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| Climate Risk Analysis: review of public research |
| February 2016 |

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[Moody's approach to assessing the credit impacts of environmental risks, Moody’s (2015) 9](#_Toc444180878)

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[Fossil fuels: exploring the stranded assets debate, Towers Watson (2015) 14](#_Toc444180910)

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[Institutional investment, corporate governance and climate change: what is a trustee to do? Minter Ellison (2015) 15](#_Toc444180912)

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[Responding to Climate Change Risk in Portfolio Management, Schroders (2015) 15](#_Toc444180914)

[Stranded Assets: what next? HSBC (2015) 15](#_Toc444180915)

[The Emissions Gap Report 2015, UNEPFI (2015) 15](#_Toc444180916)

[Climate Change and Oil & Gas Industry: How Do We Bridge To A Low-Carbon Future? Alliance Bernstein (2015) 16](#_Toc444180917)

[Options for Reducing Fossil Fuel Exposure, MSCI (2014) 16](#_Toc444180918)

[Another bad year for King Coal, Bank of America Merril Lynch (2014) 16](#_Toc444180919)

[Carbon risk hedging methodology, AODP (2014) 16](#_Toc444180920)

[CTI response to Exxon report on climate risk management, Carbon Tracker Initiative (2014) 16](#_Toc444180921)

[Fossil-fuel Investment in the Norwegian Government Pension Fund Global: Addressing Climate Issues through Exclusion and Active Ownership, Norwegian Finance Ministry (2014) 16](#_Toc444180922)

[A rising risk premium on fossil fuel assets, Impax (2014) 16](#_Toc444180923)

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[Stranded assets, fossilised revenues, Kepler Cheuvreux (2014) 17](#_Toc444180925)

[Hedging climate risk, Andersson et al (2014) 17](#_Toc444180926)

[American climate prospectus: economic risks in the United States, Risk Business (2014) 17](#_Toc444180927)

[Stranded assets: fossil fuels, carbon stores in Environment Agency Pension Fund, Trucost (2014) 17](#_Toc444180928)

[Stranded assets: challenging the status quo, Standard Life (2014) 17](#_Toc444180929)

[Financing climate change: carbon risk in the banking sector, Boston Common Asset Management (2014) 18](#_Toc444180930)

[Storms on the horizon: the investment case for fossil fuel divestment, Impax (2014) 18](#_Toc444180931)

[Essays on the impact of climate change on the insurance industry, Casualty Actuarial Society E-Forum (2014) 18](#_Toc444180932)

[LGS leads by example on climate change: enhancing ‘negative screening’ approach on LGS investments, Local Government Super (2014) 18](#_Toc444180933)

[What does LGS's approach to responsible investing involve? Local Government Super (2014) 18](#_Toc444180934)

[Integrated risk and uncertainty assessment of climate change response policies, IPCC (2014) 18](#_Toc444180935)

[Pension Fund Trustees and Climate Change, The Council of the Association of Chartered Certified Accountants (2014) 19](#_Toc444180936)

[Moving to a low-carbon economy: the impact of policy pathways on fossil fuel asset values, Climate Policy Initiative (2014) 19](#_Toc444180937)

[Moving to a Low Carbon Economy: The Financial Impact of the Low-Carbon Transition, Climate Policy Initiative (2014) 19](#_Toc444180938)

[ESG Keys: Fossil Fuel DisinvestmentIs it the Answer? Distributed Disinvestment Is, UBS (2014) 19](#_Toc444180939)

[Responding to the call for fossil-fuel free portfolios, MSCI (2013) 19](#_Toc444180940)

[Overwhelming risk: rethinking flood Insurance in a world of rising seas, Union of Concerned Scientists (2013) 19](#_Toc444180941)

[Accounting for emissions hidden in reserves, CTI and ACCA (2013) 20](#_Toc444180942)

[What a carbon-constrained future could mean for oil companies' creditworthiness, Standard & Poor’s (2013) 20](#_Toc444180943)

[Shifting capital markets by 2 degrees: implications and strategies for long-term investors, HSBC (2013) 20](#_Toc444180944)

[Environment Agency Pension Fund: strategy to reduce climate risk, EAPF (2013) 20](#_Toc444180945)

[Beyond fossil fuels: the investment case for fossil fuel divestment, Impax (2013) 20](#_Toc444180946)

[What is the right price for carbon? Litterman (2013) 20](#_Toc444180947)

[Petroleum production under the 2 degree scenario (2DS), Rystad Energy (2013) 21](#_Toc444180948)

[Oil & carbon revisited: value at risk from ‘unburnable’ reserves, HSBC (2013) 21](#_Toc444180949)

[Integrated analysis: how investors are addressing environmental, social and governance factors in fundamental equity valuation, UNPRI (2013) 21](#_Toc444180950)

[What a carbon-constrained future could mean for oil companies' creditworthiness, Standard & Poor's and CTI (2013) 21](#_Toc444180951)

[Unburnable carbon 2013: wasted capital and stranded assets, CTI (2013) 21](#_Toc444180952)

[Stranded carbon assets: why and how carbon should be incorporated in investment analysis, Generation Foundation (2013) 21](#_Toc444180953)

[Still dirty, still dangerous: the Norwegian Government Pension Fund’s investments in the coal industry, Greenpeace (2013) 22](#_Toc444180954)

[Superannuation trustees and climate change, Baker & McKenzie (2012) 22](#_Toc444180955)

[Unburnable carbon: are the world’s financial markets carrying a carbon bubble?, CTI (2012) 22](#_Toc444180956)

[Tail risk and the price of carbon emissions, Litterman (2012) 22](#_Toc444180957)

[Investing in climate change 2012: investment markets and strategic asset allocation, Deutsche Bank, (2012) 22](#_Toc444180958)

[Climate change risks and opportunities for investors, CWC (2012) 22](#_Toc444180959)

[Decarbonizing the Swiss real estate sector, Credit Suisse AG, WWF (2012) 22](#_Toc444180960)

[Severe weather in North America: perils, risks, insurance, MunichRe (2012) 23](#_Toc444180961)

[Determining the impact of climate change on insurance risk and the global community phase 1: key climate indicators, Society of Actuaries (2012) 23](#_Toc444180962)

[Adaptation: underwriting risks for (re)insurers, Kepler-Cheuvreux (2012) 23](#_Toc444180963)

[Determining the impact of climate change on insurance risk and the global community, Phase I: key climate indicators, Solterra Solutions (2012) 23](#_Toc444180964)

[Insurance solutions in the context of climate change-related loss and damage, Munich Climate Insurance Initiative (MCII) (2012) 23](#_Toc444180965)

[Climate change and resource depletion: the challenges for actuaries, Institute and Faculty of Actuaries (2011) 24](#_Toc444180966)

[Climate change scenarios: implications for strategic asset allocation, Mercer, IFC & Carbon Trust (2011) 24](#_Toc444180967)

[Investing in climate change 2011: the megatrend continues, Deutsche Bank (2011) 24](#_Toc444180968)

[The treatment of risk and uncertainty in the US social cost of carbon for regulatory impact analysis, Simon Dietz (2011) 24](#_Toc444180969)

[Investing in climate change 2010: a strategic asset allocation perspective, Deutsche Bank (2010) 24](#_Toc444180970)

[Australian equities: pricing carbon risk, Citigroup (2010) 24](#_Toc444180971)

[Sizing the climate economy, HSBC (2010) 25](#_Toc444180972)

[Carbon risks in UK equity funds, Trucost (2009) 25](#_Toc444180973)

[Green New Deal, Societe Generale (2009) 25](#_Toc444180974)

[The climate change challenge, Geneva Association, Dlugolecki (2009) 25](#_Toc444180975)

[Banking & climate change: opportunities and risks, SAM (2009) 25](#_Toc444180976)

[Perspectives on corporate finance and strategy: how climate change could affect corporate valuations, McKinsey (2008) 25](#_Toc444180977)

[The potential impact of climate change on insurance regulation, National Association of Insurance Commissioners (NAIC) (2008) 25](#_Toc444180978)

[Coal and carbon, stranded assets: assessing the risk, HSBC (2008) 25](#_Toc444180979)

[The Inconvenient Math - Implications of Costed Carbon, Credit Suisse (2007) 26](#_Toc444180980)

[Utilities vs. Carbon: phase II, Kepler Chevreux (2007) 26](#_Toc444180981)

[Climate policy uncertainty and investment risk, IEA (2007) 26](#_Toc444180982)

[Credit risk impacts of a changing climate, Barclays and Acclimatise (2007) 26](#_Toc444180983)

[Climate change and the ASX100: an assessment of risks and opportunities, Citigroup (2006) 26](#_Toc444180984)

[A climate for change: a trustee’s guide to understanding and addressing climate risk, IIGC, Mercer (2005) 26](#_Toc444180985)

[Climate change & the financial sector: an agenda for action, Alliance Group & WWF (2005) 26](#_Toc444180986)

[Asset management and climate change, Dlugolecki & Mansley (2005) 26](#_Toc444180987)

[Climate adaptation: risk, uncertainty and decision-making, UKCIP (2003) 27](#_Toc444180988)

[Climate change risks and opportunities, SwissRe (2002) 27](#_Toc444180989)

[Climate change: a risk management challenge for institutional investors, Dlugolecki & Mansley (2001) 27](#_Toc444180990)

# Introduction

The listed articles indicate the state of industry research on climate risk. The list is not exhaustive but does indicate the direction of thinking within the financial industry on climate risk assessment at various levels of the economy. The list is presented in chronological order to show the progression of understanding on climate risk.

There are three broad categories of analysis:

(1) physical climate risk (i.e. flooding, extreme weather) produced by the insurance sector with reference to OECD countries, where they have significant exposure;

(2) economic climate risk and uncertainty analysis; and

(3) company-level climate risk undertaken by banks, focused on The Carbon Tracker Initiative’s stranded assets thesis.

The list does not provide comprehensive coverage of academic analyses on these issues.

# Too late, too sudden: Transition to a low-carbon economy and systemic risk, ESRB (2016)

Online: <https://www.esrb.europa.eu/pub/asc/html/index.en.html>

Author: Advisory Scientific Committee to the European Systemic Risk Board

# Sustainable real estate investment – implementing the Paris Agreement, UNEPFI (2016)

Online: <http://www.unepfi.org/fileadmin/documents/SustainableRealEstateInvestment.pdf>

Author: UNEPFI

# Potential climate risks in financial markets: a literature overview, Norges Bank (2016)

Online: <http://www.sv.uio.no/econ/english/research/unpublished-works/working-papers/pdf-files/2016/memo-01-2016.pdf>

Authors: Ingrid Hjort et. al

# Potential climate risks in financial markets: workshop report, Norges Bank (2016)

Online: <http://www.sv.uio.no/econ/english/research/unpublished-works/working-papers/pdf-files/2016/memo-02-2016.pdf>

Authors: Ingrid Hjort et. al

# After Paris: fiscal, macroeconomic, and financial implications of Climate Change, IMF (2016)

Online: <http://www.imf.org/external/pubs/ft/sdn/2016/sdn1601.pdf>

Authors: Mai Farid, Michael Keen, Michael Papaioannou, Ian Parry, Catherine Pattillo, Anna Ter-

Martirosyan,

# Towards a carbon data science, Hoepner et. al (2016)

Online: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2715101>

Authors: Pei-Shan Yu, Andreas Hoepne, and Hampus Adamsson; e: a.hoepner@icmacentre.ac.uk

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# A guide on climate change for private equity investors, IIGCC (2015)

Online: <http://uksif.org/wp-content/uploads/2012/12/IIGCC-2010.-A-Guide-on-Climate-Change-for-Private-Equity-Investors.pdf>

Author: IIGCC

# Global utilities: COP21 - mind the gap, UBS (2015)

Online: <https://neo.ubs.com/shared/d19frXR23OdEp/>

Authors: Simon Powell et. al, e: simon.powell@ubs.com

# Risks and opportunities from the changing climate: playbook for the truly long-term investor, Cambridge Associates (2015)

Online: <http://www.cambridgeassociates.com/our-insights/research/risks-and-opportunities-from-the-changing-climate-playbook-for-the-truly-long-term-investor/>

Author: Liqian Ma

# Investor momentum around portfolio decarbonization will likely continue to build, Barclays Bank (2015)

Online: not publicly available

Authors: various

Climate Strategies and Metrics: exploring options for institutional investors, 2 Degrees Investing Initiative (2015)
Online: <http://www.unepfi.org/fileadmin/documents/climate_strategies_metrics.pdf>
Authors: StanDupré, JakobThomä, and Sophie Dejonckheere (2°InvestingInitiative); Remco Fischer (UNEPFI); Christopher Weber(WRI/UNEPFI/2°Investing Initiative); CynthiaCummis and Aman Srivastava (World Resources Institute).

# Carbon Compass: Investor guide to carbon footprinting, Kepler Cheuvreux, IIGCC, and Deloitte (2015)

Online: <http://www.iigcc.org/publications/publication/investor-guide-to-carbon-footprinting>

# The Long-Term Risk Signal Valley of Death - Exploring the Tragedy of the Horizon, 2 Degrees Investing, Generation Foundation (2015)

Online: <http://2degrees-investing.org/IMG/pdf/the_tragedy_of_the_time_horizons_-_leaflet_-_light.pdf>

# Known unknowns: The hidden threats that climate risks pose to British prosperity, IPPR (2015)

Online: <http://www.ippr.org/publications/known-unknowns-the-hidden-threats-that-climate-risks-pose-to-british-prosperity>

Authors: Joss Garman, Diana Fox Carney

# Environmental risks: heat map shows wide variations in credit impact across sectors, Moody’s (2015)

Online: <https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1009845>

Author: Henry Shilling et al.; e: henry.shilling@moodys.com

# Moody's approach to assessing the credit impacts of environmental risks, Moody’s (2015)

Online: <https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBM_1010009>

Contact: William Hunter; e: william.hunter@moodys.com

# The heat is on: ‘The Heat is On’ Initiative: catalysing stronger leadership from fossil-fuel companies on climate change, Critical Resource (2015)

Online: <http://www.c-resource.com/assets/The-Heat-Is-On-Initiative-report-A-call-to-action-Critical-Resource-24.11.15.pdf>

# The price of climate change: global warming’s impact on portfolios, Blackrock (2015)

Online: <http://www.blackrock.com/investing/literature/whitepaper/bii-pricing-climate-risk-us.pdf>

Author: Blackrock Investment Institute

# Climate risk: rising tides raise the stakes, Standard & Poor’s (2015)

Online: <http://www.longfinance.net/images/reports/pdf/SP_Climate%20Risk%20Rising%20Tides%20Raise%20The%20Stakes_2015.pdf>

Authors: Michael Wilkins and Xenia Xie et al.

# Global non-linear effect of temperature on economic production, Nature (2015)

Online: <http://www.nature.com/nature/journal/v527/n7577/full/nature15725.html>

Authors: Marshall Burke, Solomon M. Hsiang & Edward Miguel

# Pension Funds and Fossil Fuels: The Economic Case for Divestment, CCPA (2015) [Canada]

Online: <https://www.policyalternatives.ca/publications/reports/pension-funds-and-fossil-fuels>

Authors: Marc Lee, Justin Ritchie

# Climate Change Will Likely Test The Resilience Of Corporates' Creditworthiness To Natural Catastrophes, S&P (2015)

Online: <http://www.actuarialpost.co.uk/downloads/cat_1/SP_Climate%20Change%20Impact%20On%20Corporates_Apr212014.pdf>

Authors: Miroslav Petkov, London (44) 20-7176-7043; miroslav.petkov@standardandpoors.com; Michael Wilkins, London (44) 20-7176-3528; mike.wilkins@standardandpoors.com

# Empty promises: G20 subsidies to oil, gas and coal production, ODI (2015)

Online: <http://www.odi.org/publications/10058-production-subsidies-oil-gas-coal-fossil-fuels-g20-broken-promises>

Authors: Elizabeth Bast, Alex Doukas, Sam Pickard, Laurie Van Der Burg and Shelagh Whitley

# Lost in transition: how the energy sector is missing potential demand destruction, Carbon Tracker (2015)

Online: <http://www.carbontracker.org/report/lost_in_transition/>

Author: Carbon Tracker

# Institutional investors and climate-related systemic risk, Preventable Surprises (2015)

Online: <https://preventablesurprises.com/wp-content/uploads/2011/03/Preventable-Surprises-October-report_FINAL.pdf>

Authors: Raj Thamotheram and Howard Covington

# The impact of climate change on the UK insurance sector, PRA (2015)

Online: <http://www.bankofengland.co.uk/pra/Documents/supervision/activities/pradefra0915.pdf>

Author: Prudential Regulation Authority

# New York Attorney General Assurance of Discontinuance agreement with Peabody Energy, (2015)

Online: <http://ag.ny.gov/pdfs/Peabody-Energy-Assurance-signed.pdf>

Author: Eric Schneiderman, New York Attorney General

# Oil and Gas mismatches: finance, investment and climate policy, Chatham House (2015)

Online: <https://www.chathamhouse.org/publication/oil-and-gas-mismatches-finance-investment-and-climate-policy>

Authors: John Mitchell, Dr Valérie Marcel, Beth Mitchell

# Science-based Target Setting Manual, CDP (2015)

Online: <http://sciencebasedtargets.org/2015/09/23/for-public-comment-science-based-target-setting-manual/>

Authors: CDP, WRI

# Climate change disclosures of companies in the oil and gas, and coal sectors, ClientEarth (2015)

Online: <http://www.clientearth.org/climate-energy/climate-energy-publications/climate-change-disclosures-of-companies-in-the-oil-and-gas-and-coal-sectors-a-letter-to-the-financial-reporting-council-2904>

Authors: ClientEarth, Carbon Tracker Initiative, CDSB, and CDP

# Hague District Court Urgenda decision (2015)

Online: <http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2015:7196&keyword=urgenda>

Author: Hague District Court

# The Lancet Commission on health and climate change (2015)

Online: <http://press.thelancet.com/Climate2Commission.pdf>

Authors: Lancet, various.

# (Mis)calaculated risk and climate change: are ratings agencies repeating credit crisis mistakes? CIEL (2015)

Online: <http://www.ciel.org/wp-content/uploads/2015/06/CIEL_CRA_Brief_24Jun2015.pdf>

Author: Center for International Environmental Law

# On the Edge: 1.6 Million Barrels per Day of Proposed Tar Sands Oil on Life Support, Oil Change International (2015)

Online: <http://priceofoil.org/2015/05/29/edge-1-6-million-barrels-per-day-proposed-tar-sands-oil-life-support/>

Authors: Hannah McKinnon and Lorne Stockman, Oil Change International

# Investing in a time of climate change, Mercer (2015)

Online: <http://www.mercer.com/content/dam/mercer/attachments/global/investments/mercer-climate-change-report-2015.pdf>

Author: Mercer

# Adjusting to a world of surplus crude: from peak oil to crude abundance in just over a decade, Prudential Fixed Income (2015)

Online: <https://cache.webcasts.com/content/ints001/1063650/content/7ffc31c30ad665c8010f0c15bb25f0872169896b/Prudential%20-%20A%20World%20of%20Surplus%20Crude.pdf>

Authors: Brian Barnhurst; David Winans

# IMF Working Paper: how large are global energy subsidies? IMF (2015)

Online: <https://www.imf.org/external/pubs/ft/wp/2015/wp15105.pdf>

Authors: David Coady, Ian Parry, Louis Sears, and Baoping Shang

# Les indices low carbon : entrée des investisseurs institutionnels dans la lutte contre le réchauffement climatique, Andersson et al. (2015)

Online: <http://www.cairn.info/revue-d-economie-financiere-2015-1-page-175.htm>

Authors: Mats Andersson (AP4); Patrick Bolton, and Frédéric Samama (Amundi and SWF RI)

# The case for divesting coal from the Norwegian Government Pension Fund Global, IEEFA (2015)

Online: <http://ieefa.org/wp-content/uploads/2015/05/Case-for-Divesting-Coal-from-the-Norwegian-Government-Pension-Fund-Global_compressed.pdf>

Author: Tom Sanzillo, IEEF

# Allocating Capital for Long-Term Returns: the strengthened case for sustainable capitalism, Generation Foundation (2015)

Online: <http://www.longfinance.net/images/reports/pdf/Generation_allocatingcapital_2015.pdf>

Author: Generation Foundation

# Linkage between the IFA Resource and Environment and Pensions Boards, Institute and Faculty of Actuaries (2015)

Online: <http://www.actuaries.org.uk/research-and-resources/documents/linkage-between-resource-and-environment-and-pensions-board>

Author: IFA Resource and Environment Board

# Mapping Climate Risk of Property and Power Assets, MSCI (2015)

Online: <https://www.msci.com/documents/10199/d8e3c1e1-b0a3-413f-b9e4-a9d36fba4bc2>

Authors: Daniel Rogatschnig (Cape Town); Cyrus Lotfipour (New York); Morgan Ellis (Sydney)

# The Fossil Fuel Transition Blueprint, Carbon Tracker Initiative (2015)

Online: <http://www.carbontracker.org/report/companyblueprint/>

Author: Carbon Tracker Initiative

# Lessons from market turmoil: Raise the “risk premium” for fossil fuels, Carbon Tracker Initiative (2015)

Online: <http://www.carbontracker.org/lessons-from-market-turmoil-raise-the-risk-premium-for-fossil-fuels/>

Authors: Andrew Grant and Mark Fulton

# Climate Change Investment Solutions: A Guide for Asset Owners, IIGCC (2015)

Online: <http://www.iigcc.org/files/publication-files/Climate-Change-Investment-Solutions-Guide_IIGCC.pdf>

Author: IIGCC

# The Market for Lemmings: Is the Investment Behavior of Pension Funds Stabilizing or Destabilizing?, Blake et al. (2015)

Online: [http://ssrn.com/abstract=2567381](http://ssrn.com/abstract%3D2567381) or <http://dx.doi.org/10.2139/ssrn.2567381>

Authors: David P. Blake, E: d.blake@city.ac.uk; Lucio Sarno; and Gabriele Zinna.

# The Case for Forceful Stewardship (Part 1): The Financial Risk from Global Warming, Thamotheram and Covington (2015)

Online: [http://ssrn.com/abstract=2551478](http://ssrn.com/abstract%3D2551478)

Authors: Raj Thamotheram and Howard Covington

# Fossil fuels: exploring the stranded assets debate, Towers Watson (2015)

Online: <http://www.towerswatson.com/DownloadMedia.aspx?media=%7BFF5296C5-5CC0-427A-B976-44A61FEA854C%7D>

Contact author: Jane Goodland, Senior Investment Consultant, T: +44 20 7227 2411, E: jane.goodland@towerswatson.com

# Stormy seas, rising risks: what investors should know about climate change impacts at oil refineries, Union of Concerned Scientists (2015)

Online: <http://www.ucsusa.org/sites/default/files/attach/2015/02/stormy-seas-rising-risks-ucs-2015.pdf>

Authors: Christina Carlson, Gretchen Goldman, Kristina Dahl

# Institutional investment, corporate governance and climate change: what is a trustee to do? Minter Ellison (2015)

Online: <http://www.minterellison.com/publications/articles/Institutional-investment-corporate-governance-and-climate-change-what-is-a-trustee-to-do/>

Authors: Maged Girgis, Sarah Barker

# Beyond Divestment: Using Low Carbon Indexes, MSCI (2015)

Online: <https://www.msci.com/documents/10199/031bf397-5920-4fef-b743-0c879ae46610>

Authors: Remy BriandE: remy.briand@mscibarra.com; Linda-Eling Lee; Sébastien Lieblich; Véronique Menou; Anurag Singh

# Responding to Climate Change Risk in Portfolio Management, Schroders (2015)

Online: <https://c.na32.content.force.com/servlet/servlet.ImageServer?id=01550000001rdLGAAY&oid=00D300000000M2BEAU>

Authors: Rick Stathers and Alexia Zavos

# Stranded Assets: what next? HSBC (2015)

Online: <http://www.longfinance.net/images/reports/pdf/HSBC_Stranded%20Assets_What_Next_2015.pdf>

Authors: Ashim Paun, Zoe Knight et al.

# The Emissions Gap Report 2015, UNEPFI (2015)

Online: <https://issuu.com/unpublications/docs/egr_2015>

Authors: UNEPFI

# Climate Change and Oil & Gas Industry: How Do We Bridge To A Low-Carbon Future? Alliance Bernstein (2015)

Online: <http://d7fa72909c34c4ace4c0-33eff5c5de9f434a00d26f4bef5f88f6.r66.cf1.rackcdn.com/TengBenv2.pdf>

Authors: Oswald Clint, Senior Analyst; T: +44-207-170-5089; E: oswald.clint@bernstein.com; Teng Ben, Associate, T: +44-207-170-0589; E: teng.ben@bernstein.com

# Options for Reducing Fossil Fuel Exposure, MSCI (2014)

Online: <https://www.msci.com/resources/factsheets/MSCI_ESG_Research_Issue_Brief_Options_for_Reducing_Fossil_Fuel_Exposure.pdf>

Author: MSCI

# Another bad year for King Coal, Bank of America Merril Lynch (2014)

Online: <http://www.longfinance.net/images/reports/pdf/baml_coal_2014.pdf>

# Carbon risk hedging methodology, AODP (2014)

Online: <http://aodproject.net/best-practice.html>

Authors: Bob Litterman and Julian Poulter

# CTI response to Exxon report on climate risk management, Carbon Tracker Initiative (2014)

Online: <http://divestinvest.org/wp-content/uploads/2014/09/Exxon-Report.pdf>

Authors: Paul Spedding, Andrew Grant, Carbon Tracker Initiative

# Fossil-fuel Investment in the Norwegian Government Pension Fund Global: Addressing Climate Issues through Exclusion and Active Ownership, Norwegian Finance Ministry (2014)

Online: <https://www.regjeringen.no/contentassets/d1d5b995b88e4b3281b4cc027b80f64b/expertgroup_report.pdf>

Authors: Martin Skancke, Elroy Dimson, Michael Hoel, Magdalena Kettis, GroNystuen and Laura Starks

# A rising risk premium on fossil fuel assets, Impax (2014)

Online: <http://www.impaxam.com/sites/default/files/FFD%20FINAL%20August%202014%20UK_0.pdf>

Contact: Ian Simm, Chief Executive, T: +44 (0) 20 7434 1122; E: i.simm@impaxam.com

# Integrating environmental risks into asset valuations: the potential for stranded assets and the implications for long-term investors, HSBC (2014)

Online: <http://www.iisd.org/sites/default/files/publications/integrating_environmental_risks_en.pdf>

Author: Nick Robins, Head, HSBC Climate Change Centre of Excellence, T: +44 20 7991 6779, E: nick.robins@hsbc.com

|  |
| --- |
| Stranded assets, fossilised revenues, Kepler Cheuvreux (2014)Online: <http://www.keplercheuvreux.com/pdf/research/EG_EG_253208.pdf> Authors: Mark Lewis, T:+33 17081 5760, E: marklewis@keplercheuvreux.com  |

# Hedging climate risk, Andersson et al (2014)

Online: [https://www0.gsb.columbia.edu/faculty/pbolton/papers/Hedgingclimaterisk(v35).pdf](https://www0.gsb.columbia.edu/faculty/pbolton/papers/Hedgingclimaterisk%28v35%29.pdf)

Authors: Mats Andersson (AP4); Patrick Bolton, and Frédéric Samama (Amundi and SWF RI)

# American climate prospectus: economic risks in the United States, Risk Business (2014)

Online: <http://rhg.com/wp-content/uploads/2014/10/AmericanClimateProspectus_v1.2.pdf>

# Stranded assets: fossil fuels, carbon stores in Environment Agency Pension Fund, Trucost (2014)

Authors: Trucost

Online: <http://www.trucost.com/published-research/128/strandedassets/environmentagency>

# Stranded assets: challenging the status quo, Standard Life (2014)

Online: <http://www.standardlifeinvestments.com/WP_Stranded_Assets_White_Paper/getLatest.pdf>

Author: Rebecca Maclean, Analyst, Responsible Investment

# Financing climate change: carbon risk in the banking sector, Boston Common Asset Management (2014)

Online: <http://www.bostoncommonasset.com/documents/ThoughtPiece-2014-07-FinancingClimateChange.pdf>

No author provided: E: invest@bostoncommonasset.com

# Storms on the horizon: the investment case for fossil fuel divestment, Impax (2014)

Online: <http://www.impaxam.com/media-centre/white-papers/storms-horizon-investment-case-fossil-fuel-divestment>

# Essays on the impact of climate change on the insurance industry, Casualty Actuarial Society E-Forum (2014)

Online: <http://www.casact.org/pubs/forum/14wforum/CompleteWinter2014.pdf>

# LGS leads by example on climate change: enhancing ‘negative screening’ approach on LGS investments, Local Government Super (2014)

Online: <http://www.lgsuper.com.au/documents/media/LGS%20Press%20Release%20on%20negative%20screens%2020141007.pdf>

# What does LGS's approach to responsible investing involve? Local Government Super (2014)

Online: <http://www.lgsuper.com.au/documents/factsheets/2014/LGS477-SustInvestPolicy%20FS%202.pdf>

# Integrated risk and uncertainty assessment of climate change response policies, IPCC (2014)

Online: <http://report.mitigation2014.org/report/ipcc_wg3_ar5_chapter2.pdf>

# Pension Fund Trustees and Climate Change, The Council of the Association of Chartered Certified Accountants (2014)

Online: <http://www.ecolateral.org/PensionsandClimateChangeESRCACCA.pdf>

Authors: ACCA, Professor Jill Solomon

# Moving to a low-carbon economy: the impact of policy pathways on fossil fuel asset values, Climate Policy Initiative (2014)

Online: <http://climatepolicyinitiative.org/wp-content/uploads/2014/10/Moving-to-a-Low-Carbon-Economy-The-Impacts-of-Policy-Pathways-on-Fossil-Fuel-Asset-Values.pdf>

Authors: David Nelson; Morgan Hervé-Mignucci; Andrew Goggins; Sarah Jo Szambelan; Thomas Vladeck; Julia Zuckerman

# Moving to a Low Carbon Economy: The Financial Impact of the Low-Carbon Transition, Climate Policy Initiative (2014)

Online:

Authors:

# ESG Keys: Fossil Fuel DisinvestmentIs it the Answer? Distributed Disinvestment Is, UBS (2014)

Online: <https://neo.ubs.com/shared/d1ekB96P7Fg>

Authors: UBC Analysts

# Responding to the call for fossil-fuel free portfolios, MSCI (2013)

Online: <https://www.msci.com/resources/factsheets/MSCI_ESG_Research_FAQ_on_Fossil-Free_Investing.pdf>

Authors: MSCI

# Overwhelming risk: rethinking flood Insurance in a world of rising seas, Union of Concerned Scientists (2013)

Online: <http://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/Overwhelming-Risk-Full-Report.pdf>

Author: Union of Concerned Scientists

# Accounting for emissions hidden in reserves, CTI and ACCA (2013)

Online: <http://www.carbontracker.org/in-the-media/accounting-for-hidden-reserves-press-release-2/>

Author: James Leaton, E: jleaton@carbontracker.org

# What a carbon-constrained future could mean for oil companies' creditworthiness, Standard & Poor’s (2013)

Online: <http://www.carbontracker.org/report/bonds/>

# Shifting capital markets by 2 degrees: implications and strategies for long-term investors, HSBC (2013)

Online: <http://www.churchinvestorsgroup.org.uk/system/files/documents/James%20Corah/HSBC%20-%20Nick%20Robins.pdf>

Author: Nick Robins, Head, HSBC Climate Change Centre of Excellence, T: +44 20 7991 6779, E: nick.robins@hsbc.com

# Environment Agency Pension Fund: strategy to reduce climate risk, EAPF (2013)

Online: <https://www.eapf.org.uk/~/media/Document%20Libraries/EAPF/Investments/Strategy%20to%20reduce%20climate%20risk.ashx>

Contact: Faith Ward, Chief Responsible Investment and Risk Officer, M: 07818 457759, T: 0117 934 4360

# Beyond fossil fuels: the investment case for fossil fuel divestment, Impax (2013)

Online: <http://www.impaxam.com/media-centre/white-papers/beyond-fossil-fuels-investment-case-fossil-fuel-divestment>

Author: Ian Simm, Chief Executive, T: +44 (0) 207 434 1122, E: i.simm@impaxam.com

# What is the right price for carbon? Litterman (2013)

Online: <http://www.cato.org/regulation/summer-2013/what-right-price-carbon-emissions>

Author: Bob Litterman

# Petroleum production under the 2 degree scenario (2DS), Rystad Energy (2013)

Online: <http://www.abcnyheter.no/files/rystad_energy.pdf>

# Oil & carbon revisited: value at risk from ‘unburnable’ reserves, HSBC (2013)

Online: <http://dcdivest.org/wp-content/uploads/2015/10/HSBCOilJan13.pdf>

Author: Nick Robins, Analyst, T: +44 20 7991 6779,

# Integrated analysis: how investors are addressing environmental, social and governance factors in fundamental equity valuation, UNPRI (2013)

Online: http://www.unpri.org/ viewer/?file=wp-content/uploads/Integrated\_Analysis\_2013.pdf

Editors: Katie Beith, Neil Brown, Jessica Cassey and Rob Lake, E: implementation.support@unpri.org

# What a carbon-constrained future could mean for oil companies' creditworthiness, Standard & Poor's and CTI (2013)

Online: <http://www.standardandpoors.com/ratings/articles/en/eu/?articleType=PDF&assetID=1245348784590>

Credit Analysts: Simon Redmond, T: (44) 20-7176-3683, E: simon\_redmond@standardandpoors.com; Michael Wilkins, T: (44) 20-7176-3528, E: mike\_wilkins@standardandpoors.com

# Unburnable carbon 2013: wasted capital and stranded assets, CTI (2013)

Online: <http://carbontracker.live.kiln.it/Unburnable-Carbon-2-Web-Version.pdf>

Author: James Leaton, E: jleaton@carbontracker.org

# Stranded carbon assets: why and how carbon should be incorporated in investment analysis, Generation Foundation (2013)

Online: <http://genfound.org/media/pdf-generation-foundation-stranded-carbon-assets-v1.pdf>

Contact: Daniela Saltzman, E: genfound@generationim.com

# Still dirty, still dangerous: the Norwegian Government Pension Fund’s investments in the coal industry, Greenpeace (2013)

Online: <https://www.urgewald.org/sites/default/files/typ_download/still_dirty.final_.compressed.pdf>

Author: Heffa Schucking, T: +49 2583 304 920; E: heffa@urgewald.org

# Superannuation trustees and climate change, Baker & McKenzie (2012)

Online: <http://www.bakermckenzie.com/files/Uploads/Documents/Superannuation%20Trustees%20and%20Climate%20Change%20Report%20-%20reduced%20file%20size.pdf>

Authors: Baker & McKenzie

# Unburnable carbon: are the world’s financial markets carrying a carbon bubble?, CTI (2012)

Online: <http://www.carbontracker.org/wp-content/uploads/2014/09/Unburnable-Carbon-Full-rev2-1.pdf>

Author: The Carbon Tracker Initiative

# Tail risk and the price of carbon emissions, Litterman (2012)

Online: <http://www.rijpm.com/pre_reading_files/Pre-Reading_Robert_Litterman.pdf>

Author: Bob Litterman

# Investing in climate change 2012: investment markets and strategic asset allocation, Deutsche Bank, (2012)

Online: <https://www.db.com/cr/en/docs/Inv_in_CC_2012.pdf>

Authors: Mark Fulton, Bruce Kahn

# Climate change risks and opportunities for investors, CWC (2012)

Online: <http://www.workerscapital.org/images/uploads/CWC_climate_change.pdf>

# Decarbonizing the Swiss real estate sector, Credit Suisse AG, WWF (2012)

Online: <https://www.credit-suisse.com/ch/real_estate/doc/Nachhaltigkeit/study_decarbonizing_swiss_real_estate_eng.pdf>

Contact: Fabian Huwyler, Public Policy – Sustainability Affairs, Credit Suisse, E: sustainability.affairs@credit-suisse.com

# Severe weather in North America: perils, risks, insurance, MunichRe (2012)

Online: <https://www.munichreamerica.com/site/mram/get/documents_E1449378742/mram/assetpool.mr_america/PDFs/3_Publications/ks_severe_weather_na_exec_summary.pdf>

# Determining the impact of climate change on insurance risk and the global community phase 1: key climate indicators, Society of Actuaries (2012)

Online: <https://www.soa.org/Research/Research-Projects/Risk-Management/research-2012-climate-change-reports.aspx>

# Adaptation: underwriting risks for (re)insurers, Kepler-Cheuvreux (2012)

Online:  <https://www.cdp.net/Docs/investor/adaptation-underwriting-risks-for-reinsurers.pdf>

Author: Erwan Créhalet, T: +33 31 5365 57 60, E: ecrehalet@keplercheuvreux.com

# Determining the impact of climate change on insurance risk and the global community, Phase I: key climate indicators, Solterra Solutions (2012)

Online: [www.casact.org/research/ClimateChangeRpt\_Final.pdf](http://www.casact.org/research/ClimateChangeRpt_Final.pdf)

# Insurance solutions in the context of climate change-related loss and damage, Munich Climate Insurance Initiative (MCII) (2012)

Online: <http://www.climate-insurance.org/upload/pdf/20121112_MCII_PolicyBrief_2012_screen#pdf>

# Climate change and resource depletion: the challenges for actuaries, Institute and Faculty of Actuaries (2011)

Online: <http://www.actuaries.org.uk/research-and-resources/documents/climate-change-and-resource-depletion-challenges-actuaries-review-l>

Authors: Allen, N G Aspinall; S D Baxter, O D Bettis, S J R Brimblecombe, F M Brofman-Epelbaum, C Fitzgerald, Dr S Harrison, V J Hodge, C C Jones, B P Maher, E H McNeill, P G Meins, A Mookerjee, G Morrison, N Niami, N G Silver, T Zalk

# Climate change scenarios: implications for strategic asset allocation, Mercer, IFC & Carbon Trust (2011)

Online: <http://www.mercer.com/attachment.dyn?idContent=1407480&filePath=/attachments/English/ClimateChange-Survey_Report.pdf>

# Investing in climate change 2011: the megatrend continues, Deutsche Bank (2011)

Online: <https://www.db.com/cr/de/docs/Inv_in_CC_2011_Final.pdf>

Authors: Mark Fulton, Bruce Kahn

# The treatment of risk and uncertainty in the US social cost of carbon for regulatory impact analysis, Simon Dietz (2011)

Online: <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2014/02/WP54_uncertainty-us-social-cost-carbon.pdf>

Author: Simon Dietz, E: s.dietz@lse.ac.uk, T: +44 (0) 207 955 7589

# Investing in climate change 2010: a strategic asset allocation perspective, Deutsche Bank (2010)

Online: <https://institutional.deutscheawm.com/content/_media/1113_InvestingInClimateChange2010WhitePaper.pdf>

Authors: Mark Fulton, Bruce Kahn

# Australian equities: pricing carbon risk, Citigroup (2010)

Author: Elaine Prior, T: +61-2-8225-4891, E: elaine.prior@citi.com

# Sizing the climate economy, HSBC (2010)

Online: http://www.longfinance.net/images/reports/pdf/hsbc\_sizingclimateeco\_2010.pdf

Authors: Nick Robins, Charanjit Singh, Robert Clover, Zoe Knight and James Magness

# Carbon risks in UK equity funds, Trucost (2009)

Online: <http://www.trucost.com/_uploads/downloads/Carbon_Risks_in_UK_Equity_Funds.pdf>

Author: Trucost

# Green New Deal, Societe Generale (2009)

Online: <http://www.longfinance.net/images/reports/pdf/Green_New_Deal.pdf>

Author: Sarbjit Nahal

# The climate change challenge, Geneva Association, Dlugolecki (2009)

Online: <https://www.genevaassociation.org/media/185956/rm_sc1.rev.pdf>

Author: Andrew Dlugolecki, T: 01738 626351, E: andlug@hotmail.com

# Banking & climate change: opportunities and risks, SAM (2009)

Online: <http://www.igcc.org.au/resources/Documents/sam_study_banking_e.pdf>

Authors: Bettina Furrer, Volker Hoffmann (ETH Zurich), Marion Swoboda (SAM Sustainable Asset Management)

# Perspectives on corporate finance and strategy: how climate change could affect corporate valuations, McKinsey (2008)

Online: <http://corporatefinance.mckinsey.com/_downloads/knowledge/mckinsey_on_finance/MoF_Issue_29.pdf>

Authors: Marcel W. Brinkman, E: Marcel\_Brinkman@McKinsey.com; Nick Hoffman, E: Nick\_Hoffman@McKinsey.com; and Jeremy Oppenheim, E: Jeremy\_Oppenheim@McKinsey.com

# The potential impact of climate change on insurance regulation, National Association of Insurance Commissioners (NAIC) (2008)

Online: <http://www.naic.org/documents/cipr_potential_impact_climate_change.pdf>

# Coal and carbon, stranded assets: assessing the risk, HSBC (2008)

Online: <http://divestum.files.wordpress.com/2013/02/hsbc-coal-report-summary.pdf>

# [The Inconvenient Math - Implications of Costed Carbon](http://www.longfinance.net/images/reports/pdf/CS_inconvenientmath.pdf), Credit Suisse (2007)

Online: <http://www.longfinance.net/images/reports/pdf/CS_inconvenientmath.pdf>

Authors: Dan Eggers; Samantha Dennison; Justin Speer; Kevin Cole

# Utilities vs. Carbon: phase II, Kepler Chevreux (2007)

Online: <http://www.longfinance.net/images/reports/pdf/cheuvreux_carbon_2007.pdf>

Authors: Stéphane Voisin et al.

# Climate policy uncertainty and investment risk, IEA (2007)

Online: <http://www.iea.org/publications/freepublications/publication/Climate_Policy_Uncertainty.pdf>

Author: Dr. Ming Yang, Energy and environment economist, IEA, E: ming.yang@iea.org

#  Credit risk impacts of a changing climate, Barclays and Acclimatise (2007)

Online: <https://www.home.barclays/content/dam/barclayspublic/docs/Citizenship/Reports-Publications/storm-shelter-climate-risks-africa.pdf>

Authors: Bray, C., Colley, M. and Connell, R.

# Climate change and the ASX100: an assessment of risks and opportunities, Citigroup (2006)

Author: Elaine Prior, T: +61-2-8225-4891, E: elaine.prior@citi.com

# A climate for change: a trustee’s guide to understanding and addressing climate risk, IIGC, Mercer (2005)

Online: <http://www.iigcc.org/files/publication-files/A_climate_for_change_a_trustees_guide.pdf>

# Climate change & the financial sector: an agenda for action, Alliance Group & WWF (2005)

Online: <http://www.c2es.org/docUploads/Allianz%20--%20WWF%20Climate%20Agenda%20for%20Financial%20Sector%20--%202005.pdf>

# Asset management and climate change, Dlugolecki & Mansley (2005)

Online: [www.gci.org.uk/Documents/GA2008\_GP33(1)\_Dlugolecki%20(1).pdf](http://www.gci.org.uk/Documents/GA2008_GP33%281%29_Dlugolecki%20%281%29.pdf)

Authors: Mark Mansley, E: mark@claros.co.uk [currently CIO at Env. Agency Pension Fund], Andrew Dlugolecki, E: andlug@hotmail.com

# Climate adaptation: risk, uncertainty and decision-making, UKCIP (2003)

Online: <http://www.ukcip.org.uk/wordpress/wp-content/PDFs/UKCIP-Risk-framework.pdf>

# Climate change risks and opportunities, SwissRe (2002)

Online: <http://stephenschneider.stanford.edu/Publications/PDF_Papers/SwissReClimateChange.pdf>

# Climate change: a risk management challenge for institutional investors, Dlugolecki & Mansley (2001)

Online: <http://www.uss.co.uk/Documents/climate_change_paper.pdf>

Authors: Mark Mansley, E: mark@claros.co.uk [currently CIO at Env. Agency Pension Fund], Andrew Dlugolecki, E: andlug@hotmail.com