



Building the case for the internal informational value of ESG disclosure

Donato Calace*, Angelo Russo**

*PhD Candidate, LUM Jean Monnet University

**Director of PhD Program «The Economics and Management of Natural Resources» Full Professor of Management, LUM Jean Monnet University Sustainability Lab – SDA Bocconi

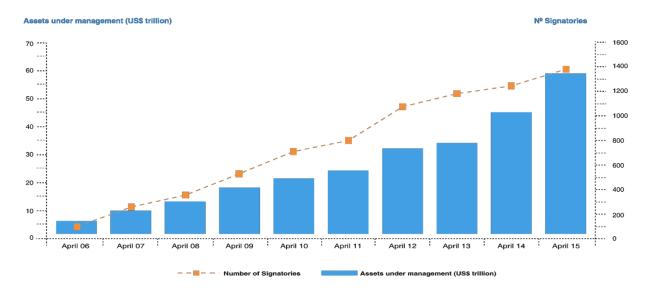
Milan, November 16, 2015





Responsible investments: a «niche» phenomenon

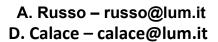








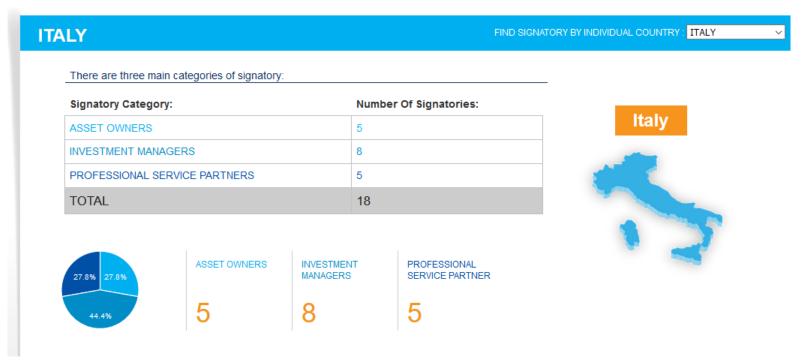






Responsible investments in Italy

Signatories to the Principles for Responsible Investment



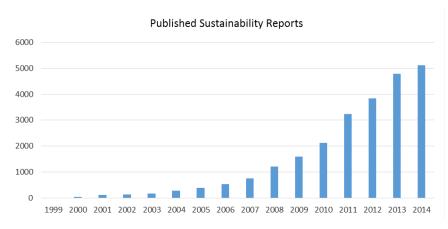
PRI signatories in Italy account for roughly €700bn (\$796bn) AUM



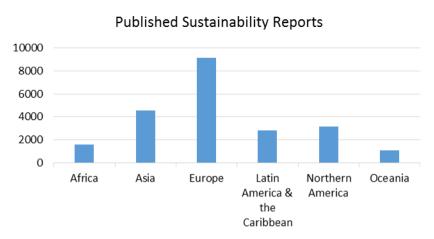


Disclosing ESG data: sustainability reporting (SR)

SR has gained significant momentum in recent years.



"A sustainability report is a report published by a company or organization about the **economic, environmental and social impacts** caused by its everyday activities. A sustainability report also presents the **organization's values and governance model**, and demonstrates the **link between its strategy** and its commitment to a sustainable global economy." (Global Reporting Initiative, 2015)



"the process of identifying, classifying, measuring, recognizing, and reporting performance in all areas of EGSEE (economic, governance, social, ethics, and environmental)". (Brockett and Rezaee, 2012)

Data provided by the GRI Sustainability Disclosure Database

"the process of **providing information designed** to discharge social accountability" (Sutantoputra, 2009)





Policies supporting SR



The December 2014 EU "Directive on disclosure of non-financial and diversity information by certain large undertakings" requires more than 6.000 "public interest entities" (i.e. organizations with more than 500 employees) to report on environmental, social and employee-related, human rights, diversity, and anti-corruption and bribery issues.

Within the newly adopted **UN Sustainable Development Goals** (SDGs), **SDG 12** focuses on "sustainable consumption and production patterns", and target 6 aims at supporting SR worldwide, as an enabling tool for moving towards sustainable development.





The link between ESG disclosure and firm value: academic literature

Bachoo, Tan, and Wilson (2013) analysed the relationship between **firm value and quality of sustainability reporting** for the **ASX 200 firms, from 2003 to 2005**. Using the **Ohlson model**, they found a **positive association with the current price** of a firm's stock, and a **negative one with the cost of equity**, applying **Easton's (2004) MPEG model**.

Clarkson, Fang, Li, and Richardson (2013) investigated the incremental informative value of voluntary environmental disclosure by contrasting it to the Toxic Releases Inventory (TRI) disclosure. They argue that the sources of increase in market value are (1) facilitating expected future financial performance prediction (2) reducing cost of capital. Their sample includes US public companies in 2003 (92 firms) and 2006 (103 firms) operating in five polluting industries. Their results show (1) a positive relationship between incremental environmental disclosure and price of a firm's stock (estimated through Ohlson model), (2) no significant association with the cost of equity capital (using MPEG measure), (3) a positive association with t+3 average ROA and cash flow from operations

Plumlee, Brown, Hayes, and Marshall (2015) introduce a new measure of voluntary environmental disclosure quality and study its relationship with **stock price**, **expected future cash flows**, and **cost of equity** (estimated through target price and PEG). They categorise disclosure on the basis of **type** (hard vs soft) and **nature** (positive vs negative). Their final sample includes **79 US listed firms over a 6-years period** (2000-2005) drawn from **5 industries** (oil&gas, chemical, food, pharma, and electric utilities). Results show, again, a **positive association between positive** (both hard and soft) **voluntary environmental disclosure** and **firm value**





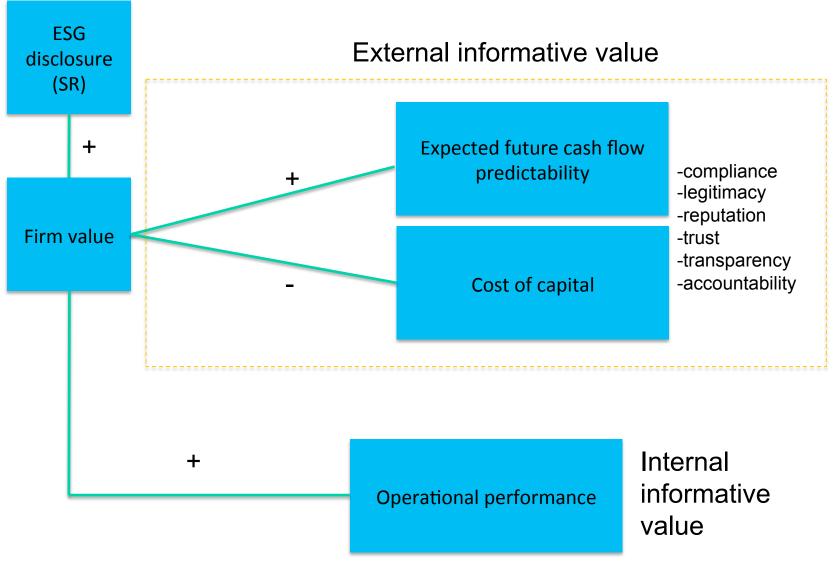
The link between ESG disclosure and firm value: academic literature

Paper	Sample	Model	ESG disclosure variable	Results
Bachoo, Tan, and Wilson (2013)	ASX 200 firms, from 2003 to 2005	Firm's stock price (Ohlson model), cost of equity (Easton's MPEG)	Quality of sustainability reporting	+ with the current price of a firm's stock, and - with cost of equity
Clarkson, Fang, Li, and Richardson (2013)	US public companies in 2003 (92 firms) and 2006 (103 firms) operating in five polluting industries	Firm's stock price (Ohlson model), cost of equity (Easton's MPEG), t +3 average ROA and CFO	Incremental informative value of voluntary environmental disclosure	(1) + with price of a firm's stock, (2) not significant with the cost of equity capital, (3) + with t+3 average ROA and CFO
Plumlee, Brown, Hayes, and Marshall (2015)	79 US listed firms over a 6-years period (2000-2005) drawn from 5 industries (oil&gas, chemical, food, pharma, and electric utilities)	Firm's stock price (Ohlson model), cost of equity (Easton's MPEG, target price), expected future cash flow	Voluntary environmental disclosure categorised on the basis of type (hard vs soft) and nature (positive vs negative).	+ association between positive (both hard and soft) voluntary environmental disclosure and firm value

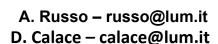




ESG disclosure informative value and firm value









Internal informative value?

An **emerging trend** in literature (Adams & Frost, 2008; Adams & McNicholas, 2007; Arjaliès & Mundy, 2013; Bouten & Hoozée, 2013; Contrafatto & Burns, 2013; Gond et al., 2012; Larrinaga-Gonzalez & Bebbington, 2001; Larrinaga-González et al., 2001; Milne & Gray, 2013) observes SR as a **process**, a **management control system** (MCS)

A MCS is used to **«to maintain or alter patterns in the organisation activity»**, as a **«lever of control»** (Simons, 1990). Simons indicates 4 levers of control:

- Belief system (expression of the corporate core values);
- Boundary system (risks to be avoided, establishing negative terms or minimum standards indicating the limits to be respected)
- Diagnostic system (feedback systems used to track variances from preset goals and manage by exception)
- Interactive system (diagnostic systems used with regular and personal involvement of the top management to address strategic uncertainties)





Hypothesis development

On top of the external informative value, ESG disclosure through the use of SR as a MCS is a source of firm value in term of increased operational performance





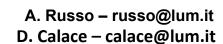
Methodology

Panel analysis of S&P 1200 from 2002 to 2014 (data coming from Thomson Reuters Datastream and Asset4 ESG)

Model	Dependent variable	predictor	Control variables
SR – firm's stock price (Ohlson model)	Current stock price	SR index: SR publishing +reporting scope +guidelines adoption +third party audit)	Book value of equity; Abnormal earnings (EPSt +2); Reporting experience (years);
SR – cost of equity	Cost of equity (Easton MPEG, PEGST for robustness check)	SR index	Beta; Size; Book to market ratio; D/E; Earnings growth ratio;
SR use – operational performance	ROA+1 ROA+2 ROA+3	Monitoring Index: internal audit department+third party auditor+reporting scope +(emission +health&safety +resource efficiency) kpi monitoring	Size; R&D intensity; Slack resources;

All the models include year, industry, geo, reporting experience (years), environmental and social performance (Thomson Reuters score) controls







Results

Model	Results
SR – firm's stock price (Ohlson model)	SR index has a positive coefficient (7.58, p<0.01) when the model includes AE proxied with EPS+2. With EPS, SR index p<0.1
SR – cost of equity	SR index has a small negative coefficient (0.002, p<0.01). Results are confirmed also when estimating cost of equity with PEGST method
SR use – operational performance	Monitoring index has a positive coefficient (0.18, p<0.01) with ROA+3. Results are confirmed on ROA+1 and +2 as well.





Implications

- External informative value is not the only source of firm value for ESG disclosure through SR
- ESG metrics convey an important flow of information relevant for operational performance (materiality)
- Use of SR as MCS is an important driver of operational efficiency, especially considering that years of reporting experience have a negative impact on ROA





Limitations and further research

- **Size bias**: the sample includes the 1200 largest companies in the world;
- A more refined measure of SR use can be built;
- Moderating effects of monitoring and environmental/social performance can be investigated
- A different methodology (SEM) would allow to study the simultaneous relationship between environmental and social performance, ESG disclosure, ESG use, and economic performance





Q & A







"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."

Thank you



