

Institution: The University of Edinburgh
Unit of Assessment: 23 Sociology
Title of case study: 1: Impact of Research on Financial Crises
<p>1. Summary of the impact</p> <p>As part of our commitment to public sociology (see REF3a), we have prioritised making Edinburgh sociological research on financial crises available to wider audiences: financial practitioners, policy makers and interested members of the general public. This has been primarily via six essays by Donald MacKenzie in the <i>London Review of Books (LRB)</i> and two invited articles in the <i>Financial Times</i>, listed in section 5.3. The impact of this research is in enhancing cultural understanding of finance and contributing to critical public debate. Evidence of its significance and reach includes: (a) public recognition (eg <i>Prospect</i> magazine naming MacKenzie amongst the 25 intellectuals with most impact on the “public conversation” about the financial crisis); (b) articles by others in prominent sources (the <i>Financial Times</i> and <i>Economist</i>) drawing on his work; (c) use of the Edinburgh University research in a major US corporate lawsuit; (d) reprints of the <i>LRB</i> articles eg in French and German public affairs magazines, in the booklets accompanying a Swedish exhibition and a Belgian art video, and in two financial-practitioner magazines.</p>
<p>2. Underpinning research</p> <p>The impact is underpinned by research on financial markets in the Sociology Unit of Assessment at the University of Edinburgh that began in 1998 and forms part of the growing field of “social studies of finance”. (The field involves the application to financial markets of broader social-science disciplines, not – as traditionally – simply economics or individual-psychological “behavioural finance”.) From 2003 onwards, this Edinburgh research has focussed strongly on the processes of knowledge construction in financial markets, the organisational bases of those processes, and their relationship to financial crises. (“Knowledge” is used here in the sociology-of-knowledge sense of shared belief, not justified belief.)</p> <p>Amongst the findings of this research are:</p> <p>i. Mathematical models in finance can be both performative (alter market processes in such a way to make them “more like” the postulates of the model) and counterperformative (make market processes less like the postulates of the model). See MacKenzie and Millo (2003) and MacKenzie (2006).</p> <p>ii. In the financial crisis of 2007-8, models played a specific counterperformative role: the models of complex structured products used by the credit rating agencies (to award ratings such as AAA, etc) were arbitrated widely by market participants, who would quite deliberately set out to create the most high-yielding (and therefore most risky) products that would nevertheless gain the desired credit ratings. See MacKenzie (2011).</p> <p>iii. This process was fuelled by the organisational division of labour in credit rating agencies, which each had a group evaluating asset-backed securities (ABSs, such as mortgage-backed securities) and a separate group evaluating collateralised debt obligations (CDOs), despite the similarity in structure between ABSs and CDOs (again, see MacKenzie 2011). Communication between the groups was poor, and they employed different models. The result was that it was possible to package together tranches of ABSs with low credit ratings into a CDO most of which would nevertheless receive the top credit rating, AAA. This was a lucrative arbitrage opportunity that was exploited widely with disastrous results. The resultant heavy demand from ABS CDOs for mortgage-backed securities sidelined previously important gatekeepers (experienced, specialist, risk-sensitive investors in the lower tranches of these securities) and in so doing helped make possible the increased recklessness of mortgage lending in the US. Enormous losses were incurred on those ABS CDOs, and those losses were concentrated at the pinnacle of the financial system, in globally important banks and insurers.</p> <p>iv. The “facticity” (factual status) of numbers – prices, interest rates and other metrics – is crucial to the markets in financial derivatives: that is, products whose value depends on those prices or</p>

rates. See MacKenzie (2007) which, for example, examined the construction of LIBOR (London Interbank Offered Rate), well before the controversy over this crucial interest-rate benchmark erupted into the public domain in 2012 following the attempted rate fixing by Barclays and other banks. (To our knowledge, *LRB* article b, listed in section 5.3, was the first article outside of the specialist financial press to report doubts re LIBOR's facticity.)

The underpinning research was conducted at the University of Edinburgh by Donald MacKenzie (Prof. of Sociology since 1992) and his students Yuval Millo (PhD student at Edinburgh 1999-2002; now Prof. of Accounting at Leicester) and Iain Hardie (MRes/PhD student at Edinburgh 2003-7; Lecturer in Politics [UoA 21] at Edinburgh since 2007).

3. References to the research

MacKenzie, Donald (2006), *An Engine, Not a Camera: How Financial Models Shape Markets* (MIT Press). Winner, Viviana A. Zelizer Distinguished Scholarship Award of the American Sociological Association, 2008, and British International Studies Association, International Political Economy Group Book Prize, 2007. Available from HEI.

MacKenzie, Donald (2007), "The Material Production of Virtuality: Innovation, Cultural Geography and Facticity in Derivatives Markets," *Economy and Society* 36: 355-376, DOI: [10.1080/03085140701428332](https://doi.org/10.1080/03085140701428332).

MacKenzie, Donald (2011), "The Credit Crisis as a Problem in the Sociology of Knowledge," *American Journal of Sociology* 116: 1778-1841, DOI: [10.1086/659639](https://doi.org/10.1086/659639). In REF2. Winner, Granovetter Award, American Sociological Association, 2012.

MacKenzie, Donald, and Yuval Millo (2003), "Constructing a Market, Performing Theory: The Historical Sociology of a Financial Derivatives Exchange," *American Journal of Sociology* 109: 107-145, DOI: [10.1086/374404](https://doi.org/10.1086/374404). Winner, Viviana A. Zelizer Distinguished Scholarship Award of the American Sociological Association, 2005, and K. William Kapp Prize of the European Association for Evolutionary Political Economy, 2003. Reprinted in Richard Swedberg (ed.), *New Developments in Economic Sociology* (Cheltenham, Glos.: Elgar, 2005), vol. 2, 233-271. Abbreviated reprint also in Ismail Erturk, Julie Froud, Sukhdev Johal, Adam Leaver and Karel Williams (eds), *Financialization at Work: Key Readings and Commentaries* (London: Routledge, 2008), 269-280. Abbreviated French translation as "Construction d'un marché et performance théorique: sociologie d'une bourse de produits dérivés financiers," *Réseaux* 122 (2003): 15-61.

Main underpinning research grants:

Donald MacKenzie, Professorial Fellowship in Social Studies of Finance, April 2004 – March 2007, £382,128 [ESRC: RES-051-27-0062]. Final report graded "outstanding."

Donald MacKenzie and Iain Hardie, Understanding and Governing Complex Financial Instruments: A "Social Studies of Finance" Investigation of Multi-Name Credit Derivatives, September 2009 – May 2013, £282,497 [ESRC: RES-062-23-1958].

4. Details of the impact

In this section, we first outline how this work has been brought into the public domain, and then we lay out the evidence of its impact. The main mechanism has been six essays, each around 4,000 words, in the *London Review of Books* since 2008 (part of a series of 12 *LRB* articles on the sociology of markets MacKenzie has published since 2000) and two invited 800-word articles in the *Financial Times*. These articles are listed in section 5.3. In the relevant period, the audited circulation of the *FT* averaged around 375,000, and that of the *LRB* around 50,000 (figures from Audit Bureau of Circulations: <http://www.abc.org.uk/>).

MacKenzie has also disseminated the research findings directly to practitioner or mixed academic/practitioner audiences. Examples include:

- i. Talk at conference on the financial crisis at the Centre for Research in the Arts, Social Sciences and Humanities (*CRASSH*) at the University of Cambridge, 16 October 2009, attended by participants from the Bank of England, Bank of America, UBS, Association of Corporate Treasurers, Bank for International Settlements, PricewaterhouseCoopers, Prudential and Royal Bank of Scotland.
- ii. Keynote address at practitioner/academic symposium on "The Quantitative Revolution and the

Crisis”, held in New York on 4 December 2009. Other speakers included the Director of Research of Goldman Sachs, the Director of Quantitative Research at Bernstein & Co. and the Chief Risk Officer of State Street Global Advisors.

iii. Subplenary address at the 64th Chartered Financial Analysts Institute annual conference, May 2011. The CFA Institute is the world’s largest body of finance professionals.

iv. Talk to the dissemination meeting of MacKenzie’s and Hardie’s ESRC project on complex financial instruments, 8 June 2012, attended by participants from the Bank of England, Aegon, Bank of Scotland, Scottish Widows Investment Partnership, Barclays and Standard Life.

v. Talk to around 80 traders and risk managers at the New York trading firm, Jane Street, 26 Sept 2012.

The impact of this work is in enhancing “cultural understanding” (Main Panel C, *Criteria*, Table C1) of finance. Its contributions are “examples of research findings having been communicated to, but not necessarily acted upon, by the intended audience, but which nevertheless make a contribution to critical public debate” (*ibid.*, paragraph 80). **Evidence of their significance and reach in this role includes:**

Public recognition of this dissemination work (corroboration sources: section 5.1)

i. In January 2010, a panel convened by *Prospect* magazine named MacKenzie as amongst the 25 public intellectuals, primarily in the English-speaking world, who had “made the most impact ... on policy ... or the ‘public conversation’” on the financial crisis. *Prospect* cited his “many sharp LRB essays unpicking the anthropology of finance.”

ii. On 17 July 2009, BBC Economics Editor Stephanie Flanders commented in her blog, “Stephanomics”: “If you want to read more on the interplay between theory and practice in this area [the financial crisis], I would point you in the direction of Gillian Tett’s recent book, *Fool’s Gold* - or better, perhaps, Donald MacKenzie’s superb recent review in the *London Review of Books* [item d in section 5.3].” On 6 May 2013, Flanders also tweeted in respect to MacKenzie (2006): “Wd still rank it 1 of best crisis explainers.”

iii. In a speech in Beijing on 8 July 2011, Andrew Haldane, Executive Director, Financial Stability, Bank of England, and member of the UK’s Financial Policy Committee referred to item e in section 5.3 as “a brilliant recent account of the role of HFT [High Frequency Trading], in particular in the context of the Flash Crash [the turmoil in the US markets in the early afternoon of 6 May 2010].”

Articles in prominent sources drawing on this research (corroboration: articles cited in this paragraph, all available via libraries with subscriptions to the *FT* and *Economist*)

Gillian Tett of the *Financial Times*, one of the world’s most prominent financial journalists, has drawn on MacKenzie’s work several times (eg 17 July 2009, p.30; 27 November 2009, p.13; 16 April 2010, p.32; 25 March 2011, p.34). His work was also prominent in a special report on financial risk in *The Economist* (13 February 2010) based primarily on the New York practitioner/academic symposium, event ii above.

Use of our research in a major US corporate lawsuit (corroboration source: section 5.2)

The research in MacKenzie (2011), via item h in section 5.3, has been drawn on by Landesbank Baden-Württemberg in a suit against Goldman Sachs in the Southern District of New York (the prime jurisdiction for corporate lawsuits in the US). The suit alleges the misselling by Goldman to the Landesbank of an ABS CDO.

Reprints and translations of MacKenzie’s public dissemination articles (corroboration sources: section 5.3)

MacKenzie’s *LRB* articles have been reprinted by: the French public affairs journal *Le Débat* and the German magazine, *Lettre Internationale*; the artists Simon Goldin and Jakob Senneby in the booklet accompanying their 2010 Stockholm performance and exhibition, “Plan for Speculation”; and film-maker Ronny Heireman in the booklet accompanying his video, “The Residence: A Wager for the Afterlife”.

These wider public reprints have also been joined by reprints in magazines for market practitioners: *Markit Magazine* and *Traders’* magazine (see item e in section 5.3).

Note re testimony: none of those quoted were participants in the process of impact delivery (although Haldane later gave the keynote address at the dissemination meeting of MacKenzie and

Hardie's ESRC project).

5. Sources to corroborate the impact

In case of broken links, the weblinks, *Prospect*, *LRB* & *FT* articles listed are archived in PDF at www.wiki.ed.ac.uk/display/REF2014REF3B/UoA+23

5.1 Public recognition:

i. Jonathan Ford, "Public Intellectuals and the Financial Crisis," *Prospect* 166 (Jan 2010): 52-53.

ii. BBC Economic Editor's blog and tweet. Blog:

http://www.bbc.co.uk/blogs/thereporters/stephanieflanders/2009/07/is_economics_a_busted_flush.html?postid=83045394. Tweet: <https://twitter.com/BBCStephanie/status/330995882411581441>

iii. Speech by Bank of England's Executive Director, Financial Stability:

<http://www.bankofengland.co.uk/publications/Pages/speeches/2011/509.aspx>

5.2 Use of our research in major US corporate lawsuit: Landesbank Baden-Württemberg v.

Goldman, Sachs & Co. and TCW Asset Management Company, 10-7549, US District Court, Southern District of New York, Document 1: Complaint, paragraph 29, available at:

<http://www.tavakolistructuredfinance.com/LBBW.pdf>. The *Financial Times* article quoted there is item h below.

5.3 MacKenzie's dissemination articles since 2008 and reprints/translations of them:

a. "End-of-the-World Trade," *London Review of Books* (8 May 2008): 24-26. Reprinted in *Real World Economics Review*, no 46 (May 2008): 102-109, also in booklet accompanying Simon Goldin and Jakob Senneby, "Plan for Speculation," performance and exhibition, Konsthall C, Stockholm, 10 Nov-3 Dec, 2010.

b. "What's in a Number? The Importance of Libor," *London Review of Books* (25 Sept 2008): 11-12. Reprinted in *Real World Economics Review* 47 (Oct 2008): 237-242.

c. "An Address in Mayfair," *London Review of Books* (4 Dec 2008): 9-12. French translation as "Comment fonctionne un *hedge fund*?" *Le Débat* 155 (May-Aug 2009): 23-31.

d. "All Those Arrows" [essay review of Tett, *Fool's Gold*], *London Review of Books* (25 June 2009): 20-22.

e. "How to Make Money in Microseconds," *London Review of Books* (19 May 2011): 16-18. Reprinted in *Markit Magazine* (Summer 2011): 44-48; in *Traders' magazine* (Aug 2011): 6-10 and (Sept 2011): 6-10; and in German translation as "Elektronische Börsen: Das globale System des Aktienhandels schaltet im Mikrosekundentakt," *Lettre Internationale* (Winter 2012): 24-27. Extract reprinted in brochure accompanying art video by Ronny Heiremans, "The Residence: A Wager for the Afterlife," Koolmijn van Watersche, Genk, Belgium, 2 June-30 Sept 2012.

f. "The Magic Lever," *London Review of Books* (9 May 2013), 16-19.

g. "Beneath all the Toxic Acronyms Lies a Basic Cultural Issue," *Financial Times* (26 Nov 2009), 36. To be reprinted in Adrian Buckley, ed., *Financial Crises: Causes, Context and Consequences* (Harlow, Essex: Pearson).

h. "Unlocking the Language of Structured Securities," *Financial Times* (19 Aug 2010), 32.

All the above *LRB* and both the *FT* articles are electronically available via libraries with subscriptions, and the majority of the *LRB* articles are freely available on <http://www.lrb.co.uk/>.

5.4 Individual users/beneficiaries who could be contacted to corroborate claims:

Executive Vice-President, global investment-management firm, managing over \$1 trillion in assets: can speak to the impact of MacKenzie's work on his professional activity.

Senior fund manager, UK investment-management firm, managing over £20 billion in assets: can comment on the usefulness of MacKenzie's work to practitioners.

Senior official, Bank of England: can speak to the usefulness of MacKenzie's work to policy makers.

Senior Editor, *London Review of Books*: can speak to the interest of MacKenzie's articles to its readership.

Senior journalist, *Financial Times*: can speak to the influence of this research on financial journalists.