



# Future Scenarios for Responsible Investment (RI) across Asset Classes

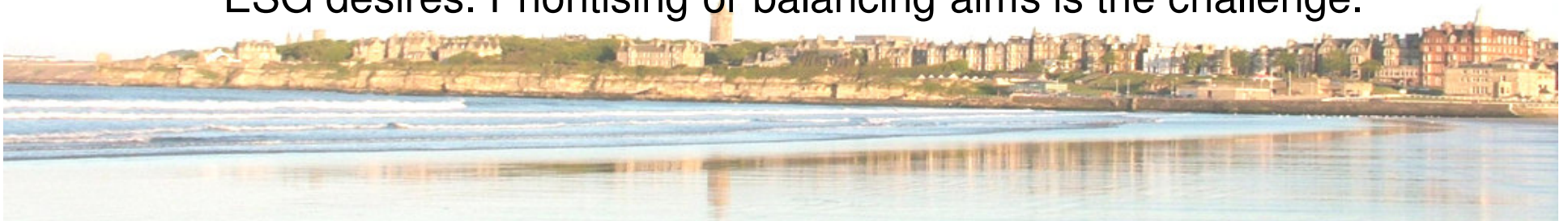
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# Summary



- Aim: Exploring RI's hypothetical potential with respect to (i) its impact on corporate ESG behaviour, (ii) its ESG performance, (iii) and its financial performance
- Method: Scenario development via Morphologic Analysis
- Findings:
  - RI has separately a very strong potential in each of the three measures (e.g. Short Seller Engagement, *Game Changer* RI, or *Best in Box* RI)
  - However, optimizing RI's potential in one measure often conflicts with another measure
  - Hence, RI has an immense potential to serve investors and their ESG desires. Prioritising or balancing aims is the challenge.



# Morphologic Analysis



- based on Astrophysicist Fritz Zwicky (1948, 1969), who used it for i.e. for the development of rocket propulsion systems
- three step procedure
  - (1) Breaks down a complex process in its relevant variables
  - (2) Defines all possible properties of these variables
  - (3) Generates a universe of all (hypothetical) specifications of the process by multiplying out all possible processes of each variable  
→ Encourages analyses of boundary specifications
- Simple Example:
  - A process Z consists of only three variables A, B, and C, which can take 4, 3, and 5 properties, respectively
  - Morphologic Analysis would result in this case in a universe of 60 [ $4 \times 3 \times 5 = 60$ ] specifications of process Z, of which usually only a few surfaced in Z's historical evolution



# Aim and Information Basis of Morphologic Analysis



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- Aim: Investigate hypothetical potential of RI with regards to three performance measures based on boundary scenarios of the RI process
  - RI's ESG performance
  - RI's impact on corporate ESG behaviour
  - RI's financial performance
- Focus: We aim more to be thought provoking in the long term than to generate scenarios adhering to a certain country's current legislation
- Information Basis for Morphologic Analysis (> 1,000 documents):
  - RI literature reviews and overview books
  - (Annotated) bibliographies of RI
  - Searches for recent research on Google Scholar, Web of Science & SSRN
  - Websites of RI industry associations
  - Websites of 71 ESG rating organisations analysed by Schäfer et al. (2006)



# Selected Variables and Properties



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- Direction of RI transaction (Long, Short, Derivates based mix)
- Classification criteria for ESG universe (Industry, Country, Size, Style, other)
- Classification(s) of asset universe before ESG screening? (No, once, twice, more than twice)
- ESG rating (Absolute, Relative to Sustainability Goals, Relative to peer group)
- Threshold in ESG screening? (No, Necessary threshold, Sufficient threshold)
- Impact of assets' ESG performance (low, medium, high)
- Use of optimization techniques in ESG screening (No, heuristics, advanced techniques)
- Relation to engagement target (Investor, Potential investor, Shorter Seller)



# Scenarios exploring RI's potential impact on corporate ESG behaviour



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- *Engage to Consider* RI
  - Engage with companies and *offer* them consideration of investment for improved ESG performance
  - Avoids ESG dilemma of Shareholder Activism (Guay et al., 2004)
- Double / Triple RI
  - Hedge Funds could double an investment's ESG impact by investing long in good ESG companies financed by short selling bad ESG companies
  - Impact would be tripled adding *Short Seller Engagement*
- The *Encourage and Caution* List
  - Annually updated Triple RI list maintained by coalition of responsible investors with (i) 10 spots for best ESG companies, which are over-proportionally invested in, and (ii) 10 spots for worst ESG companies, which are shorted in case of irresponsible behaviour during their *probation for public goodwill* year

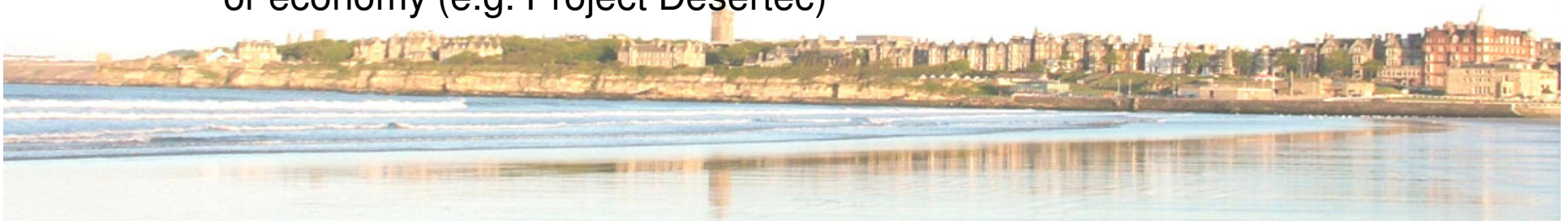


# Scenarios exploring RI's ESG performance potential



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- (Mutually) Guaranteed RI
  - Investors are guaranteed to only invest in companies, which meet their absolute ESG performance requirements (e.g. CO<sup>2</sup> emission)
  - Investors with very strict requirements could guarantee companies their investment to diversify their otherwise very small asset universe
- Sufficiently Sustainable Investment
  - Requires a corporate ESG rating relative to sustainability goals to exceed a necessary threshold (e.g. responsible investment portfolio should have an estimated ecological footprint of below 1)
- ,Going for the ESG Game Changer' RI
  - Private equity or Venture Capital in assets, who do not only have a good ESG performance, but whose business model relies on their ESG performance and who are likely to change an *ESG game* in an industry or economy (e.g. Project Desertec)



# Scenarios exploring RI's financial performance potential



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- ,Best in X' RI
  - In addition to classifying stocks by industry classes, they could also be classified by country, size or style etc.
  - A ,Best in Box' strategy, which defines a box i.e. by industry, size and country characteristics, could likely provide a responsible portfolio with superior diversification characteristics following Lee and Faff (2009) and Hoepner and McMillan (2009)
- Climatically Responsible Investment
  - Investors can fairly be expected to demand more compensation for climate change risk than for business cycle risk in a few decades, as the former is in contrast to the latter a pure, increasingly dangerous risk (Hoepner & McMillan, 2009), which is also systematic over time (Figge, 2001)
  - Climatically responsible stocks are hence very likely currently underpriced from a long term perspective



# Scenarios exploring RI's financial performance potential (2)



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- Optimized RI
  - ESG investment based on ESG inefficiencies (Derwall et al., 2005; Edmans, 2008; Eichholtz et al., 2009; Gompers et al., 2003; Hoepner et al., 2008; Kempf and Osthoff, 2007)
  - Specialisation on SRI increases financial performance (Gil-Bazo et al., 2008)
  - Use of risk and performance measure optimization techniques (e.g. Hallerbach's et al.'s (2004) Interactive Goal Programming)





# Thank you for your attention!

I appreciate (especially critical)  
questions and comments.

