MSc in Finance and Strategic Management

MASTER'S THESIS

Impact Investing in the Danish Pension Fund Industry

An Assessment of Opportunities and Challenges in sub-Saharan Africa

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Nils Martin Heller & Peter Juergen Hofmann
Student ID: 123223 & 123816

Abstract

Growing concerns about scarcity and inequality have become increasingly urgent. Impact investing presents considerable opportunities to effectively address pressing social and environmental challenges by narrowing the prevalent funding gap in sub-Saharan Africa and contributing to the achievement of the Sustainable Development Goals by 2030. Whilst the impact investing industry has made significant gains over the last few years, Danish pension funds have been reluctant to engage in the impact investing sphere of sub-Saharan Africa.

With this paper, the researchers aimed to enrich the academic literature with a framework focused on the opportunities and key challenges facing Danish pension funds related to impact investing in sub-Saharan Africa. The researchers interviewed a range of Danish pension funds as well as experts within the field and engaged Danish pension fund members by means of an online survey. Drawing on these qualitative and quantitative measures, the findings were clustered according to strengths, weaknesses, challenges, and opportunities rooted in the internal external environment of Danish pension funds.

A lack of awareness and understanding around the true possibilities of impact investing and a narrow interpretation of fiduciary duty translate into challenges, such as omissions in the context of learning potential and future-readiness. Contrastingly, Danish pension funds are well-positioned to unveil substantial opportunities in the impact investing sphere of sub-Saharan Africa by leveraging their key strengths, access to significant financial resources and considerable market power.

The researchers concluded that Danish pension funds have the ability to capitalise on the opportunity to generate both financial and social returns through impact investing. Considering Danish pension funds’ key strengths as well as their ability to catalyse other sources of private capital and to legitimise industry standards, it is evident from the research that Danish pension funds are well-positioned to engage in impact investments in sub-Saharan Africa.

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List of Abbreviations

AuM:	Assets under Management
BRICS:	Brazil, Russia, India, China and South Africa
DFI:	Development Finance Institution
DPF:	Danish pension fund
EU:	European Union
ESG:	Environmental Social Governance
GIIN:	Global Impact Investing Network
GIIRS:	The Global Impact Investing Ratings System
GRI:	Global Reporting Initiative
IFC:	International Finance Corporation
IFU:	Investeringsfonden for udviklingslande
OECD:	Organisation for Economic Co-operation and Development
OPIM:	Operating Principles for Impact Management
PE:	Private Equity
PPP:	Public-Private Partnership
SDG:	Sustainable Development Goals
SE:	Social Enterprise
SR:	Sustainability Reporting
SRI:	Socially responsible investment
SROI:	Social Return On Investment
SRQ:	sub-research question
SSA:	sub-Saharan Africa
SWOT:	Strengths Weaknesses Opportunities Threats
UCT GSB:	University of Cape Town Graduate School of Business
VC:	Venture Capital
WHO:	World Health Organization

1 Introduction

The world we live in faces monumental social and environmental challenges. Climate change represents the most pressing environmental issue as the compound effects of global warming such as increased ocean acidification, coastal erosion, extreme weather conditions, frequent and severe natural disasters, land degradation, loss of vital species and the collapse of entire ecosystems will be catastrophic and irreversible if we do not cut record high greenhouse gas emissions now (United Nations, 2019). Increased inequalities, extreme poverty, and hunger constitute substantial social challenges. Launched in September 2015, the United Nations 17 Sustainable Development Goals (SDGs) provide a blueprint for world leaders to end poverty, fight inequities and to tackle climate change by the end of 2030 (United Nations, 2019).

Figure 1: Sustainable Development Goals. Source: Adopted from United Nations (2019).

Since the inception of the SDGs in the 2030 Agenda, the United Nations (United Nations, 2019) identifies considerable progress and positive trends in some critical areas including the considerable decline in extreme poverty, a drop in the under-5 mortality rate by 49 percent, millions of lives saved through immunization, and the vast majority of the world's population now having access to electricity. Despite the considerable progress, sub-Saharan Africa (SSA), which is home to some of the poorest and most vulnerable countries in the world, continues to face significant challenges across several SDGs, including no poverty, zero hunger, good health and well-being, quality education, clean water and sanitation, as well as affordable clean energy (United Nations, 2019). With 413 million out of 736 million people worldwide, SSA shows the highest proportion of people living in extreme poverty. Further, SSA remains the region with the highest prevalence of hunger, with 237 million people undernourished. Of all regions, SSA faces the biggest challenges in providing access to good quality education which is reflected in 750 million illiterate adults and 617 million children and adolescents lacking minimum proficiency in reading and mathematics. Several hundred million people in SSA remain without basic drinking water services and lack basic sanitation. With 573 million people without access to electricity, the region is also home to a large proportion of the 3 billion people worldwide who do not have access to clean cooking fuels and technologies.

Solving these challenges and to meeting the SDGs by 2030 requires significant financial resources. The United Nations Conference on Trade and Development (UNCTAD, 2014) estimates that the total investment needs on a global level amount to $5 to $7 trillion per year with $3.9 trillion for emerging countries alone. Current investment levels leave a funding gap of $2.5 trillion in these markets. The available resources in many emerging and frontier markets are not sufficient to bridge this funding gap (Gaspar, Amaglobeli, Garcia-Escribano, Prady, & Soto, 2019). Local governments and philanthropic organisations alone cannot support such a level of financial commitment (United Nations, 2015). This has led to rising demand for alternative private-sector funding methods such as Social Finance ((Alex Nicholls & Emerson, 2015)). As a sub-category of social finance (Oleksiak, Nicholls, & Emerson, 2015), impact investing presents ground breaking opportunities to mobilise additional resources by channelling private capital towards social and environmental objectives (IFC, 2019a).

Faith-based, charitable and mutual/co-operative finance organisations and their efforts to allocate capital to social and economic value creation equally have been around for decades. However, in more recent years, a new social finance market emerged (Addis, Mcleod, & Raine, 2013; A. Brown & Norman, 2011; A. Brown & Swersky, 2012; Cabinet Office, 2011, 2012; C. Clark, Emerson, & Thornley, 2014; Harji & Jackson, 2012; J.P. Morgan, 2010, 2013; Alex Nicholls, 2013; Alex Nicholls & Lehner, 2014; Alex Nicholls & Schwartz, 2014; O'Donohoe, Leijonhufvud, Saltuk, Bugg-Levine, & Brandenburg, 2010; Saltuk, Bouri, & Leung, 2011; Spitzer & Emerson, 2007). Social finance refers to the allocation of capital for the intentional creation of social and environmental impact alongside financial returns (Alex Nicholls & Emerson, 2015). Also referred to as 'three-dimensional capital' or 'blended value investing' (World Economic Forum, 2013, 2014), social finance adds the optimisation of a given social or environmental return to conventional financial risk and return criteria when allocating capital. However, Nicholls and Pharoah (A Nicholls & Pharoah, 2007) noted that social finance goes beyond the allocation of capital to social or environmental projects. Identifying conventional finance as a driver for social inequality and environmental failure, social finance aims to internalises the externalities of mainstream investments. Thus, social finance not only generates new social and environmental value, but also corrects for negative effects caused by conventional investing. With a spectrum ranging from traditional philanthropy and venture philanthropy to conventional investments, social finance embraces various types of capital, investment approaches, and financial instruments (Alex Nicholls & Emerson, 2015).

Of all the sub-sectors within this spectrum, impact investing received the greatest attention and shaped a pronounced profile (Oleksiak et al., 2015). The International Finance Corporation (IFC) defines impact investing as investments intended to contribute to measurable positive social or environmental impact alongside a financial return (IFC, 2019a). Impact investing aims to expand the available resources to address global challenges by bridging the gap between philanthropy, public funding, and mainstream capital markets (O'Donohoe, Leijonhufvud, Saltuk, et al., 2010). The core concepts behind impact investing has been around for decades(Kramer, 2006), yet the emergence of impact investing as a market is relatively new. In two special meetings in 2007 and 2008, under the leadership of the Rockefeller Foundation, several prominent practitioners coined the term impact investing aimed to create an industry for investing for social and environmental impact (Oleksiak et al., 2015). This emerging industry attracted a number of investors, including development finance institutions (DFIs), foundations, private wealth managers, pension funds, and commercial banks.

Despite the attention impact investing receives from practitioners, academic literature regarding the topic remains very limited (Alex Nicholls & Emerson, 2015). Practical research has mainly focused on the capital gap emerging from a mismatch between demand for and availability of resources in the field (Arosio, 2011; Bolton & Kingston, 2006; A. Brown & Norman, 2011; H. Brown & Murphy, 2003; Cabinet Office, 2011, 2012; Freireich & Fulton, 2009; Grabenwarter & Liechtenstein, 2011; Impact Investment Shujog, 2011; Joy, de Las Casas, & Rickey, 2011; O'Donohoe, Leijonhufvud, Saltuk, et al., 2010; OTS, 2006, 2008; Saltuk et al., 2011; SIITF, 2014; SITF, 2010; Spitzer & Emerson, 2007; Thornley, Wood, Grace, & Sullivant, 2011; Unwin, 2006; A. R. Wood, 2009; World Economic Forum, 2013). Scholarly literature on impact investing remains at an early stage of development and only few valuable contributions centred around investment structure (J. Brown, 2006; Edery, 2006; Scarlata & Alemany, 2012; Sunley & Pinch, 2012), the role of mainstream capital (Geobey, Westley, & Weber, 2012; Moore, Westley, & Brodhead, 2012), the motivation of social investors (McWade, 2012), the ethics involved in impact investing (Buttle, 2007; Edery, 2006), and portfolio approaches to impact investing (Ottinger, 2007) exist. Nicholls and Emerson (Alex Nicholls & Emerson, 2015) suggest, that the relative paucity of scholarly work may be due to three specific reasons. Firstly, impact investing might lack a wider legitimacy among scholars as a new 'paradigm' worthy of study (Kuhn, 1962; Suchman, 1995). Secondly, some financial economists perceive the sole purpose of investments centred around risk and return without accounting for social or environmental objectives (M Friedman, 1962; Glyn, 2007; Harvey, 2007; Hayek, 1944). Thirdly, the research on societal challenges primarily focuses on the creation of public goods in charitable terms rather than investments (Clotfelter, 1992).

Notwithstanding the increased interest among practitioners, including the research conducted by recognised and reliable institutions such as the World Bank, IFC and the Global Impact Investing Network (GIIN), the researchers identified a lack of literature focused on the engagement of DPFs in impact investing. Tied to the long-term nature of their liabilities, pension funds are traditionally considered as source for long-term capital (OECD, 2019a). In recent years, pension funds in Organisation for Economic Co-operation and Development (OECD) countries increasingly started to allocate capital towards alternative investments, such as infrastructure projects, private equity (PE) or hedge funds (OECD, 2019a). More and more pension funds build investment strategies that go beyond ESG (Environmental Social Governance) and assess their portfolios against climate resiliency and an alignment to the SDGs (OECD, 2019a). However, a recent survey among pension funds based in OECD countries shows that none these pension funds carries out infrastructure projects in Africa (OECD, 2019a).

Given the apparent social and environmental challenges in SSA, the significant potential of Danish pension funds (DPFs) to catalyse private capital (A. Gianoncelli, Gaggiotti, Boiardi, & Picón Martínez, 2019), and the general trend among pension funds move beyond ESG strategies (OECD, 2019a), the researchers aim to enrich the literature with an analysis of challenges and opportunities for DPFs in the impact investing sphere of SSA.

1.1 Research Objectives and Research Questions

Our research objective is therefore twofold. Firstly, we aim to identify the challenges DPFs must be aware of when conducting impact investments in SSA. On the other hand, we intend to determine the opportunities for DPFs that can result from an engagement in impact investments in this region. Based on this, our research focuses on the following research question:

”What are challenges and opportunities for Danish pension funds in the impact investment sphere of emerging markets with a specific focus on sub-Saharan Africa?”

To answer this main research question, we draw on the following nine sub-research questions (SRQs):

1. *“How do Danish pension funds define the concept of impact investing?”*
2. *“How do Danish pension funds perceive the role of regulatory authorities related to the definition of impact investing and the concept in general?”*
3. *“What are challenges related to impact due diligence, impact measurement and management, impact reporting, and incentive structures in the context of impact investing?”*
4. *“To which extent are traditional risk-return considerations and traditional portfolio theory influencing the impact investing approach?”*
5. *“How can Danish pension funds contribute to a manifestation of the impact investing industry as a mainstream approach?”*
6. *“To which extent is a trend towards sustainability in general and more sustainable finance in particular reflected in the demand side for impact investments and how does this affect the product range offered by Danish pension funds?”*
7. *“To which extent are Danish pension funds currently engaged in impact investing in emerging markets?”*
8. *“What are the specific characteristics of (impact) investments in emerging markets and sub-Saharan Africa and how can these result in opportunities or challenges for Danish pension funds?”*
9. *“How can innovative financing allow Danish pension funds to mitigate perceived and real risks of conducting impact investments in sub-Saharan Africa and to allocate their funds effectively?”*

1.2 Purpose and Motivation for the Thesis

During an exchange semester at the University of Cape Town, one of the researchers experienced the prevailing socio-economic challenges in SSA at first hand. The researchers believe that significant private resources are needed to solve pressing social and environmental challenges, particularly in SSA. Witnessing considerable changes in the conventional forms of investing, we believe in the contribution of impact investing in solving the aforementioned challenges.

The researchers identify pension funds as a potentially suitable investor in the impact investing sphere. We believe that the long-term nature of impact investing offers great potential to meet the long-term investment horizon of DPFs. Contributing to the Danish pension system themselves, the researchers are intrinsically motivated to ensure that their pension savings are invested in a way that matches their personal values and beliefs.

Our preliminary research pointed out a significant gap related to the engagement of DPFs in the impact investing sphere of SSA. The researchers are convinced that impact investing has the ability to gain wider legitimacy and become the new norm in future financial markets. Driven by their genuine belief that financial markets can contribute to the greater good, the researchers hope to spread awareness of the topic among practitioners and within the wider population.

1.3 Contribution to Previous Research

Our research contributes to the fragmented literature on impact investing in general as well as the lacking literature on the engagement of DPFs in the impact investing sphere of SSA in particular. As far as we know there is no other research conducted to this specific topic and the interviewed practitioners highlight the pressing nature of the topic. The research further contributes by providing DPFs with a framework that highlights opportunities and provides guidance on how to overcome potential challenges and risks associated with impact investments in SSA.

1.4 Outline of The Thesis

The structure of our thesis consists of the following seven chapters. In chapter **two**, we present the methodology of our research and argue for our choice of research approach, research philosophy, and research strategy. The methodology chapter further highlights the tools and methods applied to analyse our research question. Chapter **three** focuses on the review of relevant literature on impact investing, presents the case of pension funds as institutional investors, and highlights specific characteristics of emerging markets in general and SSA in particular. In chapter **four** we outline the specific theories, namely portfolio theory, principal-agent theory, and theories related to industry emergence and entry, which we consider most relevant for our research. This chapter also highlights several industry standards and frameworks which are used as a benchmark throughout our analysis. Chapter **five**, the analysis chapter, follows the structure of our nine SRQs. In chapter **six**, following the same structure as the analysis chapter, we discuss our key findings in the context of relevant literature and theory. The chapter further provides a basic framework to answer our main research question and points out limitations of our research. Finally, in chapter **seven** we draw our conclusions and present recommendations for future research.

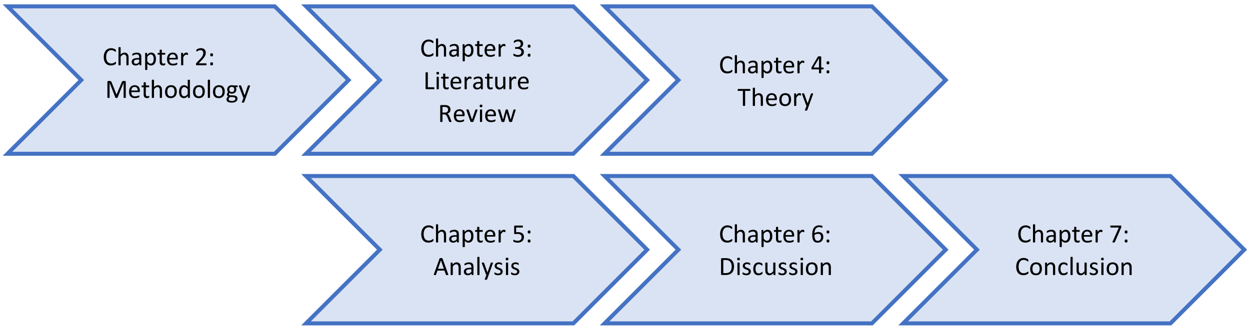


Figure 2: Thesis Outline.

1.5 Delimitations

The researchers limit the scope of this study to provide a purposive analysis of the research problem at hand: the challenges and opportunities for DPFs in the impact investing sphere in SSA. Therefore, other institutional or retail investors are not considered in this research. The choice to enrich the data sample with interviewees from the Investeringsfonden for udviklingslande (IFU) as well as the UCT GSB is primarily motivated by the need to account for biases within the pension fund industry and to guarantee the most neutral perspective possible. In terms of geographical delimitations, the researchers decide to exclusively focus on the pension fund landscape in Denmark. This decision motivated by proximity, as it simplifies the personal engagement with potential interviewees. Additionally, it eases the integration into the regulatory context. The inclusion of pension funds in other geographical regions such as Asia or America would result in considerable discrepancies in the legal framework, which must be taken into account. Besides the institutional context, the researchers narrow down the regional scope to impact investing in SSA. The decision to set the focus on SSA is rooted in the researchers' intrinsic motivation to specifically illuminate the special characteristics inherent this market environment. While the researchers follow an inductive approach, a deductive approach might have been conceivable. However, as the literature on the research topic at hand is still fragmented, the researchers perceive an inductive approach to be more suitable. Ultimately, the researchers aim to provide a macro-perspective on the subject as a whole. In contrast, the scope could have been narrowed down to a more detailed examination of a specific sub-category.

2 Methodology

The following section presents the overall methodological approach in this study. The researchers outline the interrelation between research question and SRQs as well as the framework used to answer those questions. The framework consists of research philosophy, research design, and research methods. The structure of this methodology (Figure 3) is derived from and inspired by Saunders et al. (2016). This section concludes with a critical evaluation of the methodology applied in this study.

This study aims to identify the key opportunities and challenges for DPFs in the impact investing sphere of SSA. The researchers develop various SRQs to address the most relevant and pressing research areas of the study. Finally, the results of these SRQs are consolidated to provide answers to an all-encompassing research question.

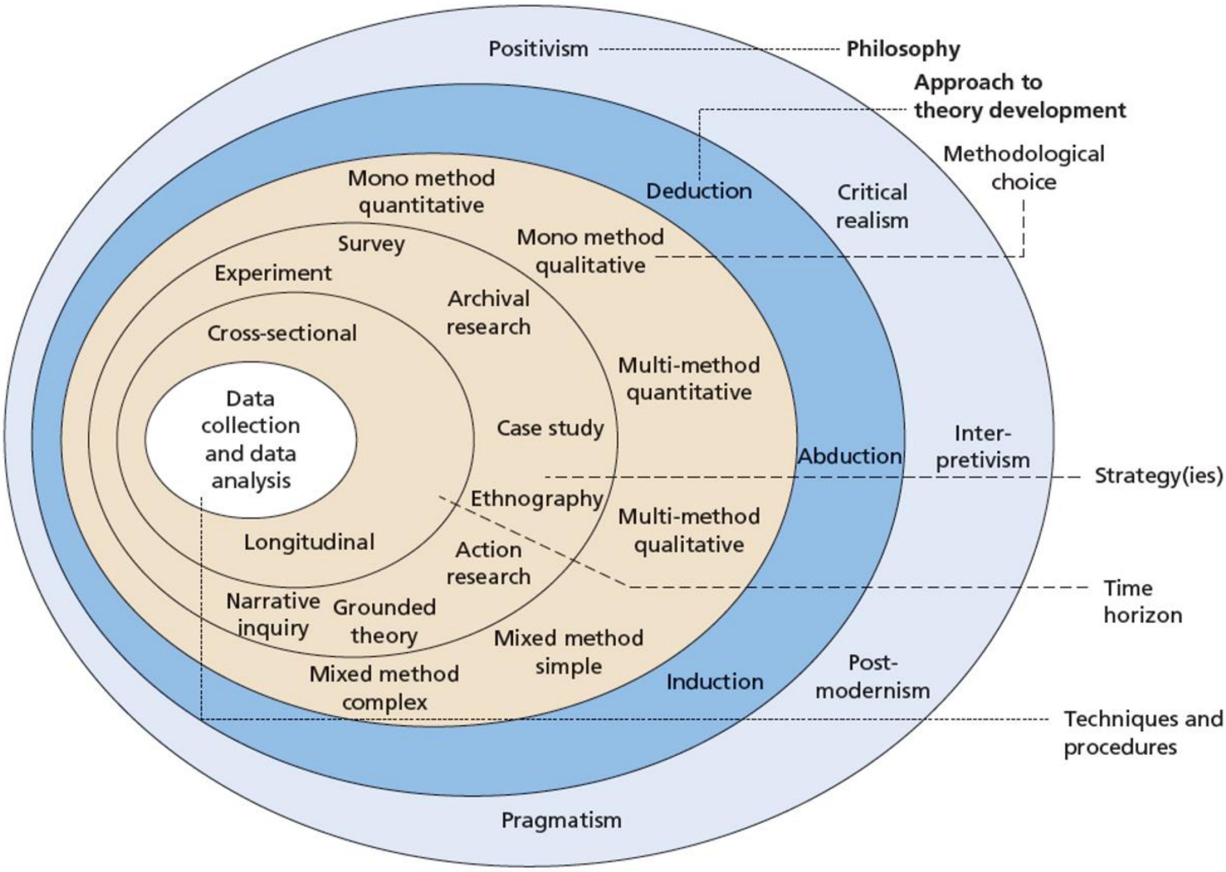


Figure 3: Research Onion. Source: Saunders et al. (2016).

2.1 Research Philosophy

Based on the research onion developed by Saunders et al. (2016), the outermost layer, the research philosophy, is defined first. The research philosophy helps to clarify and define the research design and, eventually, how data should be collected and analysed (Saunders et al., 2016).

2.1.1 Ontology, Epistemology, and Axiology

According to Saunders et al. (2016, p. 124), *"the term research philosophy refers to a system of beliefs and assumptions about the development of knowledge."* Burrell & Morgan (1979) argue that every step of research is based on several assumptions, whether the researchers make them consciously or not. These assumptions can be classified as epistemological assumptions, ontological assumptions, or axiological assumptions. Epistemological assumptions include perceptions regarding how human knowledge is acquired, what is considered to be legitimate knowledge, and how knowledge is communicated to others. Ontology constitutes assumptions related to the nature of reality, while axiology refers to values, ethics, and perception, which influence the research at hand.

2.1.2 Research Dimensions

Due to their multidiscipline character, business research philosophies are scattered across a multidimensional set of continua between two opposing extremes (Niglas, 2010). These dimensions can provide a supportive framework for the researchers to differentiate between research philosophies and the underlying assumptions discussed above (Saunders et al., 2016). One of these dimensions is the distinction between objectivism and subjectivism. While objectivism includes assumptions regarding natural sciences, subjectivism incorporates assumptions about the arts and humanities (Saunders et al., 2016).

With the ideological dimension, Burrell & Morgan (1979) add political or ideological orientations of the researchers to the equation. Similar to the objectivism – subjectivism dimension, this dimension constitutes two opposing poles, namely "sociology of regulation" and "sociology of radical change". On the one end, research that is classified as *regulation research* assumes the underlying unity and cohesiveness of societal systems and structures and seeks to recommend improvements within this framework. On the other hand, when taking the *radical change* perspective, research is conducted to change organisational and social worlds in its foundations. Eventually, Burrell & Morgan (1979) combine the two dimensions, objectivism-subjectivism and ideological, in a 2 x 2 matrix with four distinct and rival "paradigms".

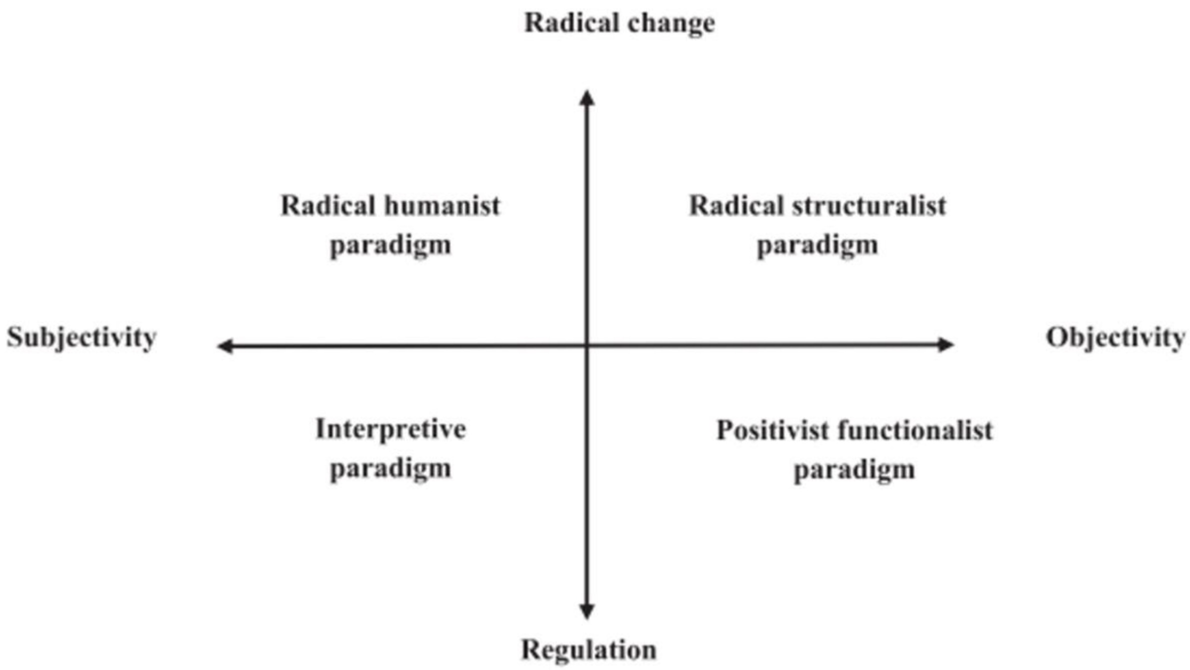


Figure 4: Research Dimensions. Source: Burrell & Morgan (1979).

2.1.3 Choice of Philosophy

In this study, we utilise the philosophy of positivism and categorise our research within the positivist functionalist paradigm. From a positivistic stance, researchers draw on observable social reality and aim to develop law-like generalisability (Saunders et al., 2016). Positivism leverages research methods designed to result in observable and measurable regularities (Saunders et al., 2016).

From an epistemological stance, we objectively focus on quantitative and qualitative data, which is observable and supposed to be generalisable for the DPF industry. Since this study takes a positivistic stance, axiological assumptions are supposed to be neutral and unbiased (Crotty, 1998). However, the researchers do acknowledge that their own values and interpretations may not be fully separated from the research. Regarding the ontological assumptions made in this research, the researchers take an objective position. Therefore, the researchers acknowledge that tangible entities (e.g., financial markets and financial institutions) as well as concepts (e.g., portfolio theory) in the financial world exist regardless of interpretations and experiences of social actors. For instance, by illuminating risk-return profiles and the regulatory environment, this research aims to provide a macro-perspective on the decisive pillars which can boost or hamper impact investments in emerging markets. Thus, the research focuses on an analysis of causality mechanisms to reveal a set of regularities within an external reality (Lagoarde-Segot, 2015). Ultimately, following the functionalist paradigm, the researchers are concerned with the development of rational explanations and a set of recommendations within the existing structures (Burrell & Morgan, 1979).

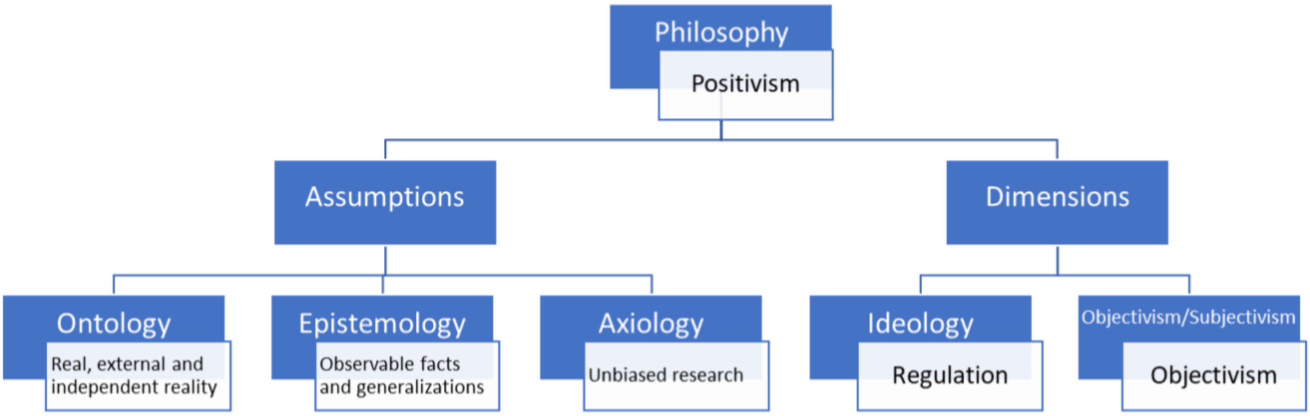


Figure 5: Methodology Outline. Source: Own depiction.

2.2 Research Approach to Theory Development

Inductivism and deductivism are the two most widely accepted approaches towards theory development in the academic world. Following the inductive reasoning, research makes sense of collected data to formulate theories and develop conceptual frameworks (Saunders et al., 2016). In contrast to and inductive approach, deductive reasoning seeks to derive conclusions from testing a set of premises (Saunders et al., 2016). Applying the deductive approach, hypotheses are postulated based on previous literature and research. These hypotheses are then confirmed or rejected by the analysis of the collected data.

Due to the scarcity of literature that studies the interplay between impact investments, emerging markets, and Danish pension funds, this work follows an inductive approach.

Albeit the core element of inductive research is the development of own theories and frameworks, the researchers still need to obtain an understanding of existing theories in the research area (Saunders et al., 2016). Therefore, the researchers conduct an extensive literature review to identify the most relevant theories and refine the research questions. The most influential theories and concepts extracted from this literature review are consequently presented in the theory section.

Following this approach, the researchers attempt to explore the key factors, which influence the engagement of DPFs in the impact investing sphere in SSA.

Based on these findings, the researchers develop a conceptual framework to answer the research questions and extend existing literature. For this framework, the researchers utilise the principles of the SWOT Analysis presented in the theory section.

2.3 Research Design

The data collection approach of this thesis is twofold. Firstly, the researchers gather qualitative data through semi-structured interviews with employees from the major DPFs and various experts from practice and academia. Secondly, the researchers gather quantitative data through a survey conducted among members of DPFs.

2.3.1 Qualitative Data Collection: Semi-Structured Interviews

In the first part, the research aims to identify the decisive factors which influence the engagement of DPFs in the impact investing sphere in SSA. As the researchers use a single data collection technique, the qualitative part can be classified as a mono method qualitative study (Saunders et al., 2016). Gathering relatively unstructured qualitative data is in line with the exploratory purpose of the research design and is well suited to answer the research questions. Saunders et al. (2016, p. 175) state that exploratory research is particularly useful "*if you wish to clarify your understanding of an issue, problem or phenomenon, such as if you are unsure of its precise nature".* Finally, semi-structured interviews are a well-proven measure to conduct an inductivism-based study (Bryman, 2012).

Depending on the availability and preference of the interviewees, the interviews were either conducted face-to-face or via an online medium such as Skype. Typically for semi-structured interviews, a predefined set of questions was sent to the participant in advance (transcripts of the interview questions can be found in Appendix 9.2.1). The researchers developed separate sets of questions for DPFs and experts from practice and academia. The interview questions were purposely framed very narrow in order to guide the interviewee's attention towards areas related to the SRQ. Due to their semi-structured nature, the interviews followed a rather open sequence and did not necessarily cover all questions. However, the interviewers ensured that the core topics related to the SRQs were addressed. The duration of the interviews ranged from approximately 30 to 60 minutes. The interviews were recorded with a recording device and afterwards transcribed for the analysis process described in section 2.4.1 (Transcripts of all interviews can be found in Appendix 9.2.3). A total number of 13 interviews were conducted, which is reasonable for this type of research (Rowley, 2012).

Potential candidates were approached through various channels, such as LinkedIn and company email address. The researchers selected three homogeneous sample sets of candidates. The first set constitutes employees of DPFs. The researchers decided to include six of the largest DPFs, namely Danica, PensionDanmark, PFA, PKA, ATP, and AP-Pension, to ensure the generalisability of the research to the largest extent possible. Recently founded pension fund start-ups such as MatterPension were deliberately excluded. The second set includes employees of the Danish DFI, the IFU. The researchers perceive the third-party view from the IFU to be highly relevant for the research, due to the undeniable expertise of the IFU in SSA and their collaboration with the DPFs related to the SDG Fund. The third and last sample consists of representatives of the University of Cape Town (UCT), more precisely, the Bertha Centre of Social Innovation and Entrepreneurship of UCT's Graduate Business School (GSB). The researchers justify the inclusion of this sample with the profound knowledge and experience of these interviewees related to the subject and SSA. Furthermore, including an academic perspective is supposed to enhance the validity of the research at hand.

Consequently, the sample selection was based on the following criteria:

Sample Set	Characteristics
1	Employed at one of the major DPFs and being part of either the Equity Investment, Alternative Investment, ESG Investment, Responsible Investment, or Emerging Markets Investment - Department
2	Employed at the Danish DFI, the IFU
3	Academic representative of the University of Cape Town in the field of Impact Investing

Figure 6: Sample Set. Source: Own depiction.

The sample selection can be classified as purposive sampling, which is a non-probability form of sampling (Bryman, 2012). The participants are not selected on a random basis, but *"in a strategic way, so that those sampled are relevant to the research questions that are being posed"* (Bryman, 2012). Other criteria such as ethnicity, gender, and age did not play a role in the selection process. The positions of the interviewees cover a broad spectrum, ranging from analyst to senior or executive level (an anonymous list of participants including gender, position, department, and institution can be found in Appendix 9.2.2). As agreed with the interviewees upfront, the list of interviewees is anonymised. The interviews were conducted in English since all candidates were fluent in this language. This helped to avoid language barriers or distorted translation.

2.3.2 Quantitative Data Collection: Survey

In the second part of our research, quantitative data is collected through an online survey among members of the DPFs. The researchers designed the survey to generate quantitative data related to their understanding of impact investing and demand for impact investing products offered by pension funds. Similar to the qualitative data collection, a single data collection technique is deployed. Hence, the quantitative part of our research can be framed as a mono method quantitative study (Saunders et al., 2016). Although surveys have traditionally been linked to deductive studies, Saunders et al. (2016) argue that they might be utilised in inductive studies.

The quantitative evaluation of demand through a questionnaire accommodates the epistemological and ontological stance of our research in a traditional way. Crotty (1998), for example, alludes that with taking a positivistic stance, the epistemological focus of research is to discover measurable facts and regularities, for which questionnaires are perfectly qualified.

The survey started with questions related to general demographic characteristics, such as gender, age, and educational background. Subsequently, the focus shifted to questions regarding the participant's understanding of concepts such as sustainability, impact investing, and the SDGs. Further, the survey investigated the awareness and interest of participants related to the investment of their pension savings with regards to sustainability, impact, and geography. Finally, participants were asked whether they are willing to sacrifice return for impact (the complete set of survey questions is displayed in Appendix 9.3.1). The survey was designed to take approximately 5 minutes for completion. The questions were easy to answer, which follows the recommendation by Bryman (2012), who pleads for simplicity in the design of questions, due to the lack of an administrating interviewer. Moreover, the questions can be characterised as closed and scaled in their nature. The answer possibilities range from *"strongly disagree"* to *"strongly agree"* on a seven-point scale. The design is supposed to ease the analysis and comparability of the results gained from this survey.

The survey was created in SurveyMonkey and was distributed online within the researchers' personal and professional network. The type of sampling used can therefore be classified as "Convenience Sampling" (Bryman, 2012). The researchers chose a sample which was easily available and accessible. Further, the survey design corresponds to a "self-completion questionnaire" (Bryman, 2012), which allows respondents to complete the questions on their own, and results in a more convenient administration for the researchers. Eventually, the survey was available online for about six weeks.

2.3.3 Time Horizon

The researchers conducted the interviews during February and April 2020. Due to time constraints, this study follows a cross-sectional approach. This means that the exploration of the research object is limited to a pre-defined time period, i.e. a "snapshot" of the research object is taken (Saunders et al., 2016). This assumption also matches the relatively short time frame within the qualitative and quantitative data were collected.

2.4 Analysis

To analysis the qualitative and quantitative data gathered through the semi-structured interviews and the survey, the researchers draw upon qualitative and quantitative data analysis methods described in the following.

2.4.1 Qualitative Data Analysis

The qualitative data analysis in this study is based on the *grounded theory* originally published by Glaser & Strauss (1967). More precisely, we will follow the Straussian approach to this theory (Anselm Strauss & Corbin, 1990). Applying the grounded theory, the researchers leveraged the three concepts of *coding, theoretical saturation,* and *constant comparison.*

Coding can be described as the key process in grounded theory. By coding, the collected data is divided into its components. Strauss & Corbin (1990) differentiate between three different kinds of coding practice that the researchers adopted for the analysis:

1. *Open coding* describes *"the process of breaking down, examining, comparing, conceptualizing and categorizing data"*(Anselm Strauss & Corbin, 1990). With open coding, the researcher develops concepts which are then grouped and turned into categories.
2. *Axial coding* refers to a procedure *"whereby data are put back together in new ways after open coding, by making connections between categories"* (Anselm Strauss & Corbin, 1990).

3. *Selective Coding* is *"the procedure of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development"* (Anselm Strauss & Corbin, 1990)

The coding process will come to an end when a point is reached, where collecting and reviewing data does not add further value to the development of concepts and categories. This state is called *"Theoretical saturation"* (Glaser & Strauss, 1967).

Throughout the analysis, the researchers ensured that a close connection between data and conceptualisation is maintained. This guaranteed the correspondence between the concepts and categories with the collected data. This process is called *"Constant comparison"* (Glaser & Strauss, 1967).

As mentioned earlier, in the open coding process concepts are developed, which are then grouped into categories. A category is crucial for theory development as it represents real-world phenomena. According to Strauss & Corbin (1998, p. 22), a theory is *"a set of well-developed categories … that are systematically related through statements of relationship to form a theoretical framework that explains some relevant social… or other phenomenon".*

The coding process displayed above is conducted with the support of IT-based solutions, namely NVivo. The coding procedure in this study can be labelled as "computer-assisted qualitative data analysis" (CAQDAS).

The structure of the coding process enabled the researchers to answer the research questions and subsequently develop a conceptual framework. Accordingly, the design of the categories and concepts are closely aligned with the SRQs. Based on the grounded theory approach exhibited above, several broader concepts were developed and combined into categories during the process of *Open Coding*. Eventually, five different categories, including their respective concepts, emerged (see Appendix 9.2.4). Besides codes related to wider themes, the researchers further created codes for the "Units of observation" (i.e. the interviewees) and their respective institutions. This helped the researchers to distinguish between the stances taken by the different institutions. During the *Axial Coding* procedure, the researchers used the built-in queries and analysis functions provided by NVivo to point out relationships between the seven categories. Ultimately, based on the principles of the *Selective Coding* process, the researchers chose "impact investing" as their core category. The discussion of the findings and the development of the conceptual framework were based on this core category.

2.4.2 Quantitative data analysis

The survey was conducted to reveal the demand for impact investing products among members of DPFs. Thus, the researchers only performed fundamental analysis. Offering several features to filter and compare responses on an aggregate level, SurveyMonkey allowed the researchers to analyse the responses to key questions based on different demographic characteristics.

The quantitative data extracted from the questionnaire is classified into different types of variables. These variable categories range from interval/ratio variables, ordinal variables to dichotomous variables (Bryman, 2012). While all the above-mentioned types of variables are represented in the data related to the demographic characteristics of the participants, the data related to the relevant concepts applied throughout this research primarily entails interval variables (Bryman, 2012)

Utilising of univariate analysis, the researchers analysed one variable at a time (Bryman, 2012). Quantitative data analysis tools such as frequency tables and diagrams were applied to generate fundamental insights. For example, the researcher presented a frequency related to the sentiment of survey participants in the context of sustainability in financial markets. Further, the researchers utilised diagrams to display responses of participants to several different questions, including to which extent they are concerned about how their pension savings are invested with respect to social and environmental issues. Furthermore, bivariate measurements are deployed, which are supposed to reveal possible relationships between two variables (Bryman, 2012), e.g. the participants' sentiment towards sacrificing returns for impact based on their affiliation with a particular age group.

Moreover, the researchers did not apply measurements of central tendency, such as the arithmetic mean were used. Further, due to the low response rates, the researchers deliberately refrained from using significance tests and recommend that the survey should only be seen as an indicator of possible trends among the members of DPFs. In the critical evaluation of the quantitative research design, the researchers provide a more detailed overview of possible weaknesses.

2.5 Critical Evaluation of Methodology

Logically, the design of this research is subject to certain flaws. Mason (1996, p. 21), for instance, states that generalisability, reliability, and validity *"are different kinds of measures of the quality, rigor and wider potential of research".* Henceforth, the critical review of the research design and methods focusses on these three quality measures. Further, the researchers distinguished between generalisability, reliability, and validity of their qualitative and quantitative research design. Finally, the methods of analysis are critically illuminated.

2.5.1 Generalisability

The term generalisability defines the extent to which findings can be generalised beyond the scope of the research (Bryman, 2012).

2.5.1.1 Qualitative Research Design

Concerning the qualitative part of this research, Bryman (2012) raises concerns regarding the generalisability and the transparency of findings due to personal interpretations by the interviewees as well as the researchers. These concerns initially seem to contradict the positivistic research philosophy, which attempts to reveal transparent law-like generalisability (Saunders et al., 2016). While the researchers are well aware that producing law-like generalisability might be out of scope, they raise four arguments in support of the generalisability and the transparency of their findings. First, the researchers were able to interview representatives from six of the largest pension funds in Denmark. Second, most of the interviewees from DPFs worked in departments that focus on investments beyond traditional investments. This increased the validity of the collected data. Other personal criteria did not play a role in the selection process of the interview candidates, which mitigated the risk for criticism from a transparency perspective. Third, the core part of the interview questions was strongly connected to the SRQs, which minimised the exposure to personal opinions. Therefore, the researchers argue for mitigation of personal interpretations, which might have biased the data. Fourth, the interviews conducted with representatives of the IFU and the UCT allowed the researchers to gain insights from a third-party perspective.

Therefore, the researchers are confident that the generalisability and transparency of their qualitative research are ensured to a reasonable extent considering the scope of this study.

Further justification for positivist qualitative research is provided by Su (2018). Ontologically, the author argues, positivist qualitative research can summarise and apprehend not yet quantifiable external realities. Furthermore, from an epistemological stance, positivist qualitative research identifies regularities and causal relationships through non-statistical means and summarises patterns into generalised findings (Su, 2018). Bryman (2012) also argues that in the case of very specific research questions, the data collected by qualitative research adopts a more scientific character. As the main research question consists of several SRQs, the justification for a positivistic approach is given.

2.5.1.2 Quantitative Research Design

With regard to the generalisability of the quantitative data, four aspects could give rise to criticism. First, the size of the sample is comparably small, which makes any generalisability from these results for the entire population too ambitious. Second, the demographic diversity concerning the educational background and age is very low within the sample. This matches the criticism raised by Bryman (2012) with respect to the sample selection method, the "Convenience Sampling". The author alludes that samples based on the close personal and professional network of the researcher do not provide sufficient ground for generalisability. Although the findings might not be generalisable to the entire population, the researchers argue that the generalisability within specific demographic groups presented in the survey is reasonable.

2.5.2 Reliability

Bryman (2012, p. 168) defines reliability as *"fundamentally concerned with issues of consistency of measures"*. In this context, reliability makes statements about whether the results of a study can be repeated (Bryman, 2012).

2.5.2.1 Qualitative Research Design

With respect to reliability, LeCompte & Goetz (1982) differentiate between external and internal reliability in qualitative research. External reliability, in this context, describes the extent to which the study can be replicated. Due to the cross-sectional character of this research, the replication of the study might be difficult as the social or market environments might change significantly in the future. However, the philosophy, approach, and design selected for this research aim to generate results as objective and generalisable as possible. To further enhance the reliability, the researchers list the interviewed institutions and provide an overview of the interview questions and data analysis methods used in this study. Therefore, the researchers argue for the replicability of this study. However, the researchers acknowledge that due to the anonymisation of the interviews with DPFs, the exact replication of the results obtained during this research might be difficult.

Internal reliability describes the consistency of interpretation among the researchers. Since two researchers conducted this study, possible inconsistencies cannot be ruled out completely.

2.5.2.2 Quantitative Research Design

Concerning the survey of this study, it is difficult to determine whether the results are replicable and, hence, reliable. As perceptions around terminologies and definitions related to concepts such as sustainability and impact might evolve, the replicability of results cannot be guaranteed. The terminology and definition problem can also be linked to the cross-sectional approach that the researchers apply. A more longitudinal approach could account for those problems. Additionally, changing demographic characteristics of the sample and the anonymisation of respondents limit the replicability even further. Changes in the financial situation of the respondents, which might influence their sentiment related to sacrificing return for impact (Bryman, 2012).

2.5.3 Validity

Bryman (2012, p. 47) describes validity to be *"concerned with the integrity of the conclusion that are generated from a piece of research".* In the following sub sections, the researchers shed light on the validity of their qualitative and quantitative research design.

2.5.3.1 Qualitative Research Design

Similar to the quality measure of reliability, LeCompte & Goetz (1982) highlight that validity in qualitative research consists of an external and an internal component. External validity describes the degree of generalisability of findings across research settings. As discussed earlier, the researchers argue in favour of the generalisability of the findings and, thus, see proof for external validity. With internal validity, the authors describe the extent to which observation made during the study are an authentic representation of the reality. To ensure the highest level of validity possible, the interview questions were sent out in advance. Therefore, interviewees were able to prepare their answers and to avoid flaws in their argumentation. Although the interview questions were rather specific to be in line with the positivistic stance of this paper, they are sufficiently wide enough to allow for more detail where necessary. However, the researchers cannot rule out flaws due to the personal interpretation of the interview questions by the interview participants. This might raise concerns regarding the authentic representation of the reality. Again, the cross-sectional approach of this study may hamper the degree of internal validity, as possible flaws of the snapshot taken cannot be accounted for in the long run.

2.5.3.2 Quantitative Research Design

To increase the validity, the researchers tested the quality, coherence, and consistency of the questionnaire through a peer review among fellow students, who were familiar and experienced with this type of research. Additionally, the researchers provide the research participants with the definitions of the relevant concepts, which have been used consistently throughout the entire research to ensure a uniform understanding among the respondents. This enables the participants to answer the questions in the best possible way. However, the close-ended nature of the questions may have negative effects on the level of detail to which the respondents can express their opinion. Additionally, the researcher cannot influence the thoroughness applied by the participant while answering the questions (Bryman, 2012). Further, low response rates may hamper the robustness of the results. The decision in favour of closed-ended questions and answers based on a rating scale also removed the possibility for the researcher to further explore the meaning of the responses (Bryman, 2012). Furthermore, the researchers acknowledge that the specific framing of questions may lead to biased responses, as the researchers do not specifically point out potential shortfalls of the relevant concepts.

The data gathered through the survey might also be subject to the hypothetical gap between stated and revealed preferences (Bauer, Ruof, & Smeets, 2019). The researchers are not able to determine whether the stated preferences of respondents deviate from their revealed actions.

2.5.4 Methods of Analysis

In their initial draft of grounded theory, Glaser & Strauss (1967) propose theoretical sampling, which differs from purposive sampling, in that the data is collected in an ongoing process. This study, however, takes a purposive sample (Bryman, 2012), given the time constraints faced by the researchers.

The utilisation of the grounded theory approach entails several shortcomings that must be accounted for. For example, Glaser (1992) criticises the Straussian adaption of the grounded theory as too prescriptive. He argues that this adaption of grounded theory is primarily focussed on the development of concepts rather than theories.

Further, critiques argue that dividing data into distinct fragments during the coding process might disrupt the narrative flow of the interviews and distorts the context (Coffey & Atkinson, 1996). However, the research aims to discover distinctive factors related to the SRQs so that the narrative flow might only play a subordinated role. Since coding, and CAQDAS in particular, enhances the transparency of the qualitative data analysis process (Bryman, 2012), the researchers argue that this method supports the scientific approach of their study.

Conclusively, given the objectivist nature of grounded theory (Charmaz, 2000), the researchers consider the application of this approach to be well suited to reflect the positivistic stance taken by their study.

3 Literature Review

Based on the three main components of the overarching research question, the researchers conduct an extensive literature review in the areas of 'Impact Investing', 'Pension Funds as Institutional Investors', and 'Emerging Markets and sub-Saharan Africa'. Drawing on this literature review, the researchers identify the theories and concepts deemed to be most relevant for this study.

3.1 Impact Investing

Covering the first component of the literature review, the researchers outline the emergence of impact investing, present the definition of impact investing used in this study, look at the industry development and market size, and place impact investing on the broader investment landscape. Further, the researchers highlight important segments of impact investing, such as impact themes, market players, impact measurement, reporting, and due diligence. Moreover, this sub section describes the interplay of impact investing and portfolio theory, and sheds light on innovative financing.

3.1.1 Emergence and Definition of Impact Investing

The term "impact investing" was only coined a bit over a decade ago, yet commonalities of the underlying concept can be found in several preceding approaches to investing. Dating back as far as the 18th century, origins of the impact investing concept can partly be traced back to the ethical responsibility found in many religious traditions of Islam, Judaism, and Christianity which have aligned economic activity with ethical belief (IFC, 2019a).

To some extent driven by the demand from religious institutions with large endowments, socially responsible investing (SRI) emerged in 1960 (Sparkes & Cowton, 2004). Originally, this asset management strategy involved negative screening and exclusion of industries with negative social and environmental impacts, such as coal, tobacco, firearms, and gambling, but later broadened to include management and labour issues as well as antinuclear sentiments (Sparkes & Cowton, 2004).

Moving beyond simple negative screening and exclusionary approaches as a result of a growing understanding of environmental, social, and governance (ESG) risks, investors increasingly adopted ESG integration or sustainable investing strategies to assess and mitigate the ESG risks of all assets in the portfolio (IFC, 2019a). The United Nations Principles for Responsible Investing launched in 2005 encourage investors to follow a responsible investing approach which integrates environmental and social considerations into their decision-making process (PRI, 2020). The historical evolution and critical milestones of these investment approaches are presented in Figure 7 below.

According to the predictions of Deutsche Bank (2018), an ever-growing demand for products that integrate ESG will result in 95 percent of professionally managed assets having some sort of ESG mandate by 2030. While negative screening is particularly popular in Europe (PWC, 2017) and ESG integration strategies enjoy greater popularity in the United States, Canada, Australia, New Zealand, and Japan, assets managed under both strategies have seen rapid annual growth between 2011 and 2015 (IFC, 2019a).

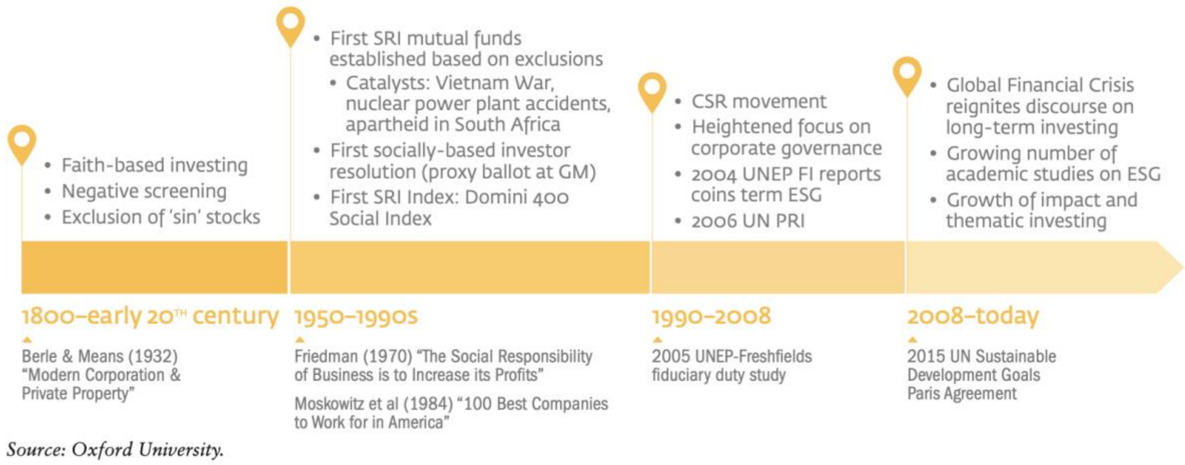


Figure 7: Impact Investing Emergence. Source: Adopted from IFC (IFC, 2019a).

Impact investing goes even further than responsible or socially responsible investing and places social and environmental impact at the centre of the approach. Growing out of philanthropies and foundations seeking more financially sustainable ways to achieve impact than conventional grant giving and driven by responsible investors seeking to go beyond 'do no harm' strategies, impact investing initially focused on supporting social enterprises with innovative business models (IFC, 2019a). Synthesising the various definitions of impact investing (Table 1) circulating in the industry, the IFC defines impact investments as:

> *"investments made into companies or organisations with the intent to contribute to measurable positive social or environmental impact, alongside a financial return."*
>
> (IFC, 2019a)

In the following, the researchers refer to these *'companies or organisations'* as social enterprise (SE).

Aligning the different definitions, the IFC (IFC, 2019a)identified three distinctive cornerstones, intent, contribution, and measurement, which are critical to distinguish between the approaches of impact investors and other types of investors. Further, in this context it is also important to specify the definition of positive social and environmental impact. Alex Nicholls et al. (2015) define impact as: 'Significant changes in the wellbeing of key populations, whether intended or unintended, brought about by the allocation of social investment capital, going beyond what would otherwise have been expected to occur." This definition explicitly refers to social impact but can be extended to environmental impact. As many other definitions, this definition of impact is not free from criticism (Alex Nicholls et al., 2015), but is considered as sufficient for the scope of the following sections. Besides positive social and environmental impact, the three distinctive attributes of impact investing build the foundation for the formulation of a credible impact thesis through which the impact investor articulates the intended outcomes and how the investment will contribute to achieve these outcomes (IFC, 2019a).

Organisation	Impact Investment …is made with the intent…	…to contribute…	…measurable…	…positive social and environmental impact
Cambridge Associates LLC	is "made in an enterprise that offers"			"a market-based solution to a social or environmental challenge"
Global Impact Investing Network (GIIN)	has "intention"	"to generate"	"measurable"	"positive social and environmental impact"
Global Steering Group (GSG)	"optimizes risk, return and impact to people and the planet"	by "setting"	"and measuring their achievement" of	"specific social and environmental objectives"
Mission Investors Exchange	is "intended"	"to generate"		"social and/or environmental impact"
Monitor Institute	is "actively placing capital in businesses"	"that generate"		"social and/or environmental good"
Omidyar Network	"seeks"	"to generate"		"social change"
Organisation for Economic Co-operation and Development (OECD)	has the "expectation of"		"measurable"	"social return"
Overseas Private Investment Corporation (OPIC)		"deliver[s]"		"social and environmental benefits to emerging markets"
Social Impact Investment Taskforce	"intentionally"	"targets"	"and measure[s]" the "achievement" of	"specific social objectives"
The Rockefeller Foundation	has the "intention"	"of generating"		"social and/or environmental impact"
U.K. National Advisory Board on Impact Investing	has the "deliberate intention"	"to make a"		"positive social or environmental impact"
UN Global Compact	has the "intent"	"to create"		"benefits beyond financial return"
World Economic Forum (WEF)	"intentionally seeks"	"to create"	"that is actively measured"	"positive social or environmental impact"

Table 1: Impact Investing Definitions. Source: Adopted from IFC (IFC, 2019a).

In order to provide investors with better guidance on how to identify impact investments, the IFC in consultation with leading asset managers and asset holders developed the Operating Principles for Impact Management (OPIM). The principles were launched on April 12, 2019 at the World Bank Group/IMF Spring Meetings in Washington D.C. and provide a framework for investors to ensure the integration of impact considerations throughout the investment life cycle (IFC, 2019b). Together with the IFC, the signatories of the principals include asset managers, asset owners, Multilateral Development Banks and DFIs and collectively seek to catalyse capital for impact and to shape the future of impact investing (IFC, 2019b). It is worth mentioning that the Investment Fund for Developing Countries (IFU) represents the only Danish signatory of the principles (OPIM, 2020). The IFC claims that just as the Green Bond Principles helped to avoid "greenwashing", the OPIM will help to avoid "impact washing" (IFC, 2019a).

3.1.2 Industry Development & Future Outlook

The term impact investing initially emerged over the course of two meetings in 2007 and 2008, when as small group of pioneering investors in the fields of community development, microfinance and environmental sustainability used the term impact investing to describe their shared purpose of investing for social or environmental benefit (GIIN, 2018). With the term impact investing, the group of pioneering investors intended to emphasise both, investments made to create positive impact as well as the impact on the broader practice of investing. This underpinned their vision of moving impact investing from its infantry stage of uncoordinated activity to a mature, high-functioning market and to influence mainstream investment practices in the financial industry. Freireich & Fulton (2009) outlined the efforts needed to develop a market for impact investing and highlighted cornerstones such as infrastructure, resources, and tools required to guide impact investing through various stages of industry development, from an uncoordinated innovation to market building, capturing the value of the marketplace, and eventually maturity. Over the past decade, the industry made significant progress, which allowed a transition from marketplace building to capturing the value of the marketplace. The impact investing industry has made considerable progress in the context of intermediation, infrastructure, and absorptive capacity (GIIN, 2018). Impact investing is now a recognised and legitimate investment practice among a small but critical mass of investors and enjoys a wider adoption in different types of organisations. Despite the achievements related to growth, interest and acceptance, several challenges remain (Table 2). Impact investing is only generating a fraction of the impact required to address social and environmental challenges globally, severe issues such as climate change, inequality and social division persist, and major targets such as those set out in the Paris Climate Agreement and the SDG might not be achieved (GIIN, 2018). Furthermore, the impact investing industry continues to face persisting misperceptions, lack of awareness and profound understanding in the broader population, fragmentation in impact measurement approaches, and limited market infrastructure for the facilitation of impact deals for large-scale investors (GIIN, 2018). However, field building organisations, governments and impact investors continue to accelerate the impact investing industry, create meaningful, enduring, and positive impact, challenge the dominant paradigm in the global financial markets, and lead the way to a future where impact is embedded in all investment decisions and impact investing is accessible to everyone (GIIN, 2018). Practitioners and international actors across the public and private sector, such as the CFA, World Bank, or EU, agree that investments which disregard social and environmental impact will simply become unacceptable in the foreseeable future (CFA Institute, 2017; European Comission, 2018; GIIN, 2018; Maimbo & Zadek, 2017).

Pillar	Developments	Challenges
Intermediation	Positive developments around intermediation: • Impact focused investment banks, clubs, funds, and products allow more effective capital allocation • Industry defining funds serve as role model for: ➢ Addressing social & environmental challenges ➢ Channelling risk-taking capital into catalytic finance structures ➢ Attracting existing intermediaries into impact investing ➢ Creating financial products to increase accessibility • Robust and diverse set of impact investing funds across all impact themes, geographies, and asset classes • Demonstrated success of generating impact alongside financial returns through large-scale vehicles	Intermediation lacks behind in critical areas: • Facilitation of impact deals, structuring capital, generating aggregate opportunities for large-scale investors • Development of sizable investment products beyond microfinance and renewable energy • Promotion of blended finance vehicles to leverage risk-tolerant capital and commercial investors • Inclusion of retail investors by providing options to invest retirement funds, savings, and other capital for positive impact
Infrastructure	Infrastructure developments crucial for improvements in impact investing: • Wide range of impact measurement tools and resources, some contribute to greater standardisation • Policy and regulatory changes • Development of Global Impact Investing Network to accelerate industry • Integration of social and environmental factors into economic and finance theory • Development of risk assessment tools for impact	Impact investing only gained wide recognition in some financial and philanthropic circles: • Lack of awareness and profound understanding in broader population • Misconceptions around true possibilities and realities of impact investing persist • Large-scale educational challenge • Industry standards to assess and benchmark impact • Lack of advocacy platforms to engage various regulatory stakeholders
Absorptive Capacity	Development of sufficient and high-quality investment opportunities: • Emergence of a wide range of accelerators, incubators, and specialised consultancies • Support social purpose organisations providing scalable solutions to social and environmental challenges	Persisting challenges related to absorptive capacity: • Many high potential entrepreneurs lack financial understanding around capital needs, investment processes, growth planning, general financial management • Scarcity of high-quality investment opportunities with track records constrain growth of impact investing industry

Table 2: Impact Investing Development So Far. Source: Own depiction, based on GIIN (2018).

Drawing on the evolution of other movements and industries in the financial sector such as microfinance, PE, venture capital (VC), hedge funds and green bonds, research conducted by the GIIN (2018) identified three priority areas and six categories for actions needed to successfully scale impact investing (Figure 8).

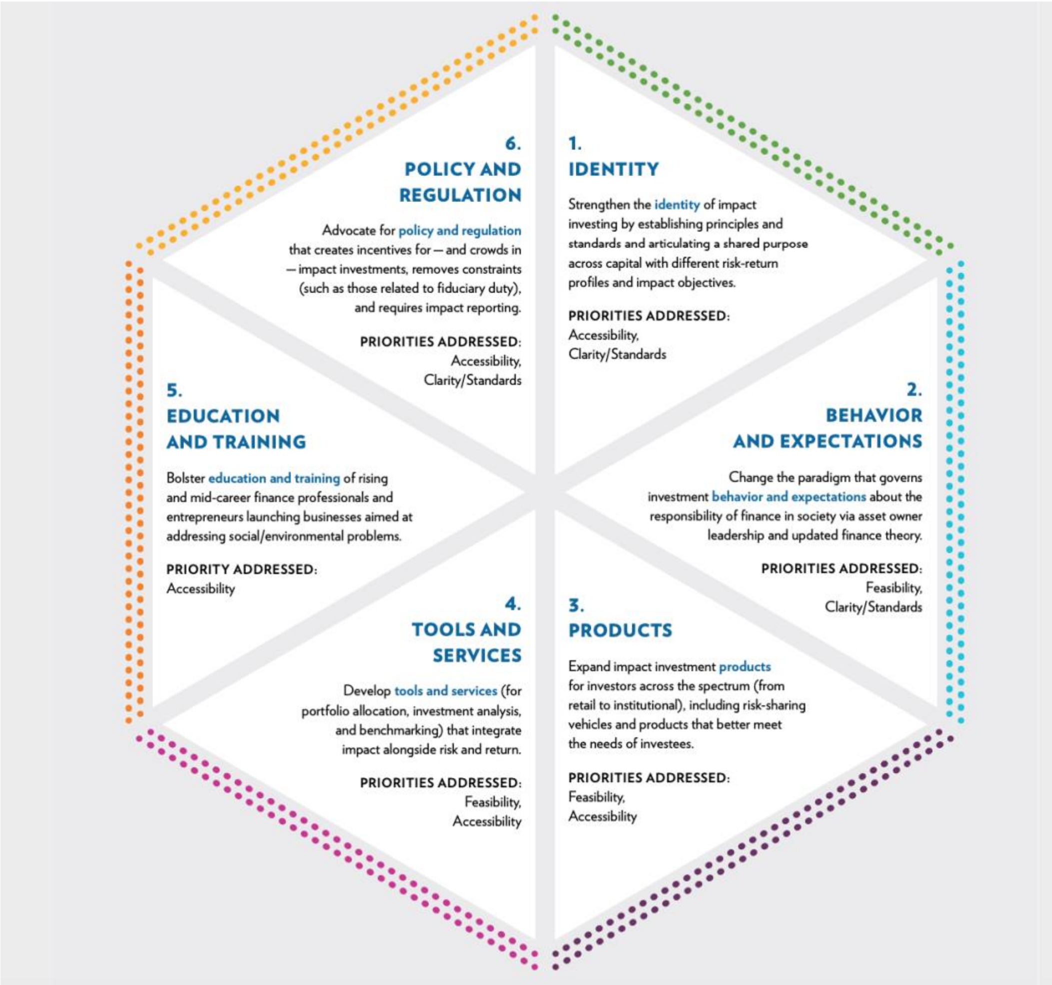


Figure 8: Scaling Impact Investing. Source: Adopted from GIIN (2018).

3.1.3 Impact Investing Market Size

Given the considerable uncertainty about the size of the impact investing market, widely cited estimates range from \$222.1 billion (GIIN, 2018) to \$1.3 trillion (UNPRI, 2018). While estimates based on investor surveys might not capture the full size of the market and are exposed to subjectivity of participants and their interpretation of the impact investing definition, the OPIM provide a basis for clearer estimates of the market size (IFC, 2019a). Based on the three distinctive attributes of impact investing, the IFC (IFC, 2019a) identified different types of investors which might meet the definition of impact investors and large asset classes which might be considered impact investments (Table 3).

Asset Pool	AuM US$ billion	Market(s) of Operation	Defining Attributes of Impact Investing INTENT for social or environmental impact	Credibly established CONTRIBUTION to the achievement of impact	MEASUREMENT of improvements in social or environmental outcomes
Outstanding Private Sector Operations Portfolio of 25 HIPSO Signatory DFIs	$742	Private	YES, the investor has an explicit mandate to promote social and economic impact	YES, insofar as the investor can: (a) change the investee's cost of capital, (b) transfer knowledge or technology to investees, or (c) exert influence that induces investees to improve relevant outputs or processes	YES, the investor uses indicators to assess whether the investment contributes to improvement
Non-Treasury Assets of 81 Development Banks	$3,083				
Private Investment Funds with Intent for and Measurement of Impact	$71				
Green and Social Bonds Outstanding	$456	Private and Public	POSSIBLY, one might purchase the product with intent to create social or environmental value The manager's marketing materials may emphasize "sustainable" or "responsible" investment, rather than "impact" Alternatively, one might purchase the product with a desire to gain (or reduce) exposure to ESG risk factors		POSSIBLY, to the extent indicators are reported by investees
ESG Integration Strategies	$10,369			NO, particularly in public portfolios, strategies are unlikely to (a) change investee's cost of capital in the presence of other investors indifferent to social or environmental impact. Further, limited direct relationship with investees precludes managers from (b) transferring knowledge or (c) exerting influence	
Negative Screening of Securities	$15,023			NO, securities negatively screened may end up being held by those who would prefer to produce less social value	
Corporate Engagement and Shareholder Action	$8,365			UNCERTAIN, given board members' fiduciary duty of obedience to shareholders who are indifferent to social value	YES, through reporting on whether engagements and actions are successful

Table 3: Impact Investing Market Size. Source: Adopted from IFC (IFC, 2019a).

Even though there is little information available on direct impact investments, impact investors can invest through private managers or DFI co-investment vehicles to get exposure to private market assets (IFC, 2019a). A number of 417 private investment funds with intent for and measurement of impact hold a total of $71 billion in AuM (IFC, 2019a). These funds allocate a higher proportion of their resources outside Europe and North America and in emerging markets with approximately 8 percent of assets focused on Africa, which is significantly higher than in conventional PE funds (IFC, 2019a). Besides geographical differences, private impact funds also vary based on asset classes. Comparing private impact funds operating in developed and emerging markets, the IFC (IFC, 2019a) identifies a significant discrepancy in the focus on infrastructure investments and suggests that the comparably small proportion of infrastructure investments in emerging markets is more likely due to the lack of bankable projects rather than an absence of capital. The IFC also points out two larger investment classes in public markets, public equites with corporate engagement and shareholder action and green and social bonds aligned with the Green Bond Principles, which offer investors opportunities to invest for impact in public markets and together combine approximately $8,821 billion in AuM (IFC, 2019a). Governments can also operate as impact investors through outstanding private investment portfolios of DFIs or government owned development banks. While investments of DFIs such as the European Investment Bank or the IFC amount to $742 billion, non-sovereign lending by national and regional development banks accounts for $3,083 billion in AuM (IFC, 2019a). Despite the challenges associated with forecasting the growth potential of the impact investing industry, in 2010 O'Donohoe et al. (O'Donohoe, Leijonhufvud, Saltuk, et al., 2010) estimated the size of the impact industry to be between $400 and $1000 billion whereas in 2015 the Global Steering Group for Impact Investing predicted $307 billion invested for impact by 2020 (Sharma, Mohapatra, & Sharma, 2015). Using a top down approach rather than the bottom up approach, the IFC (IFC, 2019a)estimates the potential investor appetite for impact investing across all asset owners seeking commercial returns at $31.5 trillion (Table 4).

	AuM US$, trillions	
Potential Investor Appetite for Impact Investment	Commercial Return	Sub-Commercial Return
Private Markets	8.7	1.5
Private Institutions and Households	5.1	1.5
DFI own account	3.6	-
Public Markets	22.8	3.2
Private Institutions and Households	21.4	3.2
DFI own Account	1.4	-
Total	31.5	4.7

Table 4: Potential Investor Appetite for Impact Investment. Source: Adapted from IFC (IFC, 2019a).

3.1.4 Impact Investing on the Investment Landscape

As outlined in a previous section, the impact investing industry continues to face considerable challenges related to a lack of awareness and a profound understanding in the broader population (GIIN, 2018). The GIIN (GIIN, 2018) points out greater clarity and standardisation of impact investing as a key priority to address prevailing misconceptions and to eliminate confusion among investors. Especially among practitioners in the financial industry, a wide range of terminologies emerged to describe and classify different investment approaches which focus on environmental, social and governance (ESG) related issues (University of Cambridge, 2020). Commonly used terms in this context include ESG integration, sustainable investing, negative screening, best in class ESG screening, positive screening, norms-based investing, exclusions, ethical investing, thematic investing, green investing, and impact first investing(University of Cambridge, 2020).

Except for shareholder engagement, all of these approaches are related to the investor’s portfolio composition. Shareholder engagement, also known as active ownership, describes measures an investor can take beyond portfolio composition to influence the behaviour of investee companies on ESG related matters or to increase disclosure (University of Cambridge, 2020). Nonetheless, based on the definition provided by the IFC (IFC, 2019a), which highlights three distinctive attributes, impact investing must be clearly distinguished from other approaches to investing, such as traditional investing, responsible investing, socially responsible investing and venture philanthropy. Marking the outer boundaries of the investment landscape, traditional or conventional forms of investing, which have no or only limited focus on ESG factors (Bridges Ventures Research, 2012) and venture philanthropy which accepts below market return for high-impact solutions (OECD, 2014), only play a subordinated role in the context of this work. Responsible investing considers the assessment of ESG related risks and opportunities as an integral part of financial analysis, targets competitive returns and leverages shareholder engagement to influence the behaviour of investee companies (IFC, 2019a). Similar to responsible investing, socially responsible investing aims for market rate returns and leverages shareholder engagement but draws on screening or exclusionary approaches to align a portfolio to specific norms and values (Sparkes & Cowton, 2004). With the potential to generate competitive returns and targeted at high-impact solutions, impact investing bridges the gap between socially responsible investing and venture philanthropy (IFC, 2019a).

In Table 5 below, the researchers cluster the commonly used terms to describe ESG related investment approaches into the wider investment categories of responsible investing, socially responsible investing and impact investing.

Category	Approach	Characteristics
Responsible Investing	ESG Integration	• ESG criteria are considered alongside financial factors in investment analysis • Integrates ESG risk/opportunities into traditional financial analysis and decision making • ESG assessment on fundamental level (business model, product strategy, distribution system, R&D, human resource policies)
	Sustainable Investing	• Portfolio composition based on certain definition of sustainability • Definition of sustainability can vary from investor to investor • Similar to ESG Integration if definition of sustainability centred around ESG criteria • Similar to Negative Screening if focused on long-term social or environmental sustainability
Socially Responsible investing	Negative Screening	• Actively screens out investments with negative effects on long term-social or environmental sustainability • Screens out assets from industries such as fossil energy, tar sands and coal, too big to fail financial institutions
	Best in Class ESG / Positive Screening	• Portfolio composition based on defined ESG threshold • Active selection of investments which meet specific ESG ranking hurdle • ESG soring and financial analysis are separated • Selection of best performing investments in both, ESG and financial assessment
	Norms-Based Investing	• Screening based on international standards and norms around ESG factors • Norms and standards provided by international bodies such as UN
	Exclusions	• Systematic exclusion of investments or asset classes based on investor's specific value set • Also referred to as values-based exclusions • Typically excluded areas are weapons, pornography, tobacco, fossil fuels, animal testing
	Ethical Investing	• Systematic exclusion of activities deemed to be unethical or in contrast to certain international declaration, conventions, or voluntary agreements • Depending on investor's specific conception of unethical activities • Exclusions range from alcohol, tobacco, pornography, certain weapons, nuclear power, human rights violations
Impact Investing	Thematic Investing	• Focus on one or more issue areas where social or environmental challenges create growth opportunity for market rate return • Mitigating social and environmental risks, targeting competitive returns and high impact solutions
	Green Investing	• Focused on investments generating positive environmental impact • Fund investments, investments in particular companies, or infrastructure projects • Performance of green investments often dependent on political stability, subsidies, or regulations
	Impact First Investing	• Generation of social and environmental impact of outmost importance to investor • Investments require some financial trade off resulting in below market returns

Table 5: Investment Categories and Approaches. Source: Own depiction, based on University of Cambridge (2020).

Impact Investing Themes

The impact investing landscape offers a wide range of investment themes across various sectors in developed and emerging markets. These themes are closely related to the SDG and are concerned with social and environmental challenges ranging from access to clean water to biodiversity conservation (Oleksiak et al., 2015). For the purpose of this work, the researchers focus only on the impact themes of access to housing, access to quality education, access to health care, financial inclusion, water, sanitation and hygiene, renewable energy and clean technologies, and agriculture. The definition for each of these themes as well as specific characteristics, investment opportunities and links to the SDGs are outlined in Table 6 below.

Theme	Definition	Characteristics	Investment Opportunities	SDG
Affordable Housing	Housing projects, services or infrastructure for which the associated financial costs represent a reasonable proportion of an individual's overall income and do not threaten the enjoyment of other human rights or basic needs	• Affordable housing is crucial for social development and social inequality • Affordable housing is urgently needed for marginalised groups and low-income populations	• Affordable housing projects, low-cost housing, social housing, and inclusive housing • Secondary market areas: Materials, services, training of skilled labour, mortgage and home equity financing	11 Sustainable Cities and Communities 1 No Poverty
Quality Education	Providing access to affordable and quality educational services infrastructure and technologies targeting vulnerable and marginalised groups across all levels of education	• Education is a basic human right • Education is one of the strongest instruments to reduce poverty and to improve health, gender equality, global peace and stability	• Running education facilities, (privately-owned or private-public partnerships) • Technology based educational services • Investments addressing issues of availability, accessibility, quality, and equality in education	4 Quality Education 1 No Poverty 8 Decent Work and Economic Growth
Access to Health Care	Access to health care focuses on high-quality health services, products, and technologies which are accessible, affordable, and measurable and do not create hardship or impoverishment from health costs	• Access to health services and products is a basic human right • Programmes and initiatives targeting safe, affordable and accessible health services and products • Reduce mortality rates, increase life expectancy, contribute to economic development by boosting productivity	• Providing affordable medicine to clinics in developing countries • Building and managing hospitals under a public-private partnership model • R&D related initiatives and research on diseases	3 Good Health and Well-Being 1 No Poverty
Financial Inclusion	Inclusive finance provides financial services such as loans, savings, insurance and other basic financial services to low income clients and SMEs who lack access to banking and related financial services	• About two billion adults worldwide are excluded from formal financial services • Inclusive finance provides access to savings, credit, insurance, remittance and payment services to individuals who would otherwise be excluded	• Microfinance • Small and medium sized enterprise (SME) finance	8 Decent Work and Economic Growth 9 Industry, Innovation and Infrastructure 1 No Poverty
Water, Sanitation & Hygiene	Products and services related to water infrastructure, water technology, water waste and water utilities, with the intention to provide safe and fresh drinking water and basic sanitation to individuals without compromising the quality and sustainability of water resources	• Focused on severe challenges related to water availability and quality. • Shifting water consumption patterns, higher industrial capacity and changing lifestyles accelerate an increase in demand • Intrinsically linked to areas of other impact themes	• Water management, water technologies, water distribution, and water conservation. • Critical infrastructure, efficient technologies, and system architecture in the water and sanitation industry	6 Clean Water and Sanitation 1 No Poverty
Renewable Energy & Clean Technology	Renewable energy & clean technology explicitly excludes coal, gas and nuclear energy and focuses exclusively on energy production from sources that can naturally replenish themselves	• Worldwide, about 840 million people still lack access to electricity • Increase in supply and demand gap for power due to population growth • High correlation between economic growth and access to energy	• Renewable energy, energy efficiency and green buildings • Increase power production, power distribution, increase energy efficiency	7 Affordable and Clean Energy 9 Industry, Innovation and Infrastructure 11 Sustainable Cities and Communities
Agriculture	Sustainable agriculture conserves land, water, and plant and animal genetic resources, and is environmentally non-degrading, technically appropriate, economically viable and socially acceptable	• Increased demand due to growing population, shifting dietary patterns as result of higher income levels, and advances in biofuel technology • Pressure on supply due to growing urbanisation and decreasing arable land • One of most effective strategies to foster economic growth and reduce poverty	• Direct or indirect increase in the capacity for food production. • Food availability, access to greater variety and better nutrition • Higher employment rates, particularly in developing countries	2 Zero Hunger 6 Clean Water and Sanitation 15 Life on Land

Table 6: Impact Investing Themes. Source: Own depiction, based on D. Capital Partners (D. Capital Partners, 2013), *FAO* (FAO, 2014), *McGraw Hill Construction* (McGraw Hill Construction, 2015), *Morriesen* (Morriesen, 2016, 2017), *U.S. Department of Energy* (U.S. Department of Energy, 2015), *UCT GSB* (UCT GSB, 2016), *Unger & Hierninga* (Unger & Hierninga, 2012), *United Nations* (United Nations, 1948, 1990), *UNPRI* (UNPRI, 2018), *World Bank* (2018, 2019), *World Health Organization* (World Health Organization, 2014, 2016).

3.1.6 Impact Investing Market Players

A growing impact investing industry has attracted a wide range of different actors which can be categorised into asset owners, asset managers, demand-side actors, and service providers (Oleksiak et al., 2015). Table 7 below displays specific actors within these four categories.

Impact Investing Market Players			
Asset Owners	Asset Managers	Demand-Side Actors	Service Providers
• High-Net-Worth Individuals (HNWIs)/Families • Corporations • Governments • Employees • Retail Investors • Foundations	• Investment advisors • Fund managers • Family Offices • Foundations • Banks • Corporations • Venture Funds • Impact investment funds/intermediaries • Pension Funds • Sovereign wealth funds • Development Finance Institutions • Government investment programmes	• Corporations • Small and growing businesses • Social enterprises • Cooperatives • Microfinance institutions • Community development finance institutions	• Networks • Standard setting bodies • Consulting firms • Non-governmental organisations • Universities • Capacity development providers • Government programmes

Table 7: Actors in the Impact Investing Industry. Source: Adapted from Harji & Jackson (2012).

These actors follow different impact strategies which may not be primarily focused on impact investing. While some of the actors have a philanthropic background or are linked to governments and public service entities, others lean towards or follow more traditional investment approaches (A. Gianoncelli et al., 2019). Considering the purpose of this work, the researchers focus on the 10 key market players (highlighted in table 8 below) and their critical role in driving the impact investing industry (Table 8).

Market Player	Role within the Impact Investing Industry
Impact investors / social impact funds	• Pioneers of impact investing industry • Screen for innovation and support SEs with commercially viability • Provide high-risk capital and early stage funding • Play catalytic role to create sustainable pipeline for other investors • Explore innovative solutions which tackle pressing social and environmental challenges
Institutional investors	• Manage large pools of capital and have ability to boost impact investing industry • Fiduciary duty prevents them from providing high-risk or first loss capital • Large institutional investors well positioned to play market building role • Ability to catalyse private and public capital and drive development of industry standards
Banks	• Important role in microfinance, loan funds, and impact investing funds • Provide investment vehicles with impact strategies • Develop products, services, and tools which can be leveraged by other investors • Ability to engage in consultancy and field building activities
Asset managers	• Manage substantial amounts of capital for large institutional investors and other investors • Ability to develop products, services and strategies that account for impact • Can play catalytic role by attracting commercial and institutional capital
HNWIs/ family offices	• Hold more than USD 5.9 trillion in AuM and become increasingly interested in impact investing • Ability to channel considerable funds into impact investing industry • Innovative wealth mangers can accelerate development of impact investing industry • Innovative and socially oriented wealth mangers can provide wide range of financial instruments
Corporates	• Can establish corporate social investment (CSI) units with focus on social & environmental impact • CSI units can be structured as corporate or shareholder foundations, corporate social businesses, corporate social investment funds, or corporate social accelerators • Ability to generate social impact by providing financial and non-financial support to SEs
Foundations	• Early adopters of VP approach which is located in close proximity to impact investing • Contribute through engagement, impact measurement, non-financial support • Ability to provide first-loss capital, impact expertise, network • Can play catalytic and market building role (attract capital and strengthen social infrastructure)
Governments / public sector	• In the forefront of providing social services (education, health, other services) • Cross sector collaboration in public-private partnerships • Provide high risk capital to catalyse commercial capital and private resources • Provide rules of the game, share information, channel private capital towards social investment
INGOs	• Extensive knowledge and understanding of local context and broad network of key stakeholders • Represent important partner for all actors in impact investing sphere • Focus on bottom of the pyramid and play critical role in de-risking high-impact investments
DFIs	• Focus on investments which generate economic development in emerging markets • Ability to catalyse investments beyond own resources by attracting commercial capital • DFIs under European DFI association drive development of impact measurement by committing to Operating Principles for Impact Management

Table 8: Key Market Players. Source: Own depiction, based on Barth, Cruz Ferreira, & Miguel (2018), Bolis, West, Sahan, Nash, & Irani (2017), Campden Wealth Ltd & UBS (2019), Case, Kizer, & Pfund (2019), A. Gianoncelli et al. (2019) OECD (2019b), Roza, Heitmann, Serneels, & Boiardi (2018), Savoy, Carter, & Lemma (2016), Wilton (2019).

3.1.7 Impact Measurement, Reporting, Due Diligence & Incentives

The following subsection sheds light on different impact measurements, reporting practices, as well as on impact due diligence processes and incentive structures.

3.1.7.1 Impact Measurement

Generating social returns through impact investments evokes the question of how impacts may be measured and reported on. Other than traditional investments, impact investments include goals that go beyond financial return. This hybridity of social and financial returns cannot be properly captured by traditional finance tools as yet (Brandstetter & Lehner, 2015). The SRI report by Eurosif (2018) states that the lack of definitions and clear metrics is a clear burden to the industry and is co-responsible for emerging concerns around the greenwashing problem. Nevertheless, several systems are in place which attempt to satisfy the need for standardised, industry-wide measurement and metrics. For example, the Social Return on Investment (SROI) approach focuses on the economic cost-benefit calculation. The SROI takes inputs, outputs, outcomes, and impacts identified by stakeholders of an organisation into account. Furthermore, the SROI allocates financial proxy values on the social, economic, and environmental benefits and costs created by an organisation (Arvidson, Lyon, McKay, & Moro, 2010). Other measurement systems are the Impact Reporting and Investment Standards (IRIS) and the Global Impact Investing Rating System (GIIRS) (Brandstetter & Lehner, 2015). While the IRIS system standardise social impact reporting and eases the creation of industry benchmarks by providing taxonomy, the GIIRS applies IRIS definitions and additional data to assign values to investments' social performance (O'Donohoe, Leijonhufvud, & Saltuk, 2010).

Additionally, the IFC performance standards were initiated and developed in cooperation with the World Bank. These standards intend to provide the private sector with guidance on how to identify risks, mitigate these risks, and measure impact as a way of doing sustainable business (International Finance Corporation, 2012). Committing to the assessment and management of environmental and social risks and impacts based on the eight distinct performance standards, investors must ensure compliance with these standards throughout the life span of their investments (International Finance Corporation, 2012)

Whilst these systems aim to address the gap in accessible tools for measurement, they are far from being robust. They neither completely address the risk associated with the generation of impact nor the correlation between parameters of risk and return. According to Brandstetter & Lehner (2015), this creates problems at the portfolio level. Mulgan (2010) argues that considerable staff training is necessary to gain the benefits of measuring social value. He further points out that limitations of data, costs of collecting and analysing the data, and the alignment of mathematical metrics with complex human behaviour pose substantial difficulties and challenges. Moreover, all the metrics outlined above lack the ex-ante point of view and rather focus on the ex-post point of view, once ventures are already established (Brandstetter & Lehner, 2015).

Sandberg et al. (2009) investigate whether standardisation in the SRI market is desirable. First, the authors differentiate between three levels of terminological heterogeneity regarding SRI: the definitional, strategic, and practical level. While they find common ground concerning the definition of what SRI constitutes of, they note discordance on the strategic and practical level. On the strategic level, there is widespread disagreement on how non-financial concerns should be included in the investment process. This disagreement peaks on the practical level, where these strategies translate into actual investment criteria.

Sandberg et al. (2009) raises the question whether standardisations are realistically feasible and desirable. Referring to cultural differences among the actors in the SRI market, the authors are rather pessimistic about whether standardisation in this field can be achieved. While the authors agree that further mainstreaming of SRI is inevitable, they doubt that conceptual and methodological standardisation and homogenisation is the right path to pursue. In contrast, the authors propose to mainstream SRI by including SRI into the conventional language of finance.

To summarise, the standardisation of impact measurements is still subject to academic discourse. Albeit many frameworks exist, they all entail several pitfalls. Additionally, the question is raised whether these standardisations are actually feasible and desirable (Sandberg et al., 2009).

3.1.7.2 Impact Reporting

The lack of suitable impact measurements and metrics closely connects to the lack of rigorous and standardised impact reporting practices. However, increasing globalisation of markets and companies asks for a harmonised, default format CSR reporting, which allows for a uniform understanding of companies' social behaviour (Prado-Lorenzo, Gallego-Alvarez, & Gracia-Sanchez, 2009). In some countries, firms are obliged to report on sustainability (Ioannou & Serafeim, 2017). For example, as of the 1st of January 2009, an directive that amended the Danish Financial Statements Act requires companies to report annually on social responsibility that fulfil two out of three criteria (Ioannou & Serafeim, 2017):

a) total assets more than DKK 143 million,
b) net revenues of DKK 286 million or above
c) average number of full-time employees of 250 or above

The authors conclude that in the case of Denmark, mandatory disclosure regulations did not significantly alter the degree of sustainability reporting by firms. However, apart from Denmark, the authors indeed find a positive economic effect of these regulations on the firms' valuation due to enhanced transparency.

Investigating the relationship between reporting quality and investment efficiency, Biddle et al. (2009) reveal that higher reporting quality directly correlates to less deviation from predicted investment levels and less sensitivity to macro-economic conditions. Since high-quality reporting reduces the information asymmetry between firms and capital providers, their results suggest a reduction in moral hazard and adverse selection problems. Hence, improved reporting practices enhance contractual relationships and improve managerial incentives to refrain from value-destroying activities (Biddle et al., 2009).

One general approach regarding the global standardisation of sustainability reporting is the *Global Reporting Initiative* (GRI). Founded in 1997, the GRI developed a framework for sustainability reporting that supports businesses to communicate their impact concerning climate change, human rights, and corruption. The GRI framework guidelines introduced several performance indicators that include criteria such as energy, biodiversity, and emissions. In 2016, the GRI guidelines were replaced with the GRI Standards, a set of 36 modular standards, which constitute over 120 indicators.

The GRI guidelines have been subject of numerous academic studies. Brown et al. (2009) acknowledge that the GRI founders successfully institutionalised sustainability reporting in companies worldwide in only a few years. Additionally, researchers find that the adoption of GRI reporting is linked to superior environmental performance of companies (Clarkson, Li, Richardson, & Vasvari, 2008a). According to Ioannou & Serafeim (2017), GRI reporting prevents opportunistic behaviour as well as corruption.

On the other hand, Searcy (2012) summarises critics who note that the GRI Guidelines are too general, and the range of indicators is too extensive. Other critics stress that comparability of companies even within the same industry is not guaranteed. They argue that this is rooted in the lack of guidance on how and what to report. (Kolk, 2010; Toppinen & Korhonen-kurki, 2013).

Motives for sustainability reporting are twofold, namely external and internal. External motives for SR can be illuminated from several different theoretical angles. These theoretical approaches reach from legitimacy theory (Suchman, 1995), stakeholder theory (Freeman & McVea, 2001) to accountability theory (Gray, 2001). From the legitimacy theory stance, organisations seek to comply with what is socially considered to be good corporate behaviour by voluntary information disclosure (Suchman, 1995). Different from the legitimacy theory, the accountability theory stresses that information disclosure must be determined on a normative basis to inform its legitimate receptors about relevant corporate activities and impacts (Gray, 2001).

Internal motives for the adoption of sustainability reporting are driven by managers who need relevant and reliable information to support their decisions. Sustainability accounting and reporting provide managers with necessary means and measurements to support their solution to environmental and social business problems (Burritt & Schaltegger, 2010).

Nicholls (2009) summarises that the core question is, *"what is to be measured and reported*?". The author expresses that social sector organisations engage with a wide diversity of resource inputs and generate a wide range of non-comparable outputs. Second, the question emerges *"how to measure what is reported?"*. Nicholls (2009) finds that calculative mechanisms for social value creation are neither standardised nor comparative. In order to tackle the absence of suitable reporting tools, Nicholls (2009) argues in favour of a conceptualisation named "Blended Value Accounting". It draws on the notion of the "Blended Value" introduced by Emerson (2003), which suggests that all organisations create intrinsically connected financial and social value.

Altogether, with the development of the GRI, efforts have been taken towards the standardisation of impact reporting measurements. These efforts are especially important when considering the potential for superior economic and environmental performance gained through proper reporting and disclosure practices (Clarkson et al., 2008a; Ioannou & Serafeim, 2017).

3.1.7.3 Impact Risks and Due Diligence

Besides the considerations of impact or return measurement, the conceptualisation of unique risks related to impact investments need to be illuminated.

In a recent study conducted by Verheyden et al. (2016), the authors compare the performance of a global unscreened universe with a global screened portfolio. The authors use best-in-class ESG data from Sustainalytics over the period 2010-2015. Investigating daily returns of underlying stocks in a portfolio, Verheyden et al. (2016) come to the conclusion that ESG screening indeed lowers the downside risk of stock portfolios.

The studies conducted by Dunn et al. (2018) come to a similar conclusion. The authors develop a statistical framework that discovers a potential link between ESG exposure and risk. It becomes evident that stocks with poor ESG ratings show volatility of 10-15% higher and betas of 3% higher than stocks with higher ESG scores. The authors justify their findings by arguing that ESG-related risks such as environmental damages are hardly quantifiable and, therefore, not entirely incorporated into traditional financial risk models. With particular relevance for pension funds, Dunn et al. (2018) argue in favour of ESG investments, as they tend to capture long-term risks, which may not materialise in the short or medium run.

Godfrey (2005) tackles the question of whether rational, profit-maximising managers should engage in corporate philanthropy from a risk management perspective. He argues that firms can generate positive moral capital with the execution of philanthropic activities. This moral capital functions as insurance-like protection for the firm's relationship-based intangible assets, which in turn increases shareholder wealth. In another study, Oikonomou et al. (2012) investigate the relationship between CSP and financial risk for a sample of US companies between 1992 and 2009. Their findings show that CSP is negatively but weakly related to systematic firm risk. At the same time, socially irresponsible behaviour is positively and strongly associated with financial risk (Oikonomou et al., 2012).

Hornsby & Blumberg (2013) distinguish between six key qualities that help to assess the social risk (Table 9).

Key qualities to assess social risk	Description
Explicit	Determines the social purpose, the approach, and the potential achievements of an organisation. The starting point is to check for the explicitness un terms of clarity, concreteness, and completeness.
Reasoned	Check whether the focus of attention of the impact plan is set on presenting a compelling and well- reasoned theory of change.
Integral	Potential tension may arise within the organisations between impact- and revenue-generating divisions. The generation of impact should, therefore, be an integral part of the organisation's business strategy, operations and revenue model.
Feasible	An analysis regarding the feasibility of the impact plan needs to be conducted. This includes whether the organisation is able to provide with necessary resources, capacity, skills and relevant experience.
Evidenced	Evidences must be provided which support the impact plan's approach to impact generation. This may include track records, research or control groups.
Evidencable	A robust impact measurement system must be in place to track the outcomes and to ensure that possible impact will be evidenced.

Table 9: Key qualities to assess social risk. Source: Hornsby & Blumberg (2013).

In a report published by J.P Morgan (O'Donohoe, Leijonhufvud, & Saltuk, 2010), the authors characterise the risk of impact investments to be similar to that of VC or high yield debt instruments. According to the report, these investments entail several traditional risks such as company risk, country risk, and currency risk. On top of this, impact investments are particularly exposed to certain legal and reputational risks. The report highlights that this becomes especially evident when operating in emerging markets. For example, the report mentions that the legal enforcement of many transactions in emerging markets cannot be guaranteed. Furthermore, O'Donohoe et al. (2010) point out that exiting a venture in those markets can be difficult due to legal and regulatory obstacles. The authors, thus, suggest the installation of local teams that are fluent in the local legal and political framework within which the business will operate.

To accurately detect impact risks and to be able to manage them effectively, risk management procedures need to be adapted. The application of impact due diligence on potential investee companies mainly serves four core functions, which are defined by the GIIN as follows (GIIN, 2020):

1. Impact due diligence functions as a risk management tool
2. It allows for the identification of ways to add value to and improve the impact of an investee.
3. It is supposed to define social or environmental impact, or both, of the business.
4. It serves as a measurement to respond to the expectations of the limited partners.

The Equator Principles (EP) are one framework that supports companies to assess and manage environmental and social risks in projects (Equator Principles, 2020). They were developed by private banks and are partly based on policies and guidelines of the performance standards released by the IFC (Scholtens & Dam, 2007). The implementation of the EP is voluntary (Scholtens & Dam, 2007). The utilisation of these principles shall enhance socially responsible and sound environmental practices and contribute to the objectives of the SDG goals (Equator Principles, 2020). However, studies show that the same professional processes and techniques are used for traditional and impact due diligence (Ormiston, Charlton, Donald, & Seymour, 2015). These processes include meeting fiduciary obligations and analysing investment opportunities appropriately (Ormiston et al., 2015).

Conclusively, ESG-measures, SRI, corporate philanthropy, and impact due diligence can have a risk-mitigating effects. On the other hand, special risks of impact investments must be considered carefully. This is especially important with view on emerging markets.

3.1.7.4 Impact Incentives

Incentive issues, which have been introduced earlier in the context of long- and short-term alignment (Sethi, 2005a) and the quality of reporting (Biddle et al., 2009), generally play a decisive role in the principle-agent theory.

In the following, one must distinguish between the contractual principle – agent relationship of the managers and the pension funds, and the portfolio companies and the pension funds.

By illuminating incentive structures in the PE sphere, the GIIN analyses how the compensation of fund managers can be aligned with social and environmental performance (GIIN, 2011). For example, one fund that was analysed by the GIIN directly links an Impact Score, which is determined by an Impact Audit Committee, to the financial remuneration of the fund manager. Thus, the payment structure of the fund manager includes both a short-term and a long-term component. However, the GIIN stresses that uniformly metrics need to be agreed on in order to ensure the credibility of impact investments as well as the transparency for stakeholders (GIIN, 2011).

Geczy et al. (2019) shed light on the contractual relationship between impact funds and their portfolio companies. Due to the duality in its goals, Geczy et al. (2019) allude that impact investing adds another layer to the already complex contracting problem in the principle-agent relationship. Next to financial side, contracts now need to also account for social-benefit objectives. They find that contracts contain, on the one hand, an operational impact dimension, which allows funds to directly operationalise impact by having the portfolios to measure and report on the impact goal. On the other hand, contracts feature an aspirational impact dimension, which adheres the intention to deliver impact and not to produce negative impact (Geczy et al., 2019).

Ultimately, the authors show that participatory governance (e.g. monitoring or information rights) is exerted to a greater extent by impact funds than by non-impact funds, which manifests itself in form of advisory committees at the fund level and board seats at the portfolio company level.

3.1.8 Portfolio Theory and Impact Investing

In this sub-section, the researchers illuminate impact investments in the context of portfolio theories as well as the specific return characters of impact investing.

3.1.8.1 Portfolio Theory

The portfolio theory (PT) established by Markowitz (1952) is a framework for portfolio creation that maximises expected return for a given level of risk. A key pillar of this theory is diversification. According to Markowitz' (1952) PT, ruling out investments due to social and ethical considerations would reduce the number of assets available and thereby reduce the effect of diversification. For example, by comparing the efficient frontier of a restricted and an unrestricted portfolio, Le Maux & Le Saout (2004) discovered that the efficient frontier experiences a downward shift when the investment universe is restricted.

Contrarily, Hoepner (2010) alludes that the inclusion of ESG criteria into investment processes does not necessarily lead to a loss of diversification. For his analysis, the author classified three main drivers of portfolio diversification: (1) the number of stocks, (2) correlation of stocks, and (3) average specific risk of stocks. His findings prove that, although applying ESG criteria is likely to worsen portfolio diversification through the first and the second driver, portfolio diversification is enhanced through a reduction of the average specific risks of stocks. According to Hoepner, the overall portfolio diversification of an ESG best-in-class fund might in sum be superior to that of otherwise identical conventional funds. Furthermore, Verheyden et al. (2016) discover that in three out of four tested scenarios, ESG screening has a net positive impact on portfolio diversification.

In light of these findings, it is critically argued whether the performance measurements and the understanding of market efficiency based on the theories of Markowitz (1952) are still suitable when assessing impact investment opportunities. For instance, Wood et al. (2013) state that investors may be constrained when assessing impact investing solely by indicators such as risk and return.

Going one step further, Root Capital (2017) extends the traditional risk-return space by the impact dimension. In this three-dimensional space, it is possible to draw a so-called “efficient impact-financial frontier”. This frontier provides the possibility to consider the risk, return, and impact of a portfolio in an integrated way. To calculate the efficient impact-financial frontier, the expected impact needs to be defined and related to expected financial performance. Furthermore, an impact as well as a financial hurdle rate for individual investments needs so be set up. Ultimately, integrated impact and financial goals need to be defined for the entire portfolio.

Ormiston et al. (2015) state that the decision to include impact investments will solely be driven by the expected impact on the risk and reward characteristics of the overall portfolio. According to Ormiston et al. (2015), impact investments represent a distinct asset class and thereby add another dimension to the portfolio diversification.

Ultimately, Saltuk (2012) enriches the traditional view on PT by adding the impact dimension into the risk-return space.

3.1.8.2 Impact-Returns

The extent to which SRI and impact investments can create return alongside their social objectives is subject to a controversial debate in academic literature. Several studies exist, which measure returns of SRI funds, impact investments, or philanthropic investments and compare them with returns of traditional investments. On the one hand, some academics acknowledge the positive effect of SRI on returns. According to these authors, impact and sufficient return can coincide without sacrificing one for the other. Hamilton et al. (1993) compare the performance of 32 SRI funds and 320 randomly selected non-SRI funds. The authors reveal that the performance of SRI funds is not statistically different from the performance of non-SRI funds. These findings suggest that SRI funds at least do not underperform when compared to their traditional counterparts. In a more recent study, Eccles et al. (2014) investigate two samples of 90 US companies each. The first sample consists of companies that are classified as High Sustainability (HS), and the second sample consists of companies classified as Low Sustainability (LS). The authors assign these classifications depending on whether distinct ESG measurements are in place or not. The authors report significantly higher returns in both stock market and accounting performance for HS companies compared to their LS counterparts.

In their performance analysis of impact investing, Viviani & Maurel (2019) discover two factors that contribute to the value creation of impact investments. First, the authors state that the hybridity of financial and social returns does create value due to the innovative and entrepreneurial approaches that are necessary to achieve them simultaneously. Furthermore, the hybridity can create value due to its coinsurance or diversification effect (Viviani & Maurel, 2019). Second, the authors refer to reduced agency costs due to the reciprocal relationship between the impact investor and its investee.

On the other hand, some academics question the ability of impact investments to be able to generate high returns alongside impact. Documenting the ex-post financial returns earned by impact VC funds, Barber et al. (2019) reveal that traditional VC funds financially outperform their impact counterparts by 4.7 ppts. Another example is presented by Hong & Kacperczyk (2009), who discover that so-called sin stocks have higher expected returns than otherwise comparable stocks. Institutional investors such as pension funds, therefore, pay a financial cost as they need to abstain from these stocks due to social constraints. Geczy & Stambaugh (2005) support these findings. The authors focus on the diversification costs of an investor who invests solely in SRI funds for the period 1963-2001. Their analysis reveals severe financial costs, which are caused by SRI constraints imposed on mean-variance optimising investors. Furthermore, screening out above mentioned sin stocks further increases the costs due to the SRI constraint. Additionally, Renneboog et al. (2008) investigate the question of whether investors pay a price for investing in SRI funds or whether they obtain superior returns. Their studies show that average SRI funds in the US, the UK, and most European and Asia-Pacific countries fall short compared to domestic benchmarks. Hence, investors pay a price for ethics by sacrificing risk-adjusted returns (Renneboog et al., 2008). Similar to Geczy & Stambaugh (2005), Renneboog et al. (2008) analyse that the exclusion of stocks through SRI screenings hampers risk-return optimisations, prevents fund managers from selecting under-priced stocks and, thus, leads to the underperformance of SRI funds.

Conclusively, the relationship between returns and impact is still blurry. This stance is further supported by the fact that meta-analyses on this field of research have not reached unanimous consensus either (Friede, Busch, & Bassen, 2015; Margolis, Elfenbein, & Walsh, 2007).

3.1.9 Innovative Financing

Impact investors invest in a broad range of SEs which operate across various geographies and market sectors. However, conventional financial instruments, predominantly traditional forms of equity and private debt, are neither suitable to accommodate for the funding needs of a wide range of SEs, nor adequate to meet the objectives of different types of investors (Oleksiak et al., 2015). Consequently, many sources of investment capital remain untapped, available resources are not deployed in the most efficient manner, and SEs are still confronted with high cost of capital (Huppé & Silva, 2013). Innovative financing offers a variety of opportunities to align investor objectives and financing needs of SEs (Alessia Gianoncelli & Boiardi, 2017; Oleksiak et al., 2015).

Looking beyond traditional forms of equity and debt, innovative financing combines elements of various financial instruments and brings together actors with different risk, return, and impact profiles (Alessia Gianoncelli & Boiardi, 2017). Tailoring financial solutions to the financing needs of SEs is crucial to mitigate the risk of failure, both from an impact and financial perspective, (EVPA Knowledge Centre, 2018; Varga & Hayday, 2016). Innovative financing offers a variety of opportunities to avoid a misalignment between the investor's financial objectives and the SE's impact strategy (Achleitner, Heinecke, Noble, Schöning, & Spiess-Knafl, 2011; Oleksiak et al., 2015) and to utilise available resources in an efficient and effective way (Alessia Gianoncelli & Boiardi, 2017). However, Gianoncelli & Boiardi (2017) also highlight some of the challenges of hybrid finance such as higher transaction costs associated with the structuring process as well as difficulties in aligning the objectives of different actors.

In the following section, the researchers point out some of the currently available innovative financing instruments, structures, and mechanisms, discuss ways to mitigate risks through innovative financing, and highlight the role of public-private partnerships (PPPs).

3.1.9.1 Innovative Financing Instruments

Impact investors must select the appropriate financial instruments to meet their specific preferences while accommodating for the financing needs of SEs. As different financial instruments carry different characteristics, impact investors need to consider several criteria, such as future cash flows, riskiness of the underlying business, ownership structure, and exit strategy, when designing innovative financing instruments (Alessia Gianoncelli & Boiardi, 2017). In their core, these instruments build on traditional forms of debt, equity. However, in recent years, impact investors have recognised the importance of philanthropic and public capital (Alessia Gianoncelli & Boiardi, 2017). Adding grants to the impact investing toolkit, these actors have the ability to reduce risks and to catalyse mainstream capital (C. H. Clark, Emerson, & Thornley, 2013). Although, public funders and philanthropic investors focus primarily on generating social and environmental impact, participating in the financial success of SEs and recycling recovered resources for other investments becomes increasingly compelling to them (Armeni & Ferreyra de Bone, 2017).

In Table 10, the researchers outlined some of the currently available innovative financing instruments across the debt, equity, and grant continuum.

Type	Instruments	Characteristics
Debt Instruments	Revenue-based loans: • Straight revenue loans • Convertible loans • Subordinated debt	• Higher flexibility and levels of risks, suited for financially sustainable SEs • Periodic payments based on percentage of revenue, profit, cash flow or another financial indicator up to predefined multiple • Less reliant on collateral, flexible repayment schedules, honeymoon or grace periods, enhancements through royalties, options to convert to equity • Increased downside risk, but higher upside potential
Equity Instruments	Revenue-based equity: • End-of-period equity redemptions • Gradual equity redemptions • Percentage-based Dividends	• Include predetermined liquidation mechanisms such as redemptions or mandatory dividends based on revenue, cash flow, or profit (alternative exit options) • Include mandatory periodic repurchase of shares at predefined multiple of initial share price (based on revenue or one time/gradual repurchase after recapitalisation) • Mitigate risks of liquidation and reduce risk of complete loss in case for investor • Offer flexibility to SEs in terms of grace periods for low revenue periods • Provide significant upside potential in case SE reaches scale and financial viability
Grant Instruments	Recoverable grants	• Allow investors to recover in case SE becomes financially sustainable or fails to deliver predetermined impact milestones • Based on preference of investor, equipped with a recovery or 'do not pay for success' option • Provides high-risk capital to early stage SEs and allows to build track record

Table 10: Innovative Financing Instruments. Source: Own depiction, based on Alessia Gianoncelli & Boiardi (2017).

3.1.9.2 Innovative Financing Vehicles

According to Wilson (2014) there is a compelling need for innovative financing vehicles that use a combination of different financial instruments to meet the needs of various types of investors and SEs. Typically managed by impact investors who act as financial intermediaries (Alessia Gianoncelli & Boiardi, 2017), innovative financing vehicles are funds which combine resources from various actors with different risk return profiles and allow for more efficient financial and non-financial support of SEs (Alessia Gianoncelli & Boiardi, 2017).

Not only pooling resources and expertise, but also combining impact strategies of different types of actors, such as public funders, philanthropic funders and impact investors, the innovative financing vehicle develops a new, independent impact strategy on the fund level, which might differ from those of the actors involved (Alessia Gianoncelli & Boiardi, 2017). At early stages, SEs which have the potential to become self-sustainable often face difficulties to attract capital from public or philanthropic sources as well as impact and more commercial investors. Innovative financing vehicles aim to address this funding gap. With innovative funds, SEs only have to deal with one counterparty and gain access to the most suitable mix of financial and non-financial support, while investors benefit from specialisation of capital and a split conducted at the fund level which satisfies their specific risk-return profiles (Alessia Gianoncelli & Boiardi, 2017).

3.1.9.3 Innovative Financing Mechanisms

Structured on a deal level, innovative financing mechanisms are financing schemes developed to attract resources from different actors by de-risking an investment in the context of financial or impact targets (Alessia Gianoncelli & Boiardi, 2017). Innovative financing mechanisms combine a broad range of actors and can be structured as outcomes-based mechanism, guarantee scheme, or solidarity-saving scheme.

Outcome-based mechanisms are contracts which aim to address specific societal challenges in an innovative way. Pulling in public entities, philanthropies and commercial investors, a risk-taking social investor finances the contract and de-risks the investment for these actors (Alessia Gianoncelli & Boiardi, 2017) Reducing the impact risk for outcomes-payers such as public entities and philanthropic actors, the risk-taking investors recovers the initial investment and a surplus only in case a predetermined social impact is generated. Some of the commonly used outcomes-based mechanisms are Social Impact Bonds, Development Impact Bonds, and Social Success Notes (Table 11).

Outcomes-Based Mechanisms	
Social Impact Bond	• Contracts between public entities and social investor • Investor is repaid when predefined outcomes are achieved
Development Impact Bond	• Contracts between philanthropic actor / development aid provider and social investor • Investor is repaid when predefined outcomes are achieved
Social Success Note	• Specific donor (foundations, governments etc.) makes investments more attractive to commercial investors • Investors provides concessionary/below market interest loans • Investor receives premium in case outcome targets are met • SE can also receive premium to effectively lower cost of capital • Allow for significant leverage as commercial investor provides financing and donor only pays for outcome

Table 11: Outcomes-Based Mechanisms. Source: Own depiction, based on Alessia Gianoncelli & Boiardi (2017).

Guarantee schemes are another innovative financing mechanism to de-risk an investment. By promising to assume the debt obligation of a SE in case of default, the guarantor can catalyse resources from various types of investors (Alessia Gianoncelli & Boiardi, 2017). While both mechanisms de-risk an investment, outcomes-based mechanisms come into effect in case a SE achieves a predetermined outcome, whereas a guarantee covers the losses in case the SE defaults. Solidarity-savings schemes, such as company-specific employee retirement plans or corporate savings plans for employees, allow retail investors to enter the impact investing sphere by channelling their savings to SEs (Alessia Gianoncelli & Boiardi, 2017).

3.1.9.4 Innovative Financing & Risk Mitigation

Drawing on the innovative financial instruments, vehicles and mechanisms outlined above, investors can mitigate various types of risks, including impact risk, early stage risk, scalability risk, manager risk, transaction cost risk, liquidity risk, and exit risk (Bridges Ventures, 2014; Huppé & Silva, 2013; ImpactAssets, 2011; Oleksiak et al., 2015). Impact risk covers the risk associated with not achieving a desired social or environmental impact or even creating negative impacts (Bridges Ventures, 2014). Early stage risk refers to the risks associated with the early development stages of a SE which has not yet proven their business model (Saltuk, 2012). Scalability risks include the risks that a SE fails to reach the scale required to deliver the desired financial returns and impact (Huppé & Silva, 2013). The lack of track records which prove the ability of fund or managers to execute impact focused investment strategies that create financial returns is often referred to as manager risk (ImpactAssets, 2011). As a result of small deal sizes, transaction cost risks describe the mismatch between time and resources an investor spends on structuring and managing an investment and the financial or social impact generated (Bridges Ventures, 2014). Due to the nature of impact investments, investors are confronted with risks related to the liquidation of an investment when necessary. Referred to as liquidity risk, this risk is often a legitimate concern associated with impact investments (ImpactAssets, 2011). While exit risks are less of a concern in developed markets, investors operating in emerging, especially in frontier markets need to be aware of considerable exit risks related to impact investments (ImpactAssets, 2011).

3.1.9.5 The Role of Public-Private-Partnerships

Many of the social and environmental challenges targeted by impact investors are closely related to public goods. Therefore, PPPs are worth mentioning when speaking of innovative financing. PPPs are agreements between public and private entities to supply infrastructure and services that are traditionally provided by governments (Engel, Fischer, & Galetovic, 2007; Osborne, 2000; Yescombe, 2002, 2011). These agreements can range from management or service contracts to a full privatisation or divesture. Blending public and private sector resources, innovative models of PPPs allow governments to provide better quality services and play a critical role in development finance (Grinishankar, 2009). Furthermore, public private partnerships can alleviate the development funding gap in emerging markets by de-risking investments and channelling private resources towards projects and geographies that would otherwise not be attractive to commercial investors (Grinishankar, 2009). Leveraging innovative financing instruments, vehicles, and mechanisms, PPPs not only turn impact projects into commercially viable ones, they also enhance the pool of resources available to target social and environmental challenges (Grinishankar, 2009).

3.2 Pension Funds as Institutional Investors

This sub section of the literature review sheds light on the unique characteristics of pension funds as a specific sub-category of institutional investors, followed by an assessment of the role institutional investors and pension funds play within the impact investing sphere. With a specific focus on institutional investors and pension funds, this sub section displays the role of the regulatory framework and fiduciary duty as well as the consumer demand for sustainable investment in general.

A pension fund pools monetary contributions of pension plans, invests the proceeds on behalf of the employees, and distributes them as retirement income. The portfolio of a pension fund is characterised by the long duration of its liabilities and, thus, by its long-term investment horizon (PensionEurope, 2019)(see Appendix 9.1.1 for an overview of the DPF system).

Over the past years, institutional investors have increasingly invested in the alternative investment space. For example, the OECD survey among pension funds (OECD, 2019a) shows that funds, also in Denmark, have substituted equity and fixed income in favour of alternative investment exposure. The current interest in these asset classes is mainly driven by the diversification benefits they offer (OECD, 2019a). This diversification effect can be rooted in the typically low correlation with traditional investments (Stalebrink, 2016) However, the authors report that the funds' propensity to utilise alternative investments is constrained by information asymmetries, as PE funds do not disclose their investments strategies (Stalebrink, 2016).

Institutional investors are of utmost importance for the development of the impact investing market. For example, Wood et al. (2013) reason that institutional investors may boost the growth of the impact investing market by providing significant sums of investment capital. The provision of this capital can legitimate the impact investing sphere and thereby attract additional capital from asset managers, service providers, and other investors (Wood et al., 2013). The SRI report of Eurosif (2018) stresses the fundamental importance of institutional investors for regulators. The regulators hope that these investors fill the investment gap of approximately €180 billion every year, so that the 2030 European Commission's climate targets can still be accomplished.

Following the same line of argumentation, Dyck et al. (2019) confirm that institutional investors can improve the environmental and social (E&S) performances of firms. Additionally, they conclude that especially institutional investors located in countries with superior levels of E&S standards tend to influence their portfolio firms with respect to E&S performance positively.

By nature, pension funds have a long-term investment horizon. Hence, pension funds must carefully track the long-term survival and growth of corporates in which they are invested (Sethi, 2005a). However, Sethi (2005) alludes that the short-term incentives prevailing in financial markets are not aligned with the long-term perspective of pension funds. For example, the short-term interests of financial intermediaries prevent them from acting in the best interest of long-term investors, such as pension funds (Sethi, 2005a). Therefore, pension funds themselves need to encourage portfolio companies to consider the long-term impact of their operations in terms of environment, sustainability, and community welfare (Sethi, 2005a).

Due to the vital role pension funds can play for the emergence of industry, the researchers decide to illuminate industry emergence theory from an institutional perspective in greater detail. Therefore, the theory section of this study is enriched by an extensive overview of this literature.

3.2.1 Regulatory Framework & Fiduciary Duty

When investigating the opportunities for pension funds to adapt impact investments, the unique legal and regulatory environment in which pension funds operate must be considered. For example, the fiduciary duty of pension funds obliges them to act solely in the beneficiaries' best interest (Richardson, 2007). Furthermore, the exercise of due care, generally referred to as "prudent man rule", is paramount (Sandberg, 2011).

Representatives of the neoliberalism argue that the only responsibility of a business is to generate money while conforming to basic rules is embedded in law and ethical custom (Milton Friedman, 1970). In accordance with the fiduciary duty consideration, Friedman (1970) points out that a manager's only responsibility is to increase the profits of his agents. Neoclassical considerations of seeking nothing but maximum returns prevent a vast amount of institutional investors from investing in socially responsible investments (Sandberg, 2011).

Although financial performance may never be subordinated to social objectives, Wood et al. (2013) find that current interpretations of fiduciary duty do not explicitly forbid impact investment. As long as social and environmental risk factors also influence long-term financial performance, fiduciary duty allows the inclusion of these factors in the decision-making process (Sethi, 2005a).

Defining a legal framework, Freshfields Bruckhaus Deringer (2005) open the door for institutional investors to include ESG factors in their investment decisions without a breach of their fiduciary duty.

First, Freshfields Bruckhaus Deringer (2005) contend that the integration of ESG considerations is obligatory when such concerns have a material impact on financial performance or valuation.

Second, the selection of investments based on their ESG performance is obligatory when unanimous support among the beneficiaries in favour of such investments can be assumed (Freshfields Bruckhaus Deringer, 2005).

Third, ESG characteristics can play a decisive role without a breach of fiduciary duty, given that the analysis of financial criteria is exhausted and financial characteristics of two investments are otherwise similar (Freshfields Bruckhaus Deringer, 2005).

This new interpretation of fiduciary duty is subject to criticism by academic literature. Tackling the first argument of the Freshfield report, Margolis et al. (2007) find only a small, positive effect on the empirical link between corporate social performance (CSP) and corporate financial performance (CFP). The authors, however, argue that differences in the research methodology and the definition of CSP and CFP may contribute to the result they obtained. In a more recent meta-analysis of more than 2000 empirical studies, Friede et al. (2015) conclude that ESG criteria and CFP are, on average, positively correlated.

Finding a consensus among beneficiaries, the second argument in the Freshfield report, is also subject to critical review. Sandberg (2011) contends, for example, that given the entire population can be considered as beneficiaries of public pension funds, finding unanimous agreement on any ESG issue seems extremely unlikely. The author points out that even if all beneficiaries of a public pension fund would consent that environmental demolition is unethical, it is likely that the extent to which it is perceived to be unethical will remain an individual perception.

By critically illuminating the third argument of the Freshfield report, Sandberg (2011) emphasises that with considering modern portfolio theory, investment decisions should not only be based on expected return and risk, but should regard the correlation of an investment with the remaining portfolio of the investor. Therefore, the author admits that a situation might occur in which financial analysis is exhausted, but that he perceives this to be rather unlikely.

Overall, the legal environment remains unclear, making it difficult for institutional investors to incorporate ESG factors and impact considerations into their portfolio design. Therefore, researchers call for policymakers to set clear rules, which may successfully channel capital toward investments with positive impact. For instance, Wood et al. (2013) divide the possible starting points for policy to intervene in three categories:

1) the supply of capital for impact investing

2) the demand for impact investing capital and availability of investment opportunities

3) and the directing of existing capital toward investments with social benefits.

Concerning the supply side, the authors argue that by setting an appropriate regulatory framework, policies can exert influence on the direction of institutional investments towards impact investing or create co-investment opportunities with the direct participation of the government.

On the demand side, Wood et al., 2013 (p. 83) stress the need for the development of "sound, investable companies, projects, and intermediaries" in order to improve impact-related investment opportunities.

Finally, the authors discuss several policies that can be utilised to direct capital towards investments with social benefits (). Among these policies are tax reliefs for companies that achieve certain social impact objectives as well as policy directives that foster transparency and reporting requirements (Wood et al., 2013).

	Supply Development	Demand Development	Directing Capital
Government Influence	Investment rules and requirement	Enabling “corporate” structures	Taxes, subsidies, reporting requirements and intermediation
Government Direct Participation	Co-investment	Capacity building	Procurement

In December 2019, the European Council and the European Parliament proposed a Regulation on the Establishment of a Framework to Facilitate Sustainable Investment, the so-called “Taxonomy Regulation” (TR). Lillycrop (2020) provides an overview of the TR’s most essential characteristics. The TR attempts to provide firms and investors with a common framework for assessing the degree of their investment’s environmental sustainability. However, the TR is no label on its own. It sets out the criteria that need to be consulted when assessing whether a product or activity is environmentally friendly. Labelling schemes developed by the individual EU Member States need to comply with these criteria.

Apart from that, pension funds need to disclose and report the degree of environmental sustainability for products promoted as environmentally friendly. Financial market participants that offer financial products must disclose and report to what extent underlying investments comply with the criteria for environmental sustainability set out in the TR.

Altogether, the importance of institutional investors to legitimate the impact investment sphere is emphasised. The fiduciary duty is no longer bound to the neoclassical interpretations, as the Freshfield report opens the door for institutional investors to include ESG considerations in their portfolios. This development is further amplified by EU Regulations, which aim to clarify the taxonomy regarding sustainable investments.

3.2.2 Consumer Demand for Sustainable Investing

In order to quantify the awareness of and interest in sustainable investing, Morgan Stanley conducted a survey in 2017 among 1,000 individual investors (Morgan Stanley, 2017). With view on the U.S., sustainable and impact investing has steadily grown at a rate of more than 33% from 2014 to 2016 and reached a level of USD 8.72 trillion. The heightened interest in these investments coincides with consumer preferences tilting away from one-size-fits-all investment approaches towards more individually tailored ones. Especially among Millennials, the perception prevails that their investment decision impacts those issues they care about most. Additionally, the risen consciousness regarding sustainable products in the consumer space has spilled over to the investment space. Therefore, investors increasingly screen for investment opportunities that are in line with their values and interests. Nevertheless, the myth of a trade-off between impact and return persists among investors (Morgan Stanley, 2017). While 53% of all investors believe that they must sacrifice return for sustainability, even 59% of the Millennials are of this opinion.

Although this literature review highlights the unclear picture in terms of SRI performance, mutual funds have recognised the increasing consumer demand and altered investment strategies towards more ESG exposure (Barber et al., 2019).

However, the difference between stated preferences and revealed preferences must be considered when analysing consumer demand. People tend not to put their words into action, which is proved by several behavioural studies (Bauer et al., 2019). After accounting for this hypothetical gap between stated and revealed preferences, Bauer et al. (2019) detect increased demand for sustainable investments among Dutch pensioners. The findings show that a vast majority voted for more sustainability in the investment strategies of their pension savings. Only 9.6% voted against it.

While SRI funds do not necessarily imply the sacrifice of returns, Barber et al. (2019) investigate whether investors in the impact investing sphere sacrifice return for impact. In their analysis, the authors measure the willingness to pay (WTP) for nonpecuniary benefits, i.e. the willingness to trade-off financial returns for impact. Their findings show high levels of WTP for impact, especially among investors with organisational missions and commitment to the PRIs. Additionally, investors who largely depend on political and social goodwill show significantly high levels of WTP for impact. According to Barber et al. (2019), pension funds exhibit a high WTP for impact likewise, which is rooted in their preferences to cause positive economic, political, and social effects. However, they allude that legal constraints such as fiduciary duties have an overall negative impact on the WTP for impact.

3.3 Emerging Markets & Sub-Saharan Africa

Many of the institutional frameworks and structures which build the foundation for thriving financial markets and which investors take for granted in developed countries, are largely absent in emerging markets (Leeds, 2015). In the following section the researchers focus on the characteristics of an emerging market, highlight specific risks and opportunities in these markets, point out the importance of local knowledge, and take a closer look at the emerging region of SSA.

3.3.1 Emerging Market Defined

The concept of emerging markets (World Bank, 2016) was originally established in 1981 by the IFC, a sister organisation of the World Bank and member of the World Bank Group (Biswas, 2018; Talmor & Vasvari, 2017; Vishwanath, 2009). Coining the term emerging markets rather than classifying developing countries as ‘Third World Countries’, the IFC intended to foster private sector investments by creating a more positive image for developing countries (Biswas, 2018). Drawing on the concept of gross national income (GNI) per capita, the IFC traditionally classified all low and middle-income countries as an emerging market. However, economic indicators alone are not always sufficient to define an emerging market (Talmor & Vasvari, 2017). While some countries have made significant progress in the transition from a low-income country towards a more developed country, others have stagnated or even moved in the opposite direction in terms of economic development (Biswas, 2018; Marston, 2011). Despite the very vague definition of an emerging market, the intention was to identify a specific group of developing countries which are achieving rapid economic growth, are pursuing substantial political reforms, and are progressing rapidly towards becoming more integrated into the global economy (Biswas, 2018; Vishwanath, 2009). Vishwanath (Vishwanath, 2009) stresses that recent economic liberalisation, functioning equity and debt markets, and significant potential for capital market investment by foreigners are important factors for investors in emerging markets, even though these markets might have underdeveloped or developing commercial and financial infrastructure. Morgan Stanley Capital International (MSCI) uses strict criteria to classify countries into developed, emerging, and frontier markets (MSCI, 2013). Countries that show a GNI per capita 25 percent above the World Bank's high-income threshold for three consecutive years are classified as developed countries. Emerging markets are open to foreign ownership, allow capital in and outflows, and present sufficient size and liquidity in their financial markets. As a subset of emerging markets, frontier markets refer to countries at significantly lower stages of development (Marston, 2011). These countries are often among the poorest countries in the world (African Development Bank, 2020; Leeds, 2015).

3.3.2 Emerging Market Risks

Institutional frameworks and a supportive ecosystem build the foundation for a strong and successful investment landscape. These frameworks include supportive government policies which do not impede the essential role of the market, confidence-inducing legal frameworks that enforce contracts and protect investors, efficient financial markets that offer affordable access to diverse sources of capital, relatively stable macroeconomic and political conditions, business acceptance of international best practices such as standards for accounting, reporting and corporate governance, and deep pools of skilled human capital (Leeds, 2015). Investors operating in developed markets sometimes take these conditions for granted, yet they are significantly less robust and dependable in many emerging markets. Many emerging markets are characterised by limited government support, weak contract enforcement mechanisms and legal protection for investors, nascent or inaccessible financial markets, low adherence of company owners to international accounting and corporate governance practices as well as a shortage of skilled managers and other key professionals (Leeds, 2015). Hess, Moser & Narayanamurthy (2017) and Talmor & Vasvari (2017) highlight the heterogeneity of emerging markets in terms of pace and direction of development as an additional challenge for investors. Investors operating in in emerging markets often cannot build on the same insights and frameworks as their counterparts in developed markets, due to limited access to quality information, a lack of data, and the absence of intermediaries (Bekaert & Harvey, 2002; Khanna, Palepu, & Sinha, 2005). Acknowledging the uniqueness of emerging markets, researchers have either argued for the extension of existing theories (Cuervo-Cazurra, 2012; Ramamurti, 2009, 2012) (Cuervo-Cazurra, 2012; Ramamurti, 2009, 2012) or for the development of new theories (Guillén & García-Canal, 2009; Luo & Tung, 2007; Mathews, 2006).

Many institutional investors perceive the risks associated with investments in emerging markets as being too high and require high risk premiums to compensate for procedural uncertainties associated with making, managing, and collecting investments in these markets (Talmor & Vasvari, 2017). Based on Porter's competitiveness framework for nations (Porter, 1990; Porter, Delgado, Ketels, & Stern, 2012) these potential risks can be broadly grouped into macroeconomic risks, microeconomic risks, and risks related to the functionality of the local banking system (Hess et al., 2017; Talmor & Vasvari, 2017). Macroeconomic stability in terms of stable political, legal and social institutions (Snowdon & Stonehouse, 2006; Sutton, Short, McKenny, & Namatovu, 2015) sets the context for a nation's entire economy (Porter et al., 2012). Thus, macroeconomic risks are related to political institutions in terms of political risk, regulation policies, corruption, entry barriers, bureaucracy, and taxation policies, legal frameworks including property rights, legal resource and security, and transparency and reliability of courts, monetary policy in the context of capital movement restrictions, inflation, and currency development, as well as the social environment around social peace and the social aspects of law (Hess et al., 2017; Talmor & Vasvari, 2017). As macroeconomic stability alone does not guarantee a successful investment (Snowdon & Stonehouse, 2006), investors must consider certain microeconomic elements, such as the business environment and information sources, that can significantly affect the success of an investment (Porter et al., 2012). Business environment risks subsume risks related to, among others, management capabilities, corporate governance, and intellectual property rights. The lack of adequate disclosure leads to risks related to the availability of reliable information (Hess et al., 2017; Talmor & Vasvari, 2017). Lack of reliable information and understanding of the environment is a key driver of perceived risk related to investments in emerging markets (EMPEA, 2011; Enelamah, Executive, Capital, & Aca, 2012; Wilton, 2010). A well-functioning local banking system is crucial for investors operating in emerging markets. Despite the improvements in the financial sectors of emerging markets, remaining financial infrastructure deficits and low market depth of the banking sector impose substantial risks on investors (Hess et al., 2017).

3.3.3 Emerging Market Opportunities

Emerging markets represent over 80% of the world's population and landmass, yet their financial markets are currently significantly underdeveloped in terms of size and liquidity compared to their counterparts in developed markets (Talmor & Vasvari, 2017). The lack of a well-developed financial sector and a considerable need for capital in emerging markets results in a significant funding gap to finance for instance essential infrastructure projects (Talmor & Vasvari, 2017) or to fund growth-oriented companies (Leeds, 2015) and SEs (GIIN, 2018). Attractive growth drivers such as a growing middle class and a young workforce (Khanna & Palepu, 2010) as well as the lack of access to affordable long-term financing and value-creating business skills in emerging markets present investors with various investment opportunities, especially related to alternative investments (Cumming & Zhang, 2016) such as PE, VC, private debt, angel investment, crowdfunding, and hedge funds (Hess et al., 2017; Leeds, 2015). Addressing the weaknesses and inefficiencies of the financial sector in emerging markets, investors can allocate resources to a wide range of growth-oriented companies across several industries, including basic manufacturing, technology and communications, financial services, tourism, energy, environmental services, infrastructure, health care, education, and real estate. In addition to potentially generating promising returns for investors, investments in in these companies benefit a broad range of stakeholders, since they often serve as the primary source of job and income generation, tax revenues, economic development, and poverty alleviation (Leeds, 2015).

Besides the benefits from diversification and a broader opportunity set (Vishwanath, 2009), strong economic growth and market size, improving macroeconomic conditions, better legal environments, investor protection, and corporate governance, increased receptivity of governments to foreign investors, wider availability of skilled human capital, and the prospects of high returns drive an increasing capital allocation towards emerging markets (Talmor & Vasvari, 2017).

3.3.4 The Role of Local Knowledge

Local knowledge plays a critical role in emerging markets. While the developing local knowledge can result in considerable prospects for investors, the lack of local knowledge might turn a promising investment into a miserable failure (Leeds, 2015; Talmor & Vasvari, 2017). Besides hiring local partners, the most effective way to acquire local knowledge is to operate in emerging markets. Building reputation for success and trust allows investors to build strong relationships with local partners. Leveraging these partnerships helps investors to collect local knowledge and to better identify and assess investments (Talmor & Vasvari, 2017).

3.3.5 Sub-Saharan Africa

The emerging region of SSA refers to all African countries except for those located in North Africa, namely Algeria, Egypt, Libya, Morocco, Sudan, and Tunisia (Talmor & Vasvari, 2017). Strong economic growth, growing macroeconomic stability, enhanced political reforms, and a rising global demand for the region's vast natural resources have made SSA increasingly interesting for investors. The SSA region shows significantly higher average economic growth than OECD member countries, rapidly growing capital inflows, and significant developments in expanding the scale of investment opportunities (African Development Bank, 2020; International Monetary Fund, 2019). However, frontier markets outside South Africa still receive only a small fraction of investments (Talmor & Vasvari, 2017), investors continue to command high risk premia (Salomons & Grootveld, 2003), and significant currency risks remain a key concern of investors in SSA (Leeds, 2015). Nevertheless, the region has made considerate progress in developing domestic capital markets, providing reliable information, implementing regulatory and financial sector reforms, and adopting international best practices and modern technologies. South Africa has successfully risen through the ranks and now belongs to the leading emerging markets (African Development Bank, 2020; Berg & Portillo, 2018; International Monetary Fund, 2019; Mlachila, Park, & Yabara, 2013). Commonly referred to as BRICS, this specific group of emerging countries consist of Brazil, Russia, India, China, and South Africa (Stuenkel, 2015). This development is also reflected in a growing interest in the SSAn region among impact investors. According to the 2015 impact investor survey conducted by J.P. Morgan and the GIIN, a higher capital allocation to SSA than to any other emerging market was highlighted (Saltuk, Idrissi, Bouri, Mudaliar, & Schiff, 2015).

4 Theory

Building upon the literature review in the previous section, the researchers identified five theories and concepts most relevant for the subsequent analysis and discussion of the results. The theory section comprises portfolio theory, principal-agent theory, industry emergence, SWOT analysis, and concepts and frameworks developed by recognised and reputational institutions.

4.1 Portfolio Theory

The origins of Modern Portfolio Theory lie in the studies conducted by Harry Markowitz (1952, 1959). Markowitz developed a model for optimizing the trade-off between risk and return in portfolios. He called this choice between mean and variance the "expected returns – variance of returns" rule (E-V rule). This rule is based on the notion that the investor desires expected return and dislikes variance of returns. Further, Markowitz (1959) differentiates between two main objectives that all investors commonly share:

1. Investors seek for profits
2. Investors are risk averse; they prefer certainty over uncertainty

Consequently to the E-V rule, investors can increase their portfolio's expected return by taking on additional variance and vice versa. Markowitz (1952, p. 79) states that *"The portfolio with maximum expected return is not necessarily the one with minimum variance. There is a rate at which the investor can gain expected return by taking on variance, or reduce variance by giving up expected return."*

4.1.1 Diversification

The foundation of Markowitz' portfolio selection theory is based on the concept of diversification. Markowitz (1952, 1959) alludes that the E-V rule almost always implies that all efficient portfolios are well diversified. Investing in more than one stock, diversification benefits are realised in the form of reduced portfolio volatility. In this context, investors must consider the correlation and covariance of stocks pooled in their portfolio. To utilise the full potential of diversification, the investors must not only invest in a considerable number of different securities but also avoid investing in securities with high mutual covariances (Markowitz, 1952). However, Markowitz (1952) notes that diversification can never eliminate the entire portfolio variance.

4.1.2 The Minimum-Variance Portfolio and the Efficient Frontier

Markowitz (1959) differentiates between "efficient" and "inefficient" portfolios. If a specific portfolio "A" provides higher expected returns than portfolio "B" given a certain level of uncertainty, Portfolio "A" is considered superior to portfolio "B". Hence, portfolio "B" is "inefficient" and can be eliminated from any further consideration. This process continues until all "inefficient" portfolios are eliminated. Markowitz (1959) refers to the remaining portfolios as minimum-variance portfolios, in the sense that there is no other portfolio that offers the same expected return at a lower risk level. Combining all these portfolios in a two-dimensional mean-variance space results in the “efficient frontier” (Markowitz, 1959). Based on this efficient frontier, investors can select portfolios depending on their risk preferences.

4.1.3 A Portfolio Approach to Impact Investing

Saltuk (2012) developed a framework that adds an impact layer to the traditional risk–return dimensions of modern portfolio theory. She further calls on investors to abandon the debate around the return-impact trade-off. Further, Saltuk (2012) argues for investors to identify investments in accordance with their impact theme, to conduct economic analysis on a deal-by-deal basis, and to set risk-adjusted return expectations accordingly. The framework consists of three main dimensions (Table 13).

Dimension	Description
1. Building an impact investment portfolio	1. The target characteristics of the portfolio need to be clarified. 2. Provide the organisational setting and sufficient resources in the form of manpower. 3. Individual impact objectives need to be articulated such as access to education or health care. 4. Financial parameters need to be defined. These include among others suitable instruments, geographical focus, the scalability of the business, and the risk preferences of the investor.
2. A framework for impact, return and risk	1. Target profiles for individual investment opportunities as well as for the entire portfolio need to be mapped in the risk, return and impact space. 2. Based on the expected outcome of an individual investment with respect to risk, return and impact, it is compared with the overall target profile of the portfolio. 3. An individual investment does not necessarily need to fit in the space if the aggregate portfolio is in line with target profiles. 4. The aggregated portfolio is assessed by the consolidation of individual investment and represent the characterisation of the portfolio as a whole.
3. Financial & impact risk management	1. Risks can be compared to the risks of traditional investment in similar sectors or regions. While there also. 2. Cross-market risks needs to be considered such as the early stage of the market, but investors are likely to develop more sophisticated practices to mitigate those risks. 3. Risk management can utilise capital structures, fund intermediaries and compensation-related or covenant-based incentives to mitigate the identified risks. 4. These covenants can also be employed to manage frictions between impact and return that may arise in the course of an investment. These covenants ensure that the impact objectives of an investments are ensured.

Table 13: A Portfolio Approach to Impact Investing. Source: Own depiction, based on Saltuk (2012).

4.2 Principal-Agent Theory

Many studies related to principal-agent theory in the VC or PE sphere have illuminated the relationship between the investors and the entrepreneurs (Kaplan & Strömberg, 2003; Osnabrugge, 2000). For example, O’Donohoe et al. (2010) allude that the risks associated with impact investments in emerging markets can be compared to those inherent VC investments. The authors particularly highlight legal and reputational risks. Principal-agent theory is highly relevant when identifying potential impact investments and partners in emerging markets, especially in the context of the enforceability of contracts.

4.2.1 Agency Costs

One of the most acknowledged academic works on the principal-agent theory is provided by Jensen & Meckling (1979). The authors define the principal-agent relationship as a contractual relationship in which principals delegate decision making authority to agents in order to perform tasks and services on their behalf. This delegation of decision-making power leads to the separation of ownership (the principal) and control (the agent), which is fundamental to the principal-agent theory (Jensen & Meckling, 1979). Due to the assumption of principals and agents maximising personal utilities differently, the agent might not always act in the best interest of the principal (Jensen & Meckling, 1979). Hence, contracts between principals and agents entail "agency costs", which need to be considered. Jensen & Meckling (1979) define agency costs as the sum of:

1. The monitoring expenditures by the principal
2. The bonding expenditures by the agent
3. The residual loss

4.2.2 Agency Problems

The precondition for agency problems can mainly be found in the asymmetry of information, which is manifested in the information advantage of the agent over the principal. This information advantage emerges when the principal is not able to fully observe the behaviour of the agent. Given the information asymmetry and the self-interest of the agent, Eisenhardt (1989) refers to two potential agency problems: *moral hazard* and *adverse selection*.

Moral hazard describes the lack of an agent's adherence to pre-agreed efforts (Eisenhardt, 1989). *Adverse selection* is concerned with the principal's misinterpretation of the agent's ability to perform tasks, as the principal might not be able to fully observe the agent's skills when designing the contract (Eisenhardt, 1989).

4.2.3 Measurements to Mitigate Agency Problems

Several measurements and efforts can be taken to mitigate the risks stemming from information asymmetry. Many researchers have dealt with suitable governance mechanisms to limit the agent's self-serving behaviour.

In the context of moral hazard and adverse selection issues, Eisenhardt (1989) proposes additional information systems such as reporting procedures as well as monitoring mechanisms such as boards of directors, and additional layers of management. Similarly, Fama & Jensen (1983) discuss the role of the board of directors as an information source to monitor opportunistic behaviour by the executives. Alternatively, Fama (1980) considers the role of efficient capital and labour markets as an information mechanism to control the self-interested behaviour of executives. Jensen & Meckling (1979) illuminated the ownership structure of corporations more carefully. They conclude that equity ownership by managers is a powerful measure to align managers' interests with those of the principal. Therefore, outcome-based contracts between principal and agent can reduce managerial opportunism (Jensen & Meckling, 1979).

Osnabrugge (2000) empirically analysed the approaches investors take to mitigate potential agency risks related to investments. Osnabrugge (2000) revealed that investors strongly emphasise ex-ante measures such as pre-investment screenings and due diligence to mitigate these risks.

4.2.4 Agency Problems and Impact Investing

Viviani & Maurel (2019) identify the potential of reciprocity between the different stakeholders involved in an impact investment to create value by mitigating agency problems. They conclude that agency issues mainly arise due to difficulties in impact measurement and the opposition of financially and socially motivated investors. However, with a shared social identity and a common impact goal, moral hazard and other agency costs may be reduced as investee and investor identify with each other's values (Akerlof & Kranton, 2000).

4.3 Industry Emergence

In the following subsection, the researchers shed light on industry emergence theories that are relevant for the analysis of the impact investing industry in the context of the study.

According to Michael Porter (1980), technological innovations, changing consumer needs, or other economic and sociological developments can lead to the emergence of new industries.

Phaal et al. (2011) argue that companies should be aware of the implications these dynamics might have on the distribution of competitive advantages within an industry.

However, technological developments resulting in new applications, business models, and industries steadily increase the complexity of the industry landscape (Phaal et al., 2011). Additionally, MacMillan & Katz (1992) allude that it is challenging to study the emergence of new industries. Most entrepreneurial efforts are obscure or difficult to capture through traditional techniques such as case studies, large-scale surveys, and secondary analyses of commercial and government sets (MacMillan & Katz, 1992). These obstacles have led to a lack of academic attention on emerging industries, which resulted in major gaps in the understanding of the organisational world (Aldrich & Ruef, 2006; Forbes & Kirsch, 2011). This problem in research is further amplified *"by a lack of consensus about how to define the term 'industry'"* (Phaal et al., 2011).

4.3.1 Extension of Schumpeter's Model

Schumpeter's Model of Economic Development was initially published in 1912 in his paper *The Theory of Economic Development.* The most distinctive concepts of his theory are innovation, or "New Combinations", and entrepreneurship. In this context, the entrepreneur's role is to revolutionise patterns of production by exploiting an invention or an untried technology for the production of a new commodity (Schumpeter & Backhaus, 2003). Therefore, the entrepreneur's primary responsibility is to direct existing resources to "New Combinations" (Schumpeter & Backhaus, 2003). The emergence of innovation disrupts the existing economic structure of an industry and replaces it with a new one. Schumpeter (1975) defines this process as *"creative destruction"*.

Hart & Milstein (1999) illuminate Schumpeter's theory from a broader sustainability perspective. The authors see the emerging challenge of global sustainability as a driver for *creative destruction* in the sense of Schumpeter's theories. They developed a framework consisting of two metrics, which allows managers to evaluate the current sustainable performance of their organisations. Hart & Milstein (1999) allude that many technologies developed during the last few decades have led to severe environmental damage and a massive gap between rich and poor. Managers, therefore, need to *"rethink the social and environmental impact of their technologies, products, and processes"* (Hart & Milstein, 1999). The authors differentiate between two prevalent strategies among firms that rethink their current practices:

1. Strategies for Greening
2. Strategies for Sustainability

While "greening" refers to the incremental improvement of existing products and processes, "sustainability" concerns the redefinition and redesign of whole industries. Hart & Milstein (1999) contend that the sustainability-driven creative destruction eventually favours those who follow strategies for sustainability rather than simple "greening" (Table 14).

Strategies	Characteristics
Strategies for Greening	Focus on existing: - Products - Processes - Suppliers - Customers - Shareholders Incremental continuous improvement rationalises industry
Strategies for Sustainability	Focus on emerging: - Technologies - Markets - Partners - Customers - Stakeholders Discontinuous create destruction restructures industry

Table 14: Continuous Improvement versus Creative Destruction. Source: Own depiction based on Hart & Milstein (1999).

In order to achieve a better understanding of sustainability-driven creative destruction, Hart & Milstein (1999) express the need for firms to evaluate business opportunities based on three different types of economies:

1. The developed, *consumer* economy
2. The *emerging* economy
3. The *survival* economy

In the context of the emerging economy, the authors allude that managers must reinvent outdated practices and technologies to achieve long-term success and exploit the economic potential of largely unfulfilled consumer needs. The biggest challenges are to avoid a collision of skyrocketing demand and stable or decreasing natural resources (Hart & Milstein, 1999). Therefore, the authors propose metrics to assess the sustainability of business strategies (Table 15).

Drivers	Metrics	Payoffs 3
Consumer Economy Reducing Corporate Footprint	Pounds of materials per sale Pounds of toxics per sale Greenhouse gas emissions per sale Public acceptance level Corporate reputation	Earnings Growth
Emerging Economy Avoiding Collision	Emissions per sale Water use per sale Land conserved compared to land used Percentage of assets in developing countries Number of jobs created	Sales of Growth Stock Preference
Survival Economy Meeting Basic Needs	Percentage of sales to survival economy Breadth of product availability Social investment compared to wages Small-scale vs. large scale applications Community-enhancing vs. community-degrading	P/E Ratio Share of New Wealth

Table 15: New Metrics, Improved Payoffs. Source: Own depiction based on Hart & Milstein (1999).

4.3.2 Process of industry emergence

Analysing the role of DPFs in the impact investing industry, the researchers apply institutional theories to shed light on how these institutions can influence the emergence of new industries.

Generally, the academic research conducted by Benner & Tripsas (2012) shows that a firm's industry affiliation influences the conceptualisation and framing of nascent products. Additionally, the authors point out that firms are likely to imitate certain features of nascent products from competitors of the same industry affiliation. This is in line with neo-institutional theory, which states that firms within an industry tend to imitate each other due to their exposure to the same institutional environment (DiMaggio & Powell, 1983).

Entrepreneurs, who attempt to introduce novelty inside or outside their organisation, must select the design of their new products carefully and present certain features as old, others as new, and hide others completely (Hargadon & Douglas, 2001). Hargadon & Douglas, 2001, (p. 499) express the need for entrepreneurs and innovation to *"find the balance between novelty and familiarity, between impact and acceptance"*.

Furthermore, the institutional theory also highlights the role of institutions as entrepreneurs and their contribution to an increased legitimisation of emerging industries. David et al. (2013) add to this theory by drawing a comparison between institutional entrepreneurs in mature and emerging fields. Since entrepreneurs in emerging industries face certain challenges that are not present to the same degree in established fields, they must heavily rely on external authorities and social elites (David et al., 2013). These authorities and elites, such as universities, professional societies, and professional journals, shall compensate for the lack of internal expertise in these emerging fields (David et al., 2013). The authors propose that *"in emerging fields, new organizational forms will gain legitimacy if entrepreneurs make salient contradictions between the status quo and broad cultural logics; use established categories of expertise from outside their field to develop solutions to these problems; deemphasize their own self-interest in favor of their clients and the broader social benefits derived from their operations; create distinctiveness and exteriority by collectively defining social codes that distinguish their organizational forms from rivals and provide templates for replication"*(David et al., 2013). David et al. (2013) claim that the gained legitimacy then seizes the opportunities created by changes in regulation and corporate demography.

Sine & Lee (2009) examine to what extent the U.S. wind power industry was driven by environmental social movement organisations. The authors aim to discover the influence of large social movements on entrepreneurial activity and the emergence of new market opportunities. With the example of the U.S. wind power industry, the authors show that norms, values, favourable regulatory structures as well as social and environmental movements give rise to nascent entrepreneurial activity (Sine & Lee, 2009).

4.3.3 Three Stages of Industry Emergence

In their analysis of precedent literature, Gustaffson et al. (2016) identified three stages of industry emergence.

First, the *initial stage* marks the starting point for the industry emergence process. In this stage, the order and structure of existing industries are challenged. While the authors identify technological innovations as main drivers for industry disruption, they also reveal the role of cultural values and the regulatory environment in challenging current industry structures (e.g. Lounsbury et al., 2003; Sine & Lee, 2009). However, in the initial stage, structures of the newly emerging industry have not yet been developed.

The second stage, called the *co-evolutionary stage,* is characterised by the co-evolutionary emergence of organisational, technical, and product or service-related innovations. The high growth potential in the co-evolutionary stage increasingly attracts other firms to enter the industry (Gustaffson et al., 2016). Moreover, this co-evolution process is blurring the lines and boundaries between the roles of private and public actors such as government agencies, institutional investors, or universities. This results in the development of new arrangements and structures ((David et al., 2013; Woolley, 2014). In order to transition from the co-evolutionary stage to the growth stage, Gustaffson et al. (2016) identify the need for industry players to develop and agree on industry-wide standards. These industry-wide standards countervail uncertainties, foster compatibility, and support the establishment of a critical mass of complementary products (Funk, 2012; Katz & Shapiro, 1986; Rosenkopf & Tushman, 1998).

Eventually, an emerging industry enters the third and last stage, the *growth stage*. Distinct from the preceding stages, this stage offers sustainable growth (Phaal et al., 2011). This stage is characterised by the emergence of a dominant design and a widely accepted market or industry category.(Abernathy & Utterback, 1978; Suarez, Grodal, & Gotsopoulos, 2015). Ultimately, quality improves and competitive pressure within the newly formed industry increases (Agarwal & Bayus, 2004; Luo, 2003).

4.4 Industry Entry – SWOT Analysis

In the context of industry entry, the SWOT framework allows the researchers to *"distinguish between the external and internal environment"* (Grant, 2016). It groups the different influential factors on a firm's strategy into four categories: Strengths, Weaknesses, Opportunities, and Threats (Grant, 2016). While the first two factors – strengths and weaknesses – refer to the internal environment of a firm, opportunities, and threats concern the firm's external environment (Grant, 2016). It constitutes as a precursor to strategy definition and managerial decision making and action (Pickton & Wright, 1998). An analysis of the internal environment covers the image, structure, capacity, efficiency, and financial resources of an organisation (Helms & Nixon, 2010). The external environment of an organisation comprises customers, competitors, social changes, and market trends, as well as various environmental, economic, political, and regulatory issues (Helms & Nixon, 2010).

The SWOT framework is subject to different criticism. On the one hand, Evans & Wright (2009) argue in favour of the SWOT analysis as one of the most useful components of strategic planning due to the clear summary statement of an organisation's strategic position. However, the authors stress that it should not be used in isolation but rather be combined with other tools such as Porter's 5-forces. On the other hand, some authors emphasise that strategic planning is more dynamic than the SWOT framework might suggest (Pickton & Wright, 1998). Pickton & Wright (1998, p. 104) state that *"carrying out a SWOT is a 'low-grade' form of analysis which causes some people to question whether it is truly analysis at all"*.

4.5 Industry Standards and Frameworks

Conducting a thorough literature review, the researchers identified several industry standards and frameworks which play a decisive role in their study. Developed by recognised and reliable institutions from practice, these standards and frameworks include the IFC's impact investing framework, the OPIM, the IFC Performance Standards, and the GRI Reporting Standards.

4.5.1 IFC Impact Investing Framework

Based on the three defining attributes, *intent*, *contribution*, and *measurable improvements*, the IFC (IFC, 2019a) developed a framework to validate whether a particular investment qualifies as an impact investment and to strictly differentiate impact investments from other types of investments. The first differentiating factor of impact investments is the investors *intent* to generate positive social and environmental impact alongside a predefined financial return. While impact investors intend to generate measurable positive social and environmental outcomes for specific beneficiaries, they must also consider the unintended negative consequences of their investments (IFC, 2019a). *Contribution* represents the second differentiating factor of impact investments (IFC, 2019a). Describing how the investment makes a difference to a firm or market, an impact investor's contribution consists of additional financial or non-financial resources. These resources or inputs are transformed into outputs, which in turn lead to a positive impact in the form of social and environmental outcomes (IFC, 2019a). Representing an investor's impact narrative, this chain of casualty is displayed in Figure 9 below.

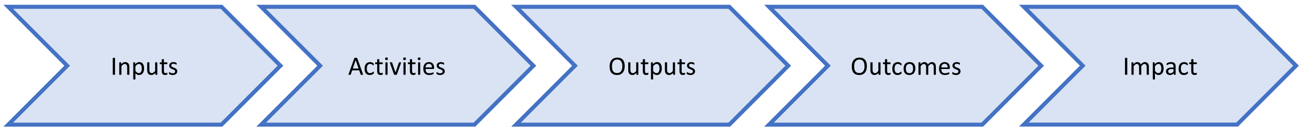


Figure 9: Theory of Change. Source: Own depiction, based on Rogers (2014).

According to the IFC (IFC, 2019a), it is seemingly impossible to attribute impact to a single activity and an individual impact investment might not be the sole cause for the generation of social and environmental outcomes. However, a well-articulated impact narrative allows an investor to point out that the outcomes would not have occurred to the same extent without the investment (IFC, 2019a). As the third and last differentiating factor in IFC's framework (Figure 10), *measurable improvements* demonstrate the investors' commitment to measure improvements in social and environmental outcomes (IFC, 2019a).

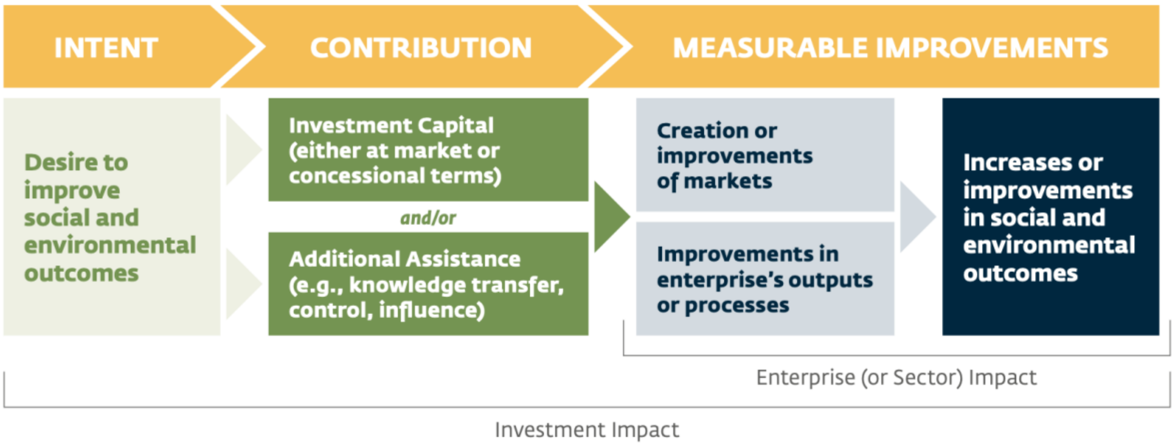


Figure 10: IFC Impact Investing Framework

Based on the IFC's framework, impact investments are only classified as such if the investment approach encompasses all three defining attributes. Some investments might show the investors' intent but lack a credible narrative to describe the investor's contribution. Other investments might have a positive contribution but lack measurable improvements. According to the IFC, these investments classify as value-aligned investments rather than impact investments (IFC, 2019a).

4.5.2 Operating Principles for Impact Management

Drawing on emerging best practices from a variety of actors operating in the impact investing industry, the OPIM are designed to provide guidance for a wide range of institutions and funds (IFC, 2019b). Adopting the OPIM allows investors to screen impact investment opportunities on a fund, corporate, or even asset level (IFC, 2019b). Defining an end-to end process, the OPIM (Figure 11) includes elements of strategy, origination and structuring, portfolio management, exit, and independent verification (IFC, 2019b).

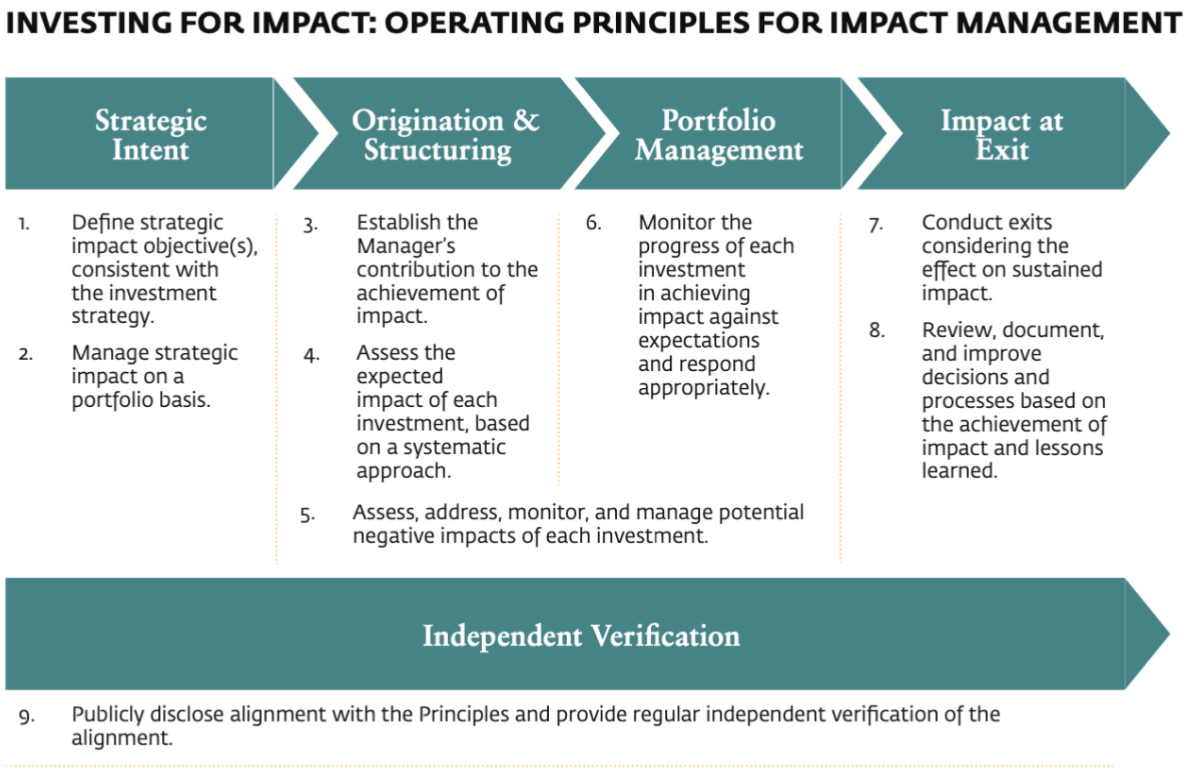


Figure 11: Operating Principles of Impact Management. Source: IFU (2019b).

4.5.3 IFC Performance Standards

The IFC Performance Standards on Environmental and Social Sustainability (Performance Standards) provide investors with a framework for impact management and measurement (International Finance Corporation, 2012). The eight Performance Standards outlined in Table 16 below are designed to guide investors in the process of identifying, avoiding, mitigating, and managing risks and impacts (International Finance Corporation, 2012).

IFC Performance Standards	
Performance Standard 1	Assessment and Management of Environmental and Social Risks and Impacts
Performance Standard 2	Labour and Working Conditions
Performance Standard 3	Resource Efficiency and Pollution Prevention
Performance Standard 4	Community Health, Safety, and Security
Performance Standard 5	Land Acquisition and Involuntary Resettlement
Performance Standard 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources
Performance Standard 7	Indigenous People
Performance Standard 8	Cultural Heritage

Table 16: IFC Performance Standards. Source: Own depiction, based on IFC (2012).

While the first performance standard is concerned with the assessment and management of environmental and social risks and impacts in general, the Performance Standards two to eight are directed at specific issue areas that require particular attention by investors (International Finance Corporation, 2012).

4.5.4 GRI Reporting Standards

According to the GRI sustainability reporting *"is an organization's practice of reporting publicly on its economic, environmental, and/or social impacts, and hence its contribution – positive or negative – towards the goal of sustainable development."* (GRI, 2016)

In order to enhance the comparability of global communication regarding the economic, environmental, and social impacts of organisations, the GRI standards build a common language for organisations and stakeholders (GRI, 2016).

The GRI standards are divided into universal standards and topic-specific standards. While the universal standards focus on general disclosures and management approaches to material topics, topic-specific standards are centred around specific disclosures related to material economic, environmental, and social topics (GRI, 2016).

Adopting the GRI standards, an organisation must follow certain principles related to the content and quality of its reporting (Table 17). Based on four principles that define the reporting content, an organisation must identify key stakeholders, include performance in a wider context of sustainability, reflect material economic, environmental and social impacts, and ensure completeness (GRI, 2016). Further, the organisation must ensure the quality of reporting on the basis of accuracy, balance, clarity, comparability, reliability, and timeliness (GRI, 2016).

Defining Report Content	Defining Report Quality
• Stakeholder Inclusiveness • Sustainability Context • Materiality • Completeness	• Accuracy • Balance • Clarity • Comparability • Reliability • Timeliness

Table 17: GRI Reporting Principles. Source: Own depiction, adapted from GRI (2016).

5 Analysis

Drawing on the distinct concepts and categories developed in the coding process, this section provides an unbiased, neutral, and descriptive presentation of the results. The results are grouped according to the respective SRQs. Furthermore, the researchers distinguish between the views presented by the DPFs, the IFU, and the representatives of the UCT. Citing the interviewees, the researchers used abbreviations in the following manner. For instance, interviewee 1 from pension fund 1 translates into "*I1-P1*".

The interview results related to SRQ 6 are enriched by the analysis of the survey conducted by the researchers. This survey aimed to generate insights into the sentiment of members of DPFs in the context of impact investing. The demographic characteristics of the survey participants can be found in Appendix 9.3.2. An overview of the most relevant results of the survey are displayed in Appendix 9.3.3.

5.1 SRQ-1: Danish Pension Funds Defining Impact Investing

The first SRQ is concerned with how Danish pension funds define the concept of impact investing.

Pension funds struggle with the concept and lack a clear definition of impact investing.

Some pension funds mention individual components of the definition and often refer to practical examples to define impact investing.

> *"In my opinion, impact investing is just making an investment with a purpose. I would say do something better than it was. Regarding the environment, for example if you build a housing community so that they don't use a lot of power or electricity, I would call it an impact investment. I would also call it an impact investment what we are doing down in Holland regarding the flood protection means. This has an impact, meaning that it will give a brighter future to the people who live there.*" (I2-P2, p. 151)

Another pension fund highlights the issues associated with the transition from a narrow definition centred around additionality towards a wider definition of impact investing.

> *"But, again, the original definition of impact is amongst others that there has to be additionality.*" (I8-P6, p. 189)

> *"I think we're going more towards the looser definition of impact. I see that with new funds being launched from various asset managers. A lot of them have impact in their name."* (I8-P6, p. 189)

Some interview partners point out their struggle with the term in the context of their mandate as a pension fund.

> *'It's a bit difficult because we don't actually do impact investments. We struggle a bit with the term I think, because we try to have an impact in all of our investments. And we don't do investments strictly for impact. We are required to provide the best possible returns.*" (I6-P4, p. 173)

When comparing impact investments to more conventional investments, one interview participant misses clear boundaries of what it means to be an impact investor.

"The impact investments definition, which I find difficult. Apparently, other investments have clear definitions that you're able to use and I certainly use that. But my concern would be how to frame it right, how to set up boundaries on what's an impact investment and what's not." (I6-P4, p. 177)

When asked about a universal definition and understanding of impact investing, interview participants from the IFU point out the guidelines and frameworks developed by the IFC (I9-IFU, I10-IFU)

The representatives of the academic stance have a very clear perspective on whether the definition of impact investing is an issue or not. Similar to the IFU, they point to the OPIM as a guideline and an industry standard of what defines an impact investor. Furthermore, they call it an educational challenge and argue that the issue stems from a lack of understanding rather than a lack of definition.

'I would say that the definition issue has, to be completely honest, mostly been decided. And so, it's more of an education issue now. The IFC Operating Principles for Impact Management seems to be the prevailing industry norm now. I think what we're going to see is in the coming months and years that the IFC principles, which are very similar to the UN PRI, become the overarching definition of what it means to be an impact investor." (I12-UCT, p. 222)

Key Findings

- Pension Funds struggle with the concept, term and definition of impact investing
- Pension funds stress their clear mandate of generating returns
- Pension funds highlight a lack of clear boundaries related to the concept of impact investing
- IFU & Academics point to the OPIM as overarching industry norm

Figure 12: Key Findings SRQ1.

5.2 SRQ-2: Impact Investing & Regulation

The second SRQ focusses on how Danish pension funds perceive the role of regulatory authorities related to the definition of impact investing and the concept in general.

Struggling with the definition of impact investing in the context of comparability across investors, many pension funds call out for regulatory bodies to provide uniform taxonomies and standardised guidelines for what defines 'impact'.

"*I think what we want [...] right now is a taxonomy and a description or standardized set of rules of what is defined as impactful, because Pension Fund A defines it in one way, and then another pension fund defines it in another way, then you have no way of comparing it.*" (I1-P1, p. 142)

Pension funds also relate the need for a standardised taxonomy to issues around impact measurement and reporting. In their opinion, the structural setups created by regulations could contribute to increased transparency and comparability (I1-P1). They also point out the determined role of the Danish government in driving the green transition in Denmark and requiring institutional investors to contribute (I1-P1).

Speaking of regulations on a European level, many pension funds refer to the newly launched EU taxonomy and regulation as very useful for the identification of impactful investments and differentiation between green and non-green investments (I8-P6, I4-P3, I2-P2, I3-P2).

> "*On the other hand, from a positive view, I think the EU taxonomy, and the regulations that are being launched, will help set the framework what is sustainable and what isn't. And it will make it easier for us to identify sustainable investment opportunities*." (I8-P6, p. 189)

Despite a strict mandate and regulations, which might make impact investing more difficult (I8-P6), one interview participant highlighted the changing view of the Danish regulatory authority on fiduciary duty (I3-P2).

In the context of regulation, the representatives of the IFU give regulatory bodies a subordinated role among the driving forces of impact investing. Highlighting the difficulties of regulating the impact investing industry and mentioning the EU regulations as one positive contributor, they point out market forces as a more significant positive factor. (I9-IFU, I10-IFU) The representatives of the IFU emphasise their close collaboration with other European DFIs, the Canadian and Australian DFIs, as well as the IFC. Together with the World Bank, the DFI community is constantly raising the bar by, for instance, setting and implementing performance standards (I9-IFU). According to the IFU, their investment decisions are guided by the IFC Performance Standards rather than regulations. One interview participant described it as: *"I think, as a DFI community, we're probably ahead of the regulators at any given time."* (I9-IFU, p. 193)

The representatives of the UCT share a very similar view with the interview participants of the IFU. Pointing to the different taxonomies provided by the United Nations and the EU - the SDG investment taxonomy and the climate investment taxonomy - one UCT interviewee highlights the controversial discussion around how to align these different taxonomies in order to make them incorporable to the investors' decision-making process (I13-UCT). Furthermore, they mention a significant recognition of a top-down approach both within Europe and Africa and the controversial debate around prescribed assets (I13-UCT). Similar to the IFU, the academic interview partners recognise the IFC's definition as the prevailing definition of impact investing (I12-UCT).

Key Findings

- Pension funds require regulatory bodies to provide uniform taxonomies, standardised guidelines, and structural setups for increased transparency and comparability
- One pension fund highlights a changing view on fiduciary duty
- IFU and Academics give regulations a subordinated role to industry standards in driving the impact investing industry

Figure 13: Key findings SRQ 2.

5.3 SRQ-3: Due Diligence, Measurement, Reporting & Incentives

The third SRQ centres around challenges related to impact due diligence, impact measurement and management, impact reporting, and incentive structures in the context of impact investing.

Regarding the due diligence process of impact investments, approaches followed by the IFU and the DPFs are somewhat different.

The IFU's due diligence process starts with the exclusion of investments related to certain industries such as weapons or tobacco (I11-IFU). This step is followed by an impact screening, assessment, and planning (I11-IFU).

The IFU also points out that the key element of their due diligence process is to grasp a good understanding of the local context (I9-IFU). In addition, the due diligence includes thorough background checks of investee companies as well as their suppliers (I10-IFU). Often external consultants are hired to perform these checks.

One challenge of the IFU's approach is that investee companies must be thoroughly examined.

> *"There is the risk that you end up in a partnership, where you cannot really control what the partner does. So, the check of the partner is very important."* (I10-IFU, p. 206).

With respect to impact due diligence, all pension funds do not mention any particular impact due diligence process but rather perform some sort of ESG screening or active ownership. The process of ESG risk assessment is limited to qualitative methods (I7-P5, I6-P4).

I7-P5 describes the process and its challenges as follows:

> *"When it comes to impact and ESG it's very much based on a qualitative process, where you look through the company, what you know about the management etc. […]. And then you try to map it out also with some political risk […]. However, you can't really assess risk the same way as in the listed market where you would do something like Value at Risk or whatever volatility analysis."* (p. 184).

In addition, our results show that no further impact due diligence measure, such as the IFC Performance Standards or the GRI Reporting Standards are incorporated. For example, Pension Fund 6 and Pension Fund 2 state that there is no additional due diligence that covers impact in particular. However, one interviewee mentions that due diligence processes for green investments do not necessarily need to be different from traditional due diligence processes (I3-P2):

> *If you do the same due diligence for green investments that you do for brown investments, and if you are looking at the long term perspective, then you will find that green investments can be just as profitable as the brown ones."* (p. 157)

When asked to comment on current impact measurement practices, the pension funds universally report to face problems regarding the actual measurement and quantifiability of their investments' impact. They mainly identify the problem to be rooted in the lack of standardisation related to the term 'impact investing'.

For example, one participant alludes that if *"[…] Pension Fund A defines [impact investing] in one way, and then another pension fund defines it in another way, then you have no way of comparing it"* (I1-P1, p. 142). Therefore, the interviewee calls for transparency in metrics, which are supposed to measure impact. Building upon this argument, most DPFs emphasise the importance of a coherent taxonomy established by the EU to enhance their impact measurement practices.

> *"I would say the main benefit right now is actually getting transparency, getting better ESG data, getting better climate data, getting the taxonomies which activities are green, which are not."* (I3-P2, p. 156).

The issues around the quantifiability of impact are amplified by the naturally large portfolios of pension funds (I1-P1, I12-UCT). Due to investments in numerous funds of fund structures, it is particularly difficult to pinpoint the aggregated impact of a pension fund's entire portfolio. This is compounded by a lack of impact databases and the fact that *"[…] a lot of impact reporting tends to be qualitative and anecdotal"* (I8-P6, p. 187) (I1-P1, I5-P4, I7-P5, I8-P6).

Due to absent uniform standards, the measurement of the impact of investments in DPFs is either limited to climate impact or disregarded entirely. One interviewee reports that *"[…] right now, we mainly measure on the climate side. So, we look at CO2 emissions avoided, and reduction of water usage, and clean electricity produced."* (I8-P6, p. 187). Others report to have difficulties in quantifying the impact they have and that no sophisticated measurement is in place (I6-P4).

The IFU's approach towards the impact assessment of their investments is twofold (I9-IFU). First, a value creation plan is created, which is driven by metrics such as EBITDA, cost considerations, and exit options. Second, an impact plan is set up, which is individually tailored to the investment and its local context. The impact plan includes metrics such as job creation, the CO2 footprint, gender equality, and taxes paid.

Nevertheless, the assessment of an investment's impact goes hand in hand with financial analysis:

> *"So, when we screen an investment, we look at the impacts, is there enough impact in this deal to be done? And is there enough returns for us to do the investments?"* (I11-IFU, p. 213).

The IFU agrees with the notion of DPFs that, at least with view the on the African continent, a lack of reliable databases exists (I10-IFU). In addition, it is particularly difficult to track the impact that happens *"outside the gate"* (I10-IFU, p. 213). Examples for this issue are difficulties in accounting for jobs that are created by sub-suppliers (I10-IFU, I11-IFU).

From an academic point of view, the lack of a standardised approach towards impact measurement is also acknowledged as one of the key challenges. While the impact is easier to pinpoint in the green industries, measurement in fields such as education is far more complex and cannot be captured by a single metric (I13-UCT). Again, difficulties in measuring impact have been spotted mainly on the portfolio level, whereas the deal level impact can be sufficiently assessed.

"I think […] the ability to do measurement on a deal level is very, very good. Investors are realizing how to do that, whereas it's much more difficult to do it on a portfolio level." (I12-UCT, p. 223).

The results show that quantification of investments' negative impact is neglected entirely. Many interviewees report that no well-developed measurement for negative impact is in place at their institution (e.g. I7-P5, I8-P6, I10-IFU).

As regards impact reporting, many such reports exist to varying degrees. On the one end of the spectrum, Pension Fund 3 publishes annual reports with sophisticated ESG figures, including one page on the institution's environmental impact. Moreover, Pension Fund 3 has its figures reviewed by an auditor. Pension Fund 2 also issues annual reports on responsible investments and the impacts they generate. However, they do not perform impact assessments on the asset-class level, but rather estimate aggregated impact. Again, reporting primarily focusses on climate and environmental impact.

Pension Fund 4 used to release one single yearly sustainability report. However, they divided the report into sub reports directed at themes such as climate, tax, or stewardship and engagement to account for specific needs of stakeholders.

The data sources for impact reporting vary with the different types of investment. Pension Fund 2, for instance, hires third-party providers for ESG scores of their listed equities. Pension Fund 5 gathers necessary data for its direct investments on its own. For its fund investments, this pension fund relies on the reports of the respective fund managers (I7-P5).

The current practices at Pension Fund 4 can be summarised as follows:

"So, in order for us to report on our portfolio impact, on our portfolio emissions, etc., then we need the companies in question to report. They are only going to do that if it's required. So at least in a comparable way." (I6-P4, p. 172).

According to some interviewees, the EU taxonomy release in 2019 is going to provide increased standardisation for impact measurement and reporting (e.g. I1-P1, I3-P2, I4-P3).

"Regulation that could improve this state for impact investments could be such things as reporting on impacts and making customers more aware of the impacts achieved with their savings and the financial products" (I4-P3, p. 165).

The IFU looks at the impact reporting issue from a different angle. While they also rely on their companies to report on certain impact metrics, they increasingly focus on setting impact targets prior to the actual investment (I10 IFU).

"So, we try to strengthen the way we formulate the objectives and the targets for the companies. We try to be specific and agree with them why they should target for [these objectives]. And then we ask them to report annually on these things." (I10-IFU, p. 204)

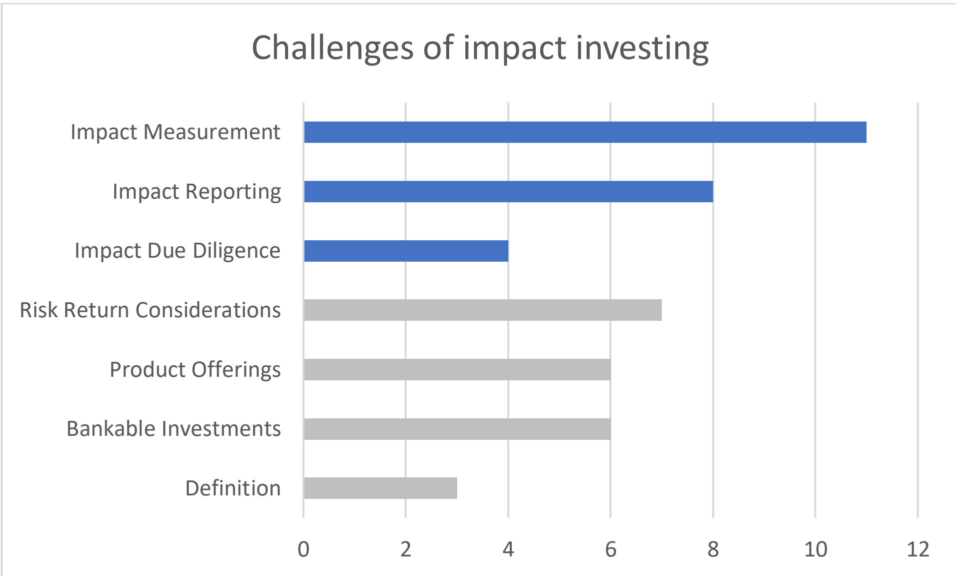


Figure 14: Coding frequency of impact measurement, reporting, and due diligence in the context of challenges. Source: Own depiction.

Further, the researchers asked interviewees whether impact-based incentive structures could foster impact investing in their fund.

Results are mixed in this context. Whereas Pension Fund 1 reports that the salary of employees includes bonus payments related to return, Pension Fund 6 states that employees' remuneration does not depend on performance. Pension Fund 4 does not see misalignment of their incentive structure and impact investments, as bonus payments are insignificant. However, at large asset managers, this misalignment might be more severe (I6-P4).

The IFU sees current payment and incentive structures and their effect on impact investments as much more critical and relates the problem to the quantifiability of impact.

"But ultimately, what we still get measured on is what return did you create, right? So not what impact did you create. Because there is not yet a great quantifiable way of doing that. And ultimately, like it or not, I guess, if you measure people on a certain thing, that's also what you get." (I9-IFU, p. 197).

However, the heterogeneity in terms of compensation structures among DPFs must be acknowledged in that some funds established far more advanced payment structures than others (I9-IFU).

Albeit arguing in favour of an impact incentive scheme, one interviewee perceives the implementation as quite challenging:

"And we have tried to make an incentive program which is linked to the impact that we are creating, but it's difficult and to be honest with you we haven't found it yet. The model that we had, we actually just recently shut down, because it did not make sense." (I11-IFU, p. 217)

The interview partners from the UCT confirms these results. They also believe that compensation structures should be more focused on the impact achieved. Nevertheless, they also acknowledge that it is challenging to implement these incentive structures.

Key Findings

- No industry-wide impact due diligence practice in place
- Apart from green investments, absence of uniformly applied measurement standards
- Various types of sustainability reporting in place, but no distinct impact reporting
- No distinct, impact-related incentive structures in pace

Figure 15: Key findings SRQ 3.

5.4 SRQ-4: Risk-Return-Impact

The fourth SRQ investigates to which extent traditional risk-return considerations and traditional portfolio theory influence the impact investing approach.

The results unambiguously show that investment decisions of DPFs clearly follow traditional risk-return patterns. The pension funds clearly prioritise financial return over the impact they create with their investments (e.g. I1-P1, I2-P2, I7-P5, I8-P6). Pension funds consider impact in their decision-making process, only if an investment provides satisfyingly high returns (I2-P2, I7-P5).

"I think the key takeaway is that pension funds and other investors are looking at return and then on sustainability, as there is no grace or charity." (I1-P1, p. 143)

Although DPFs report high demand for sustainable and green products by their members, they understand their mandate as clearly return focused which does not allow for return sacrifices in favour of impact (I2-P2, I7-P5, I6-P4).

In their opinion, most sustainable investments do not seem to satisfy risk-adjusted return expectations.

"[In] nine out of ten investments there are way higher risks relative to the expected return. So, every time we're looking at an investment, we are seeing it." (I1-P1, p. 143)

Referring to the measurement problem, one interviewee points out that the mandate of pension funds does not necessarily rule out impact investments (I7-P5). If the return generated by impact investments was clearly measurable, there would be no reservations to impact investments, the interviewee says (I7-P5).

Albeit the pitfalls and challenges of many impact investments in the light of traditional risk-return considerations, pension funds stress the opportunities they might provide. One example is the particularly promising returns of green investments (I1-P1, I3-P2). Microfinancing investments constitutes another interesting investment class. Advantages such as solid returns and high degrees of diversification are highlighted (I1-P1).

In addition, pension funds acknowledge impact investments to be compatible with their long-term investment horizon. Hence, they perceive themselves to be suitable investors for those investments.

"[Pension Fund 2] is doing [impact investing] because we're a long-term investor. And we believe that these assets will be the most profitable in the long-term. We believe that we need to reduce the climate risks on our portfolio […]" (I3-P2, p. 158)

"But it's [impact investments in sub-Saharan Africa] not something that we've selected based on an impact perspective. Of course, we select from risk-return, and then we also invite the impact because we believe it deleverages some of the risk for us." (I7-P5, p. 180).

Moreover, efforts have been taken by pension funds to better capture ESG considerations in their risk-return calculations. For instance, Pension Fund 4 extended its factor model with an ESG tilt, which complements existing factors, such as low risk, momentum, and value (I5-P4). Depending on the degree of an industry's carbon emissions, the ESG tilt constitutes up to one quarter of an investment's score (I5-P4).

Despite the illiquidity in the alternative investment space, it is evident that liquidity for listed asset classes in the impact investing sphere is not necessarily perceived to be a major problem any longer. For example, green bonds provide similar levels of liquidity as black investments (I2-P2). However, high demands for green investments made these investments particularly expensive reflected by share prices exceeding intrinsic values (I1-P1, I3-P2, I7-P5). This is compounded by more players entering the market (I7-P5).

The academics interviewed predominantly argue that impact investments are useful from a portfolio theory perspective, as they mitigate certain long-term risks and make portfolios more resilient.

"Diversification is and continues to be important. I mean, it's the number one rule in finance. And, you know, in this post COVID world, it's only going to be stronger because you need to be diversified, to be able to continue to exist [...]." (I12-UCT, p. 225)

One interviewee argues for a data-related advantage of sustainable investments (I12-UCT). The interviewee points out that the collection of environmental and social data can manifest in increased financial performance of sustainable and responsible investments.

Key Findings

- Investment decisions at DPFs clearly follow traditional risk-return considerations
- Traditional interpretation of fiduciary duty
- Recognition that impact investing corresponds to the long-term perspective of pension funds

Figure 16: Key findings SRQ 4.

5.5 SRQ-5: Danish Pension Funds as a Catalyst of the Impact Investing Industry

The fifth SRQ focuses on how Danish pension funds contribute to a manifestation of the impact investing industry as a mainstream approach.

The academics interviewed identified a distinctive movement towards impact investing in the pension fund industry. Similar to the findings discovered in SRQ 4, pension funds need to match their long-term liabilities with long-term focused assets.

"[...]in Europe there is a distinctive movement, and particularly in Northern Europe, pension funds are recognizing kind of a) the role they play and b) the risk that they're bearing, particularly on the climate side." (I12-UCT, p. 224)

Due to similar characteristics, pension funds in geographic proximity tend to be subject to peer pressure (I12 UCT). This might accelerate the emergence of the impact investing industry (I12 UCT). The interviewee further argues that considering their size, pension funds are able to influence the behaviour of other funds, companies, asset managers, and consultants and, thereby, contribute to the manifestation of the impact investing industry:

"If they start asking for funds, and managers and consultants to report and to differentiate on investments based on impact or SDG metrics or climate metrics. And then they will start doing it and that helps the rest of the market and smaller asset holders that don't have that type of sway but would like to see those types of reporting." (I12-UCT, p. 224)

Highlighting the catalytic potential of other institutional investors' capital in Europe, one interviewee confirms the notion of her colleague and calls for DPFs to appreciate their important role in the development of the impact investing industry (I13 UCT).

To sum up the academic stance, pension funds can not only prove that impact investments have the potential to mitigate long-term risk and make a portfolio more resilient, they might also contribute to the impact investing industry by improving the quality of impact data for many other investors.

The IFU acknowledges that, for instance, the SDGs cannot be reached with public capital alone (I9 IFU, I10 IFU). In this context, they stress the Danish government's objective to involve private players to a greater extent and emphasise the important role DPFs can play to attract additional private capital (I9 IFU, I10 IFU).

The pension funds themselves take a mixed stance concerning their role in the manifestation of the impact investing industry. One pension fund, Pension Fund 3, has recognised the role it plays in this context. Referring to Pension Fund 3's involvement in the SDG fund, alludes:

> *"We are a quite large investor in this fund (the SDG fund) and we made the fundraising a bit easier. So, we helped to raise the fund and to bring attention to it. And yes, it became a pretty large fund actually."* (I4-P3, p. 161)

However, one interviewee argues that pension funds do not gain benefits from being the first investor in a specific field (I1-P1).

Key Findings

- Pension funds in geographic proximity tend to be subject to peer pressure
- Size of pension funds underline their potential influence on other market participants
- Catalytic potential of institutional investor's capital

Figure 17: Key findings SRQ 5.

5.6 SRQ-6: Demand for Impact Investing & Product Offerings

The sixth SRQ aims to identify to which extent a trend towards more sustainability in general and more sustainable finance in particular is reflected in the demand side for impact investments and how this translates into the product range offered by Danish pension funds.

While all pension funds agree that there is a general trend towards more sustainability in financial markets, the degree to which pension funds see this trend reflected in the demand from their customers varies considerably (I2-P2, I3-P2, I8-P6, I6-P4, I4-P3). On the one end of the spectrum, one interview participant of Pension Fund 3 argues that Pension Fund 3 did not observe an increased customer-driven demand (I4 P3), whereas two other interviewees working for Pension Fund 2 highlight a huge demand from their customers, particularly for green investments (I2-P2, I3-P2). One interviewee of Pension Fund 2 emphasises the customer base as a very significant factor for this high demand (I2-P2). Even though the perception regarding the demand from the end client in Pension Fund 6 and Pension Fund 2 diverges, interview participants from both funds underline the importance of sustainable investment options when bidding for larger company accounts (I3-P2, I8-P6). One interview partner describes the situation as: "*I think what you'll also see is that it's very difficult to win the bidding for some of the larger company accounts in Denmark in terms of pension if you do not have this option[...]*" (I3-P2, p. 156). Another interview participant outlines the special case of his pension fund as a mandatory pension scheme. Acknowledging the high interest in the general public and the significant political attention, the interviewee emphasises the importance of finding the right balance without politicising mandatory pensions (I6-P4).

The IFU recognises a clear public sentiment, all the way down to an individual investor or pension owner.

> "*[...] they are clearly expressing to the pension funds, guys, we don't want you to invest our money in black economies.*" (I9-IFU, p. 193)

Collecting the voice of the customers through the survey conducted in this research, the researchers reveal considerable agreement among members of DPFs. Members across all represented age groups respond that the concept of sustainability should be reflected in financial markets. This is shown in Figure 18 and Figure 19 below. The vast majority of participants (95.08%) state that they at least somewhat agree to the statement, while only 1.64% of the participants show a negative sentiment towards this statement. The neutral and the somewhat disagreeing responses exclusively stem from the male participants of the survey, whereas 100% of the female participants at least somewhat agree and the majority (60%) strongly agree (60%).

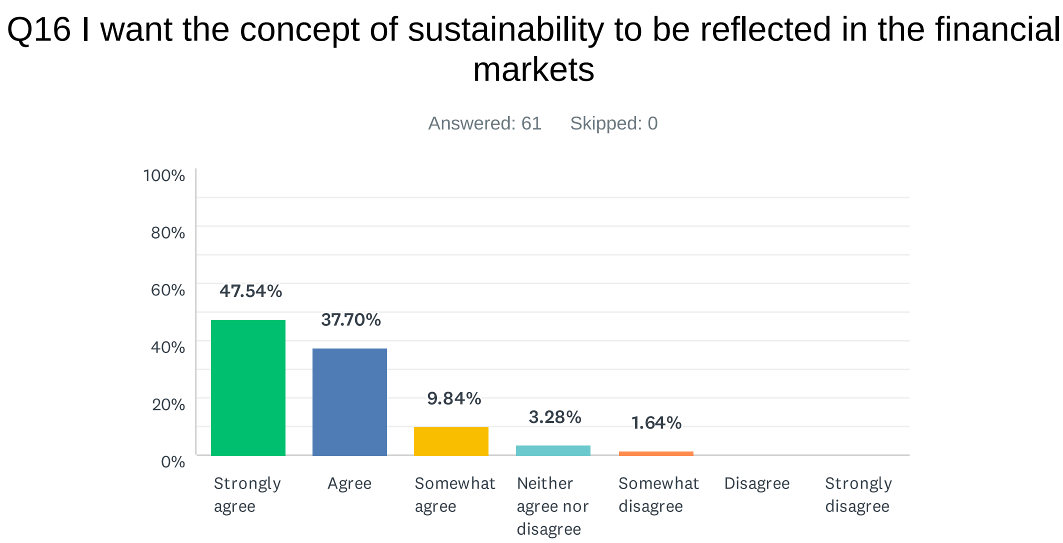


Figure 18: Sustainability and Financial Markets.

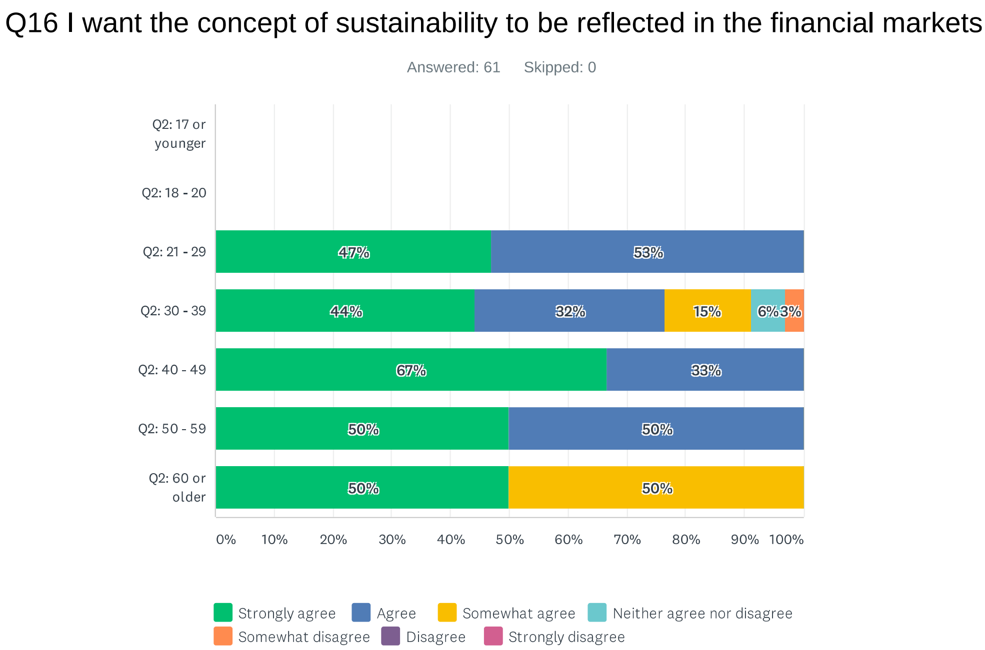


Figure 19: Sustainability and Financial Markets - Age Group.

Asked whether they are concerned about how pension funds are investing their pension savings with regards to social and environmental issues (Figure 20), 67.21% of the survey participants show a positive response (at least somewhat agree), while 21.31% take a neutral stance and 11.48% lean towards a negative sentiment (at least somewhat disagree).

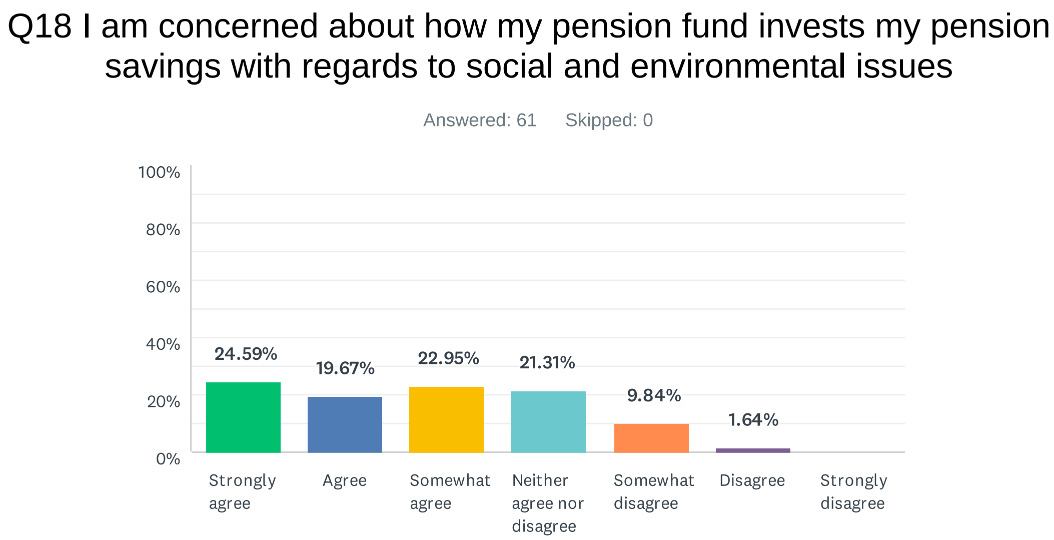


Figure 20: Pension Savings and Social and Environmental Issues.

Given that 77.05% of the survey participants at least somewhat agree that their pension funds should invest in a way that supports the SDGs, the vast majority (85,24%) demonstrates consent that their pension funds should generate a positive social and environmental impact alongside financial returns. In this regard a remarkable 72.13% of the interview participants either strongly agree (32.79%) or agree (39.34%) (Figure 21), while the slightly negative sentiment stems exclusively from male participants with a yearly household income above 750,000 DKK.

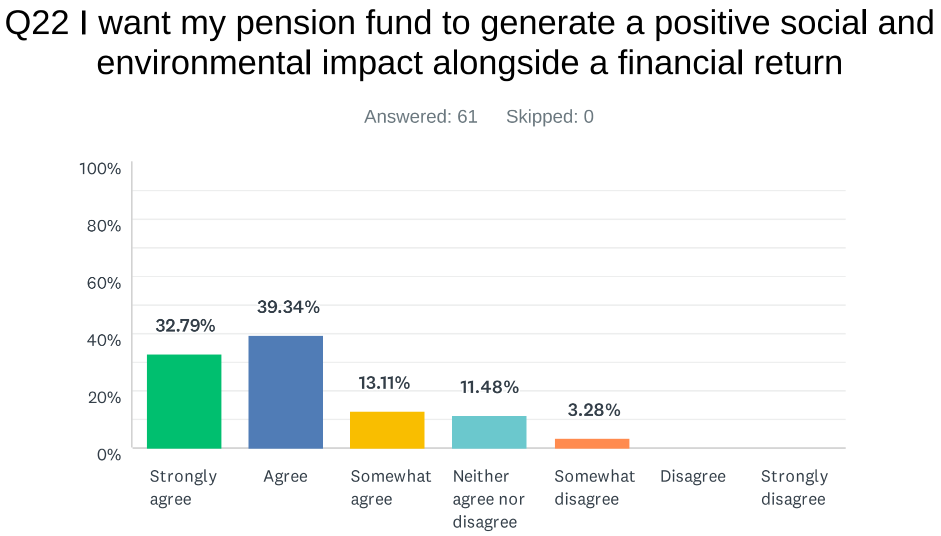


Figure 21: Pension Funds and Impact Investing.

The sentiment towards investments which generate impact alongside returns is also displayed in the survey participants responses whether their pension funds should conduct impact investing in emerging markets to create measurable positive impact (Figure 22).

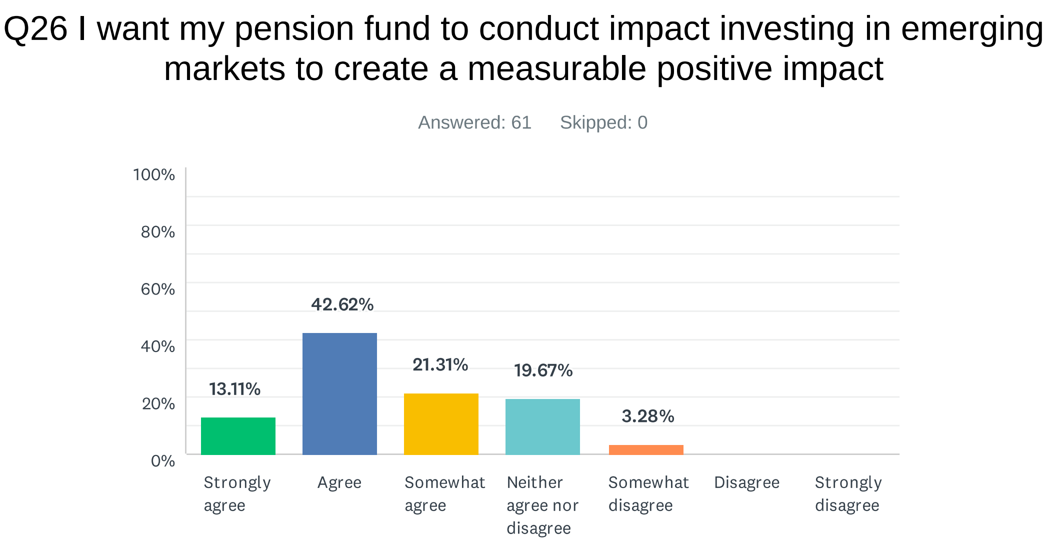


Figure 22: Pension Funds and Impact Investments in Emerging Markets.

Despite an increasing customer demand for greener investments, one interview participant questioned the robustness of this demand when it comes to sacrificing returns.

> "*Even though the customers in the pension fund, they are demanding green and greener products. What we see is that in the end, what they really just care about is the return and how wealthy they are when they retire.*" (I1-P1, p. 143)

The interviewee also pointed out that pensioners in Denmark do have the opportunity to administer their own pension by allocating their savings to mutual funds but only very few pensioners exercise this option.

> "*To be honest, there's just a lot of people that are complaining a lot. But they simply have no idea what their money is invested in. And as long as there's a growth in the pension plan, they are happy*." (I1-P1, p. 148)

One interviewee from Pension Fund 2 points back to the characteristics of the customer base as a differentiating factor when speaking of customers' willingness to sacrifice returns.

> *"We haven't asked the members that, because we didn't want to put them in that position. But we do know that a few other pension funds have asked that question and the results they're getting are mixed. But the sum of the pension funds where the member base looks a lot like ours do get the answer that members will risk some returns over having greener portfolios."* (I3-P2, p. 157)

One interviewee from Pension Fund 2 highlights that from a long-term perspective and with sufficient due diligence, green investments can have the same performance as conventional investments.

> *"I think the reason why Pension Fund 2 is doing this is because we're a long-term investor. And we believe that these assets will be the most profitable in the long term. We believe that we need to reduce the climate risks on our portfolio and we believe that our members have given us a strong mandate to invest in the future that they would like to live in. Which means protecting their assets but also trying to mitigate some of the climate risks that the world is facing through investing in offshore windfarms and disinvesting from black economies."* (I3-P2, p. 157)

A representative of Pension Fund 4 confirms the mixed sentiment of customers in the context of sacrificing returns for impact (I6-P4).

> *"There's a lot of demand for green investments. There's a lot of demand for sustainable investment products. But given that we are a pension fund that covers all people in the Danish labour market, there is also demand for the opposite side.*" (I6-P4, p. 173)

Probing the survey participants about their willingness to accept a slightly below market rates of return for positive outcomes in the impact themes, such as access to housing, access to quality education, and access to health, the responses are less unequivocal compared to those of previous questions. However, the survey participants still show a tendency towards a willingness to sacrifice returns for impact (Figure 23).

Q30 I am willing to accept a slightly below market rate of return in return for positive outcomes in the above impact themes

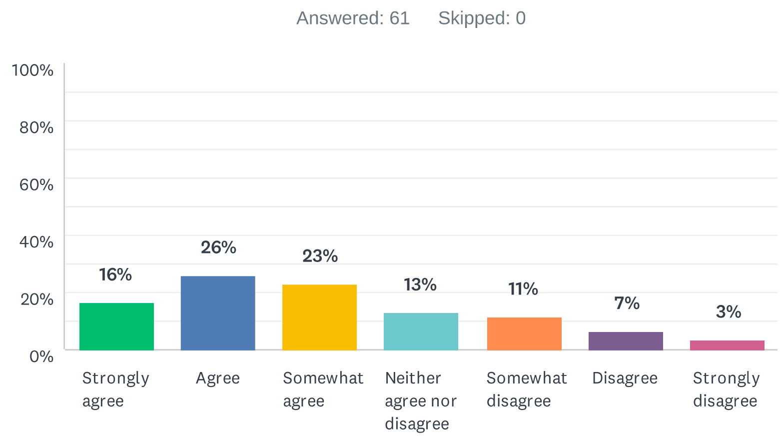
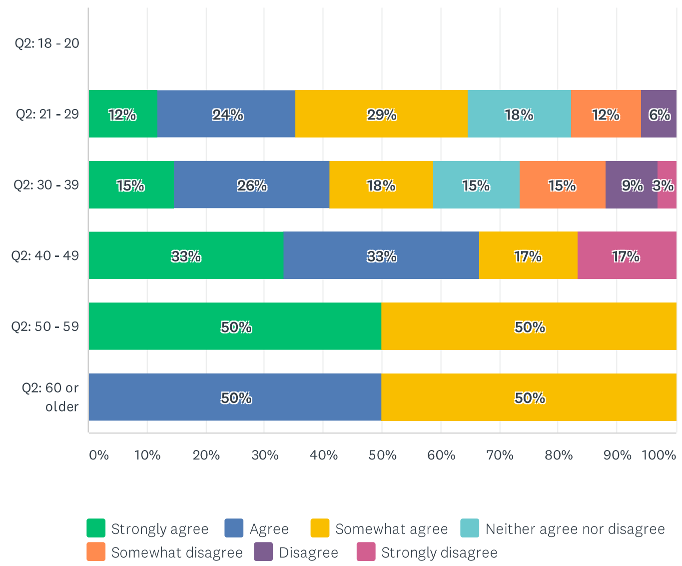


Figure 23: Willingness to Sacrifice Returns.

While the results show a somewhat similar pattern across several demographic characteristics, the responses across age groups are rather skewed given the uneven distribution of the sample. However, the results for the strongest represented age group of participants (30 to 39) display a mixed sentiment. Nevertheless, even within this group, participants lean towards an overall positive sentiment (Figure 24).

Q30 I am willing to accept a slightly below market rate of return in return for positive outcomes in the above impact themes

Answered: 61 Skipped: 0



	STRONGLY AGREE	AGREE	SOMEWHAT AGREE	NEITHER AGREE NOR DISAGREE	SOMEWHAT DISAGREE	DISAGREE	STRONGLY DISAGREE	TOTAL
Q2: 18 - 20	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0
Q2: 21 - 29	12% 2	24% 4	29% 5	18% 3	12% 2	6% 1	0% 0	28% 17
Q2: 30 - 39	15% 5	26% 9	18% 6	15% 5	15% 5	9% 3	3% 1	56% 34
Q2: 40 - 49	33% 2	33% 2	17% 1	0% 0	0% 0	0% 0	17% 1	10% 6
Q2: 50 - 59	50% 1	0% 0	50% 1	0% 0	0% 0	0% 0	0% 0	3% 2
Q2: 60 or older	0% 0	50% 1	50% 1	0% 0	0% 0	0% 0	0% 0	3% 2
Total Respondents	10	16	14	8	7	4	2	61

Figure 24: Willingness to Sacrifice Returns - Age Group.

Acknowledging the difficulties related to the issue of sacrificing returns for impact, one representative of the IFU describes their approach of creating different pools of capital in order to accommodate for the financial needs of different types of investors and stakeholders(I9-IFU). The focus of these pools ranges from more commercial to high impact. (I9-IFU)

Despite the demand for greener investments, several pension funds raise their concerns related to greenwashing (I2-P2, I7-P5, I6-P4). The interview participants working at these pension funds point out the specific issue related to the labelling of green investments or listed equity funds.

"I'm well aware that there are certain listed equity funds out in the market that sort of promote themselves as an impact investment fund. I don't entirely agree with that methodologies and it's difficult to claim any impact in that hundred-billion-dollar company where you own 0.000147 % of the company." (I7-P5, p 179)

Yet, pension funds themselves are not absolved of any blame using impact investments predominantly for marketing purposes. Representatives of the IFU, for example, highlight the experience they had with regards to the collaboration with DPFs in their SDG fund. While on the one end, they acknowledge the commitment of some pension funds in the SDG fund going beyond marketing purposes, they identify a clear trend of pension funds urging them to do more marketing about the activities of the fund (I9 IFU). According to the IFU, to some extent, pension funds want to be part of the journey in order to tell their members (I9 IFU).

When asked about the importance of the SDGs, one interview participant of Pension Fund 1 highlights the issue related to the use of the SDGs as a marketing instrument by squeezing investments into one or more of the seventeen goals.

> *"I think going forward, they will have an increasing role. I think if you're using them right now publicly, it's only for marketing. And that's across a lot of the Danish pension funds. Something that the customers can relate to. It makes the pension fund look nice."* (I1-P1, p. 146)

This view is supported by one representative of the IFU who states:

> *"Could you imagine any economic activity which is not related to any SDG? Not really. All activities related to an institution could always find an SDG. […] So, I think both IFU and pension funds need to be much more precise in specifying what they are actually trying to achieve."* (I10-IFU, p. 208)

Bringing in the academic perspective on greenwashing, one interviewee stated:

> "*I'm not as worried as a lot of people are on greenwashing and impact washing. Yes, it's an issue. But I think that, you know, as we're getting more organizations to talk about these things, to report on them, to start looking at the data around correlation, I fundamentally believe, that it's been borne out right now.*" (I12-UCT, p. 223)

When it comes to the range of investment products which pension funds offer their customers, the answers of the interview participants are rather diverse. While some pension funds offer their members a standard product (I2-P2, I5-P4, I6-P4), other pension funds give their members a higher degree of liberty in deciding how to allocate their pension savings. In the latter case, pension funds provide their customers the option to decide whether to invest in a standard product, a standalone greener or more impact-focused product, or an arbitrary mix of both (I1-P1, I7-P5, I8-P6). However, the standard product and the greener or more impact-focused product lines are clearly separated.

> "*I think what you will see is that some very green products are being launched, and the customers can choose them. But they won't be included in the standard package. I think the pension funds will offer this to you, but we won't include it in our own portfolio selection. And I think that's because there is a belief that it's not able to match the returns.*" (I1-P1, p. 143)

When asked about the product offerings of their pension funds, only 21.31% of the survey participants are somewhat familiar with the sustainable investment products offered by their pension fund, whilst more than two-thirds (68.86%) are either unfamiliar (31.15%) or strongly unfamiliar (26.23%) (Figure 25).

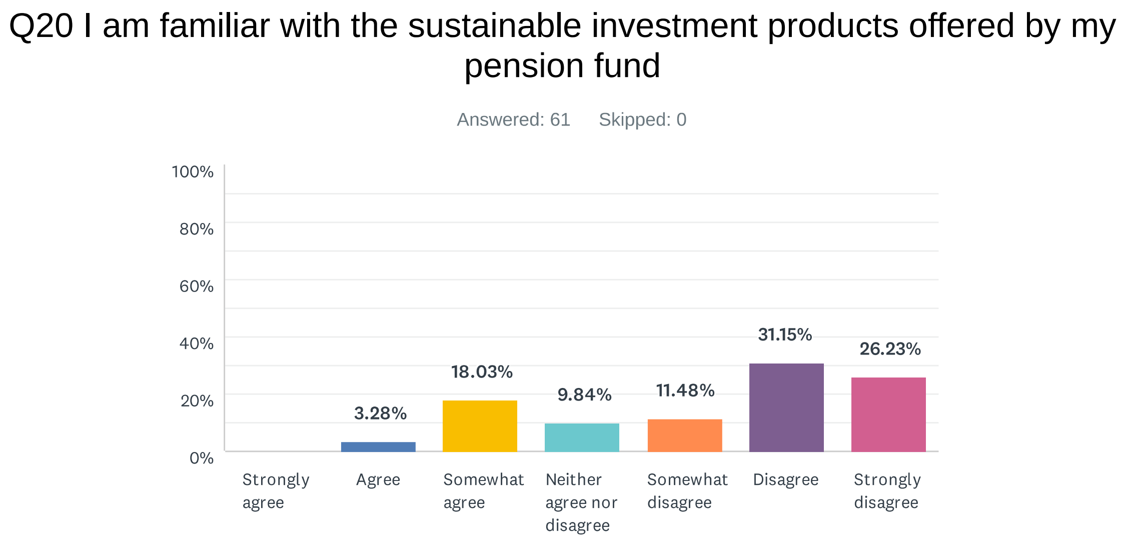


Figure 25: Pension Fund Product Offerings.

Despite this lack of familiarity or transparency, a clear majority of 83.61% of the survey participants at least somewhat agrees that their pension funds should offer impact investment products (Figure 26).

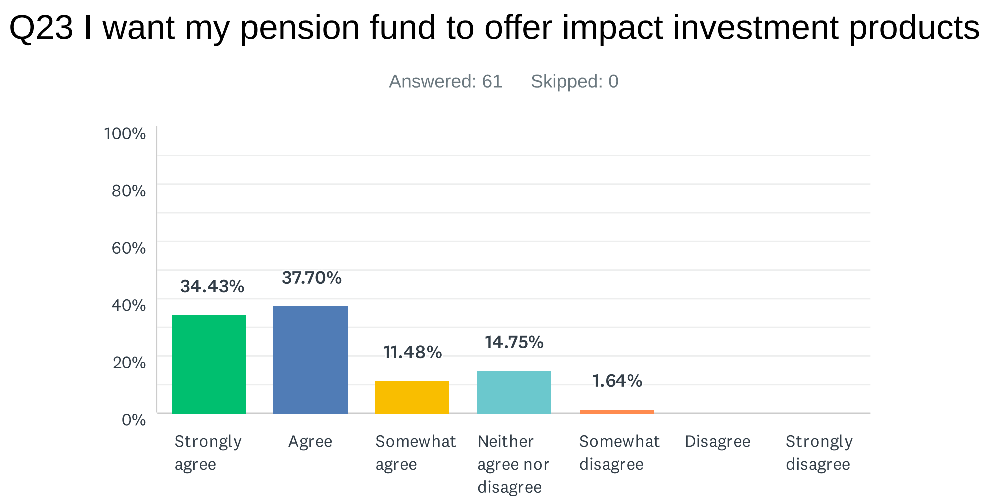


Figure 26: Pension Funds - Impact Investing Product Offerings.

Beyond the ability to provide customers with a higher degree of liberty, one interview participant identifies another advantage in developing new impact focused product lines.

"[...]it pushes the investment team out in a territory that they may not have gone out in otherwise, or it may have taken longer to get there. So it basically makes the investment team have to put on a different hat and think in a different way when they're looking for investments." (I8 P6, p. 186)

Key Findings

- Pension funds have mixed observations regarding demand but acknowledge importance of sustainable products for winning corporate mandates
- Pension funds question the robustness of demand in the context of sacrificing returns
- IFU identifies clear public sentiment but acknowledges difficulties related to sacrificing return
- Survey results show positive sentiment towards sustainability and impact, but mixed responses in the context of sacrificing return for impact
- Pension funds follow different product strategies related to sustainability and liberty for customers
- Survey results show customers' unawareness related to product offerings but clear demand for impact related products

Figure 27: Key findings SRQ 6.

5.7 SRQ-7: Danish Pension Funds & Impact Investing in Emerging Markets and SSA

The seventh SRQ assesses the extent to which Danish pension funds are currently engaged in impact investing in emerging markets.

Even though many pension funds highlight their clear mandate of delivering returns for their members (I4 P3, I2-P2, I8-P6), they engage in a wide range of impact-related activities, some with a higher focus on impact and others centred around ESG risk.

When speaking of impact related investments, the interview participants across pension funds primarily mention listed green investments and alternative investments (I2-P2, I4-P3, I3-P2, I7-P5, I5-P4, I1-P1). In the context of listed green investments, one interviewee of Pension Fund 2 highlights green government bonds, green investments issued by the World Bank and in Scandinavia, as well as the increased liquidity in this specific market (I2-P2).

In the spectrum of alternative investments, interviewees mention direct investments in the form of green energy infrastructure projects (I4-P3) PE investments (I4-P3, I5-P4) and fund investments (I4-P3, I3-P2, I7-P5, I5-P4). Particularly the fund investments are highlighted by many interview partners.

"*We have invested in a few different impact funds. We've invested in three different microfinance firms, we've invested through IFU in the Danish SDG and Climate Investment Fund, and through Maersk Capital we've invested in what's called the Africa Infrastructure Fund.*" (I3-P2, p. 156)

Within the fund investments, interviewees of three different pension funds explicitly point out the collaboration with the IFU in the context of an investment in the SDG Fund (I3-P2, I7-P5, I6-P4).

Additionally, two pension funds report their collaboration with Copenhagen Infrastructure Partners (CIP)[1] and their engagement in CIP's New Market Fund, which provides funding for energy projects in emerging markets.

Beyond the investment activities leaning towards impact, pension funds engage in various ESG risk-related activities. Four interview partners across three different pension funds mention the systematic exclusion of investments through negative screening based on company, sector or geographical criteria (I5-P4, I2-P2, I8-P6, I6-P4).

> *"We exclude tobacco and commercial weapons, we exclude companies where more than 30% of the revenue comes from coal or tar sand, and then we have a few other exclusions related to companies, where there have been some human rights violations.*" (I8-P6, p. 186)

While two interview participants of Pension Fund 1 and Pension Fund 6 point out a positive screening approach of their pension funds (I1-P1, I8-P6), only one interviewee highlights a best in class ESG screening approach (I4-P3).

An ESG integration approach that incorporates ESG related risks and opportunities into conventional financial analysis and decision making is mentioned by two interview participants of Pension Fund 4 (I5-P4, I6-P4).

The activities of their pension funds related to shareholder activism, engagement, and active ownership are emphasised by five interview participants (I5-P4, I1-P1, I3-P2, I8-P6, I6-P4).

When asked about exposure to emerging markets, the responses of interview participants have been rather scarce. One pension fund mentions adding listed equity investments in emerging markets to their global equity portfolio and expanding direct investments related to infrastructure and energy to these markets (I6-P4, I5-P4). Two other pension funds highlight microfinancing as a suitable use case for investments in emerging markets which generate both, impact and returns (I1-P1, I3-P2). Another two pension funds point out their fund investments in the African Infrastructure Fund (I3-P2, I7-I5). Further, two representatives of different pension funds point out their appetite for emerging markets investments while emphasising the importance of strong co-investors (I7-P5, I4-P3).

Despite showing interest in investments in emerging markets, the interview participant of Pension Fund 6 explained the lack of emerging market exposure by not yet being prepared to invest in these markets.

"It's something we're working on to see if we can figure out. But we're not there yet." (I8-P6, p. 188)

In general, concerns about legal risk and political instability in emerging markets persist among pension funds (I3-P2, I1-P1).

[1]Copenhagen Infrastructure Partners is a fund manager, which has more than EUR 8 bn under management. It focusses on energy infrastructure including offshore wind, onshore power transmission, solar energy, and more (CIP, 2020).

Key Findings

- Pension funds highlight strict mandate but engage in some impact related activities
    - Listed green investments
    - Direct investments in green energy infrastructure projects, PE, and other funds
    - Investment in SDG fund
- Pension funds follow responsible or socially responsible investment approaches
    - ESG integration
    - Negative screening, positive screening, and exclusions
- DPFs show clear appetite for emerging market investments but are highly concerned about political and legal risks

Figure 28: Key findings SRQ 7.

5.8 SRQ-8: Challenges & Opportunities in SSA

The eighth SRQ investigates the specific characteristics of (impact) investments in emerging markets and SSA and how these can result in opportunities or challenges for Danish pension funds.

One interviewee identifies massive population growth together with unfulfilled consumer demands as one of the key opportunities in emerging markets and in SSA in particular(I7-P5). Satisfying those demands requires huge investments in *"[...] infrastructure projects, certain types of energy projects, and certain types of electricity generation projects [...]."* (I7-P5, p. 180).

Pension Fund 1, for example, names microfinancing to be an appropriate tool to meet financial demands in emerging markets. Furthermore, it enables the pension fund to diversify political risks across various countries (I1-P1).

With the view on the current low-interest environment, the IFU reported that DPFs are forced to take on additional risks in order to meet the return goals of their pension obligations (I10 IFU). Entering emerging markets either through direct investments, fund of funds structures, or in cooperation with DFIs, provides pension funds with potentially higher returns due to the increased market and deal risks (I10 IFU). For example, through the SDG fund, DPFs participate in investments, such as a chain of dialysis clinics, educational platforms, or agricultural projects (I9 IFU, I10 IFU). Simultaneously, they profit from risk-mitigating effects, as the SDG fund is backed by the Danish government (I10 IFU).

However, all respondents to our interviews reported considerable risks when entering the emerging market of SSA. The list of risks mainly entails political instability, governance issues, corruption, currency risks, lack of databases, and the underdeveloped jurisdictional systems.

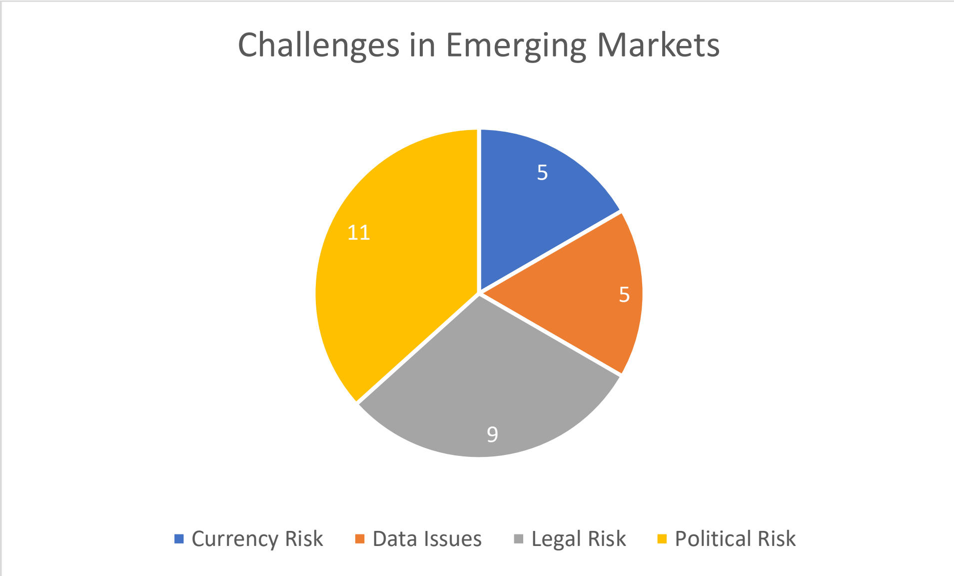


Figure 29: Coding frequency of challenges in emerging markets. Source: Own depiction.

Due to these risks and the special character of the African market, DPFs perceive local knowledge as vital to invest in these markets (I4-P3). However, they doubt to have the required manpower to acquire this local knowledge (I4-P3, I8-P6). The situation is further compounded by the fact that DPFs have difficulties in finding sufficiently large investments, as the number of large-scale investments is very limited (I8-P6).

These challenges prevent institutional investors from entering the market through direct investments (I4-P3, I11-IFU).

The IFU summarises the situation of the DPF industry as follows:

> *"So, the capital markets (in emerging markets) are not ready for institutional investors. [...] Danish pension funds shouldn't be doing unlisted investments because they cannot deal with them. [...] Because they don't have the resources internally to deal with direct investments."* (I11-IFU, p. 219).

This notion is also confirmed by one interviewee who admits:

> *"We are a small team of 20 people; we wouldn't be able to cover these [emerging] markets in sufficient detail for making these direct investments ourselves"* (I4-P3, p. 161).

Another interviewee adds to this:

> *"I hear it over and over again that there are plenty of opportunities out there. But for most large institutional investors, they're simply too small so that it's not worth the resources to spend on the due diligence for those investment opportunities."* (I8-P6, p. 188).

For these reasons, pension funds' direct investments mainly focus on environmental impact investments in Europe and North America because the risk profile is considerably lower (I4-P3). Contrastingly, with their fund investments pension funds tend to invest in riskier assets in emerging markets (I4-P3).

Key Findings

- Massive population growth together with unfulfilled consumer demands in sub-Saharan Africa
- Considerable risks in sub-Saharan Africa (legal, political, corruption etc.)
- Risk-mitigating effects of public-private partnerships and cooperation with DFIs
- Importance of local knowledge
- Lack of bankable investments in sub-Saharan Africa
- Pension funds lack manpower to conduct direct (impact) investments in emerging markets

Figure 30: Key findings SRQ 8.

5.9 SRQ-9: Danish Pension Funds & Innovative Financing

The ninth SRQ focuses on how innovative financing allows Danish pension funds to mitigate perceived and real risks of conducting impact investments in sub-Saharan Africa and to allocate their funds effectively.

Pension funds are experimenting more and more with alternative investments, such as PE and direct infrastructure investments as well as microfinance and impact related fund investments.

When asked about their use of innovative financing to mitigate some of the risks associated with the impact investments in SSA, many DPFs point to their collaboration with the IFU and the investment in the SDG Fund.

> *"[...]we have a very large investment in the Sustainable Development Goals fund offered by the IFU[...]. But it's an investment that we've decided not because we needed to do impact allocation. But because we believe that this was a great investment opportunity for us to invest alongside the Danish government in certain projects, which can help even bridge some of the risks in emerging and frontier markets, while still delivering a good return for our clients.*" (I7-P5, p. 180)

One pension fund highlights the importance of a strong co-investor with similar standards, such as European DFIs as well as partners with local knowledge and local engagement, to mitigate risks when investing in emerging markets.

> "*For us there are certain players that we can have as our co investors.[...] some of the different European DFIs are co-investors we would like to have, because that gives us comfort that certain international norms and standards will be upheld.*" (I7-P5, p. 181)

Another interviewee explicitly mentioned the collaboration with governments in in the form of PPPs and government-backed funds or guarantees as a way of mitigating risks (I1-P1). The interview participant further highlights the role of governments in creating incentives such as subsidies or outcome-based payments to bridge the gap between expected and required returns and to attract commercial investors (I1-P1). As an example, he points to investments in windfarms which, initially subsidised, are now attractive for commercial investors, even without subsidies. (I1-P1)

The same interview participant even mentions the option of mandatory capital allocation to a fund which invests alongside the Danish government. The interviewee points out investments related to the green transition in Denmark as a possible example (I1-P1).

Two pension funds highlight that in the future, they hope to see increased maturity of deal structuring as well as the development of other financial products and structures, which foster the attraction of capital from commercial investors. Both mention the securitisation in the context of microfinance as an example (I8-P6, I1-P1)

> *"We also see that to be able to reach the Sustainable Development Goals by 2030, more money is needed in emerging markets. We hope that there will be more investment opportunities and that there will be more products and structures where governments, other institutions and organizations bear the brunt of the risk so that institutional investors can go in with their capital as well. So, basically that there are different tranches of risk and return."* (I8-P6, p. 190)

When conducting impact investments in emerging markets, the IFU also draws on innovative financing tools and structures to mitigate risks and to tailor financing solutions to the specific needs of investee companies. One interview participant elaborates on three different pools of capital which the IFU deploys (I9-IFU). First, a conventional DFI balance sheet consisting of equity, debt and any form of exotic mezzanine instruments. A second pool of capital focuses on high-risk-high-impact solutions. The third pool is slightly more commercial in its nature and directs capital to the SDG fund.

Emphasising the uniqueness of the SDG Fund within the DFI community, the interviewee outlines the underlying structure of the fund (I9-IFU). The IFU is the single largest investor and is operating as the general partner (I9-IFU). In addition, the fund is designed to catalyse private resources and the majority of the capital comes from private DPFs (I9-IFU).

One interviewee highlights that within the SDG fund, the IFU can deploy more or less almost every single instrument, from straight senior loans to redeemable, convertible and preference share instruments.

> "*I think for us, it's a big strength that we are not super tied into one or two particular instruments, because again, assessing and understanding individual risks mean that you can tailor the product that fits that particular situation. For instance at a high growth company that is actually very risky and where, on the one hand, you would like to make sure you get your money back, on the other hand, if you give them a loan, you're going to kill their cash flow and they can't reach their growth goals. So then maybe you go in with a convertible instrument with a cap in the end instead."* (I9 IFU, p. 199)

When asked about innovative financing, another interview participant of the IFU emphasises blended finance in the form of combining first loss and grant facilities as well as concessionary loans as means to attract capital from commercial investors (I11 IFU).

"*In our view, we are like a multi-faced animal. Because we do have a number of different hats that we can put on in different scenarios, depending on the situation.*" (I11 IFU, p. 212)

Leveraging the various innovative financing instruments and managing the SDG fund - an innovative financing vehicle - the IFU allows DPFs to allocate larger amounts of capital efficiently and mitigate risks associated with impact investments in SSA (I9 IFU).

"*The things that we bring to the table for pension funds are 50 plus years of experience of investing in these emerging markets, knowing how to manage these risks, knowing how to assess partners, knowing how to structure it in a way so you're not exposed to corruption or common regulation change. And that of course is a big thing if you want to engage in these developing markets.*" (I9 IFU, p. 198)

In this context, the interview participants of the IFU highlight the importance for DPFs to experiment in the field and to embark on the learning journey.

"So I think it is time for Danish pension funds to start exploring, but they are quite reluctant. This is a bit of an experiment, right? They would much rather just put some money in, you know, a JP Morgan emerging market index fund or something, because it is liquid and they can relate to it. But I don't think they have a choice. If they want to be able to deliver on their future obligations, they have to start taking more risk." (I9 IFU, p. 200)

One interviewee of the IFU points out the IFU's educational role in the learning journey of pension funds and states that pension funds are considerably missing out on the learning curve if they do not start to engage in impact investing in emerging markets soon.

"[…] they do want to learn, they're looking to us to see what we're doing, when it comes to reporting the impact and so forth. So, for them it is also like a learning journey. Same thing, some years ago, they weren't investing into infrastructure funds, but now they can do it directly. Now they're learning the game, and they're learning to assess the risk and then hopefully, in a few years, they can do this themselves. And that's our reason, hopefully we can be part of educating the institutional investors so they can go directly or at least invest directly into private equity funds and other funds in, say in Africa, instead of going through IFU as a government entity." (I11 IFU, p. 219)

In connection with this learning journey of institutional investors, one interviewee from the UCT highlights a significant interest of mainstream financial players in learning how to operate in the impact investing sphere of emerging markets (I13-UCT). However, the interviewee also agrees that DPFs are missing out if they do not start exploring with impact investing in emerging markets and points out the considerable risks involved with being unprepared for the future (I13-UCT).

"That is a strong point and I think also because as I was saying before, I think the Danish pension funds are actually a little bit late to the party. So, there is quite a lot of learning that's already been happening that

they haven't necessarily been part of. […] I think a lot of people are now starting to say if you're a financial institution, and then you don't have SDGs in your impact reporting, then that's a massive risk for you because you will get quite lost once that train really leaves the station. I completely agree on the learning process. I think to some extent, also from a strategic point of view, I think there's a massive opportunity in emerging markets that we can't downplay." (I13-UCT, p. 232)

Speaking of innovative financing, one interview participant representing the academic stance highlighted the opportunities for risk mitigation through innovative financing, or through diversification (I12-UCT).

The interviewee emphasises the variety of guaranteed funds, backed, for instance, by the European Investment Bank, large institutional investors, multilateral institutions or even the World Health Organization (WHO). Furthermore, the interviewee points out other funds, which provide first loss facilities and guarantees, or pool capital to mitigate some of the perceived and real risks associated with impact investments in emerging markets. However, the interviewee also stresses some of the difficulties related to these risk-mitigating structures. Despite the willingness of foundations or even local governments to provide guarantees, off-take agreements or first loss facilities, the capital allocations of pension funds are simply too large for these individual instruments to be effective (I12-UCT)

"*The issue is that pension funds have such large wallets and so they can easily burn through even a $100 million first loss facility […] and that's very rare that you'd be able to find something that big. So, one of the issues around risk mitigation is the sheer size of the checks that need to be written."* (I12-UCT, p. 226)

Given this issue, the interview participant refers to diversification in the context of investing in fund of funds as a potentially smarter way for pension funds to mitigate risks.

"This is where diversification comes in again, investing in fund of funds with a proven track record that are able to spread out, do the due diligence on multiple different funds, and are operating in different sectors and geographies, I think this is one of the smarter ways to mitigate risks." (I12-UCT, p. 226)

Further, both interview participants from the UCT underline several initiatives currently undertaken to attract mainstream capital and to allow for the effective allocation of large amounts of capital.

"*Right now, we're chairing a group of asset builders, globally, but mostly focused on Africa, and we're looking at the question of how to actually build these types of opportunities, such as gender bonds […] that allow pension funds and others, to start bringing these types of investments into their portfolios."* (I12-UCT, p. 227)

Another initiative focuses on the creation of a listed fund of funds, which invest in PE funds that specialise on emerging markets. This listed fund of funds has the potential to provide more liquidity and attract institutional and mainstream investors. (I13-UCT)

One interviewee also emphasises the increased focus of large foundations such as the Rockefeller Foundation on mainstream investments and products. These foundations are not only valuable partners, but also create a pipeline for DFIs, as well as PE and VC funds to eventually pull in pension funds (I13-UCT)

> *"I think that's where some of the really interesting partnerships will happen. And I think increasingly, we have to actually be okay with the fact that both public and philanthropic and private money will operate together in those ways. And that we will be using public money to some extent to actually incentivize big private money to operate in these spaces."* (I13-UCT p. 233)

Building on these invectives, one interview participant mentioned the launch of a fund which is based on a fund of fund structure and provides incentives to local investment managers in an outcomes-based model. Only receiving payments after the outcomes are generated, the payments might be used to de-risk future investments, to lower cost of capital, or for business development and technical assistance (I13-UCT)

> *"We're seeing exactly the same mechanism with ING, a big Dutch bank and Philips. For instance, ING gave Philips, so you know, a 1 billion euro loan, but they tied the cost of that loan to their sustainability rating. For instance, if they save water, they save electricity, then the interest rate went down. And I think there's different ways that pension funds can really start playing around with some of these mechanisms and incentive structures at different levels."* (I13-UCT, p. 234)

The interviewee also highlights the interest of the Danish Government in exploring guarantee products to de-risk investments in emerging markets and to pull in mainstream capital.

> *"Sweden, for instance, has been using a lot of their development aid budget [...] to provide a substantial amount of guarantees for mainstream investors to invest in emerging markets. I think there's quite a lot of focus from the Danish government also to figure out how they can do that. [...]but essentially a lot of pension funds will primarily play if they know that their capital is also de-risked."* (I13-UCT, p. 231)

Key Findings

- Pension funds continue to explore with alternative investments but do not utilise full potential of innovative financing
- Pension funds are collaborating with governments and strong co-investors
- IFU and Academics highlight significant potential of innovative financing related to impact investing in sub-Saharan Africa
- Impact investments in sub-Saharan Africa can help DPFs to meet their long-term obligations
- DPFs are missing out on the learning potential and risk to be unprepared for the future

Figure 31: Key findings SRQ 9.

6 Discussion

Following a similar structure as the analysis, this section discusses the results in the context of the literature reviewed and theories identified. In addition to the nine SRQs, this section addresses the overarching research question, presents a framework for DPFs, and points out imitations to this research.

6.1 SRQ-1: Danish Pension Funds Defining Impact Investing

The Danish pension industry is faced with an educational challenge regarding impact investing. This finding is in line with the literature which highlights the persisting challenges around awareness and profound understanding of impact investing practices in the wider circles of financial markets (GIIN, 2018).

While Danish pension funds struggle with the term, speak to individual components of the definition, miss clear boundaries of impact investing, confuse ESG investments for impact investments, and stress their clear mandate in the context of a return impact trade-off, the representatives of IFU and the UCT point out IFC's impact investing definition and the OPIM as the prevailing industry norm. This highlights a clear gap of awareness and understanding of impact investing between different actors in the market.

A comparison of the examples provided by DPFs to define impact investing with IFC's definition points out that most of these examples lack one or more defining attributes of impact investments. While the investments mentioned by DPFs generate positive social and environmental impact, primarily related to renewable energy and clean technology, it is apparent that the impact measurement component is absent in all of these investments. Analysing the investments on the basis of intent and contribution of the pension funds, these attributes cannot be verified for all but are met by some examples. Albeit the intent and contribution of DPFs to generate positive social and environmental impact through these investments, the lack of impact measurement qualifies these investments as value-aligned investments rather than impact investments (IFC, 2019a).

Pension funds demanding clear boundaries for impact investing underlines the lack of awareness around guiding principles and industry norms, namely the OPIM which provide clear boundaries and guidance around what it means to be an impact investor (IFC, 2019a).

Identifying that DPFs stress their strict mandate to generate returns when speaking of their engagement in impact investing, the prevailing misconceptions around impact investing become apparent (GIIN, 2018), as impact investing does not necessarily mean to sacrifice returns (Viviani & Maurel, 2019).

The lack of awareness and understanding of the concept of impact investing as well as prevailing misconceptions in the DPF industry points to the need for of a large-scale education around the true possibilities and realities of impact investing (GIIN, 2018).

However, the literature also emphasises the important role of field building organisations and other actors in establishing a clear segmentation of the impact investing industry and facilitating the collaboration between a diverse set of investors (GIIN, 2018).

6.2 SRQ-2: Impact Investing & Regulation

In the context of impact investing, DPFs are driven by a regulatory bottom line rather than prevailing industry standards.

While DPFs call out regulatory bodies to provide uniform taxonomies and standardised guidelines, representatives of the IFU and the UCT give regulations a subordinated role among the driving forces of impact investing and emphasise prevailing industry norms and standards as a more important factor.

Despite their strict mandate, one Pension fund notices a changing view of the Danish regulatory authority (FSA) on fiduciary duty, whereas another pension fund emphasises that their current fiduciary duty does not necessarily contradicts with impact investing.

Even though the neoliberal view of fiduciary duty (M Friedman, 1962) is to a large extent outdated and the Freshfields report provided a new perspective on the matter (Freshfields Bruckhaus Deringer, 2005), the IFC (IFC, 2019a) criticises the fiduciary duty in some countries as not supportive enough to create the environment needed for managers to seek impact.

Supportive policy regulations can set the frameworks to channel investments into the impact direction or create co-investment opportunities (D. Wood et al., 2013). However, given their narrow interpretation of fiduciary duty, DPFs constrain themselves in exploring and pursuing impact investing opportunities.

DPFs emphasise the important role of regulations in providing structural setups. The pension funds often refer to the EU Taxonomy on sustainable investments as an example for regulations easing the assessment of green investments and contributing to an increased transparency and comparability of these investments across different investors. The so-called "Taxonomy Regulation" provides investors with a framework to assess the environmental sustainability of their investments, whether or not they are labelled as such (Lillycrop, 2020).

The representatives of the IFU and the UCT share a very similar view on the role of regulations. While the IFU points out the difficulties of regulating the impact investing industry and the interview participants of the UCT highlight the issues associated with aligning the different existing taxonomies, both mention regulations as a positive contributor, but identify industry norms as more important in guiding investors. As the prevailing industry norm, the OPIM (IFC, 2019b) which are signed by a number of large institutional investors, provide investors with a clear framework of what defines an impact investor. Additional industry standards such as the IFC Performance Standards on Environmental and Social Sustainability (International Finance Corporation, 2012) or the GRI standards for impact reporting (GRI, 2016) provide guidance to investors engaging in impact investing.

Not a single reference of these standards by any of the pension funds interviewed suggests that in the context of impact investing, DPFs are driven by a regulatory bottom line rather than cutting edge industry norms.

6.3 SRQ-3: Due Diligence, Measurement, Reporting & Incentives

With respect to *impact due diligence*, the findings are not surprising, as DPFs and the IFU differ substantially in their impact due diligence approaches. While the IFU has distinct impact due diligence measurements in place, DPFs regularly refer to ESG screenings, exclusion and other ESG measurements. It is pointed out that impact investments are a useful extension to traditional risk management practices, but that no distinct impact due diligence measurements are implemented. As a result, none of the DPFs we surveyed carries out impact screening in the true sense of the word. This may be due to the fact that the Equator Principles, for example, are based on voluntary cooperation and no further regulatory pressure exists (Scholtens & Dam, 2007).

It should be noted that this picture is supported by other studies. Ormiston et al. (2015) see no difference in risk management practices between traditional and impact investments, which fits the statements made by the pension funds in our interviews. One could argue that no distinct impact due diligence is necessary if impact can be quantified so that traditional risk management tools can be applied. However, tools introduced by the EP or those used by the IFU might function as good extension to traditional risk management until the obscurities surrounding the understanding and measurement of impact are resolved.

As regards *impact measurements*, our results are mainly in line with the literature and confirm the industry-wide notion of lacking tools to measure or quantify impact (e.g. Brandstetter & Lehner, 2015; Eurosif, 2018). The reported lack of suitable impact measurements particularly on the portfolio or fund level suggests that DPFs are currently not capable of accurately capturing the impact generated by their investments. The measurement of climate-related impact is an exception, as it can be easily measured by means of CO2 emissions. Generally, the pension funds complain about the unsatisfying data situation and the unavailability of suitable metrics in other areas. However, with the IFC performance standards, suitable metrics have already been endorsed by the World Bank. Furthermore, the IFU uses impact metrics such as jobs created, gender equality and taxes paid to assess its investments' impact. The IFU's approach of developing individually tailored impact plans together with investee companies is in line with Sandberg et al. (2009), who doubt the usefulness of standardised approaches towards impact measurement.

Albeit the flaws of impact measurement tools must be acknowledged (e.g. Brandstetter & Lehner, 2015; Mulgan, 2010), the call for standardised metrics on the EU level by the DPFs seems questionable. Even though the literature alludes the need for regulatory authorities to lay the foundations for impact investments (D. Wood et al., 2013), it was reported by the IFU and one DPF that the industry usually is ahead of regulatory authorities in terms of industry-wide standards.

Surprisingly, we find no evidence for the incorporation of negative impacts. It should be noted that the DPFs do not balance the positive and negative effects they generate and the IFU only to a certain extent. It is left to future research to what extent it is possible to create a system, such as a balanced scorecard, that can reflect this in detail.

In summary, with the IFC performance standards released in corporation with the World Bank, a credible impact measurement tool is already in place. The impact measurement practices by the IFU also shed light on suitable practices for direct investments which could easily be adopted by the Danish pension industry. Given that pension funds are also ahead of their regulators and can exert pressure on their portfolio companies, pension funds are quite capable of setting an industry-wide standard themselves.

The varying degree of *impact reporting* displayed in the DPF industry shows that there is still a perceived or alleged lack of unifying and mandatory reporting measures. This coincides with the literature on impact reporting, which emphasises reporting challenges due to the vast amount of inputs when accounting for impact and resulting measurement issues (Alex Nicholls, 2009b). While the EU taxonomy released in 2019 and its influence on pension funds is acknowledged, other established reporting standards like the GRI presented in the theory section of this paper have not been established in the DPF industry at all.

The motivation to report the investments' compliance with ESG or impact criteria can be attributed to the current political landscape and increased demand by the members of the DPFs.

This is also in line with the literature on legitimacy theories, stating that one motive for reporting practices regarding ESG and impact is the desire to comply with what is perceived to be socially acceptable (Suchman, 1995).

Due to the influential role they play in the market (Wood et al., 2013), the researchers argue that pension funds could themselves contribute to the establishment and the legitimation of an impact reporting system. As alluded by the representative of the UCT, this would in turn be beneficial for other companies in the market and improve the overall data availability within the entire industry. Furthermore, high quality reporting from portfolio companies can reduce frictions such as adverse selection and moral hazard (Biddle et al., 2009; Osnabrugge, 2000) and is linked to superior economic performance (Clarkson, Li, Richardson, & Vasvari, 2008b; Oikonomou et al., 2012).

The results we obtained in connection with *impact incentives* are consistent with the prevailing Principal–agent theory. Even though remuneration structures differ from fund to fund and some of them have introduced more advanced systems than others, total remuneration is clearly based on financial outcome in accordance with traditional principle-agent theory (Jensen & Meckling, 1979).

Considering the fact thatcthe IFU had to abolish its impact incentive scheme, it reaffirms the difficulties in quantifying and reporting on impact and subsequently linking these metrics to the remuneration of fund managers. The literature on impact incentives for managers backs our findings. The GIIN, for example, emphasises the need for uniform impact metrics to be able to successfully implement impact incentives in compensation structures, while Geczy et al. (2019) acknowledge the increased complexity of contractual principle-agent theories by adding an impact layer.

With respect to incentives for portfolio companies to meet agreed upon impact targets, lessons learned from the PE sphere show that it is possible for impact funds to include and enforce impact measurements in contracts with their portfolio companies (Geczy et al., 2019).

6.4 SRQ-4: Risk-Return-Impact

By mainly applying traditional risk-return considerations in its investment decisions, the DPFs interpret their fiduciary duty towards their beneficiaries rather as conservatively and neoclassical. However, they recognise the increased consumer demand for sustainable and impactful investments and allow impact to influence their investment decision when they choose between two financially identical investments. This is in line with the Freshfield report's third argument, which allows for the inclusion of non-financial criteria in investment decisions if financial analysis methods are exhausted (Freshfields Bruckhaus Deringer, 2005).

There is a discourse in academic literature about the extent to which financial return must be sacrificed for impact. Some academics state that impact investments are inferior to traditional investments (Barber et al., 2019; Hong & Kacperczyk, 2009; Renneboog et al., 2008), whereas others argue that SRI and impact investments perform equally well or even better than traditional investments (Eccles et al., 2014; Hamilton et al., 1993; Statman, 2000). With view on impact investments, our results show that risk-adjusted returns are perceived to be below traditional investments, which rather supports the former notion.

Constraining a portfolio by screening out investments based on ESG criteria naturally contradicts traditional portfolio theory (Markowitz, 1952, 1959). This notion is confirmed by the DPFs. However, Hoepner (2010) shows that by applying ESG criteria reduces the idiosyncratic risk of stocks so that in sum the overall diversification is superior to conventional portfolios.

Further, DPFs perceive impact investments to positively influence the overall portfolio diversification through additional exposure to alternative asset classes. This diversification benefit may be due to the fact that they are considered to be a distinct asset class, adding a further dimension to portfolio diversification (Ormiston et al., 2015).

We conclude that, except for Freshfield's third argument (Freshfields Bruckhaus Deringer, 2005), the changing view on fiduciary duty is still underappreciated by DPFs. As long as the disagreement concerning the trade-off between financial return and impact persists, Danish pensions are unlikely to deviate from traditional risk-return measures. These results are closely related to the fact that no measures are in place at DPFs to quantify the impact of their investments.

The researchers believe that the implementation of a uniform measurement standard helps pension funds to better capture their impact and thus quantify the trade-off between risk, return and impact for their investments. Given the right impact metrics are agreed on, the risk-return space of traditional portfolio theory could then be extended by applying the framework introduced by Saltuk (2012). This framework would allow DPFs to include an impact dimension next to the traditional risk-return parameters.

6.5 SRQ-5: Danish Pension Funds as a Catalysator of the Impact Investing Industry

The presented results clearly indicate that DPFs see and understand the underlying trends leading towards more sustainable and responsible investments. These trends include a wide range of socio-economic and environmental challenges, such as climate risks or the massive population growth in emerging markets. According to the relevant literature on industry emergence (Porter, 1980; Schumpeter, 1975), these trends are clear indicators of a newly arising industry. In our case, the impact investing industry.

As revealed by our results, the pension funds are well aware of the potential of their scale. Together with the reported peer pressure among them and their influence on companies, asset managers, and consultants, there is a huge potential to shape the market for impact investments. The institutional theory we have chosen ties in with these results and provides evidence that firms in the same institutional environment tend to imitate each other (Benner & Tripsas, 2012). This has the potential to support the manifestation of the impact investing industry. We therefore believe that the pension funds in our sample can help to legitimise impact investments in Denmark, which is necessary to further attract private capital (Eurosif, 2018; D. Wood et al., 2013).

Given the early stage of the impact investing industry (Monitor) and their beginning interest in impact investments, pension funds certainly have the potential to take over certain tasks of an *institutional entrepreneurs* according to David et al. (2013). For example, the cooperation with the government-backed IFU may provide proof for this hypothesis, as David et al. (2013, p. 371) alludes: *"in emerging fields, new organizational forms will gain legitimacy if entrepreneurs use [...] established categories of expertise from outside their field to develop solutions to these problems."*

However, one must acknowledge that pension funds lack several other decisive criteria which contradict the institutional entrepreneur hypothesis and, moreover, do not uniformly perceive themselves to be in the frontrunner role.

In their extension of Schumpeter's *Theory of Economic Development*, Hart & Milstein (1999) call for *strategies for sustainability* to be able to meet current environmental and social challenges and to unleash future economic potential. The emergence of the impact investment industry is clearly one of these strategies. As regards the environmental aspect and the expansion of renewable energy in Europe, DPFs certainly follow the proposed *strategies for sustainability* and therefore contribute to the design of the whole industry.

In order to determine the current status of the impact investing industry, we classify our results into the three-stages model by Gustaffson et al. (2016) described in our theory section. Considering the measurement and reporting problems that pension funds face, the third stage, the *growth stage*, has clearly not been reached yet. For this stage, industry-wide standards would be required. Consequently, we find evidence that the current stage can be classified under the second stage, the *co-evolutionary stage*. The reported good returns already provide growth potential, while new arrangements between companies and government agencies emerge (Gustaffson et al., 2016).

Eventually, we conclude that with PPPs or cooperation with DFIs the impact investing industry has already made progress in Denmark and has reached the second stage of the industry emergence cycle. To finally reach the last stage, the standardisation problems with respect to impact measurement and reporting need to be resolved.

6.6 SRQ-6: Demand for Impact Investing & Product Offerings

Given the high demand for more sustainable and impactful investments from the majority of their customers, DPFs must start rethinking and redesigning their product offerings to give their members the liberty of choice.

The perception among DPFs in the context of a customer driven demand for sustainable and impactful investments is surprisingly mixed. While some pension funds do not identify a significant increase in customer demand, the majority of pension funds acknowledges a considerable customer driven demand and a greater relevance in winning biddings for corporate contracts. Even though the IFU is not directly linked to the end customers of pension funds, they recognise a clear public sentiment all the way down to the individual investor and pension owner. This view is supported by the survey conducted in the course of this research. Analysing the data collected shows an apparent positive sentiment towards more sustainability in financial markets, concerns of pensioners about how pension funds invest their savings with regards to sustainability, evident demand for pension funds to generate positive social and environmental impact alongside financial returns, and a positive view towards impact investments in emerging markets.

The literature also highlights a steadily growing consumer demand and a high impact conciseness in the investment decisions of millennials (Morgan Stanley, 2017). Studies of Bauer et al. (2019) see this high demand also reflected in the case of pension funds.

However, some pension funds question the robustness of this demand when it comes to sacrificing returns for impact. They highlight different member bases as an important factor and point out mixed results when asking their members in this regard. The IFU acknowledges the difficulties associated with a return impact trade-off and underlines the segregation of capital into different pools to address the specific financial needs of various types of investors. While the analysed survey data shows mixed results with a widely spread sentiment of the participants, overall the respondents are still inclined to sacrifice returns for impact. The literature supports this view and studies of Barber et al. (Barber et al., 2019) show that despite a potential gap between stated and revealed preferences (Bauer et al., 2019), investors are willing to trade off financial returns for impact. Barber et al. (Barber et al., 2019) frame it as a willingness to pay for nonpecuniary benefits.

With an increasing demand, pension funds raise concerns about the labelling of green investments and greenwashing in general. The IFU and one pension fund mention that some pension funds currently use impact investments and the SDG predominantly for marketing purposes which could classify as impact washing. However, the representatives of the UCT are much less concerned about these issues than the pension funds. Their view is endorsed by the literature which highlights the important role of the Green Bond Principles and the OPIM in avoiding greenwashing and impact washing respectively (IFC, 2019a).

While customers are mostly unfamiliar with the sustainable investment products offered by their pension funds, the majority of the survey participants articulate the demand for impact investing options in the product range of their pension funds. This demand translates rather dispersed into the current product offerings of DPFs. A small number of pension funds give their members some degree of liberty of choosing between conventional and more sustainable investment products, whereas other pension funds only offer a standardised product to their customers. The literature suggests that an increased consciousness regarding sustainable products in the consumer space has translated into the choice of investment products (Morgan Stanley, 2017). The increased demand for individually tailored investment products, especially among millennials, requires investments to be in line with personal values and interests (Morgan Stanley, 2017).

Considering the high awareness and demand related to sustainable and impactful investments, especially among millennials, the researchers believe that DPFs ultimately need to rethink and redesign their product offerings in order to give their customers the liberty they demand.

6.7 SRQ-7: Danish Pension Funds & Impact Investing in Emerging Markets and SSA

DPFs are taking small steps towards impact investing in emerging markets but as of now are primarily focused on investment strategies of responsible or socially responsible investing.

Despite highlighting their strict mandate of generating returns, the interviewed pension funds show a high awareness and understanding of risks associated with environmental, social and governance issues. This finding is supported by the literature which identifies a clear development towards this direction (IFC, 2019a).

Only one of the interviewed pension funds mentions the integration of ESG related risks into financial risk management. This approach falls into the category of responsible investing (University of Cambridge, 2020) which emphasise the mitigation of ESG related risks. The literature highlights that an ESG integration approach is particularly popular in North America, Oceania and Japan, whereas negative screening enjoys greater popularity among European investors (PWC, 2017). This is reflected in the majority of DPFs which emphasise their negative screening, best in class ESG screening, positive screening, or exclusionary approaches to investing. Focusing on the screening of ESG related risks to align a portfolio to specific norms and values, all of these approaches can be subsumed under socially responsible investing (Sparkes & Cowton, 2004).

Although DPFs follow different strategies to mitigate ESG related risks or to align their portfolio to specific norms, the majority of the pension funds emphasises the use of engagement or active ownership. The literature states that this approach is leveraged in both, responsible investing and socially responsible investing.

Impact investing goes even further than responsible and socially responsible investing (IFC, 2019a), however, the impact related activities of DPFs hardly reach this stage.

The impact related activities of the interviewed pension funds are largely focused on listed green investments in markets with high liquidity. Benchmarked against IFC’s definition of impact investing (IFC, 2019) with the three defining attributes of intent, contribution, and measurement, the impact related investment activities of the pension funds lack at least one of these defining attributes.

According to the literature, pension funds are increasingly engaging in alternative investments (OECD, 2019a). This is also reflected in some investment activities of DPFs such as direct infrastructure and energy investments, PE investments or investments in microfinance and other impact focused funds.

Even though some of the direct investments in energy and infrastructure projects mentioned by the pension funds might meet the intent and contribution requirements of IFC’s impact investing definition, they clearly lack a measurement component.

Based on IFC’s definition of impact investing, the listed green as well as the direct infrastructure and energy investments of DPFs can at best be classified as value-aligned investments (IFC, 2019a).

The closest step DPFs are currently taking towards impact investing are their investments in IFU’s SDG fund, the African Infrastructure Fund, microfinancing funds or other impact focused funds. It might be debatable that these investments reflect the defining attributes of impact investments on the side of DPFs. However, on a lower level, the fund managers deploying the capital provided by the pension funds clearly show an intent to contribute to measurable positive social or environmental impact through their investments.

Apart from some sporadic investments in listed equities, direct investments in infrastructure and energy projects or the fund investments mentioned above, DPFs are rather reluctant to invest in emerging markets. The interviewed pension funds stress their concerns about legal risks and political instability as well as the need for a strong co-investor.

However, pension funds show an appetite for investments in emerging markets and justify their currently low penetration by not yet being prepared to assess the specific risks. While there is plenty of evidence for investors’ concerns regarding emerging market risk (Hess et al., 2017; Talmor & Vasvari, 2017), the literature also highlights significant opportunities which speak in favour of the appetite of DPFs in these markets (Cumming & Zhang, 2016; Talmor & Vasvari, 2017; Vishwanath, 2009).

Evaluated on the basis of IFC's definition, all the impact related activities of DPFs, whether conducted in developed or emerging markets, currently lack a well-articulated impact narrative. Such an impact narrative would allow the pension funds to communicate their intent, the contribution of their investments as well as the measurable positive social and environmental impact generated. Therefore, the researchers argue that it is crucial for Danish pension to develop a clear impact thesis if they want to take the next steps towards impact investing in emerging markets. The researchers suggest that distinct impact investing teams, like they already exist for ESG and alternative investments, might support the development of a clear impact thesis. Moreover, directing human capital directly to impact investments in form of distinct teams may also reduce the reported absence of sufficient manpower.

6.8 SRQ-8: Challenges & Opportunities in SSA

As regards impact investments in emerging market, the findings clearly reflect the current literature on this topic. While the economic potential is recognised, the specific risks and the lack of bankable investments prevent DPFs from investing in SSA.

The literature especially confirms opportunities stemming from strong economic growth, a growing middle class, wider availability of skilled human capital and considerable funding needs. Nonetheless, academic discourse also agrees on the notion that political, legal, and currency risks as well as the lack of data are heavily pronounced, which prevent institutional investors to enter the market directly (Hess et al., 2017; Talmor & Vasvari, 2017)

Since even the IFU states that emerging markets in Africa are not yet ready for institutional investors, our results are not surprising that DPFs are reluctant to directly invest in emerging markets. Besides considerable risks, the (IFC, 2019a) confirms the lack of suitable investment opportunities rather than a lack of capital.

However, the utilisation of partnerships with co-investor such as CIP or innovative financing structures like the cooperation with the IFU have the potential to mitigate the aforementioned risks and tackle the problems related to the scarcity of bankable investments. The literature backs these strategies (Bridges Ventures, 2014; Huppé & Silva, 2013; Oleksiak et al., 2015) Additionally, academics advise against entering emerging markets without local partners that possess the knowledge necessary to manoeuvre in these markets (Leeds, 2015; Talmor & Vasvari, 2017).

The need for innovative financing structures in emerging markets is backed by academics, who argue that strategies, which have driven developed economies over the past decades, must be altered and the outdated practices must be reinvented (Hart & Milstein, 1999).In this context, the allocation of capital to the IFU's SDG fund, the African Infrastructure Fund, microfinancing funds as well as other impact-focused fund managers is a step into the right direction.

Furthermore, our findings considering the implementation of sufficient measurement and reporting tools plays a key role here. When the lack of precise measurements and reporting standards is combined with the high legal risk in these countries, it is not surprising that pension funds shy away from these investments. From a principal-agent theory perspective, the pension funds do not only need to account for the incentives of the portfolio companies in Africa to generate the agreed impact, they also have to fear jurisdictional enforceability of the contract itself.

In summary, the researchers believe that DPFs need to keep up the pace and continue the path taken in cooperation with the IFU and CIP. Extracting the learning potential from this unique relationship with respect to local knowledge may foster the willingness to directly invest in these markets. Thereby, the catalysation of the necessary private capital to further develop the impact investment sphere in emerging markets can be enhanced. Finally, an improved local understanding also enables the writing of detailed contracts, which would prevent frictions concerning agency costs.

6.9 SRQ-9: Danish Pension Funds & Innovative Financing

DPFs need to further explore innovative financing instruments, structures and mechanisms to leverage the full risk mitigation potential of innovative financing and to exploit the ample opportunities of impact investments in emerging markets.

While the pension funds are increasingly engaging in alternative investments, the extent to which they utilise innovative financing in their impact related activities remains rather limited. Currently collaborating with the IFU, other European DFIs, and fund managers focused on impact, the pension funds see potential in the collaboration with the government in the form of government backed funds and guarantees. They also point out the important role of governments in creating incentives such as subsidies which can bridge the gap between expected and required return to attract resources from commercial investors. Although one pension fund mentions the possibility of a mandatory capital allocation to a government backed fund, the interviewee emphasises the challenges associated with prescribed assets. In general, the pension funds hope to see a development in the maturity of deal structuring as well as financial products and structures.

The representatives of the academic stance and the literature on the other hand, point out the currently available wide range of opportunities to mitigate risks associated with impact investments in emerging markets through innovative financing or diversification.

Drawing to some extent on the principles of Principal-Agent Theory and contracting (Eisenhardt, 1989; Jensen & Meckling, 1979), innovative financing instruments in the debt, equity and grant continuum, such as revenue-based loans, revenue based equity instruments or outcome linked grants, allow DPFs to mitigate specific risks associated with impact investing in emerging markets (Alessia Gianoncelli & Boiardi, 2017). The mitigated risks can either be linked to impact investing in general, i.e. impact risk, early stage risk, scalability risk, manager risk, transaction cost risk, liquidity risk, and exit risk (Bridges Ventures, 2014; Huppé & Silva, 2013; ImpactAssets, 2011; Oleksiak et al., 2015; Saltuk, 2012), or stem from the specific characteristics of emerging markets, i.e. political and legal risks (Talmor & Vasvari, 2017).

While hybrid financial instruments are more relevant for the direct investments activities of DPFs, structured on a fund or deal level respectively, innovative financing vehicles or mechanisms allow the pension funds to satisfy their specific risk-return profile on a broader scale (Alessia Gianoncelli & Boiardi, 2017).

A variety of guaranteed funds backed for example by Governments, the European Investment Bank, large institutional investors, multilateral institutions or even the WHO have the potential to mitigate perceived and real risks associated with impact investments in emerging markets. However, given the large amounts of capital DPFs need to allocate, diversification might be a more effective way of risk mitigation. As a fundamental principles of portfolio theory (Markowitz, 1952, 1959), diversification in the form of investments in fund of funds allows the pension funds to reduce the abovementioned risks by effectively allocating capital across a large number of individual impact investments.

While the investment of some pension funds in the Sustainable Development Goal Fund is rather small compared to their total portfolios, the collaboration between the DPFs and the IFU is one of the few examples of how these pension funds currently utilise innovative financing. While the IFU has the ability to provide high risk capital including first loss capital, grant facilities, and concessionary loans, the SDG fund is more commercial in its nature. However, blending public and private resource as well as tailoring the financing tools to the investee needs, the SDG fund allows DPFs to mitigate risks associated with impact investments in emerging markets and to effectively allocate larger amounts of capital.

However, there is a wide range of innovative financing initiatives in the impact investing industry and in SSA beyond the SDG fund. The interview participants from the UCT highlight initiatives around the development of social impact bonds and listed fund of funds which increase the liquidity in the market and allow DPFs to start including these types of investments into their portfolio. Additionally, efforts of foundations such as the Rockefeller Foundation can create a pipeline for various types of investors, including DPFs. Highlighting the increased importance of incentivising private capital through public resources, one representative of the UCT mentions an initiative around a fund of fund structure which utilised outcomes-based grants to incentivise local fund managers. Referring to an example which uses a similar outcomes-based mechanism to link the cost of capital of a loan to the borrower’s sustainability rating, the interviewee stresses the need for DPFs to explore theses kind of instruments and structures.

Both, the IFU and the representatives of the UCT agree that DPFs are missing out on the learning curve and highlight the considerable risks associated with being unprepared for the future. While acknowledging potentially higher transaction costs, challenges in aligning different objectives (Alessia Gianoncelli & Boiardi, 2017), and the current limitations to measuring impact on a fund level (Brandstetter & Lehner, 2015), the researchers argue that DPFs must start exploring innovative financing instruments and structures if they want to exploit the opportunities of impact investing in emerging markets.

6.10 A Framework for Danish Pension Funds

To provide a framework which outlines the opportunities and challenges of DPFs in the impact investing sphere of emerging markets with a specific focus on SSA, the researchers synthesise the findings discovered and discussed in the context of the SRQs. Drawing on the principles of the SWOT Analysis the researchers distinguish between the internal and external environment of DPFs in order to classify strength and weaknesses as well as opportunities and threats respectively. In this context, the researchers use the terms threats and challenges interchangeably. Developing their framework, the researchers draw on the categories developed during the coding process (Appendix 9.2.4.) and the definition of what constitutes a theory by Strauss & Corbin (1998 p. 22).

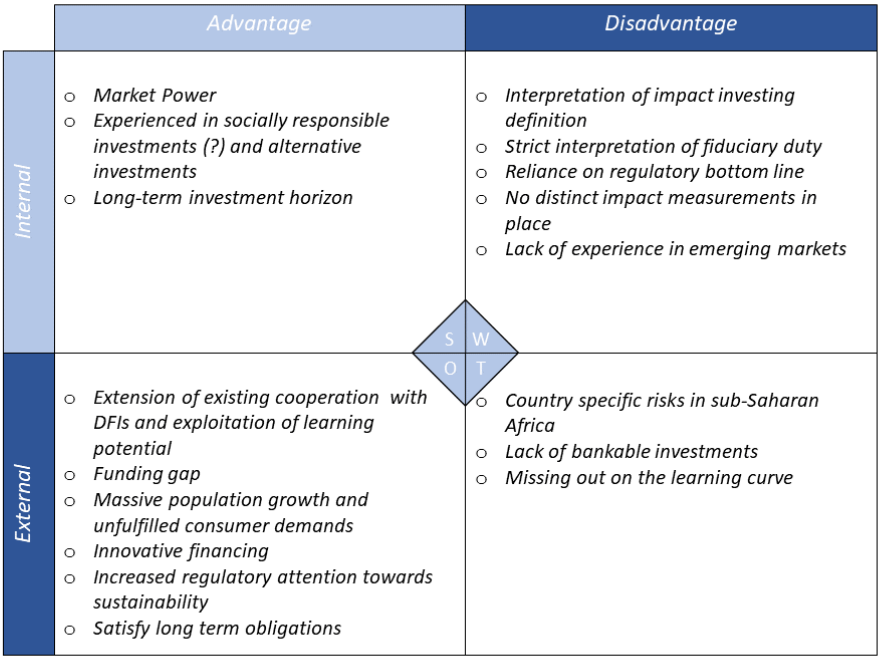


Figure 32: An Impact Investing Framework for Danish Pension Funds. Source: Own depiction, based on Grant (2016).

DPFs possess several key characteristics which position them well to play a decisive role in the impact investing industry. Managing pension saving for a large number of individuals, pension funds are equipped with significant financial resources. This in turn results in a substantial market power when allocating capital. Many DPFs have close ties with the local government and an established collaboration with the Danish IFU.

Further, their experience with responsible and socially responsible investment approaches as well as alternative investments can be considered as a strength in this context and as a first step towards impact investing in SSA.

Some of these strengths, particularly their market power, can translate into significant opportunities for DPFs when considering impact investing in SSA. For instance, the pension funds can leverage their market power to influence other actors, such as asset managers or asset consultants, to increase their efforts in sourcing impact focused deals. Additionally, given their market power, pension funds have the opportunity to drive the development of industry wide impact measurement and reporting standards as well as improvements in data quality. Further, the pension funds can utilise their market power to represent the voice of their members and to legitimise impact investing through peer pressure within the industry. Drawing on the experience with responsible and socially responsible investing, DPFs can move from 'greening' and avoid harm strategies towards 'sustainability' and impact investing strategies. Similar, the pension funds are able to leverage their experience with alternative investments, particularly direct infrastructure investments, when conducting impact investments in SSA. To gain the local knowledge and experience required for investments in this region, the pension funds might benefit from established partnerships and the collaboration with the Danish IFU. An increased regulatory focus on sustainable investments, resulting in a changing view on fiduciary duty, open up additional opportunities for DPFs in the context of impact investments in SSA. Besides regulatory requirements, the pension funds can draw on industry norms and standards such as IFC's definition of impact investing, the OPIM, the IFC Performance Standards as well as the GRI Reporting Standards. Further, the development of an impact thesis allows DPFs to clearly articulate their intent and contribution to measurable positive social and environmental outcomes and constitutes the foundation for the extension of traditional portfolio theory. Additional opportunities lie in the mitigation of specific risks associated with impact investments in SSA either through innovative financing tools, structures, and mechanisms or through diversification in the form of fund of funds structures. The emergence of a new industry, significant growth potential, promising initiatives as well as the prevailing funding gap in SSA constitute considerable opportunities for DPFs to generate attractive financial returns while tackling large-scale social and environmental challenges. Ultimately, redesigning their product offerings in a way that they account for impact investing options and provide a certain degree of liberty in the form of tailored investment products, might result in significant opportunities for DPFs related to customer acquisition and biddings for corporate mandates.

With respect to weaknesses, DPFs struggle with the definition of impact investing and their strict mandate. While their unawareness regarding the definition is rooted in a large-scale educational challenge around impact investing in the DPF industry, their narrow interpretation of fiduciary duty signals a strong dependence on a regulatory bottom line. With a relatively small headcount compared to the size of their AuM, DPFs might not have the human resources that are necessary to implement proper impact due diligence, impact measurement, and impact reporting practice. Although the significant financial resources are considered as a strength, the large amounts of capital DPFs need to allocate limit the pool of investments deemed to be bankable. Further, based on their reluctance to invest in emerging markets, DPFs lack the required experience and local knowledge to operate in SSA.

The narrow translation of fiduciary duty and the reliance on a regulatory bottom line translates into considerable constraints in the exploration and exploitation of impact investing opportunities in SSA. The pension funds might also face substantial difficulties in acquiring customers and winning the biddings for corporate mandates if they do not include impact investing options in their product offerings. If pension funds do not start engaging in impact investing in SSA, they are missing out on the learning curve and might face substantial threats of being unprepared for the future. Similar challenges may arise if the pension funds do not move from strategies for 'greening' to strategies for 'sustainability'. Further, DPFs are confronted with considerable challenges stemming from impact investments in general and SSA in particular. The lack of suitable measurements to assess and report impact on a portfolio level makes it difficult for the pension funds to measure and report the impact generated by their investments. Significant political and legal risks as well as a lack of bankable investments are challenges particularly associated with impact investments in SSA.

6.11 Limitations

The results and their interpretations are subject to various limitations, which need to be accounted for when considering the framework developed by the researchers.

For example, the researchers base their recommendations solely on the data gathered through the interviews and the survey. Hence, no secondary research is conducted to further prove, disprove, or refine the results.

Albeit the researchers view the strict interpretation of the fiduciary duty as potentially obstructive for the engagement of DPFs in the impact investing space, we acknowledge the fundamental role of this regulation for the pensioners. The researchers do not intend to doubt the meaningfulness of the fiduciary duty and believe that regulations in general continue to play a substantial role. Consequently, the development of an impact thesis recommended by the researchers must be aligned with the fiduciary duty.

When discussing the current stage of the impact industry, the researchers derive their interpretations and perceptions solely from their findings within the DPF industry. One must note that the generalisation made may divert when accounting for other market players and their engagement in the impact investing sphere. Nevertheless, since the literature agrees on the premature nature of the impact investing space, we are confident that our generalisations are reasonable.

Even though DPFs undoubtedly have the market power to influence their portfolio companies in the context of active ownership, the extent of this power is limited by the size of the company concerned. The larger the size of a portfolio company, the less likely it is that the pension fund is in an influential position to steer the company according to its beliefs.

As already elaborated in the methodology section, the generalisability of findings discovered in the survey might be subject to limitations due to a small sample size and a skewed distribution of the respondents' demographic characteristics.

Although the researchers believe that altering the product offerings to include impact investing options and to provide customers with a certain degree of liberty, the resulting administrative burden cannot be disregarded. Especially, with view on the suggested impact investing team, one must bear in mind the limited human resources of DPFs. Despite their personal preference, consumers might not be willing to administer their pension savings even if the pension funds provide them the liberty of investing in impact related products.

The researchers further recommend the application of the Operating Principles launched in corporation with the IFC. Although currently signed by a number of DFIs, large institutional investors, fund managers, and other investors operating within the impact industry, they have not yet gained wider acceptance outside this circle.

Ultimately, while innovative financing tools, structures, and mechanisms as well as other standards exist in theory and pension funds have the ability to drive the development in practice, some of the required infrastructure to utilise these tools and structures are still absent.

7 Conclusion

By pursuing an inductive approach to answer the research question, the researchers developed a theoretical framework that enriches the existing literature with a macro analysis of key challenges and opportunities for Danish pension funds in the impact investing sphere of Sub-Saharan Africa.

Considerable risk specific to sub-Saharan Africa as well as the lack of universally applied impact investment standards pose significant challenges on large institutional investors such as pension funds. This explains the scarce investment activities of pension funds in sub-Saharan Africa (OECD, 2019a). The researchers show that a narrow interpretation of fiduciary duty by the Danish pension funds reinforces this phenomenon. However, the study presents considerable opportunities for Danish Pension funds in the impact investing sphere of sub-Saharan Africa if they are able to overcome their weaknesses and leverage their strengths.

The successful collaboration with the IFU and CIP marks a first step into the right direction and might serve as a blueprint for future partnerships aiming to combine the funding potential of Danish pension funds with resources, expertise and local knowledge of strong co-investors. In this context, the emergence of innovative financing instruments, vehicles, and mechanisms and their potential for risk mitigation must be accredited. Altogether, the learning potential of Danish pension funds to successfully operate in sub-Saharan Africa and to patriciate in the economic potential of this market illustrates the significance of these findings.

With regard to impact investing in general, the sharp increase in impact related AuM (Deutsche Bank Research, 2018; IFC, 2019b) and a wider legitimacy and acceptance of the SDGs in the context of investment strategies is evidence that the impact investing industry is gaining ground. A wider acknowledgment of practitioner standards and the implementation of measures to account for impact alongside financial return builds the foundation for a potential contribution of Danish pension funds to accelerating the rise of the impact investing industry. Furthermore, the extension of traditional portfolio theory by an impact dimension enables Danish pension funds to accommodate for the specific risk/return/impact preferences of their clients (Saltuk, 2012) and the increased demand for individually tailored products (Morgan Stanley, 2017).

Considering their significant resources and market power, Danish pension funds have the ability to channel large amounts of capital into the impact investing industry, catalyse additional private resources, and legitimise industry standards (Eurosif, 2018; IFC, 2019a; Sethi, 2005b; D. Wood et al., 2013). Embracing this catalytic and legitimating role, Danish pension funds could eventually narrow the prevailing funding gap in emerging markets (Gaspar et al., 2019; O'Donohoe, Leijonhufvud, Saltuk, et al., 2010) and ultimately contribute to the achievement of the SDGs by 2030.

The researchers leave the following three aspects for further research. Firstly, in order to implement and anchor impact investing within the Danish pension fund industry, future research could emphasise on the development of impact-based incentive structures tailored to the specific characteristics of these pension funds. Secondly, future research could examine the implications of a cross-border collaboration between pension funds within the European Union on the establishment of industry wide standards focused on impact. Thirdly, contributing to the wider acceptance of impact investing, future research could focus on the development of tools and practices which allow the aggregation of deal level impact to a portfolio or fund level.

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9 Appendices

9.1 Supporting Material

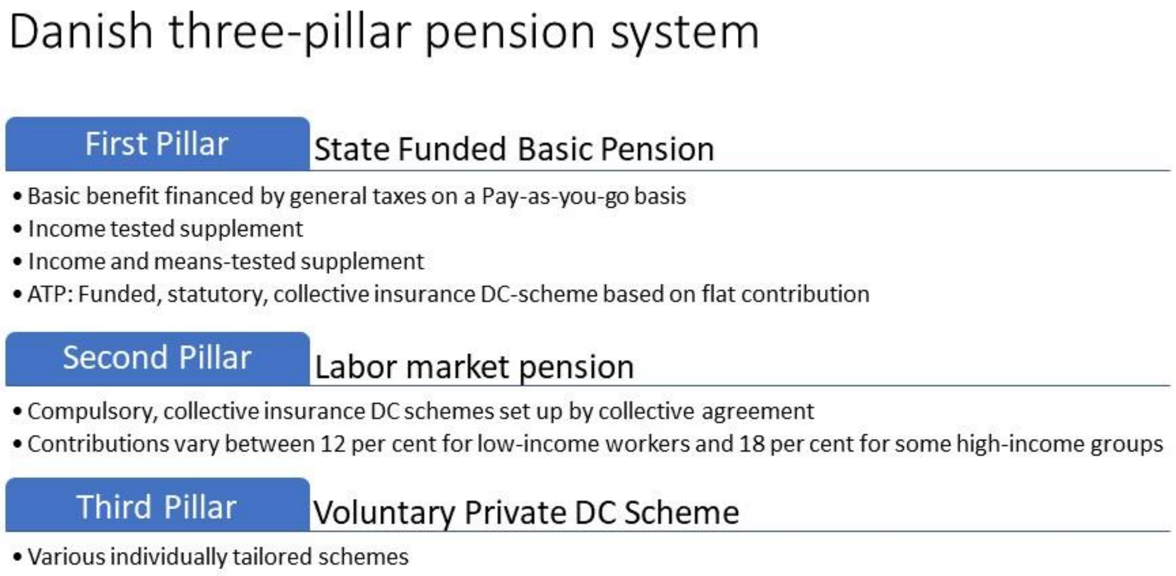
9.1.1 Danish Pension Industry Landscape

Employer-sponsored pension schemes can generally be classified into defined-contribution schemes (DC) and defined-benefit schemes (DB). In the course of DC schemes, the employee invests part of his salary to a pension scheme. To a certain extent, this contribution can be matched by the employer. With a DB scheme, a guaranteed benefit will be paid to the pensioner, which depends on years worked and the salary.

In accordance with the OECD taxonomy, retirement income systems around the world can be divided into a three-tier systems (OECD, 2019b). While the first tier provides social protection independent of past earnings, the second tier comprises mandatory earnings-related components to smooth consumption between working life and retirement. The final and third tier constitutes voluntary, private schemes.

For the most part, there is broad consensus that the first tier is governed by a public pension funds system, whereas the third tier is managed through private funds (Willmore, 1999). More controversy exists around the second tier. Advocates of neoclassical views favour a reduction of the state's involvement, while others defend public pensions stressing social concerns such as the transfer of income (Willmore, 1999).

Denmark's pension system is based on a similar multi-pillar system combining public and labour market pensions (Andersen, 2015). The first and public pillar of the Danish pension system mainly ensures flat basic protection complemented with income-tested supplements for very low-income pensioners (Sørensen, Billig, Lever, Menard, & Settergren, 2016). It is paid out independently of any labour-market pension or other private savings (Andersen, 2015). Retirement income received through the first pillar is characterized as defined contribution and tax funded (Andersen, 2015). The second pillar constitutes a quasi-mandatory occupational pension scheme (Sørensen et al., 2016). This scheme is based on fully funded DC-scheme with contribution rates ranging between 12% for low income and education groups and 18% for higher income and education groups. The third pillar composes optional DC-based schemes (Sørensen et al., 2016).



(Source: Own depiction, based on Sørensen et al. 2016)

9.2 Interviews

9.2.1 Interview Questions

9.2.1.1 Interview Guide - Danish pension funds

Introduction

1. What are the most interesting/pressing/relevant trends with respect to sustainability which you can observe with respect to your investment policies?
    a. Regulatory
    b. Demand
    c. Macroeconomic trends

2. How does the development towards sustainability over the past decade look like in your pension fund?
    a. What are the most significant differences compared to the past?
    b. What are the most significant changes to be expected in the future?

3. What are the prevalent investment opportunities at your fund besides traditional investments?
    a. Responsible investing
    b. Socially responsible investments
    c. Impact investing
        i. SDG goal
    d. Green Bonds

Impact investing – General concept

4. What are advantages/disadvantages (or motives?) of these investment categories compared to traditional ones?
    a. Interest rate environment
    b. Public awareness
    c. Demand by customer
    d. Risk management
    e. Risk/return
    f. Diversification
    g. Terminology / Taxonomy Problem
    h. Correlation with the broader market

5. How do you define the concept of impact investing?
    a. Which relevance does impact investing play in your fund in general?
    b. To which extend do you consider impact investing in portfolios?
        i. If large extend, why?
        ii. If small extend, why not?

Impact investing – Emerging markets and sub-Saharan Africa

6. To which extend do you consider emerging markets in portfolios?
    a. If large extend, why?
    b. If small extend, why not?

7. To which extend plays the Sub-Saharan/ Southern African region a role in your investment considerations?
    a. If large extend, why?
    b. If small extend, why not?
    c. Which alternative regions does your fund consider for impact investments?
        i. Why these regions in particular?

Investment process

8. How is the process defined, by which you assess sustainable/impact investments?
    a. Positive/negative screenings?
    b. Best in class?
    c. Shareholder activism?
    d. How do you measure sustainability or impact? Positive as well as negative?

9. What kind of alternative investments do you pursue at your institution?
    a. Are these alternative investments (Private Equity, Venture Capital, Infrastructure etc.) used as vehicles to conduct impact investing in emerging markets?

10. Which would be the requirements for the impact investment landscape to be considered in your investment portfolios (for example building a working marketplace)? (Past vs. Future)
    a. Which efforts have been taken to fulfill these requirements?
    b. Which efforts are still needed to be taken to fulfill these requirements?
        i. Emerging markets
        ii. Sub-Saharan/Southern African region

Demand for impact related products

11. How do you perceive the demand for impact/sustainable investment products in your offerings?

12. Which options do customers have to choose from impact/sustainable investments?

Traditional risk-return considerations

13. When considering portfolio theory, how do you perceive the influence of impact investing for your risk/return profile
    a. Diversification?
    b. Correlation with broader market?

Regulatory framework

14. How do regulatory requirements hamper or boost sustainable investments / impact investing?
    a. What are differences between national (Danish FSA) and international (EU) regulations?
    b. What are the perceived barriers to conduct impact investing in emerging markets?
        i. How do you perceive the role of fiduciary duty?
        ii. Development over time?
    c. How do Pension Funds differ from other institutional investors? Are other institutional investors better suited to conduct impact investments?

Due diligence and risk management

15. How do you ensure well-functioning risk management mechanisms are in place?
    a. How do you perceive potential risk management problems that result from impact investments?
        i. PPP (Prudent Person Principle)
        ii. Illiquidity premium
            1. No historical data

16. Can you categorize the perceived risks when conducting impact investments?
    a. Difficulty of finding opportunities
    b. Currency risk
    c. Internal resource requirements
    d. Lack of liquidity

How do you measure risk?

9.2.1.2 Interview Guide – IFU

Introduction

1. What are the most interesting/pressing/relevant trends with respect to sustainability which you can observe with respect to your investment policies?
    a. Regulatory
    b. Demand
    c. Macroeconomic trends

2. How does the development towards sustainability over the past decade look like in your fund?
    a. What are the most significant differences compared to the past?
    b. What are the most significant changes to be expected in the future?

3. What are the prevalent investment opportunities at your fund?
    a. Traditional investments
    b. Responsible investing
    c. Sustainable responsible investments
    d. Impact investing
        i. SDG goals

Impact investing – General concept

4. What are advantages/disadvantages of and motives for these investment categories compared to traditional ones?
    a. Public awareness
    b. Vision / Mission
    c. Demand by customer
    d. Risk management
    e. Risk/return

    f. …

5. How do you define the concept of impact investing?
    a. Which relevance does impact investing play in your fund in general?
    b. To which extend do you consider impact investing in portfolios?
        i. If large extend, why?
        ii. If small extend, why not?

<u>Investment process</u>

6. How is the process defined, by which you assess sustainable/impact investments?
    a. Positive/negative screenings?
    b. Best in class?
    c. Shareholder activism?

7. What were the requirements to consider the impact investment landscape in your investment portfolios? (Past vs. Future)
    a. Which efforts have been taken to fulfill these requirements?
    b. Which efforts are still needed to be taken to fulfill these requirements?
        i. Emerging markets
        ii. Sub-Saharan/Southern African region

<u>Traditional risk-return considerations</u>

8. When considering portfolio theory, how do you perceive the influence of impact investing for your risk/return profile
    a. Diversification?
    b. Correlation with broader market?

<u>Regulatory framework</u>

9. How do regulatory requirements hamper or boost sustainable investments / impact investing?
    a. What are the perceived barriers to conduct impact investing in emerging markets?
        i. How do you perceive the role of fiduciary duty?
        ii. Development over time?

<u>Due diligence and risk management</u>

10. How do you ensure well-functioning risk management mechanisms are in place?
    a. How do you perceive potential risk management problems that result from impact investments?
        i. PPP (Prudent Person Principle)
        ii. Illiquidity premium

11. How do your due diligence processes look like?
    a. Quantitative
    b. Qualitative

<u>IFU-specific questions</u>

12. How does your expertise differ from Pension Funds?
    a. Knowledge of local market?
    b. Assessment of local risks?

13. You are currently active in the following impact investment themes (agriculture, renewable energy and clean technology, microfinance), how did you decide on these three specific themes?
    a. What is the difference to other themes such as:
        i. Access to housing
        ii. Access to quality education
        iii. Access to health
        iv. Water, hygiene, and sanitation
    b. What would it take to take these themes into consideration?

14. To measure the impact of your investments you developed a "Development Impact Model", could you please elaborate a bit on how this model works and how it is applied?
    a. What are the challenges in impact measurement?
    b. How to you tackle these challenges?
    c. How are you reporting on the positive and negative outcomes of your investments?

15. To which extend are you utilizing innovative financing structures in your investments?
    a. Blended finance
    b. Outcomes based funding
    c. Impact bonds
    d. Etc.
16. What potential do you see for Danish pension funds in the impact investment landscape?
    a. In general
    b. In emerging markets
    c. In the Sub-Saharan region
17. Which challenges do you see for Danish pension funds to conduct impact investment?
    a. In general, related to regulation etc.
    b. In emerging markets
    c. In the Sub-Saharan African region
18. IFU is managing the Danish SDG investment fund. This includes the collaboration with Danish pension funds. How do you perceive the commitment of Danish pension funds with regards to impact investing?
    a. Marketing?
    b. Greenwashing?

9.2.1.3 Interview Guide – UCT GSB

Impact Investing in General

Despite the achievements in the impact investing industry, several challenges remain. Impact investing is only generating a fraction of the impact required to address social and environmental challenges globally, severe issues such as climate change, inequality and social division persist and major targets such as those set out in the Paris Climate Agreement or the Sustainable Development Goals might not be achieved.

1) What are the current challenges impact investing is facing?

- What are challenges around a universal definition and understanding of impact investing?
- What are some of the misconceptions about the nature of impact investing?
- What are some of the challenges related to feasibility at scale, increased accessibility and greater clarity and standardization?
    - Greenwashing and impact investing as a marketing gimmick
    - Wider range of products and vehicles for retail and institutional investors
    - Clear segmentation and enhanced standardization of impact measurements and management practices

2) How can impact investing challenge the prevailing paradigm in the global financial markets?

Large institutional investors such as Danish Pension funds have strict regulations and mandates for financial returns which prevent them from taking high risks or providing first loss capital.

3) Despite these preconditions, which role can Danish Pension Funds play in the impact investing industry?
    - Market building
    - Catalysing private and public capital (bridging the funding gap)
    - Contribution to manifestation of impact investing as a mainstream approach
    - Promoting impact measurement and management

4) What potential opportunities do you see for Danish pension funds in the impact investment landscape, not only from a financial perspective, but also from an impact perspective?

5) Many of the pension funds allocate their capital with an 'avoid harm' strategy. What needs to be done to convince pension funds to incorporate impact considerations into investment decisions and to allocate substantial capital towards investments which actively generate positive impact?

6) Which role can incentive structures (structuring incentives around impact) play for Danish pension funds in the development towards higher engagement in impact investing?

<u>Sub-Saharan Africa</u>

Sub-Saharan Africa has a large proportion of so-called frontier markets and even within the region characteristics of countries vary widely in terms of institutional frameworks, political and macroeconomic stability, and legal settings.

7) What are some of the challenges Danish pension funds face in this regard?
8) How important is local knowledge and a clear understanding of the local context?
9) What are some of the current initiatives in the region to attract capital from foreign investors?

Danish pension funds have been reluctant to investments in emerging markets and Sub-Saharan Africa.

10) Which role does perceived risk play in this regard and what do these pension funds need to change in the future?

Strong economic growth, growing macroeconomic stability, enhanced political reforms, and a rising global demand for the region's vast natural resources have made Sub-Saharan Africa increasingly interesting for investors, especially related to alternative investments. Among other reasons, the low interest environment is driving pension funds towards allocating more capital towards alternative investments.

11) Which opportunities do Danish Pension funds have in the impact investing sphere of Sub-Saharan Africa?
    - Opportunities across various impact investing themes

12) How can large Danish pension funds leverage innovative financing structures and public-private partnerships to engage in the impact investing sphere?

Danish pension funds manage large amounts of capital and often describe the size of investment opportunities in emerging markets, especially in Sub-Saharan Africa as too small or not bankable.

13) Is the investment landscape in Sub-Saharan Africa not yet ready to attract large amounts of capital form large, foreign institutional investors?

14) How can large pension funds channel their funds efficiently to impact investments in the region?

15) What are some of the challenges for social purpose organisations when attracting capital from large European institutional investors such as Danish pension funds?

The supply of sustainable and impact investments in developed markets is limited and attractive investments often overpriced.

16) Which opportunities do impact investments in Sub-Saharan Africa have from a financial as well as an impact perspective?

9.2.2 List of Interviewees

Name of Interviewee	Gender	Position	Department	Name of Institution
Interviewee 1	Male	Investment Manager	Alternative Investments	Pension Fund 1
Interviewee 2	Male	Senior Portfolio Manager	Equity Investments	Pension Fund 2
Interviewee 3	Male	ESG Analyst	ESG Investments	Pension Fund 2
Interviewee 4	Male	Investment Analyst	Alternative Investments	Pension Fund 3
Interviewee 5	Male	Senior Portfolio Manager	Equity Investments	Pension Fund 4
Interviewee 6	Male	Senior Analyst	ESG Investments	Pension Fund 4
Interviewee 7	Male	Head of ESG	ESG Investments	Pension Fund 5
Interviewee 8	Female	Head of Responsible Investments	Responsible Investments	Pension Fund 6
Interviewee 9	Male	Vice President	Sub-Saharan Africa	IFU
Interviewee 10	Male	Analyst	Development Impact	IFU
Interviewee 11	Male	Chief Investment Officer	N/A	IFU
Interviewee 12	Female	Professor	Bertha Centre of Social Innovation and Entrepreneurship	UCT GSB
Interviewee 13	Female	Professor	Bertha Centre of Social Innovation and Entrepreneurship	UCT GSB

9.2.3 Interview Transcripts

Date: 20.02.20
Duration: 1:06:34
Interviewee: Interviewee 1
Institution: Pension Fund 1

Interviewer 1:	We are currently writing on our thesis on the topic of impact investing. And we try to figure out to which extended is possible for institutional investors, such as pension funds, to include impact investing in their portfolio. And we just want to figure out what are the advantages and the disadvantages of doing so next to, let's say, traditional investments or alternative investments, such as private equity, venture capital. That's why we have invited you today to give us some insights on what is going on in the industry in terms of sustainability in terms of impact investing, and to share some insights of yourself or Pension Fund 1 as far as possible.
Interviewer 2:	Would be nice with you to start with a quick introduction of yourself and then you can share a little bit about your person and about your responsibilities at Pension Fund 1. As Interviewer 1 mentioned, we're both my students, we study the FSM program. I just returned from an exchange in Cape Town, which was also nice in terms of getting in contact with the impact investment sphere. That was very interesting. And that's why we also decided on having a topic also with a focus on, Interviewer 1 didn't mention it now, but we also want to focus on emerging markets in Sub Saharan African region.
Interviewer 1:	So, if you could give us a small introduction of yourself.
Interviewee:	So just to start, my name is Interviewee, and I graduated from CBS and 2017. So I had around two and a half a year at KPMG in our corporate finance department, and at the end of 2019, I decided to take the next step in my career and I had a fantastic offer from Pension Fund 1 to be part of their alternative investments team. So I'm working in a cross asset function, working with all of our assets and our specific was one of our asset classes and give me the opportunity to do a bit of everything. And normally allocated when there is a need for, for typically a transaction background when we do new transactions. And then of course, I have a portfolio of investments that we are monitoring. Typically, after we've been doing an investment, there's a lot of follow up reporting, is the investment progressing as we hoped it would, and there is a lot of like challenges from time to time. We are typically or I guess, pension funds in general are typically defensive investors in terms of we prefer more safe investments relative to more volatiles and an aggressive investment. Further we are passive investor. So, we normally don't take any actions in terms of operations. And therefore, pension funds normal like a very strong manager or co investor to be in place and I will touch up in bit upon that later. And alternative investments are increasing in Denmark and yeah, and in the Nordics. One thing is that offering is much wider today than it was 10 years ago. Then you have the low interest rate environment that's also fueling it there. And, and I guess it's, it's, yeah, there's just much wider opportunities today. And then seeing usual, you can just see that Nordic p fund started mid late in 90s. And first funds was moderate success, I guess.
Interviewer 1:	And where do you really see this trend to go in the future?
Interviewee:	So, alternatives will only increase I guess. And when you think about alternatives versus liquid investments, with alternative you can kind of structure the deals or the transactions exactly as you want. So you could say that when you're looking at a listed company or listed security, you're kind of a you're into the market. So the market or the issuer kind of sets the security that's out and you can just buy it and it's very standardized. But in the alternative space, you can kind of go in and negotiate a structure it the way you want it to be. I think that's one of the things that's needed when we're talking about impact investments and sustainable investments.

Interviewer 1: And you were talking about alternative invest and what would you include or what is your perception of alternative investments, and how do you fit impact investing into those categories?

Interviewee: So, I think alternative investments can be defined as very illiquid, something that is not listed on an exchange. It's a very unstandardized and customized investment type. So, if I'm investing directly in a company, I'll have to go in and negotiate with the owners. But it spreads across various asset classes private equity, venture capital, capital infrastructure, private debt, agricultural. And then you could say that impactful investments could be both alternative investments but it could also be liquid investments. I think what we want the sector is looking for right now is a taxonomy and a description or standardized set of rules of what is defined as impactful, because Pension Fund A defines it in one way, and then another pension fund defines it in another way, then you have no way of comparing it. So just to give you an example is that a wind farm we can all kind of agree that that is renewable Energy. And that is a green investment. But let's say that you have a factory in the middle of Russia producing these batteries for electric vehicles. Is that a green investment? Because it is has high emission in a production, but it also has a purpose in the end, right? Or at least to a larger extent. So I think that the sector is really looking for this taxonomy, and the latest I've heard is that the European Union would publish something in 2019. At least to some degree, and it's kind of a starting point. But I would also say that impactful investments can be you know, very different. I mean if you look at like traditional ESG, so there's like environmental, social and governance. And there's like three very, very different ways. And you could have something that if you look at environmental something that has a net positive impact, like a wind farm. But you could also have a company that has done a lot to reduce their emissions. And right now, it's just like really, really hard to measure what to screen and I think when you look at pension funds in Denmark, the way it's been done right now is through negative screening. And that was actually one of your questions. So instead of saying, in our portfolio right now, we need something green. Then when we're doing in an investment, we have an ESG due diligence. So, we do it ourselves and we have a team that does it. But I think for smaller pension funds, they might hire external consultants, just to see, would it be any kind of exposure here? Something that we do not want?

Interviewer 1: I think we've read on the on the internet page of Pension Fund 1 that you, for example, rule out every investment that is connected to coal, critical weapons or stuff like that.

Interviewee: And, and then, and that's really that, that that's really a no go, you know, we're not allowed to invest in that. But let me see if I can find an example. So maybe, that "G" in the ESG is kind of overlooked if you ask me that, because you could actually have conflict of interests in the ownership structure between owners and lenders in a transaction. And that would constitute a big problem to the "G" and the governance. And we actually see a lot of especially small companies, when we're looking at private equity, that that have these problems. And we see a lot of private equity funds doing right now is that so when they're looking at a transaction, they look at return, but they also look at risk. So if they are able to increase the level of governance, they would be able to derisk the asset and by that increase the return in the end, and it's kind of the other way around compared to how investing has been in the past where you've only been focusing on operations, operations, operations, and like profit maximization. And I think that same would follow for environmental and social issues going forward. Because you're not able to sell an asset at an attractive price if you have issues. That's kind of the new normal.

Interviewer 1: You have just talked about negative screening, which is like more or less the base of it. Do you do something that goes beyond that, as for example positive screening or shareholder activism?

Interviewee: It's kind of hard for us to do the shareholder activism, since we are not normally active shareholders in investments we are doing, we are setting some demands when we are doing investments. So, I don't have any good examples, but we could demand them not to do X, Y Z. Kind of like some rules. But I think in terms of positive screening, the best example is in the annual report of Danske Bank Group it was also stated that I think it's between 2013 Pension Fund 1 needs to have invested 100 billion danish kroner in renewable or sustainable business. So that's kind of a target that we that we're looking very closely at right now. And that is actually applying pressure because one of the biggest issue right now is how are sustainable of impactful investments competing to more traditional investments, and then you just need to make bankable cases out of the sustainable investments. And what we've seen so far as you need to have a dialogue with local governments in order to create a structure that kind of facilitate projects that would not normally be bankable to make them bankable. And that could be subsidies, it could be fund structures where pension funds have invested in the fund, but also lend that money to the fund and then the fund is backed by the government or insured by the government. So instead of buying a government bond, just simply lend to the fund and then it's backed by the Danish government, triple A rating. So, by that you are supplying funds to more risky assets, but it's actually the government having the risk. So, one way of doing it is through these public or semi-public private partnerships. But the trend that we're seeing right now is that everyone wants to do the sustainable investments. The thing is that at nine out of 10 investments there are way higher risk relative to the expected return. So, every time we're looking at an investment, we're seeing it. So what do we expect to have in return on this investment, say 20%. And then what is the required return on this investment? And it is really just out of a financial textbook, risk free rate, then you have equity risk premium leverage premium, and on top of that we have something called illiquidity premium, and then cost and complexity. But when you take these small breaks and just stack it up, you just see that some of these investments like these impactful investment, just take an example of investing in a new biofuel factory, the maturity of this type of investment is very, very low and that is increasing the risk. And the return that we get or the expected return simply doesn't match it. Okay. So, you need to do to bridge expected return to the required return on the investment and a way of doing it that could be subsidies. I think the key takeaway is that pension funds and other investors are looking at return and then on sustainability, as there is no grace or charity. Even though the customers in the pension fund, they are demanding green and greener products. What we see is that in the end, what they really just care about is the return and how wealthy they are when they retire.

Interviewer 1: Is that related to the greenwashing phenomenon?

Interviewer 2: Yeah, I think that also relates to one of our questions if you actually see a demand for greener products for more socially responsible products for more impactful products or investments. But in the end, do you actually see this demand on your customer side do they then say okay, we want greener product or more sustainable products, but are they willing to give up or accept a slightly below market rate for that impactful investment?

Interviewee: That’s a big topic right now. And it's really good spotted because we see a larger demand and I think that we will see within the next couple of years is when you are creating products for your pension, it's really complex and, and the degree of liberty you're giving to your customers also depends from fund to fund. I think what you will see is that some very green products are being launched, and the customers can choose them. But they won’t be included in the standard package. I think the pension funds will offer this to you, but we won't include it in our own portfolio selection. And I think that's because there is a belief that it's not able to match the returns. So, so just a very, very good example is that, I don't know if you've been following the market prices in the liquid markets for green assets, such as Orsted and there's also like a few of the American and renewable energy companies, the market prices has just skyrocket. And you can say that, in the end, the intrinsic value is almost unchanged. That's because you have an ever-increasing demand in the green securities. And that's kind of the problem with liquid market is that you can just inflate prices, because more and more demanders, but the intrinsic value remains unchanged. In the alternative investment space, that typically won't happen, you would say that there will still be multiple buyers in one transaction. But the liquid market is to a larger extent dominated by retail investors and less professional investors driving up prices, while the professionalism and the competencies are way bigger in the alternative investment space. And I don't say that we don't do any mistakes, but at the end, we will be doing the due diligence, and we will be doing all of our analysis. And if we simply doesn't see that this case is intact, and then something that we want to invest in, we simply walk away then we don't have any strict targets that we need to allocate this and this amount of money. And if they're like good cases we will invest. No cases we don't invest. And that's just an example of the very large differences between liquid and illiquid markets.

Interviewer 2: You touched upon it before. First it was starting with traditional investments and pension funds then there was one step further towards integrating ESG characteristics in the analysis of the investments. What In your opinion, what would it take to go another step further towards? Okay, then we have first traditional investments or traditional investing, then we have responsible investing where we include ESG criteria, then we have socially responsible investments, what would it take for pension fund to go the next step towards impact investments and what is your definition of impact investments?

Interviewee: I think it's, it's easier to give examples of that. So as I said, renewable energy. It could be a micro financing. That has been like very popular in the past. Because this is one of the areas where you can actually get quiet solid returns relative to the risk, because you're very great degree of diversification. Both in terms of single investments and geography. Impactful could also be like.. So there's a fund like public funding, the social capital private equity fund. So this is a fund I don't know if it's actually open to like outside investors, but I think the Danish government has put a lot of money into now. So this is a fund that invests in companies that does a great job to, just one example is that the in the invested in a company that only hires people with autism, yes. And try to get that them hire as consultants and then like sell them out to companies because they can have a hard time finding their place in the marketplace. And they've been doing a fantastic job. That's just one way or one of their investments. And, and one example of that, but impactful investment could be a lot of things depending on who you are. But again, my guess why we don't have any more of these very impactful investments in the Danish pension fund is that it's too high risk, competitive return and, and we have so many good opportunities and in the global world, we can invest across the globe. So why would we invest in a solar farm in Denmark? If we can invest in something in the US?

Interviewer 1: What would reduce the perceived risk for you? What would it take to reduce this risk? For example, when investing in micro financing, let's say for example, in any emerging markets.

Interviewee: So I think maturity of structuring, would be a good example. As I said, when we're talking about micro financing, so in the beginning, if a pension fund wanted to kind of do micro financing, say way back, so it's kind of impossible for these pension funds to go down to Africa. And like set up a portfolio. So that there needs to be at least one or two managers in between. And you need to find a structure also in terms of how the money flows, where you can reduce that taxes on the way to the end of the fund, you need to find out how do we do the legal side of it. So, maturity in structuring is one thing. When we're talking about renewable energy, one thing that's really derisking it is maturity in technology. So when we're looking at wind farms, we have a high degree of maturity structuring through specialty managers like Copenhagen Infrastructure

Partners. We have a high degree of technology. And we also have a lot of companies around it that are very professional. So someone very professional at building the windmill, someone very professional at operating them and keeping maintenance like very sharp, and that can, decreases the risk. But, as I said before, who's investing or who is the first to invest in biofuel, so I don't get anything extraordinary or incremental of being the first investor in this series. So, what you could see there was done on the windmills. And in the Windpark is that they kind of had some very, very favorable prices to begin with. But again, you need either counterparties or the governments to go in and set up a structure so that at least one part is derisking the transaction by taking some risk on their behalf. And I think that's that is just needed and governments have been the one take this risk in the past in order to push it out. Another example is bio gas in Denmark. So between 2010 and 2014, I think, like newly constructed plans was only around two, three. In 2014 you could get subsidies for setting up plans around 25% of your capex, and then 75% subsidies on all of your production. So this really incentivized people to kind of invest in this. And since we've seen, I think between 2014 and 2019, when the subsidy scheme kind of ended, we've seen like plus 80 to hundred new plants being set up. So you need to create incentives, okay. And one way where it actually makes sense for the government is that when the model destructuring, and the technology is mature enough, then the risk or the construction and the operation risk is so low that you will attract new investors and that's what we've seen with the windparks, right, where the subsidies has just been decreasing. And I think right now we're seeing the first wind Park without any subsidies.

Interviewer 1: Do you think that other institutional investors are better suited to invest in those premature impact investing sphere, just against the background that you also have the fiduciary duty towards your clients?

Interviewee: I think for your clients, you don't win much by being the first I think, for the client, it's better if you can create a product. So I have two options. I can create a product and buy a lot of other products in the international market, package it and then sell to my customers. So by this, is the customer has a perception that they're buying something green. And that's what they want. They don't care about what's the underlying investments. Okay, well, on the other hand, what I can do is, I can take a lot of risk by being the first to invest in a project here in Denmark, and then just put it in the portfolio. But you would simply not be able to create your own portfolio of Danish or Nordic, very high risk products. So I think that's that, that's what we will see is that the customer will demand green products and the pension fund will find it across the globe through managers, and then they will collect it and then package it as something green. Because the customers they don't have any idea what's in their pension fund. Or what's underneath. What they will see is maybe some kind of ESG score like we see for mutual funds with the morning star, Paul Cisco ESG score. I think maybe we also see that to a larger extent, for pension funds, but the transparency in my opinion will never be so big that you can see through all of the portfolios. Because then it would be simply too easy to set up a pension fund, and then copy the portfolios of the larger funds on the liquid side. On the alternative side, it will be harder, but it will simply be too easy to replicate the most successful funds. Otherwise you would have like a time lag. And that would be, say one-year lag, like I don't think that will help customers a lot. But I think that could be nee way of doing it, creating transparency in the quality of metrics. But again, then you then you need to define it. And you need to like have a set of standards taxonomies and ESG is one way of doing it through the “E”, the “S”, and the “G”. But impactful investments can be much broader.

Interviewer 2: And you also touched upon one interesting topic, I would like to ask another question. You said that the structure inside especially is very important in emerging markets, for example. But he said, these investments, these impact investments are too risky. They have to be derisked. Where do you see the potential for innovative financing structures?

Is that backed by the government or other you know, maybe other parties, for example foundations? Do you think there's a big potential for these innovative financing structures in emerging markets to derisk these impact investments?

Interviewee: So, when we are and sorry if I'm like diverting a bit, so if we're talking about emerging markets, I don't know, like the degree of, of impactful investments in emerging markets versus in development markets. But as I said before, you need to kind of de risk it. And I think emerging markets are less ready to do so because they have other priorities. And a government in Africa would rather spend money on trying to like increase the wealth in his of the of the country instead of trying to set up a structure or providing subsidies for international investors, which is kind of a paradox right? Now, if they created structures for international investors to invest more in the countries, then they might have a better chance of creating jobs. But again, I think the overall issue is that again, I get back to it, but there's just too high risk in terms of political risk, you have a currency risk. So, when we are taking in a new investment, we will always with our end customers, I suppose to be Danish kroner or euro, which is x, then we would need to hedge an investment. So, say you have an investment in Africa, providing you optimistically 25% internal rate of return, we need to hedge this. It might cost us four percentage. So, by that we've already like taking like a big chunk of our profit just because we're not exposed to the same currency as them. So that's just currency and that has nothing to do with the investments. So, there's like a lot of macro factors that have a negative impact on investment. So political risk, you have currency risk. Or you would say regulatory risk in the sense that regulations are non-existing in a lot of these very underdeveloped countries.

Interviewer 1: When talking about risk, how would you make sure that if you invest in such a market that risk measurements are in place to protect you from sacrificing too much returns?

Interviewee: So typically, again, we will have a very strong menu with us. So, let's say we have we're doing an investment in Africa. Then we would need to do it with a manager or a co investor that are familiar with doing such investments in the country or region. And then we put out our trust in them and their ability to cope in these markets. Now, we could do direct investments in liberal countries, but we would never do it in emerging markets. I would think one thing is the legal side of it. That could be way different than what we used to, if it gets to like a civil court. It's very fundamental thing that that could be missing in some emerging markets. Corruption is still like a big risk around the world. I think you could say, the easier it is to put it in into an Excel spreadsheet, the more willing we are to have to investigate it, you know, just to make it very simple. But it's an interesting topic like impact investments in emerging markets. And I think we'll talk about micro financing. That's, that's really one thing that has been able to kind of put together a lot of the puzzle and just going to solve this because you are able to provide financing just to people, that one thing is that they have a high need for it and they are able to generate returns. And you're able to have a highly, highly diversified portfolio with thousands, thousands of counterparts. And again, you could also diversify across several countries. So you have a low degree of political risk. Because, you know, the correlation between governments in one African country and one South American country would be quite low. Currency risk, I think you'd still have that to some degree. But micro financing, it's actually like a like a quiet, nice way of structuring it. But it depends on the manager and their capabilities.

Interviewer 2: I think micro-financing is also one part of the UN sustainable development goals. And I read a bit about that some other pension funds make the Sustainable Development Goals as a core of some of the investment funds. To which extent does it play a role at Pension Fund 1?

Interviewee: I think going forward, they will have an increasing role. I think if you're using them right now publicly, it's only for marketing. And that's across a lot of the Danish pension funds. Something that the customers can relate to. It makes the pension fund look nice.

It's a part of the greenwashing kind of thing that you mentioned before. It sounds nice and you can always I would say if you have a like 17 sustainable goals. And if you have a negative screening, you would always, or at least a lot of your investments, you would be able to tweak it to fit into at least some of the UN sustainable goals in some way. And again, there's no taxonomy right? So you can just like squeeze it out to fit in a few here and there. But we've seen more private equity funds using the UN sustainability goals. Maybe it's to like for marketing, for the pension funds, and for investors, and one way to differentiate themselves, but you could say, it doesn't cost a lot and if you invest in these investments, which fit with the goals, why not like displaying it?

Interviewer 2: So, you wouldn't say the announcement or the Sustainable Development Goals had an impact on your investment policies or your investment portfolio management or your investment targeting at all?

Interviewee: Not that we're using it actually it.

Interviewer 1: Could you maybe touch on upon the regulation side? What would prevent you from, let's say, investing in an emerging market, for example, in terms of maybe national regulation, Denmark side or maybe EU wise?

Interviewee: So, for pension funds in terms of risks, and the risks that any pension fund can do, there are typically limits to in what current you we can invest in. So, you could see that one circle is something that the government puts, so that's one layer. And then we put out another layer in order to protect ourselves from taking on risks. Again, thanks to the currency risks. But I think one of your questions was related to how regulations can boost or hamper. I just have just have put down some notes there too. One thing would be increased transparency. And that could be in, in as I said before, in how sustainable the portfolios are. Then, it could be in that you will need to report on how much of your portfolio is renewable. But again, then you need the taxonomy in order to be able to compare it. And it could be in order to provide these structural setups making it attractive. So, in Denmark we have a VIX fund, if you know. So the Danish Growth Fund, I think FDK, that's the homepage. So, it's so it's a fund by the Danish government. They take external funds. And but the idea was, I think it was just after the financial crisis, where the banks were not willing to finance a lot of smaller and midsize Danish companies. The FDX fund stepped in providing both capital and also credit to a lot of these companies. So again funded by or initially funded by the Danish government, but also pension funds later. And, and that's actually by law in Denmark that the we need to have this kind of capacity. It's also like they have a sister organization called Denmark's green investment fund, something like that, with the purpose of investing in the green transition in Denmark in order to like kind of push the development to a face where institutional investors are willing to invest as well and I think so in order to so by making it a law, you also like creating regulation so that you have money being invested. And I think in, in contrast that you won't see that in Africa, or in the US or so. So, so even in developed countries, but the fund has a great return. So I think to some extent, the risk and return profile is okay. It's hard to say because they are taking a lot of risk. And if they are providing, say, 10%, then it's positive, but what is it compared to the risk that they're taking? Right? And I think in this world, 10% is okay. But always think about risk and return. And that's key. But I think one way that regulation could handle this is to enforce institutional investors specifically pension funds to say have 5% of sustainable investments and could be, or it could sound a bit weird, but you could end up in a situation where one pension fund is more or less forced to make one investment. And then they think okay, now we have so much risk because of this one asset. So, we are more reluctant to take similar assets on later that might actually have a better risk reward profile. So that's just you could force pension funds too much to take on bad assets.

Interviewer 2: You touched upon it and from my understanding it in the end, it all comes down to the traditional portfolio theory to the risk of return. As you said risk and reward. Do you think that if we adding another dimension into the equation in terms of impact is that we don't have only risk and return but we have risk return and impact? Do you think that could make a difference in in for pension funds as well? Or in general?

Interviewee: I think you would need to find a way to measure it. Everything it's numbers, figures, and just take what's driving incentives in in the pension funds for the ones working there. It is salary and, and bonus, you know, let's be honest, the bonus is partly based on return. But how would you measure if a company is impactful on the time you invest in it? And then five years later, so you would need like standardized set of reporting on impactfulnis. And what have you made an investment that turned out to be not very impactful? How would you then just make a haircut on your, on your score then and who would be to review your impactfulness? Would it be like a third party or yourself? So there's like a lot of issues, since it's like more like a qualitative thing than a quantitative thing and that is one problem. And you'd also need like very high demand from the customers. Because right now, everyone measures pension funds on two things, return and cost. And then product offering investment solutions offering but I would say that 95 out of 100 they have a pension and then they choose between defensive mid risk and then offensive in the risk appetite, but more than that, you know, it's very few in Denmark. We actually have the opportunity to say, I want to control my pension myself and put it in mutual fund A, B and C. But it's very, very, very few people that actually does it. But I think you should be able to find statistics on how many are actually doing it by themselves. So, you would need a lot of pressure or demand from the customers on creating impactful. To be honest, there's just a lot of people that are complaining a lot. But they simply have no idea what their money is invested in. And as long as there's a growth in the pension plan, they are happy.

Interviewer 2: You mentioned that impact measurement is a big, big issue. No centralization, everybody measures differently. I have one question related to your alternative investments when you have alternative investments that are impactful. How do you measure the impact? How do you report it to your to your customers? Do you report it to customers? You just mentioned that, in the end, the customers only care about the return?

Interviewee: There is a need to report it for marketing purposes. And another thing that's very problematic in this way is that, take an example of having a portfolio of liquid assets, finding out whether these assets are renewable and not that simple just pulling data from a Bloomberg terminal. You can look up every security and the Bloomberg typically have like a, I don't know, it was called a sustainable or its renewable. But by there you can see so I'm invested in these 10 assets, how renewable is my portfolio. When you're doing that an alternative portfolio, you need to go through all your investments, line by line and do it manually. So that would not be big problem if have only direct investments, but since you have a lot of investments in, say pension fund A have invested in a global private equity fund, then the fund has invested in 12 companies, then you need to assess these companies. If you have invested in a venture capital fund, then it's not 12 then it's more like 300. And if you have invested in a fund of funds structure, then like, then it's like exponential, right? Because you want diversification, but diversification also makes it like problematic for you. So, you need to go through all your investments and label it. Is it renewable? And how renewable is it? So, one way of doing it could be you have been a heavy energy company in the EU. A lot of the energy companies, they have coal and say they have some wind farms. So what's the split? And when you have assets that then you still have, say 5000 unique investments you have to go through. So it's, it's a lot of work. And then when you get to the next quarter, you need to do the need to start over. So it's a lot of work because right now we don't have like a, like a database and that is why it would be practically impossible to do. Because in Denmark, you would say that financial statements are public. And that's the same in UK for some company in Norway, Sweden, but in Germany, like a lot of companies just go like below the radar. Major statements are not public. And then it's pretty hard to figure out. What are they doing? Like from an outside in perspective? So, it's very, it's very time consuming. And that's just when we're talking about renewable where it's kind of black and white, is this renewable or is it not? What is it then? Is it sustainable? Is it not? And then is it impactful, is it not?

Interviewer 2: And then you said if you if you measure it, then you can only or you only use it for marketing terms. And probably the effort is not…

Interviewee: So benefit and costs. And it's you would need very skilled people to do it. Because there is some kind of like mathematics in it, even though it's not like it's quite simple, but you still need to pay like decent salary and it will be like a very, very terrible job to be honest.

Interviewer 1: And regarding risk management we've found that especially for illiquid investments, you use the prudent person principles.

Interviewee: I've heard it a lot. But I have not been a part of the prudent person principle when we do new investments. So overall, as far as I understand it, and really you need to look it up. So it's just principle in order to protect that you are acting in the customers best interest and that you are not taking any excessive risks and something like that. And it is creating a lot of problems by the pension funds that wouldn't that there is some adjustment and it is really just a formality. Because I don't think that that you would ever be in violation of this, but you need to make a lot of new documentation that you didn't do in the past.

Interviewer 1: But do you actually conduct it an Pension Fund 1? Can you tell something about that?

Interviewee: Yeah. So every time we do a new investment and I think that's by law, despite the lack of regulation, you need to go through and just to see whether the investment lives up to the prudent person principle.

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Duration: 0:24:32
Interviewee: Interviewee 2
Institution: Pension Fund 2

Interviewer 1:	Yeah, as I said, we are two master students, we are currently at CBS and we are studying finance and strategic management. And we are currently writing our master thesis regarding institutional investors and specifically Danish pension funds and their opportunities in investing in impact investing, so to say, as an alternative for, you know, like traditional investments or like alternative investments you already pursue like private equity or venture capital. And, yeah, we just want to explore how you perceive impact investing or like sustainable investing in general. And also when it comes to emerging markets. And yeah, that's actually what we're trying to figure out right now. And that's why we are calling you to get more information on how you guys actually work on how you include these considerations into your daily investment decisions.
Interviewee:	First of all, I think it's an interesting topic because I think we are the greenest pension fund in Denmark. I just read. As long as it's green, we're buying it. But I think what is most important, let's say we have a black investment, which is not green. And the green one, of course, and then you don't, we always need to have the same yield on the on the green one. Really, you don't want to buy anything that it's more expensive than the black one. I think that's like a rule of thumb that we use. If we find the exact same investment in something, then you gotta have the same return, even though it's green. So I think it's really important to emphasize that. The most important thing for us is to get the highest return. But we are really focusing on finding green things. But if there's a black one with a higher return, than we are choosing the black one.
Interviewer 1:	Okay, this makes sense. Could you maybe just walk us through some of the trends that have evolved during the last years? When it comes to sustainability? How can you like maybe give us an overview of how this trend was going on in the past and your fund and how it how it is maybe evolving in the future?
Interviewee:	I think that has been the movement for the last several years. And it will continue. The thing is, there is something called green washing, I don’t know if you know about this. That means that there's a lot of issuers, who have trouble finding green investments to buy green stuff. And then they just call them green, even though it's not green. That's not good. The EU has a taxonomy regarding things that you need to follow to be 100% sure that what you're buying is green. And we can come back to this in more detail. We have a team sitting here at scanning all investments, so if I have an investment, then I got to go through the ESG team and they will read through the taxonomy and see if it's okay to do the investment.
Interviewer 1:	And what kind of sustainable investments? Do you focus on something in particular or is it just that you analyse your overall investments for ESG criteria.
Interviewee:	I think it's all. I can come with an example we have been big in Dutch government bonds and that's due to all these water floodings in Holland. Then they do a lot of green investments down in Holland. And we're trying as good as possible to keep it so we're really big in green investments down there.
Interviewer 1:	Okay, you've already touched upon how you guys evaluate the ESG criteria. Could you maybe elaborate on this one a little bit more and just to mention some notes and like, we've found that you know, people use positive and negative screening or, shareholder activism.

Interviewee:	The EU has this taxonomy which is really important. So they have these rules that you need to follow, and they are developed by the minute. I would say to have more and more rules that you need to follow. These rules are changing rapidly, but we are trying to hold on to perceive under rules to succeed. But again, the EU has an enormous taxonomy regarding these things that you need to follow on what to do and not to do with all kinds of investments, if they are green or not. So, I don't think there is any kind of rule set, as you would say, is changing so, so that's why we have a lot of ESG people just doing that. I can afterwards give you the contact of the guy who is responsible for this, he is an ESG analyst. He knows a lot more about that.
Interviewer 1:	Okay, that would be that would be very interesting. That would help us a lot, thanks for that in advance.
Interviewee:	I’m just the guy making the money.
Interviewer 1:	Okay. Good to know.
Interviewer 2:	Speaking of the EU regulation, that brings me to an interesting question. So is the EU regulation and all these restrictions, the main motivational driver behind going into green investments at Pension Fund 2? Or is it also other additional drivers or motivating factors such as demand from your customers?
Interviewee:	I think there's a huge demand from the customers We are owned by nurses, right? And these nurses are known, that all these kind of jobs really want to have some green investments. So I think from this perspective it is very important to them that we do some green investments. So we have guidelines from our board of directors to be green. So it is specified by the board and we just follow the regulations of the EU.
Interviewer 1:	Okay, makes sense. But do you think or do you perceive that those people who actually demand those green investments, that they would be willing to sacrifice return?
Interviewee:	No.
Interviewer 1:	So it's like when talking about greenwashing again, it's more like you want to have it but on the other hand, you're not willing to sacrifice returns for it, is that correct?
Interviewee:	We don’t sacrifice returns, that is very important to say. However, we will always choose the green investment if it has the same return.
Interviewer 2:	You said your customers, the backbone of your pension fund are from nursing and health industry. Do you give them the opportunities to deliberately decide on options to go greener? Or do you just include these green investments in your general portfolio and then it's included for all of them?
Interviewee:	It is for all of them.
Interviewer 1:	Do you at Pension Fund 2 pursue impact investing and could you give us your definition of what impact investing actually is?
Interviewee:	In my opinion, impact investing is just making an investment with a purpose. I would say do something better than it was. Regarding the environment, for example if you build a housing community so that they don’t use a lot of power or electricity, I would call it an impact investment. I would also call it an impact investment what we are doing down in Holland regarding the flood protection means. This has an impact, meaning that it will give a brighter future to the people who live there.
Interviewer 1:	Do you pursue those kinds of investments in emerging markets as well?
Interviewee:	Actually, that is something we're trying to do and we are looking forward to do. For example, we are excluding a lot of countries who do not do those kinds of things. There is a lot of countries who are not doing it the right way and we are excluding a lot of these countries.
Interviewer 1:	What are the reasons for you to exclude some of these countries? What are the risks?
Interviewee:	For example, if it is not a democracy, then we can’t invest in that country.

Interviewer 1: Okay, and what would be like prerequisites for you to invest in those countries. I mean, you've talked about political risk, but are there any other things that you would need before you are able to invest in those countries?

Interviewee: But I think that there is a lot of things. Let's take an example, weapons are a big part, or whether it is tabaco or stuff like that, we exclude those things as well. And we're actually we're making big balances as to speak on how much money we have missed by not being invested in those kinds of trades. So, you have to weigh these four and against. Well there is no rule of thumb regarding the tabaco, but I know we are trying to do so much groundwork before we invest in something. We don't want to make any bad headlines; it is so easy these days to create bad headlines. Nobody wants to invest in something that is bad for democracy or bad for people, that is not popular these days.

Interviewer 2: You touched upon the comparison between the black and the green investments and that actually the deciding factor in the end is going to be the risk and return

Interviewee: I would say that's in developed markets, but in its emerging markets, first of all we cannot choose between black and green, because there isn't anything. I mean when we exclude directly, then you don't have a choice.

Interviewer 2: Okay. But even in those developed markets, when you compare these investments. Does the impact which the green investment have, does it influence the investment decision in any way? Or is it just that the return of the black and the green investment is compared.

Interviewee: It is just the return.

Interviewer 2: Okay, do you see any development in the way we apply traditional portfolio theory in a sense that we go away from merely a risk return approach towards including another dimension, the impact dimension? When impact is going to be measurable and once we can quantify it, do you think it will be included in our portfolio decision?

Interviewee: No, I think our goal as a pension fund is to earn as much money for the for our customers. If you do it the other way around. If you if you don't use the theory that you have learned in school, and when you just want to go green, and then it is instead of making money, that doesn't make any sense. So it will never be the case that you say, okay, that we not make any money, because that is our main purpose. So even if we want to be green, our main purpose is to make money and do the things we have learned in school.

Interviewer 1: You've talked about the big project in the Netherlands regarding the flooding protection. And I mean, those projects can be considered as rather illiquid, I would say, is that is that correct?

Interviewee: No they are government bonds, they are quite liquid, so if you want to be out of that position you can easily do that. I also think that the liquidity in green investments is getting bigger and bigger, because everything is green now. So it's not like these green investments have a bad liquidity compared to the black ones.

Interviewer 1: When considering impact investing, would you say that the liquidity problem will diminish to some extend?

Interviewee: I would say that, because there is coming more and more green. Right now you can get some green investments that are cheaper than the black ones. And that is due to that they are not as liquid as the black ones. Now I think in the future they will have the same liquidity for the green ones, meaning that the discount you are getting with these green investments will disappear in the future. Because more and more will be green.

Interviewer 2: I have another question on the emerging markets. I read some articles about your cooperation with the Danish government in terms of having funds which are backed

	by the Danish government. Do you think that this is the only one way for Danish pension funds to enter emerging markets and to conduct investments in those markets? Or do you see other alternatives for entering these emerging markets and if not, what is hindering you at the moment from entering emerging markets?
Interviewee:	That's a good question. I think it is important to follow the rules by the Danish government.
Interviewer 2:	For example, when you think about these emerging markets, do you think that they need to make structural changes? What are the biggest challenges you see for entering those markets? Do you think if the government in those markets would provide better structures, better standards, in terms of investing or do you think the financial markets are not as developed? In your opinion, what are the biggest challenges for a Danish pension fund to enter a emerging market?
Interviewee:	I think especially when you have political risk in some countries, then I think we have more and more problems entering these markets. For example if you have a dictator ruling a country or when we think about issues related to women's rights in Arabic countries, then it is hard for us to invest in these countries. So I think there will be more and more of that, meaning that it is not a possibility for us to invest in these countries. I think we will continue and it will be the main theme going forward, that you can't invest in emerging markets where the standards are not the same as our western standards, because it will create so much bad headlines.
Interviewer 2:	You mentioned the green investments in the Netherlands. Of course, the Netherlands is a developed market. Do you have other alternative/green investments in developed markets here in Europe, the US or somewhere else?
Interviewee:	Yes, we have a lot. There is a lot of Danish ones and the World Bank has also issued some green investments. There is a lot of green things going on in Scandinavia and I think we are really far ahead in the Nordic countries regarding green. I think in the US the are a little bit behind, but we are trying to make it as green as possible, but I think that they are lagging behind in the US regarding green projects and stuff like that.
Interviewer 1:	I'm coming back to the liquidity issue. Let's say you have an investment that is more illiquid than others, how do you ensure that the proper risk management mechanisms are in place? I mean, for example, if you don't have any financial instruments to hedge positions and staff. How would you proceed when making such and investment that is more illiquid or riskier? How do you ensure that the risk management is properly set up?
Interviewee:	Just use some common sense I would say.
Interviewer 1:	Okay, I have heard a lecture from ATP, one of your competitors, and they were talking about the PPP, the prudent person principle. Is that something you are using when assessing those investments?
Interviewee:	Yes it its. Sorry have another call from work, can you call back in five minutes?
Interviewer 1:	Yes, we will call back in five minutes. Bye.
Interviewee:	I have time for another two questions and then I have to run.
Interviewer 1:	Would you just give us some comments on the prudent person principle we've just talked about?
Interviewee:	Of course, the prudent person principle is important and it is something that we follow. That is just common sense.
Interviewer 2:	I have one last question on the impact measurement. When you do these green investments, do you measure the impact you achieve with whose investments and do you report these impacts back to your customers?
Interviewee:	I think the ESG guy will know much more about how we do all these things. I think that will be something that we do in the future to control and to make sure that these

investments are green. That something we will do and will continue doing in the future.

Interviewer 2: Yes, I think that is very important because then you can make sure that investments are not made merely for greenwashing purposes. Then we can actually measure the impact we achieve based on a standardized measurement which allows comparison with other investments. This can then be reported back to the customer.

Interviewee: That makes sense. I will give you the contact of the ESG guy. I have to run. Take care, bye.

Date: 03.03.20
Duration: 0:36:16
Interviewee: Interviewee 3
Institution: Pension Fund 2

Interviewer 1:	Then, first of all, thanks for taking the time. And we really appreciate that you are having this interview with us. And I think we should start with a little introduction of what we're doing. And yeah, then maybe you can just give us a brief introduction of what you are doing at Pension Fund 2. So, we are both students at CBS. We study finance and strategic management. We are now in our fourth and last semester and are currently writing our master thesis. And the topic is about institutional investors and specifically Danish pension funds and their opportunities to conduct sustainable or impact investing in emerging markets.
Interviewee:	So few words about myself. My name is Interviewee 3, I am an ESG analyst at Pension Fund 2. Pension Fund 2 is the third largest they think Danish pension fund. We managed about 300 billion Danish kroner. And we do so for a few different pension funds. So we're actually a pension funds of the Danish welfare workers broadly speaking. So, the nurses the social pedagogues, the social workers etc. My task mainly include ESG integration into the Pension Fund 2s investments which includes work with engagement in Mexico ownership on climate issues, tax, human rights, labour, and a few other different items that I work with in terms of integrating ESG into Pension Fund 2s investment universe by excluding companies that pose large ESG risks, but also in a positive sense by investing, primarily, I would say in climate related assets, but also another sort of social investment activities. I think that's a brief introduction. And I I graduated from CBS where I think you study as well. Four years ago. It was national business and political politics program.
Interviewer 1:	Could you maybe start with giving us an overview about the most interesting pressing trends with respect to sustainability that you can observe with respect to your investment policies?
Interviewee:	So you were asking about trends and sustainable investing. I would say a few different trends I think are observable right now is that climate change is becoming very salient in public discourse. It's becoming very visible when you look out the windows and you haven't seen snow in Denmark the entire winter. You're seeing flooding in the UK and you're seeing bushfires in Australia, etc. So I think a few different things here is that you can you see investors start to mobilize on this, you've seen this, they starts mobilizing both from the risk management side, so trying to actually understand the climate related risks that they're, that their portfolios are exposed to full pictures of physical risks. So my prophecy is going to sink into the ocean, but also the transition risks so are the other business models of my portfolio company is going to be obsolete within a few years is excellent going to exist by 2014. And I think those are some of that's carrying a lot of the trend setting here is investors are now starting to become aware of this. This, in turn leads to, I would say, a lot of flooding around the impact investments that you can make and that has now proven to be profitable, so renewable energy investments, particularly sort of alternative investments in renewable infrastructure like offshore wind, onshore wind, solar farms, etc. I think we can see now that the that there are so many investors involved in so many investments interest in this, that it's actually pretty difficult to get the returns that we used to get 8 years ago when we started to get involved with this, so there's a lot of interest in also trying to invest green. And I think what you're also seeing is that there is a lot of interest consumer driven interest I say in in greenish funds so be it your pension fund or be it your just regular investment index fund. There's a lot of interested in those being green impact. And I think you can see that a lot of Danish pension funds now launching impact products or green products that are either impact driven or exclusion driven to cater to

this market. I think what you'll also see is that it's very difficult to win the bidding for some of the larger company accounts in Denmark in terms of pension if you do not have this option, so, so it's really moving forward at a very rapid pace, just from the sort of from the buyer perspective, then the final thing I think I'll emphasize is the legislative side at the EU level regulatory side. There were a lot of stuff is happening. I would say the main benefit right now is actually getting transparency, getting better ESG data, getting better climate data, getting the taxonomies which activities are green, which are not. And then getting some benchmarks that are sort of open benchmark standards that are set from somewhere that is the isn't the private to company, and I think that's that's going to be very, very influential. So, what's happening at the EU level is going to change investing in a very profound way I would say.

Interviewer 1: Okay, so you've already touched upon like the need for standardized benchmarks. How do you currently measure impact? Well, how do you currently measure ESG performance?

Interviewee: So, in a few different ways. So in terms of impact, if we measure impact, we don't do like an impact report where we sit down and say, Okay, so, but what we do collect the impact reports and then use them in our communication. So we do have some numbers on our green energy investments, I think produce green energy for 4 million households or something. So we do have those types of numbers. What we do is basically we count our investments in climate related activities, and I think it's, I think we're at 28 billion Danish kroner there. And we use the I think we use the taxonomy as sort of guiding, guiding principle there, or at least the stuff we know from the taxonomy. Then we, and then we on our listed equities, we use a third party provider of ESG scores. We also tilt our passively managed mandates on ESG, so we tilt them. I can't remember the numbers somewhere between 10% and 20% more ESG than the benchmark. There's a few different ways that we do it.

Interviewer 1: So, I think you've already mentioned it before and that you do like the negative screening and the positive screening What else do you do? Like for example best in class or being an active shareholder? Is that an option as well?

Interviewee: We do engagement, if that's what you call shareholder activism. So, we do vote alongside other sort of responsible investors on all our companies we vote at. We do a lot of engagement in terms of dialogue with companies. So we try to convince them to become more responsible, this have less environmental impact. So those are a few just the ways that we do that, if that makes sense.

Interviewer 1: So I think you've already said that you have like green investments, for example, energy investments. Are there any other investments that you have that you do besides traditional investments? And maybe especially with focusing on emerging markets for example? We have invested in a few different impact funds. We've invested in three different microfinance firms. We've invested through IFU in the Danish SDGs and Climate Investment Fund, and through Maersk Capital we've invested in what's called the Africa infrastructure Fund.

Interviewer 1: Could you maybe, I don't know how much detail you can give us but how does the relationship with the IFU, for example, looks like?

Interviewee: It's similar to other managers that we have. So they will come to us with the proposal for a fund. Oftentimes, some of those will, of course, be sort of somewhat politically driven. And then we'll assess the fund through our so we'll have our external private equity partner in these cases, assess the fund, the legal structure, the governance structure, the financial setup, and the commercial protection, and then we'll make a and they'll do the due diligence as well. And then we'll make this decision.

Interviewer 2: You mentioned the public awareness of sustainability and also the demand by your customers and that also the Danish pension funds are competing for corporate contracts by offering more sustainable or green investments. Do you think that's the main driver on the main motivator for Pension Fund 2 to conduct these more sustainable investments?

Interviewee: I think the reason why Pension Fund 2 is doing this is because we're a long-term investor. And we believe that these assets will be the most profitable in the long term. We believe that we need to reduce the climate risks on our portfolio and we believe that our members have given us a strong mandate to invest in the future that they would like to live in. Which means protecting their assets but also trying to mitigate some of the climate risks that the world is facing through investing in offshore wind farms or disinvesting from black economies.

Interviewer 2: Does the low interest rate environment also play a factor in this decision?

Interviewee: I would say but spreading the risks more. Of course low interest rate environment is a driver of allocating a bit more to alternatives maybe, but it's all I think the main driver here is actually trying to see okay, what is what's the profile that we would like for our listed equity investments or the mandates? They're also very long term. So what we what we usually like to invest in this stuff that's that has a long life time, so an offshore wind park about 20 to 30 years, maybe even more. And we like investments that look like that where the initial costs are high, but then we get a nice, nice decent return year on year. But it's, I think it's a matter of just spreading the risk because we can afford to spread the risks to illiquid alternatives because we have quite a large capital buffer we have quite large risk buffer. And then we like to sort of not have everything in instructions and bonds, which used to be an option if you're a pension fund but now you need to know you need to look elsewhere.

Interviewer 2: You also mentioned the demand by the customers that they actually want these sustainable products. When you report on your investment investments. You said you don't have impact reporting in like specifically. But do your customers demand reports on the impact the investments have. Or don't they really look on the on the impact side?

Interviewee: Yeah, so we do an annual sort of report on responsible investing, where we sort of tell the story of which investments that we have made in the past year, it's part of the sort of the annual report that we do. So we'll have one that's dedicated to responsible investments in there and we'll try to sort of account for new investments, but also the current impact of all of the impact investments that have been made. So we do do some reporting. It's just not it's not that where we sit down and look at each asset class and say, Okay, this group down here is not sort of structured that way is more communication tools.

Interviewer 1: And when you when you talk about the demand of our customers, do you think that they're willing to actually sacrifice return for, let's say having an impact? Is that something? Because we've experienced that if you have, for example, a black investment and a green investment, and that the black investment is slightly above the green investment in terms of return, that you that you would always go for the black investment. Is that true?

Interviewee: We haven't we haven't asked the members that, because we didn't want to put them in that position. But we do know that a few other pension funds have asked that question and the results they're getting are mixed. But the sum of the pension funds where the member base looks a lot like ours do get the answer that members will risk some returns over having greener portfolios. You know, I think that there's, I think that's a false dichotomy. If you do the same due diligence for green investments, that you do for the brown investments, and if you look at the long term perspective, then you will find that green investments can be just as just as profitable as brown ones. It's just I like to add this whenever people ask this question it's really that I think it is a false dichotomy. Of course, you don't need to do philanthropy but you can get the same returns particularly if you are a long term investor with green investing.

Interviewer 1: Back to the, to the to the next question. When you would invest in emerging markets, what are the special risks, the risks that you can see when investing in emerging markets and what makes them different from developing countries?

Interviewee: It is the same as any other asset class in emerging markets. So its political risk, it's a bunch of different sort of context risks. Its risks with regards to the geopolitical stability Are you able to actually get in the country? What currency are you going to deal in, is it hard currency or is it going to be local currency? So, a bunch of different risks, which I'm not the expert on. And then a lot of sort of specific risks depending on the asset type. But that's why you also typically get a better return because you need to have the risk return adjusted.

Interviewer 1: How do you conduct risk management with respect to those risks? Is there something special when looking at emerging markets, or do you use special tools?

Interviewee: No, I think our risk management model is just set up to price the risk differently for those types of assets. So we get a higher risk charge for those types of investments.

Interviewer 1: You've mentioned already the EU regulations. Is there something like the Danish FSA set some special rules that you have to consider when it when it comes to sustainability?

Interviewee: Every year to stick around was called the Christmas letter where they asked investors to account for something in their portfolio. That can be in anything. This year, it's on climate related financial risks. So, they having us basically answer the questions that is in the guidebook to the TSFB recommendations. So basically, what they're making all investors make TSFB report answering the question. And I think that's, new signal from the FSA because. I'm not an expert in this, but I think they have seen climate related financial risks and the fiduciary duty of traditional perspective. Now, I think they're opening up to maybe adding climate risks into fiduciary duty.

Interviewer 2: Yes, speaking of the fiduciary duty, how do you think this changing view on fiduciary duty will have an impact on your pension fund or do you already follow the principle that you include these ESG risks?

Interviewee: So we'll already try to have the TSFB recommendations by sort of looking at the financial risk and how we can show them, strategy governance, risk management. And I think, obviously, what it does is that it really makes it visible throughout every investment organization, that this is something that you need to address. This is something that you cannot just say this for the ESG people. This is no this is actually real risk management that this management people need to do. Its real part of investment decisions that the people are making, due diligence. So I think what it does is that it makes it very salient what the what the different types of offers are.

Interviewer 2: Do you see any issue of making those risks quantifiable? If we talk about environmental risk? How do you how do you see issues about pricing those risks?

Interviewee: I think the main problem is that you're projecting something that you don't really know. So, you have a pretty good idea about some things that may happen in a scenario, but you don't really know. So, you don't know the sort of the policy decisions that are being made to mitigate these challenges. So, you don't know the future that you're projecting your risk management to. And I think that's the big problem.

Interviewer 1: In the literature, we found or during the other interviews we've experienced that it's somehow difficult to find like the right opportunities to invest in for such a big scale investor like a Danish pension fund, and or, for example, that the demand for sustainable investments has skyrocketed and therefore, yeah, stock prices have risen. Is that something that you experience as well? Or could you give us a little assessment of this?

Interviewee: I think there's a lot of demand for green assets. I think you can, you can see that by looking at the one product, what is the capital cost of setting up offshore wind or renewable energy, stock price of Tesla. I think people are really looking for those types of clean green assets. And I think there are too few of those. I think they're too few projects. And that's why it's really expensive right now and there is just too much capital.

Interviewer 2: Just to follow up on this question, most of these investments in developed markets if you have the opportunities or something you mentioned Tesla other green investments in Europe or North America. Do you think that the high prices for those investments are an opportunity for investments in emerging markets?

Interviewee: I think the reason why the price is so high is because now that there are investable needs, these are safe assets. And I don't think investors could be there's an offshore wind farm operated by an emerging market operator or an emerging market state has the same profile. But of course, if it is set up in the right way, then it is an option.

Interviewer 2: Okay, so what would be the requirements for emerging markets to have the same profile as an investment in a developed market? Do you think there's a lack of political stability? Or do you think there's other requirements these emerging markets have to fulfill before?

Interviewee: I have to tell you, a lot of these are sort of public private partnerships or, or the state is involved in some way by maybe the power price may be somewhat supported by the state. So I think the political stability is one of the major drivers there. Obviously, then also just construction risks. And it being sort of a reliable model to invest in is basically it's the same risk as everywhere else in the emerging markets. And I think that's why it's maybe taking a little bit longer to get on board with this. Because there is a there's a different risk here. And because the investments are usually illiquid, then it's very usually very large. It's a lot of risk to take on.

Interviewer 2: You mentioned those private public partnerships. Do you think that's a good opportunity for institutional investors or for your pension fund to enter those markets? Because maybe those partners on the ground that have local knowledge, they know how to price risk. Do you think in the future this will be more of an opportunity for Danish pension funds to enter these emerging markets?

Interviewee: Yes, it's a great opportunity to join these emerging markets but it I think, I think pension funds typically don't like to take too much of this type of risk. So, if the risks are reduced, or if you can find an operator that can mitigate those risks, then of course, it's interesting. And sometimes she hit on something that's, that's very, very good, like the financie investmes that we have made we get very, very good returns from those, like very risky environment. And it's only because we've worked with a good operator who works with good local operators that were able to do that.

Date: 26.02.20
Duration: 0:36:58
Interviewee: Interviewee 4
Institution: Pension Fund 3

Interviewer 1: We are to finance students at CBS majoring in finance and strategic management. We are currently writing our master's thesis. The broad topic of our thesis is impact investing of Danish intuitional investors, especially Danish pension funds. Braking it down, we try to explore the investment opportunities of Danish pension funds in the impact investment sphere of emerging markets, especially Sub-Saharan Africa. Doing this, we are trying to explore the opportunities and challenges of impact investing in those markets related to fields like regulation, fiduciary duty, but also risk management, the relationship between return and impact, diversification.

Interviewer 2: Thank you again for taking the time today. Maybe you can give as a quick introduction to your person and where your responsibilities at Pension Fund 3.

Interviewee: Yes, sure. I work at the alternative investments department here at Pension Fund 3. We are focusing on asset management of our fund and direct equity investments. These investments cover a wide range of sectors and we would call ourselves an impact investor. But I think this would be up to you to judge.

Interviewer 1: Speaking of sustainability in general and impact investing more specifically, could you maybe give us a short overview over the pressing trends related to those fields over the past years and how the investment opportunities or the investment landscape has changed over the past few years.

Interviewee: My first observation would be that there is a sharp division between continental Europe and North America in terms of implementing ESG both in reporting and identifying SDG investment opportunities. They do occur more often in Europe than in North America.

Interviewer 1: Where do you see these differences and what do you think are the reasons for the differences between those regions?

Interviewee: My first guess would be tradition and the political environment in these markets. So there are just way more opportunities in Europe for impact investment.

Interviewer 1: And where do you see this going in the future? Maybe also with respect to emerging markets?

Interviewee: I would definitely say that while Europe is a front runner in this field, North America, Asia and Africa are catching up. So my projections are that these geographical areas will also expand in this new opportunity set.

Interviewer 1: And what about the investment opportunities at your pension fund right now next to traditional investments. You mentioned your current role in the alternative investment division, can you maybe tell us a bit more about the different kinds of projects you are working on?

Interviewee: For our direct portfolio we are a bit more risk averse, so we are focusing on infrastructure. But these infrastructure investments can also be related to energy infrastructure such as onshore and offshore wind farms or to sectors like transportation and hospitals. For our fund investments we are willing to take on more risk and decent parts of the allocation of these funds are dedicated to SDG investments.

Interviewer 1: You have a close collaboration with Copenhagen Infrastructure Partners and last year introduced the New Markets Fund which is focused on emerging markets. Could you please give us a few insights into this particular fund?

Interviewee: In this fund we are seeking to expand our exposure to emerging markets and CIP has the advantage of managing portfolios like energy infrastructure and are expanding to emerging markets, especially Taiwan these days. We would like to get along this journey and of course there is more risk attached to these investments, but we are also expecting high returns.

Interviewer 1: Where do you see the advantages or disadvantages of conducting those investments in emerging markets?

Interviewee: The disadvantage is a lack of ease of doing business. It’s a bit more difficult and immature judicial systems and legal counselling make it more risky to do business in these markets. Therefore, we would like a compensation for putting on those risks.

Interviewer 2: You mentioned your direct investments in emerging markets related to big infrastructure projects.

Interviewee: Just to interrupt you there. For our direct investments we are exclusively focusing on Europe and North America. It is a very low risk portfolio and the impact area of these investments is related to the environment. Here we focus on these developed markets due to lower risks. For our fund investments we are meant to take on more risk related to both, the actual type of project, but also the geographic location of these projects.

Interviewer 2: And you use these partners, these intermediaries because they have more industry knowledge, more people on the ground and the capacity to evaluate the specific risks in emerging markets?

Interviewee: Yes, exactly. We are a small team of 20 people, we wouldn’t be able to cover these markets in sufficient detail for making these direct investments ourselves.

Interviewer 1: When talking about partnerships. You are also collaborating with the IFU and you are involved in their SDG fund. Could you maybe give us some more insights on your stake in this fund?

Interviewee: We are quite a large investor in this fund and we made the fundraising a bit easier. So we helped to raise the fund and to bring attention to it. And yes, it became a pretty large fund actually.

Interviewer 1: When you invest in these types of funds, the SDG fund or the New Market Fund, how would you describe your motives for these investments?

Interviewee: For the SDG fund it would be exposure to energy and infrastructure as well as being socially and environmentally sustainable. For the New Markets Fund it would be the increased exposure to emerging markets.

Interviewer 1: Did you see a demand from your customers to conduct these types of investments?

Interviewee: Not so much for Pension Fund 3. But there are more and more products for pension savers to allocate their specific savings towards SDG investments.

Interviewer 2: How are you evaluating the demand of your customer base and do you see whether they are demanding you to invest more in sustainable and SDG products?

Interviewee: We are of course listening to our customers and our board of directors, where our customers are represented, has direct access to our investment committee.

Interviewer 2: At the moment, do you give your customers the opportunity to deliberately opt in to more sustainable products or do you include these products in your general portfolio?

Interviewee: I don’t think so, but I’m not aware.

Interviewer 2: A more general question, how would you define impact investing?

Interviewee: Sure, for Pension Fund 3 it means active ownership, so that we try the best we can to implement our values in the companies we invest in. And by this, we also do not make a hard screening of investments, we don’t have a list of companies we don’t invest in. We prefer to participate in the board meetings and to deliver our values and try to implement those. And it comes from the objective of these value changes to construct for example a wind farm, you still need mining, manufacturing and transportation. So we prefer to be in these companies which provide these services and goods instead of just excluding them, because their services and products are still needed. We are trying to select the best in class and prefer to take an active part in the transition towards a more sustainable society.

Interviewer 1: Do you have any specific investments in Africa?

Interviewee: This would be trough funds, but I’ve printed a list of all our fund investments, you can find this on our website and I’ve highlighted the funds where I would say they are impact investing related. For example the IFU fund and all the interesting looking funds who invest in small businesses here in Denmark. There’s a development towards taking account for these local financiers. XXX which is a fund of fund investing in small companies and the African Infrastructure Fund or Copenhagen Infrastructure Partners, so you can take this list of investments. But yes, funds investing in Africa. We would like a exposure there, because there are also larger expected returns in emerging markets. So we like to allocate some part of our total portfolio to these type of investments. But this requires specific geographical and industry knowledge.

Interviewer 1: Could you maybe elaborate a bit more on this geographical and industry knowledge required for investments in these markets?

Interviewee: For some of our direct lending's or direct lending investments, we use a export credit fund (EKF) to ensure our payments and to decrease our risk towards political instability. So this would be a way of mitigating higher political risk. Regulation does also play an important role in getting access to emerging markets, and of course networking

Interviewer 1: Besides political risk, which other major risk factors have to be considered when investing in emerging markets?

Interviewee: Currency risks and inflation.

Interviewer 1: What measures do you take to hedge those risks?

Interviewee: We do hedge if the fund itself isn't hedging these kind of exposures. We would then take the step ourselves and hedge these risks away because we don't want to be exposed to those kinds of risks.

Interviewer 1: If you have for example very illiquid investments like wind farms and it is not easy to hedge those risks since there are no suitable financial instruments. How do you make sure that risk management is properly in place?

Interviewee: This would be trough a best guess on our exposure and then hedging away the market values and different currencies.

Interviewer 2: You mentioned that you exclusively conduct your direct investment in emerging markets. Could you please elaborate a bit on the specific criteria your fund has for alternative investments in developed markets and what the specific differences are compared to emerging markets?

Interviewee: Political stability. After Brexit we've seen that events like this can lead to a lot of political instability for some of our investments in terms of hedges on exports. So political stability is key.

Interviewer 2: Could you please give us an example of one of your alternative or direct investments in developed markets?

Interviewee: Sure, I have also printed our policy for direct investments. We are divided into real assets which are really, really low risk investments, like transmission credits and real estate transportation infrastructure. And we are interested in investments which are reverse downside and non-cyclical.

Interviewer 1: Are you doing this because of a low correlation with the market?

Interviewee: These investments have a very low correlation with the GDP. So communication infrastructure, the EBITDAs of these investments shouldn't be affected too much. And our other category is stable equity, which is a bit more risky but has a robust downside protection. Regarding the geographies of these investments, they are primarily in Europe and North America, due to the given political stability.

Interviewer 1: We've touched upon the demand side earlier. How do you report your ESG exposure or impact investing exposure to your customers?

Interviewee: We actually came out yesterday with our annual report and Pension Fund 3 is one of the first financial institutions in Denmark to have our ESG figures revised. This includes a whole page on Pension Fund 3's impact on environment. We also have our CSR reports.

Interviewer 1: During our previous interviews we discovered the issue around terminology and taxonomy of ESG and how it is measured and reported. Could you please give us your opinion on this?

Interviewee: The EU just came up with some more specific guidelines. I can't remember the name, but it should result in a framework for measuring impacts on CO2 and water usage, especially for financial institutions who are actually owning the assets or some of them. So this framework should make it easier to report on ESG. And of course our auditors are a counsellor for these new frameworks.

Interviewer 2: How are you currently measuring the impact you achieve with your investments?

Interviewee: This should be a question for Jan Kaeraa, our Head of ESG, he knows how we are measuring it and which framework we are using.

Interviewer 2: How does the impact an investment creates currently affect your investment decision? When you evaluate an investment, you look at returns, you look at risk, but do you also look at the impact an investment can achieve?

Interviewee: Yes, in our due diligence process for both, our fund investments as well as our direct investments we are assessing the impact of this asset.

Interviewer 2: And which role does this impact then paly in the final execution decision?

Interviewee: For some of our investments it is a focus area and it could be determining whether r not to make this investment. And for other investments we would emphasize on the financial return.

Interviewer 2: So for example if you have two different investments in the same risk category and the one investment has a higher impact, but a slightly lower return, how would the investment decision look like in this scenario?

Interviewee: I think it depends, but Pension Fund 3 could chose and we have examples for where we prefer the impact.

Interviewer 2: Are you allowed to sacrifice some financial returns for a higher impact?

Interviewee: We don't view it that way and this is not a compromise we are willing to take. In the investment decision, impact is an important matter and weighs more or less from case to case, but it should not be a compromise. The returns of course, are the most important for delivering the pension savings.

Interviewer 2: You mentioned the EU regulations earlier. Do you see any other regulatory frameworks that can either boost a development towards more sustainable investments or actually hamper Danish pension funds to conduct more sustainable investments, for example when you have to exclude certain companies, industries or countries?

Interviewee: Regulation that could improve this state for impact investments could be such things as reporting on impacts and making customers more aware of the impacts achieved with their savings and the financial products. They have taken Matter Pension as an example. AP Pension has a collaboration with Matter Pension. I think reporting and making people more aware of the impact of their investments could push towards more impact investments. In the opposite direction, the danger so to say could maybe hit harder on emerging market exposure and more risky investments, especially in alternative investments which has a lot of focus.

Interviewer 1: Has this changed over in recent years? So when you were talking about the FSA, do you have something in mind what has happened recently in this direction to push pension funds more towards sustainable investments and investments in emerging markets?

Interviewee: Not specifically for sustainable investments or impact investments, but regarding the prudent person principle certainly. This implies that we may be a bit more risk averse and this could have an effect on impact investments in emerging markets, since they are riskier. It could make us choose not to make these emerging market investments due to the increased difficulty in measuring risks in these markets.

Interviewer 2: Do you currently have any other restrictions which prevent you from investing in certain countries or certain industries, whether internally or externally. You described it as a two layered system, the first layer being the regulatory framework created by the EU or FSA, and the second layer being internal restrictions towards certain investments.

Interviewee: We do have an internal layer on top of the external layer. We do an initial screening of our investments on criteria such as human rights, corruption, etc. This is the level on which we do our screening and we have internal guidelines which restrict us from doing some investments.

Interviewer 2: Do you have any good example where such an internal guideline came into action. For example, when you find an investment which would be good from a return perspective but is not in line with your internal guideline. Or does such an investment not even come up because it doesn't make it through the initial screening?

Interviewee: The initial screening would stop our due diligence process and if an investment does not live up to our standards of social responsibility, then we will not do it. These are just examples for our direct investments, that is low risk infrastructure investments and investments in transportation and energy.

Interviewer 1: Do you collaborate with private equity funds or venture capital funds and do you think that these investment vehicles are suitable for investing in emerging markets or particularly in Africa?

Interviewee: Private equity, sure.

Interviewer 1: What would be the conditions for those investments?

Interviewee: An experienced management team and a team focusing on a specific region.

Interviewer 1: So we come back to the geographical knowledge.

Interviewee: Yes, that's an important factor.

Interviewer 1: Could you give us an example of how to build up such a relationship with local partners and how you would approach them. You mentioned that you mostly invest through funds and maybe these funds than have the expertise, but are you also involved in building up these funds? You told us your team is quite small and therefore this might not be possible, but maybe you could elaborate a bit on this.

Interviewee: To elaborate on that. We don't seek to gain local knowledge internally, this is part of outsourcing for expert management teams. Maybe we can take SIP as an example. They have a really experienced management team with knowledge in emerging markets. So this we would outsource to those.

Interviewer 2: You mentioned participating in higher returns as a driver to invest in emerging markets or in the African context. What other motivational factors do you see for investing in those countries and what potential opportunities do you see there.

Interviewee: We are not taking financial into account, I'd say the SDG, that is a big part of Pension Damarks investment policy. So we seek to improve the world the way we can, but of course if there are these side effects on these investments, we prefer making those. So if there are two equally profitable investments, we will definitely choose that one with more social sustainability.

Interviewer 1: Pension Fund 3 is participating in the SDG fund. What could be an example of an investment made through this fund and what are the characteristics of such an investment? Is it more in the health care sector, or educational sector, housing, microfinance, etc.

Interviewee: I would say it's a quite wide mandate. They cover a wide range of industries and geographies. We know the portfolio, but I'm not sure it's publicly available. But an example could be renewable energy in a developing market.

Interviewer 2: You mentioned the active ownership role you take in your investments. When you invest in other funds, intermediaries and vehicles alike, which are on the ground and make investments in emerging markets and developing countries, do you also take an active role in those investments?

Interviewee: Yes we seek to, especially if we are quite a large investor in the fund, then we seek to leverage our share in the fund and to implement our values in the portfolio. For our direct investments, both listed and unlisted, we are more substantial on the board of directors or through voting at the annual general meetings for the listed companies. On the impact measurement again, I think we are one of the only ones in the financial sector having our figures reviewed by our auditors. I think this is a first step and with more detailed frameworks and guidelines for measuring and reporting I think more will follow.

Date: 05.03.20
Duration: 0:28:05
Interviewee: Interviewee 5
Institution: Pension Fund 4

Interviewee: I am a Senior Portfolio Manager. And I primarily work with the equities. So that's a very brief introduction. I was educated myself in math. So, I was not, not from a school like this.

Interviewer 1: So, we'll just then give you a short introduction of what we are doing. So, we are currently having our master thesis or writing a master's thesis, Peter and me. And we've chosen to investigate to which extend institutional investors such as pension funds are able to include impact investing in their portfolios and with specific respect to or view on emerging markets. So maybe if you want to, you could just give me a brief overview about the recent trends or with respect to sustainability that you've experienced at your company.

Interviewee: Yes, I can definitely tell you about that. But maybe just before I do that, I'll just say that, that you should just be aware that that my point of view might be a bit more towards developed markets, since that's where I do my work myself. We do work with the with emerging markets, but that's, as I said, primarily my colleagues. I am touching upon it means we're starting to trade in China. So I'll get I'll get back to all this. But then you so to answer your question, so, so how we, how we observe sustainability coming in, you know, firm at the moment. I would say so I started in ACP five years ago. And when I started there, we had a small ESG department, I think at that time being around four people. And it has grown to about 10. Now, I think they are 11 people in the ESG team. So, you can say, something has happened during just these five years. And I think, actually, a lot of things have happened. But to us, from my perspective, the main thing that happened was that we integrated an ESG measure in our, in our scores. So, what I do is that I, I run this what you would call maybe a factor-driven portfolio. So, we invest by factors. So, like the usual ones who would know low risk, momentum, value measures like that. But then on top of that, we also put in what we call an ESG tilt. So that's one of the things. Before all this happened, we of course screen like, is probably not true but more or less every other pension company in Denmark so we have a blacklist. So, if a company enters the black list so it's like, if you create weapons of mass destruction than you are excluded. That's pretty much the first part we have as an ESG team, taking care of, so if there are controversies towards regarding laws or stuff like that then we don't want to hold that company. After we have excluded all these companies, then Pension Fund 4 themselves have chosen that we do not want to invest in what some people might call sin stocks. So like tobacco and stuff like that. So, it's maybe human sustainability. But that would choose also to exclude and then after that, then you still have a large pool of stocks to decide from which one to hold. And we do that by this tilt I mentioned. So, every stock, so actually, we do this sector wise because we want to get as much impact as we can. So we want to look at what is the board of the company doing towards making carbon emissions go down. So, how do the board affect the company? So, if they have to have a plan for at least decreasing or something, then they are scored by some number. So, we buy our data, of course, outside and then then we score different companies after how they do that and then, then it's a measure like everything else. So, if you're good, you're more likely to be held by us and if you have a bad score then not. That's how it works for, for stocks in developed markets. And as I said to a bit earlier, that's also how it's going to work for, for stocks in the Chinese market. So even though you might say that the China is an emerging market still, but you know, more or less the biggest economy in the world, right, so data quality is, at least to my knowledge, and yet we of course, still have a lot, a lot of analysis to do. But to my knowledge, they are actually quite good on delivering data as well. So that's also going to happen in the other emerging markets. We do hold cash equities in Mexico. So they are under the same kind of screen from the ESG team. But they are not tilted like the others. Simply because the market is too narrow. There are not enough stocks there. On the futures side, that's how we take the rest of the exposure in the EM markets as at least equity exposure. We do that by futures investing. Yeah. And it is in the main indexes. And I think that a lot of these index providers, they are trying to create different kinds of ESG tilted indices and stuff like that, but the liquidity is simply not where it has to be for a company like Pension Fund 4. So, the sizes.. we simply cannot get it and there's not enough liquidity for us there. But so that was pretty much the direction we have been we have went from five years ago to now. Now we put in this tilt. Now the ESG department grew quite a bit now.

Interviewer 1: And where do you see this going in the future?

Interviewee: For now, I see only more of it. So the first part was just to try to do the right thing, make a tilt to somebody says oh, we would invest in some something a bit cleaner. So ,the next thing is that we got to go we are going to, and that's not 100% Sure, but what we gonna do is that like, like we invest in companies where management does something against carbon emission, we would like the company, we would like to invest in the companies that does something towards going to green energy instead of what we call black.

Interviewer 1: So you actively or you're trying to actively engage with the companies you're holding investments in and try to communicate with them and to push them to what let's say push them towards being more sustainable. Is that something that you do or that you expect doing in the future?

Interviewee: Yes, I should, should actually have set that at the beginning also, because that's, that's one of the parts. That's one of the reasons why we are actually investing in cash equities in the developed market, instead of just taking our exposure through a future. So that is that is that you can be an active owner. And one of the things of being an active owner, is that our ESG team, they can actually engage with the companies. So they can say why do you only use coal energy? Why don't you use wind energy and stuff like that? So they engage and I think we will just see more and more and more of that.

Interviewer 1: Do you see firms changing or altering their behaviour when you approach them regarding these matters?

Interviewee: I think so and my short answer is yes, but I only know a few cases. Okay, so I think you should really talk to one of my colleagues here. So, it's not so they are 10 people in the team, and they have to serve all of our organization, you can imagine. It's not that much time. You cannot engage with the 100 companies, but maybe you can engage with 10 at a time. And I know they have done and I just simply don't remember the names yet. I mean, they actually had some results on it. So that was, I thought it was kind of cool that that it can make an impact.

Interviewer 1: So you mentioned like I think we've covered this topic. So, we use this idea of the negative screenings, let's say so, if they engage in weapons you will leave them out, which is basically exclusion and then you actually engage with others. You say that you have this tilt measure, this ESG metric. How much weight does it have when you make an investment?

Interviewee: So for companies in sectors where we believe that carbon emission management actually is a key factor. It has one fourth of weight and it has if we then go to finance sector, it will have zero weight because they use energy from the block. We all do that, so we don't force them. But in utilities and materials in transportation and in industrials, the ESG weight has one fourth. So low risk, momentum, value, and then these ESG measure of one fourth to each.

Interviewer 1: So how’s your personal opinion on how you see, disadvantages or advantages when it comes to those alternative investments, sustainable investments, impact investments, when comparing to the traditional ones. I mean, you said already you're engaged with equity more or less, but what is your personal opinion regarding the advantages or disadvantages?

Interviewee: So maybe I can maybe I can tell you about an analysis one of one of my colleagues did last week actually. He wanted to check, sort of right now, there is I think there is we have one limitation of how much of your entity, so if you are an energy provider, so you are in the gig sector utilities, you are an energy provider, if more than half of your energy, the energy that you provide comes from coal, then we exclude you. So the question was, how much would it cost us to say that, we do this by excluding companies where more than 30% comes from coal. And doing a lot of back tests and stuff like that we come up with the price that it would cost to then to say we cannot buy companies that provide their coal energy at more than 30% coal energy, that will cost us around 10 millions a year. So, my personal opinion is it costs us money, but it might be the right thing to do.

Interviewer 1: But I'm just maybe I mean, regarding if you let's for example, if you take diversification or if you take the correlation with the market of sustainable investments or alternative investments, how you perceive this to play a role in your portfolio creation?

Interviewee: I'll try to answer. So, we have a pretty diversified portfolio. We have what we call Pension Fund 4 Private Equity Partners. So it's like a fund of funds. And, and you should probably speak to someone who knows a bit more about the ESG engagement in in the private equity department. Yes, because I frankly do not really know a lot there. I know that the there is a guy both in Pension Fund 4 Real Estate and we have a guy at Pension Fund 4 private equity partners who are engaging with them and try it to make their portfolio more sustainable, but I don't really know what they do. But you're completely right we invest in these alternatives and to be honest it doesn't really look it doesn't look really expensive to go towards something more sustainable because of the diversification. But again every time you limit down your area you must cut somewhere and because cut is your expected return. So it takes a little but in the long run, you never know what it's what's gonna happen.

Interviewer 1: You said that you are that you're mostly responsible for equities in developed markets. What is like the difference when you say developed and emerging markets. Like what is your kind of definition of it?

Interviewee: So, I follow pretty MSCI standard because that's the world I know that so when I say develop markets it means that I invest in US stocks, Canadian stocks, Australian stocks, Japanese stocks and more or less European stocks there are some that I don't want, so we don't invest in Israel.

Interviewer 1: But what is the difference between those stocks and let's say stocks in emerging markets or in Africa for example?

Interviewee: Yeah. I actually a good question. So, I mean stocks are stocks, right. So markets can of course, be different. But our main problem is, and it's the same thing you probably hear every time that it's really hard to get data. So, the data quality in emerging market stocks is simply not as good as in developed markets. Okay and then we are limited in Pension Fund 4 by liquidity. Because we are we are really big organization. So, we need to be able to put a certain amount of money in, let's say, South Africa or somewhere else for us, for it to make sense for us to spend man hours. And if we cannot do that is simply too expensive for us. So it’s a cost and benefit consideration.

Interviewer 1: When you say that is ESG has emerged and it has been come more and more mainstream let's say over the past years and how do you see the demand from your customers or from pensioners that actually are part of Pension Fund 4?

Interviewee: So we are kind of a funny or odd one in the pensions companies because you are in Pension Fund 4 by law, and we have one product which means that everyone gets the same product now, more or less, yeah, depending on age and stuff like that. But more or less you get the same product. That means that we don't speak to our clients. So, the way clients impact us is more or less by the tongues of journalists. All the media like that. But of course, we listen to, so we can just turn on television and like everyone else we know what is going on in the media. And so, we feel a great pressure towards to switch over to renewable energies and stuff like that.

Interviewer 1: But you could just maybe just keep it as it is just focus on returns. Is that not something that you could do?

Interviewee: We have definitely thought about that. But at some point I think that's how we think about it. There is also something that is the right thing to do. So, you can just say that. That we're just we're just creating returns now for our customers. That's what the law says is that we should do. But then again, if we create a bunch of good returns, but there is no world, then what does it matter? So, I think at some point, you have to think about what is the right thing to do? And I think the people's opinion matters here.

Interviewer 1: But when speaking about law, is the Danish FSA pressuring you as Pension Fund 4 towards more sustainability or towards impact investing or towards emerging markets?

Interviewee: So again, this is only because I have spoken to some of the people who knows. But maybe if you ask someone from a risk department, they were actually asked to report on different topics. So how do you mitigate your risk towards rising water levels and heat and all this. So, it's not a demand yet. But we have been asked these questions. So yeah, from the FSA. So, I think it's something it's coming.

Date: 23.03.20
Duration: 0:52:29
Interviewee: Interviewee 6
Institution: Pension Fund 4

Interviewer 1:	All right, and I think I would just start with giving you a short introduction of what we are doing, and the purpose of the call or the interview. And then afterwards, you can maybe give us a short introduction of yourself and your current position at the pension fund. So, as I said, it's me and Interviewer 2, we are both master students at CBS. And we studied finance and strategic management and we are now in our fourth last semester and currently writing a master's thesis. And the topic is institutional investors and precisely Danish pension funds and their opportunities to invest in the impact investing sphere. And thereby, we specifically focus on emerging markets. And we are conducting interviews with Danish pension funds. And, for example, the IFU. If that if this says something to you…
Interviewee:	We invested some money in in one of the SDG funds as well. That's one of the points that I wanted to make. I wanted to point you in that direction. Because we don't do impact investments ourselves, but we do have the IFU.
Interviewer 1:	Maybe you can give us a short introduction of yourself.
Interviewee:	So, I am an economist from Copenhagen University, originally. And I've been working with Pension Fund 4 since early 2016. So, I've been there for four years and a bit. And I do a lot of corporate governance. I do proxy voting, I manage our proxy voting on global equities. And then I do a lot of engagement with ESG companies. Some of it, most of it perhaps, originates from the from the governance work, but I also do a bunch of regular sort of say ESG engagements. I think that that's the overall position that I have right now.
Interviewer 1:	When talking about sustainability in general, could you maybe give us an overview of the current trends that influence your investment policy at the moment?
Interviewee:	Yes, I can try. There are a lot of trends. So, there are a lot of themes a growing I'd say almost exponentially has been for the last at least the last four years. I'd say the main theme is climate, or was climate until this Corona thing happened. But the climate has been a main driver for a couple of years now. A lot of Paris Agreement themes, a lot of coal or general energy, energy focused themes. Then we have the governance space. We also have some things, but I don't think it might not be that relevant to you guys or how do you feel about that?
Interviewer 1:	Interviewer 2, would you say governance, I mean, we were talking about like, corporate social performance too. So I think it might have an impact generally.
Interviewee:	There's a lot of focus on executive remuneration from different angles and but one of them is sustainability and coherence with the rest of society and but branching off that is livable wages which is also based on this sustainability of the workers. I mean having a minimum wage, perhaps many of in the US but also in emerging markets. I'd also say reporting. And perhaps the last year, I'd say the EU has certainly pushed an agenda regarding sustainable finance, which probably is going to drive a lot of reporting on carbon emissions and portfolio footprints. And in order to achieve that, we need data from the companies from the portfolio companies. And so that would require them to provide a lot of background data on their footprints.
Interviewer 1:	When talking about reporting, how do you report the impact of your investments to your customers? Is there a way to do this right now?
Interviewee:	So so we have a sustainability report that we do annually. And then starting last year, we divided our, we used to do one annual big record of 100 pages, which was probably not that well read by a lot of people. So we divided it up into.. I think we had seven smaller reports, themed reports last year. So instead of doing 100 pages, we did a report of 10 pages on climate, and 10 pages on tax and 10 pages on

stewardship and engagement and so on. So, we try to divide the work so to say, in order to get a better penetration into the market so that people actually have a chance to read it. Because, we do a lot of work on all of these subjects. And we do a lot of, I keep saying engagements, we do a lot of engagement with the companies on these subjects. And we try to improve our reporting and try to improve the company's stance on these subjects. And it's difficult to get it all out there in just one big go.

Interviewer 1: But when doing this, these reporting, I mean, in the literature, you always find that it's challenging to actually assess what is sustainable or to which extent is that investment sustainable or more sustainable than another? How do you perceive these challenges of measuring impact or sustainability when doing your report?

Interviewee: That's very difficult. We don't we don't have we don't actually have a good way to measure our impact. But we can never say we engaged with the company and we achieved this goal because there might have been, there probably is 10 other investors doing similar engagements or doing engagements in an opposite direction. And the company never says, Oh, now we understand, now we're going to do things differently. So it's difficult to quantify the effect that we have. But a lot of what we do is also driven by, by demand in the public, in the media, with the politicians as, I mean, as Pension Fund 4, there is an Pension Fund 4 law. And the politicians have a lot of interest, let’s say, in how we run our fund. Also, because it's mandatory, so it affects everyone. So it's not just nurses, but it's all of the Danes working. So there's a lot of political attention. And they have a desire and a need to understand what are we actually doing? So one thing is what are the results? Can we can quantify them? But they just basically they want to know that we're doing something and that we are acting and that we are doing the best that we can and we can certainly report on that. And I mean, a lot of what we do is based on common sense logic. And our engagement is not ethics based, so we try to reason within financial effects. So we want companies to be more sustainable because it also affects them positively. Return wise. And that's, that's a story that's relatively easy to report on. And if the story makes sense, then it makes sense for the company to also maybe not follow to their letter, but at least be inspired by the engagement that we do.

Interviewer 1: What would you need to do a better reporting? I mean, you talked about the problems to quantify your impact or the sustainability, but what would you need to do a better reporting? I mean, you you've already talked about regulations. Is that something that must change in order for you to do a better report?

Interviewee: Yes, in order for us to do portfolio footprinting, we need data from the companies because we can't otherwise, I mean, we can report what Pension Fund 4s footprint is, but that's not very interesting because it's 10 different office buildings with no production or anything, so it's not interesting at all. So, in order for us to report on our portfolio impact, on our portfolio emissions, etc., then we need the companies in question to report. They are only going to do that if it's required. So at least in a comparable way.

Interviewer 1: So, they need to be regulated or they need to be kind of forced by the regulator to do this reporting?

Interviewee: Yes, if we are to report on our portfolio impact, then yes.

Interviewer 1: How could like better reporting from the company look like? I mean, you talked about data, what kind of data?

Interviewee: So it depends on the subject but for climate, it's emissions reporting, it's greenhouse gases, its targets and metrics would be one way for us to be able to measure our portfolio emissions for example. And for taxes we have different requirements. That's perhaps a bit more complicated with taxes because it's different legal systems in different countries. But I guess some investors, or we don't actually require that right now. But some investors might say, we want country by country reporting from companies in order to provide tax reporting.

Interviewer 1: We’ve talked about a bit about impact and sustainability. And the main focus of our thesis is impact investing, actually, could you give us your definition of what you perceive to be impact investing?

Interviewee: I can try. It's a bit difficult because we don't actually do impact investments. We struggle a bit with the term I think, because we try to have an impact in all of our investments. And we don’t do investments strictly for impact. We are required to provide the best possible returns. Not specifically mentioned the highest possible returns but at least the best. And we're not actually allowed to be…. Our board has a policy on on our social responsibility, and it's based on conventions that Denmark assigned and international treaties and such. So, we're not actually allowed to do ethical or… So we can't say we don't invest in tobacco. That would be a political decision for us, then you can't actually make and so in that connection, we're not allowed to do investments strictly for having an impact. So we can’t say we want to impact this sector, so, we are going to invest and hopefully as a byproduct, we get a return. We need to be driven by return. And when we then invest, we always try to improve the companies and the investments to engagement. But I don't think that's impact investment.

Interviewer 1: With impact investing you have this duality of outcomes with the return and, on the other hand, you have like kind of a, let's say, social good that you generate with doing this investment.

Interviewer 1: But I think you've talked about the demand from your customers or from the society in general. Do you think that it might change in the future, so that you might be able, or you even need to sacrifice return for something else, like sustainability or impact?

Interviewee: Ah, I don't think so. There's a lot of demand for green investments. There's a lot of demand for sustainable investment products. But given that we are a pension fund that covers all people in the Danish labour market, there is also demand for the opposite side. So, it’s perhaps easier to exemplify with a more political subject such as, let's say Israel Palestine. So, there's a lot of pressure on Pension Fund 4 not to invest in Israel from one side of the political spectrum. But there's a similar pressure, not to disregard and not to exclude Israel from the opposite side of the political political spectrum. So, we're not actually in a position to take a binary yes or no stance on these subjects, we have to be able to embrace both sides. And as long as everyone is complaining about our policies, then we're probably somewhere around the middle. And so there's going to be a lot of demand for probably for impact investments. Because when you frame it right, then people are going to say, that's a good idea. We want that in our pensions, okay. But there's also going to be a lot of people saying, I don't want this. This is politically driven and I don't want you to politicize my mandatory pensions.

Interviewer 2: Speaking of the demand, again, you mentioned that it's mostly driven by politicians and basically they are the representatives of your customers. When you say you represent basically all people employed in the Danish labor market. Do you also see the demand from the individual customer side? Do you see a demand for development towards more sustainability?

Interviewee: Yes, we also see from the individual customers, but we don't have a lot of direct contact with them. But we do. I mean, obviously, it stems from them. And it's the general public's demand for this, that's driving politicians. And we also do see it on individual customers. But we also see from NGOs and from media. I mean, it's sort of a constant pressure from everyone, I’d say.

Interviewer 2: Do you do such things like customer services in that regard where you ask your customers if they want you to invest more in sustainable products or more in sustainable companies?

Interviewee: No. No surveys. No at all.

Interviewer 1: But do you do offer special products?

Interviewee: We only have one product.

Interviewer 1: So the pensioners, they are not able to select where their pensions are going to be invested in?

Interviewee: Not at all. They are forced by the by politicians to provide us with money, okay. And they can't choose different funds with us. We only have one big pool. It covers everything. That is also why I was speaking about different political spectrums, because, I mean, we have to cover it all in one thing.

Interviewer 1: But when you assess your investments, and when you assess them with respect to sustainability, how do you do this? I think you've touched upon it a bit. But for example, do you do screenings or do you actively engage with the companies?

Interviewee: So all of our investments are screened and as I mentioned, we have a board that has a policy on social responsibility that dictates that companies that breach these international treaties were not allowed to invest in. Companies that provide custom munitions and nuclear weapons. So those are excluded on an overall level. And on top of that, then it sort of depends on the assets. So for our listed equities, we have that we have two factor investments. So we have a factor model, which is basically a quantum model, which looks at a handful of key factors. And then those factors decide which companies to invest in. We just picked the highest-ranking companies that our factor model scores.

Interviewer 1: And is ESG one of those factors?

Interviewee: Yes. Well, ESG it is a wide factor. It's difficult to quantify, right? But a couple of years ago, maybe two or three years ago. We started trying to integrate ESG into the Factor model. And I think it took about a year before we succeeded. And we did a lot of testing with a lot of ESG data. Looking for, for data that improves our model, because basically, as I mentioned previously, we are driven by the return, right, we're required to provide returns. And our model is meant to create that. So we can't just say we're gonna add in some random ESG score, if it doesn't improve our return, because if we add in a factor and then we effectively remove weight from the other factors, and the other factors are proven by back testing, so proven with for us, for us to provide returns. So then we would be removing returns in order to add in an ESG score. And we can't do that. So did a lot of back testing. And we ended up with a model where we include emissions. We have an emissions data point, carbon emissions, I believe it is, which didn't actually improved our returns. But it didn't lower the returns either. So we removed weights from other factors, which we know to create value. And then we added in this emission score and then the returns remained at the same level, which implies that the emission score added value. The side effect of adding in that emission score was then that our overall portfolio ambitions dropped by 25%. Which was a nice benefit and a way for us to create a greener portfolio without losing returns. So we have that as part of our equity model. And then for our direct investments or illiquid investments we do a lot of sort of, that's more individual led. We do a lot of big investments that are individual in nature. So, we have an alternative asset, alternative investments, which looks at investment opportunities and they are provided with a number of investment opportunities and the ones that they find attractive, then we have a process within Pension Fund 4 where the ESG team is part of the due diligence group and we look at the Investments before we invest and figure out: Are there any issues for us? What do we need to be aware? And of what are the potential gains that we can, that we can implement once we have invested in these companies on an ESG perspective as well. So, it's less formula based and more hands on and individual. For our private equity that's more difficult because we invest, we have a fund of funds Private Equity Fund, which means that they invest in other funds. And that means that we can't actually, we're not allowed to have an influence on the actual investments because that would then change the liability structure of the fund. So we say up front that we want to invest a billion in a fund and then the fund managers select the companies because otherwise we are liable in a different way. So, in order for them to have autonomy of the fund, then we need to decide what's the investment universe for them on day one. And the private equity fund perhaps lives for 10 years, right? So when we on day one decide, okay, you can't invest in these companies, but you can invest in the rest. And we sign off on that. If we then come back a year later and say, Okay, now Pension Fund 4 has changed our policy. And we no longer want to invest in these other companies, then we cannot come to the to the private equity fund and say, we need to update the agreement, because they've already invested some of it. And the rest of it perhaps hasn't been invested yet has been agreed on with us and with a number of other investors so they can't just say, okay, we're going to change that. So we need to have it hold in place on day one. And then that lives on until the fund is closed after 10 years. So for our old funds, they have investments that our new funds cannot have. So we try to improve the policy for each fund coming up. So, for our last fund, they had updated ESG policy documents and requirements. And they signed off on that, and we'll see how that goes in 10 years. So it's probably going to be stuff coming up in that fund that we didn't anticipate, which might be problematic for some people. But in the meantime, we are currently trying to update the policy and better define what's allowed the next one.

Interviewer 1: Could you maybe give us an example of what has changed recently in the ESG policy? What was one of the factors that has changed?

Interviewee: I'm not specifically involved in the actual private equity work. But on last one was something about our coal investments, I think. They've updated the requirements on what's allowed in energy investments and therefore tightened the net.

Interviewer 1: Another question is, whether you actively engage with the companies who you are invested in and if you do so, do they actually, like if you propose them to change their behavior, do they actually follow your guidelines, then?

Interviewee: It's a difficult question. Yes, we do engage with the with the companies. I'd say on that as much as we can, I can't say on all our assets, but as many as possible, okay. And we do it ourselves. Because when you ask different pension system, they say, okay, we can engage, but we usually hire an engagement service provider. We don't do that. We do our own engagement to maintain control. Do they change? That's a difficult question. They listen. I'd say they certainly listen. Some of them listen some of them do not. That really depends on the company. So I, for instance, I do a lot of engagement on governance as mentioned, which is based on our global equities. And our global equities are small investments basically, right? We do maybe 100 million in in a large s&p 500 company. I mean, 100 million, we're not even on their on their radar, right? They don't care basically that we are here. So we are not in a position to demand anything. But we do get an opportunity to engage. Sometimes we try to improve our leverage by collaborating with others. Other investors. That's possible on some subjects, and on some it's more difficult. But we certainly, oftentimes get excess, sometimes it's on a phone call or through investor relations, which might not be that great of an access. But other times we can get access to management or to the company boards even though our investments are tiny. So, I've met with the s&p 500 board members, both on calls and then in person in the US. And it's difficult to sort of to measure how much they change, but it certainly it varies, I'd say. So, I'm somebody thinks it's quite obvious that they disagree. And they might think, Oh, this is a this is a subject from a hippie European left wing fund. We don't we don't care what they say. They have no understanding of the US capitalism and its great system. And that's quite clear sometimes. And we obviously don't have any impact on those. But then there are others where it's perhaps more neutral and others again, where they certainly…. it's not that they change, but they listen to our arguments and sometimes write them down and sort of reflect on them in their business model. but it's, it's not something that you change from day to day. It's the long haul on these engagements. So, they change it gradually over time. I believe that that we sometimes push them in the right direction.

Interviewer 2: You mentioned the different forms of your investments, the equity investments and direct investments and fund of fund structures. Could you please elaborate a bit on how these investments are focused in a geographical context? Are they more focused on developed markets or do you also do investments in emerging markets?

Interviewee: Okay, so just briefly run through the equities and then through the others as they are perhaps more interesting. So, our equity portfolio, we have a Danish equity portfolio, which is sort of, it's focused on Denmark basically. Then we have a global equities portfolio, which has a lot of weight in Europe and the US. But then we also have Japan, Australia and we are adding in emerging markets. I can't say exactly which ones we are adding in when, but we are adding in emerging markets in the direct equity investments as well. For the direct investments, it's a lot different because it's sort of what's available for us, what's attractive for us. And that's, I wouldn't say it's random, but some of it is, of course, in the developed world, but they're also investments in the emerging markets. A couple of years ago, when they had the hurricane on Puerto Rico. We had a utility company in Puerto Rico providing generators to provide power which we're interested in. Then we have infrastructure in different parts of the world. We have forestry investments, and then our direct fund investments in different parts of the world. So it's not, it's not that it's aimed at a specific emerging markets location, but it's also in emerging markets.

Interviewer 2: What would you say some main difference between those investments if you do infrastructure investments in developed markets versus emerging markets, what do you see as an investor is the biggest difference on your end?

Interviewee: I'm not sure I'm the right person to answer that question. I'm part of the ESG team. I don't actually decide the investments, but we do provide input on ESG factors. And we, I mean, as the ESG team, we can also say, okay, this does not comply with our policies. So, this investment is off limits to Pension Fund 4, but we can't select investments and say this would be a great investment. And in that respect, I mean, we look at what are the ESG improvements we can affect in the companies that alternative investments team decide to invest in. So if they decide to invest in motorway system or an airport, or waste processing; we've go lot of different sorts of investments. We look at the at the sector and look at what are the ESG risks? Where can we improve? So I can only say that that's what we're looking at. I can't I speak on the differences between the different market sizing.

Interviewer 1: You've mentioned the risk now, could you maybe elaborate on particular risks that come together with ESG investments? Or, I mean, for example, pension funds are more long term investors and I think if you consider ESG this also has a more long term perspective. How can you maybe elaborate on this balance?

Interviewee: Our overall Investment belief in ESG, because as I mentioned, we're not allowed to politicize. So we're required to provide the best returns. And some might argue that the best returns would require be sacking me and the rest of my team, because we are not return creating in the short run. But Pension Fund 4 beliefs that, as you mentioned, we are long term investors. And we believe that in the long term, we can add value through ESG engagement. So, it's not just the risk we do. We do the risk-based screenings upfront, but once we've removed anything that's in direct violation of our policy, then we believe that we can improve returns. So, it's matches our long-term investment horizon. And it's because of that investment horizon that we can actually justify our engagements.

Interviewer 1: So, would say that pension funds are suitable investor for ESG investments?

Interviewee: Oh, yes, I'd say that other investment funds invest differently. So I think it's quite clear for us because we have one pool. And we have one pool of money, one

	Investment Fund, and we do our own in investments as well. So, we don't outsource to outside managers. So, for us, it makes sense to say okay, we believe that this has a long-term effect, but it might be a different calculation if you do asset management investments. Then it's probably the asset managers that need to act.
Interviewer 1:	And when talking about the relationship of short term and long term, for example, do you see that this might be a problem in for, let's say, the pay structure of investors when it comes to ESG investments? Because like the pay structures, mostly focused on short term results and not a long-term results?
Interviewee	Yes, I'd say so. But then again, it's increasingly relevant if you use asset managers because you pay the asset managers performance fees based on as you mentioned, oftentimes quite short term performance. I don't think that the performance bonuses that the portfolio managers at Pension Fund 4 get are enough to warrant concern. I'd say. So, it's become sort of a moot point. In theory, I think you're right, that we need to measure performance in the long term. And we also preach this with engagements with companies in their executive remuneration. And of course, we also need to live by that ourselves. But, given that it's 40 portfolio managers on basic Danish salaries, then it's less pronounced. But if you hire a big global asset manager with billions of dollars, of course, they require performance fees.
Interviewer 2:	I have one question and I would like to come back to the investments for impact. You said you don't really do investments directly that are focused on the impacts, but just mentioned your collaboration with the IFU and the investment in SDG fund. Can you please elaborate a bit on what Pension Fund 4s role is in the DCT fund and maybe what the motivation for investing in that fund was?
Interviewee:	My understanding of it was that it's an idea originated in the political world. Someone thought it would be a good idea if Pension Fund 4 invested in this as well. So off the record I'd say it's more of a political exercise than an actual investment exercise, I believe we invested 400 million danish kroner in the IFU fund. And we are not involved in it as ESG team in any way. So, I mean, basically a political exercise back to please someone by saying this we have this SDG front. I think it's much more relevant. I mean it's not not to disregard the SDGs or the effect that we can add through engagements. But we do a lot more in our regular investments. Even if it's not labeled as an SDG fund.
Interviewer 1:	Can you maybe elaborate a bit on the investmens or the general collaboration with the SDG fund?
Interviewer 2:	Is it more like a passive investment?
Interviewee:	Yes. We just give some money to the fund and then they can invest the way they want.
Interviewer 1:	Maybe Jacob, do you have any? I mean, you read through the questions. Do we have maybe any tips for us regarding the thesis or do would you recommend us focusing on a specific point or anything else?
Interviewee:	I guess it comes back to my, to my reply on the impact investments definition. The impact investments definition, which I find difficult. Apparently, other investments have clear definitions that you're able to use and I certainly use that. But my concern would be how to frame it right, how to set up boundaries on what's an impact investment and what's not. I just find it difficult to say we do impact investments because we do general investments. We try to impact those. But it's not the main, it's not the main goal. When we invest, we try to change things for the better. We all do that, right? We want better investments. It's sort of a no brainer. But there's also a large expensive, say greenwashing. So, for us, it's easy because we don't have to sell anything. It's mandatory to participate in our fund. We don't have to sell our fund. So we're not required to do investment if people are demanding it, until the politicians start saying. But if you have a commercial fund, fighting for customers, then it becomes a balancing act between doing good for your investments and doing

good on selling products. And I think impact investments and green investments and green bonds and all sorts of definitions of what is green and what's black. It becomes blurry when you mix the investment side with the sell side.

Interviewer 1: There's one last question that came to my mind right now. Do you perceive that there's enough supply of, let's say, green or impact investments? Because I think you're quite a big scale investor. So how you perceive the supply side of these investments?

Interviewee: I mean, should you think of green bonds when you say that. So we've invested in green bonds for last couple of years and I have a fairly good understanding of what they've been going through. I think there is a supply shortage, not of green bonds, there are plenty of green bonds, but of good green bonds, of green investments that are able to document and report on why they're labeled as such. Why is this not a regular bond, but it's just been labeled green because they can. So we've done a lot of work required, reporting from green bonds on the project level of the bonds on one of the projects that the money is supposed to fund. And how do they document it in order not to buy into greenwash driven bonds. But, I can't speak for impact investments, but I guess that the problem is the same there.

Date: 05.03.20
Duration: 0:29:32
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Institution: Pension Fund 5

Interviewer 1: I start with a short introduction of what we are doing. Peter and me we are having our thesis right now. And we are writing about Danish pension funds, and their opportunities in investing in impact investments. And specifically, we want to focus on emerging markets and Africa. And whether there are opportunities, as I said, for you guys to invest and what are the advantages or disadvantages, what are the returns, what are the risks and so on and so forth. And, yeah, that's pretty much it, what we are doing roughly, and maybe you could give us a short introduction of what you're doing at Pension Fund 5.

Interviewee: Sure. Okay, so, background on Pension Fund 5, we sell primarily corporate pension schemes, which means that Danish corporate would come to us and ask for a pension scheme for all their employees or a certain segment of their employees, there might be some employees that go to another pension scheme due to Union affiliation and so on. Other than that, it is primarily sort of the white-collar workers that ended up at Pension Fund 5 when their business sank them opportunity to Pension Fund 5. We do have some direct sales to individual clients, but that that is part of our business comes from this B2B segment as you can see, and the way that we invest people's money is that we invested according to individual person's risk profiles. So from very high risk, which is 100% equity like risk to something which is very low risk with a very low amount of equity risk. And we can then allocate that money to a lot of different asset classes. We're investing in listed equity of course; fixed income is a big part of our portfolio and then we have roughly one fifth. So around 20% of our investment portfolio is invested in the non-listed space. And out of that 20%, half of it is, yeah, roughly half is in private equity and private debt and so on. In relation to your thesis and what you're doing probably the area that's of high interest, because I would ask you that even ability for us to have the greatest impact is through non listed assets and not necessarily through listed equities. I'm well aware that there are certain listed equity funds out in the market that sort of promote themselves as an impact investment fund. I don't entirely agree with that methodologies and it's difficult to claim any impact in that hundred-billion-dollar company where you own 0.000147 % of the company.

Interviewer 1: Could you give us a short overview about the most interesting or pressing trends at the moment that affect your work at Pension Fund 5, when it comes to sustainability?

Interviewee: Definitely you can say in the past five years we have seen a really big emergency in the amount of investments that are interested in investing in non listed renewable energy assets. A pension companies such as Pension Fund 5, we have we own 25% of the private equity in the world's largest offshore wind farm for providing financing to the new Hornsea 2 which is going to be the next world's biggest offshore wind farm. And we've done those investments in the past two to four years. But what we're seeing right now is actually a major trend that other actors are starting to enter this market, that being something like some of the oil and gas majors, some of the pension companies that don't already have wind assets on their books and so on, that they're really eager to make a push into this market. So react is seeing, you could say almost an oversupply of capital in that part of the infrastructure investment space, where a lot of investors really want to make these deals, which is probably something that results in for us that we are sort of putting on the brake and saying, All right, is this the right avenue for us if we want to invest in renewable energy? Given that so many, so many new players are entering this market, so at least from sort of a market perspective, I think that's pretty interesting that you're seeing oil and gas majors that want to be integrated energy companies, and they're starting to also bid on the same type of projects that we are. And

I think that due to their natural exposure to fossil fuels and other areas, and then wanting to build up sort of an impact or more diversified into portfolio, they can probably accept lower risk return relationships than we can, which means that we're sort of looking into other avenues right now.

Interviewer 1: So, what you're basically saying is that you have an oversupply of capital right now, which makes it a bit hard for you to find suitable investment opportunities for such a big scale company like Pension Fund 5, is that correct?

Interviewee: If it was to be sort of a traditional one extension where we own 25% of the equity and point in time where we enter into the project. We're probably not doing exactly the same thing again this year. But there are plenty of other investment opportunities. But I would say that some of the traits that we liked three to four years ago are becoming very crowed, and that's probably because other players are seeing it. It has been possible to make a return.

Interviewer 1: I mean, you've touched upon it already and when saying that you have like a more risky investments like alternatives like private equity. And could you maybe give me a short overview of what you are offering besides the traditional investments, especially when it comes to, let's say, impact investments?

Interviewee: Yeah. So, we don't have a specific part of our portfolio that has to be impact investments, to be honest. We can basically just do it when makes financial sense, which is probably also the soundest way of doing it, because then you're, you're making sure that whenever you decide to invest in something like we have a very large investment in the Sustainable Development Goals fund offered by the IFU, and we have a fairly large investment in that. But it's an investment that we've decided not because we needed to do impact allocation. But because we believe that this was a great investment opportunity for us to invest alongside the Danish government in certain projects, which can help even bridge some of the risks in emerging and frontier markets, while still delivering a good return for our clients. We also have an infrastructure fund focusing on Sub Saharan Africa. That's great way for us to include the impact assessment but of course, what we're investing in is sort of the demographics of the region, right. And our investments in that space to help take upon that because that's going to be a lot of need for certain Types of infrastructure projects, certain types of energy projects, and certain types of electricity generation projects that's just going to be needed due to the massive population growth that's expected in Sub Saharan Africa. So that’s some of the base that we're doing. And definitely, it's very, very impacting and very impacting related. But it's not something that we've selected based on an impact perspective. Of course, we select from risk return, and then we also invite the impact because we believe it deleverages some of the risk for us.

Interviewer 1: So you say basically, that if you have like two different investments, for example, and then they are like kind of equal when it comes to risk return, then you go for the impact one, and to create that impact but it's not something that you it's not something that you like, let's say originally searched for.

Interviewee: No, you can say not necessarily, but there's definitely some risk mitigating factors in the impacts space that we like in the sense that if we invest in a fund that has really well developed capabilities in terms of engaging local communities and local stakeholders, then that reduces the risk of the project getting shut down due to protests and so on. So that's also a risk characteristic that we have to be aware of, and we have to try to price it and say, Alright, what's actually the value, and this fund is so good at mitigating these risks. So yeah, it's just to sort of elaborate a bit on your statement, but I completely agree with it.

Interviewer 1: Okay. Mitigate risk means that you engage like with local communities with local partners too?

Interviewee: Let’s do an example from our portfolio. Classic one, and that is that you own and operate a mind somewhere in Africa. Then you have one of these local communities saying that you're taking out our drinking water and this is negatively impacting our human rights. If that happens, then there's a pretty big risk that there will be protests, there will be NGOs into the space, there will be journalists and so on. And your mine is shut down. Basically, that means that whatever process you would have generated from that mine is completely taken out of your books. For the complete duration of the shutdown of the mine. There's no operation, there's nothing you can take in and out of the mine. And that would be a direct cost associated with not having the right Community Relations and not having sort of a guiding document that stipulates who has the right to the water what under certain conditions, who has access to water when there's lower rainfall than expected to you as the mine to take us or do you make some form of sharing agreement with the local community. If you make a sharing agreement then it may negatively impact your production levels, but you're still in production, which means that you can probably cover your fixed costs. But if you're completely shut down, then you cover zero percent of your fixed costs, which means it's just a loss and just propping up is disappearing from the company. And that's what I mean by sort of mitigating factors can hope to, well, that is what mitigation is all about. Trying to reduce the risk of something negative happens, right.

Interviewer 1: Do you have other risks that that come to your mind when thinking of emerging markets or Africa in particular?

Interviewee: Yeah, there's always Community Relations. There's, there's the sort of risk of who has the right or the ultimate ownership of land in certain areas where you don't have as detailed records. You're in terms of you have a title to the land, which means like this section my land so you can be accused of land grabbing. And that's not something that's been done properly in Africa. There's a political risk, there's corruption risk. Corruption is always there. And it's difficult to deal with. And it's basically it's a matter of ensuring that whoever you're working with that they have the right processes and education programs to try to get local stakeholders know what is are allowed and what's not allowed. So that if something goes wrong, at some point, you can go back to your training program, you can go back to whatever you have initiated as a company and say, okay, we did inform you, this was not okay. This is how we're going to address this issue going forward. Whereas if you didn't have those plans already, if you didn't have the training to begin with, then I would actually say that this points back to you as a company because you should have informed your stakeholders in high risk areas that there are certain types of activities. That's just not okay.

Interviewer 1: What would you think or what could be measurements or like conditions that you would like to have changed in Africa, for example, or that would make it for you easier to invest in Africa?

Interviewee: We already do have an appetite on investing in emerging markets, and we're already doing so. For us there are certain players that we can have as our co investors. So the other investors that we like to see in, in investment in sort of, if it's a fund that are in the fund and they are also on the board of an investment committee like we would be something I'd seen some of the different European DFIs are co-investors we would like to have, because that gives us comfort that certain international norms and standards will be upheld. Because if they weren't upheld, and these governments wouldn't go into these, these projects, so that so that that is something that we're looking at, and then there's also investing with partners that we know quite well, I mean, you've built up professional relationships with other institutional investors the same way other institution that does build up partnerships with us, we do have certain investors from the US from Canada, the Netherlands, the UK that we tend to invest with. And we know that when we sort of just go into projects, we have roughly the same guidelines in terms of ESG, impact, responsible investments, that companies fund should abide by human rights and so on. And that makes it a lot easier for us then if we need to invest with a new investment partner where we don't necessarily know their process related to us.

Interviewer 1: Just a general question, I saw on your website the approaches that you that you take towards responsible investment, for example, screening, or active ownership or exclusion? Could you maybe give us some a little more insight and what you mean by that?

Interviewee: Yeah, sure. I mean, so for the listed space, it's fairly easy. Listed companies are well covered in the media. They're well covered by NGOs and so on. So you can use different types of service providers in order for you to get a full screening of your investable universe. That will tell you Okay, the Danske bank had this issue in Estonia. And we didn't really need a service provider to tell us that, but that runs a sort of a full monitoring of your portfolio. So imagine whatever a Google search on certain keywords for every single company invest in the suppliers to say, right, are there potential issues with human rights, labor rights, environmental corruption, and so on. And then the service provider would go in and make a qualified assessment of whether or not this is actually something that holds up and something that we should enter into an active ownership dialogue with the company about. In the non-listed space, it's a bit more difficult, because you don't necessarily have the same amount of information for these that are not listed on the stock exchange. So what we do there is that we spend a lot of time in the due diligence phase when we select all the investments recommended company, and assessing company policies, guidelines and so on in terms of how did they cover the issues that are relevant to us. And sometimes we make it back to them and say that, okay, we invest in your fund or this, this sort of company, then we might have a legal that there are indications that certainly investments turn out to be in violation of labor rights, human rights, and so on. And then we want to be excused from those given investments so that it's not something that we invested in. But that being said, I mean, what we've seen in the past few years, I would say is the private equity managers have become a lot more aware of this and they do similar approaches to screen their investments as we do. And we would then double check that from time to time just to check that they're actually doing what they're saying they're doing.

Interviewer 1: And when you when you have an impact investment, and how do you measure that impact? What do you measure that impact?

Interviewee: Great question. So, the wind farm that's again, a previous example, we own that directly, we get reporting from the operators of the wind turbines in terms of how much green powers being generated by the wind turbine. That's pretty easy impact related measurements. When it's something like the stainable Development Goals fund that we invest in the fund, then it is the managers that reports the impact data to us. So direct, we try to gather data as best as possible ourselves. When we work with other fund manager. And we asked them to do the reporting to us.

Interviewer 1: Because the thing is, we've found in the literature that it's hard for investors to actually measure impact, because there's no standardized approach towards it.

Interviewee: And another thing that I think that you should mentioned in your paper, is that impact data is it's not fully developed yet. One reason why it's not developed yet, is because it's only reporting the positive impact from an investment. If you should be sort of repeated, rigorous from an academic standpoint, then I would argue that you should make sort of a balanced scorecard where you have the negative impact and the positive impact, because it seems very unlikely that you will have an investment which has no negative impact on society at all. Like whatever you construct, then you're, let’s say, there was nothing there before. It's a Greenfield investment in that building should have a negative impact on biodiversity. Now, there's nothing there where there used to be maybe a field grass, for example. They have activities that offset the loss of biodiversity, which is perfectly fine. So the net contribution can be positive to biodiversity if you have the right programs, but if you don't know what your negative impact was, then how can you say that net effect is positive? So that's just a criticism of impact measurements while it's still so inherently focused on the positive aspects.

Interviewer 1: Would you expect the regulator's to do something about it or when it comes to standardization, for example, from the EU or from the Danish FSA?

Interviewee: So let me put the answer this way, about five or six years, we started being able to do measurements of carbon emissions of the companies we invest in. And we've had that data acceptable, and we've been using it for the past four years or so and recorded it in our annual report. I think for the past four years, the European Commission has been deciding, or the debating how this one impact mission is related to climate change, which is what has the most focused whatsoever right now. They're still debating how we should report the reporting. And actually, where we are right now is that they're going to be asking the industry, what do we think is the right solution? So that's just one impact measurement on climate change that taking this long to figure out what's the standardized way of doing it. Then when they expand impact investments and say that's roughly associated with the 17 United Nations Sustainable Development Goals, which has 169 soft indicator, then I foresee it's going to take quite a while for politicians or regulators to come up with a uniform guidance document on how you should report this. So I think it's going to be something that's industry yet. And once there's some sort of harmony within the industry in terms of how you report this, then I think the regulators will be looking at that and saying, okay, that's probably how it should be done. That's my opinion.

Interviewer 1: Okay. Another more general question. Is it possible at your fund, or is it possible for your pensioners to choose actively between, you know, traditional investments or impact investments, and that being asked, and how you perceive the demand for those products?

Interviewee: Yeah, so Good question. This summer, I don't have a specific date, we'll go live with a climate focused pension product offering to our clients and the ambition is that they would be able to allocate 100% of their assets to this product, which would be a lot more impact focussed than our, additional PENSION FUND 5 plus pension environment. So basically, you can do exactly the same things, you're gonna have the same risk return characteristics as you do right now. But you're investing in companies that on the business side of things, either contribute to the green transition, there are leaders within their sector or they emit next to nothing or zero in terms of carbon. And you would get beyond the numbers side of things you would only be invested in, in companies that provide solutions to the transition to a greener economy, more certain types of infrastructure projects that has close to carbon emissions. On the real estate side of things, you would only be investing in real estate where there is a plan for how to make this building more energy efficient. So that's going to come in, it's going to come into in 2020.

Interviewer 1: I mean, you've already said that you first focus on risk on return and then on impact. Do you think that this might change in the future so that like, maybe that you would sacrifice even return for impact?

Interviewee: No, I think that if something happens, and then we just become better at quantifying the risk mitigating impact from impact investments, and then we can accept a lower return, but I never think that all else equal if we don't know for a fact that this is something that mitigates risk, then I don't think that we can serve in a sound mind actually argue to invest in this investment solution that was worse than what they could expect that we did on their behalf. I mean, it's a critical part of relationship and the trust between the investment manager and the end beneficiaries. That we select the best investment projects for them on their behalf. If they want to donate money to charity or whatever, they can do that with their own assets, we cannot do that on their behalf.

Interviewer 1: So that aims a bit to the fiduciary duty that you have towards your pensioners. But do you think that this fiduciary duty might also change, so that maybe people or pensioners value the impact or the environmental sustainability even more?

Interviewee: I don't necessarily think that your duty has to change. I mean, let's assume that we can become better at estimating the positive rate returns for society that stems from an impact investment. And we would be it would be perfectly possible for us to invest in it. But what I'm saying is that when people they stop by our offices, and they have a presentation for me where they're saying, I can invest in the impact micro finance loans somewhere in Western Africa and I can generate a return of 2% a year, then that was just ridiculous. I can't do it. 10% What? I would never do it no matter the impact, simply not feasible.

Interviewer 1: So for you, it all comes down to being better able to measure impact and risk.

Interviewee: So yes, exactly. As long as we know the impact, as long as we know, if this is something that can mitigate the risk. If the risk is lower, we can accept the lower return, but that's just how it is.

Interviewer 1: And maybe last question. I think we've talked about it, I don't know whether you've answered this already, to some extent. But we've talked about the difficulties in measuring impact. How do you actually measure risk? So for example, we've talked about Africa. And I mean, you said already that there's lack of data. How do you how do you come up with risk measurements? And how do you do the risk assessment?

Interviewee: When it comes to impact and ESG it's very much based on a qualitative process, where you look through the company, what you know about management etc., and then you make your best estimate in terms of risks associated with this company. And then you try to map it out also with some political risk where you can probably get some international databases and then you get a risk classification that say ranges from one to seven where one is fine and then they need to make some mitigating actions before we can invest into this company. However, you can't really assess risk the same way as in the listed market where you would do something like Value at Risk or whatever volatility analysis.

Interviewer 1: All right. So I think I have nothing more to add. Do you have any further questions? Or would you like to give us some maybe advice on which on what to focus? Or is Was this something that strikes your eye when you read through the questions or…

Interviewee: I mean, if I were you guys, I would do that on the inability to hold on negative impact from impact investments, given the entire incentive is that investors show how great they are in this space. I just made That'd be interesting. I think that it should be a value add for whatever it is you're doing.

Date: 16.03.20
Duration: 0:41:27
Interviewee: Interviewee 8
Institution: Pension Fund 6

Interviewer 1: All right, then I'm just going to give you a short overview or introduction of what we are doing. Interviewer 2 and I, we are both finance students at CBS. We're currently in our last master's semester and therefore, writing our master thesis at the moment. The topic of the master thesis is, we are going to explore the investment opportunities for Danish pension funds in in the impact investing sphere. And to be more precisely we are focusing on emerging markets right now. Maybe you can give us a short overview of what you were doing Pension Fund 6?

Interviewee: Yeah, I'm Head of Responsible Investments, I take care of everything related to that, our policy around responsible investment, our policy around sustainable investing, and when we have a new product, a sustainable product, then I am involved in that and what we want to do with it, how we want to, set it up, what's it, what's the purpose, etc. And of course, the normal ESG data handle that and policies for various areas, looking at UN PRI, Global Compact and so forth. So, it's a sort of a broad area.

Interviewer 1: Could you give us an a short overview about what you perceive to be the most interesting pressing trends, whith respect to sustainability that you can observe with respect to your investment policies?

Interviewee: Well, I guess in the Danish pension industry the biggest tend is to launch products related to sustainability. We launched ours in June of last year, and You see more and more pension companies launching new products with target on sustainability. And so it's sort of a kind of demand driven right now as I see it.

Interviewer 1: So, when you talk about the demands from your customer, are you talking about the pensioners?

Interviewee: I'm talking about the companies that basically we've been to get there to get to administer their pensions, and then also the employees of those companies. Okay, so we're seeing more and more when, when there's a bid for to win when a company to administer their pension. There are more and more questions around sustainability and being able to offer something that's sustainable. And I assume that has to do with that they want to work on their sustainability profiles as company. And pension are part of that.

Interviewer 2: Do you also see companies actually approach you and ask for specific products in your offers or just ask about the general profile around sustainability?

Interviewee: They ask about if we offer specific products around that or in general what our take is on it and how do how do we handle sustainable investing? So it's both.

Interviewer 1: And how do you perceive the demand from the pensioners side?

Interviewee: We as Pension Fund 6 have not seen super clear demand from the end client, from employees. However, studies show that there is an increased demand for people In general around being able to invest sustainable, and we believe this will grow more and more, we specifically see it among millennials that is very important to them. I think the driver, the companies that they feel it's important for them to be able to attract workers, they have to be able to offer a sustainable pension.

Interviewer 1: So your customers or the employees, are they able to, to choose or to pick like certain investments at Pension Fund 6, so that their money, let's say, gets invested in more sustainable investments? Is that possible?

Interviewee: Yes, you can choose products, we have what they call target date products. And there we now have two product lines are the active which is our original product. But now also AP sustainable or more sustainable product line. So it's up to the client to choose what they want to invest in, or basically the end employees.

Interviewer 1: And how do you assess yourself? The investments with respect to sustainability? Do you do positive negative screenings, best in class? Or what are the approaches at your pension fund?

Interviewee: We do all the above. But let's start with that we have one negative list for the company as a whole. We exclude tobacco and commercial weapons, we exclude companies where more than 30% of the revenue comes from coal or tar sand and then we have a few other exclusion related to companies, where there have been some human rights violations. So etc. So we have one sort of negative screening for an entire company. On the sustainable products, the purpose of the product is to support sustainable development. So our goal is to move more towards impact and not impact in the original sense. More of the new, way thinking about impact that you're trying to make a difference with what you're investing in. Where the original thought behind impact is there has to be additionality. And there's not additionality when you invest in listed stocks. And there's also some questions about green bonds whether there's additionality there or not. So the goal of the product is, so where we think, as a company as a whole, we are responsible investors. But with the new product, we're trying to focus on positive impact, finding companies that support sustainable development. So there you can see say that we have positive screening.

Interviewer 1: Do you also engage actively with the corporates you invest in?

Interviewee: Yeah, we do through a service provider. We do engagement through service providers, we do that through proxies and we have a sustainability policy when we vote our proxies. So we are an active owner, absolutely.

Interviewer 2: You mentioned a few sustainable product line to drive sustainable development. Are there any other advantages disadvantages or motives around the sustainable products related to maybe interest rate environment on public awareness or risk management etc?

Interviewee: No, it's a standalone product. So, it's a standalone product you can invest hundred percentage you can invest 5% in it. And that's up to each client to decide what they want to invest in the product is designed as, as a standalone product with focus on sustainable development.

Interviewer 1: And what are the advantages and or disadvantages of those special products compared to more traditional investments?

Interviewee: Yeah, I mean, the disadvantage is that, in reality, you do narrow in the investment universe, small universe to choose from, you have fewer, you have fewer investment options. Disadvantages also that it's not tried and tested. So all our research and all our testing and backward looking testing shows that it should have the same risk and return profile as our other product. But there's nothing that that it's for sure. And positives, is from a client perspective that the client gets a choice. We in the pension industry, we battle with clients not being happy with us investing in XYZ, okay. And whatever controversial area there that might be based on personal preferences. So as a pension company, you don't want to have too many products out there, because it's an administrative burden. So, it's difficult to satisfy every single client's personal preferences, whether it be tobacco or something related to the climate or something related to occupied territory in Palestine. By creating a separate product with positive screening, with a very dedicated focus on sustainable development, you can satisfy a lot of clients.

Interviewer 2: Are there also advantages for Pension Fund 6 with respect to sustainable products? As you just mentioned, there are advantages for the customers, for the corporates, in terms winning new clients. But are there advantages or disadvantages, or for Pension Fund 6, when investing in these product?

Interviewee: I'd said the advantages that by launching a product and you have to find investments for the product, it pushes the investment team out in a territory that they may not have gone out in otherwise, or it may have taken longer to get there. So it basically makes the investment team have to put on a different hat and think in a different way when they're looking for investments. And I think that's positive, because I think that's where the world is headed, in general, slowly but surely, very slowly. And I think that most investment people are very routine. And they like the way they do things. And it usually takes time for them to change their ways. So, I think this is a way to basically push them towards something new.

Interviewer 1: You've mentioned the impact already and that you're aiming for investments that have a positive impact and how do you how do you measure this impact?

Interviewee: Yeah, right now, we mainly measure on the climate side. So we look at co2 emissions avoided, reduction of water usage, and clean electricity produced. The hope is that we will be able, we also look SDG sustainable development goals. But the goal is to develop a better reporting system. So we can map it and tell our clients better what the impact is. But right now, again, it's focused on climate. And there's an online portal where if you invested in the product, you can log in and see the impact your investment to have made from a climate perspective.

Interviewer 1: You've mentioned the reporting already. Where do you see like challenges when reporting sustainable or impact the investments?

Interviewee: The challenges are having a quantitative data, a lot of impact reporting tends to be qualitative and anecdotal. And I think that's fine to begin with, I think, for clients that invest money in a sustainable product, I think it's important to be able to read there's an added interest in knowing what they invest in versus a client that is not interested in sustainability. So I think if we can just get better at reporting, even anecdotal information, qualitative information, I think that would help a lot of clients.

Interviewer 1 Do you also measure negative impact of your investments?

Interviewee: Negative impact? I guess we don't. I we do we report to see our CO_2 footprint, but not negative impact per se. Again, we try avoid the negative impact and the sustainable product or focuses on positive impact. But we are looking at some different data providers now. That look at it from a different perspective. Our hope is to have a better understanding of both the positive and the negative. With that said, I mean we get tons of data mainly on norms breaches. But the problem with reporting on that is that enormous breach if something has happened in a company, there has been a controversy. Our first action is engagement and engagement takes time. So just because there's been an incident with a company, which has negative impact, it doesn't mean that the company will not fix the problem and deal with it. So there's also problems with reporting negative impact in that sense that it may have a negative impact on actual company, you have to you have to let them deal with a problem first. So we do engagement. We do look at which companies we are engaging with, and why like and what different areas?

Interviewer 1: Do you do also see a taxonomy problem or terminology problem. So what is actually defined to be impact or sustainable?

Interviewee: Yeah, they're certainly not a common standard there for that. And that's why I said earlier about a new way of defining impact, not the old way. I think, and I think that's a general problem when discussing impact. That is, our primary focus is generating returns for our clients. In a true impact investment, you have a dual mandate, where they are equally important and that's not the case here. We don't measure the impact we create with it. Okay, we are just trying to make sure that there's positive that is moving in the right direction but it's doing something good for the world and not something bad.

Interviewer 2: And one question around the screening of your geography, when you when you speak of investments, did you mainly look at developed markets or is your distribution that you also invest in emerging market government bonds, or in emerging markets shares? Which role do the emerging markets play in your screening process?

Interviewee: So, as it stands today, the sustainable product does not have any emerging market exposure. And that is because we when we launched the product in June of last year, we did not feel we had a good way to screen listed stocks for per impact or commitment to SDGs. So that is something we're looking into to see how we can do that if we need to have an active management made there what we need to do, but we felt it needed to be handled separately from the developed markets. We also decided not to include emerging market debt because today we have a passive mandate in emerging market debt. So we invest according to an index, and to be able to put emerging market fit in the sustainable product. We need to have an investment strategy that invests in the countries in the in the depth of the countries where we see progress towards the SDGs that they support and they work towards the SDGs. And we're not there yet. It's something we're working on to see if we can figure out. But we're not there yet. If you're looking at alternative investments, we look at green energy. We do not have many investments in emerging markets today. And there's several reasons for that were the primary one is expense. And secondary one, I would say is risk return. And the third one being that resources. So if you think about the due diligence we have to do for alternative investments and that process. We tend to go with investments where we can funnel large amounts of money into it over several years. And a lot of the emerging market opportunities are smaller. And that's something we hear when I go to different sustainability conferences. I hear it over and over again that there are plenty of opportunities out there. But for most large institutional investors, they’re simply too small so that it's not worth the resources to spend on the due diligence for those investment opportunities.

Interviewer 2: Do you think that something like private public partnerships can be one way to mitigate that issue that somebody offers responsible for a large amount of money to smaller investment opportunities in the emerging markets.

Interviewee: I think so. Some sort of fund in fund structure or something. I'm sure it's already being worked on. I definitely think that would be a solution.

Interviewer 2: Have you engaged into some fund in fund structures yet? Do you look into this opportunities?

Interviewee: Now, not yet we are the alternatives team. They've been short on resources who have ramped up now, but it takes a while to catch up. And they're just very busy with existing due diligence. So they haven't been able to look at anything else yet. Hopefully, they were able to very soon.

Interviewer 1: You’ve talked about the due diligence process already. And could you maybe give us a short overview of how you conduct due diligence when performing impact investments?

Interviewee: There's not a there's not a different process for impact. So we don't separate it out. Beyond, we don't specifically look for impact investments. So if we look at these sustainable products where we have a big allocation to the green energy. And then basically it's our Green Energy Fund of Fund which is what we call it, that's, that's part of that product. So it's not that the team is out there finding investment opportunities in green energy. So the focus is the investment opportunities, not the impact.

Interviewer 2: Do you look at the stainable development goals when deciding on which investment to pursue? Do you use them as a guideline or like a benchmark?

Interviewee: Yeah, for the, for the equity invested investments we do the so called equity portfolio. We we've set up a process where we take in the data on the Sustainable Development Goals and whether or not the company has a product. So it's about the outputs of the company service or product that in some shape or form supports one or several of the Sustainable Development Goals. So the example would be Estee Lauder, a beauty products company, their output their products, there's nothing wrong with the products themselves. There's nothing wrong with the company. There's nothing that says they're not sustainable. But we can't find anything that makes them help the sustainable development of the world. So they're not included in universe of the sustainable product. But the example would be a pharmaceutical company or Vestas,that produce the windmills. Some food companies that are good at producing basic staples in a sustainable way like rice and other basic staples that we need. Those would be included because there is a direct link with supporting the Sustainable Development Goals. So again, when different between responsible investing, so Estee Lauder is a responsible investment. There's nothing wrong with what they do. And they have good, responsible practices at the company. But the product and service they produce they don't, that doesn't do anything to help sustainable development.

Interviewer 1: I mean, we've talked about the terminology problem already. And how do you see like the regulatory environment or how do you perceive it? Are there any regulatory measurements that could possibly boost or hamper sustainable investments in the future?

Interviewee: I think in Denmark, if we go back to alternative investments, there's such strict regulations and guidelines around the due diligence process for alternative investments that, unfortunately, I think that make may make it more difficult to find these emerging market impact investing opportunities. On the other hand, from a positive view, I think the EU taxonomy, and the regulations that are being launched, will help set the framework what is sustainable and what isn't. And I will make it easier for us to identify sustainable investment opportunities.

Interviewer 2: On the impact investment term. How would you define the concept of impact investing and in your email, you also mentioned that you cannot purse impact investment as such, but maybe you could elaborate on why? Why this is the case today?

Interviewee: Our main task is to generate a good return for our client. That is our primary mandate. So that's our focus when we're looking for investments. Now if we, if we find an investment that also has a societal and environmental positive impact, then that's a bonus. But we're not out there in sub Sahara Africa looking for investment opportunities to get the social impact return. That's not that's not our focus.

Interviewer 2: So how would you define impact investing as such?

Interviewee: If I think about sustainable products, it's making sure that the investments we make has a positive impact on the world, not a negative impact. But in thinking of the Sustainable Development Goals, because I think they encompass maybe not everything but pretty close to it. But, again, the original definition of impact is amongst others that there has to be additionality. And that's questionable exactly which products having additionality and there's even talks about green bonds not checking the box on additionality, because they will basically be able to raise the money, whether it was labeled green or not. So I mean,I think it's a hard question. I think we're going more towards the looser definition of impact. I see that with new funds being launched from various asset managers. A lot of them have impact in their name. Where some define impact as active management basically, engaging, I mean, active ownership, engaging with the companies and trying to make them make a change that they say that's impact. So there's a lot of definitions out there now. of impact and what it really means.

Interviewer 1 You've said already that you wouldn't, if I understood correctly, you would never sacrifice return for your sustainable goals or impact. And do you think this obviously correlates or is connected to your fiduciary duty towards your beneficiaries? Do you think that this perception might change sometime in the future that you might be able to sacrifice return for other goals?

Interviewee: It's hard to say. That's hard to say. And it depends on.. I mean, green bond is an example where maybe you can say that we're sacrificing returns. The jury's still out on that. depends on who you ask if you can get the same returns in green bonds as in the traditional bonds. And but when we're buying, we can see that it looks like maybe we're giving up one basis point. So basically nothing. So in our view, that's not sacrificing return. Okay to gain the greenness and the impact thereof. But when we're looking at more true impact investment cases in Africa. We also have to take return, firstly into consideration and fees of the investment. So far we have not seen anything that's attractive enough to go there. So again, if there was a 100% difference, then yeah, maybe it would be worth it. But at this point, we don't see that in that area. And hopefully that will change. We also see that to be able to reach the Sustainable Development Goals by 2030, more money is needed in emerging markets. We hope that there will be more investment opportunities and that there will be more products and structures where governments and other institutions and organizations bear the brunt of the risk so that institutional investors can go in with their capital as well. So, basically that there are different tranches of risk and return. Just in microphones today, for example, there's the microphone set ups where somebody comes in and takes the trench with the highest risk and the largest downside. So, hopefully the same goes for other types of investments in the future.

Interviewer 2: Do players in that field in Africa, maybe foundations or other investors in Africa approach you as a pension fund and come up to you and say okay, these are actually opportunities we can give you to invest here. You mentioned that the investment opportunities on just basically too small for potential pension fund or for such a large amount of investment. Do they approach you and come up with any ideas for how it would it be possible for Danish pension fund to invest in Africa?

Interviewee: No I would not say so. When we are approached, the answer to them is basically sorry, that's just too small of an investment opportunity. And I usually say what you should say what I said to you that needs to be larger, and you need to come together with other projects in some sort of fund of fund structure so we can invest. I haven't seen anything yet. But I think it's still early stages. Everything moves slowly. But hopefully, we will see some more of it within the next few years.

Interviewer 1: I have an additional question. I'm not sure whether you can answer this one. But I mean, as a pension fund, you have a more long term perspective in things and the same is true for like those sustainable investments or impact investments. Do you see that this might not go well, hand in hand with the incentive structure that is present many companies like for example, the payment incentives for managers or maybe even in your in your fund?

Interviewee: We don't get bonuses, we are not paid on performance in our company. So I don't see the problem here. And I think that might mean, potentially that could be a problem in general. When you look at short term or long term plans, it's often not the same CEO that that is there when their long term plans are looked back at. So that could definitely be a problem. But I think impact investing or investing in emerging markets or the countries that really need help, because pension funds is a very long term focus. So in that sense, we're suitable for those types of investments where we don't need to see results from month to month. We can take a few years before we see the results. So in that sense, I think we are a suitable investor for it.

Interviewer 1: Could you maybe I think we've talked about due diligence already. Could you maybe give us a short overview about the risk management processes that are in place at your pension fund and are there any specialties when it comes to sustainable investments?

Interviewee: No there is not any anything special with sustainable investment, it's the same risk process where it's each investment team that is responsible for the risk in their investments and then we have a separate department and risk management team that also monitors the risk in the portfolio and looks at all the risks for the various investments. So, I would not say that there's a difference in how we handle sustainable versus traditional investments from a risk perspective.

Interviewer 1: Do we have maybe any tips or tricks or ideas for us or any, like, kind of sort of feedback that we could incorporate in our thesis?

Interviewee: Um, I think your hardest challenge here is the definition of impact. And the interviews that you have, how do they define impact. You could just look at FNP, they asked all the pension companies to submit their current green investments. I don't recall exactly how they phrased it, but they basically said how much are you currently invested in green investments? How much are you currently invested in black investments? And it's a huge definition problem. Because if you don't give a specific instructions, everybody's gonna report in a different way. And I think it's gonna be the same here. So, what you have to be very specific with what impact investments you're looking for. So, you can get very specific answers from that actual companies.

Date: 26.02.20
Duration: 0:48:46
Interviewee: Interviewee 9
Institution: IFU

Interviewer 1: Could you please give us a short introduction of yourself of your person and what you're doing?

Interviewee: Yeah, very happy to. So my name is Xs, I've only been with IFU for a year and a bit. And my responsibility area here is, I cover what we call Sub Saharan Africa. So anything investment related in Africa. And that goes all from all the way from initial screening all the way until we exit the projects. We are a team of about 10, the Northern Africa, half of them in Africa. So we had an office in Nairobi and one in Accra, we sort of cover East and West Africa. And then roughly half the team is sitting here. And maybe I mean, if you just touch on that a little bit, right because we are a development finance institution, but a little bit different from maybe some of the other development finance institutions and we'll touch on that we invest we owned by the Danish government, but governed as an independent institution. We essentially we invest three pools of money, we have our sort of very traditional DFI balance sheet where we invest in product wise debt equity or any sort of exotic mezzanine instrument in between. We have a smaller pool of capital that we allocate that we call sort of high risk high impact, which is a lot less call it commercial in this nature and is really, really impact focused, where we but also goes into that like, you know, really interesting countries where include country risk, a commercial investor wouldn't go and then the third pool of money we allocated to what's called the Sustainable Development goal Fund, which is a about 5 billion krona fund, where IFU is the single largest investor and also the general partner, but the majority of the capital comes from private Danish pension funds. And that's, you know, a classic 10 year closed end fund. where we are, as I said, we operate as the GP. So we sourced investments and manage them for the fund all the way to exit. And of course, that's a more commercial in its nature. Yeah. So you could say in terms of a off the risk return, we have almost on an axis three different pools of capital that we're looking. I hope that sort of gives a quick overview, we are constrained by our mandate that we can only invest in developing countries. When I say only, I mean, that's still 142 countries as of today, right. So it's not like we and doing that it's quite a challenge covering all geographies

Interviewer 1: How do you categorize developing and developed countries?

Interviewee: By GDP income, lower middle income, which is today at about $4,000 GDP per capita. So that means every country in Africa is eligible. Most countries in Southeast Asia and South America and whatnot, with the exception of a few, but also Eastern Europe and Middle East.

Interviewer 2: How do you perceive the demand of sustainable products and development of the trend toward more sustainability in the financial markets in the past few years in general? And also how do you perceive the demand from your clients, especially Danish pension funds for high impact investments?

Interviewee: I think there's a difference between sustainable and high impact. And I think being a sustainable investor, I would say almost as becoming a hygiene factor, right, if you're not a sustainable investor, if you're not acting in a proper manner, you will never get a cent from any of the pension funds. Now, what that means is something that's clearly under evolution. Right. And I think there's two big areas where we see a lot of movement, especially the pension funds have also moved in the last couple of years, one is on tax, and the other is on climate. And I think I mean, both of those relate to be a sustainable investor. I think on the tax side, 10 to 12 years ago, it was the norm and quite accepted that you know, all your investments you would try to tax optimize to the maximum extent possible. Various exotic hold co locations. And structuring for tax efficiency was very accepted. Today, a lot less so. And we have a new tax policy, for instance, they're very clearly states that we will not do that just for tax optimization purposes. And we will both measure how much tax we are paying the local country. But also, you know, it's part of the investment mandate, essentially, that we want to make sure that if you make money in a country, that you also pay the fair due tax in that country. We're not trying to be silly about it, but there, you know, but we don't, for instance, a lot of this you also see in all the blacklist from the EU is becoming much more prevalent, but even, you know, we experience with our investment committee where the Danish pension funds are present, that this is also an area and there's just more and more of more questions. If there's a loss in both holding company and the investment. What is it doing? What's the substance, why is it there? And if it's just for tax efficiency reasons, we said no to investments on that. And the other big thing that I really see a lot of movement is an environment. And of course, it's a trend especially in Northern Europe. I think that's a trend that will continue. And it's especially of course related to right now. It's about climate and hence sorts about CO2 emissions. But it's also about other things like, you know, how do you deal with waste material, plastic, all these sorts of things. But also increasingly, that's not environment, but things like in the gender lens when you invest, making sure that you're doing the right things and being inclusive as an investor. So I mean, clearly, there's a trend, that is the way we are seeing there is a demand for that kind of type of funds, from the pension funds.

Interviewer 2: You touched upon the regulations form the EU side. In your opinion, how do you see these regulations, this increasing regulatory landscape, hampering or boosting development towards sustainable investing.

Interviewee: Good question. I think it's a super difficult area to regulate. And one way we think is that market forces play quite a significant positive role. If we take, for instance, investments in the fossil fuel space, right, we are seeing just by the fact that there's public sentiment, all the way down to an individual shareholder or investor or pension owner, they are clearly expressing to the pension funds, guys, we don't want you to invest our money in black economies. And that, rather than regulation, I actually think is driving a lot of the behavioural change. Because it's simply I mean, it's consumer demand. I mean, Denmark is maybe one of the more obvious with our recent election right, which was clearly a climate election. Yeah. So I think you're just seeing that it's really market forces that are driving. Regulating it is very difficult. We do not see regulation as the most important impact. The EU is doing some things and they're doing some of the right things. But for us call it I mean, in the DFI community, we have very regular interactions, and we together you know, the European DFIs, Canadian, Australian, along with the IFC World Bank, we have a lot of interactions on this a try and actually sort of continuously raise the bar, either by implementing, for instance, ISO standards in terms of corruption, for instance, right, but also just in terms of performance standards. I'm not sure if you're familiar with the IFC performance standard. IFC is the leading organizations in this, right. They're part of the World Bank. That's the private investment arm of the World Bank. And they essentially defined performance standards on how to invest and how to govern, and what are some of the challenging areas. For you name it any type of investments. Right. I think, as a DFI community, we're probably ahead of the regulators at any given time.

Interviewer 1: I think you've touched upon the demand side from the customers. When talking about returns, how do you see the demand from these customers when it comes to sacrificing returns for a high impact investment?

Interviewee: It's difficult, and we are being frank. That is in change. Partly, it's the lens and how you look at it sometimes, right? Because what is what is sustainable investment and what is impact? Clearly, there is also why we already have these three different pools of capital that we actually allocate. And that's a way of trying to address some of it. So the more commercial ones, we would put into the SDG fund, where the other ones that are maybe too risky, but have a very high impact if they succeed we are willing then to lean out. But it's easier for us because you could say we have the support from the government, that maybe we don't need a 10% return on that capital. They don't want us to lose it. But they are okay, that you know, there can be a few hiccups along the way if that make sense. Yeah. So but I mean, I think my slightly, not cynical, but more: Some people say that there's no trade off. And that you can do both. I generally think you can do both in any given investment, but there's always a trade-off. Yeah. And people that say that's not the case, I think you're simplifying the problem, because you can always do more sustainable. So it's about, you know, where do you set the bar and how do you set your standards? And one of the other just very practical challenges is also that you have to be a little bit realistic about where and how you set for instance, standards. Going into let's say you want to do an investment in Nigeria, and saying that, you know, you don't want to, we invest a lot in the financial services, for instance, but you don't want to touch anything related to the fossil industry. Fact is just that about 30% of Nigeria's GDP is somehow related to the oil industry. So, I mean there you simply have to set a different benchmark in that particular local economy. And I think what I like about how we approach it at IFU is that, we really try and look at it case by case. So for every single investment we make, we always have a value creation plan, which is a traditional PE fund would do the same, right. How you're driving EBITDA, how you drive exit, how you will take cost out, topics like this. Whatever, it might be for a particular instance. But then we also create an impact plan. And that is sort of tailor made to each individual investment and also looks at you know, what is the context because, again, the Nigerian example. I mean, we believe a lot in you know, equality and inclusion. But if you go into a labour market where maybe only 15% of the private labour force is women, then targeting an equal distribution is, you know, a bit out of context. And maybe what you should target first is 20 or 25%. Or you're going okay, what is you can actually do is to make sure to get a couple of women into management, or whatever it is right. But you have to take the local context into consideration. And that is where the regulation is very, very difficult, because regulating some of these things is extremely difficult. And it's also where I think we as a fund manager, maybe struggle the most explaining it to our investors, because they have a different perception. And an example on this, you know, a couple of examples, for instance, and investment in private education. Is that sustainable? Does it create impact? Well, on one hand, you have a very inefficient, in Africa at least, public sector that simply can't lift the change. On the other hand, I mean, I think we in Denmark, at least also in Germany, I guess, are raised to believe, you know that education is a government task to provided. And it should be free. Now, how do you in that space? How do you interact as a private investor with a mandate to return a return on your capital to your shareholders, right? And that is where you really have to sort of on a case by case go in and understand, okay, what is the impact action? What is the good you're doing? And what is the potential harm you're doing? And how can you avoid that? How can you make sure that you don't steal the best teachers from the public schools to your private school? And how do you make sure that it's still not only for the rich elite, to go to your, your school? And those are some of the very complicated dynamics. And especially investor perception, it's just you know, we understand the world we come from and if you're from Northern Europe, and your belief is: 'no but it should be free, why is the government not doing it? Or, you know, any dollar you make on an investment in private education, that's evil, that should have gone into better quality of education. And I understand the argument, but it's just in that local context, probably not how it works.

Interviewer 2: Speaking of the due diligence of your investments, and also the impact measurement, in your opinion what are the biggest challenges in the African context?

Interviewee: One of the big ones is data. There's very few great sources of data across the continent. And then it's also sort of, I think it's about just being smart and really going on what are the four or five things that actually makes sense for a particular investment to measure? Right? And it doesn't stop. If you're an investment in seven years, right? You start out with four or five, for instance, KPIs that you really focus on, maybe you achieve a couple of them, but then you introduce new ones. One thing we always look at for all our investments now is the CO2 footprint. And I think that just coming back to the climate, right, that is something that our investors, including the pension funds are clearly asking for, the government is asking for it. The public wants to know, so co2 footprint is a clear one and we do that in all our investments, whether we are in power generation where of course it is very heavy, or whether you're on the on the end of the spectrum, and maybe in industrial services or agriculture. But so co2 is always a big thing for us. And we are always aiming to reduce our co2 footprint per invested dollar, all the time. And number one and measuring it is difficult, right? But one of the challenges working on the African continent is the issue around bribery. And that is something we're very, very aware about and try and manage. It's not necessarily something you measure, right, because we just have a zero tolerance to it. So that is not a KPI that we want to improve their bribery score, no. But like introducing systems to prevent it, introducing systems to spot it. Those are measures that we try and implement in the investee companies that we have.

Interviewer 2: I've read about your development impact model which IFI developed in 2017, could you please elaborate a bit on how it works and how it is applied.

Interviewee: Yes, I am familiar with it. And essentially it's I mean, it's a model that goes in and measures just on a few sort of key metrics. The main one being employment. And one of the things again that, you know, it comes back to you. Two years ago, I think one of the biggest subjects in politics in Europe was immigration. And what causes immigration? Well, I mean, in Africa, you will have about 2 million people coming into the labour force every month. Which means if you're not creating 2 million sustainable jobs on the continent every month, you are contributing. I mean, it just creates pressure and it leads to either civil war and immigration. So one of the big things that we see as impact is around job creation and that is also called as our development impact model. One of the big matrix in that is we think we're going to employ so many people in the company itself, we think it's going to have this positive impact in the rest of the community, that's a bit harder to measure. And then there is some scoring on the CO2 footprint. And we are changing our impact model now because we also want to have a more gender focused lens. But those are sort of the hardcore metrics that that we would look at. And I'll also say, the model is far from perfect, and we're probably going to change it, simply because applying sort of a one tool model is a bit complicated. What we're seeing and probably best in class right now is a company called Actis. They're also a fund manager and came out of the British version of IFU, the CDC. They are now pioneering a new impact model. But again, we're you know, it's the metrics are defined per investment. But then they seem to they go in and they audit them and agree so you know, you get an impact score at the start and at the end. It's not so different from how we approach it. But the big difference is that they actually are now setting up a methodology with EY on how its measured. Because that means, it is one of the tricky things, right? It is measuring the impact. And you can do it on co2 emissions, you can do it on employment, those are the big ones. And then you can, for instance, air and women in the labour force, you can set up a couple of KPIs around that, but the rest of it is case specific.

Interviewer 2: Speaking of the challenges around impact measurement. I think that's very interesting. You mentioned it, there is basically no standard for impact measurement in the industry so far. IFU has its own standard, other investors have their own standards. Do you see a trend towards developing a generally accepted industry standard of measuring impact and in your opinion, what are the necessary steps to reach that point?

Interviewee: I think most impact investors agree at least as a sort of governing principles on IFC performance standards as a way of saying these are the minimum standards for any investments. And you know, they cover a wide range of subjects, you know, when you're doing an infrastructure project, how do you relocate people, how do you have to treat them and how we have to compensate them? Stuff like that. So I agree, I mean, IFC is really leading the charge on that. And Interviewer 2, the other question was?

Interviewer 2: the other question was around impact measurement standards. Basically, every investor measures it differently. How do we set measurement standards to make impacts comparable across different investors?

Interviewee: Yeah, I actually don't have a great answer to that. For some of the investments, are you familiar with the system called grasp? So it started out as a private initiative and some of the pension funds are subscribing to that. We are in the SDG fund also subscribing to that and it's a way of trying to measure your impact or your footprint, but only for infrastructure business. I'm not sure that it is possible to get to a uniform standard. I'd love to and you know, some smart people at some stage will be come up with something right. But it's also then I guess the balancing act is that you also have to make it not too cumbersome and not too complicated. And whether you like it or not, anything that requires record, you know, reporting, which ultimately it will require. Just have to be aware, right? Why are you doing it? And for the African entrepreneur in a school in Kenya for instance. What's the benefit for him? By having to spend a lot of time on reporting or some obscure thing that may be in his local context does not make sense?

Interviewer 2: I think why I was asking about standards for impact measurement is that I believe that we are still facing a problem of quantifying impact in order to bring it into the equation when it comes to evaluating investments. We have quantifiable data on returns and quantifiable data on risk, but how do we quantify the impact and bring it into the equation?

Interviewee: Give me just 30 seconds. Let's see if I can find this file. So this is an investment we are looking at within the healthcare space. And here we simply gone in and said okay, fine. What are the five key issues? I know it's not standardized, right, but what we have this format. The KPIs themselves are project specific, but going in and saying, what is the need in this specific area? How much impact will it create, if it's successful? What's the likelihood of that happening? And what is call it our non-financial contribution to this, I mean, what else can we bring, is it about a mindset, knowledge, access to whatever it could be, right? And on that, you then get a zero to 40 score for potential impact But I mean, of course, improved health through access to dialysis for the underserved. Now, anything related to kidney diseases in for instance, in India for this particular case, but generally in the developing world, the demand is just explored for many reasons, but mainly because of the way people eat. Now, this is a super relevant impact measure for dialysis clinic investment. If you are in your African education platform, it has no context, right? But we will still go in and assess it on those four pillars, and then try and score it and then we give it essentially a score when we invest. And when we then exit, we would go in and then say again, okay, what was actually the outcome? Right? What is the score now? And hopefully that better be you know, hopefully that is positive, otherwise I would say we probably haven't done our job. And the Actis model I mentioned, operates a little bit in a similar way, but where they're working with with auditors, and then all of a sudden you could say, you're at least getting some experts in and you have a defined way from the beginning. This is how we're going to measure the impact for this investment. The next step in this chain is going to be to start measuring the investment professionals on that also. And there we still have a way to go. And that is, of course a challenge because as funds, I mean, most people that work in in the investing space, this is hard to measure. So you measure the easy and quantifiable stuff, what's your return on equity, what's your and these kind of things. And if you ask me, I think all fund managers should take the next step and that could, it's an easy way of doing, but linking people's bonuses and own performance to impact. How you do it will have to be on an individual level and will be different from fund to fund and company to company, but there is still quite a long way to go.

Interviewer 1: Do you see such measures in place right now, or would it be something that see for the future?

Interviewee: It's not in place yet. And that is also I mean, for instance, the relation we're having on the SDG fund. There's no doubt that the investors like the story. And they want to be part of the journey, right. And they want to tell their members, for instance the nurses that you are actually investing in dialysis in India. And it has this and this impact, great. It's great for their customers. But ultimately, what we still get measured on is what return did you create, right? So not what impact did you create. Because there is not yet a great quantifiable way of doing that. And ultimately, like it or not, I guess, if you measure people on a certain thing, that's also what you get.

Interviewer 2: That's a very informative, very interesting point. You mentioned the SDG fund and also the collaboration with the Danish pension funds, that they like to take part in the journey, what they tell their customers. How do you perceive the motivation and commitment of these pension funds? Because we spoke to some of the pension funds and some say, okay, we mostly use it for marketing, which then poses the risk of seeing it as greenwashing. How do you see their motivation and commitment to these kinds of investments?

Interviewee: Yeah, good, good question. We are, of course, coloured by the fact that the people we now interact with, are the people that chose to invest in this fund. And hence are probably the people that believe more in this not just as a marketing instrument. There's no doubt that we also clearly get a push, they would like us to do more marketing about it. There are great stories to tell and we probably, you know by nature, we don't we don't spend enough time and effort on that. I think it's very mixed in the Danish pension by community. And you still have many, many people that I mean, still also only are measured on return. You don't see a quarterly index on the funds that had the highest impact for their pension fund customers, no, who created the highest return in 2019. Right. So, are they increasingly buying into it? Yes, I think they are. But it's not uniform. Some funds are way ahead of others. But even within the funds, I mean, you would find on another team of 20 to 30 people who don't have the same level of commitment or understanding.

Interviewer 1: You touched upon the different investment categories IFU invests in and that pension fuds would lean more towards the commercial funds. Could you please elaborate on what kinds of investments you conduct in this commercial fund category?

Interviewee: All right. The dialysis clinic chain for instance that I was showing, right. That is something that fits squarely within that space, we believe it has a lot of impact. And again, for any healthcare investment, one of the things you have to assess is if you are serving the general market or only the rich end. And this is clearly for the general market because of the way it is structured with the government and they are essentially executing a lot on behalf of the government. But the returns are still, you know, call it at a level where private investors are also interested in, but just sort of borderline right. And that's for us always the difficult is space we operate in. Because as a DFI, if there's a lot of commercial banks, for instance, interest in an investment, what's you know, what's your additionality from a financial partner? So we would target investments where international banks would say, maybe this a little bit risky for us. The things that we bring to the table for pension funds are 50 plus years of experience of investing in these emerging markets, knowing how to manage these risks, knowing how to assess partners, knowing how to structure it in a way so you're not exposed to corruption or common regulation change. And that of course is a big thing if you want to engage in these developing markets. I'm not saying, you know, sustainable investment can't be many other things. And of course, you can do things in Europe or in Denmark. But it's just that it's just for us a different lens.

Interviewer 1: You've mentioned what you bring to the table for pension funds and that you know ho to assess the risk and how to choose the right partners. Can you please give us some insights on how you are conducting your risk assessment and what you are looking at when choosing partners for investments in emerging markets?

Interviewee: Sure. And I think in emerging markets, probably more than, and this is my spirit, than then Northern Europe, understanding the local context and having a local partner that really knows how to operate is crazy important. That is the single biggest thing that makes or breaks a company, right? And so we spend a lot of time on that during our due diligence. We of course do customary background checks just to make sure that they're not politically exposed, or there's, you know, they don't have a history of bribery allegations and stuff like that. But other than that, I mean, it's about going in and you only really get it from being in the local markets, knowing people and having a network. Then you ask for reference, okay, you are invested with them, okay with a check, right. And then its about spending time with these people and getting to know them. In my previous life before I started here, I also did venture investment where we work with psychoanalytic tools on assessing leadership teams. We don't do that here at IFU, we could, but it's much more important. I mean, it's about really assessing and understanding these people that know the local market they operate in. Most investments we see failing are when people come with a European mentality and they think that they can apply it in for example in India or Brazil and don't understand that you have to execute things in a different way. Some of the bad example we had where we maybe did not understand the local context, a small example, you know, so we invested together with a Danish cement producer in East Africa. Most of them We see fail are people that come with a European mentality and think that they can apply it in India. And not understanding that you have to execute things in a different way, right. Some of the bad examples is also for us where we maybe not understood the local context. small example, you know, so invested today together with a Danish cement producer, East Africa. And one thing that we didn't understand that they didn't understand was actually the selling part. They had And we didn't understand that they didn't understand that. They had good commercial relations and so they felt comfortable about going in and we invested with them. But they didn't understand that, every time a truck full of cement was delivered to a site, the site manager expected $20 cash on hand. They didn't want to do it and of course we couldn't do it and supported them fully not doing it. But that just meant that the business never took off. Its hard to generalise that, but it is really about understanding the local nuances. Now if you had a local partner that understood the business, he could have told you. So its about creating that mix, but its also for us, we bring other things to these local companies, local entrepreneurs. We bring structure, credibility, governance tools, how do you operate in an international manner. Then the best investments are where we find local companies, entrepreneurs that know how to execute commercially and locally. This we will never be able to do from the head office. I'd say 99% of the bad investments we've had, it always came down to having a partner who wasn't as strong as we thought they would.

Interviewer 2: Speaking of the partners, you said, you also do direct investments in companies and entrepreneurs. Do you also use innovative financing structures when you collaborate with other funds or with other partners on the ground?

Interviewee: Yes, in these three pools of capital we allocate, we can offer more or less almost every single instrument you can think of. From sort of straight, very basic senior loans, for instance we are doing a hotel construction in Ghana where we've given them a loan, and that's pretty vanilla if you will. We also supply straight equity in a company. But we have all sorts of you know, whether its redeemable convertible preference share instruments or all sorts of in between. I think for us, it's a big strength that we are not super tied into one or two particular instruments, because again, assessing and understanding individual risks means that you can tailor the product that fits that particular situation. For instance at a high growth company that is actually very risky and where, on the one hand, you would like to make sure you get your money back, on the other hand, if you give them a loan, you're going to kill their cash flow and they can't reach their growth goals. So then maybe you go in with a convertible instrument with a cap in the end instead. I'm not sure whether that qualifies as you innovative financing. The SDG fund itself is actually quite unique. Non of the other DFIs have an instrument like that. As a development finance institution, one of our missions essentially is to stimulate private capital. Now, what we have with the SDG fund, any investment that does, already has for every public dollar that goes in, you have minimum two private dollars that go in, just because of the way that vehicle is structured. So that in itself is actually quite an innovative way and is something that some of the other DFIs are looking at and trying to copy. Our Finnish colleges are just one example for that.

Interviewer 2: I think that is a very valuable point. You mentioned it, tailoring the investment products to the individual needs of your investments is one of your key strength. When thinking about other investors, for example Danish Pension funds, they are probably more restricted in terms of applying these tools and might not have the opportunity to customize their solutions to each individual investment.

Interviewee: No they don't! Generally, I mean, pension funds cannot make direct investments, or they need to be really large. And we are happy in a sense of being able to then help them to deploy some of their capital. But it is also very resource intensive. I mean, dealing with the African entrepreneur or the Indian dialysis company, is a different context and you really have to be with them on the journey. So the whole portfolio management is something that takes quite a lot of resources. So I mean, if you look at the amount of money we invest at IFU, we have many, many more people who mange our investments than for example ATP or PKA have in their investment teams. But that is because we do 80% direct investments, and they do maybe 10% direct investments, maximum.

Interviewer 2: I have another question related to the pension funds and maybe to sum up the opportunities of these funds in emerging markets. When investing in emerging markets, especially the African continent, either trough your fund or directly, where do you see the biggest potential opportunities for Danish pension funds, not only on the return side, but also on the impact side?

Interviewee: Very good question. And I think the true opportunities or the biggest opportunities are probably also related to understanding the two biggest risks. And I'm not sure how you necessarily bridge it, but there is not a lot of understanding in Danish pension funds around what is actually the market risk, not just in Africa, but in emerging markets in general. And really understanding what is the actual risk of doing an investment, for example in Nigeria, is a hard one. And bridging this gap is really important. What the emerging markets don't have compared to a European context is great governance. Another opportunity or pressure we have in a low and negative interest environment. Reading yesterday, that you can now borrow money for your house at less than 1% fixed for 30 years. So as a Danish pension fund with pension obligations, you are forced to go out and find some of the riskier assets to invest in, because that's where the growth is. And that's where the potential returns are. I don't see the pension funds getting to a point of doing these individual investments, the markets individually are too small. I think they are going to have to continue working through intermediaries, like IFU, but there is a number of other fund managers that are also really good also, our competitors. So I think it is time for Danish pension funds to start exploring, but they are quite reluctant. This is a bit of an experiment, right? They would much rather just put some money in, you know, a JP Morgan emerging market index fund or something, because it is liquid and they can relate to it. But I don't think they have a choice. If they want to be able to deliver on their future obligations, they have to start taking more risk.

Interviewer 1: Speaking of the risks in these markets and the difficulties assessing it. Which tools do you have in place to assess that risk in order to make it quantifiable?

Interviewee: That is essentially our entire investment framework. Everything we do in financial modelling is about assessing what are the different outcomes. Generally we go in and look at sort of 10 traditional areas of markets. We always start with market, regulatory environment and currency. Currency is a very big one for us and also quite unique, but always applies for emerging markets. Where we are different to a PE fund investing in the Nordics, we spend a lot more time on the regulatory and on the currency risk and the understanding of the local patterns, the local environment. I know it sounds maybe a bit fluffy describing that. Otherwise we would do market supply chain, cost, competitive landscape and all the usual and traditional ways of looking at it, but currency and regulatory are the two big ones in our context. And of course for those, we have various risk assessment tools.

Interviewer 2: As we are almost out of time, maybe one last question. You mentioned the reluctance of Danish pension funds and from what we've heard so far is that if they do green investments, they prefer to conduct these in developed markets. In your opinion, which role do perceived risk and the lack of understanding of Danish pension funds related to risks in emerging markets play?

Interviewee: I think this plays a huge role. Perceived risk of investing in countries and regions. I mean the people who sit there are smart, well educated, they read the financial news and understand what is going on int the world. But for them to relate to what is the actual risk of doing a dialysis clinic in India, that's very, very, very difficult. And one of our opportunities and also one of our biggest challenges as fund mangers is to explain that to them and to their customers. And of course, the proof is in the pudding. Is the fund the first, is it going to be successful, is it going to deliver the risk adjusted return that they're expecting? The risk adjusted return, I think, is the tricky one, because right now they have a very high threshold. My hope is that, as they see, you know, we do more and more investments that they become increasingly more comfortable about doing this. But that's not a given. And I think a second challenge is that over the last 10 years, emerging markets have underperformed on the financial metrics. So again, it comes back to if you get measured on this. Why should you take the difficult ones and the risk if you can just give it to some American fund that invests in whatever stock or whatever investment. So we have an educational challenge ahead of us.

Date: 05.03.20
Duration: 0:54:43
Interviewee: Interviewee 10
Institution: IFU

Interviewer 1:	Could you give us an overview about the pressing trends that you can observe when it comes to sustainability and impactful investing? What has changed over the course of time?
Interviewee:	So, I think, very briefly, I think the trend in terms of sustainability has been over the last probably 10 years to elaborate and integrate a ESG assessment tools in the sort of the core business when doing transactions. So, there's been quite a lot of both guidelines issued within IFU, and also, of course, internationally on how to do this and how to better integrate ESG aspects when preparing and investments when selecting investments. And then within the last couple of years, I'd say, but I haven't been here so long. So, within the last three years, there's also a further emphasis on going on looking at the impact side, social impacts. So, meaning the difference the way I see it is that if you look at the ESG you're mostly covering risk and looking at what do we need to do in order to mitigate that risk and how can we have prevented or mitigated or perhaps not go into that investment if there too many risk both types of environment and governance and social issues. But so the other side the impact side is more actually, how can we select investments? And how can we work with investments both in the preparation in the ownership period, optimizing and looking for potential positive development effects. So, it's closely connected into ESH. But it's not the same. So, some of the aspects we look at in the ESG aspects for example will say, labour rights or decent labour conditions, things for environmental protection. They can also be turned into sort of positive impact if you work with if you have identified a company that you're going to invest in that has issues in this regard then you can have a plan to prove that I think would be a positive development outcome of your of your work. So, in that sense, it's it bit, but the impacts aspects is so much broader because we are looking very much beyond the company. So, we look also at suppliers with respect to ESG, but we look also for, for instance, if we talk agribusiness, we should be looking also for the effects in terms of suppliers and jobs and increased income for entrepreneurs. When we look at a bank, we shouldn't just look at the financial service or the financial institution we should also look at what are the services are provided they provide better access to financial services, new products to underserved from parts of the population that get access, things like that. So, so that is that is something that has come in IFU within the last year or something when we are developing systems and, and methods to assess that when preparing investments and also in order to measure and track it during the measurement period, so you would say before, when we talked about social impact of the investments, it was a little bit in general terms. So we thought about, okay, so we invest in poor countries that has the investments going into companies in poor countries, so it creates some jobs increase tax revenue. So it's sort of a, if you put that into an economic model, you would see that would be some economic development benefits. And it will eventually also trickle down probably, to the population. And so now so that's a sort of general thesis that whatever IFU was doing would benefit and then you would just count, sort of jobs, taxes, sort of specific indicators.
Interviewer 1:	These are already methods with which you have measure the impact. Like how many jobs have been created?
Interviewee:	That was the standard way of doing it. Here at IFU and at most other DFIs as well. There was a discussion and development in these concepts and the methods of doing this. And there is also internal in IFU development methods to do this. So, we not only look at jobs, taxes and on indicators, but focus a little bit more on each investment, what can it contribute to in terms of development? So that's what I work very much with, so

how can we develop the whole framework for assessing what are development effects? What is the impact? And so that means that we have developed five categories. So, this seems to be impacting related to the company, the company staff or which was a lot of that was taken care of by the ESG team. And then there is impact in relation to the customers. So, for instance, a financial institution will have a particular relation to the customer. The banks could also be in a agricultural product where you have more nutritious foods to those who don't have telephone services, also, things which are related directly to the SDGs. And then we have, we have one category called market which is sort of effects in terms of other businesses. So, it could be that a company works with something where they're very central in the value chain so other companies would actually have benefit from their financial services also entity into infrastructure things. And then We have a sort of climate as a special area of impact as well, because it's regarded a bit differently than other you don't need. It's so people are centered, it's more like the planet. So people talking about the planet. And so the climate is separate. So co2 reductions, we have a lot of renewable energy investments. And then we talk about society and community. So those are the things that benefit broader society or CSR activities to the community, which could be you know, something which is close, or things like jobs in taxes. So we have developed these categories. And then when we go into investment, we try to score the investments according to how we live up to these criteria. We use a lot of terms and basics from impact management project, so impact investing literature and practice.

Interviewer 1: The problem that we've found in the literature also is how do you actually quantify impact? How do you measure impact? There's no standardized way of doing so. So I think that's very interesting that, that you came up with such an model, for example.

Interviewee: If you have a development corporation, they that's what they're doing. So they have to plan a project, make a lot from logical framework, with a purpose or outcomes in there, and then try to put in indicators. Yeah, so it's a little bit applying that on our investment level. Of course, we can't ask the companies to report on high level impacts and high level outcomes, because they don't really know what are they, you know, they know the immediate effects perhaps or the immediate benefits, but they don't know really what that brings in terms of better living conditions for the people, they can't really. So you need to make a survey or study to find out those things. So, so we distinguish between something that company can report on and then other things that we can inform. But we can't really measure we would need to start in evaluation or impact start in order to actually find out whether there are changes here. So that's all coming from the evaluation literature.

Interviewer 1: So, you see a reporting issue when it comes to impact investments. And the measurements you've just mentioned, like surveys, are your, like, way around this problem?

Interviewee: So you can say that we can improve. We're trying to improve the reporting requirements. But the first thing is, we're trying to improve the way to specify better what are we actually aiming to achieve? Because if you don't know really what kind of impact you want to achieve, it's very difficult to report on. So that's number one is to sort of specify what is it actually that this company can contribute with? And of course, within the sector's, it's very much the same perhaps in the agriculture sector, something and foodstuff and value chains within renewable energy, something relating to energy production and co2 reduction. And within financial services, which these are the three core focuses sectors of IFU . Financial services is again, another thing. But then so specify that that's number one, and then make a results framework for the investment where we'll ask the company to report on certain indicators, which is specific to that investment. Some will then be general, which we can then aggregate on the high level, but otherwise it's the most important is to set up specific targets. So it could be, you know. So then, if it's a financial services institution, the number of women with access to a number of loans given to a culture or in specific rural areas or something like that. But the loans, for example, what they are used for, how does that actually translate into welfare benefit, increased assets for the human at lower poverty level, we can't really ask them to report on that. So if you want to know something about there needs other data sources, reporting can only cover some parts the data. So that would be with studies, you know, things which we would need to do, but we haven't done too much here.

Interviewer 1: So you see, also a data problem there, like, a lack of data…

Interviewee: There is a huge data problem.

Interviewer 1: …. And how do you deal with that data problem or how you try to improve that?

Interviewee: So we try to strengthen the way we formulate the objectives and the targets for the companies. We try to be specific and agree with them why they should target for. And then we ask them to report annually on these things. So we have written reports coming in. And of course, many of the investments if we would have a seat on the board, and able to follow up on some of these things. So there might be under some of the issues that might be an excellent plan of attack to do something in order to improve their business. And so they can follow up on the actual claim and think a little bit. And then given what your question was how we improve? So, basically, they happen to report and then there's a final reporting at the end of the project, also some of the same indicators. So we just sort of stuck to those indicators. And then hopefully also, we can do some studies along the way, but we can't do it for every project because it's too expensive. So across projects we can do some studies, but that's not really been. We need a strategy for.

Interviewer 1: And you've already mentioned that you investigate the companies you're investing in, and then you, for example, investigate what are the suppliers and all those questions. Do you also engage like actively with the companies and, and try to get them to meet your requirements or standards when it comes to ESG or sustainability?

Interviewee: So, there's a team here, you know, at IFU, a sustainability tean, which I'm part of, sort of the impact specialist and two, three in ESG issues. So for each investment, there has to be an assessment of ESG issues. And then so we follow the IFC performance standards, which are these five very well these different areas. So sometimes perhaps you can find a company that lives up to national regulation, but we basically live up to sort of the international regulation, to IFC standards, in order to say if they don't do that, we'll make a list of the things that they don't comply with in terms of you know, could be the, the working environment, it could be, yeah, pollution or all kinds of ESG. So, and then we'll make an action plan of the things that have to improve. And sometimes it would be a condition before going in, but mostly it would be something that they would have to do within the first year. Okay, so we actually come up to the standard way we expect them. So that's why also we can say, you know, there's this discussion about jobs, are they decent jobs? Are they not decent jobs in the sense to high or low standards for good job. So we can say that the jobs that we are in, you know, coming out from the companies that we are investing in, the direct jobs into companies, they are good job because we ask them to live up to these things. The indirect jobs which come from procurement or other things, those we can't really know what are the standards.

Interviewer 1: And is there is there a way you measure, I mean, we are always talking about positive impacts. And you also measure like negative impacts that your investments might have, and how do you weight these?

Interviewee: We don't have a good way of doing so. So you can say some of the negative impact, a lot of the negative impact and risk of negative impact is taken care of In the ESG assessment, so there you have the negative page, you know, to workers to local population to environment, kind of a thing. So, but you could also imagine that there were negative income impacts from other things than ESG. So, we, when we make the case for that we commissioned the poll, we also need to we have, you know, in the format that we need to also indicate, what are the potential negatives? Yeah, yeah. So it could be, you know, investing in, in private hospitals, could be a negative impact from staff leaving public hospitals. And sometimes it's very difficult to imagine the negative impact but could of course be if you invest in one company, and then sort of the displacement effect. So, you favor that company and then perhaps some other companies would sort of in the same business will suffer or something like that. So we don't have a very good framework for that. It's more what can you sort of come up with? Which are possible negative impacts? You need to describe that and then have a plan to mitigate it? But we don't have a way of, you know, weighing them on. So you could say, if we look at the SDGs, there will always be negative impacts in terms of you know, you have some production, you could create jobs, you would have some services delivered, but then you would have this negative on the climate and the environment like that. We don't have a way of, you know, we just need to limit the negative as much as possible.

Interviewer 1: I think then we're coming back to the problem of standardization, and how to weigh those things. Because you can't really quantify negative externalities, for example, with respect to maybe positive externality. It's there's something that maybe regulators could help you With, if you think of the EU or maybe also the Danish FSA? Are there measurements that could boost or hamper those kind of investments?

Interviewee: So everybody say they contribute to the SDGs. And they, you know, but it's, it's really been very much up to the individual company, how they present that and so they stick a SDGs on what they're doing. So, I think the more I mean, we now I think in the process where more and more both other pension funds as far as I can gather, and more and more companies go into more seriously thinking what does this actually mean what can we actually two instead of just you know, saying that we contribute to the SDGs. So the more standardization and the more regulation, perhaps not, not necessarily, you know, government regulation, but the more standards we can agree within the business, that's better, I think, because then we have a better, you know, better position to present the case. So, and there's a lot of cooperation between the European DFIs and also with IFC was also so much bigger than the European DFIs.

Interviewer 1: The IFC performance that you mentioned before?

Interviewee: Yeah. So IFC performance standards in the ESG area, but also on the impact side. They are slo doing a lot of stuff. There is a lot of inspiration from them because they have a lot of manpower and brainpower. And so we are I think there's also IFC has also developed a standard for, for personal impact investing both for Private impact investors, sort of high net worth individuals, which we are also adhering to. So those are some nine principles that enables you to state that you are an impact investor. We consider ourselves an impact investor because by law we have to generate both return and impact.

Interviewer 1: Maybe you could elaborate a bit more on what are special characteristics of investing in emerging markets are Africa. So what are special risks? What are special conditions that you see present in those countries and what are the challenges? How do you meet those challenges?

Interviewee: The main challenge into investing in developing countries, the governance issues. And so the framework conditions in and in these countries are difficult and challenging. So it means that for instance, if you so I've lived in both Nigeria and Tansania, and if you have a private company that acquires a land for lease or land for production side of anything, you would risk the next week somebody comes up with that, that was, you know, the guy who bought that land, you know, and it's my land and all you have to pay me in and we go to court and you don't know whether you win or lose in the court, okay, it doesn't function that way. So, so, there are a lot of things which are not functioning in the way that we expect them to. So so that's a really big corruption risk and the sort of weak institutions and that makes it very difficult. And then of course, also issues like, you know, infrastructure, access to production resources. And in terms of the possibilities, I think it's when we talk about impact investing, yes, of course, in a way, much easier to find a good case in developing countries. There are many more people who are underserved in certain areas, like, you know, if you invest in, in a telephone company in Denmark, you wouldn't consider it an impact investment but in Africa, you could consider it impact investing because people need that service. So, I think that in that way, the whole way, we think about the is very much linked to the fact that we invest in in these markets. Otherwise, you couldn't think of it exactly that way. I don't know, how you would translate that to a Danish context, it would be very much different.

Interviewer 1: What are actions that you take as IFU to mitigate those risks? Like, for example, local cooperation with local partners in those countries.

Interviewee: Yeah, so that is, again, it's mostly on the on the investment side, but what we do in the due diligence process with thorough background check and often you also recruit consultants to do background checks, to do thorough due diligence analysis also of the business case company. We don't go into venture so we don't go into things which are just starting off completely from scratch, they need to have a record of something. You could go into Greenfield investment like a new factory or a new installation here and there, but they should the company or the promoter should already have some experience from the country or from the sector. IFU before 2017 it was tied to Danish companies. So, you could only go into these investments in partnership with Danish companies. So, so, it was very much seen, and that was of course, you know, took a lot of a lot of risk away because, you know those were Carlsberg and big things companies often which would go to, to emerging markets and investing in production and other things and so, that takes away a lot a lot of the risk and also in terms of ESG you would you know, you know that they have certain standards, company standards. So now, within the last two or three years when we will much more on local companies or regional companies. There is the risk that you end up in a partnership where you cannot really control what the partner does. So the check of the partner is very important. And then IFU is little bit better placed then other investor which are completely private because we are, we are publicly owned and we are somehow also has we have called the crown flag. So sometimes you could have the Danish embassy in that country to a safeguard so you would know if you run into issues with sort of with the legal system or with other things. You also have the chance to go through something the official channels, through the embassy or through others who have, you know, access to high level. And that means that you're not, you know, subject to those corruption risk and as a completely private operator would be, because you can always sort of refer to them. So that's a big open. And I would think, also from the perspective of the pension funds, that's probably also why they would like to go together with IFU because they sort of have a little bit more protection in selling into those markets than if they just went alone and of course IFU as some experience in those markets.

Interviewer 1: Maybe you could elaborate a bit more on how you work together with the pensio funds. So why do they pick you to invest in those markets?

Interviewee: So I think it's been so you know, we are owned by the Danish government. It's the Ministry of Foreign Affairs and we are also a recommended cooperation. So sometimes once in a while we get some funding from those other investment Council, which otherwise it's revolving funds. So, it's you could say with the SDGs coming in the last five to 10 years and the need for mobilizing capital for the SDGs and for investments into developing countries in general, there has been very big desire from, from Ministry of Foreign Affairs from government to you know, and generally, I think in not only Denmark, but to involve private players more in this field. And to get because you would see that just with public funding, development, cooperation, public sectors of the budgets of countries will never reach the SDGs. So you need private funding as well in order to reach some of those targets. So how to mobilize that funding? That has always been a challenge because of the risk and, and you could say and also the patience of that that capital. So I think the first initiatives are perhaps, like 10 years ago or something where sort of PKA I think, was one of the first Danish pension funds came in. So IFU has sort of their own fund. And then IFU also acts as a fund manager, so we established a new fund, which was a climate investment fund, where we then invite others to invest. So that was when there was a climate investment fund, and also a fund for Eastern Europe and one fund for Agriculture. And then, two years ago, there was this SDG Fund, which was that much larger than the other ones, 4.8 billion Danish kroner. And approximately half of that comes from private income and from pension funds. And then a good deal come from our own resources than this alone from government. Yeah. And then there's also some, a little bit of funding from the government. And then, so that that is sort of the first large scale, I would say, initiative which came in. And that came in, because in my understanding, because there was an interest from the pension funds. Now they have sort of tried it out in some of the smaller initiatives, and there was an interest from the pension funds to go into to these markets. And I think that is an interest from their members, because they may vote so that's an interest from their members to do this. I think also, of course, if you see the investment climate, generally the interest rates, I would think that would probably also play a role, of course, more willing to take some risk in these markets and with the, with the SDF fund, they have sort of been promised or what is sort of the perspective is to get a 10 to 12% return on investment. So that's, of course, very good. So, that means now when we come into this so I think there's both in the question of fulfilling the mandate from the need the demand from their own members, and then some financial appetite for trying out other things and getting some experience with other markets. And IFU is a good partner for that because we have the experience for these countries, we have presence in some of the countries. And seeing it from the pension funds, we are sort of, I think a trusted partner because they know us a little bit already and it is sort of, it is a financial institution. I think generally the DFIs could play a very important role here. There's an European DFI association, ETFI, you can look up their website to see a bit more. So in there not that many other European DFIs that have done this. They haven’t been able to mobilize capital. So, IFU has being sort of going a little bit in the leading role here.

Interviewer 1: And why you think that that in particular, IFU was able to raise such a big fund?

Interviewee: I'm not sure why the others haven't done it. Whether, is it because of their mandate of the I mean, I think Denmark is a little bit special in terms of the pension funds, they have so many pension funds. And they are members owned. Perhaps that there are some mechanisms that that they're more inclined to do this kind of investment. I don't know if there are any legal things that prevents others, because maybe they have some, you know, of course, all pension funds, all institutional investors have an obligation to seek the highest return, etc. Risk return profile. But I suppose that the same everywhere, so I don't know why their assessment is different. So it could also be that the appetite of the DFIs, the other European DFIs is less than the IFU because some of the other European DFIs have a lot of funds, and they continue to get a lot of funds from their ministries. And IFU doesn't get that many new funds. So we have to raise funds if we want to grow. So, this could also be an explanation.

Interviewer 1: So, you've talked about the increased demand by pension funds. How do you see this demand or this commitment towards sustainability from pension fund? Is it more like a marketing thing for their members? So, is it more related to this greenwashing phenomenon?

Interviewee: Of course, they also want to look good and present it in their annual report. But I think it's it goes deeper than that, because I think with the structure they have, with the membership structure, they're sort of forced to do something about it. So, this is still very, very small part of their investment portfolio. But they need to do something about this and try to, because there's some pressure to do this. And then you also have, and that's also where you shouldn't neglect although there are some very dedicated individuals in leadership in some of these pension funds, who actually wants to do this and have an interest and see this is as the right thing to do. So, I think this also account for some of that percentage.

Interviewer 1: The thing is that that they have to also be aware of their fiduciary duty in front of the beneficiary.

Interviewee: So, to me, I definitely think that goes beyond just greenwashing. It's more than that. But I still think that when you look at their material, and you do it, to which extent they actually are good at explaining how they do this, there's still a lot missing. I think they still have a lot to learn in terms of it. And so do we. To have a sense of really seen this through. Could you imagine any economic activity which is not related to any SDG? Not really. All activities related to an institution could always find an SDG. So, what is it actually that they are trying? So, I think both IFU and pension funds needs to be much more precise in specifying what they are actually trying to achieve. So, we want to do something about, you know, access to electricity. Yeah, these are the things we are really doing. So I think there's still.. I think they want to do the right thing, but more than just that it should look right, they want to do the right thing, but they're not really there yet. And neither are we. I mean, we are working on it.

Interviewer 1: What needs to be changed so that they're more into that? Does it, again, refer to the measurement problem?

Interviewee: That's what I think that they need. You need to be much more specific on personally in terms of the objective for the net trying to achieve and also in terms of following up and documenting what are you actually achieving? And not just, you know, making a big report on what you're doing on ESG and then just putting some SDGs in targets. Because whatever sector it is, so it needs to be much more in depth and also the public should be more critical about looking at these things and actually asked for this information.

Interviewer 1: Do have an example for us what type of investment is included in the SDG fund? What do the pension funds contribute to? Maybe with respect to Africa?

Interviewee: They are investing in a farm in South Africa. I think they were working in so it's, I don't know, the details, but the expansion of the farm. And it's also other farms supplying these berries to this farm and then export that. So, a lot of agricultural production, then now also renewable energy. Our new climate strategy says that we should invest 40% of our investment portfolio should be renewable energy. It is obviously a very big part of it. So also within the SDG fund. That is a very important part. In there's also an investment in a hospital platform. It's sort of a group that invests in various hospitals in East Africa. And that's interesting because now that hospital investment, and then the tertiary education investment was, I think, one of the, one of the early ones. And of course, everyone was very proud of it because they're, you know, investing in social sectors. It's not so usual normally. So, you could contribute to some of these social objectives. But actually, it was very criticized by Danish NGOs, because these investments, because it's private hospitals and private education.

Interviewer 1: So, its again about negative impact.

Interviewee: So that's a good example of where we have been forced to step out a little bit. So, we just, I think the first investment they reduced. So first everybody is like: Yeah, it's great, I'm happy. But then, okay, there could be some problems here. One thing is you can have an ideological stance that, you know, you shouldn't invest in these. So these are social goods, this should be provided by governments. That's more on the ideological side, but you only need to look of course on the, the positive and negative benefits and when you do it. And that wasn't really done for those first investments. So now we have learned that and doing sort of a proper Impact Assessment of seeing the specific cases.

How can we sort of limit those possible negative effects by taking doctors out of the private hospitals and then provide training and support in health systems? How can we also address some of the national health challenges in those countries and not just have surgery for the, for the rich people. So that's some of those things so that so that you can make, and that's a good example of where you can't really see when is it good enough? Yeah, that's very difficult. So it's something where we try to work with the partner and have some pretty good assessment of what is the role they can play in the National Health System and then understanding how many are sort of covered by health insurance and what are the clients that come. Is it also to a rich people or middle income people. So what can we do to improve that? So that's a good example of things look nice on the surface. But then actually we have to dig even deeper.

Interviewer 1: Are pension funds actually able to deliberately choose those investments?

Interviewee: They're on the board of the SGD fund. I don't know whether they all go or whether they just selected some representative. So when an investment is prepared, in IFU, it's decided whether it should go to the SDG fund or should go to the normal. And then if you go to the SDG fund there is an investment committee, and fund board which decides. And they have said no to several investment.

Interviewer 1: And why do you think they specifically choose those the farm extensions or the hospitality platform?

Interviewee: It's not like they have a big choice. Like, we don't have a big choice. You don't sit with 10 investments and say okay, we take this one. So it's more like you have an investment presented. And then you see, does it live up to criteria. So it's a risk return profile. And it's also a question of which countries. There are some countries where they don't want to go, because might be too problematic with respect to reputational risk. Then of course, we present the case also where you know, the ESG issues and the impact issues are presented so that also plays into that equation.

Interviewer 1: I think you've mentioned it already. But this kind of phenomenon means that you have also a lack of supply of suitable investments?

Interviewee: I think it's generally a lack of good projects. We are always challenged by, you know, we have to build a good pipeline. Because these are big investments, many of them and they're not that many in those countries. So you can see I've used many is quite broad in terms of countries, we can go in many countries, but we need a certain share of our investments into more difficult conditions as in Africa. We have also many Latin American countries where we can invest in, which is within the mandate. But of course, it's more difficult to argue why we should do that if there's enough private capital available. So, you need always look at the impact but also at this additionality issue.

Interviewer 1: What is additionality? What does that mean?

Interviewee: So, you could say it is 90 means whether or not the court that seven several types of financial additionality means whether or not the finance that actually come through it is additional to the market. Yeah, because we are. We are partly public and partly subsidized and so it means that we should not go into funding projects which could be funded by anybody else like pension funds. So that means that we need to go into those that are good enough to still give a return and have a risk profile that we can accept, but not so good that you know, private capital could just invest in.

Interviewer 1: Would you say that this problem is more severe in Africa, like the lack of private capital than for example, in other emerging markets, as in Latin America, for example?

Interviewee: Yeah, depends on the countries but in general, yes. Because of the framework issues and other causes of currency issues. So for instance, just to mention an example, we would look at an investment in Uganda, which could be a very sound investment of, you know, a 12% return annually in Uganda shillings, but then if you put it into the system here and you convert it, then you have currency risk. The risk is somehow in the systems. So it means that you really need to, you know, if you're a completely private investor, you of course, you need a tremendously good return in local currency. In order to get a good return in the project.

Interviewer 1: How do you mitigate the currency problems that at IFU?

Interviewee: The investment officers always have to present the case in Danish kroner. So sometimes, there's a holding company, which is in hard currency. But that's also for these legal issues that you will have holding companies, it's where the legal system is, is more acceptable, and then they will hold the companies that operate in those countries.

Interviewer 1: Do you have more insights regarding the due diligence process when it comes to emerging markets or Africa? Quantitative or qualitative, either way? You've already mentioned like the scoring model for example. Do you have something similar in place for your risks?

Interviewee: Yes, there is. And that has been with IFU for a long time. So they have certain parameters. So IFU has its own risk assessment system parameters. The credit rating. Also there's an OECD classification of all countries according to risk. So there are eight risk groups, okay. There's also the ease of doing business or bank, ease of doing business indicators and other things. So some of these indicators are in use, and provide a risk. So in IFU, then there would be sort of a table indicating that the percentage return when it's equity provide, sometimes it is equity sometimes it is loans. So there would be sort of a percentage and then the risk category and then how much you need to get on top of that percentage score depending on the risk, which is sort of the way we are doing it. Now it could be below that but then you have to argue for its good impact case

Interviewer 1: What I found on the internet was also, maybe that was the model you talked about earlier, is it called data development impact model?

Interviewee: Yeah, that was the one we used before.

Interviewer 1: But it has now being replaced?

Interviewee: We might keep the name but it's being renovated. So that's the one where basically there are a number of indicators.

Interviewer 1: And why was there a need to renovate it?

Interviewee: That was in order to do this assessment better and to have more focus on the development phase. There was as evaluation of IFU, which was done by the Ministry of Commerce (?) That has also sort of spurred Interest in IFU and in also the general trend in in this type of organization. So, so we needed to do it better than that system. So briefly to explain the difference was that that system had these overall standard indicators, jobs and taxes, energy production and things like, sector wise also. And then you would assess an investment exempted in time in terms of these indicators. You will see how much could you expect to achieve and then it was rated according to that. And in what either above or below a certain threshold when you walk into the investment, but then only a few of these were actually followed. So we didn't really monitor. So it's much more used as screen. So, and then we're done on the basis of these overall standard indicators. So now we go much more into the single investment and what are the benefits or the possible benefits of these investment. And to measure and follow that to an investment and then some of that can be aggregated on, but we can aggregate everything.

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Interviewer 1:	Yes. It's Peter speaking. Can you hear me loud and clearly?
Interviewee:	Yeah, yeah, it's good. Okay, go ahead.
Interviewer 1:	Perfect. I know these times are, first of all, thank you for taking the time in these current circumstances. I know that it's probably quite hectic and busy for all of us at the moment. So, I will just start right away. First of all, I would like to give you an introduction to what we are doing and also the intention of our thesis. Maybe then you can give us an introduction to your person and also your role at IFU. So, as I said, Nils and I, we are currently two master students at CBS. And we are writing our thesis about impact investments for institutional investors. And we would also like to explore the investment opportunities of Danish pension funds in the impact investment sphere, especially with a focus to the African markets. And that's why we would like to get some insights from your side on some of these pressing topics related to impact investments in Danish pension funds.
Interviewee:	Good. Yeah, it's good. Okay. Just continue talking, also let me know if you want me to address something, is that okay?
Interviewer 1:	Yeah. Okay. As I said, maybe you could give us a quick introduction to your person and your role at IFU please.
Interviewee:	I've been with IFU for a little less than a year now. I have a private equity background. I was involved in establishing the first public equity fund in the Nordic regions, back in 89. And I was involved in that fund for more than 20 years and then I have a number of years where I've done my own private investment and investments and then last year I got an offer to join IFU and do something different, like more impact investing. In the past, my investments have been for, say return based and I thought it would be interesting to get engaged in another discipline and something with a bit of a nicer purpose than just generating cash. My role at IFU is the Chief Investment Officer. I'm responsible for investment activities and I have nine VP’s reporting to me, and we are organized in three sectors, as you wrote in your Q&A and divided into secret regions. And that's how we’re organized.
Interviewer 1:	Perfect. Maybe you touched upon it, maybe on a high level could you give us an overview of what IFU is doing regarding fund structure, types of investments, geographical focus, and also maybe the mission of your fund.
Interviewee:	Yeah, but I shouldn't get acquainted with the idea, the thing is we are considered the idea of or enabled by the Danish government, the Minister of Foreign Affairs and I’m appointed by the Board and the CEO told me he's appointed by the Minister for developing countries. So, we are a government owned entity, and we to, to some extent we are also funded by the Danish government. We are part of the fiscal budget every year when it gets approved by the Danish government, and then we have a number of different targets that we’ve been investing from. One you could say is our equity which we have accumulated over the last 52/3 years which is about 5 billion Danish Kroner and on top of that, we also managed some funds, where it’s partly, it is pension fund money. So, we are also a fund manager and as the SDG fund you’ve been eluding to, we have 5 billion Danish Kroner into that fund where 60% are coming from the pension funds and 40% are coming from the Danish government. So, we have, and last year we also got a new facility from the Danish government, it’s 200 million Danish Kroner, to be earmarked towards high risk, high impact deals in Africa. And then we also have last year where we also got 1 Billion Danish kronor from the Danish Future Fund, the green future fund. So, we also have had to deploy and see to all of it. Oh, yeah, and then we also have some grant facilities, that we can get, and on top of that, we are also the manager for what’s called the media

sustainable infrastructure financing, which is concessional financing. I suppose a non-commercial investment for where it could be infrastructure investments or great investments where the counterpart is the local government in the country of investing. Where it becomes, where it can be both a grant or a concessional financing, like noninterest bank loan and so forth. In our view, we are like a multi faced animal. So, I think for the purpose of what we're talking about here, maybe we should just focus in on the SDG fund and not to make it too blurred, but that's up to you guys to decide. Because we do have a number of different hats that we can put on in different scenarios, depending on the situation.

Interviewer 1: Yeah, I think that's a good idea. Perfect. Thank you. A question around sustainability on a on a higher level in your opinion, what are the most pressing or relevant trends you can observe related to sustainability in the context of regulatory requirements demand and also macroeconomic trends.

Interviewee: For me it's too difficult a question to answer. But the thing is like, like for me to make sure that we're doing our job in developing countries, if you wanted people to talk sustainable investing, people are coming to IFU because they needed money, to grow a business. And I think that's kind of where we need to see this, and then we can sit in the developed countries and say, Yeah, but you should do XY and Z to make it clean and all these issues. But I think the thing is that there's an underlying need for cash to grow a business. And if you look from the other side, so our value proposition, two words, people who usually need a pool of capital is to get our money. And because both parties want to have the money, so they can grow a business, they can create jobs, they can improve, like health, like all these things that comes on the money side, and then it is as we as development finance institutions say "yeah, but we are only going to give you the money, if you are going to be complying to xy and z." And so, for me, the most important thing is, is that you need to have the regulation and the incentives in place. If you say like India, as an example, right now, they have a huge problem with piling of waste, and good clean water and water treatment, and so forth, but what has happened now is that finally something is going to happen because there's a water shortage. Now there's water shortages. And that means that some of the country will need to buy water, it needs to be brought in in trucks in in certain periods during the drought and dry periods of the year. And as soon as there's an economic penalty, then people will start addressing this. So, people are like businesspeople. So, the Indian owner of the factory is thinking that now suddenly it costs money to get clean water, then I better start treating the water that I have thrown out to the sewage. Now, it didn't make sense to me economically, to treat the water. Always people just going to say, just let the water out into the river or we're just going to pile up the trash on the side and then the monsoon rain comes, it's all flooded into the river and we're good to go again. So, you need both, there needs to be an economic incentive for people to do this or there needs to be disincentive for them to do it, which could be a penalty, fine or regulation. I just think it comes down to that basic level because if you sit in like, like one of the poorest countries in the world you cannot afford to think like the way we are imposing things on people from developed countries point of view that the entity should only come from renewable. But what about baseload? What about the alternatives? I can't actually sit and wait for somebody to build a wind farm or put up a solar park? I don't think so and that's where we need to, to see it from the other side. What are these people looking for? So, for me, I will say, for people to do the right thing from a sustainable point of view there needs to be an incentive or a disincentive not to do so. And the incentive that we're using now is that we are saying, you know, we cannot give you our money unless you apply to X, Y and Z on the USD side and on the impact side. But if they had an alternative to get money from somewhere else, as we see people do this stuff, it's in nature of human beings.

Interviewer 1: Thank you. You touched upon the regulations, what role in your opinion do regulations play in the impact investment sphere in general or how do you see that regulations can boost or hamper, hamper impact investments?

Interviewee: If you talk about local regulation, it is of course, that you can tell people like in India as an example again, if you are thinking of distillery or you are pharmaceutical company or you're a textile company, you need to have zero liquid, meaning that you're not allowed to discharge any water and you need to be zero, you need to recycle any water you are letting out and you need to clean it, water treatment on site, and then put it back into your production flow. That's the kind of regulation you need to make sure that people are behaving, but you also need to make sure that you can enforce it. If you have regulation and you're not able to enforce it, then something doesn't make sense. So for every country to foster investment and for everybody else to invest in a country, there needs to be regulations and there needs to be the right to ownership and but also you need to be able to enforce the law because you need to have a playing field. So of course, for us to invest in any given country that we're looking at, what is the ease of doing business and we are looking at, can we enforce right to ownership, right to title and so forth, so you need regulations to make sure that you can invest into a country.

Interviewer 1: Perfect. Speaking of impact, you as a DFI, how do you define the concept of impact investing? Or how would you see the concept of impact investing?

Interviewee: Like, what was definition of it?

Interviewer 1: How you or your institution would define the approach of impact investing?

Interviewee: I can share this view. Can you see my screen if I do this?

Interviewer 1: Now I can see it perfectly.

Interviewee: This is a basically what we, one of the first thing I addressed is that we should be more clear on how to measure impact and how we can actually do monitoring and follow up on the impact that will create and this is one of the challenges that everybody has, how do you measure impact and they take a few initiatives. So, this is how we have started approaching it as per January 1 of this year. So, we'll be looking at is like basically the effect of the business on the company level in the community and society level the customers and the market leakage and the climate. And then by two things, is minimize the risk through EPSG compliance and then by improving impact performance. So, this is how you see, this is like the classical way, we just try to illustrate so that you can look at the direct measures which are relatively easy where you are in control. Basically, how many jobs are you creating? How much tax are paying locally? All of these are relatively easy to measure as long as you define what you're measuring, but the hard thing is outside the gate. What are you creating, how many jobs are you creating with sub-suppliers? What are you doing, is there a school being built next door because you're creating jobs is the health care facility being built all those things on the outside, it's a little more difficult to assess. Just to illustrate this, and this is how we are changed now. So, we went from the top now to the bottom and this is how we are addressing investments from day one as the first one is to use the exclusion list. This is how, from an SDG point of view, we look at a deal. First is it on the exclusion list, what is industry or the country it is under. And there are of course some industries that we don't touch, which is, of course, the tobacco weapons and highly polluted industries. And then we categorize the SDG. And then we do an SDG assessment and then on panels, we also do an impact screening and the impact assessment and impact planning. And then we create plans before we sign, and they'll be implemented on the board. And then we do our reporting. And then in the end, we do a final evaluation report. So this is how we look at it now. So, SDG and impact goes hand in hand with the financials. So, when we screen an investment, we look at the impacts, is there enough impact in this deal to be done. And is there enough returns for us to do the investment. And you see this is just to illustrate what we did before and what we do now. So, to come back, we didn't really look at impact from day one, we just assumed that just by providing capital, we will be generating income. But now we are doing it differently. We also do tend to define impact classes 123. I'll come back to those. And then our claims in principle, I can send this to you afterwards, so you can have it.

Interviewer 1: Perfect. Thank you.

Interviewee: Yeah. And then you know, the SIP is our claims in principle. When we like look at this, is this a deal we want to do in principle, and then BC is our banking commitment, because before on the questionnaire, you talked about our DIP model assessment, we have defined our deemed criteria's and target as odium, it is our internal system. And then during the ownership phase, we're doing the annual SDG and impact reporting and we do follow up on our impact creation plans. So, these just to show, what is new is that we have like three impact classes. One is basically just like act to avoid harm and basically try to eliminate negative outcome of what we're doing. A simple example could be if we're investing into a hotel will that investment hamper local people's access to the beach or will that impair efficient access to the water. Impact class two looks at the benefits of its stakeholders, and who's going to benefit from this investment, both inside the gate and outside the gate. Impact class three is where we contributed to a solution where we're making something that can structurally change the country or the community. And initial dimensions, we'll come back to this one on the next slide. But we are doing like a gap assessment, where we're using the IFC gap assessments by country and states. Are you familiar with the IFC's performance standards? So basically, when you're looking at a deal now, we are saying where are we now? And what kind of impact creations can we do to make this a deal better story? And of course, it's not like in a monetary sometimes we are trying to do, I have one example here from a case and development pack and VI tracing, which SDG's are these specific deals, which one this is number one, and this is number eight. And we looked at what kind of development outcome do we see in this transaction and what kind of additional things do we have here and then also the business sustainability of the project. So, we are addressing each case where we try to link them through the SDGs. And then we also on the impact side, we have a rating which I'll come back to, where we try to on a case by case basis try to rate different projects. And as you can see, we have to customize this for these specific deals on the right side, what we're looking at here in this is a cable producing company in Egypt. So here occupational health and safety, this is one of the things we're looking at and gender equality in the workforce, sustainable numbers of decent jobs, power contribution to electric value chains. So, these are specific for the details. Because if you want to do, you cannot do something generic because all the deals are different. So we actually require investment professionals, before they present the deal to me that they have done this homework to look at our level of impact and sustainability, actually on this deal specifically, what can we do here, and you can see the impact classification on the upper right corner. This is a two, we can see, of course, we're not just doing this to avoid doing harm, but we actually put the impact higher and there is a positive outcome for the benefiting shareholders. But it's not an impact class three investment, it doesn't give that amount of impact. And then you can see what we're looking at here with the same ones. How do we get to that score in the first place, we get the score on the upper left corner, or approximate rating of very good at 25 points. So, we have a rating here where you can get up to 40 points and this work comes out at 25. So, if you look at the occupational health and safety who's to benefit from this? Is it the company? How much is it? Is it medium, you can discuss. Is it medium, low and high? So, we still say within that it's not a clear objective criterion to do this. It's based on the assessment by the team. And then you have the gap assessment, how much can be to be done here? Basically, how are they performing? And good could it be? How much room for improvement exists on the occupational health and safety side in this deal? On this deal we have assessed to be medium, they are doing relatively okay, but there's still more stuff to be done. And this is how it ends up at a medium and we say how much can you contribute to get this up to the best standard, which is relatively high because we can move them all the way we can require and make sure that they get the tools and ensure that they're incentivized to be truly complying with the Occupational Health and Safety side here and what is the likelihood that it is going to happen, to be relatively comfortable that company has signed on to do this and we can say, I wouldn't say forced them, but you could convince them that it's a good idea to do this. So this is how we look at it at each deal this way.

Interviewer 1: Perfect. Okay, thank you.

Interviewee: And these are the new deal indicators for general outcome, and this is how we look at it. We have added some new ones, and this is how we are going to do to portfolio reporting going forward in our annual report, and this is how we’re going to start. And what we’re doing this this spring is that we are testing it to see if this is the way we're going to do it going forward. So this is a work in progress, but it's much better than what we had before. And it is a moving target and we are having a lot of discussions with the other deal guys on how we can align the way that we talk about SDG and impact.

Interviewer 1: Perfect, thank you would be great if you can share this material afterwards. It's very interesting. You talked about the impact measurement and also the impact due diligence process your development impact model. How do you see the challenges in impact measurements and development towards a standardized impact measurement and reporting? An industry standard, for example. It is a moving target and there are a lot of people trying to create a standard, what we're spending most of our energy together with all the advice of the organization on this matter, because you have a lot of semi-proven similar commercial institutions who also try to create some kind of standard and there good ones, and they're getting much better. But we haven't seen anything that’s like a plug and play, and better than ours, I’d say it’s a mix of things that we have collected, and we’re integrating the best of these models. But it's difficult, and it's very difficult. And you can see, you have as an example that they took a Canada pilot to Kenya. There's a lot of studies being done on the impact of building safety infrastructure. So one thing is that we are generating electricity and we are creating jobs, local jobs, but there’s also a road that has been built, and what is the impact of having built that 600 kilometres of road? Then there are studies that have been made that looks at amount that the price of fish has gone down, and food in general have gone down in the local markets. So, is that good or bad? That's my question. That is good for the consumer, they can get cheaper food for maybe for the local farmers it is not good because more competition now. I'm just saying that it still is so complicated, so you cannot turn it into a science. And the thing is, every time you want to invest and while discussing this internally, we ask how much should we do on our measuring and doing this compared to how much energy should be spent on making this a better investment and better deal by creating more jobs by being more efficient, growing the business… because this also takes away the focus on getting a job done. If we told this cable company in Egypt that impact measuring and all this stuff was the most important thing, that could potentially hamper the development of the business, and maybe wouldn't have the resources to start expanding the business into other countries in North Africa. So, it also comes with a cost. So, we need to find a good balance. And that's what we are struggling with. But it's a reasonably good balance. Because we don't want this to be a liability on the company, we want them to focus on developing their business, creating jobs, and expanding the businesses.

Interviewer 1: It’s a very interesting point that you also touched upon the negative impact some of these projects can have. How do you see if it's possible to measure this negative impact and to take it into account or how is it currently done when negative impacts are achieved or are a by-product of an investment?

Interviewee: We are addressing the negative impacts in our things and we are considering what potentially negative impact is, you can see on the left corner down, risk of negative development impact, risk of displacement effect for competing cable in Egypt. So, by giving this company funds are they able to out compete smaller players and stuff. So, this is just one simple example this is not the best example I have. But if you go back to Canada again, what happens when you do a big construction like that to Canada, and that happens not only in Africa but a lot of places. If you have a construction site, what do you see during a construction phase and to some extent a little bit afterwards. You create a lot of jobs, hopefully decent jobs, but you also create jobs for like prostitutes, to be honest. I mean, is that a negative impact? I would say, because you're not creating decent jobs, and it should be good, but the thing is you have all these dilemmas. And what will you accept, and also of course, it's not going to happen in the compound that this happens, but it was just outside the compound. And we see that all the time. And then we've areas where they are painting the roads that you see here certainly is that you have a region where you have nomads where they walking around with the goats, and then you suddenly some goats they are getting killed due to increased traffic, that's also a negative impact. And some of the jobs creating look like to Canada is not local jobs because they do require some technical skills. So are you creating local jobs in the operational phase or not, and are the jobs you're giving to the locals, say the less educated ones would have to be a security guard or something of such, so there are all these dilemmas. So, it's hard to see this as isolated, I think often you need to look at it countrywide or regional, is this region better off by having this wind farm? I think we could say yes. But how much on an economic scale of say 10, because access to green electricity is good, but when you start deducting the cost of having 200 prostitutes allowed? Is that one, two or five or what is that? So, I'm just saying that you cannot put a numerical value on it. And that's why it's complicated, but I just think that we as investors just need to be transparent. What are the causes and what are the minors and then be transparent in in saying what are the pros and the cons and dilemmas in this investment, and we are trying to have more fortune on the dilemmas because we do have dilemmas in everything we are looking at. I can tell you positive impact of old investments, but I can also tell you some negative effects of old investments that have been done. Just to the wind park again, you have displacement of the indigenous people, how much does that count?

Interviewer 1: I think it's an it's a very good point that the negative impacts don't fall behind and are not mentioned or considered. I think if you weigh up positive and negative impacts and then see it on a on a consolidated level, that's also in our opinion, the best approach for now.

Interviewee: But the thing is, some people are trying to put some numerical scores on different things like you get a score of x if you generated so many jobs per million kroner invested and of course you can start doing that, but what's the real value in it. There's a deal for a hydro power plant, and when we had the ability to generate electricity to maybe more than 1 million people, but we had to displace about 3000 people had to move. And what's the cost of that? But I'm just saying that there's always dilemmas. I just want to flag that we are trying to look at the negative dilemmas as well, and we have in our hospital deals that we're looking at as a private hospital. And same with private schools and university deals that we have done. Are you doing brain drain from the public system? Or are you making sure you're creating jobs for people who have left the countries who have to come back and now start working in the private sector, who wouldn't work in the public sector, and all these things we keep seeing all the time. So, what we're focussed on looking at now is like the gap assessment, can we fill that gap? We can see with the healthcare field, there is a lack of hospital beds and there's a lack of doctors and by doing this investment, we can create more hospital beds. So, we also have to like dumb it down, but that's why we look at the gap assessment here. And then you can look at the gap assessments as issued on the first day at the company level, in the community and society level, about the customer levels and on the impact on the climate. I think everybody can agree that it's better to build a wind park than it is to do a coal fired power plant, but the problem is that you don't have any baseload.

Interviewer 1: Thank you. Speaking of mobilizing capital, capital you as a DFU and also in collaboration with the Danish government, how do you see your role with respect to private investors and mobilizing capital related to leverage and also mitigating commercial and political risk?

Interviewee: DFI's can and have played a role in that and I'd say that I feel we are one step ahead, because every time we invest out of this G fund, we are mobilizing private capital because we bought the private capital into that fund, say where other DFI's only have government money, they need to have co investors on the deal. So, we just by deploying our fund we are mobilizing private capital into the transactions. So, we are born with a private and public partnership, so on that account we kind of like tick the box, just by deploying capital into an investment opportunity. And then the reason why we can do this and then the pension fund cannot do it directly; first of all, they don't have access to the deals, because there's a different deal sourcing environment, and the size of deals and the amount of deals is not really there yet and there's not that many bankable deals, and secondly it's our view, we have long experience in this market and we look at risk differently. We have access to the policies and so forth, so we can mitigate some of the risk there. So obviously, if you take one of our Dane?? pension plans, if they had to invest into this cable factory in Egypt, they will probably put a higher discount rate on the country risk than you or I will, because we see there's less risk, that this plan is being will be nationalized if we were the owner that if it were owned just by private capital. So, we might have a different discount rate that we apply when we enter a deal.

Interviewer 1: That's a very good point. Speaking of the risk, the Danish pension funds in the past have been very reluctant to invest in emerging markets and in what role in your opinion does perceived risk play in this context?

Interviewee: Of course, plays a huge amount of risk and also depends on your time horizon. We know that things take time and as long as you have the stamina to stay in, a lot of things will recover. As a pension fund you basically have to show margin to your investors. So, do you have the stamina and the long-term view of this, over time it will recover and level out. So sometimes we have to stay in for more than 10 years, but most pension funds don't have a 10-year time horizon when they are looking at things and they're basically looking at the forward curve on the Egyptian Pound right now. Okay, the Egypt pound maybe the forward curve, I guess it's like probably six or seven and then they apply that to the capital asset pricing model, whereas we know that maybe over time and history, probably it's less than that. Not that we're trying to outpace the market, because we just have an idea that that the capital market often puts a higher risk on some of these countries. You can see in India, the forward curve may have been around 7% for the last many years, whereas historically the inflation rate has only been about 3. So pretty much the capital market has overstated the expectation of inflation by a factor 2, but maybe the capital market could be right and maybe India will do a deviation of 30%, like they did in Chile in some years, and then the capital market was right. Of course, we do the same calculations as all commercial investors but then we are willing to accept less of a risk premium on top of that.

Interviewer 1: You touched upon the investment horizon of Danish pension funds, do you think incentive structures do also play a role in the way Danish pension funds look at impact investment opportunities and emerging markets? And do you think that maybe structuring the incentives around impact might change something in this in this context?

Interviewee: To be honest, I didn't know how they incentivize, so it's a bit difficult for me answer that question. But the whole thing about this is, with alternative assets, you need to be in a situation where you can do long term, even if it was private equity or venture or infrastructure or if it's investing in emerging market. You cannot do market to market every day, you need to have a 5- or 10-year horizon that you're looking at it. So, you need to make sure that you have an incentive system that will fix that. So, you don't want to do short term gains on the account of a lot of long-term benefits for the organization. But I don't know how they're incentivized. And we have tried to make an incentive program which it's linked to the impact that we're creating, but it's difficult and to be honest with you we haven't found it yet. The model that we had, we actually just recently shut down, because it didn't make sense.

Interviewer 1: I can see that it can be very difficult to structure incentives around impact. But do you think that there is going to be a development towards linking these impact measures to incentives?

Interviewee: Yeah, I'll be surprised if it didn't happen. Some of the STG investors in our fund, I would say their commitment to our fund is more or less CSR than it is a commercial investment. I do think some of them see this and think, okay we need to be in this space and hopefully we'll get okay returns. But I don't see them from a commercial point of view, I don't think they think it’s a space they need to be in yet, because it is too complicated. If you look at the infrastructure space like the wind park, now some of the big players I work with and infrastructure partners have started looking to Taiwan because that market has opened and now Vietnam. So, they do it market by market and they’re doing Brazil. So, they are getting into emerging markets but they’re doing it country by country and based on when the commercial playing field is ready for them. So, they're sitting and waiting for the regulation and the partnership agreements to be in place before they enter the markets. So, they're doing that country by country. And I think that's what's going to happen in some other industries and some other countries. The Commercial investors will go there directly when the market is ready and is relatively mainstream and you have liquidity and so forth and you have the regulations in place. And you have the implausibility in place, then the commercial players will go directly then maybe there be a list of organizations like ours.

Interviewer 1: Okay, thank you. You mentioned it earlier when you spoke about the different screening process, investment screening process of IFU compared to Danish pension funds, to which extent are you utilizing innovative financing structures such as blended finance, outcomes based funding impact bonds and how do you see whether this tailoring of products to a different investment is a key benefit for your fund?

Interviewee: We are using blended finance and with our impact investments we do have a sale or first loss facilities that we can deploy into the different cases. And I think that's something we'll see more of in the future as a way of attracting commercial investors, especially as an example we are looking into a development fund for war initiatives, where we have put money into the Development Fund, what this fund will do is to develop the projects and then it will be sold into a construction fund and in that construction fund, there you will have commercial investors. So, the high-risk part is in the development phase and then when it’s transferred into the construction fund, we can have a commercial investor in there.

Interviewer 1: So you see these different instruments you can apply for tailoring products to choose certain investment as a key benefit compared to Danish pension funds, which might be more restricted in terms of which products, financial products, they can use investments?

Interviewee: Our fund wouldn't do this because it's looking for commercial return. But our SDG fund could potentially say invest into that construction fund, because that's where you can have commercial money. But IFU as a DFI could put first loss money or brand money into the Development Fund. And then when the project is ready to be scaled up and go commercial, then it would need to be sold into the construction fund where you could have commercial funds in there. I don't think the pension funds will ever go into a Development Fund because it's too risky. The pension fund job is to take care of the of the money that they have been granted by the customers, it's not to take that kind of risk.

Interviewer 1: That brings me to another interesting point, the challenges of Danish pension funds related to impact investment maybe on a general level and emerging markets, but also in the in the African context. And yeah, I heard from a lot of Danish pension funds that investment opportunities are just too small and for them, it's too much effort to screen individual investments. How do you how do you see this?

Interviewee: I said before that in the market there's not enough big bankable projects on the continent. If you look into the stats, you can see the number of transactions above 100 million dolInterviewee are nowhere, there's not enough deals to be done. And then you need people on the ground, and you don't have a stock market that is going to bring real liquidity into it. So, the capital markets are not ready for institutional investors. And I will say, Danish pension funds shouldn't be doing, unlisted investments, because they cannot deal with them. You can see even in Denmark, every time Danish pension funds are going into direct investments, it's just a matter of time before it's going to explode. Because they don't have the resources internally to deal with direct investments. If you look at the food chain Danish pension funds will start investing into funds like IFU and then the next step would be to invest into private equity funds or venture funds in Africa. And then there'll hopefully be a further development in the listed market, and then they can start investing into that. But I think you need to look at the food chain, I think the food chain is going to be pretty much the same as its been in our lives. When I started off in 89, American pension funds gave us money to our fund, because they were not ready to do direct investments in the Nordics. And that's how it continues to be evolving. The same thing happens if you look at America not wanting to go into to Asia, that also started out following the same food chain.

Interviewer 1: Thank you. I have another question around the Danish pension funds, and you mentioned the SDG fund and also related to the motivation and commitment of Danish pension funds in this fund. How do you see the motivation and commitment of Danish pension funds related to impact investments? You mentioned that most many of them use it mostly for CSR purposes. But do you also think that they are more pressured from the customers to go into more sustainable investments?

Interviewee: Yeah, I do. But I will also be so frank as to say off the record that some of the Danish pension funds may probably all be hypocrites, because they don't want do heavy fuel based investments and oil based investments, and high mission investments in Africa, but they're still investing in oil companies in in western worlds. And that's why I think they are part of the game of imposing restrictions on the African continent, versus what we do in Europe. So I think a lot of them right now, they're doing it for CSR reasons just because they need to tell the politicians and their clients that they are engaging in development financing, like the same way it was if you go back five years ago, everybody had to say that we are investing into renewable energy. So now this is as you said in your document a bit like green washing, but now we also see poor country washing here right. But it's okay, it's going to happen, but I just think if we look at all of West Africa, their co2 emissions are less than Spain, and then we tell those countries that you are not allowed to use natural gas to create baseload. We only want you to invest into in Renewable Energy, I think, come on, is this really the way that we want to do development? In fact, the alternative is that they're going to build cheap energy generated by coal, using the bad technology coming from China, because they need to have based loads. So, there's lots of things that we need to see if we impose strict restrictions on what the poorest countries can do. We also need to see, are we controlling? Are we directing in the right direction? Or are we just putting them into the enemy of the dirty stuff? I don't know. And that's why I think Danish pension funds should be a bit careful on what they impose on the poorest countries compared to what they're doing themselves here, still investing into oil and gas companies and coal companies, generating power based on coal in Poland in Germany and in the US.

Interviewer 1: From your perspective for your personal experience related to the SDG fund, when you collaborate with the Danish pension funds, do you see that they mostly use it as marketing and ask you to report on the good impact? Or do you see that they are actually doing this because they want to be part of the journey in the SDG fund.

Interviewee: I think both of what you just said, and thirdly because they do want to learn, they're looking to us to see what we're doing, when it comes to reporting the impact and so forth. So, for them it is also like a learning journey. Same thing, some years ago, they were investing into infrastructure funds, but now they can do it directly. Now they're learning the game, and they're learning to assess the risk and then hopefully, in a few years, they can do this themselves. And that's our reason, hopefully we can be part of educating the institutional investors so they can go directly or at least invest directly into private equity funds and other funds in, say in Africa, instead of going through IFU as a government entity.

Interviewer 1: Perfect, thanks. That brings me to my last question, actually. You said, maybe in the future Danish pension funds will be able to make direct investments in Africa. As of now, what potential or what opportunities do you see for the Danish pension funds in the impact investment sphere, especially on the African context? And this is not only from the financial perspective, but also from an impact perspective. What opportunities do they have and what opportunities do they miss out if they don't engage in impact investment in these in these continents?

Interviewee: I say they miss out on the learning, if they don't engage right now, they miss out on the learning curve, right? Then the thing is, the size of the economies in the African continent is not going to make a difference on the balance sheet of the Danish pension funds to be honest. So, for me it’s more about the learning and the understanding of what it requires to do deals in Africa. The thing about Africa in general, there's more money available to be invested into Africa than there are deals. It's not lack money, it’s lack of deals.

Interviewer 1: Okay, And what do you think could change this lack of deals? Do you think it’s that projects are too risky to be approved? Or is it just a lack of projects or a lack of initiatives that are conducted in Africa?

Interviewee: First of all, it’s a lack of bankable project, who has the size where you can extract say, non-local money, right? You need to have companies that are big enough so you can actually go to the capital markets. If you have a blueberry farm of five hectares you cannot attract international money, you need to have a certain size of business to be able to attract international capital. The same goes for Denmark. If you have a grocery store, you cannot attract international capital, you need to have a chain of supermarkets before you can attract. So, it’s that chicken and egg dilemma before you can attract international capital. And the second thing is; the regulatory framework needs to be in place if you want to attract infrastructure partners into a large investment into renewable energy, you need to make sure that your PPA regime is in place that that you have a government entity who's willing and are paying for the electricity that is generated. So, the reasons why they’re looking into Vietnam and Taiwan now is because the PPA regime is in place, they can start getting a PPA 20 or 30-year PPA, so they can do them the math and calculate the return on invested capital. If you don't have the PPA regime in place, that's not going to happen. So, it comes back to the regulation, the regulatory requirements and that people are actually paying you what they're promising you. So, you need to have governments who are willing to do that and actually have the money to live up to those obligations. The problem in Africa right now is that maybe you have some governments who is willing to sign like they did in Kenya for this contract. But then you also have to make sure that your consumers can actually afford to buy electricity generated based on the PPA prices, right. And you have some countries in in Africa, where the population is too poor. They cannot afford to pay market-based prices for the electricity. Because the cost of generating electricity from a windmill is relatively the same globally. But if you do, if the income per capita is so much less than they can afford it, then it's not going to work. And then you see what they do, then the government start giving subsidies. And when they start getting subsidies, suddenly they start defaulting and you're back to square one.

Interviewer 1: Thank you. I think the regulatory framework in these countries I think it's a very interesting point. Do you see that maybe you touched upon the bankable deal sizes? Do you think that if there's a consolidation in the market happening or structures in place, which consolidate different smaller projects and give large institutional investors the opportunity to go into their structures and into to invest into their structures that would make it easier for large investment funds to actually go into these projects?

Interviewee: If you have the funds. You also have to look at the role of the development bank's you have African Development Bank and ours. I don't know if you have looked at those? Yeah, I think some of the things that need happen here is that you need to have some

Development Bank and also the World Bank, who can actually assess and give back to back guarantees to some of the governments if you really want something to happen. You need to create an infrastructure where people have trust, let’s say if one government default that they can go to the Development Bank and get covered, which is why the risk premium that they're putting on investing in these country are way too high. But it's a difficult game.

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Interviewer 1: It's a really great opportunity for us because of your knowledge on the field or in the field subject, and also your experience. It's a really, really good opportunity for us to have this interview with you. I think as we I have a lot to cover, I would suggest that we just jump right to it and start with our questions on impact investing. I think I sent you the questions in advance. And I would just start with a question about the challenges of impact investing in general because we've experienced in our interviews with a Danish pension funds that some of them are struggling with a universal definition and a clear understanding of impact investing. Some of them have different views on impact investing and on the definition itself. Maybe you could give us like a quick briefing of what are the most pressing challenges of this definition issue in impact investing.

Interviewee: Sure. I would say that the definition issue has, to be completely honest, mostly been decided. And so, it's more of an education issue now. The IFC Operating Principles for Impact Management seems to be the prevailing industry norm now. I think what we're going to see is in the coming months and years that the IFC principles, which are very similar to the UN PRI, become the overarching definition of what it means to be an impact investor. And it's, you know, it's specific enough that it talks about, how you should be finding deals, sourcing deals using them within your portfolio, that there's guidance similar to, you know, the UN PRI. So, I will be surprised if the kind of the definition piece of like "are you an impact investor or not is still an issue in the next year or two? I think we've started to get over that. I think it's, it's now an education issue of, you know, these pension funds and things like that being pointed to the principles and seeing some of their peers sign principles and report on them. So, you know, it'll take in every jurisdiction and in every asset class and every geography, whatever you want to say, you know, a leader doing that and reporting on it, and then you'll be able to point to. I think, for instance, I believe, that PTGM, I know they've done an audit with IMP and I believe they've signed the principles as well. So I don't know of any Danish ones that have signed, but I would look up and see if there's any Danish firms that have signed on to the principles.

Interviewer 1: And just a follow up question on the challenges in investment. Because simply from talking to the Danish funds, there's a lot of misconceptions around the nature of impact investing. From your experience, what are the prevailing misconceptions that impact investing is still facing?

Interviewee: I mean this is gonna be a really pivotal time kind of going forward post COVID or impact investing, I think that there's obviously going to be a strong realization that the world as we know, it doesn't exist anymore. And you know capital is going to be a huge part of how we rebuild societies and economies. And I think that, you know, best practices from impact investors are going to be really important as organizations that have never considered really seriously social environmental impact on how they've allocated capital. So, I think there's going to be a rush of interest, that we've never seen before. And one of the challenges that comes with that is the fact that, you know, impact measurement is still not completely standardized, as you both know. So I think there's going to be a lot of large institutions like pension funds, and obviously governments and sovereign wealth funds and others that are going to try to understand how they allocate capital in a way that's sustainable from an environmental and an economic perspective. And they're probably going to be quite frustrated that impact investors can't just hand them a perfectly you know, tabulated PowerPoint presentation that tells them exactly how to allocate capital, how you measure impact. So the thing, why definition around you know, how to be what is an impact investor may not be an issue, I think there is still going to be big challenges about what it means to be a best in class impact investor. And just being able to do measurements. I think where we are now is the ability to do measurement on a deal level is, is very, very good. Investors are realizing how to do that, whereas it's much more difficult to do it on a portfolio level. And then we're talking about pension funds, right from an LP perspective of doing fund of funds. So, so giving the deal level metrics, it makes sense. But rolling those up into portfolios, and then those up into funds of funds and up to asset holders is difficult. And so I think that's where for large institutions, figuring out how to do things that make sense that are substantive is going to be it's just difficult and that's going to take, you know, a lot of engagement. That's not necessarily what they're used to having to do.

Interviewer 1: Coming to green washing. What's your opinion on bigger, larger institutional investors just using it as a marketing gimmick, say okay, we engage in impact investing or we invest some proportion of our funds into another fund that is doing something related to impact. What's your opinion on that?

Interviewee: I'm not as worried as a lot of people are on greenwashing and impact washing. Yes, it's an issue. But I think that, you know, as we're getting more organizations to talk about these things, to report on them, to start looking at the data around correlation, I fundamentally believe, that it's been borne out right now. If you look at exchange traded funds that are sustainable ETFs and other types of portfolios that are sustainable, responsible, etc. They're performing better than other companies right now. And so I think that, you know, as long as people are collecting data, and they have a thesis, if they're dipping their toe in the water and they're suddenly realizing that, A) the data they're collecting that's external to financials, but it's not, it's actually really useful to them. And then they start to see correlations between the way in which companies treat their workers the products that they that they produce, the way they treat the environment, the type, the way they interact with communities. And they see companies that are outperforming on those regards are also outperforming financially or just performing the same financially but with more data, and then they'll start to make different decisions. So to be completely honest, I have less of a problem with it than a lot of people do. I would prefer the entire market be traded based of data that is not just financial and then people get to make their choices. Not everyone wants to go deep impact. But you know, being able to find information, because the largest institutional investors in the world, or at least asking for some of this information, I think is really important. So, you probably will speak to others that are feel very differently. But that's how I've always felt about it.

Interviewer 1: And coming to the pension funds again. They are large institutional investors and they have large amounts of capital to allocate. What do you think? Can Danish pension funds, or which role can Danish pension funds play in the impact investing industry in terms of market building or catalyzing other capital?

Interviewee: So, pension funds, you know, have a really, really strong role to play. They have long term assets, and they certainly have long term liabilities and they need long term assets. So pension funds historically, and as I'm sure you've seen with some of the research that you've done, have been able to as large asset holders to dictate to funds how they would like them to act and to report. So there's a UK pension fund that announced a few weeks ago that they would fire any of their fund managers that aren't going to start reporting on climate risk within the next three months. So, you know, pension funds have the ability to say “I need you to do this”. And so it can be in a relatively simple like climate risk. It can be things that are, you know, more complex, like looking at jobs and impact and gender and different types of impact sectors. But specifically, what they can do is require the funds and their managers to provide them with data around areas that a) they're interested in and b) that aligned to the Sustainable

Development Goals. So they can encourage those funds that are already provided data, but then they can also require reporting that's in line with, you know, what's being done elsewhere. So not, you know, I think one of the things that a lot asset holders want is they want very specific reporting only for them. And that obviously becomes cumbersome and is frustrating to underlying organizations. But pension funds have the ability to lose the market, because, you know, they are the largest holders of assets in the market. If they start asking for funds, and managers and consultants to report and to differentiate on investments based on impact or SDG metrics or climate metrics. And then they will start doing it and that helps the rest of the market and smaller asset holders that don't have that type of sway but would like to see those types of reporting.

Interviewer 1: That brings me to another interesting question. You mentioned the UK pension fund that is basically firing any fund manager who is not reporting on climate change. Danish pension funds have been kind of reluctant to invest in impact investments or more sustainable investments. In your opinion, what does it take to convince them to go away from "avoid harm strategy" towards more incorporating impact considerations into their investment decisions?

Interviewee: I wish I knew it. I would say that there's a few different things that I've seen that have been useful for the pension funds that I've worked with. So one is peer pressure. So you know, pension funds, obviously, are often I mean, almost always geographically specific. So Danish pension funds, very different to the South African pension fund to the UK to an American, right. But at the same time, as large asset holders, they have a lot of really similar characteristics. And so I think that, you know, what's happening is that in Europe, there's a distinctive movement, and particularly in Northern Europe, pension funds are recognizing kind of a) the role they play and b) the risk that they're bearing, particularly on the climate side. And I think that what's happening now, with COVID, will probably lay bare some of the other significant long term issues that are transnational. And so I think what, you know, pension funds need to start thinking about is, you know, for instance, you know, in Denmark inequality is not a huge issue. But the inequality of you know, neighboring countries, other parts of Europe is actually an issue. So how do you as an asset older, think about the ways in which you can reduce your risk by actively engaging on some of these topics? I think that one of the things that I found that works really well for pension funds is talking about it in a portfolio perspective, you're not going to take your entire how many ever hundreds or 10s of billions of dollar portfolio and put it all towards Deep Impact, right. So having a portfolio approach to thinking about things like impact sectors and different asset classes around diversification and resilience of portfolios, and thinking about those as opportunities, is how pension funds are able to then look across a big amount of capital and say we need to make sure that we have know, made our portfolio resilient to the fact that, you know, there might be a global health crisis again, there is rising inequality that changes how supply chains work that. And the nice thing about what's happening now is we're realizing there's more and more fund Managers, in fact, most now recognize that climate is a risk for their portfolio. And so leading them from climate to start thinking about gender thinking about slavery, thinking about health care access to. Those are going to be things that you can frame in the same way. So there's no, I think there's been a lot of consternation on the part of kind of impact investing advocates that pension funds don't automatically see some of these long term investments as good for their portfolios. But it's really about making the case for some of these individual theme areas and relating them to overall portfolios. So if you are invested in large corporates, which you're going to be because you're going to hold stocks, understanding how issues relate to their supply chains is something you need to think about in your portfolio, whether that's from a climate perspective, from a modern day slavery perspective, from a healthcare workers perspective. So I think that as institutions globally are asking you these questions, I think the other thing that's going to change is that pension funds are going to start seeing better presentations from fund managers and consultants. So these consultants, as they're starting to be asked to produce this type of information, as funds start to get better reporting, they're going to start seeing these events sometimes even when they don't ask for them. And that's also going to start changing their mind as they see top performing funds speaking about impact and speaking about how they are mitigating risks. So I think it's a combination of continuing to move along that risk mitigation angle, but also thinking about opportunities for diversification and resilience in their portfolios. And in some cases, probably will be a bit opportunistic as well as they see really good opportunities coming their way that have an impact.

Interviewer 1: And when talking about making impact investment present or the impact considerations present on a lower level on an employee level, for example, do you think structuring incentives around impact would be something that could work within the pension fund?

Interviewees: Yes, people need incentives. Right. So I actually just had a student to do a piece of work on essentially carry an impact carry. But that's obviously not at the pension fund level, it is at the fund manager level. Um, but I think that, you know, incentives need to be in place for financial as well as social. I think people respond to incentives. So, I think that, you know, whether those are government's saying to pension funds they need to do things or pension funds saying to their employees: Listen, you're going to be graded based off how well your funds perform, how highly they score on internal meter rating from a risk and an impact perspective. So, absolutely. I think that's going to be more difficult. I think that will come later. I think that some od this will, potentially some of these investments need to be made and portfolios need to be considered. But I think that as pension funds and other asset holders, you realize the opportunities here, they'll need to figure out a way to incentivize employees. And consultants, so internal employees and consultants and asset consultants to be able to bring them deals that make the most sense and funds and fund of funds as well as employees managing those deals.

Interviewer 1: When we focus on Sub Saharan Africa. I mean, a lot of days pension funds say, okay, Sub Saharan Africa or Africa in general was way too risky investments. We don't really have experience in the emerging markets. And we don't really do investments in Sub Saharan Africa. In your opinion, what role is the local knowledge, the understanding of the local context playa when you do investments in Sub Saharan Africa?

Interviewee: I mean that's a key, right? I mean you need local, you need local managers or managers that are very connected on the ground. So I don't think that I would impact or not, I wouldn't encourage anyone to do kind of deals without having managers that are extremely experienced in those local markets. So that's not an impact specific regard. So I think it's having there's a lot of diaspora that obviously live in London and other parts of Europe that manage funds, and there's a lot of good fund managers on the ground, but I would say it's a very risky strategy trying to invest in emerging markets in general, with fund managers that don't have extensive experience in those markets.

Interviewer 1: And linking to that perceived risk. Do you think a lot of Danish pension funds still struggle with the perceived risk of investing in emerging markets in Sub Saharan Africa?

Interviewee Absolutely. Yeah, absolutely. I mean, if you remember from class, you know, the difference between perceived and real risk is slight, right? I mean, it's hard to know when one crosses over really. But I think there's, you know, you have this double whammy of perceived risk from a geographic and a political perspective, as well as now on this impact side. And so it's about shifting it around to think about opportunities. Diversification is and continues to be important. I mean, it's the number one rule in finance. And, you know, in this post COVID world, it's only going to be stronger because you need to be diversified, to be able to continue to exist, because there's just you just don't know what's going to happen in the future. And, you know, geographic diversification is going to be important as well, there's going to be potential, you know, huge negatives going forward recessions all over the world, including emerging markets. But there's also going to be huge opportunities for private business to be able to, you know, meet the needs of a growing middle class in these countries. As opposed to shrinking middle classes sometimes elsewhere in the world. So, I think there's real risk, there's perceived risk, there's risk investing everywhere. But I do think that impact investing in Africa has a very scary ring to it from most European institutional investors. And I mean obviously from Americans as well. But just in our context when we're saying now, I do think absolutely.

Interviewer 1: And what is currently done to kind of like mitigate this perceived risk and some of the initiatives to attract maybe Danish pension funds or other fund managers or funds from European pension funds? Is there one of the best initiatives currently undertaken to attract this type of capital?

Interviewee: So there's a variety so there's guaranteed funds that are guaranteed by for instance, like the European Investment Bank, large institutional investors, and some of the multilateral institutions, even things like the WHO. And also others have funds that they have pooled to either guarantee or do first loss. And the idea is to try and combat some of this perceived and someone's real risk as funds come into the fold. The issue is, is that pension funds have such large wallets and so they can easily burn through even a 100 million dollar first loss facility may not be enough and that's very rare that you'd be able to find something that big. So, one of the issues around risk mitigation is the sheer size of the checks that need to be written. And this is something that, you know, it's just difficult to get around. So you might have foundations or even local governments that are willing to step up and guarantee or do off take agreements or do first loss facilities or have you know, current hedges. But when you're talking about the types of checks that pension funds need to write, it can get difficult. This is where diversification comes in again, investing in fund of funds with a proven track record that are able to spread out, do the due diligence on multiple different funds and are operating in different sectors and geographies, I think this is one of the smarter ways to mitigate risks. So you can, you know, have your risk mitigation in a single vehicle or your risk mitigation by diversifying. And for a lot of pension funds it would be you know, there'd be some in the individual vehicles but a lot around diversification and being able to invest in organizations that have track record and you know, really do you know, what they're doing on the continent, and that's sometimes the best risk mitigation that you can have.

Interviewer 1: You mentioned the size of the investments or the large amounts Danish pension fund have to allocate. In your opinion what would be most efficient way for them to channel the funds because they mostly say “Well, the investment opportunities in Sub Saharan Africa are basically just too small for us. They're not bankable deal sizes, or there's just more capital available than deals.” What would be a good way for them to channel their funds? You mentioned the funds of funds, but maybe other structures?

Interviewee: I think that, you know, you've got it in here. It's around the stuff we worked on together, right? It's going to take innovative financing. So it's going to be pooling of assets. It's going to be, you know, obviously, as you said, fund to funds make sense, but also working with other organizations. You know, the European Investment Bank, great partner for, you know, pension funds, thinking about large infrastructure projects. Think about this aggregation. How do you think about using FinTech to be able to distribute capital? I think that there's no easy answer. And the answer differs by asset class. So, you know, thinking about large investments, for instance, in affordable housing is very different than thinking about, you know, pooling large investments in early stage FinTech. But I think that it's about, you know, working with intermediaries and others that, you know, have an understanding, but it's also about really the first step before they even get to that stage is that discretion, funds need to tell their asset consultants that these are the types of deals and the types of things that they'd like to see. And then the asset consultants need to go out and they need to start, you know, developing some strategies around this. And that's a signaling thing. So, you know, once that signals out into the space, and then you know, that sets a whole other kind of set of work that begins where organizations that are thinking about pooling. And it's definitely a chicken in the egg kind of thing, right? So you need this pension funds to signal that they're willing to buy some of these things. And then you need to have the time to be able to put them together. And it's, it's not going to happen easily or quickly. But, you know, there's definitely a lot of interest. We're chairing a group of asset builders, globally, but mostly focused on Africa, and we're looking at the question how to actually build the types of opportunities, such as gender bonds, that allow pension funds and others, to start bringing these types of investments into their portfolios.

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Interviewer 1: But I just start out with a question related to local knowledge and local understanding. As I said, we've spoken to some of the Danish pension funds and they've been very reluctant to invest in emerging markets and they always stressing the large and huge risks related to investments in Sub Saharan Africa. In your opinion, what can local knowledge and clear understanding of the local context or how can local partnerships help them to overcome these kinds of perceived risks?

Interviewee: Well, the question is to some extent whether they are perceived, right? So your right. I mean, you've talked to a lot of Danish pension funds. So, you'll have had exactly the same conversations as I've had, right, where people are saying yes, but of course, our fiduciary duty and all of that we need relatively safe investments. And there's also plenty of impact investing opportunities or sustainable investing opportunities in Europe. So a lot of them define their sustainable investing as windmills in Europe, which is not a bad business case. It's still a good investment and it's still a sustainable investment, but it's not necessarily… You wouldn't have done that if the business case wouldn't have been that good. And then I think they are legitimate concerns around the whole governance elements of ESG. So the G in ESG, I think there is legitimate concerns around the actual risks. And it's just, that's not their investment appetite. So I think the mandate, first of all, is quite different. Now, a lot of them also take, then struggle a little bit with the active ownership part or the divesting parts. And some of the conversations we've had with them. It's like, Okay, great, well, but you're still investing in a lot of what we would say is relatively troublesome. And some of the arguments I've heard from the Danish pension funds more than in other European markets. So I was saying that so they don't really want to divest because they want to take a very active ownership role. Because otherwise, if they are not in some of the more troublesome investments, then the Chinese will just be in those investments. And then that's not a win for sustainability overall. So that's kind of how they were approaching a lot of their active ownership in their ESG. Which, I mean, you can have opinions about that. That's not necessarily my place. I also think a lot of the Danish pension funds and a lot of as well as the European pension funds and institutional investors, this whole sense that once you kind of start moving beyond green, you're moving into a very interesting space where then it becomes human rights and there's not necessarily global perception around human rights. So green is easier. So that's a super high level. I think there is this definitely a lack of products and a lot of these people can actually invest in because their mandate is so different and they need liquidity and they need scale. And there aren't that many products that's actually available for that type of investments. Would it help if they knew more? Of course, it would help if they knew more. And also if there was more partnerships with local financial institutions, and I don't think we really seen that to the extent that we could yet. There is a lot of South African financial institutions, for instance, said really reshaping how they think about risk and how they think about impact and how they think about sustainability and really trying to put impacts and especially intentionality and measurability into the investment frameworks. And we've been working with three of the four biggest banks in South Africa around those impact frameworks. And they're very, very keen on also co investment and have done climate finance funds with a lot of the big European investors. So I think there's definitely an opportunity. I also think we haven't seen, especially in the Danish space, some of the issues is also that it is still quite split between impact on traditional investment. So we definitely not as far as for instance, the Swedes, or the Dutch are in terms of how do you think about also blended finance. How do you make for instance, FMO which is a

Dutch DFI, how do you make them partner with the Dutch private sector and Dutch NGO sector to really create investment opportunities and to channel more institutional investors into, into sustainable investing and impact investing. And we haven't seen that to the same extent in the Danish sector, the NGO space is still very nascent, is still very development focused and only starting to kind of think about innovative finance impact investing products and how they can play a role there. The IFU, the Danish DFI had for a very long time that Danish mandate of investing with Danish companies, but they also and I hope I'm not offending them, I probably would be. No, I probably wouldn't be because I met with them in December and I think they also starting to kind of see that they don't necessarily take a heck of a lot of risk. So their mandate has been very big investments and not necessarily taking a lot of risk. And you can argue whether their capital is super catalytic? So, for instance, I've just gotten a 200 million Rand or 200 million kroner from the Danish government, which is great for investments into a least developed countries and smaller investments. But there's also not a leverage ratio. Right. There's not a criteria for how much additional private sector money they should potentially be raising on the back of that. And I think those are some of the conversations we need to start having, what are those right partnerships and who can actually be that pull effect for a lot of the Danish big financial institutions. Because it doesn't make any sense that the Danish sector is not more active also in these type of investments. Because a lot of the emerging market areas such as agriculture, green investments, water etc. It's all the things that we really, really good at. So it does not make any sense that the Danish capitals not out working more, and also not trying to kind of also create mutually beneficial partnerships and investment opportunities.

Interviewer 1: You've mentioned the public private partnerships and also the IFU, the Danish of DFI. We've spoken to them as well. And they are always stressing their Social Development Goals fund where they actually catalyze capital in collaboration with a Danish pension funds. But when we've spoken to the Danish pension funds then and asked them about the SDG fund and their motivation and commitment to the fund, we mostly have the perception that they use it somehow as a marketing gimmick. Is that the case?

Interviewee: Um, so I'll be honest, I don't know that much about the SDG fund. I also don't really know what it is invested in. And I should actually go and have a look at that. I think when you look at exactly as you said, when you speak to the Danish pension funds, there's very, very little appetite to actually invest in emerging markets and in Africa in particular. Kind of my key focus is probably a little bit more interested in Asia, but Africa just has so many challenges so that it becomes a little bit tricky. And so it's I think there's not a lot of interest. I think when you also speak to a lot of the big Danish banks for instance, they will also tell you that there is a very, very specific interest from their high net worth clients, for instance, to explore impact investing. But they're not keen on developing for instance, in Africa strategy, their solution to that is to potentially set up investments, excursions and present, pipeline, etc. that then high net worth clients can invest in directly, but that doesn't necessarily expose them to any risk. I think that some of the few Danish banks like Danske Bank also has a few impact investment funds that are managed in London just to have a few funds and offering. But in general, one of the key constraints I think, that we've seen in the Danish space is that it continues to be niche and marginalized, and it's not necessarily an integrated part of how they work, which is fair and not fair because I think Danish companies have a high governance standard compared to other countries. So I really think that of course, there is a rooted kind of vision and a mindset and a way of doing things that is proper and proper, like proper governance and all of that. But when you talk about intentionality and measurability, which are the key things and impact investing, and therefore also how do we actually contribute to a better to a better world and how do we invest in things that either if you're using the impact management project framework, either avoid harm or benefit communities or either contribute to new solutions? I think there is too little of that happening. Whether the SDG fund is a marketing gimmick, I don't know, but it certainly is convenient. Oh, I wanted to say just two things because I think there is one thing that's really cool that's happening in just one while I remember. One initiative is called MatterPension. And I think that's wonderful, right. And that's definitely something that's innovative also in a global context. So that's definitely quite ahead of the curve. And I think they I don't remember which pension fund they are partnering with, but it's definitely one of the big ones.

Interviewer 1: I think it was AP pension.

Interviewee: Yeah. And then I just wanted to mention as well that I don't know if you've spoken to “access to innovation?”

Interviewer 1: We actually didn't.

Interviewee: They are quite active in the investing for impact space. And just did a report which I'm actually not sure if it's out yet, but they've just mapped a lot of whether the capital that's committed to impact is also actually committed to impact and met that space. So I can just can if it would be interesting, I can just connect you to Martin who is been doing some of that work.

Interviewer 1: Once we've been speaking to the Danish pension funds, they also come up with a statement that they say, the size of the investment opportunities in the emerging markets, and especially in Sub Saharan Africa, basically too small and they are not bankable. And that's one reason why they haven't been investing in these markets. Do you think that impact investment or the investment landscape inside Saharan Africa is not ready to attract these large capital providers? Or are there other also some perceived issues for these foreign investors?

Interviewee: I think it's definitely a real thing. I definitely think that there is a complete lack of products in this space. And that's also something I mean, it's one of the main focus areas from impact investing in general right? How do we attract more mainstream capital? And how do we make sure that investors and the sector's broaden beyond your foundations and your DFIs, and you're kind of a private equity VC funds, and really start actually becoming a lot more mature by having product innovation. We've done some work around it. So if you're, if that's also part of what you're looking at, I can send you some ideas. Um, but so I think, first of all, I think it's a legitimate thing. I really do. I think there is a complete lack of awareness, investment strategies and products, etc, that people can adopt. There is a wonderful initiative that actually is still in motion but I think is in doubt whether it will actually launch called impact PLC, which is a listed fund of funds on the London Stock Exchange or the South African Jersey Johannesburg Stock Exchange. Where institutional investors and mainstream investors can invest in listed funds of funds that then invest in PE funds in emerging markets. So it's a way of kind of making those investments more liquid and attract more and more scale, of course, because it is a it's a real thing. And there's also a Rockefeller report that we worked with Rockefeller on, that came out about a year ago from the global steering group for impact investing, also trying to figure out how do you actually do more product innovation in this space? But having said that, I mean, you're also asking here what can Danish pension funds play in that impact investing industry? And I think there's definitely a role to both create and be a voice in creating those different products. I think there's a massive gap there for people's to leading this conversation. I think other institutional investors and pension funds in the rest of Europe that is doing product innovation that is more catalytic and that Danish pension funds could definitely follow on. There are other institutional investors in Europe and there capital is actually quite catalytic in this market building, so that I think pension funds could, could definitely play a greater role. I mean, we've also seen so that's the European ones just in South Africa alone. For instance, we've seen PIC, which is one of the biggest, biggest players on the conIntervieweeent. And they've just put 2 billion Rand fund of fund also in place where they invest in PE funds and VC funds that have a mandate for contributing to the

South African economy. So that's on what they've done for the PDP for that particular fund of funds. They've also created a framework for the rest of PIC, where all of their investment decisions are driven by how it contributes to sustainability and impact on the economy. And I doubt that Danish pension funds to the same degree, have that level of leadership. You've also seen for instance, PGGM in Holland doing a partnership with impact management project where they've also put out their whole portfolio on that framework so that they can so they can visualize to what extent they're really filling all of these different gaps from avoiding harm to benefiting communities and countries to then also contributing to new solutions. And I think, I think some of that leadership we haven't seen. So I think oh, some of those examples that I just mentioned, actually cover a lot of the points that you've got there because I think that really is what they could be doing. They could be promoting things like impact measurement, management project and some of the global standards to really be market leading in terms of a) How do you build intentionality into your portfolio and into your decision making and B) how do you then measure also, and demonstrate what the impact that you've been having is. A contribution to the manifestation of impact investing is a mainstream approach. Yes, I think they could also do that by leading or taking part in some of the product innovation that's happening, either by investing in it or just actually also by supporting it. And catalyzing private and public capital. Yes, I think that goes back to the partnerships we talked about before, which we're seeing in countries that we normally compare ourselves to, and that just hasn't really happened yet for some weird reason, and I think, I think it's because impact investing has just taken off more slowly in Denmark than it has in other countries and if I can be philosophical for just a second, I used to work in Holland and it is the most amazing ecosystem to work in, because there's so much focus on impact is such a diversified space. It's everything from pension funds to governments, to the DFIs, and NGOs, to intermediary organizations, all very focused on innovation, blended finance, everybody's super comfortable with all these concepts that we use all the time. But they also have a very international background, right, like from a colony perspective. And from like, a bigger population, a more mixed population, probably a little bit more in the kind of more landlocked more heart of Europe. But we're seeing the same leadership from Sweden for instance. And we're seeing the same thing from Norway and to some extent from Germany as well. And just none of these initiatives actually come out of Denmark. Now, four years ago, if you said impact investing, nobody really listened. Now at least people are listening, they understand the concept, and there is a lot more interest. Like there's a very, very significant interest, which is also why I'm actually quite excited about your research. And I think it comes out at a super relevant time. And it's great that it only focuses on Denmark. As I think it is time to shake things up a little bit. I also know that the Danish government, for instance, is quite keen on exploring guarantee products. Sweden, for instance, has been using a lot of their development aid budget or a lot of their government strategy to provide a substantial amount of guarantees for mainstream investors to invest in emerging markets. I think there's quite a lot of focus from the Danish government also to figure out how they can do that. So there's a lot of collaboration with the finance ministry, for instance, to see, okay, great: How does that translate into our exposure in this country, etc? And how do we do a lot more of those in partnership with potentially with Sweden. And that's also one of the partnerships that would be super beneficial to get more pension funds to really play. Because one can say what one wants to say and talk a lot about the role, but essentially, a lot of pension funds will primarily play if they know that their capital is also de-risked.

Interviewer 1: We've been talking a lot about the challenges in South Africa or in Sub Saharan Africa market. And you mentioned some of the initiatives that are actually taken at the moment. But from your perspective, what are some of the best opportunities for Danish pension funds to invest in impact investments in Sub Saharan Africa? Or what are they actually missing out on if they don't do impact investments in Sub Saharan Africa, from financial as well as from an impact perspective? Because when we've been speaking to the IFU, they were mentioning a lot that Danish pension funds are actually missing out on the learning side, because in the future, they have to do more investments in emerging markets and maybe also more impact investments. But if they don't participate now with partnerships and so on, they are not prepared when they have to do it.

Interviewee: So that's actually a really, really good point. I wouldn't have thought about that. That is a strong point and I think also because as I was saying before, I think the Danish pension funds are actually a little bit late to the party. So, there is quite a lot of learning that's already been happening that they haven't necessarily been part of. And we are definitely seeing it here. And that goes for a lot of mainstream finance players in Africa, but also the European counterparts that there is a very, very significant interest in figuring out how do we adopt the right measurement frameworks at this point in time? And how do we align the different taxonomies? So, for instance, the UN has a SDG investment taxonomy, the sustainable investment taxonomy. The EU has put in place their climate investment taxonomy, which is now also mandatory right for people to live up to. And some of the conversations that are happening now is how do we make sure that those actually align? And how do we make sure that people can start dabbling into a lot of these measurement strategies, both from both from a decision-making point of views or from an impact management point of view, but also from an impact measurement point of view. And, and that's not driven purely by altruism. Oh, because people want to play it's mainly driven by the fact that very shortly, I think there's a significant recognition that this is going to come from a top down level, both in Europe as we've seen through the EU, but also but also here. A lot of people talking about prescribed assets. I think a lot of people are now starting to say if you're a financial institution, and then you don't have SDGs in your impact reporting, then that's a massive risk for you because you will get quite lost once that train really leaves the station. I completely agree on the learning process. I think to some extent, also from a strategic point of view, I think there's a massive opportunity in emerging markets that we can't downplay. Now, I did speak to a financier friend of mine yesterday and he did say there's no money that will go into Africa over the next five or 10 years because also Europeans will be so busy fixing our own countries after the whole Corona crisis, right. So I don't know there could be two sides of this coin, but never mind if we stay to kind of conventional pre pre coded wisdom. I think there are very, very specific economic opportunities. I think they are so aligned to what we do well in Denmark that they miss out on those investment opportunities.

Interviewer 1: You've just mentioned it now that COVID I mean, it's probably not a big part of our research. But I mean, this crisis now basically shows all the flaws in some of the systems and all the flaws that we are currently dealing with the challenges around the world. Do you think that's gonna have an impact on how we gonna look at these challenges after the crisis?

Interviewee: So, I think there's two different ways of looking at it. And I'm unsure how it's gonna translate into the pension funds, but at least for financial institutions across the risk return spectrum, so everything from foundations to VC funds to institutional investors, etc, here, and definitely also overseas. I think there's an increased appreciation for impact and interconnectedness to some extent. What we're definitely seeing here is, and that's the kind of thing I'm not sure how, I think time will tell how much that will land in Europe. But we're definitely seeing here that a lot of the financial institutions and the DFIs, for instance, in South Africa are changing how they're thinking about risk. Also from a social unrest and inequality point of view. So I think people saw what happened in Chile and was quite surprised because Chile was a relatively stable country, and with a Gini coefficient that's lower or higher, depending on how you want to tweak that, than in South Africa is and I think there is in a lot of the African countries and a lot of the financial institutions in Africa kind of a realization that that means something and that you can't you have to take that into account in a risk matrix. You can't just take financial risk. You also have to look at the kind of country situation and say, Well, if we don't do anything so in South Africa, specifically, if we don't do anything about the township situation and the inequality situation, and the lack of access to basic health care, basic education, etc. What are the chances of then complete chaos in in a year? It's probably not significant, but it's definitely there. Right. And it's a little bit the same we've seen on the climate side in EU and also an increased realization that of course, the push on the boundaries and borders, etc, will be higher if Africa also continues to be poor. So I think we're back to the old story of kind of you need to, we can't just invest in New York, we have to invest everywhere from a security perspective. And whether or not that's going to change, so back to my previous point, I think we're definitely in our little sector, we definitely seeing us very, very significant interest in impact and COVID responses and SME finance and everybody kind of needs to do their own pod. Everybody needs to be responsible to society with back to doing things with purpose and with intentionality and, and purpose driven organizations and all of that. So I think, on one side, we've seen significant momentum there, which is great for the impact sector. But then the other hand, whether COVID will result in a lot of European financial institutions also having to focus on their own economies because all of the European economies are going to be poor too.

Interviewer 1: You've mentioned foundations. And that brings me to another interesting question. I mean, how can new and innovative financing structures like hybrid financial vehicles, different funds structures help Danish pension funds to actually enter the emerging markets and the impact investments in Sub Saharan Africa? From what we've seen, and from our interviews with the Danish pension funds, there's not a lot of initiatives from their side to actually collaborate in these vehicles. Yeah, how do you see that these financial, these new innovative financing structures can help them to enter the market?

Interviewee: I think there's a lot of activity happening in terms of some of the big international foundations like the Rockefeller Foundation really putting significant focus on mainstream investment and products. It is tricky because the pension funds will be, they'll have such a large criteria for what to invest in. There's a few different ways of looking at it. One can either look at it from a pipeline perspective, and there's a partnership angle there, where you go from foundations and the PE funds and the VC funds and the DFIs, etc. and you create a pipeline almost, that potentially the pension funds can one day be interested in. But the pension funds investment strategies are quite far removed from that. So, it's definitely something to be aware of. But I think the prominent opportunity comes in with the big international foundations that are really focused on creating an impact investment market. And that would be Fords and Rockefellers and all of all of those guys that are trying to also seed innovations like the one I've mentioned before, in fact PLC that listed fund of funds on stock exchanges, both in emerging markets and in London, for instance. And a lot of that work is funded by, for instance, the Rockefeller Foundation, and a lot of the seed funding for that comes from the Rockefeller Foundation and from other foundations. I think that's where some of the really interesting partnerships will happen. And I think increasingly, we have to actually be okay with the fact that both public and philanthropic and private money will operate together in those ways. And that we will be using public money to some extent to actually incentivize big private money to operate in these spaces.

Interviewer 1: That brings me to another question, you've used the word incentives. I mean, not only incentivizing Danish pension funds to actually go towards more impact investments and focusing on more sustainable investments. But do you think that incentive structures within the pension funds and structuring incentives around impact can actually then play a role to trigger it down to a to fund manager or Portfolio Manager level? Because we spoken to a lot of different people within the funds. Some of them were senior portfolio managers, some of them were focused on ESG and you get a very different perspective from these different people within the fund. Do you think that these incentive structures are needed and can help for Danish pension funds to actually then invest more in impact investment?

Interviewee: Yes, my short answer is Yes, I think so. I think there's always an interest in financial markets if you tie, if you actually tie both the incentive structures internally, but also the kind of external incentive structure to impact. I definitely think so. So first of all, of course, I think this is actually a client thing. There's a client movement in Europe and that's or customer movement in Europe that's a lot more focused on this. And we're seeing it here but I think in Europe, it's a lot more outspoken than in Denmark. I think it's also slowly starting to move. So it's definitely I mean, it's gonna sound lame, but there's an incentive to attract more customers and use it as a marketing strategy. And of course, it needs to be deeply into embedded. Yes, I think we've seen, I am actually not aware of any pension funds , but we've seen that with quite a few different impact investment funds across the conIntervieweent where both they've got an impact and a financial hurdle rate, but they also have compensation policies for employees that are targeted to the impact that's created. I think it's a super interesting thing to explore. I think the jury, to some extent is still out on its effectiveness. But it's definitely one of the key things in the industry at the moment how do you deeply embed impact in the traditional financial structures. The other thing which might be a little bit more out there. We've just launched a fund now which is a based fund of funds structure, which provides incentives to investment managers here. So they get a grant incentive on an outcomes based model. So after the fact, after they've created outcomes. And then they can use those outcomes, outcome payments for anything they like, right? They can use it to de risk future investments, they can use it for technical assistance, they can use it for business development, they can use it to lower the cost of capital, they can use it also to tie the cost of capital to, for instance, if say one of our investment fund managers sign a contract with an SME and say, you have to create 10 jobs in the green economy. Then let’s say that investment in that SME creates 30 jobs, then that can have a positive effect on the cost of capital, either whether it's equity or whether it's debt, obviously, the interest rates go down. We're seeing exactly the same mechanism with ING, a big Dutch bank and Philips. For instance, ING gave Philips a 1 billion euro loan, but they tied the cost of that loan to their sustainability rating. So for instance, if they save water, they save electricity, then it went down. And I think there's different ways that pension funds can really start playing around with some of these mechanisms and incentive structures at different levels.

Interviewer 1: From what we've seen is that incentive structures are closely linked to how we are able to measure impact. And a lot of the Danish pension funds, they mentioned that especially in emerging markets and in Sub Saharan Africa, there's basically a lack of data. And most some of these social purpose organizations, they don't create that data. They don't report a lot. Because for them, it doesn't make sense to report to some extent to actually spend time and effort on reporting on the impact. And yeah, these days pension funds they stress the fact that there's a lack of data. How do you see that?

Interviewee: We're kind of went back to the basic of the issue in the impact investing space, right. Ask any investor what's the biggest bottleneck to scale? And they'll say there's not enough VCs and ask all the entrepreneurs, what's the biggest bottleneck and they'll say there's not enough money. So is measurement an issue? Of course, it's an issue. It's an issue because it's really tricky to measure a lot of these Different things. I think we're still in very early days and figuring out what are the right frameworks, etc. I think the impact management project, for instance (…) So I think where we're at the moment with impact measurement is, I think a few years ago there was a kind of a hope that with the GIIN catalog and metrics that was easily accessible and free and open source and then a few years later, we would have investments and all new like as a standard almost where people would just mention a number and then they would attach a value to that. Yes, it is hard, right? So I think what the impact management project, for instance, is doing, which is a widely accepted framework and funded by all the big foundations and governments etc, they're really trying to be an anchor point in the industry. What they are doing is they're really trying to be more of a decision making framework so that your portfolio can kind of, you can have different strategies for different types or pools of capital. And then what you measure is not necessarily as metrics focused as the IRIS metrics were, so it becomes a little bit more strategic. So that's the one way of kind of going about it. The other way is, of course, it is tricky to have all these different metrics and figuring out how to standardize them and how to report and some people report in different ways. I think it's just a learning journey that we're all on. I don't think there's any way around it. But I think a lot of people at the moment just focusing on the kind of strategy side, and then the measurement becomes a little bit more practical in terms of what is and what's impossible to measure. And of course, it's very different. If you're looking at the green industry, it's super easy to measure. If you're looking at education, it's a lot trickier, right? So, it also depends where you play, and what your levels for standardization are. But I don't think it's necessarily, I mean, it's easy to say, we can't get the reporting. That's fine, but it's also a little bit of a cop-out .

9.2.4 Interview Coding

Category	Concepts
Impact Investing (Core Category)	Bankable investments Challenges Definition Demand Impact Due diligence Impact Measurement & Management Impact Reporting Incentives Structures Innovative Financing Structures Opportunities Product Offerings Risk Return Considerations
Sustainability	ESG measures (i.e. screenings, exclusions,…) General Trends SDG Goals
Traditional Investments	Portfolio Theory Risk Return Considerations
Emerging Markets	Challenges Opportunities Risk Return Considerations Role of Local Knowledge / Local Context Sub-Saharan Africa
Market Players	Cooperation with DFIs Other External Partners Pension Fund as Institutional Investors Public-Private Partnerships Regulatory Bodies

9.3 Survey

9.3.1 Survey Questions

Impact Investing - Pension Fund Customer Sentiment

Welcome to our survey regarding impact investing of Danish pension funds.

We are two master students at Copenhagen Business School and we are conducting this survey in the course of our thesis. This survey is anonymous and your personal data will be treated with utmost confidentiality. We are first asking you to provide some personal information before asking you to rate the statements below on a scale from strongly agree to strongly disagree. The statements follow a specific order and you will be guided through the survey by clicking 'OK' after answering each section. Completing the survey will only take approximately 5 minutes.

* 1. What's your gender?

- Male
- Female
- Prefer not to say
- Other (please specify)

* 2. Which category below includes your age?

- 17 or younger
- 18 - 20
- 21 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- 60 or older

* 3. What is your marital status?

- Married
- Widowed
- Divorced
- In a domestic partnership
- Single (never married)

* 4. Do you have children?

- Yes
- No

* 5. What is your highest level of education?

- Less than high school degree
- High school degree or equivalent
- Some college but no degree
- Bachelor's degree (e.g. BA, BS)
- Master's degree (e.g. MA, MS, MEd)
- Doctorate (e.g. PhD, EdD)

* 6. What is your current employment status?

- Employed full-time
- Employed part-time
- Unemployed (currently looking for work)
- Unemployed (not currently looking for work)
- Student
- Retired
- Self-employed
- Unable to work

* 7. How many years of employment do you have?

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 30
- 31 - 40
- 41 or more

* 8. What is your yearly household income?

- Below 75,000 DKK
- 75,001 - 375,000 DKK
- 375,001 - 750,000 DKK
- 750,001 - 1,125,000 DKK
- Over 1,125,000 DKK
- Prefer not to say

* 9. What is your nationality?

* 10. I am a member of one of the following pension funds:

- Pension Danmark
- PKA
- ATP
- PFA
- Other (please specify)
- Danica
- Sampension
- I don't know

Impact Investing - Pension Fund Customer Sentiment

* 11. I am familiar with the concept of sustainability

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

In 1987, the United Nations defined sustainability as: "meeting the needs of the present without compromising the ability of future generations to meet their own needs".

* 12. I am familiar with the United Nations 17 Sustainable Development Goals

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

According to the United Nations: "The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice. The 17 Goals are all interconnected, and in order to leave no one behind, it is important that we achieve them all by 2030".

* 13. I regularly apply the concept of sustainability in some aspects of my daily life

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 14. I care about the social and environmental issues worldwide

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 15. I believe developed countries have a responsibility to foster the social, environmental and economic development of emerging countries

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 16. I want the concept of sustainability to be reflected in the financial markets

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 17. I am mainly concerned about financial returns when deciding on my pension fund

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 18. I am concerned about how my pension fund invests my pension money with regards to social and environmental issues

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 19. I want my pension fund to invest my money in a way that supports the United Nations Sustainable Development Goals

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 20. I am familiar with the sustainable investment products offered by my pension fund

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 21. I am familiar with the concept of impact investing

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

Impact investments are defined as investments made into companies, organisations, and funds with the intention to generate social and environmental impact alongside a financial return.

In the contrast to sustainable investing which is integrating environmental, social and governance factors to enhance traditional financial analysis or socially responsible investing which is actively eliminating or selecting investments according to specific ethical guidelines, impact investing goes one step further. In impact investing, positive outcomes are of the utmost importance—meaning the investments need to have a positive impact on society or the environment in some way.

* 22. I want my pension fund to generate a positive social and environmental impact alongside a financial return

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 23. I want my pension fund to offer impact investment products

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 24. I want my pension fund to provide sufficient information on impact investment options

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 25. I would like to know where my pension fund is conducting impact investments

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

In emerging markets, especially in the Sub-Saharan African region, impact investment can have a significant impact on the lives of millions of people in one or more of the following impact investment themes:

- Access to housing
- Access to quality education
- Access to health
- Water, hygiene, and sanitation
- Renewable energy and clean technology
- Agriculture

* 26. I want my pension fund to conduct impact investing in emerging markets to create a measurable positive impact

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 27. I want my pension fund to make impact investments in the Sub-Saharan African region to create measurable positive outcomes

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 28. I want my pension fund to provide information regarding the positive outcomes achieved with my pension money

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

* 29. I want my pension fund to provide information on how these positive outcomes are measured

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

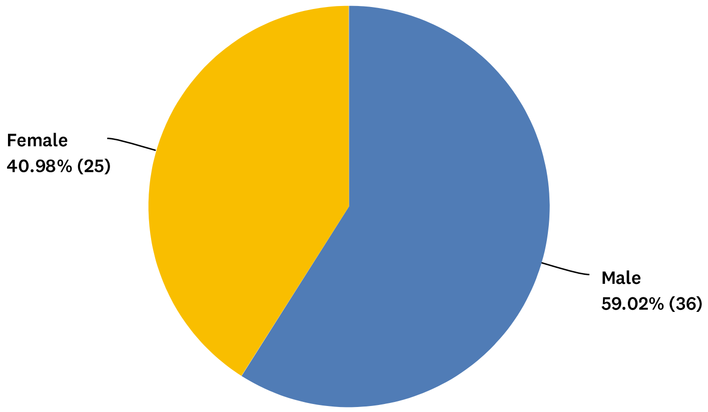
* 30. I am willing to accept a slightly below market rate of return in return for positive outcomes in the above impact themes

- Strongly agree
- Agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Disagree
- Strongly disagree

9.3.2 Survey Demographics

Q1 What's your gender?

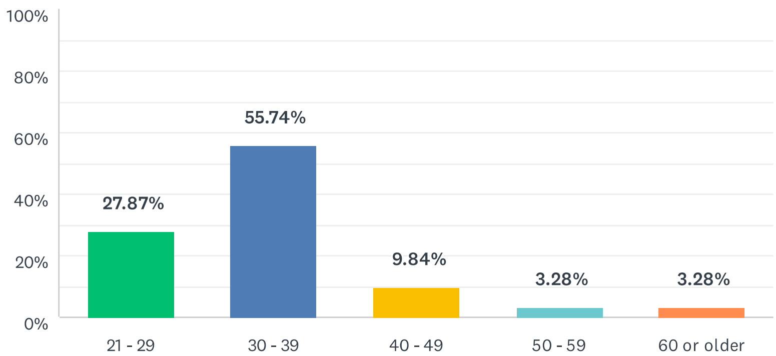
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Male	59.02%	36
Female	40.98%	25
TOTAL		61

Q2 Which category below includes your age?

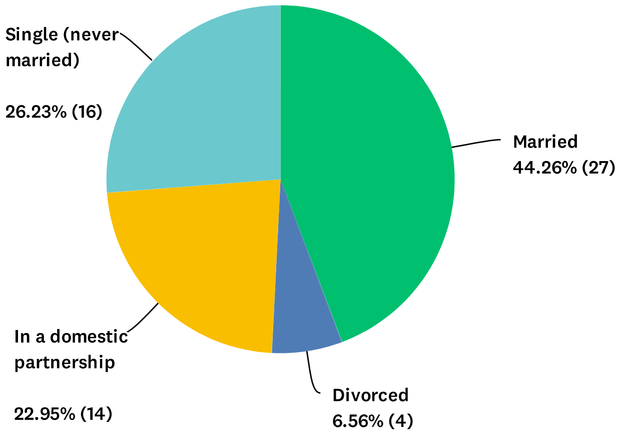
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
21 - 29	27.87%	17
30 - 39	55.74%	34
40 - 49	9.84%	6
50 - 59	3.28%	2
60 or older	3.28%	2
TOTAL		61

Q3 What is your marital status?

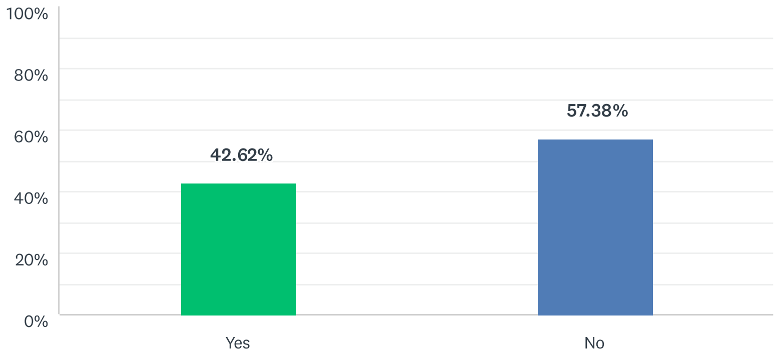
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Married	44.26%	27
Divorced	6.56%	4
In a domestic partnership	22.95%	14
Single (never married)	26.23%	16
TOTAL		61

Q4 Do you have children?

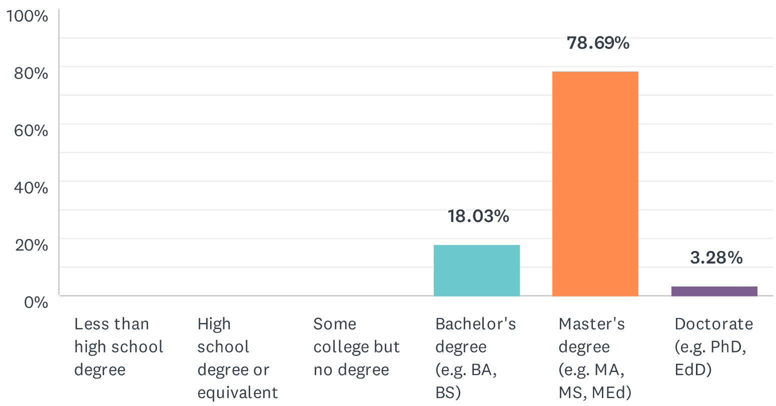
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	42.62%	26
No	57.38%	35
TOTAL		61

Q5 What is your highest level of education?

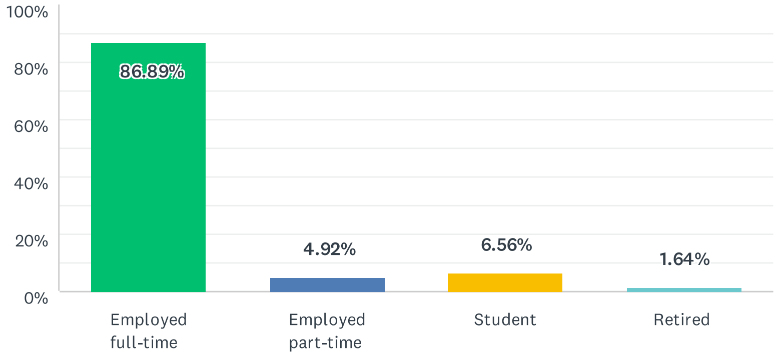
Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
Less than high school degree	0.00%	0
High school degree or equivalent	0.00%	0
Some college but no degree	0.00%	0
Bachelor's degree (e.g. BA, BS)	18.03%	11
Master's degree (e.g. MA, MS, MEd)	78.69%	48
Doctorate (e.g. PhD, EdD)	3.28%	2
TOTAL		61

Q6 What is your current employment status?

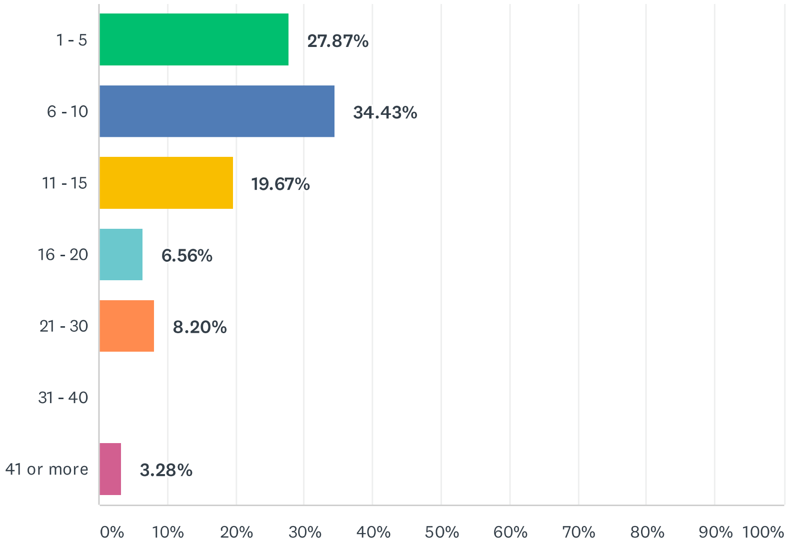
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Employed full-time	86.89%	53
Employed part-time	4.92%	3
Student	6.56%	4
Retired	1.64%	1
TOTAL		61

Q7 How many years of work experience do you have?

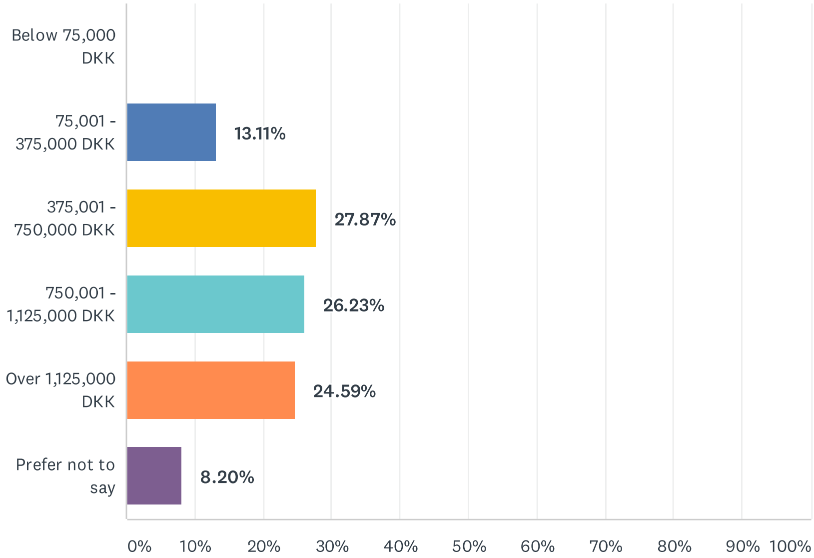
Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
1 - 5	27.87%	17
6 - 10	34.43%	21
11 - 15	19.67%	12
16 - 20	6.56%	4
21 - 30	8.20%	5
31 - 40	0.00%	0
41 or more	3.28%	2
TOTAL		61

Q8 What is your yearly household income?

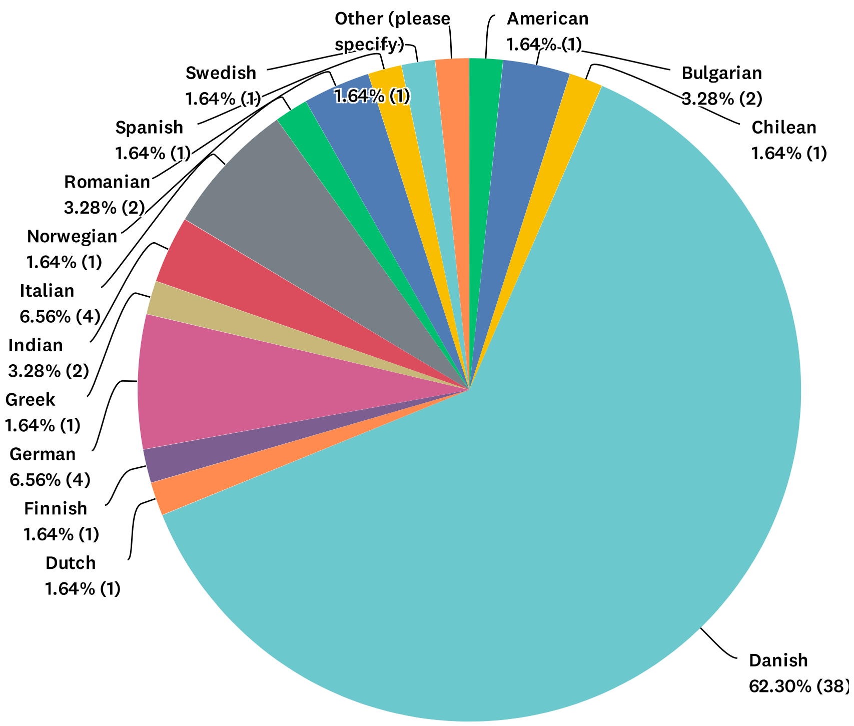
Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
Below 75,000 DKK	0.00%	0
75,001 - 375,000 DKK	13.11%	8
375,001 - 750,000 DKK	27.87%	17
750,001 - 1,125,000 DKK	26.23%	16
Over 1,125,000 DKK	24.59%	15
Prefer not to say	8.20%	5
TOTAL		61

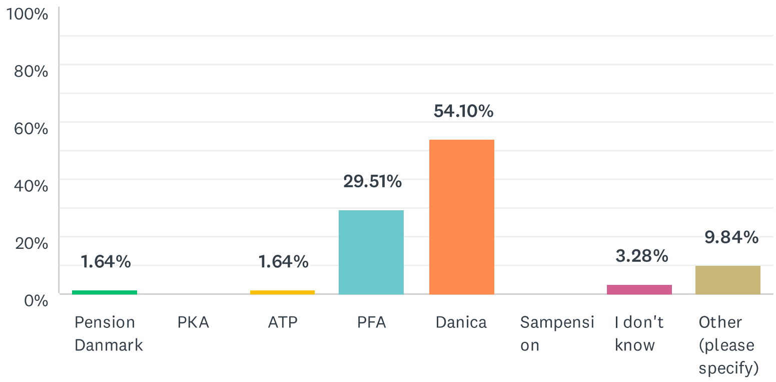
Q9 What is your nationality?

Answered: 61   Skipped: 0



Q10 I am a member of one of the following pension funds:

Answered: 61   Skipped: 0

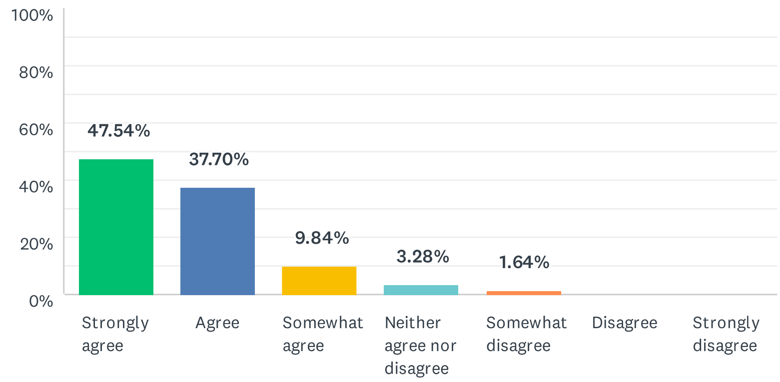


ANSWER CHOICES	RESPONSES	
Pension Danmark	1.64%	1
PKA	0.00%	0
ATP	1.64%	1
PFA	29.51%	18
Danica	54.10%	33
Sampension	0.00%	0
I don't know	3.28%	2
Other (please specify)	9.84%	6
TOTAL		61

9.3.3 Relevant Survey Results

Q16 I want the concept of sustainability to be reflected in the financial markets

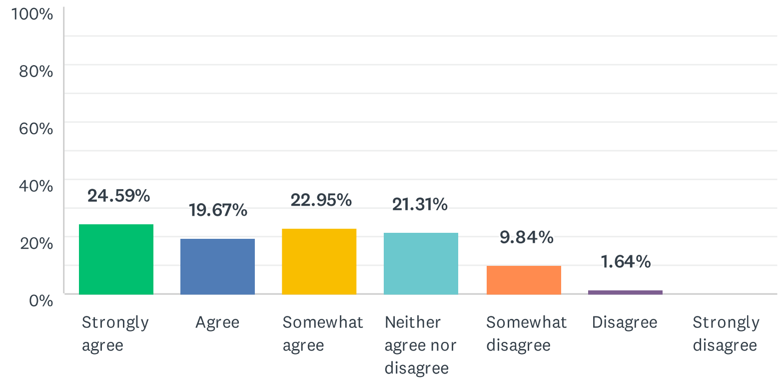
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	47.54%	29
Agree	37.70%	23
Somewhat agree	9.84%	6
Neither agree nor disagree	3.28%	2
Somewhat disagree	1.64%	1
Disagree	0.00%	0
Strongly disagree	0.00%	0
TOTAL		61

Q18 I am concerned about how my pension fund invests my pension savings with regards to social and environmental issues

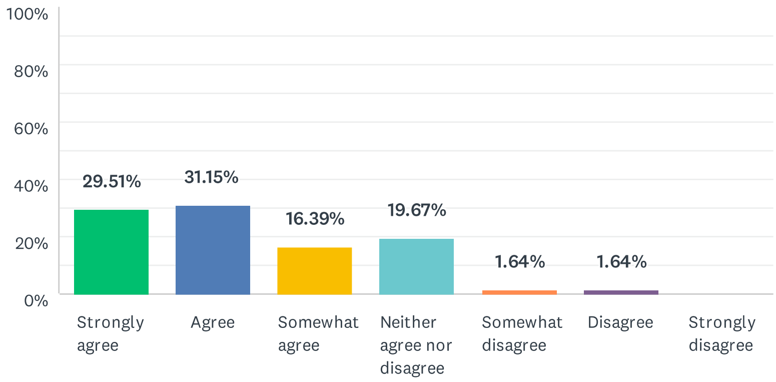
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	24.59%	15
Agree	19.67%	12
Somewhat agree	22.95%	14
Neither agree nor disagree	21.31%	13
Somewhat disagree	9.84%	6
Disagree	1.64%	1
Strongly disagree	0.00%	0
TOTAL		61

Q19 I want my pension fund to invest my savings in a way that supports the United Nations Sustainable Development Goals

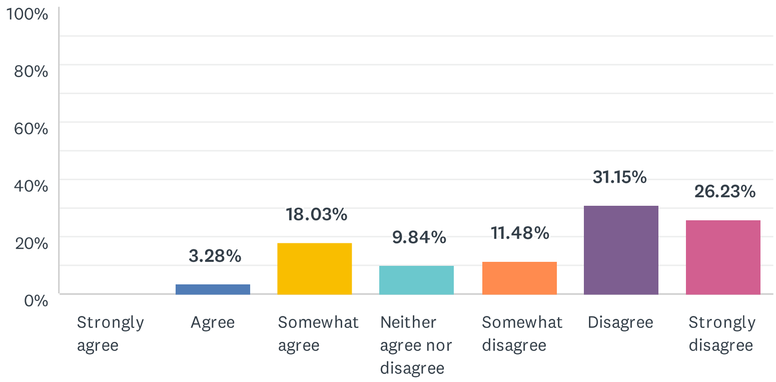
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	29.51%	18
Agree	31.15%	19
Somewhat agree	16.39%	10
Neither agree nor disagree	19.67%	12
Somewhat disagree	1.64%	1
Disagree	1.64%	1
Strongly disagree	0.00%	0
TOTAL		61

Q20 I am familiar with the sustainable investment products offered by my pension fund

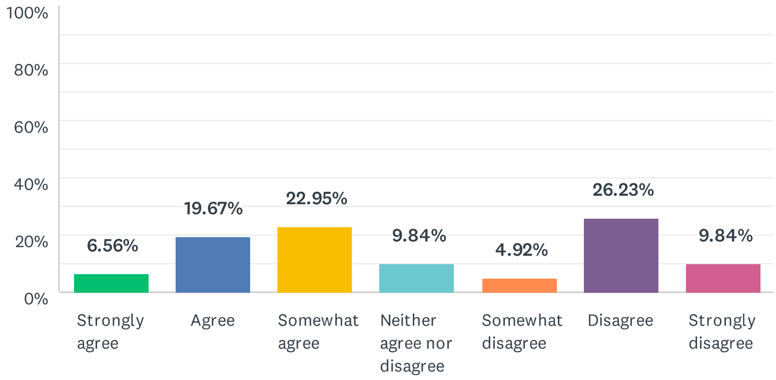
Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	0.00%	0
Agree	3.28%	2
Somewhat agree	18.03%	11
Neither agree nor disagree	9.84%	6
Somewhat disagree	11.48%	7
Disagree	31.15%	19
Strongly disagree	26.23%	16
TOTAL		61

Q21 I am familiar with the concept of impact investing

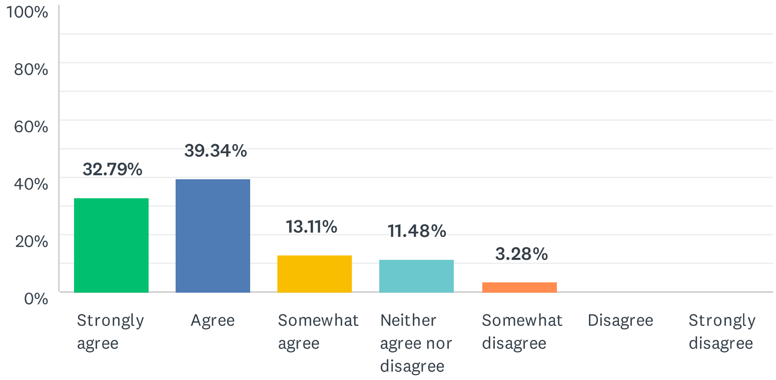
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	6.56%	4
Agree	19.67%	12
Somewhat agree	22.95%	14
Neither agree nor disagree	9.84%	6
Somewhat disagree	4.92%	3
Disagree	26.23%	16
Strongly disagree	9.84%	6
TOTAL		61

Q22 I want my pension fund to generate a positive social and environmental impact alongside a financial return

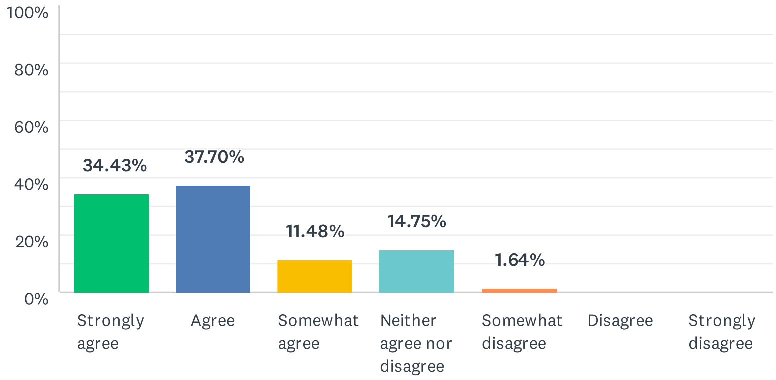
Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	32.79%	20
Agree	39.34%	24
Somewhat agree	13.11%	8
Neither agree nor disagree	11.48%	7
Somewhat disagree	3.28%	2
Disagree	0.00%	0
Strongly disagree	0.00%	0
TOTAL		61

Q23 I want my pension fund to offer impact investment products

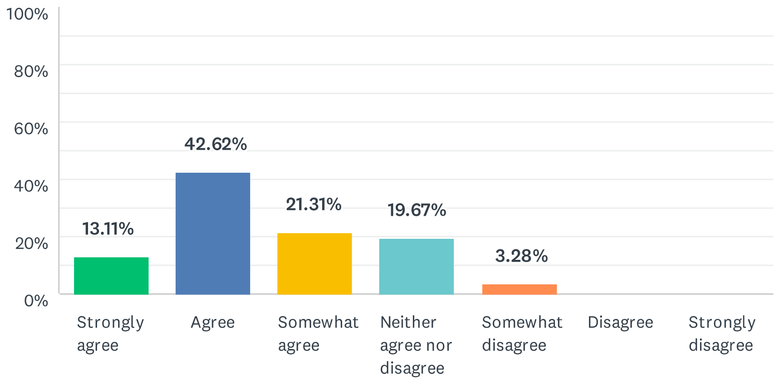
Answered: 61 Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	34.43%	21
Agree	37.70%	23
Somewhat agree	11.48%	7
Neither agree nor disagree	14.75%	9
Somewhat disagree	1.64%	1
Disagree	0.00%	0
Strongly disagree	0.00%	0
TOTAL		61

Q26 I want my pension fund to conduct impact investing in emerging markets to create a measurable positive impact

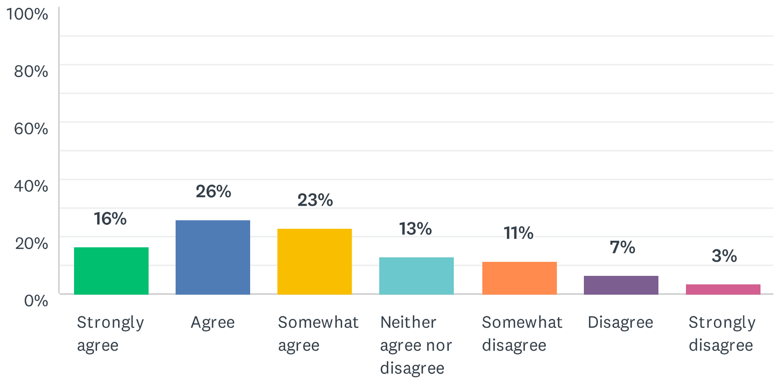
Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	13.11%	8
Agree	42.62%	26
Somewhat agree	21.31%	13
Neither agree nor disagree	19.67%	12
Somewhat disagree	3.28%	2
Disagree	0.00%	0
Strongly disagree	0.00%	0
TOTAL		61

Q30 I am willing to accept a slightly below market rate of return in return for positive outcomes in the above impact themes

Answered: 61   Skipped: 0



ANSWER CHOICES	RESPONSES	
Strongly agree	16%	10
Agree	26%	16
Somewhat agree	23%	14
Neither agree nor disagree	13%	8
Somewhat disagree	11%	7
Disagree	7%	4
Strongly disagree	3%	2
TOTAL		61