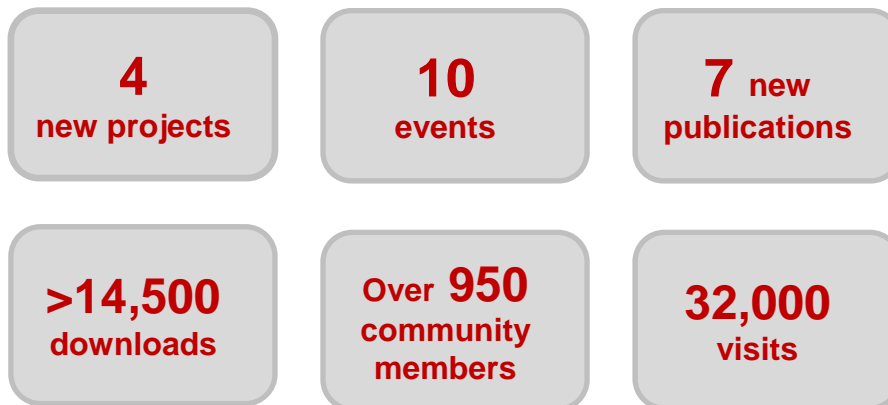


Long Finance
Evidence of Worth
2015

Long Finance seeks to expand frontiers, change systems and deliver services to foster a long-term approach to finance through its community's programmes, research, publications, and events. This document presents 'Evidence of Worth'¹ by reviewing Long Finance achievements during 2015.

2015 SUMMARY



EXPANDING FRONTIERS AND CHANGING SYSTEMS

New Research Areas:

- ◆ **MetroGnomo** – an open-source experimental timestamping service based on Z/Yen's ChainZy mutual distributed ledger (MDL) technology and sponsored by the States of Alderney. MetroGnomo was the result of a challenge to design, build and find an application for the simplest form of MDL possible. It demonstrates the flexibility of MDL technology to adapt to different tasks and trust conditions.
- ◆ **The Impact and Potential of Blockchain on the Securities Transaction Lifecycle** – a research project commissioned by the SWIFT Institute that explored how blockchains and mutual distributed ledgers could impact the lifecycle of securities transactions. In particular, it considered whether blockchains might allow almost instantaneous post-trade delivery against payment, thus radically simplifying post-trade processing and substantially reducing both costs and operational and liquidity risks.
- ◆ **InterChainZ** - a research consortium project that demonstrated it was possible to build distributed ledgers that could store, exchange, and keep records of any kind. An InterChainZ interface was created for tasks including the selection and

¹ Ian Harris, Michael Mainelli and Mary O'Callaghan, "Evidence of Worth in Not-for-Profit Sector Organisations", *Journal of Strategic Change*, Volume 11, Number 8, John Wiley & Sons (December 2002), pages 399-410 -

http://www.zyen.com/index.php?option=com_content&view=article&id=135&Itemid=359

storage of documents, document encryption, the sharing of keys and transaction observation. Practical applications were also discussed, developed and later shared through a video titled “**Sharing Ledgers for Sharing Economies**”.

- ◆ **Cyber-Catastrophe Reinsurance** – a project that sought to explore how cyber-catastrophe reinsurance might help mitigate cyber-risk, establish some evidence of the appetite for such reinsurance, and examine how government might best assist the establishment of an efficient free market solution.

The London Accord

Well over 500 freely accessible reports have been shared by over 65 London Accord contributors – with topics spanning finance, cities, environmental, social & governance (ESG) issues.

517 reports were available on the London Accord at the end of 2015, representing a 7% increase from 2014. Several new contributors joined the London Accord in 2015 – including ET Index, The Generation Foundation and MSCI.

The Farsight Award, an award category of the Sustainable City Awards organized by the City of London since 2009, rewards the best individual piece of analysis done by an investment research institution that integrates traditional financial analysis with longer-term ESG issues. **Out of 56 reports considered, Kepler Cheuvreux won the Farsight Award 2014/15 for their outstanding report “Tax Me If You Can: Game Over”**. The Long Finance judges found Kepler Cheuvreux’s report provided “an extensive review of the tax implications for a variety of companies and sectors, including banks and pharmaceutical companies”. The report explores tax planning techniques and their impact on long-term shareholder value given increased public awareness and tighter regulatory environments.

Green Alliance and Hermes and Sustainalytics were highly commended for the excellence of their research. Chart 1 gives an indication of the research areas that were most explored by our contributors.

Chart 1 – London Accord Most Popular Research Areas in 2015

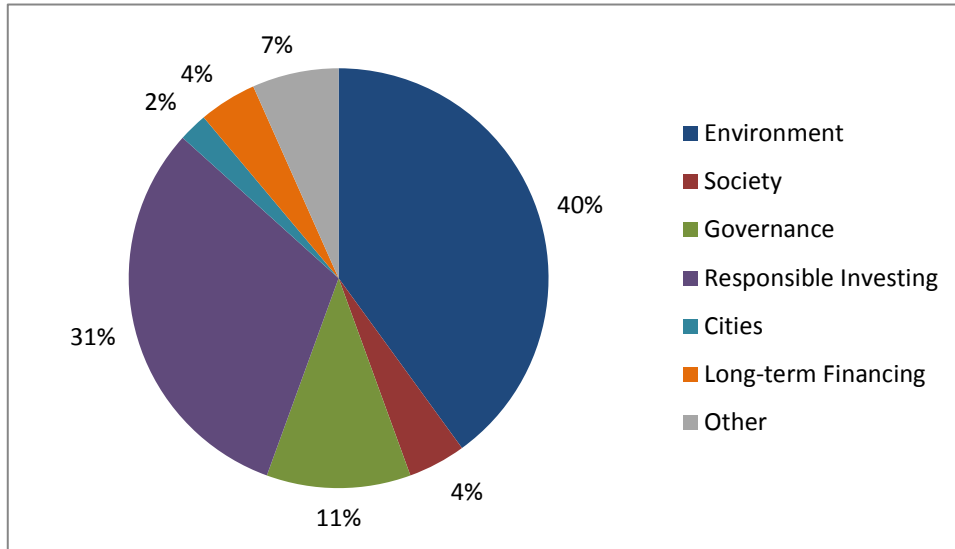


Table 1 shows the most popular reports downloaded from the London Accord in 2015.

Table 1 – Most popular London Accord reports in terms of downloads in 2015

Contributor	Report	Year
Kepler Cheuvreux	Tax Me If You Can: Game Over	2014
Bank of America Merrill Lynch	The Silver Dollar – Longevity Revolution Primer	2014
Bank of America Merrill Lynch	No Time to Waste – Global Waste Primer	2013
Credit Suisse & WWF	Transition to a Low Carbon Economy: the Role of Banks	2011
Bank of America Merrill Lynch	Institutional Factor Survey – Results Are In: Investors Are Going Back To Basics	2012
HSBC	Carbon & Oil Revisited – Value At Risk From ‘Unburnable’ Reserves	2013
Bank of America Merrill Lynch	LT Asset Return Study: A Study Into The Unknown	2012
Arabesque Asset Management and Smith School of Enterprise and the Environment, University of Oxford	From Stockholder To The Stakeholder – How Sustainability Can Drive Financial Performance	2015

J.P. Morgan	Impact Assessment In Practice	2015
CA Cheuvreux	Luxury Goods – Sustainability Sector Profile	2012

Financial Centres Futures

The 17th and 18th edition of the GFCI were released. GFCI now researches 98 financial centres.

The **Global Financial Centres Index**, which provides profiles, ratings and rankings for 83 financial centres, continues to reach a global audience. It has been covered at a wide selection of events – including in the UK, China, South Korea, Turkey and Trinidad and Tobago – and through global media press outlets, such as the



Financial Times, City AM, the Daily Telegraph and the Washington Post. The widespread media attention granted to GFCI in 2015 confirmed that it remains one of the most widely respected and used indicators of financial centres' competitiveness.

Sponsored by the Qatar Financial Centre, the Financial Centre Futures programme is always looking to expand, develop and learn from the index. 2015 saw three new cities added to the GFCI – Dalian, Los Angeles and Liechtenstein. 14 financial centres are waiting to acquire the minimum 200 assessments to be included in the GFCI, of which Kuwait City and Barbados were added in 2015.

In 2015, the GFCI used 105 instrumental factors (third party measures and indices), alongside over 12,450 financial centre assessments from 902 respondents. The charts below give an indication of the respondents' location and sector of activity.

Chart 2 – GFCI Respondents 2015 – Location

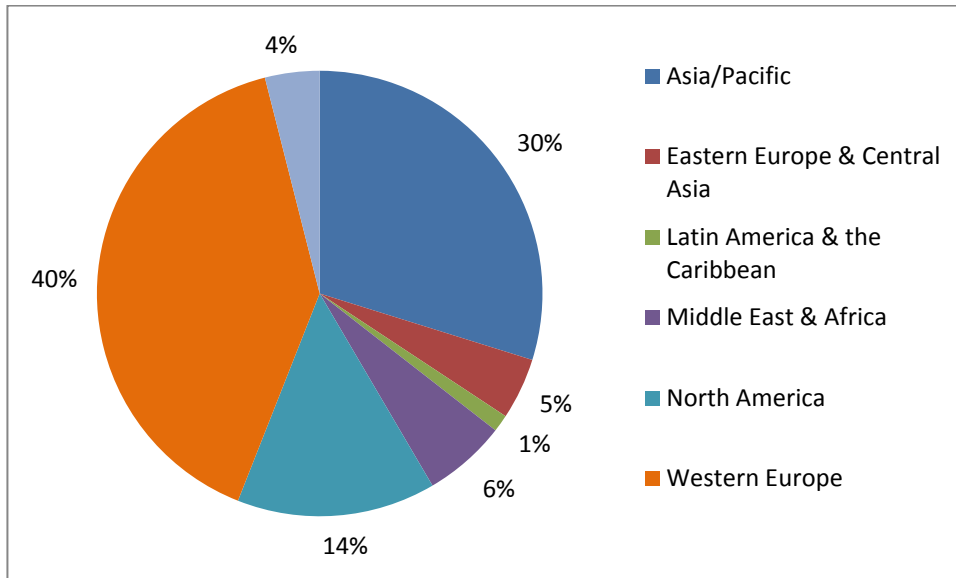
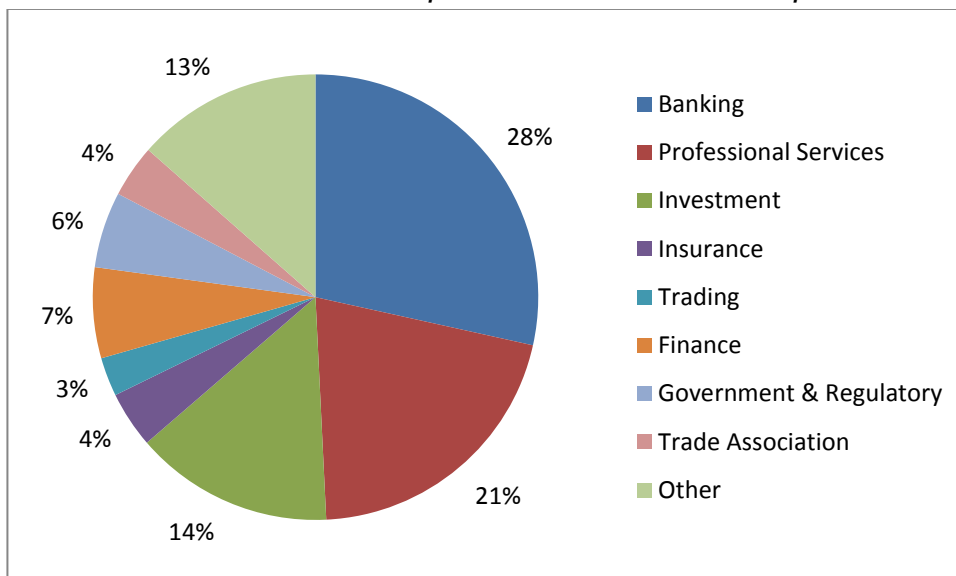


Chart 3 – GFCI Respondents 2015 – Sector split



The full GFCI has been published every six months (in March and September) since 2007, with interim versions produced in June and December. The progress of each financial centre can be tracked online using the [GFCI Over Time tool](#).

DELIVERING SERVICES AND SHARING KNOWLEDGE

Research & Publications

40 research publications are free to download, with more to come expanding on the Long Finance research agenda.

Long Finance takes a collaborative approach to research by working with financial services professionals, universities and governments to advance innovative long-term thinking on a wide range of subjects, and to influence policy-makers to accelerate change. In 2015, Long Finance continued its efforts to strengthen key Long Finance research areas as illustrated by the **Long Finance research agenda** below.

Table 2 – Long Finance research agenda

Theme	Research areas
Behaviour	<ul style="list-style-type: none"> ◆ Concept of ‘Fairness’ ◆ Folklore, Myths and Finance* ◆ The Future of Price*
Cities	<ul style="list-style-type: none"> ◆ Finance Toolkit for Sustainable Cities* ◆ Financing Tomorrow’s Cities** (shared research on finance and cities)
Financial System	<ul style="list-style-type: none"> ◆ Insured Utility Banking* ◆ Futures of Finance ◆ Clustering* ◆ Asset Management* ◆ Global Financial Centres** ◆ Emerging Markets* ◆ Sell-Side Research
Governance	<ul style="list-style-type: none"> ◆ Good Governance** ◆ Ethics ◆ Ethical Banking*
Measurement	<ul style="list-style-type: none"> ◆ Confidence Accounting** ◆ Long-Term Performance Measurement ◆ Uses and Abuses of Discount Rates*
Monetary Systems	<ul style="list-style-type: none"> ◆ Common Tenders* ◆ Eternal Coin* ◆ Distributed Futures: Distributed Ledgers, Blockchains and Cryptocurrencies**
Regulation	<ul style="list-style-type: none"> ◆ Mortgages* ◆ Voluntary Standards Markets** ◆ Compliance Architectures

Risk Mitigation	◆ Public-Private Cyber-Catastrophe Reinsurance*
Structure	◆ Pensions Indemnity Assurance and Internal Growth Rate Measures for Pensions**
Sustainability	<ul style="list-style-type: none"> ◆ London Accord 2007** (24 integrated reports) & London Accord* ◆ Burn It All?! ◆ Policy Performance Bonds* (Index-Linked Carbon Bonds and Index-Linked Forestry Bonds)

(*) indicates research at an active stage / (**) indicates research at an advanced stage



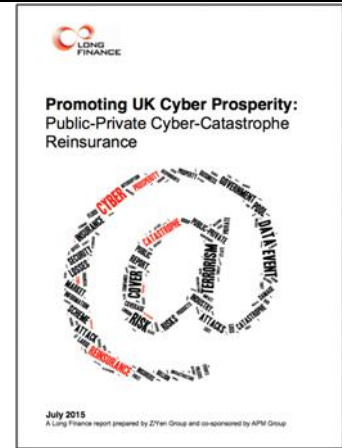
Learning from the InterChainZ project was shared through an article published in the Journal of Financial Perspectives, titled “**Sharing Ledgers for Sharing Economies: An Exploration of Mutual Distributed Ledgers (aka blockchain technology)**”. This article dissects the role of trusted third parties into three parts – validating the existence of the tradable item and membership of the trading community, preventing double spending, and recording the trade in the event of dispute. It then considers whether coinless mutual distributed ledgers can replace the latter two roles

without incurring the costs of ‘mining’. At the centre of this discussion is the balance between an environment’s trust level and the system’s efficiency. The series of functioning, interlinked MDLs developed by the InterChainZ consortium are then described. The consortium concluded that MDLs incorporating trusted third parties for some functions had significant potential in financial services, such as know-your-customer (KYC), anti-money-laundering (AML), insurance, credit and wholesale financial services.

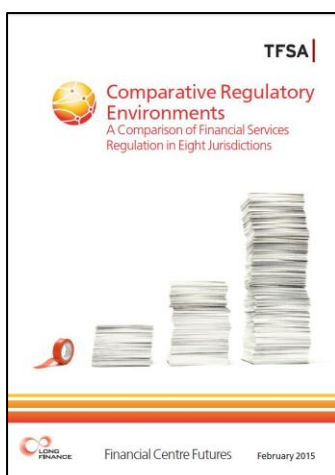
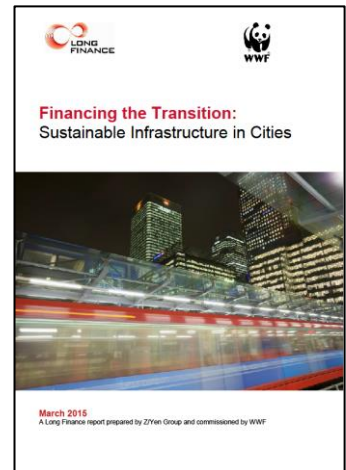
2015 saw our long running research interest in discount rates come to fruition in a publication by Dr Nick Goddard titled “**Uses and Abuses of Discount Rates: A Primer for the Wary**”. Dr Nick Goddard guides the reader through the perils of discounted cash flow (DCF) and net present value (NPV) analyses, where the selection of the wrong rate can transform the most expensive projects into bargains. this report won a Sustainable City Awards “Insight Award” at Mansion House in March 2016;



Co-sponsored by APM Group, Long Finance published the report **“Promoting UK Cyber Prosperity: Public-Private Cyber-Catastrophe Reinsurance”** in July 2015. The report explores the nature of cyber-risk and the role of cyber insurance and reinsurance as a risk mitigation tool with a focus on cyber-catastrophe events; those cyber events that could seriously affect the broader economy. It explores how a public-private cyber-catastrophe reinsurance scheme could help secure ICT-based prosperity in the UK by helping insurers insure themselves to insure others. The scheme would provide cover to a group of insurers above a catastrophic loss threshold, through a pool funded by the insurance industry.



Long Finance partnered WWF to produce **“Financing the Transition: Sustainable Infrastructure in Cities”** published in March 2015. Cities are faced with the huge challenge of providing infrastructure that meets the needs of a rising urban population, with limited public resources and increasing sustainability concerns. Against this background, the report reviewed the financial instruments commonly used to finance infrastructure and assessed their potential to finance the transition towards sustainable infrastructure. A particularly focus is placed on energy efficiency and renewable energy projects at a city level.



Commissioned by the Toronto Financial Services Alliance, the Financial Centre Futures programme produced **“Comparative Regulatory Environments: A Comparison of Financial Services Regulation in Eight Jurisdictions”** in February 2015. Whilst some jurisdictions perform better than others, the regulatory picture is not encouraging. Most financial professionals believe that the regulations will become more onerous, less easy to comply with and more costly, whilst also becoming less effective. Most believe that regulations will become a greater barrier to entry in the future.

39 Long Finance publications were available to download for free online at the end of 2015. Table 3 gives an indication of the most popular in 2015 in terms of downloads.

Table 3 – Top 10 most popular downloads in 2015 (Long Finance publications)

Publication Title	Year
GFCI 18	2015
Chain Of A Lifetime: How Blockchain Technology Might Transform Personal Insurance	2014
GFCI 17	2015
GFCI 16	2014
Promoting UK Cyber Prosperity: Public-Private Cyber-Catastrophe Reinsurance	2015
GFCI 15	2014
Financing the Transition: Sustainable Infrastructure in Cities	2015
Financing Tomorrow's Cities: Meta-Analysis	2014
Uses and Abuses of Discount Rates – A Primer for the Wary	2015
Comparative Regulatory Environments: A Comparison of Financial Services Regulation in Eight Jurisdictions	2015

Long Finance blog [the Pamphleteers](#) also attracted significant attention in 2015. Table 4 shows a selection of popular articles released in 2015.

Table 4 – Popular Pamphleteers' blog articles from 2015

Author	Article	Date
Robert McDowall	The Myths and Folklore of Gold - Ancient and Modern	May 2015
Robert McDowall	The Hemline Index	March 2015
Robert McDowall	October: Its Mythical Significance in Folklore and Finance	February 2015
Dr Shann Turnbull	Why Should the UK Adopt a Digital Currency?	April 2015
Nicholas Benes	Regulation of US Executive Compensation Should Emulate Japan	October 2015
Chris Yapp	The Price of Free	June 2015
Michael Mainelli	Pricing Free Motives	August 2015
Robert McDowall	Sell in May and Go Away	March 2015
Rob Julian	Not Quite Free Money: The Hidden Price of Crowdfunding	September 2015
Chris Yapp	The Price of Regulation	September 2015

Events

In 2015, Long Finance organised 10 events in the UK and participated in over 20 more events in the UK and internationally.

The Long Finance Conference provides a forum for professionals to discuss topics that will be significantly influential over the long term. The 2015 Conference “**The Curious Case of Japan: Why Macroeconomics Needs a Rethink**” was kindly hosted by Gresham College at Barnard’s Inn on 3 March 2015. The conference explored the conundrum of Japan for economists, where a clash between conventional theory and practice has left an opening for fresh thinking. Speakers included Professor Richard Werner (University of Southampton), George Tait Edwards MBE, John Greenwood OBE (Invesco) and Professor Michael Mainelli (Z/Yen Group).

Long Finance events bring together professionals from a wide range of disciplines and sectors relevant to finance. Popular ones included:

Table 5 – Selected Long Finance Events held in 2015

Event title	Attendance
Long Finance Conference 2015 - The Curious Case of Japan: Why Macroeconomics Needs A Rethink	145
Keeping the Lights On: Can Renewables Meet Our Future Energy Needs?	150
So Hard to Measure Good	33
Promoting UK Cyber Prosperity: Public-Private Cyber-Catastrophe Reinsurance - Report Launch	79
Finance Toolkit for Sustainable Cities - Report Launch	37
Lies, Damned Lies And Taxation Simplification	24

BUILDING COMMUNITIES

32,000 people visited the Long Finance website in 2015, an increase of 18% compared to 2014. 82 new members joined the Long Finance online community, which now includes 652 members from about 50 countries. The online community allows like-minded individuals to cooperate, share ideas, participate in discussions and network. Long Finance’s wider network includes over 4,000 people globally.

THANKING OUR PARTNERS

We would like to express our gratitude to Qatar Financial Centre Authority, the City of London Corporation, Gresham College, and Z/Yen Group for their long-standing support. We would like to thank all the London Accord contributors for sharing research and members of the Long Finance Advisory Board for their wise guidance. Finally, we would like to thank those in our community who contribute



LONG FINANCE EVIDENCE OF WORTH 2015



their thoughts and time to the Long Finance events, blogs, and discussions on the online community.