



Australian Government
Australian Research Council

EI
2018
ENGAGEMENT
AND IMPACT



Engagement and Impact 2018

The University of Western Australia

UWA15 (SS) - Impact

Overview

Title

(Title of the impact study)

Fixing a Leaky Fixing

Unit of Assessment

15 - Commerce, Management, Tourism and Services

Additional FoR codes

(Identify up to two additional two-digit FoRs that relate to the overall content of the impact study.)

01 - Mathematical Sciences

14 - Economics

Socio-Economic Objective (SEO) Codes

(Choose from the list of two-digit SEO codes that are relevant to the impact study.)

91 - Economic Framework

89 - Information and Communication Services

84 - Mineral Resources (excl. Energy Resources)

Australian and New Zealand Standard Industrial Classification (ANZSIC) Codes

(Choose from the list of two-digit ANZSIC codes that are relevant to the impact study.)

62 - Finance

64 - Auxiliary Finance and Insurance Services

21 - Primary Metal and Metal Product Manufacturing

33 - Basic Material Wholesaling

77 - Public Order, Safety and Regulatory Services

75 - Public Administration
59 - Internet Service Providers, Web Search Portals and Data Processing Services
70 - Computer System Design and Related Services

Keywords

(List up to 10 keywords related to the impact described in Part A.)

financial benchmarks

market manipulation

commodities

market regulation

London Fixing

benchmark pricing

financial derivatives

futures markets

precious metals

gold

Sensitivities

Commercially sensitive

No

Culturally sensitive

No

Sensitivities description

(Please describe any sensitivities in relation to the impact study that need to be considered, including any particular instructions for ARC staff or assessors, or for the impact study to be made publicly available after EI 2018.)

Aboriginal and Torres Strait Islander research flag

(Is this impact study associated with Aboriginal and Torres Strait Islander content?

NOTE - institutions may identify impact studies where the impact, associated research and/or approach to impact relates to Aboriginal and Torres Strait Islander peoples, nations, communities, language, place, culture and knowledges and/or is undertaken with Aboriginal and Torres Strait Islander peoples, nations, and/or communities.)

Science and Research Priorities

(Does this impact study fall within one or more of the Science and Research Priorities?)

Impact

Summary of the impact

(Briefly describe the specific impact in simple, clear English. This will enable the general community to understand the impact of the research.)

UWA research uncovered a price bias and an exploitable trade advantage in the 100 year old mechanism used to set the daily benchmark price of precious metals globally. The London Fixing, which had been run by a handful of "member" banks, formed an integral part of a US\$30 trillion dollar annual market, impacting metal prices, financial instruments and contracts. Following publication of the research, multiple civil and criminal trials were launched against the banks. Regulatory investigations began and fines were issued. Benchmarking regulations were overhauled and manipulation was criminalised. The research has led to the London Fixings being replaced with modern electronic auctions that provide fairer and more transparent systems of commodity price benchmarking.

Beneficiaries

(List up to 10 beneficiaries related to the impact study)

- Global financial markets
- Governments
- London Bullion Market Association and bullion dealers
- Precious Metal Miners and producers, metal refineries
- Royalty land owners such as Indigenous groups in Australia
- Banks and central banks
- Class action plaintiffs
- Investment community
- Consumers

Countries in which the impact occurred

(Search the list of countries and add as many as relate to the location of the impact)

United States of America
England
Scotland
Ireland
Northern Ireland
Wales
Switzerland
Germany
France
Italy
Spain
Portugal
Greece
Denmark
Netherlands
Sweden
Norway
Austria
Croatia
Poland
Belgium
Iceland
Ukraine
Czech Republic
Romania
Hungary
Finland
Bulgaria
Serbia
Cyprus
Albania
Slovenia
Luxembourg
Montenegro
Slovakia
Monaco
Lithuania
Estonia
Latvia
Former Yugoslav Republic of Macedonia (FYROM)

Bosnia and Herzegovina
Japan
China (excludes SARs and Taiwan)
India
Indonesia
Vietnam
Singapore
Thailand
Philippines
Iran
Malaysia
Korea, Republic of (South)
Hong Kong (SAR of China)
Syria
Saudi Arabia
Pakistan
Israel
Korea, Democratic People's Republic of (North)
Myanmar, The Republic of the Union of
Sri Lanka
Cambodia
Taiwan
Maldives
Bangladesh
Qatar
Iraq
Oman
Afghanistan
Nepal
United Arab Emirates
Yemen
Lebanon
Armenia
Macau (SAR of China)
Jordan
Laos
Uzbekistan
Bahrain
Mongolia
Kuwait

Bhutan
Brunei Darussalam
Kyrgyzstan
Turkmenistan
Timor-Leste
New Zealand
Canada
Mexico
Brazil
Argentina
Colombia
Peru
Chile
Venezuela, Bolivarian Republic of
Uruguay
Ecuador
Bolivia, Plurinational State of
Paraguay
South Africa
Nigeria
Morocco
Senegal
Kenya
Tunisia
Ghana
Congo, Democratic Republic of
Ethiopia
Algeria
Tanzania
Uganda
Cameroon
Zimbabwe
Mali
Sudan
Angola
Mauritius
Rwanda
Libya
Namibia
Guinea

Somalia
Zambia
Mozambique
Botswana
Malawi
Niger
Liberia
Sierra Leone
South Sudan

Details of the impact

(Provide a narrative that clearly outlines the research impact. The narrative should explain the relationship between the associated research and the impact. It should also identify the contribution the research has made beyond academia, including:

- *who or what has benefitted from the results of the research (this should identify relevant research end-users, or beneficiaries from industry, the community, government, wider public etc.)*
- *the nature or type of impact and how the research made a social, economic, cultural, and/or environmental impact*
- *the extent of the impact (with specific references to appropriate evidence, such as cost-benefit-analysis, quantity of those affected, reported benefits etc.)*
- *the dates and time period in which the impact occurred.*

NOTE - the narrative must describe only impact that has occurred within the reference period, and must not make aspirational claims.)

In 2013, Professor Caminschi researched the interaction between the London Fixing, a financial benchmark, and public markets for gold, silver, platinum and palladium. This involved an analysis of hundreds of millions of transactions, quotes and orders in markets trading over US\$30 trillion annually. Empirical evidence from the study revealed that the fixing produced a biased benchmark price where information could be exploited, impacting global financial markets. The trade advantage available to fixing members was significant and economic, and it increased with the transition of electronic derivatives trading. The findings cast strong doubt on the integrity of the most critical price within this market. The research findings were published in the Journal of Market Futures in 2014, a series of working papers (2014, 2017) and formed the basis of Professor Caminschi’s doctoral thesis (2016).

MARKET AWARENESS
 Extensive media coverage of Caminschi's research increased awareness about the vulnerability within this critical benchmark. In September 2013, Sprott, global metals investment fund manager published the story. Bloomberg ran the story in November 2013 and within hours, it headlined across media outlets world-wide. Between 2013 and 2015, 220 newspapers and media broadcasters in Europe, Asia and America covered the story including Forbes (US), BBC News (UK), The Washington Post (US), Die Welt (Germany) and the Economic Times (India). Professor Caminschi has been an active and available interviewee in this process, providing interviews to Bloomberg (US), The Financial Times (UK), ABC Radio (AU), 2GB (Sydney), KitcoTV (Canada) and public speaking engagements to help increase awareness of the London fixings.

REGULATORY REVIEW
 Subsequent to the publicity, several regulatory investigations were launched into the conduct of the London Fixing and associated market participants. In December 2013, Germany’s financial regulator, The Federal Financial Supervisory Authority announced an investigation of Deutsche Bank. In the same month, the Director General for Competition of the European Commission requested the research for its investigations. In May 2014, the Financial Conduct Authority fined Barclays US\$43.8 million for manipulating the gold fix. In November 2014, Switzerland’s financial regulator FINMA found “serious misconduct” by UBS in precious metals trading, with their chief executive officer stating that the regulator has “seen clear attempts to manipulate fixes in the precious metals markets.” UBS was disgorged US\$150 million. Professor Caminschi provided briefings to the US Department of Justice and the US Commodity Futures Trading Commission to assist in their investigations, some of which are currently on trial.

BENCHMARKING REFORM

In August 2014, in the wake of publicity and regulatory sanctions, the London fixings were scrapped and replaced with a London Bullion Market Association (LBMA) Silver Price: an independently administered auction open to a wider range of market participants. The London Platinum and Palladium Fixes were replaced with new auction systems in December 2014. In March 2015, the ICE Benchmark Administration replaced the London Gold Fixing practice with the LBMA Gold Price. Professor Caminschi's research led to reform of benchmark pricing from a tightly held private 'club', to auditable, electronic systems with real-time data, accessible by market participants; resulting in a fairer pricing mechanism. "His research on the London gold fixing has literally changed the way that price is determined." Professor Robert Webb, University of Virginia, Oct 2016. The International Swaps and Derivatives Association Master Agreement used to settle international financial transactions was amended to reference these new benchmarks. In December 2014, the UK announced legislation that criminalized manipulation for critical financial benchmarks, would extend to cover gold and silver. Similar criminalisation of benchmark manipulation has been implemented by the EU.

ANTI-TRUST LITIGATION

The research triggered litigation from market participants seeking redress from the financial harm suffered as a result of market abuses. The first gold case was filed in March 2014. It was followed by over 40 actions and consolidated into the "Commodity Exchange, Inc., Gold Futures and Options Trading Litigation, No. 14-M-02548 (VEC)", which is currently before the US District Court. Silver fixing complaints started in July 2014 and were consolidated into the "London Silver Fixing, Ltd. Antitrust Litigation, No 14-MD-2573 (VEC)". Platinum and palladium fixings complaints began in March 2015 and were consolidated into the "Platinum and palladium Antitrust Litigation, No.14-CV-9391 (GHW)". All cases are being tried in the US District Court of the Southern District of New York, with Judge Valerie Caproni presiding over the gold and silver trials, and Judge Gregory Woods ruling over the platinum and palladiums trials. Professor Caminschi remains an expert consultant to all three trials.

Daniel L. Brockett, Quinn Emanuel, Oct 2016: "It is testament to the excellent caliber of Professor Caminschi's work that the judge in the case recently issued an order denying the banks' motion to dismiss and allowing the investors' claims to proceed. In doing so, the judge cited Professor Caminschi's work...Moreover, citing in part Professor Caminschi's research, one of the banks has recently agreed to settle the case for a significant sum of money. These achievements demonstrate the pioneering success of Professor Caminschi's work, which has helped us to expose potential anti-competitive behaviour in the gold markets."

The research has been recognised through the award of the 2014 ASX Prize for "Any Silver Linings", 27th Australasian Finance & Banking Conference and in 2017 for the Accounting & Finance Association of Australia & New Zealand AFAANZ Best PhD.

Associated research

(Briefly describe the research that led to the impact presented for the UoA. The research must meet the definition of research in Section 1.9 of the EI 2018 Submission Guidelines. The description should include details of:

- what was researched
- when the research occurred
- who conducted the research and what is the association with the institution)

The process used to derive the benchmark price dates back to 1897 in the coffee houses of London where leading bullion brokers would meet daily to hold a private auction. The result of the auction was the "London Fix" price, which became the benchmark price for the rest of the market. Remarkably, this mechanism remained while global and derivative markets ballooned to exceed US\$30 trillion of precious metals trade annually. The daily benchmark price was used to settle contracts, price trades, calculate royalties, commissions and value financial derivatives by a wide range of market participants, including governments, central banks, miners, refiners, private investors, and pension funds.

In researching the interactions between the London Fix and public precious metal markets, Professor Caminschi's research asked four questions; are fixing benchmark prices biased?; are the fixings still relevant and do they still impact markets?; are the fixings exploitable by participants seeking trading advantages?; what impact did the transition to futures screen trading have on these markets?

Professor Caminschi conducted the analyses as part of his PhD candidature under the supervision of The University of Western Australia Professor Richard Heaney, from 2013 Through to 2016. From 2016, Assistant Professor Caminschi was appointed Director of the Rosemarie Nathanson Financial Markets Trading Room (operational from 2017).

FoR of associated research

(Up to three two-digit FoRs that best describe the associated research)

18 - Law and Legal Studies
01 - Mathematical Sciences
15 - Commerce, Management, Tourism and Services

References (up to 10 references, 350 characters per reference)

(This section should include a list of up to 10 of the most relevant research outputs associated with the impact)

Caminschi, A., Heaney, R. 2014, Fixing a leaky fixing: short-term market reactions to the London PM gold price fixing', *Journal of Futures Markets*, 34, 11, pp. 1003-1039.

Caminschi, A., 2014, Any Silver Linings? The London Silver Fixing's impact on public silver markets before and after the introduction of contemporaneous futures trading. 27th Australasian Finance and Banking Conference, ASX Prize Winner. 2014 Paper; 2015 Financial Markets & Corporate Governance Conference, Best Paper Winner.

Caminschi, A., 2016, Too Precious To Fix? The London precious metals fixings and their interactions with spot and futures markets (University of Western Australia).

Commodity exchange, Inc., Gold Futures and Options Trading Litigation. Southern District of New York Case 14-MD-2548 (VEC).

London Silver Fixing, Ltd. Antitrust Litigation. Southern District of New York Case 14-MD-2573 (VEC).

Platinum And Palladium Antitrust Litigation, Southern District of New York Case 14-CV-9391 (GHW).

Additional impact indicator information

Additional impact indicator information

(Provide information about any indicators not captured above that are relevant to the impact study, for example return on investment, jobs created, improvements in quality of life years (QALYs). Additional indicators should be quantitative in nature and include:

- name of indicator (100 characters)*
- data for indicator (200 characters)*
- brief description of indicator and how it is calculated (300 characters).*

Name

Regulatory fines

Indicator Data

Regulatory fines in association with the London Fixings have exceeded US\$100 million.

Indicator Description

Press release: FINMA (Swiss financial regulator) in 2014 states UBS is disgorged a total of CHF134 million for illegally generated profits and avoided costs. Press release: Financial Conduct Authority (UK financial regulator) in 2014 indicates that Barclays Bank PLC fines amount to £26,033,500.

Name

Civil settlements

Indicator Data

Approximately USD\$100m in settlements from Deutsche Bank, one of the six case defendants.

Indicator Description

Reuters article in December 2016 states Deutsche Bank has agreed to pay USD\$60 million to settle private US antitrust litigation by traders and investors who accused the bank of conspiring to manipulate gold prices. In October 2016 DB agreed to pay USD\$38m over alleged silver manipulation.