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nature > nature climate change > letters > article

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'Climate value at risk' of global financial assets

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Subjects <u>Environmental economics</u> • <u>Governance</u>

• This article has been <u>updated</u>

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Change history

13 April 2016 In the version of this Letter originally published, a reference was mistakenly omitted. The new reference 15 – *The Cost of Inaction: Recognising the Value at Risk from Climate Change* (Economist Intelligence Unit, 2015) – is now cited in the sixth paragraph and subsequent references have been renumbered in all versions of the Letter.

References

1 McGlade, C. & Ekins, P. The geographical distribution of fossil fuels unused when limiting global warming to 2 °C. *Nature* **517**, 187–190 (2015).

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Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (Cambridge Univ. Press, 2012).

- 8 Stern, N. The structure of economic modeling of the potential impacts of climate change: grafting gross underestimation of risk onto already narrow science models. *J. Econ. Lit.* **51**, 838–859 (2013).
- 9 Graff Zivin, J. & Neidell, M. Temperature and the allocation of time: implications for climate change. *J. Labor Econ.* **32**, 1–26 (2014).
- 10 Climate Change Scenarios: Implications for Strategic Asset Allocation (Mercer, 2011).

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- 17 Kaldor, N. A model of economic growth. *Econ. J.* **67**, 591–624 (1957).
- 18 Gollin, D. Getting Income Shares Right. J. Polit. Econ. 110, 458–474 (2002).
- 19 Modigliani, F. & Miller, M. The cost of capital, corporation finance and the theory of investment. *Am. Econ. Rev.* **48**, 261–297 (1958).
- 20 Modigliani, F. & Miller, M. Corporate income taxes and the cost of capital: a correction. *Am. Econ. Rev.* **53**, 433–443 (1963).
- 21 Arrow, K. J. et al. How should benefits and costs be discounted in an intergenerational context? *Rev. Environ. Econ. Policy* **8**.145–163 (2014).

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- 27 Global Shadow Banking Monitoring Report 2014 (Financial Stability Board, 2014).
- 28 Fossil Fuel Divestment: A US\$5 trillion Challenge (Bloomberg New Energy Finance, 2014); http://about.bnef.com/content/uploads/sites/4/2014/08/BNEF
- 29 Shiller, R. J. Do stock prices move too much to be justified by subsequent changes in dividends? *Am. Econ. Rev.* **71**, 421–436 (1981).
- **30** CISL *Unhedgeable Risk: How Climate Change Sentiment Impacts Investment* (Cambridge Institute for Sustainability Leadership, 2015).
- 31 Dimson, E., Marsh, P. & Staunton, M. Equity Premiums Around the World (CFA

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