Finance is directly related to the environment

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Abstract The balance sheet can be used as a vehicle to adapt financial institutions to a future carbon-decreased economy. Aligning assets and liabilities with the business relationship network gives firms insight into how they impact and contribute to the environment.

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> 'The science is screaming at us.' (Senator John F. Kerry, 2009)[1]

Firms' business activities have a direct impact on the environment. Carbon dioxide emissions are a readily identifiable negative example. Yet other factors also contribute to the environment in positive and negative ways. There is as yet no universal or binding[2] mechanism for determining these risks,[3] yet arguably the financial institution sector should be at the leading edge of this research and technology. In order for financial institutions to become more responsible as environmental stewards, it is important to clarify the mechanics for environmental risk management within (the reality of) a globally integrated economy.

Banks and other financial institutions are not like factories, billowing out great volumes of pollutants from smokestacks, yet they do have an extensive and vast network of relationships and the consequences of these relationships play out on the firm's balance sheet. As an agent within the relationship network, financial institutions directly interface with the environment — in its naturally occurring states (through timber, mining, real-estate development projects, etc) and also in its socially constructed states (through the economy, government, civil society, etc). Any measurements for environmental risk must take into account this interface and determine how to translate, contextually, the data regarding the firm–environment relationship into information pertaining to the firm's profitability.

The guidelines for environmental risk mechanics should be firm and fair and take into account all constituents and interested parties. But coming to a consensus on the primacy of acting as careful stewards of the environment is only the first step, the details of which set the stage for agreements on environmental risk management and its place in financial institutions.

Risk management can be used to identify, measure and capitalise on environmental risk by adhering to reporting standards (the balance sheet) and also through compliance with green economy standards (even if those standards are simply vetted at the individual firm level). An environmentally-minded approach to the question, 'where is profit coming from?', will help firms to more clearly position themselves as arbiters and benefactors of environmental risk.

Assets and liabilities are inherently and theoretically relational, but that correlation and dependence is not currently illuminated on the balance sheet; and environmental risk, as captured there, is tightly geared to economics that reward market value via shareholders' equity and book value in terms of historical cost. When determining project economics, there is also a habit of translating today's risk through the lens of the industrial economy (eg using sequestered carbon dioxide to extend the life of oil fields, effectively increasing carbon dioxide emissions over time while booking projects at profit).

Arguably, the quality of financial statement information and management decision making would be improved if the balance sheet presented an increasingly 'present' perspective of the firm's profitability. This would include, especially as regards environmental risk, a future-forward, science-based approach towards determining value, risk and cost accounting within a framework that includes a quantitative discipline measuring the symbiosis between social and natural ecology.

A more explicit relationship would show, across the balance sheet, how values for liabilities and assets are formulated in relation to an environmentally-conscious standard of profitability. That standard would take into account acceptable levels of environmental risk volatility and ratings of third and fourth-party investments. Prioritising evaluation and reporting on liabilities according to how they explicitly, through the network of business opportunities, contribute to the profit of the firm, will be a better mark to market of the firm's true, real-time, assets and liabilities.

Creating a risk framework with a wider net for environment-related data points and information will require upfront investment that will contribute positively to the firm over time. As meeting increasingly stringent environmental standards becomes *de rigueur* in markets outside California, Scandinavia and the EU, and as previously solvent firms lose market share to those better adapted to a highly networked, mobile and green economy, it will be important, especially from a credit and operational risk standpoint, for risk managers to be intimately aware of and contribute towards a way of doing business that rewards the systems, controls and intelligence that envision environmental stewardship as an asset within society.

Risk managers should actively participate in identifying, assessing and developing a *bona fide* environmental (security) risk protocol and contributing towards their firm's innovation, stewardship and management in a green-adapted, socially complex economy.

References

1 Kerry, J. F. (2009) Comments during Al Gore's testimony before the US Senate Foreign Relations Committee ('Addressing global climate change: The road to Copenhagen'), 28th January. The 2009 Climate Conference will be held in Copenhagen from 30th November to 11th December, 2009. It will be the final government-level meeting for parties of the United Nations Framework Convention on Climate Change (UNFCC) before the expiration of the Kyoto Protocol in 2012. The Kyoto Protocol, which is linked to the UNFCC, is an international agreement to prevent climate change and global warming which sets binding targets for member nations to reduce greenhouse gas emissions. The UNFCC *encourages* greenhouse gas stabilisation, while commitment to the Kyoto Protocol *mandates* it.

2 Generally speaking, it is still relatively easy and prevalent for businesses, including finance institutions, to avoid reflecting the environmental cost of doing business in their economics. A significant obstacle to changing this phenomenon is the lack of agreement among industry experts about how to qualify and quantify, with reliable, standardised, universally accepted metrics, direct and indirect environmental impacts by firms. Ceres is one leading North American network that seeks to address sustainability challenges within capital markets; some financial firms, like Sentinel Investments, are Ceres coalition members.

3 As per the definition of risk put forward by Eugene A. Rosa, risk is defined as 'a situation or an event where something of human value (including humans themselves) is at stake and where the outcome is uncertain'. See Rosa, E. A. (2003) 'The logical structure of the social amplification of risk framework (SARF): *Meta*theoretical foundations and policy implications', in Pidgeon, N., Kasperson, R. E. and Slovic, P. (eds) 'The Social Amplification of Risk', Cambridge University Press, Cambridge, pp. 47–79.

