

IMPACT INVESTING REPORT

June 2021



ABOUT GRÜNDERATELIER

GründerAtelier helps young companies to scale, to fulfill their investment needs and to build strong relations. Beyond companies, we make fruitful connections. We support our clients across a broad range of objectives: our focus lies on one hand on Startups, on the other on Investors.

GA Impact Accelerator

We are proud to announce the launch of our new accelerator, fully focused on impact-related startups. Each batch of the program will take place over the course of three months and makes our team a part of your team.

Compared to other accelerators, in this program, you will receive an external task force consisting of experts in finance, designers, HR specialists, marketers and more to boost your startup's development. We are hands-on and only stop working when you do!

On top of that, you will have the chance to benefit from our capillary network of investors, potential customers as well as our Talent Pool for the growth of your team. We will only consider for the Impact Accelerator startups that have a legal structure, have a team working full-time in the project, are less than 4 years old, are in an inferior phase than Series A and especially startups that are solving a pressing problem for society.

To find out more about the program and how to apply, we invite you to visit our dedicated website page for the Impact Accelerator.

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ABOUT MAIN INCUBATOR

main incubator is the early-stage investor and research and development unit of Commerzbank Group. We are responsible of building an ecosystem around the digital & sustainable transformation.

Thereby, we use the means of strategic investments (venture capital), prototyping (R&D) and community development to actively shape the future of our planet and society.

As one of the most active Corporate Venture Capital arms in the world we back young tech-driven startups and make their solutions accessible to Commerzbank and its customers. With a cooperation rate of 60% we have achieved to provide our portfolio with extraordinary growth opportunities.

As of 2020 we have broadened our investment focus on Greentech innovations to enable founders that aim to create a positive impact on our environment. Moreover, we have launched the IMPACT FESTIVAL 21 (16. -17.09.21, Frankfurt am Main) to bring together green startups, corporates & investors to accelerate the sustainable transformation.

In 2021 we are launching a dedicated programme for Corporates that are interested in engaging into Corporate Venture Capital.

Stages: Seed & Series A
Investment range: 250k – 2M
Region: Europe
Portfolio: 22 active investments
Exits: 3

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Keywords:

Impact investing, ESG, SRI, sustainability, acceleration, startups, global trend, Europe, case studies

ACRONYMS AND ABBREVIATIONS

Acronyms & Abbreviations	Definition
AUM	Assets Under Management
DM	Developed Markets
EM	Emerging Markets
ESG	Environmental, Social and Governance
ETF	Exchange-Traded Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIIN	Global Impact Investing Network
HNWI	High Net Worth Individuals
IA	Investment Advisor
IMM	Impact Measurement and Management
IRIS	Impact Reporting and Investment Standard
NPO	Non-profit Organization
SDG	Sustainable Development Goals
SME	Small Medium Enterprises
SVCF	Social Venture Capital Fund
SRI	Social and Responsible Investing
TEU	Twenty-foot Equivalent Unit
VC	Venture Capitalist / Venture Capital

1. INTRODUCTION

Impact investing has been a rising topic over the past decade as society notices that the economy needs to focus on social metrics as well as financial ones. The Global Impact Investing Network (GIIN) defines impact investing as “investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return”¹. Impact investing has disrupted the classical doctrine which defines investment success only by its financial metrics over the project life and has begun to attribute value to social and environmental factors.

Impact investing possesses numerous features that need to be highlighted in the first place. Impact investing is intentional; the main idea behind this alternative investment is the desire to contribute, in a measurable manner, to the betterment of the environment or society. Moreover, financial return achieved over these investments can range from below-market to market-rate, however, investors are willing to receive these results given the positive return that these investments will generate for society. The nature of the investment is not sector-specific but agnostic, with a greater focus on segments that might lead to positive externalities. The intrinsically most relevant feature is the ability to create a measurable impact. Impact investors deploy capital over projects that are not supported by the public markets

such as schools construction, community development, poverty alleviation with an additional focus on investment management of the investees. As the impact investing market reaches \$715 Billion², it is essential to discern it from other concepts such as ESG investing, social and responsible investing (SRI), sustainable investing and philanthropy.

1.1 ESG Investing

Given the large volume of terminology and literature about new-economy investment trends, there might be confusion in the market when it comes to associating the investment methodology and its concept. ESG investing is one of the most mainstream concepts in the market at the moment, regardless of it being understood partially.

Environmental, Social and Governance (ESG) investing has risen quickly and in 2020 the number of portfolios integrating ESG metrics and assessment procedures exceeded \$17 trillion³.

While impact investing is an investment strategy that targets organizations, enterprises or startups to generate financial and non-financial returns, ESG investing is a framework that is used when deciding to invest in established companies in order to assess these companies' environmental, social, governance practices and risks. Therefore, impact investing is the type of investment that an institutional or private investor is targeting while ESG factors are part of an investment process.

1.2 Social & Responsible investing (SRI)

An assumption that has always been considered in classical economics is that firms need to provide shareholders with profit maximization strategies in order to generate the highest possible return. Over the last years, we have witnessed a shift from this financially focused view to a different scope based on profit optimization.

“Sometimes, equity holders may have interests besides simply maximising their wealth when they make their investment decisions [...] they may want the firms they invest in to pursue so-

cially responsible activities”⁴. Public investors are updating their investment strategy to include SRI in their due diligence. SRI encompasses not only ESG investing but accounts also for ethical and religious considerations over the investment screening process.

Through SRI, retail and institutional investors perform their due diligence with renewed interest on topics that up to a few decades ago were marginal or non-existing in the investment process. SRI is mainly adopted on public targets and focuses on performing investments on targets that are not in conflict with the fund or management values.

Sustainable Investing

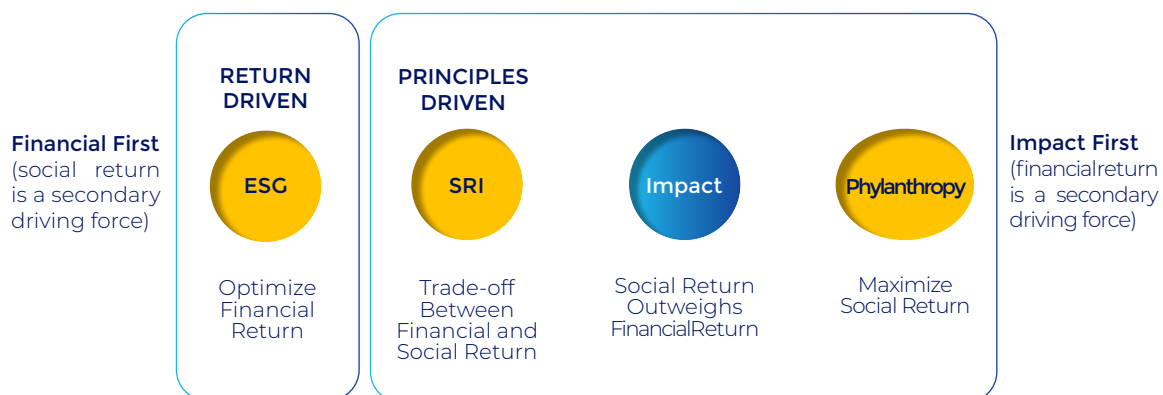


Figure 1. Sustainable Investing Breakdown

1.3 Philanthropy

Nowadays more than in any other period in history, entrepreneurs of any country and culture are trying to solve critical factors that have been left affecting our world: poverty, education, hunger, war among others. Regardless of the efforts spent so far, one of the major constraints remains capital ac-

cess. Foundations, associations and other philanthropic organizations can close this gap and provide catalytic capital to trigger new projects and waves of innovation that might lead to the solutions sought.

Philanthropy is needed to cover those gaps left untapped by the market due to non-attractive market poten-

tial, non-efficient risk-return profiles, regulatory uncertainty and lack of exit opportunities⁵.

Investments are developed and performed at different levels in society, from capital allocation into a single company to city-wide projects for the

betterment of services and quality of life. Philanthropy should be considered as a complementary strategy to the existing ones and looked at as a way to strategically allocate capital in those areas where the public wouldn't reach it.

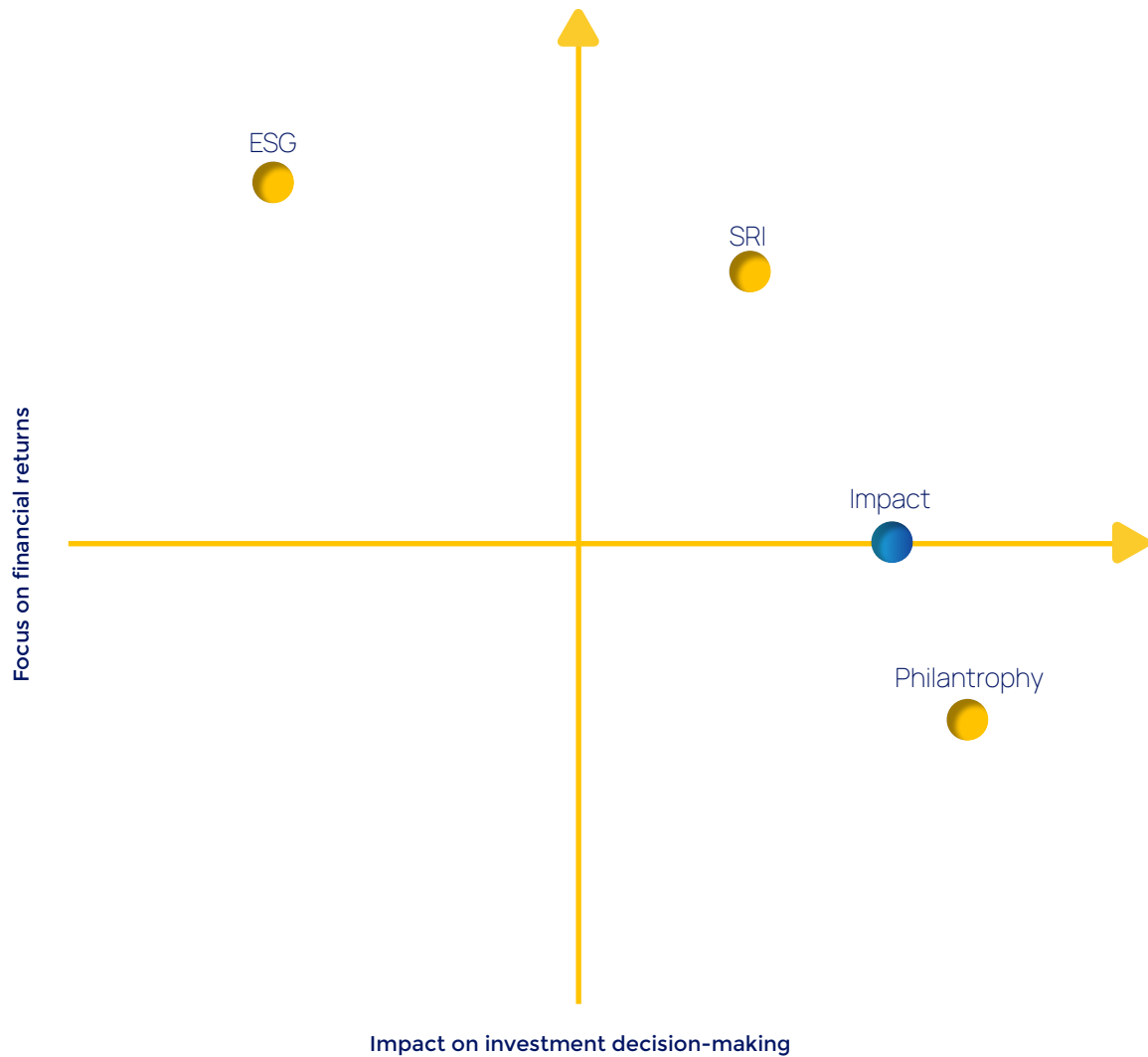


Figure 2. Impact Investing Return-to-Impact Overview

2. DIVISION BY SECTOR

According to a survey generated by the GIIN over 1600 impact investing organizations were invited to participate and feedback was gathered from 294 of them. Respondents were classified as follow:

Number of Participants

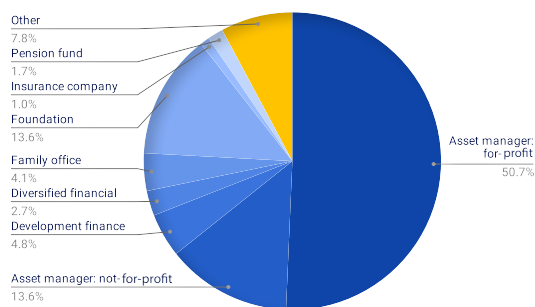


Figure 3. Classification of the respondents of the GIIN Survey (Source: GIIN, 2020)

These respondents provide valuable information about the sectors' diversification into the impact investing branch and the resource allocation process that takes place within this

industry. Excluding outliers, 55% of impact investments are directed towards developed markets while the remaining 45% focuses on the emerging ones with sub-Saharan Africa attracting the most assets (21%).

Interesting is also the repartition between debt and equity investment classes, which showcase 3 main investment vehicles. Excluding outliers, private debt was used by 37% of respondents, publicly-traded debt by 24% and private equity by 16%.

Concerning sector allocation of their investments, we can notice a concentration (excluding outliers) into the Energy sector (16% of AUM), followed by financial services (12% of AUM) and Food & Agriculture (9% of AUM).

Even though only third in size, Food and Agriculture is the most popular sector among the respondents with 57% of them allocating some resources on that followed closely by the Healthcare sector.⁶

Percentage of AUM and Percentage of Respondents

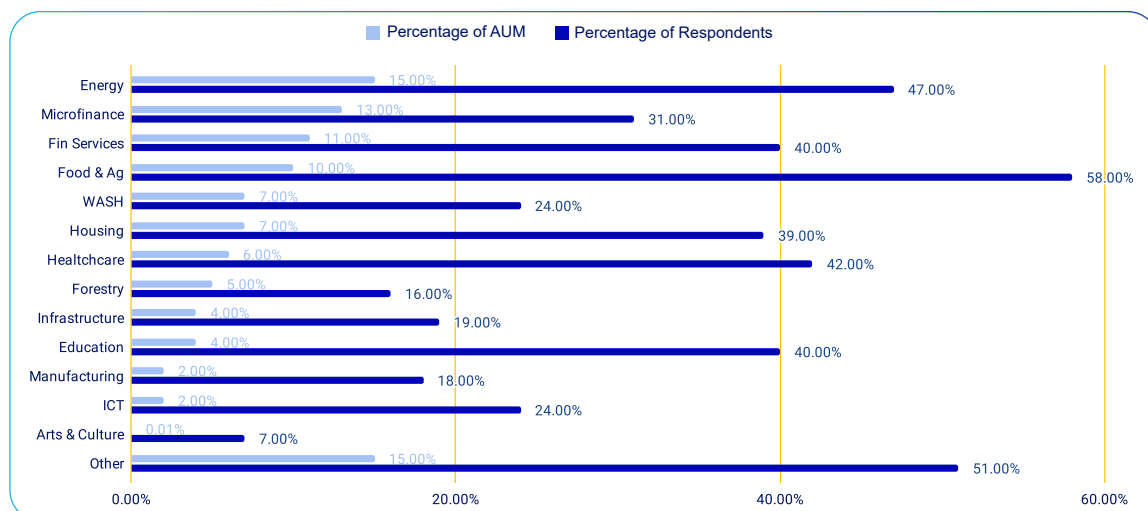


Figure 4. Sector Allocations by AUM and Number of Respondents (Source: GIIN, 2020)

3. IMPACT INVESTING: MARKET

3.1 Market Sizing

In terms of sizing, impact investing is a market where the global need exceeds the invested funds. In fact, the capital need for this type of investment is estimated at \$2.1 Trillion⁷.

According to the GIIN the size of the global impact-investing market, defined as the assets devoted to investing to achieve positive social and environmental impact as well as a financial return, stood at \$715 Billion in April 2020⁸.

We can clearly note a 42.2% increase between the global Market size in 2019, which stood at \$502 Billion, and its most recent estimate in 2020.

The research⁹ also showed that there were 1340 organizations involved in Impact Investing as of early 2019, a testament to the growing interest in this type of investment especially for asset managers as demonstrated by the pie chart below.

3.2 Segmentation

We also observe thanks to research conducted by the GIIN in 2018 that Impact Investors in majority are based in developed markets, including the U.S. and Canada (58%) and Western, Northern & Southern Europe (21%), the rest is distributed between the following regions: Sub-Saharan Africa, Latin America & the Caribbean, the Asia-Pacific, and the Middle East & North Africa.

Impact Investors by organization type

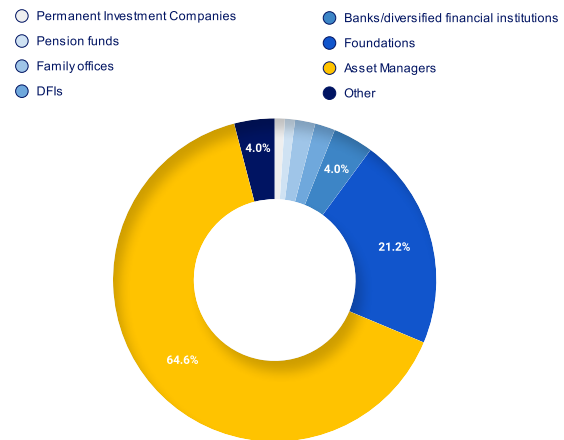


Figure 5. Impact investors by organization type (Source: GIIN, 2020)

Out of the 294 questioned investors, during a GIIN 2020 survey, 88% of them reported meeting or exceeding their financial expectations. The interviewees had a total of \$404 Billion of managed assets in impact investing assets.

As for the generated performance, 99% of respondents noted that they have met or exceeded their expectations since inception, in fact for the aggregated AUM of the respondents who participated in both the 2016 and 2019 survey, an 88% increase in their assets returns was noted: the AUM returned \$98 Billion in 2019 compared to \$52 Billion in 2016.

3.3 AUM distribution

As highlighted by the chart hereunder, AUM distribution for impact investing slightly differs from the distribution of investor by investor type.

According to the 2020 GIIN report, the three most active/engaged types of investors are Asset managers, Development Finance Institutions and

Banks & Diversified Financial Institutions holding more than 80% of the \$715 billion allocated to impact investing¹⁰.

AUM by organization type

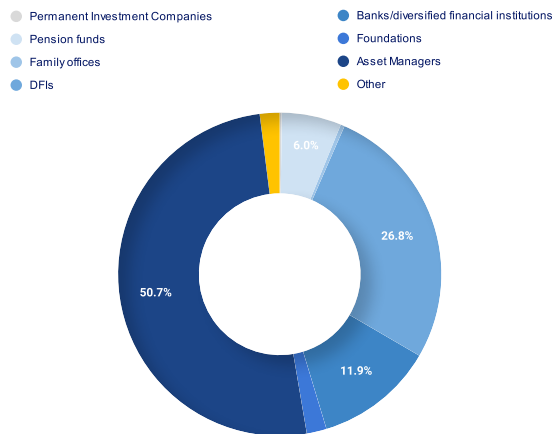


Figure 6. AUM by Organization Type
(Source: GIIN, 2020)

Geographical distribution of Impact Investors

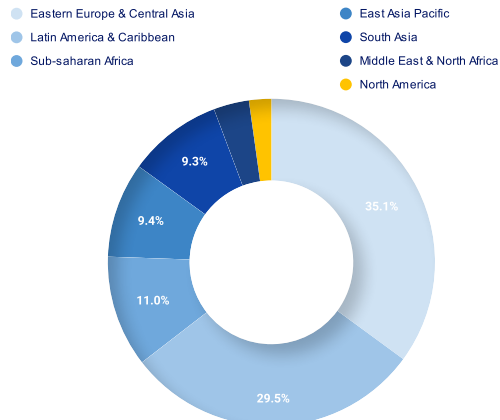


Figure 7. Geographical distribution of Impact Investors
(Source: GIIN, 2020)

Respondents to the late 2019 survey reported \$404 Billion in impact investing assets under management during Q4 of 2019. The average AUM for the interviewees stood at \$1.4 Billion¹¹. As for the median, 50% of the respondents reported over \$89 Million Average and median AUM differ significantly because several respon-

dents manage especially large amounts of impact investing capital. In fact, the three largest respondents accounted for 45% of this full sample's AUM.

Impact investors allocate capital across all regions. We can note according to the GIIN 2020 report that 55% of assets managed by survey respondents (outlier respondents not considered) are allocated to developed markets, and 40% are allocated to emerging markets for a total of \$88 Billion.

It has been observed that 45% of respondents have most of their capital invested in the US and Canada accounting for \$66 Billion of interviewees' AUM. North America is followed by Western Europe as the second most prized impact investing target with \$33 billion out of \$221 Billion in respondents' AUM. Then Latin America & Caribbean and Sub-Saharan Africa come as third and fourth in terms of invested funds with respectively \$26 Billion and \$24 Billion.

However, it is worth noting that if outlier respondents are considered in this section of the survey, we can note that the majority of the capital is allocated to emerging markets (59%), with the first region in numbers of investments being Sub-Saharan Africa with 21% of AUM.

Upon further analysis, we also note that North America and SSA are the most common regions of investment, with 47% of respondents having at least some allocation to the U.S. & Canada and 43% having some allocation to Sub-Saharan Africa. In addition, more than 30% of interviewed investors have some allocation to Latin America & Caribbean, and over a quarter allocated to South Asia or South-East Asia.

Asset allocations by geography of Investment

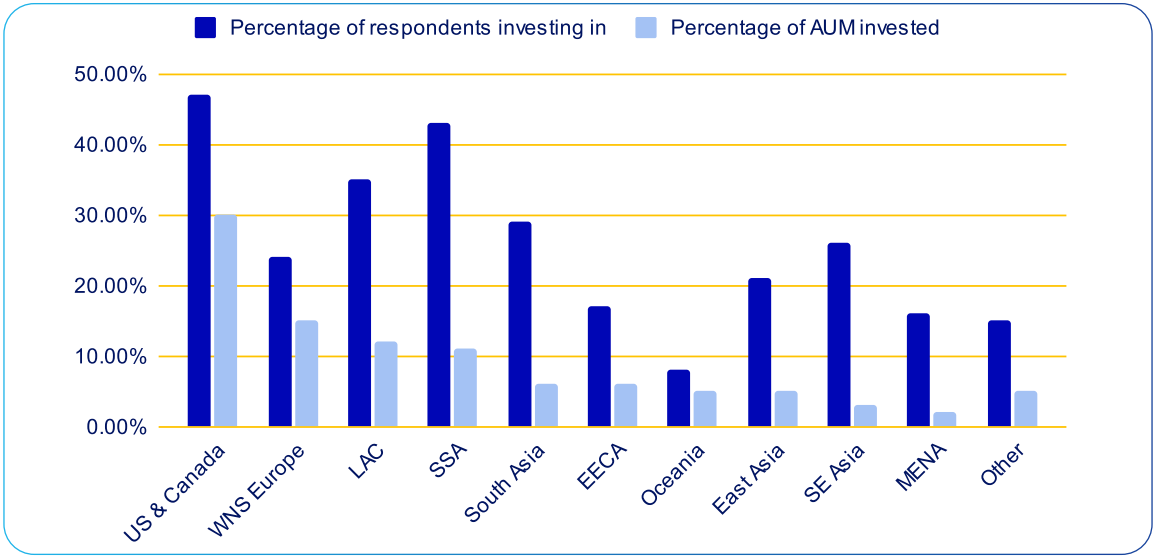


Figure 8. Asset allocation by geography of investment (Source: GIIN, 2020)

Another interesting way to analyze the AUM distribution is to divide the funds by asset in order to determine what are the most frequently opted for type of assets to finance impact investments. Private debt^[12] is currently the most utilized asset class with 21% of all AUM, as Development Finance Institutions and private debt

funds are at the forefront of impact investing. In fact, Private debt accounts for 10%-15% of total assets under management (AUM) in the private market and even though the number of private debt decreased over the last nine years, social and economic vulnerabilities could boost impact investing in the next few years.

AUM invested by Asset Class

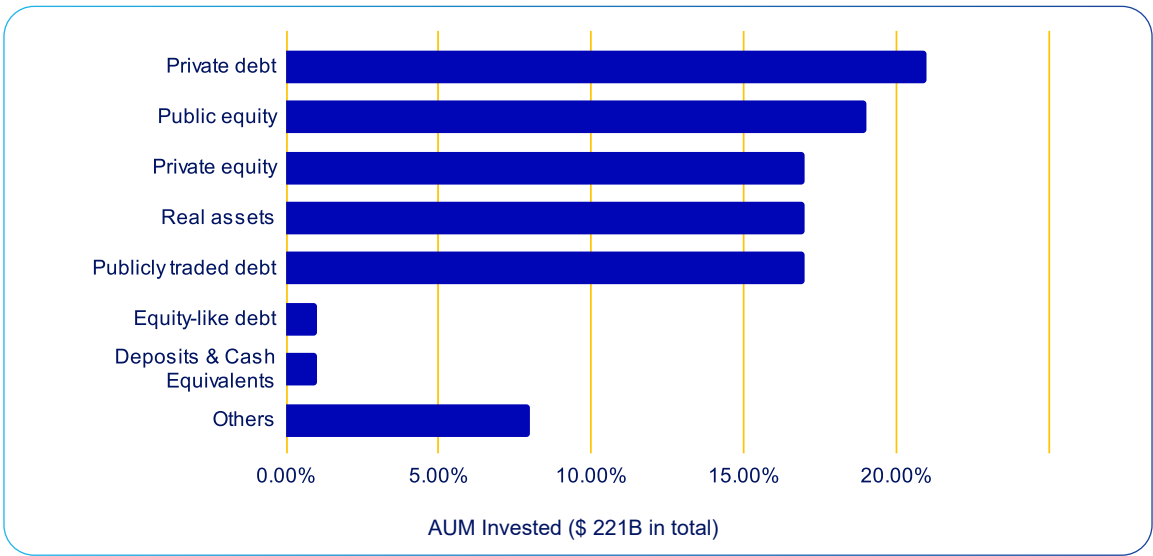


Figure 9. AUM invested by asset class (Source: GIIN, 2020)

Finally, the last distribution filter through which we can examine impact investing is the investment sector. We can immediately note the correlation between Energy being the most heavily invested sector and the prevalence of private debt in the allocation of AUM by asset class.

The reason behind this is that Infrastructure debt has a repayment period of 30+ years, because of the extended useful life of the assets, that fits perfectly for infrastructure development and investment in existing assets.

AUM allocation by investment sector

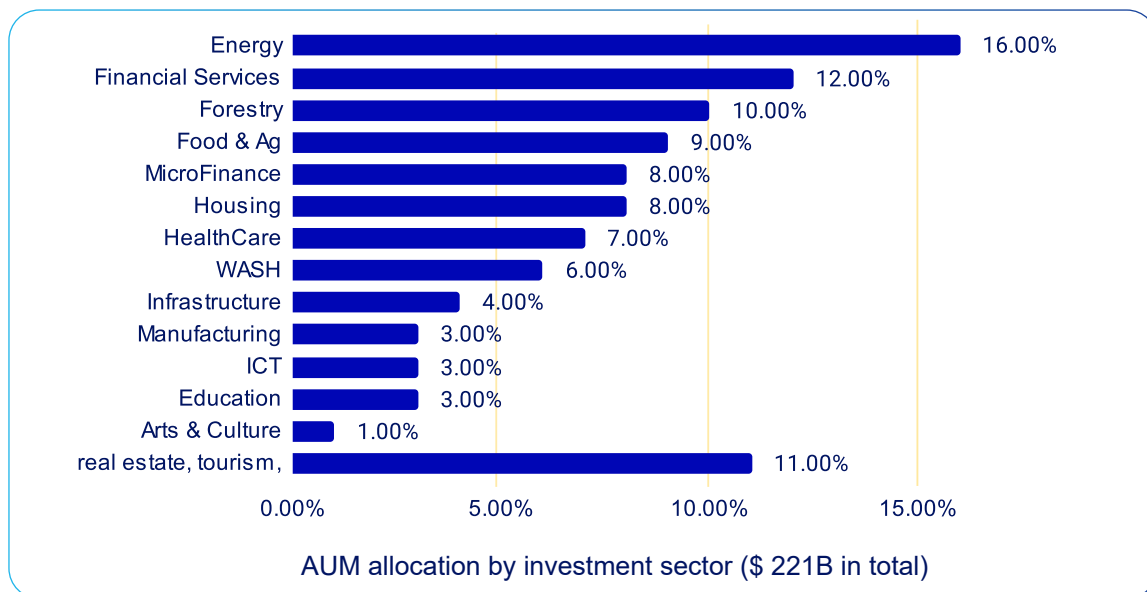


Figure 10. AUM allocation by investment sector (Source: GIIN, 2020)

3.4 Returns

The pursuit of financial performances remains a characteristic of impact investing, and these can widely vary from deeply concessionary to competitively market-rate. In 2020, 68% of respondents principally target risk-adjusted, market-rate returns, while the remaining 32% are split closely between below-market-rate: closer to market-rate (18%), and below-market-rate: closer to capital preservation (15%). The major concern for impact investors is to assess whether their investment will result in a trade-off in terms of re-

turns, inferring that they would have gained more should they have invested in more conventional assets like ETFs. A part of the answer to this complex and multi-faceted question comes with a research conducted by the Morgan Stanley Institute on 11000 mutual funds. The study, which was carried out between 2004 and 2018, demonstrates how there is no financial trade-off in the returns of impact investment funds compared to traditional funds. Furthermore, the study highlights how sustainable funds have lower downside risk than traditional funds by demonstrating a 20% smaller downside deviation¹³.

Downside Deviation of various types of fund

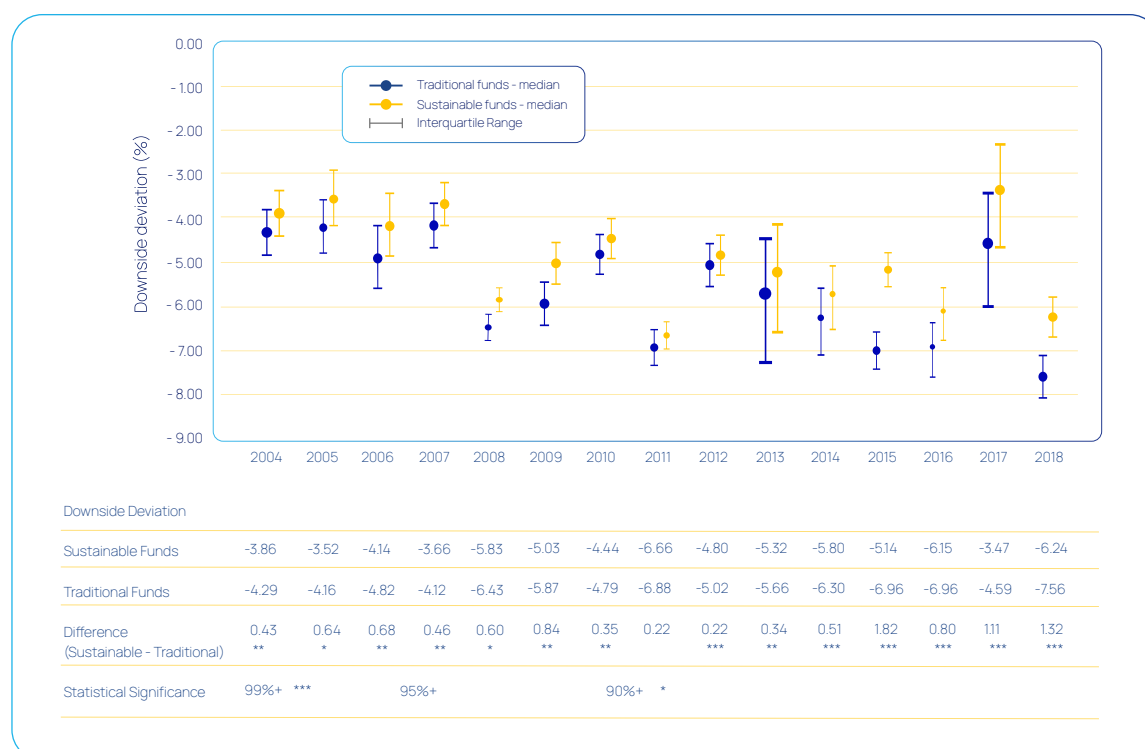


Figure 11. Downside Deviation of various types of fund (Source: Morgan Stanley, 2019)

3.5 Growth potential

Collectively, respondents plan to allocate \$48 Billion to 12,534 investments in 2020, an increase over 2019 of 2% in terms of capital invested and 28% in terms of number of investments. EM-Focused Investors plan a 44% increase in their 2020 activity, compared to a planned decrease of 36% for DM-Focused Investors.

Meanwhile, Private Debt-Focused Investors expect to invest 18% more capital in 2020, and Private Equity-Focused

Investors plan to decrease their investment by 2%. Moreover, respondents who completed the survey in both 2016 and 2020 (reporting on their 2015 and 2019 activity) grew their volume of capital invested by 12% per annum, from \$14 Billion invested in 2015 to \$22.5 Billion invested in 2019.

In addition, the number of impact investments made by this group grew 9% per year, from 4,885 investments made in 2015 to 7,014 in 2019.

The average deal size grew by 2% per year, from \$2.9 Million in 2015 to \$3.2 Million in 2019.

4. IMPACT INVESTING: CHALLENGES

4.1 Success metrics

It can be very challenging to make a correct assessment of the impact generated by an investment: nevertheless, it is critical to know how to measure and manage it, so that investors can understand if they are achieving their desired results in terms of social and environmental impact. According to the GIIN, Impact Measurement and Management (IMM) includes an evaluation of both positive and negative effects that a business has on the planet and its inhabitants, thus allowing stakeholders to attenuate the negative and amplify the positive in alignment with one's objectives ¹⁴. They also have developed a 4-step iterative approach for IMM consisting of:

1. Set goals and expectations, in which impact investors should consider both the consequences on the environment and people and balance them with their expectations for risk, returns, liquidity and impact, respectively;
2. Define strategies, in which impact investors select the most suitable path to achieve the objectives streamlined in the previous phase;
3. Select metrics and set targets, suggesting that impact investors should rely on relevant outcomes

and proxy metrics to set their goals, track their performance, and adjust their strategy to achieve what they are expecting. For what concerns the relevant metrics, they should be able to provide relevant investment information thus enhancing the portfolio's performance;

4. Manage impact performance, which might constitute the most important part since it is aimed to sum up all the information available about returns, risks and impact, and incorporate them into a feedback loop through the whole life of the investment thus achieving the objectives set in phase 1.

The GIIN has also developed a set of relevant impact-related metrics called Impact Reporting and Investment Standards (IRIS+) [15], which is aimed at helping investors to implement the aforementioned approach.

The IRIS+ is a set of over 600 metrics and sub metrics categorized by Primary Impact Category, outlining for which category should the considered metric be primarily used for: the considered categories include Agriculture, Biodiversity, Climate, Diversity and Inclusion, Education, Employment, Energy, Financial Services, Health, Infrastructure, Land, Pollution, Real Estate, Waste and Water. Of course, some of the IRIS+ metrics can be used in a cross-category fashion. Some of the most relevant metrics included in the IRIS+ list are:

Agricultural

Land Directly Controlled, described as the “area of land directly controlled by the organization during the reporting period”, which has three related sub metrics, respectively regarding the area under cultivation, the area under sustainable cultivation and the area treated with pesticides;

Land Indirectly Controlled, described as the “area of land indirectly controlled by the organization during the reporting period”, which has two related sub metrics, respectively regarding the area under cultivation and the area under sustainable cultivation;

Producer Price Premium, described as the “price premium percentage that the producer (supplier) selling to the organization obtains from the organization for its goods or services during the reporting period” and computed as

Price obtained by the producer (supplier)-Benchmark price

Benchmark price

Units/Volume Purchased from Supplier Organizations, described as “units/volume purchased from supplier individuals and organizations that sold to the organization that has received a price premium during the reporting period”, which has three related sub metrics, respectively regarding the units purchased from local organizations, the

certified amount of units purchased and the units acquired by SMEs.

Biodiversity

Number of Threatened Species, described as the “number of threatened species present on land directly controlled by the organization during the reporting period”;

Species Conservation Status, which describes the “conservation status of species during the reporting period”;

Species Area of Habitat, which describes the “area of habitat available to a species within the species' range during the reporting period”;

Species Extinction Threat, which describes “applicable threats to species during the reporting period”.

Climate

Greenhouse Gas Emissions Strategy, which “indicates whether the organization implements a strategy to reduce greenhouse gas (GHG) emissions”;

Greenhouse Gas Emission, described as the “amount of greenhouse gases (GHG) emitted through the organization's operations during the reporting period”, which has two related sub metrics, respectively regarding direct and indirect emissions ;

Value of Carbon Credits Purchase, described as the “value of carbon credits purchased by the organization during the

reporting period”.

Diversity and Inclusion

Women's Career Advancement Initiative, which “indicates whether the organization has an initiative in place to advance women in their workforce”;

Founders: Female, described as the “number of the organization's founders who are female and retain an active role in the company as of the end of the reporting period”;

Investment Committee Members: Female, described as the “number of female members of the organization's investment committee as of the end of the reporting period”;

Product Targeted to Women, which “indicates whether the organization offers a product or service that disproportionately benefits women”.

Education

Student Fees, described as the “average school fee per student per month during the reporting period”;

Student to Teacher Ratio, described as the “number of students per teacher during the reporting period”;

Student Dropout Rate, described as the “percentage of students that were attending school at the beginning of the reporting period but dropped out during the reporting period”;

Learning Hours, described as the “number of learning hours provided to

students during the reporting period”.

Employment

Job Placements, described as the “number of the organization's clients who were placed in part-time, full-time, temporary, or permanent jobs during the reporting period”.

Energy

Renewable Energy Expenditures, described as the “amount of money spent by the organization for its own consumption in renewable energy infrastructure and technology at the organization's operating facilities during the reporting period”;

Energy Generated for Sale, described as the “amount of energy generated and sold to offtaker(s) during the reporting period”, which has two related sub metrics, respectively regarding the amount of renewable and non-renewable energy generated for sale;

Product Hours of Light Available, described as the “number of hours of light available from the product during the reporting period”.

Financial Services

Solvency Ratio, described as the “ratio of an organization's admitted assets to liabilities, per an organization's statut-

Admitted Assets

Total Liabilities

ory accounts, as of the end of the reporting period” and computed as *Loan to Deposit Ratio*, described as

$$\frac{\text{Gross Loan and Receivable}}{\text{Total Deposits}}$$

the “ratio used to assess an organization’s liquidity”, and computed as *Microfinance Delivery Methodology*, which “describes the financial services delivery methodologies used by the organization”.

Health

Caregivers Employed, described as the “number of caregivers with current licenses, certifications, or training based on local requirements, employed by the organization as of the end of the reporting period”, which has a related sub metrics regarding the number of professional caregivers.

Patients Screened, described as the “number of patients screened for medical conditions, illnesses, or risk factors during the reporting period”;

Patients Completing Treatment, described as the “number of patients who successfully completed the clinically recommended course of a health intervention during the reporting period”.

Infrastructure

Number of Containers Handled, de-

scribed as the “number twenty-foot equivalent units (TEUs) of cargo containers transported by a road, railway, port, or airport during the reporting period”;

Bulk Cargo Handled, described as the “volume of bulk cargo transported through the road, railway, port, or airport during the reporting period”;

Average Daily Traffic, described as the “average number of vehicles per day using an urban road over the course of a year”.

Land

Area of Land Deforested, described as the “area of land that has been deforested by the organization during the reporting period”;

Area of Trees Planted, described as the “area of land on which trees were planted by the organization during the reporting period”, which has a related sub metrics regarding the area of land on which native species trees were planted;

Area of Fresh Water Bodies Present, described as the “surface area of freshwater bodies present during the reporting period on protected land, land under sustainable stewardship, or land under sustainable cultivation”.

Pollution

Toxic Materials, described as the “amount of toxic materials used in the

organization's manufacturing processes during the reporting period".

Real Estate

Building Area of Energy Efficiency Improvements, described as the "area of buildings projected to receive energy efficiency improvements as a result of investments made by the organization during the reporting period."

Number of Housing Units Constructed, described as the "number of housing units improved or refurbished by the organization during the reporting period."

Value of Housing Units Finances, described as the "Value of housing units projected to be constructed or preserved as a result of investments made by the organization during the reporting period."

Waste

Waste Disposed, described as the "amount of waste disposed by the organization during the reporting period", which has five related sub metrics, respectively regarding waste disposed through recycling/reusing, landfills, incinerators, composting or by other means;

Waste Produced, described as the "amount of waste created by the organization's operations during the reporting period", which has two relevant sub metrics, respectively regarding hazardous and non-hazardous waste;

Percent Recycled Materials, described as the "percentage of recycled materials used to manufacture the organization's product (including packaging)/ services during the reporting period."

Water

Water Consumed, described as the "volume of water used for the organization's operations during the reporting period", which has five related sub metrics, respectively regarding water coming from recycling, aquifers or rain, municipally-based sources or from regions with high baseline water stress;

Wastewater Treated, described as the "volume of wastewater treated by the organization during the reporting period";

Water Provided for Sale, described as the "volume of water provided and delivered to offtaker(s) during the reporting period", which has related sub metrics regarding the amount of potable water provided for sale.

4.2 Transparency

Due to the impressive growth that occurred in the last years, impact investors started to demand more transparency in the disclosure of who is benefiting from their investments, in what ways and to what degree. As a response to these needs, some of the principal impact asset managers in the world in terms of AUM have committed to comply with the IMM set of rules developed by the GIIN, which in a survey published in the "State of Impact Measurement and Management Practice" report of 2019¹⁶ shows how in just two years, between 2017 and 2019, the number of respondents who have encountered professionals with knowledge of the IMM has doubled from 22% to 44%.

The same survey highlights other two important questions: an increasing number of respondents in 2019 have noticed an improvement in the sophistication of IMM tools and framework (39% in 2019 vs 19% in 2017) and, at the same time, the major concern of impact investors regarded transparency, with a share of 63% of the answer pointing out that it is the major challenge for impact investing, skyrocketing from the 33% of the respondents in 2017.

To achieve a higher degree of transparency, in April 2019 the so-called Operating Principles for Impact Management were developed. The main aim of these nine principles is to make the impact investment market more disciplined and transparent, even through annual disclosures and independent

verification of the impact management systems and processes of who accepts to comply with them¹⁷. The nine principles are the following:

- *Define strategic impact objective(s)*, consistent with the investment strategy, meaning that the investor is responsible for the definition of strategic impact objectives which need to be aligned to the Sustainable Development Goals (SDGs), and he/she needs to ensure that the objectives are consistent and that their scale/intensity is adequate with respect to the size of the investment portfolio;
- *Manage strategic impact* on a portfolio basis, meaning that the investor shall implement a process to manage impact achievements on a portfolio basis, even if the impact can vary across the single investments;
- *Establish the Manager's contribution* to the achievement of impact, meaning that the Manager should be able to establish a narrative regarding his/her contribution to the achievement of the impact for each investment in the portfolio. Moreover, the Manager should be able to support the narrative by evidence;
- *Assess the expected impact* of each investment, based on a systematic approach, meaning that the investor should be able to evaluate in advance the positive impact of the investments. The evaluations should be based on a suitable results measurement framework which

should answer the following questions: 1) What is the intended impact? 2) Who experiences the intended impact? 3) How significant is the intended impact? Besides the aforementioned assessment, the investor should be able to verify the likelihood of achieving the desired impact, considering the risk factors and the opportunities to increase the investments;

- *Assess, address, monitor, and manage the potential negative impact* of each investment, meaning that the investor shall identify and avoid any potential ESG risk, and if it is impossible to keep away from those risks, try to minimize them;
- *Monitor the progress* of each investment in achieving impact against expectations and respond appropriately, meaning that the investor should monitor if the investment is achieving the desired impact, and in case it is not possible anymore to realize them, he/she shall take all the appropriate actions;
- *Conduct exits considering the effect on sustained impact*, meaning that the investor should consider if the sustainability of the impact is in some way threatened by the timing, the structure or the process of exit from the investment;
- *Review, document, and improve decisions and processes* based on the achievement of impact and lessons learned, meaning that the investor should include in the investment process a feedback loop through which it can embed all the available information to improve operational and strategic investment decisions;
- *Publicly disclose alignment* with the Principles and provide regular independent verification of the alignment, meaning that, at least annually, the Manager shall publicly disclose the alignment of its impact management system with the Principles and arrange for independent verification of this alignment.

The Operating Principles for Impact Management

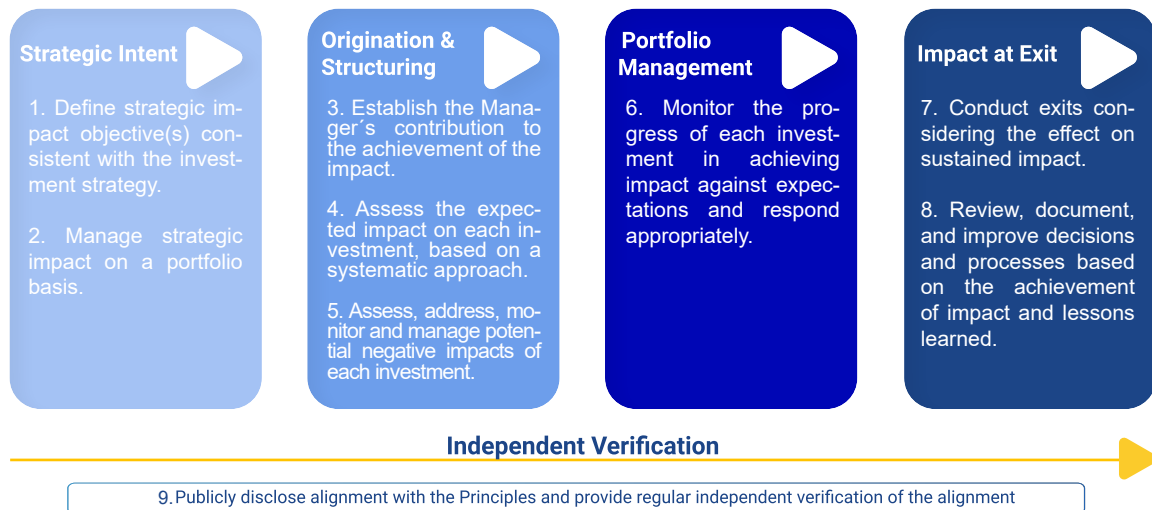


Figure 12. The Operating Principles for Impact Management

Those principles were intended to provide investors with a framework for implementing an investment management style that embedded considerations about the social and environmental impact of their investments. They are constructed in order to be relevant in the broadest sense possible, being useful for both retail and institutional investors, and can be exploited no matter the asset class, the sector or the geographical area investors are considering.

4.3 Disconnection between community and financial system

Since the explosion of the financial crisis in 2007-2008, financial markets have started disconnecting from the real economy, and thus from the community of workers behind companies. This process was tightened up by the

actions undertaken by the Central Banks, which through the Quantitative Easing and the cut of interest rate have injected a huge amount of liquidity in the economical system. These two policies have made the price of the majority of asset classes skyrocketing since commercial banks prefer to invest the liquidity in excess in the financial markets instead of funding entrepreneurial initiatives by injecting money into the real economy.

As we can notice by the following chart, in the aftermath of the financial crisis there was really poor correlation between the returns on annual basis from the EURO STOXX 600, an index which represents the 600 biggest companies located in 17 countries in the European region, representing the financial markets, and the GDP growth in the Eurozone, representing the real economy.

EUROSTOXX returns vs Eurozone GDP growth (2009-2019)

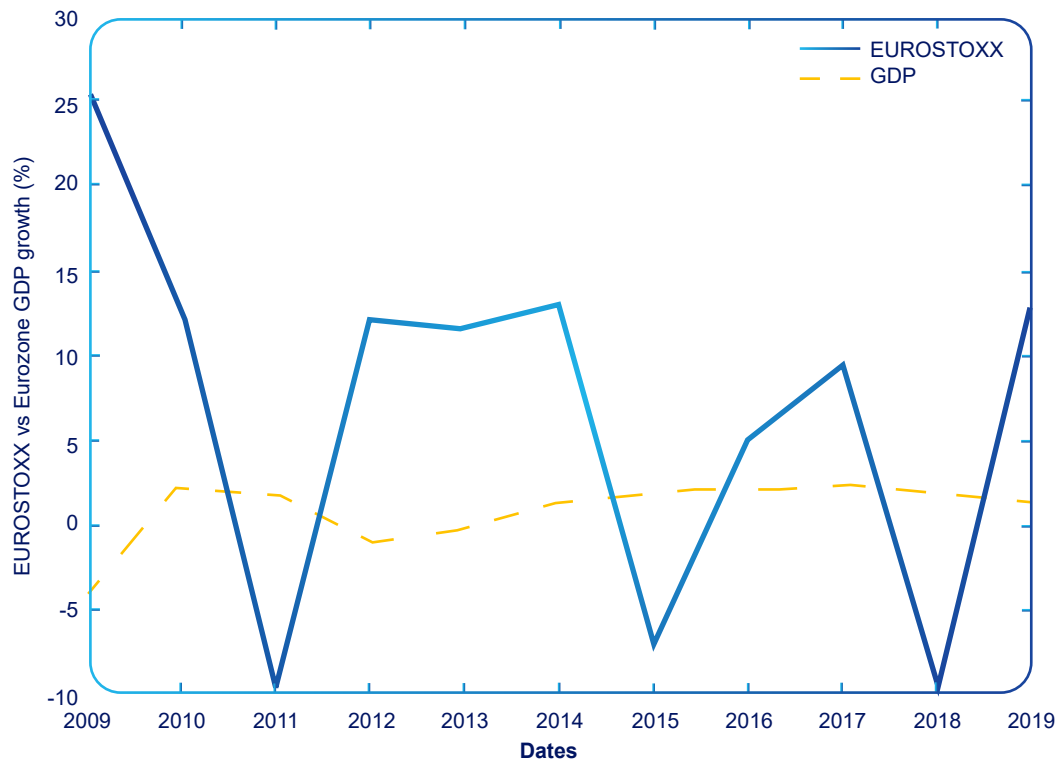


Figure 13. EUROSTOXX returns vs Eurozone GDP growth (2009-2019)

In this sense, what has happened due to the Coronavirus pandemic is a simple worsening of a problem born over a decade ago, with stock markets producing incredible returns (even if driven mostly by a limited number of Tech companies) while the community was facing one of the most severe crisis since the end of World War II.

As a result, nowadays the financial system is not doing what it was created for: connecting companies with capital needs with people able to provide them, a role that in theory is played by households. Even a great personality such as Larry Fink, CEO of BlackRock, one of the biggest investment management companies in the world with over \$8 Trillion in AUM, in his usual "Letter to CEOs" in 2018 wrote about the

need for companies to "serve a social purpose"¹⁸, thus providing not only financial returns but also a positive impact on the society as a whole.

Impact investing can be a great tool to reconnect the community to the financial system, through investment practices aimed to produce a positive effect on society or the environment. The fact that in the last few years there was a great interest in such a practice has led even the biggest companies to try to behave in a more sustainable way, for instance trying to cut their CO2 emissions or reducing the consumption of plastics, paper or water, all resources that for one reason or another have a great impact on the community as a whole. Two of the biggest companies worldwide, Apple Inc. and

Amazon.com Inc., are currently working on the reduction of their carbon footprint through the implementation of more sustainable policies regarding their facilities, their suppliers or their production pipeline, aiming to become a carbon-neutral business by 2030 and 2040, respectively^{19 20}.

Another important theme in impact investing is gender equality. Starting from the Fourth Conference on Women, held in Beijing in 1995, governments and companies have taken many steps toward the accomplishment of equal treatment of women and men. In the last decades, 143 countries have guaranteed the equality between people of different gender in their Constitutions, but there are still 52 which have not guaranteed women with the same rights and duties as men.

Companies are trying to narrow the gender gap regarding salaries and relevant positions in their boards, and this can provide benefits globally. In fact, McKinsey&Company in 2015 released a report in which they analyze how advancing women's equality can add up to \$12 Trillion in annual global 2025 GDP if companies and governments push gender equality policies to make women obtain the same treatment as men in workplaces²¹.

4.4 Role of public sector

Not only the private sector has had great importance in the development of a more conscious way of investing, but even the public sector has played a key role in constructing a framework for sustainable investments. It

all started in 2013, during the United Kingdom's Presidency of the G8, when the UK's Prime Minister David Cameron announced the creation of the Social Impact Investment Taskforce, aimed at boosting the development of an impact investment market²². This goal has driven the Taskforce to create several working groups with the objective of producing international sets of standards regarding impact measurements, asset allocation and mission alignment.

Since then, governments have injected huge amounts of resources into the development of an impact investment market that is even difficult to numerically assess. Public policies have been implemented both on the supply and demand side: for what concerns supply, governments have made an effort to increase the endowment of social impact capital, considering as such both financial and human capital, and directing it through organizations able to produce a social impact leveraging on tax incentives, reporting requirements or ad-hoc appointed investment rules.

On the other hand, governments intervene on the demand side helping companies to build an operative framework able to deliver social impact, guaranteeing them the right kind of financing they need to develop and even helping them strengthen the demand for their products or services. In some cases, the public sector has played the role of a true market participant, purchasing goods and services through social and green public procurement a direct co-investor, or public-private partnerships.

One of the main challenges for the future is to increase the interest from the private sector in impact investments. In the last years, governments and government-related companies have been the main driver in the development of a market for companies that look for a social return alongside a financial one. This market is continuously enlarging in terms of capitals flowing from the private sector, especially coming from asset management firms and Development Finance Institutions,

but it has not reached an amount of AUM comparable to more traditional markets. Governments and international boards are working on the enhancement of current policies and on the implementation of new ones to boost the transition from financial return-only oriented investments to more sustainable and socially-oriented kind of investments, that can produce richness not only for those involved in the investment process but also for the community as a whole.

5. IMPACT INVESTING: VENTURE CAPITAL LANDSCAPE

5.1 European landscape

Venture capitalists are taking note of the growing demand for socially responsible investments, with some of the largest start-up investors in Europe pushing for accountability in their own portfolios with regard to investing in climate-friendly firms.

Northzone, HV Capital and Earlybird are among the most notable backers of Berlin-based non-profit Leaders for Climate Action. A network of European entrepreneurs and investors, LFCA aims to marry “ecological success with economic success” in the tech industry.

It is true that impact investing remains a peripheral strategy to investors in Europe, but it is a matter that is increasingly growing in importance. Various reasons push investors into impact investing with broadly two reasons that drive company leaders and venture capitalists towards ESG investing.

The first set concerns the growing awareness of investors' activities and their impact on the external events occurring in the world such as climate change or social injustice. The second set involves the continuous impact

ESG strategies can have on the strategy adopted by the business and the improvement these sustainable actions will bring to the overall growth of the company.

As impact investing is more and more turned towards social issues, the main focus remains climate themed with an important emphasis on energy efficiency and renewable energy very much in accordance with the Global Climate Conferences. Promoting impact investing has been at the centre of the government's strategy and the European Commission has worked seriously on the adoption of environmentally and socially responsible activities.

Indeed, the increase of consumer awareness and government regulations has accelerated the improvement of the impact investing market that recorded \$132 Billion in Europe according to Bloomberg's analysis. However, while investors lean over impact investing, Europe stays way behind other developed countries in North America that compose 58% of the market compared to 21% in Europe.

Walking towards improvement, many social venture capital funds have made impact investing their core value and vision, helping companies with major ESG responsibilities acquire financing and grow their business strategies.

5.2 German landscape

In Germany²³, to date, few investors (e.g., high net worth individuals and family offices, institutional investors, foundations and NPOs, and governments) are familiar with the concept of social impact investing, and there is only a small (but growing) range of intermediary organizations such as social venture capital funds (SVCFs) and investment advisors (IAs). SVCFs collect capital from investors (e.g., HNWLs and family offices, institutional investors, foundations, NPOs, and governments) and then identify and manage investments. IAs provide incubation, business support or corporate finance advice to innovative social ventures to improve their "investment Readiness".

SVCFs and IAs focus on social enterprises in fields such as education, work integration or social services, organizations that often operate close to or within the boundaries of the German welfare system. The number of 'deals' is still very low and the total market volume was estimated at €24 Million at the end of 2012 with an estimated average of 10-15 deals of over €100K closed per year. Despite some efforts from foundations, intermediaries, or politics the infrastructure for impact investing is still in an early development

stage. As for the research, systematic examination of social impact investing and its drivers and barriers are still in its infancy.

There are currently two large social venture capital funds²⁴ – BonVenture (founded in 2003) and the Social Venture Fund (founded in 2009) – with a combined total of around €40 Million under management. These funds provide equity, mezzanine capital and debt to social ventures in the range of €200K-1.5 Million. BonVenture currently invests through its fourth fund in the German-speaking region (Germany, Austria, Switzerland).

The Social Venture Fund¹⁸ holds the majority of its investments within Germany but aims for a pan-European investment scope. It closed its second fund in December 2013 (first closing at €16.4 Million), presumed to be one of the largest in Europe. Due to a minimum investment of €100-500K for these funds, it is mainly HNWI, (non-German) foundations and institutional investors providing the required capital. So far, these funds have screened more than 3,000 investment opportunities. Funding has been provided to 29 socially motivated organisations in Germany, of which 9 have already been exited from investors' portfolios.

Even though the investment landscape for impactful projects has not thoroughly developed, there are a great number of associations, companies and networking groups that are dedicating abundant resources to bringing this topic up to par with other branches in the investment sector. Here below you will find a list including some of the players that are actively contributing to the cause:

- **tech2impact:** Global platform for founders, corporates, accelerators, incubators, investors, and experts involved in impact tech.
- **SEND:** German networking group that creates sustainable political support and enthusiasm in society for social entrepreneurship.
- **Change NOW:** A global event gathering leaders, investors, innovators and policymakers to discover the most concrete and innovative solutions to solve the world's biggest challenges.
- **KIBUNDESVERBAND:** The KI Federal Association is composed of more than 300 innovative SMEs, startups and experts focusing on the development and application of technologies based on artificial intelligence.
- **European Champion Alliance (ECA):** ECA is a not-for-profit initiative by a group of passionate entrepreneurs and business development experts who support European Tech and values.
- **INNOVATIONS ZENTEN (BVIZ):** The BVIZ is the Federal German association of innovation, technology and business incubation centres as well as science and technology parks. Approximately 150 innovation and business incubator centres are associated with the BVIZ, with more than 5.800 companies and over 46.000 employees.
- **Hafven:** One of the largest innovation communities in Europe counting more than 1,300 members composed of corporates, startups and innovators focusing on empowering people through easy access to knowledge and technology.
- **German Startup Association:** As part of the GEN, the German startup association is working towards the creation of a more transparent and founder-friendly startup ecosystem where people can start and scale their business.
- **Borderstep Institute for Innovation and Sustainability:** Borderstep is an independent think tank focused on entrepreneurial solutions to global challenges. Borderstep research aims to contribute to the global transition toward a green and sustainable economy.
- **Enterprise Europe Network:** The Enterprise Europe Network helps businesses innovate and grow on an international scale. It is the world's largest support network for small and medium-sized enterprises (SMEs) with international ambitions. The Network

is active in more than 60 countries worldwide. It brings together 3,000 experts from more than 600 member organisations.

- **GIZ:** GIZ provides tailor-made, cost-efficient and effective services for sustainable development. They help organisations, public authorities and private businesses to optimise their organisational, managerial and production processes.
- **ASHOKA:** Ashoka identifies and supports the world's leading social entrepreneurs, learns from their innovations and mobilizes a global network to build an "everyone a changemaker world". Ashoka focuses on 4 core topics: social entrepreneurship, empathy, youth and collaboration.
- **Green Tech Alliance:** Green Tech Alliance brings together green technology businesses that fight climate change with their products and services in the most responsible and respectful way. Moreover, Green Tech provides these businesses with advice about funding, impact, visibility and strategy in collaboration with top VCs, journalists, advisors and entrepreneurs.
- **DGMB:** Leading European Association composed of more than 1,200 members with focus on sustainable building. They include architects, engineers, construction planners and consultants, but also project managers, development managers, investors, building contractors and the providers of building services.
- **Talenteco:** Talenteco is a platform dedicated to innovation, sustainability, circular economy and climate action, connecting supply and demand. They connect expertise and innovative solutions made to improve the environmental impact of all business areas.
- **De hub:** Twelve digital Hubs provide a strong network that stimulates innovation by promoting the exchange of expertise in technology and business. de hub focuses on creating partnerships by connecting SMEs and corporations with the newest innovators from the science and start-up scene.
- **HIHK:** The HIHK informs and advises the state government in its legislative proposals. He also supports the Hessian chambers of industry and commerce organizationally, coordinates the exchange of experiences and creates synergies.
- **Planet Sustainability:** Planet's products are a key component of data-driven and sustainable solutions. Industry, government, and NGOs partner with Planet to build solutions that promote sustainable growth, measure and verify commitments, and demonstrate positive outcomes for investors and the public.
- **European Leadership Network (ELNET):** ELNET provides unique opportunities for mutual dialogue and encourages exchanges among policymakers from different political backgrounds.

They also facilitate in-depth policy discussions on key strategic issues and host high-level delegations to experience the realities on the ground.

- **Unternehmensgrün:** German nationwide association composed of business professionals who promote environmental protection and strive for sustainability.
- **British Embassy Berlin:** The British Embassy works closely with the German government on a wide range of issues, including climate change, science, innovation, foreign policy, defence and police cooperation.
- **B.A.U.M.:** Supporting its members in the organisation, the development of sustainable strategies and connect stakeholders from business, politics, economy, media and associations. Engaged companies are given a platform for practice-oriented exchange of information and experiences as well as input and impulses.
- **German Zero:** A association ba-

cked by thousands of volunteers and full-time employees who have the ultimate goal of creating a climate-safe and livable future for the world.

- **British Chamber of Commerce (BCCG):** BCCG and its large British-German entrepreneurial and institutional network are the first port of call for companies and professionals seeking advice in British-German business and trade. The Chamber is a neutral platform for interested BCCG members, co-operating partners, and guests.
- **FNG:** This professional association focused on sustainable investments in Germany, Austria, Liechtenstein and Switzerland, represents over 200 members who work for more sustainability in the financial sector. These include banks, investment companies, rating agencies, financial advisors, scientific institutions and private individuals.

Here below you will find a graphical representation of the players above mentioned and other public institutions supporting the cause:



Figure 14. Extract of German Impact landscape

6. IMPACT INVESTING: STARTUPS LANDSCAPE

As we have seen so far, the growing interest in Impact Investing has changed the way certain investors screen potential investment opportunities by looking for companies able to generate both financial and social returns. In this sense, even the startup world is quickly evolving in this direction, with hundreds of new startups with socially and/or environmentally impacting ideas. Even the increase in AUM by SVCFs is another signal that people, especially the younger generations, are not only concerned about obtaining dividends and capital gains, but they are looking for entrepreneurs who embed the achievement of a positive impact on the community in their business strategy.

Even though the pandemic slowed down the whole process, there is a rising number of startups focusing on sustainable business and innovative ideas for society's sake. Moreover, now that new weapons to fight against the virus were developed, the economy will recover and so a new flow of funds will be directed towards innovative but at the same time socially directed startups.

According to the GIIN, for such a kind of company, there are two ingredients that are fundamental to reach success: defining impact and goals at the beginning and reporting all the progress obtained in achieving them. Defining the social results a startup wants to achieve at the very beginning of its operations can be crucial, since

in this way all the stakeholders, especially investors and employees, are aware of which efforts are necessary for the company to succeed in what was planned.

Moreover, defining clear objectives would give the management a Polar Star to follow, and in case they fail to do so new risks would arise for the startup. For what concerns regular reporting, it was already stated that it is quite difficult to assess the social and environmental impact of a company: nevertheless, many efforts were made in this direction, with the development of the IRIS+ set of standards and the continuous improvement of the IMM framework. Of course, it can be difficult to align financial and social and/or environmental results, thus giving to investors and entrepreneurs a trade-off between those objectives to balance.

This is one of the main reasons why startups may find it useful to include special clauses within investment agreements that can protect their right to make decisions in critical situations. Finally, even if there are no formal reporting rules for impact investments, the GIIN states that financial statements, valuation reports and regular portfolio reviews should be disclosed to all the stakeholder in a timely fashion.

Focusing on the trade-off between financial and social returns, it was already stated that companies whose mission is to generate a social impact alongside a financial return might not be able to generate above-market returns. This means that such kinds of startups are not needed to be the so-

called “unicorns”, since they give up part of their ability to generate returns in exchange for a more community-oriented way of doing business. It is important to stress the importance of having clearly stated which is the mission of the company since intentions drive ac-

tions: if the socially-oriented impacts are defined at the very beginning of the life of a company, the management will do everything in their power to achieve those results, and investors might not be hugely concerned about average or below-average returns.

7. CASE STUDIES ON IMPACT INVESTING

In 2021, Main Incubator, which operates as Commerzbank's R&D unit, launched a community platform named Impact Festival, aimed at accelerating the European green transition.

It seeks to bring together points of view coming from founders of Green startups, Corporate, VC investors, scientists and more in the discussion regarding the development of sustainable business models. A few examples of the Impact Cases presented at the Impact Festival are presented below.

7.1 Circular

Circular is an English startup leader in the area of Regulatory Technology, with the mission of bringing transparency in the traceability of raw materials to complex supply chains. In 2019, Circular was commissioned by Volvo for a traceability solution regarding the minerals involved in the production of lithium-ion batteries for electric vehicles, such as cobalt, lithium or nickel. The idea was to provide Traceability-as-a-Service aimed at managing the risk, with an estimated 75% saving of costs in the Original Equipment Manufacturer (OEM) supply chain, and demonstrate with as much certainty as possible that no material that was not responsibly sourced entered in the supply chain at any point.

The solution developed by Circular was a blockchain-based system able to map the production flow of material and, in case of any data anomalies,

identify them through machine learning algorithms so that it would be possible to target compliance and due diligence. Initially, the service provided by the company was able to trace recycled cobalt in its various physical transformations throughout the manufacturing process across the battery supply chain, but then it was updated to track freshly mined cobalt and Phlogopite (Mica), a mineral used as a fire barrier in EV battery packs.

7.2 Grover

Grover is Europe's market leader in technology rentals, enabling people to subscribe to tech products monthly instead of buying them. Founded in 2015 by Michael Cassau, Grover's mission is to create the most innovative ways for everyone – both private customers and businesses – to get the tech they want.

With Grover, subscribers get access to a wide range of over 3,000 tech products, including smartphones, laptops, virtual reality (VR) gear, and wearables on a flexible monthly rental basis. Grover's service allows its users to keep, switch, buy, or return products depending on their individual needs and budget. Rentals are available in Germany, Austria, the Netherlands and Spain, on GROVER.COM, as well as – in Germany – through Grover's online and offline partner network, including Europe's leading electronics retail group MediaMarktSaturn.

Grover is a pioneer in the advancement of the Circular Economy. Its business model of renting out tech products

to several users across their life cycle allows maximum value to be extracted from each product and reduces e-waste. In total, Grover has recirculated nearly 150,000 devices. With a total financing volume of almost €350 million to date and currently over 245 employees increasing by about 20-30 a month, Grover is one of Germany's best-funded scale-ups.

7.3 DABEL

DABEL is a German company founded in 2018 with the mission to develop the most scalable, cost-efficient and sustainable Building Automation Technologies to make buildings energy-efficient and actively fight climate change while at the same time improving the well-being of people indoors. The company was involved by Gelsenwasser AG in the production of an AI-based building management system (BMS) able to reduce the emissions and the energy costs of Gelsenwasser AG headquarter-building.

DABEL developed a solution able to replace human control of energy systems with artificial intelligence, able to both autonomously control in real-time the energy system considering all the relevant variables, and self-learn from what has happened, thus being able to automatically adapt to the conditions of the building. This AI-BMS has provided great benefits in terms of energy efficiency, with a cost saving per building of 70.000 € per year, and CO2 emission reduction, with a saving of 433 tons per year.

7.4 GreenCom Networks

GreenCom Networks is a German IoT company founded in 2011 operating in the area of Energy Efficiency, with the mission of developing the energy system of the future. In collaboration with the energy and water supplier RheinEnergie, they aimed to establish a smart city district in the Stegerwaldsiedlung, consisting of 1,614 apartments with numerous Distributed Energy Resources (DER) installed, i.e. electrical generation and storage performed by a variety of small, grid-connected or distribution system-connected devices, thus providing green and self-produced electricity for the apartments' tenants.

The solution provided by GreenCom Networks and RheinEnergie included but are not limited to the installation of DERs on and in buildings containing 688 apartments, the integration multiple device types (solar PVs, heat pumps, battery storages, heating blades, etc.) from a different manufacturer on one digital platform, and the development of district-wide cross-device optimization to fulfil requirements of tenants, i.e., independence, transparency via app and web apps as well as lower prices.

This system provided great benefits in the form of cost reduction, thanks to 70% of community energy produced on-site by DERs, for an annual saving of €41.500, and a cut of 60% of customers' CO2 emissions, estimated at 528 ton per annum.

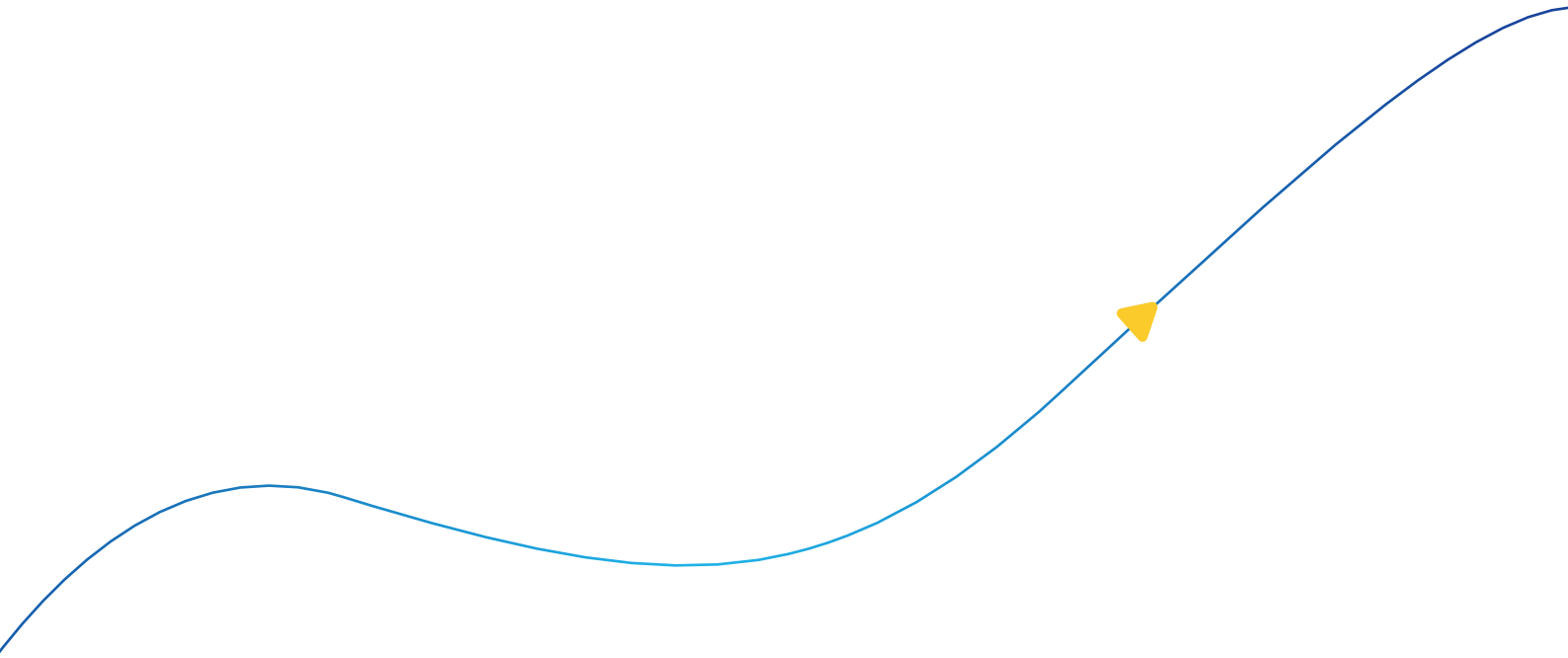
7.5 Vultus

Vultus is a Sweden-based company founded in 2016, active in the industry of Agriculture Technology, offering a technology that allows farmers to reduce costs and environmental hazards with no impact on the growth of healthy plants. They collaborate with a farmer located in the Chinese province of Hebei to support more efficient and sustainable farming.

The solution provided by Vultus involved the digitalization of the farming processes through Variable Rate Technology

(VRT) via satellite data: VRT was applied to increase the fertilization efficiency and prevent the overuse of chemical inputs, of massive inputs waste as well as deteriorating of margins and yields.

The benefits of the usage of this technology included an increase in the yield up to 5%, a reverse land use, which has enlarged the portion of land occupied by forest, a reduction in the CO₂ emissions of 149 kilograms per hectare and a 30% reduction in the usage of fertilizers, besides a betterment of carbon storage in the soils and management of risks thanks to the help of data.



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Published
15.06.2021

