

“Why does the eye see a thing more clearly in dreams

than the imagination when awake”?

Leonardo da Vinci (1452 – 1519)

Abstract

We aim to demystify the concept and the economic impact of so-called socially responsible investments (SRI) in Germany. In this context we provide a background of its historic roots, the dilemma of the de-fragmented definitions available of varying ethical concepts, and of different applied responsible investment research methodologies. We also present a classification of institutional and private customer segments and of other SRI stakeholders and of their motifs. There we identify performance, business-case orientation, risk avoidance, and promotion of environmental, social, and corporate governance (ESG) topics as motifs and driving factors with a potential to boost the economic impact of SRI further. An overview of obstacles to SRI such as the current regulatory environment of this type of investment in Germany rounds out the picture.

Furthermore, we investigate the effects of an investment culture that strives for sustainability based on the integration of soft non-financial ESG data-based factors. For this our research is twofold: (1) we investigate the level of ESG integration cross-financial actively and passively managed instruments in Germany and assess the current size of this financial sector’s niche; (2) we try to give an outlook on the future impact SRI could have. For this assessment we investigate optional paths in regard to effects on eco-, social and corporate governance innovation. In particular, we find that – in the light of the public corporate social responsibility debate – SRI may even replace our current paradigm of how money gets invested, how fiduciary duties are interpreted, and how performance is measured. In this regard further acceptance, advocacy, and action of the financial industry and of SRI stakeholders are needed. While future responsible investors target for an accepted rate of financial return, they also strive to gain an accepted ESG add-on performance. We conclude that the traditional way of how the financial industry allocates its investments is likely to shift to reflect different individual ethical concepts of target groups and take weak to strong patterns of sustainability into account. Once institutional and retail investors and the financial industry alike start to accept the SRI business case, advocate it, and finally act in the light of this new paradigm, ESG-driven investment methodologies may well enter into the mainstream and gain more economic relevance.

Table of contents

ABSTRACT.....	I
TABLE OF CONTENTS.....	II
LIST OF ABBREVIATIONS.....	IV
LIST OF FIGURES.....	XI
LIST OF TABLES.....	XII
LIST OF VARIABLES.....	XIII

CHAPTER 1

INTRODUCTION.....	1
1.1 THEORETICAL AND PRACTICAL RELEVANCE.....	2
1.2 PURPOSE OF THIS DISSERTATION.....	3
1.3 STRUCTURE OF DISSERTATION.....	6

CHAPTER 2

THEORETICAL BACKGROUND.....	9
2.1 SOCIALLY RESPONSIBLE INVESTMENTS (SRI).....	9
2.2 INFLUENCE AND POWER.....	67
2.3 INNOVATION.....	71

CHAPTER 3

HYPOTHESES.....	82
3.1 DRIVERS OF SRI.....	83
3.2 BARRIERS TO SRI.....	94

CHAPTER 4

PART ONE: CURRENT SRI IMPACT IN GERMANY.....	104
4.1 THE SIZE OF THE SRI MARKET IN GERMANY.....	104
4.2 INTERIM CONCLUSION ON IMPACT OF SRI IN GERMANY.....	161

CHAPTER 5

PART TWO: FUTURE IMPACT OF SRI IN GERMANY.....	165
5.1 POTENTIAL IMPACT ON ECOLOGICAL INNOVATION.....	165
5.2 POTENTIAL IMPACT ON SOCIETAL INNOVATION	171
5.3 POTENTIAL IMPACT ON GOVERNANCE.....	180
5.4 DISCUSSION OF POTENTIAL IMPACT OF SRI IN GERMANY.....	184

CHAPTER 6

CONCLUSION, AND AREAS FOR FURTHER RESEARCH.....	191
REFERENCES.....	200

List of abbreviations

°C	Degree Celcius
ACAFI	Atkinsson Compass Assessment for Investors
AG	<i>Aktiengesellschaft</i> – public limited company; plc
AGBG	<i>Gesetz zur Regelung des Rechts der Allgemeinen Geschäftsbedingungen (AGB-Gesetz)</i> – General Terms and Conditions Act
AGM	Annual General Meeting
AI	Alternative Investment
AI CSRR	Association for Independent Corporate Sustainability and Responsibility Research
AIA	American Institute for Architecture
AIDS	Acquired Immunodeficiency Syndrome
AIMR	Association for Investment Management and Research
Aka. / aka.	Also known as
AktG	<i>Aktiengesetz</i> – Stock Companies Act)
AltZertG	<i>Gesetz über die Zertifizierung von Altersvorsorge- und Basisrentenverträgen</i> – Act on Certification of Retirement Arrangement Contracts
AMD	Acid Mine Drainage
AO	<i>Abgabenordnung</i> (General Fiscal Law)
AuM	Assets under Management
B.A.U.M.	<i>Bundesdeutscher Arbeitskreis für Umweltbewusstes Management</i> – German Association of Environmental Management
B.C.	Before Christ
B2B	Business-to-business
BACO	Best Available Charitable Option
BAFA	<i>Bundesamt für Wirtschaft und Ausfuhrkontrolle</i> – Federal Office of Economics and Export Control
BaFin	<i>Bundesanstalt für Finanzdienstleistungsaufsicht</i> – Federal Financial Supervisory Authority
BASIC	Brazil, South Africa, India and China
BBC	British Broadcasting Corporation
BCG	The Boston Consulting Group
BEPA	Bureau of European Policy Advisors
BfG	<i>Bank für Gemeinwirtschaft</i>
BGB	<i>Bürgerliches Gesetzbuch</i> – Civil Code
BilReG	<i>Bilanzrechtsreformgesetz</i> – Act on Reformation of Accounting Standards
BMJ	<i>Bundesministerium der Justiz</i> – Federal Ministry of Justice)

BMU	<i>Bundesamt für Umwelt, Naturschutz und Reaktorsicherheit –</i> Federal Ministry for Environment, Nature Conservation and Nuclear Safety
BMWi	<i>Bundesamt für Wirtschaft und Technologie –</i> Federal Ministry for Economics and Technology
bn	Billion
BörsG	<i>Börsengesetz –</i> Stock Exchange Act
BREEAM	Building Research Establishment Environmental Assessment Method
BRIC	Brazil, Russia, India, and China
BSC	Balanced Scorecard
BVI	<i>Bundesverband Investment und Assetmanagement –</i> German Association for Investment and Asset Management
CAPM	Capital Asset Pricing Model
CDU	<i>Christlich Demokatische Union –</i> Christian Democratic Union
CEF	Closed-end fund
CEPAA	Council on Economic Priorities Accreditation Agency
CEQ	Council on Environmental Quality
CERES	Coalition for Environmentally Responsible Economies
CFA	Chartered Financial Analyst
CFB	Central Finance Board of the Methodist Church
CGAP	Consultative Group to Assist the Poor
CHAMP	Charity Assessment Method of Performance
CIS	Community Innovation Survey
CO ₂	Carbon dioxide
COP	Conference of the Parties
CSR	Corporate Social Responsibility
CSR EMS Forum	European Multi-Stakeholder Forum on CSR
CTA	Commodity Trading Advisors
DBL / 2BL	Double Bottom Line
DCF	Discounted cash flow
Destatis	Federal Statistical Office of Germany
DGNB	<i>Deutsche Gesellschaft für Nachhaltiges Bauen –</i> German Sustainable Building Council
DIW	<i>Deutsches Institut für Wirtschaftsforschung –</i> German Institute for Economic Research
DJSI	Dow Jones Sustainability Index
Dow	Dow Chemicals
DRS	Recommendations of Accounting Standards Committee of Germany
E.g. / e.g.	<i>Exempli gratia –</i> for the sake of example
e.V.	<i>eingetragener Verein –</i> registered association

EC	European Commission
ECHR	European Convention on Human Rights
EEG	<i>Erneuerbare Energien Gesetz</i> – Renewable Energy Sources Act
EFQM	European Foundation for Quality Management
EKD	<i>Evangelische Kirche in Deutschland</i> – Protestant Churches of Germany
EMAS	Eco-Management and Audit Scheme
EMH	Efficient Market Hypothesis
Enev	<i>Energiesparverordnung</i> – Energy Saving Ordinance
EPA	Environmental Protection Agency
EPC	European Patent Convention
EPO	European Patent Office
ESG	Environmental, Social, and Corporate Governance
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
<i>et al.</i>	<i>et alii / et aliae / et alia</i> – and others
ETC	Exchange Traded Commodity
ETF	Exchange Traded Fund
ETN	Exchange Traded Note
EU	European Union
EU-27	The 27 member states of the European Union
EUR	Euro
Eurosif	European Sustainable Investment Forum
EVCA	European Private Equity & Venture Capital Association
f./ ff.	Following page(s)
FCCC	Framework Convention on Climate Change
FH	<i>Fachhochschule</i> – University of Applied Sciences
FMEA	Failure Mode and Effects Analysis
fn.	Footnote
FNG	<i>Forum Nachhaltige Geldanlagen</i> – German Sustainable Investment Forum
Fo(H)F	Fund-of-(Hedge)-Funds
FRUG	<i>Finanzmarktrichtlinie-Umsetzungsgesetz</i> – Markets in Financial Instruments Directive
G-20	Group of 20 major economies
G-7	France, Germany, Italy, Japan, UK, USA, and Canada
GAAP	Generally Accepted Accounting Principles
GBC	Global Business Coalition
GBP	Pound sterling
GCGC	German Corporate Governance Codex

GDP	Gross domestic product
GewO	<i>Gewerbeordnung</i> – Industrial Code
GG	<i>Grundgesetz</i> – Federal Constitution
GII	Global Innovation Index
GmbH	<i>Gesellschaft mit beschränkter Haftung</i> – Limited company
GRI	Global Reporting Initiative
HF/ HFs	Hedge Fund(s)
HGB	<i>Handelsgesetzbuch</i> – German Commercial Code
HIV	Human Immunodeficiency Virus
HNWI	High-net worth individuals
Ibid./ ibid.	<i>Ibidem/ ibidem</i> – the same place
ICLEI	International Council for Local Environmental Initiatives
ICMM	International Council on Mining and Metals
ICT	Information and Communication Technologies
IEKP	Integrated Energy and Climate Protection Programme
IFA	Independent Financial Advisor
IFRS	International Financial Reporting Standards
IIGCC	Institutional Investors Group on Climate Change
ILO	International Labour Organization
IMUG	<i>Institut für Markt-Umwelt-Gesellschaft</i> – Institute for Market-Environment and Society (Hannover)
INSEAD	<i>Institut européen d'administration des affaires</i>
InvÄndG	<i>Investmentänderungsgesetz</i> – Act Amending the German Investment Act
InvG	<i>Investmentsgesetz</i> – Investment Act
IPCC	Intergovernmental Panel on Climate Change
IPO	Initial Public Offering
IPR / IPRs	Intellectual Property Rights
IRM	Institute of Risk Management
IRR	Internal Rate of Return
ISC	Investment Stewardship Code
ISO	International Organization for Standardization
IT	Information Technology
JEREMIE	Joint European Resources for Micro and Medium Enterprises
JPO	Japan Patent Office
KfW	<i>Kreditanstalt für Wiederaufbau</i> – Reconstruction Credit Institute
Kirchliche VwO	<i>Kirchliche Veraltungsordnung</i> – Church Administration Act
KonTraG	<i>Gesetz zur Kontrolle und Transparenz im Unternehmensbereich</i> – Corporate Sector Supervision and Transparency Act
KPI/ KPIs	Key Performance Indicator(s)

KWG	<i>Kreditwesengesetz</i> – Banking Act
LBMA	London Bullion Market Association
LEED	Leadership in Energy & Environmental Design
LEM	Local Economic Multiplier
LIBOR	London Interbank Offered Rate
LOHAS	Lifestyle of Health and Sustainability
LTCM	Long Term Capital Management
m	Million
MaRisk	<i>Mindestanforderungen an das Risikomanagement</i> – Minimum requirements for Risk management
MDG-scan	Millennium Development Goal scan
MFI	Micro-finance Institution
MIF	Measuring Impact Framework
MiFID	Marketing in Financial Instruments Directive
MOP	Meeting of the Parties
MPT	Modern Portfolio Theory
MSCI	Morgan Stanley Capital International
NAI	<i>Naturaktienindex</i> – index of environmentally friendly stocks
NAMA	National Appropriate Mitigation Actions
NAV / N.A.V.	Net Asset Value
NEPA	National Environmental Policy Act
NGO	Non-governmental organisation
NIS	National Innovation System
NIW	<i>Niedersächsisches Institut für Wirtschaftsforschung</i> – Lower Saxony Institute for Economic Research
NPV	Net Present Value
NPW	Net Present Worth
OASIS	Ongoing Assessment of Social Impacts
OECD	Organization for Economic Co-operation and Development
OEF	Open-end fund
OLG	<i>Oberlandesgericht</i> – higher regional court
OTC	Over-the-Counter
p. / pp.	Page / pages
P/L	Profit and Loss
PE	Private Equity
PFKapAV	<i>Pensionsfonds-Kapitalanlagenverordnung</i> – Pension Fund Investment Decree Act
PISA	Programme for International Student Assessment
PRI	Principles for Responsible Investment
PSIA	Poverty Social Impact Assessment

PVSC	Public Value Scorecard
Q	Research Question
R&D	Research & Development
RDED	Rio Declaration on Environment and Development
REDD	Reduce Emissions from Deforestation and forest Degradation
RJC	Responsible Jewellery Council
ROI	Return on Investment
RTD	Research Technology & Development
S&P	Standard & Poor's
SA	Social Accountability
SAM	Sustainable Asset Management
SCA	Social Compatibility Analysis
SCBA	Social Costs-Benefit Analysis
SCEA	Social Cost-Effectiveness Analysis
SEAT	Socio-Economic Assessment Toolbox
SEC	Securities and Exchange Commission
SEE	Social, Environmental, and Ethical
SIA	Social Impact Assessment
sic	Intentionally so written
SIF	Sustainable Investment Forum
SME	Small and medium-sized enterprises
s. n.	<i>sine nomine</i> – without name
SolvV	<i>Solvabilitätsverordnung</i> – Solvency Act
SPD	<i>Sozialdemokratische Partei Deutschlands</i> – Social Democratic Party of Germany
SPDR	Standard & Poor's Depositary Receipt
SRA	Social Return Assessment
SRI	Socially Responsible Investments
SROI	Social Return on Investment
s. t.	<i>sine tempore</i> – without time
StAG	<i>Staatsangehörigkeitsgesetz</i> – German Immigration Act
SVA	Stakeholder Value Added
TAP	Technology Action Program
TBL / 3BL	Triple Bottom Line
tn	Trillion
TransPuG	<i>Gesetz zur weiteren Reform des Aktien- und Bilanzrechts</i> – Transparency and Public Disclosure Reform Act
TRM	Total Responsibility Management
UCITS	Undertakings for Collective Investment in Transferable Securities Directives

UEAPME	European Association of Craft, Small and Medium-Sized Enterprises
UHNWI	Ultra high-net worth individuals
UK	United Kingdom
UK GBC	UK Green Building Council
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCHE	United Nations Conference on the Human Environment
UNEP FI	United Nations Environment Programme Finance Initiative
UNEP FI RPI	United Nations Finance Initiative Responsible Property Investing
UNEP SBCI	United Nations Environment Programme Sustainable Buildings and Construction Initiative
UNFCCC	United Nations Framework Convention on Climate Change
US / U.S.A.	United States / United States of America
USCCB	United States Conference of Catholic Bishops
USD	US-Dollar
USPTO	United States Patent and Trademark Office
UWG	<i>Gesetz gegen den unlauteren Wettbewerb</i> – Act Against Unfair Practices
VAG	<i>Versicherungsaufsichtsgesetz</i> – Insurance Supervision Act
VC / VCF	Venture Capital / Venture Capital Financing
VerkaufsprospektG	<i>Verkaufsprospektgesetz</i> – German Prospectus Act
VermVerkProspV	<i>Verordnung über Vermögensanlagen-Verkaufsprospekte</i> – Regulation of Investment Prospectuses
VersVermR	<i>Verordnung über Vermögensanlagen-Verkaufsprospekte</i> – Directive on Insurance Mediation
VGF	Association of non-tradeable Closed-end Funds
VorStOG	<i>Vorstandsvergütungs-Offenlegungsgesetz</i> – Act on Disclosure of Management Board Compensation
VVaG	<i>Versicherungsverein auf Gegenseitigkeit</i> (Mutual Insurance Society)
WCED	United Nations World Commission on Environment and Development
WGC	World Gold Council
World GBC	World Green Building Council
WpHG	<i>Wertpapierhandelsgesetz</i> – Securities Trading Act
WTO	World Trade Organization
ZEW	<i>Zentrum für Europäische Wirtschaftsforschung</i> – Centre for European Economic Research
ZKB	<i>Zürcher Kantonalbank</i>

List of figures

- Figure 1 Structure of dissertation (p. 6).
- Figure 2 SRI methodologies (p. 26).
- Figure 3 The engagement process (p. 31).
- Figure 4 The integrated sustainability triangle (p. 37).
- Figure 5 Major research issues of ESG stakeholders (p. 42).
- Figure 6 Information triad in financial instruments advice (p. 53).
- Figure 7 Innovation system (p. 74).
- Figure 8 Typical phases of Venture Capital Financing (VCF) (p. 76).
- Figure 9 ESG add-on performance (p. 91).
- Figure 10 Environmental technologies (p. 169).
- Figure 11 The SRI value chain (p. 185).
- Figure 12 Strategic framework for doing SRI in Germany (p. 197).

List of tables

Table 1	Common SRI portfolio exclusion criteria in Germany (p. 27).
Table 2	Areas of risk relevant for a report on risk, and opportunities (p. 61).
Table 3	Technical arguments, and their effect on SRI performance (p. 84).
Table 4	Sub-sets of ZKB's sustainable country rating (p. 112).
Table 5	Ecological, and social criteria of commodity investments (p. 126).
Table 6	Criteria sets of sustainable building standards in Germany (p. 129).
Table 7	Assessment of current size, and impact of the German SRI market (p. 163).

List of variables

α	Alpha, Jensen's alpha
β	Beta, market risk
σ	Standard deviation
σ^2	Variance
T/ t	Time duration of calculation (in periods).