



Efficient markets, equilibrium prices, and rational agents! Really? What modern finance really is about.

This programme aims to introduce sustainable investment professionals and intermediaries from the responsible investment space into modern finance and investment practice. The program provides sustainable investment proponents with deeply needed technical and conceptual knowledge of financial markets, and modern methods of financial decision-making such as financial data science, in order to support them in building economically and environmentally meaningful products e.g., green bonds, SRI funds etc.

Conventional finance theory, as has been taught and applied over decades, has proven too stylized and too unrealistic in its base assumptions to capture the essence of sustainable finance. Instead of endorsing conventional finance, this program is based on truly state-of-the-art finance theory e.g., behavioral finance, evidence-based finance, and financial data science as the key enablers to unlock the potential of sustainability for good investment decisions and ethical finance practice.

Successful participants will significantly enhance their abilities and employability in three distinct ways:

- Removing roadblocks to mainstreaming RI: understanding how the 'tools of the trade' of conventional finance constrain building the sustainable finance paradigm and how to cope with them;
- Practicing truly modern and flawless finance: learning to apply state-of-the-art finance methods and investment thinking such as AI, quantitative approaches, and financial data science;
- Learning to behave strategically towards mainstream finance: identifying inroads for sustainable products and investment techniques into the domain of orthodox and conventional investment management.

After passing the exam successful candidates are granted the title

Certified Sustainable Investing and Finance Professional

Target Group:

- SRI professionals
- Professionals in Sustainable Finance
- Green Bond specialists, originators
- Intermediaries e.g., rating analysts
- Representatives from NGOs and Sustainable Finance Initiatives

who seek to obtain in-depths expertise in finance.

Module 1 - Financial Economics

Introduction

- Financial markets and the economy
- Asset classes
- Financial instruments
- Market actors

Portfolio Theory

- · Risk and return concepts
- Capital allocation
- Optimal risk portfolio
- · Integration of ESG

Fundamentals of Valuation

- Capital Asset Pricing Model (CAPM)
- Multifactor models
- Efficient market hypothesis
- · Other theories?
- Does it all make sense?

Lessons from Behavioral Finance

- · Biases and heuristics
- Behavioral convergence/ divergence
- Contagions
- Financial memes and ideologies

Module 2 - Equities

Equity Valuation

- Financial statement analysis
- ESG financial analysis
- Dividends and distribution

Corporate events

- Initial public offerings (IPO) and new issues
- Mergers and acquisitions

Investment styles

- Active investing
- Passive investing and index benchmarks
- Value investing
- Other investment styles

Corporate Governance

- · International standards of CG
- Stewardship concept
- Executive remuneration
- Shareholder activism
- Board diversity and gender diversity

GHG Disclosure as recommended by EU TEG

- From Carbon Disclosure Project to TCFD
- From TCFD to EU ETG Climate related Disclosures Report
- EU TEG guidelines (e.g. double materiality, collect and estimate GHG emissions)

Module 3 - Financial Data Science

Equity vs. Bond Markets

- Primary vs. secondary markets in debt and equity – market microstructure
- Comparison of instruments and liquidity
- Voting vs. covenants
- Financially independent information in equity and bond markets – common players

Evidence-based Investment Analysis – fad or fashion?

- What are true evidences?
- The gist of EBIA: transparency of assumptions and test results
- · Financial memes and ideologies

The Elephant in the Room – a Primer in Financial Data Science

- Is FinTech killing jobs also mine?
- Which opportunities does
 Artificial Intelligence offer? Or is it Augmented Intelligence?
- Is Deep Learning just Deep Imitation?
- When to apply which approach in Financial Data Science

Comparison of ESG Aspects of Equity and Bond Markets

- Engagement in equity and bond markets
- Are standard environmental, social, and especially corporate governance ratings representing the views of bondholders, too?
- Debt denial vs. divestment direct impact vs. symbolic action?

EU Taxonomy for Sustainable Activities

- Technical Logic
- Taxonomy, classifications and NACE
- Prime Use Cases
- Green Supporting Factor & Co

EU Climate Transition Investing in Equity Markets

- Net Zero 2050
- Points of Departure for Decarbonising
- ,-7%' Trajectories
- · Measures against Greenwashing

Module 4 - Bonds

Characteristics of Bonds - Credit Risk

- Maturity
- Currency
- Seniority
- Convertibility
- Callability
- Transparency covenants

Financial Data Science of Bond Markets

- Corporate hierarchy of units of analysis: private placement, security, legal entity, corporation, ultimate parent
- LEI: Global Legal Identifier Foundation
- ISO standards of sovereigns
- Other issuers of bonds
- DeepData.ai
- Matching and mapping data
- Volatility (uncertainty) vs. real downside risk
- Bond portfolio construction
- Benchmark indices in bond markets
- Sector classification for bond markets
- Asset pricing models for bond markets
- Empirical evidence of ESG alpha in bond markets

Assessment of Bonds

- Financial independence of credit ratings ...?
- Empirical evidence on the accuracy of financially independent credit rating agencies
- Algorithms for independent buy-side assessments
- Green ratings: when are they of high quality and financially independent?
- Is green high yield attractive?
- Are investment bankers conflicted in their interests?
- ESG information in bond issuance documentation
- Creating transparency re potential co-investors – negotiating covenants
- Denying debt

Post investment decisions

- Transparency and reporting
- Engaging for good corporate behavior

Sovereign and regional bonds

- Assessing nation states
- Engaging with regulators
- Tax effectiveness and tax collection efficiency: cultural and default probabilities
- Municipal bonds
- Coherence of city regions
- Regional classifications
- Other issuers

Green bonds, EU GBS and green infrastructure

- Market growth
- Investors
- EU GBS
- Green bond due diligence
- Relative valuation of green bonds
- Regulative, legislative framework and initiatives around green bonds: how independent are green ratings?
- Green bond indices
- Green infrastructure projects
- · Reporting expectations
- From green bonds to social bonds to SDG bonds

EU Climate Transition Investing in Bond Markets

- Net Zero and Refinancing
- Bond Markets vs. Equity Markets
- GHG intensity vs. Absolute GHG emissions
- ,-7%' Trajectories in Bond Markets

The programme consists of 3 in-class blocks.

The first placed at the beginning of the programme, the second before the exam. In between the workshops, candidates study in self-paced mode, supported by webinars.

Acquired knowledge will be subject to a two hour exam.

All students passing the exam will then start a project work. The result of the project work will be presented in a two-day closing session.

The overall workload for the students sums up to approximately 120 hours during the six month study period. On average, this means 5 hours per week during the programme.

Study Material

The study material will consist of a set of crucial articles to study basic structure of finance, equities and bonds and recommended video material. The material will focus on (i) financial theories and how it is applied in investment decision-making including valuation and price-formation, and (ii) applied equity and bond valuation and management including the application of ESG to valuation approaches. Participants need internet access, to watch videos of a certain bandwidth.

Scientific Director



Prof Dr Andreas Hoepner

Professor of Operational Risk, Banking & Finance at the Michael Smurfit Graduate Business School and the Lochlann Quinn School of Business of University College Dublin (UCD)

He is currently also heading the 'Practical Tools' research group of the Mistra Financial Systems (MFS) research consortium. Prof Dr Hoepner serves as board member of the Financial Data Science Association and sits on independent assessment committees for the Investment & Pensions Europe (IPE) Awards, the Investment Innovation Benchmark (IIB), and the RI Awards. He sits on advisory boards for Bank J. Safra Sarasin, the Carbon Disclosure Project (CDP), the Deep Data Delivery Standards, the Future World Fund, Kempen and Invesco. Andreas received his PhD from St Andrews in June 2010, where he was on faculty 2009 to 2013 and built up the Centre for Responsible Banking and Finance as its Deputy Director. He is founding co-director of a social enterprise (Sociovestix Labs, a spin-off from the German Research Centre for Artificial Intelligence [DFKI]).

Prof Dr Hoepner's financial data science research has made him sole inventor of the US patent investment performance measurement (No. US8751357 B1).

DVFA - Deutsche Vereinigung für Finanzanalyse und **Asset Management**

Responsible Investor

DVFA is the Society of Investment Professionals in Germany, founded in 1960. Currently, DVFA has more than 1,400 individual members representing over 400 investment firms, banks, asset managers, consultants and counselling businesses. DVFA assures the credibility of the professionals and the integrity of the market by offering internationally recognised qualification programmes, by providing platforms for professional financial communication, and by effective self-regulation.

Via EFFAS, the umbrella organisation of European Analysts' Societies, DVFA offers access to a pan-European network with more than 17,000 investment professionals in 27 nations. Via ACIIA, the Association of Certified International Investment Analysts, DVFA is part of a worldwide network of more than 100,000 investment professionals.

DVFA GmbH as provider of training programmes and courses is a limited company owned by DVFA e.V. Since 1987, more than 5.000 graduates have received a degree from DVFA in one of our postgraduate-programmes. About 250 candidates are currently enrolled with DVFA per year. More than 150 tutors are under contract, practitioners from the financial industry as well as academics and professional trainers.

Launched June 2007, Responsible Investor (RI) is the only dedicated newswire reporting on responsible investment, ESG (environmental, social and corporate governance) and sustainable finance for 6000+ institutional investment subscribers globally. RI also produces multiple specialist workshops and three major annual conferences in London, New York and Tokyo.

RI is published by Response Global Media Limited, a stakeholder media company focusing on responsible investment, ESG and sustainable finance. Our aim is to lead strategic, sustainable change in financial markets through thoughtleadership, proprietary journalism and community building amongst business professionals. We define stakeholder media as: undertaking media activities which support and add value to the progress and growth of a specific community/sector, while maintaining strong principles of independence and impartiality.

responsible

DVFA GmbH

Mainzer Landstraße 47a 60329 Frankfurt am Main Germany

Tel. +49 (0) 69 26 48 48 121 Fax +49 (0) 69 26 48 48 488 Mail: finanzakademie@dvfa.de www.dvfa.de

Image used under license from Shutterstock.com: p. 1/8: everything possible/Shutterstock.com

January 2020 | Programme and exam structure as well as the syllabus might be subject to change.



Terms and Conditions of DVFA GmbH

1. Scope of Agreement

Scope of Agreement
These General Terms and Conditions for Participants apply to
participation in all Events, including certificate programmes and
workshops, as well as seminars, symposia and conferences
(Other Events) and eSeminars offered by DVFA – Deutsche Vereinigung für Finanzanalyse und Asset Management GmbH, together with the individual registration form, online registration or
registration via the Shopping Cart on the DVFA website, and the
accented Contract accepted Contract.

- 2.1 Registration
 2.1 The registration form must be filled out with the relevant information, signed and sent to DVFA. Written registration may be sent by Post or fax or in the case of Other Events and eSeminars, also via the relevant online registration form or the Shopping Cart. Registration constitutes a binding statement of intent on the part of the Participant or, in the case of registration by the employer, the Participant's employer to enter into a Contract for participation in the DVFA Event specified in the registration form; upon signing, registration is binding for the Participant or the Participant's employer. DVFA shall confirm receipt of the binding registration (Confirmation) in writing or via e-mail. Event registration is then subject to acceptance of the registration by DVFA. The DVFA shall state in writing or via e-mail its acceptance of the Participant to the relevant Event (Acceptance Statement).

 2.2 By sending the registration, the Participant and, as applicable, the Participant's employer expressly acknowledge these General
- by serioning the registration, the Participant and, as applicable, the Participant's employer expressly acknowledge these General Terms and Conditions for Participants. These General Terms and Conditions for Participants apply equally to members and non-members of DVFA Deutsche Vereinigung für Finanzanalyse und Asset Management e.V. to the extent not otherwise specified in writing.
- 2.3 Ancillary agreements in conjunction with these General Terms and Conditions shall only be valid and effective if they have been set forth in writing between both parties. Unilateral reservations or preconditions in relation to the registration are expressly excluded from the Contract.

Scope of Performance

- Scope of Performance
 The scope of contractual performance is specified in the individual information material relating to the relevant Event and the additional details included in the registration form.

 If, at the time of registration or acceptance, the time and place of individual Events have not been definitively stated in the informational material or registration forms, DVFA shall announce said data in due time prior to the Event.

 It he ease of digitally provided content entry feer reproduction.
- 3.3 In the case of digitally provided content, error-free reproduction may be subject to the recipient's access to adequate technical infrastructure (details specified, as necessary, in the individual product Deportation.

- 4. Changes
 4.1 DVFA reserve the right to change Event programmes to the extent necessary, provided this does not detract from the subject matter of the Event, and to appoint substitute instructors in cases of emergency. DVFA shall inform Participants of any changes in due time prior to the Event.

 4.2 Holding of individual Events is contingent upon registration of a minimum number of Participants. If the minimum number of Participants is not reached, DVFA is entitled to postpone the Event date or cancel the Event. DVFA shall immediately inform Participants in the case of Event postponement or cancellation, providing the date of the postponed Event or refunding any fees paid, as the situation warrants.

 4.3 DVFA is entitled to change the venue of an Event, in which case it shall immediately inform the Participants.

 4.4 If individual lesson hours cannot be held, the Participant shall have no claim to a replacement of the cancelled hour or reim-
- have no claim to a replacement of the cancelled hour or reim
- bursement of fees.

 In the event that an Event is cancelled in its entirety because an instructor is unable to attend, DVFA shall endeavour to offer a replacement date. If the Participant is unable to attend at the replacement date, this shall result in a claim to full or partial reimbursement of fees paid.

Examination Rules

Examinees are subject to the version of the Examination Rules in force at the time of the examination.

- 6. Payment Terms
 6.1 DVFA shall receive the fees stated in the registration form. The Event fees are in each case subject to additional value added tax (VAT) in the statutory amount.
 6.2 Event fee payment is due upon receipt of the related invoice, and payable within the period stated therein.
 6.3 If the Event in question is a distance learning course, then the Event fee shall be invoiced in instalments; the number of instalments is calculated as the minimum duration of the course (in months) divided by three (3), rounded upward.
 6.4 Receipt of Event fee payment by DVFA is a precondition for performance by DVFA and for participation in any Event. If payment is not received within the specified period, the Participant may be excluded from participation at any time. The Participant bears liability for any and all resulting damages. liability for any and all resulting damages

Cancellation and Non-attendance

7. Cancellation and Non-attenuance
7.1 Certificate programmes and workshops
The Participant, or the Participant's employer in the case of Participants registered by their employer, may cancel registration in writing at any time until receipt of the Confirmation from DVFA, without incurring cancellation fees. If written cancellation is submitted after sending of the Confirmation by DVFA and prior to conditing if the Accordance Statement an amount equal to one. mitted after sending of the Confirmation by DVFA and prior to sending of the Acceptance Statement, an amount equal to one-third of the relevant Event fee plus VAT is payable as a cancellation fee. In the case of cancellations submitted after sending of the Acceptance Statement, the full Event fee is payable. The Participant, or the Participant's employer, may, however, name a substitute Participant. DVFA reserves the right to disapprove the substitute if it deems that the requirements for participation in certificate programme or workshop are not met. If a substitute Participant alakes part in the Event, said substitute bears joint liability with the Participant, or the Participant's employer in the case of Participants registered by their employer, for payment of the Event fee. The Participant or the Participant semployer in the case of Participant registered by their employer, is, even is the Participant does not attend the certificate programme or workshop, obliged to pay the full Event fee. The foregoing also applies to partial Event bookings.

For cancellations submitted at the latest fourteen (14) days prior to the start of the Event, an amount equal to one-third of the re-levant Event fee – up to a maximum of EUR 500 – plus VAT is payable as a cancellation fee. For cancellations within fourteen (14) days prior to the start of the Event, the full Event fee is pa-yable. Cancellation shall be submitted in written form by Post, fax or e-mail. A substitute Participant may be named, subject to the approval of DVFA.

eSeminars

After sending of access data or provision of access to the relevant content, cancellation is no longer possible.

Distance Learning

If the booked Event is a distance learning Event, cancellation without cause is possible only upon conclusion of the first semester after entry into the registration Contract, observing a notice period of six (6) weeks, and thereafter observing a notice period of three (3) months. In the event of cancellation, the Participant, or the Participant's employer in the case of Participants registered by their employer, are liable for payment of the portion of the Event fee covering the performance received during the term of the Contract. Payments for performance up to the end of the cancellation period are non-refundable. cancellation period are non-refundable.

Rescission Policy
 The Participant has the right to rescind this Contract within fourteen (14) days without cause. The 14-day rescission period begins on the date of entry into the Contract.

The rescission right can be exercised by sending a clear state

DVFA GmbH Mainzer Landstr. 47a 60329 Frankfurt am Main Germany Tel.: +49 69/26 48 48 0 Fax: +49 69/26 48 48 488 Email: info@dvfa.de

(e.g. in a letter sent by Post, fax or e-mail), expressing the decision to rescind this Contract. The rescission form included with the Acceptance Statement may be used for this purpose but this is not a requirement. The rescission is deem if the rescission statement is sent prior to expiry of the resci sion period.

8.2 Consequences of rescission
If the Participant rescinds this Contract, DVFA shall refund all payments received, including delivery costs (with the exception of additional costs arising from the Participant's use of delivery methods other than the lower-cost standard delivery option offered by DVFA), immediately and, at the latest, fourteen (14) days from the date of receipt of the rescission statement. For the refund of payments, DVFA shall employ the same payment method used for the original transaction, under payment method used for the original transaction, under the participant of the payment method used for the original transaction, under the payment method used for the original transaction, under the payment method used for the original transaction, under the payment method used for the original transaction. same payment method used for the original transaction, un-less expressly agreed otherwise between the parties; in no case will the Participant be charged fees or costs for the re-fund of payments. If the Participant has requested interim performance during the rescission period, this is subject to payment of a reasonable amount to cover the portion of per-formance received relative to the full scope of performance set forth in the Contract in the period until DVFA was noti-fied of the decision to exercise the rescission right under this Contract.

Liability

- 9. Liability
 9.1 DVFA bears liability only in cases of intent or gross negligence. Liability for slight negligence shall come into question only in cases involving loss of life, physical injury and damage to health, or in the event of breaches of cardinal obligations (i.e. obligations essential for achieving the purpose of the Contract). If DVFA breaches its partial ellipsticate thereth of light endifference.
- breaches its cardinal obligations through slight negligence, any liability is limited to foreseeable damages.

 9.2 DVFA bears no liability for personal injury and/or property damage occurring during travel to or from the Event venue.

 9.3 In the case of digitally provided content, DVFA bears no liability for disruptions caused outside of the domain DVFA, e.g. disruptions caused outside of the domain DVFA, e.g. disruptions in transmission via the Internet.

10. Confidentiality

- 10.1 Event-related informational material and content are protected by copyright. All rights are reserved by DVFA. Any reproduction, distribution, revision or publication is subject to prior written ap-proval from DVFA.
- 10.2 Access data for restricted Internet content (DVFA Network) pro-
- 10.2 Access data for restricted internet content (DVFA Network) provided in connection with registration may not be made available to third parties. Any violation results in grounds for blocking further access to the DVFA Network.

 10.3 Participants are obliged to handle any and all data and information relating to other Participants and instructors as strictly confidential; the same applies to any and all data and information relating to the programmes or Events themselves.

- 11. Privacy
 11. For the purposes of processing registration, conducting the event and, as applicable, managing membership in DVFA e.V., information and data provided by participants will be processed and stored as necessary executing the obligations of the contract, made available to cooperation partners. For the purposes of contract performance and ascertaining eligibility for discounted event fees, DVFA shall request that DVFA e.V. confirm the membership of registrants claiming membership.
 11.2 DVFA keeps Participants informed about future events and publications by sending participants related informational material via e-mail and/ or mail. Participants can be excluded from the mailing lists at any time by request.

Requests for removal from mailing lists

DVFA GmbH Mainzer Landstr. 47a 60329 Frankfurt am Main Germany Tel.: + 49 69/26 48 48 0 Fax: + 49 69/26 48 48 488 Email: info@dvfa.de

12. Miscellaneous

- 12.1 In cases of force maieur, DVFA shall be exempted from per formance obligations for the duration of the disruption. Force majeur includes fire, strike, lock-out and other circumstances not under the control of DVFA, which impede or hinder performance by DVFA.
- 12.2 If any provisions of these General Terms and Conditions for Participants are or become invalid, this shall not affect the validity of other provisions herein. In place of the invalid provision, the parties shall agree on a substitute provision best suited in legal terms to enact the intended commercial purpose of the original provision. In cases of any gap or omission in these General Terms and Conditions for Participants, the parties shall agree on a provision suited to enact the intentions of the parties had they
- a provision suited to enact the intentions of the parties had they given consideration to the omitted provision.

 12.3 This Contract is governed by the Laws of the Federal Republic of Germany. The place of jurisdiction for any and all legal disputes arising from this Contract is Frankfurt am Main, provided the opposing party is acting in the capacity of a commercial agent. For legal disputes arising from a distance learning Contract, or relating to the existence of such a Contract, exclusive jurisdiction lies with the courts of the municipality in which the Participant is domicited.

Frankfurt am Main, May 2018