ENVIRONMENTALLY RESPONSIBLE INVESTMENT - A FINANCE PERSPECTIVE

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Socially responsible investment

Classifying firm activities

Informing investment / portfolio formation

History

US Funds incorporating Environmental, Social and Governance Factors

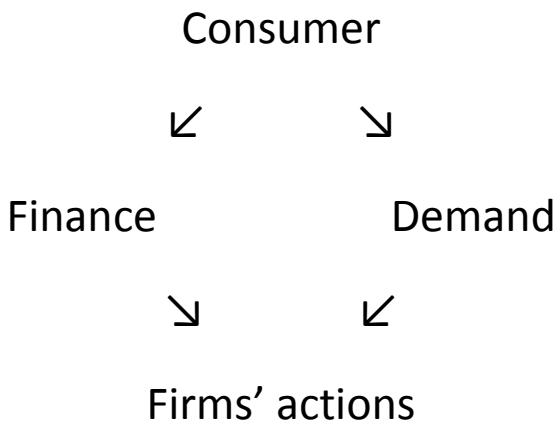
Year	1995	1997	1999	2001	2003	2005	2007	2010	2012	2014
No. of funds	55	144	168	181	200	201	260	493	720	925
Tot. net assets (billions)	$12	$96	$154	$136	$151	$179	$202	$569	$1,013	$4,306

Source: US SIF Trends 2014

Does it matter?

- Theory is underdeveloped
  - Preference-based decisions beyond price theory not well explored

In general



The demand side is better understood (can be dealt with through ordinal preferences)

Sufficiently many 'ethical' consumers will affect demand and thereby firms' actions.

However, the finance side is less understood…

Will concern for, say pollution, on the investment side eventually affect firms' actions in equilibrium?

Finance

- **'Passive' shareholders:**
  - Ethical concerns in portfolio formation

    → Alter cost of capital

      → Firms' actions [e.g. Heinkel et. al. (2001); Mackey et. al. (2007),Dam and Scholtens (2015)]

- **'Active' shareholders:**
  - Ethical concerns in portfolio formation

      → Alter firms' decisions through shareholder voting [e.g. Kelsey & Milne (1996); Renström & Yalçin (2003); Liu, Marsiliani & Renström (2016)]

The role of government

- Can government do all through corrective (Pigou) taxes?

If not, it can ‘nudge’ private ‘solutions’

- Provide index on SRI (firms’ actions ‘score’, in turn used in portfolio formation)
- Encourage active shareholders by
  - Empowering mutual funds
  - Forster shareholder ‘activism’
- Educating
  - ‘Financial literacy’ [e.g. Ashok & Spataro (2015); Spataro & Corsini (2017)]

Curriculum at universities (e.g. business school accreditations: EQUIS, etc.)

Example Durham University Business School’s mission statement:

“….use knowledge to deliver equitable and sustainable futures…

Looking deeper into the finance channel

- Environmentally and socially responsible mutual funds

- Empirical
  - CAPM

$$R_j - R_f = \alpha_j + \beta_j \left(R_m - R_f \right)$$

and empirical versions...

Is alpha systematically different for ‘green’ mutual funds?

Vast and inconclusive literature!

(e.g. survey by Wallis and Klein (2015))

- **Theory**

  Very little at this stage

  - ‘Ethical’ CAPM (Alykova, Marsiliani, Renstrom (2017)

$$R_j - R_f = \beta_j \left(R_m - R_f \right) + \frac{\lambda D \left(d_j - \beta_j \dfrac{w'd}{w'1} \right)}{bW_0^2 w'1\sigma_m^2 + \lambda D^2}$$

  …from preferences with ‘ethical’ motivation:

$$U(\tilde{W}, D) = a\tilde{W} - \frac{b}{2}\tilde{W}^2 - \frac{\lambda}{2}\left(\sum_j w_j d_j \right)^2$$

Effect on α_j

	d_j low	d_j high
β_j low	Medium	high
β_j high	Low	medium

- Physical investment models (Heinkel, Kraus and Zechner (2001), Mackey, Mackey and Barney (2007), Dam and Scholtens (2015))

Conclusions (with challenging thoughts…)

Theory needs to inform empirical investigation

Theory can be ‘problematic’ if heterogeneity in ‘environmental’ attitudes

- Will ‘unethical’ investors neutralise ‘ethical’ investors in equilibrium?

Potential contradictions:

‘Passive’ ethical shareholders should hold zero in ‘unethical firms’ (or even short-sell whatever that means in this context!)

‘Active’ ethical shareholders should invest in ‘unethical firms’ and use the votes to alter the firms’ decisions.