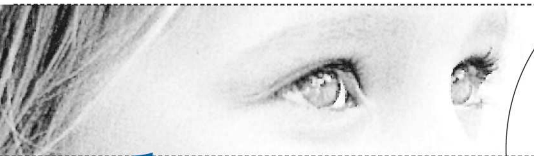

finance & bien commun / common good

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STANDING UP TO THE ETHICAL CHALLENGES OF TOMORROW'S FINANCE

ETHICS & TRUST IN FINANCE
6th Edition 2016/2017

Nominated Essays by:

- *Bibi Mehtab Rose-Palan, Mauritius*
- *Friedemann Bieber & Juri Viehoff, Germany*
- *Martin Foo, Autralia*
- *Mariusz Maziarz, Poland*
- *Brett Scott, South Africa*
- *Charmaine Fernandes, United Kingdom*
- *Tara Annison, Spain*
- *Witold Gromala, Poland*
- *Babatunde Valentine Onabago,United Kingdom*
- *Camille Meyer, France*
- *John Francis Diaz, Philippines*

Ethics & Trust in Finance

6th Global Prize

Previously «Robin Cosgrove Prize»

Finance & the Common Good / Bien Commun

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Finance & the Common Good/Bien Commun

Ethics & Trust in Finance, Global Prize
6th edition 2016-2017

Editorial

Part I
New and Old Frontiers of Ethics

Part II
What Ethical Harness for Technology

Part III
Avenues for Action

En route pour la deuxième décennie

Il y a deux ans, en automne 2015 nous étions à Washington, au siège du Fonds Monétaire International. La remise des prix de la 5ème édition – en présence de Mme Christine Lagarde, Directrice générale du FMI – a magnifiquement clôturé les dix premières années de l'existence du Prix.

Peu après cette cérémonie, après dix ans de travail assidu et de collaboration étroite et fructueuse avec l'Observatoire de la Finance, Mme Carol Cosgrove-Sacks a décidé de se retirer pour libérer du temps pour ses proches et ses autres activités et elle a donc quitté la co-présidence du Prix. Pour marquer son attachement au Prix, elle a accepté notre invitation à rester membre honoraire du Jury. En parallèle, Mme Josina Kamerling – CFA Institute, Bruxelles – a accepté de prendre la co-présidence du Prix qu'elle assume déjà pour la 6ème édition.

En dix ans, le Prix – rebaptisé en 2016 « Ethics & Trust in Finance » avec la mention « previously Robin Cosgrove Prize » - a parcouru un long chemin dont ses initiants peuvent être fiers et heureux. D'une initiative

Opening the second decade

Two years ago, in autumn 2015, we gathered in Washington, at the headquarters of the International Monetary Fund. The award ceremony of the 5th Edition – attended by Mrs. Christine Lagarde, Managing Director of the IMF – was a magnificent way for closing the first ten years of the existence of the Prize.

Shortly after this ceremony, after ten years of hard work as well as fruitful and close collaboration with the Observatoire de la Finance, Mrs. Carol Cosgrove-Sacks has decided to step down as co-president of the Prize, to have more time for her family and other activities. In order to manifest her support for this initiative, Mrs. C. Cosgrove Sacks has accepted our invitation to remain as an honorary member of the Jury. At the same time, Mrs. Josina Kamerling – CFA Institute, Brussels – has accepted to become the co-president of the Prize, and is acting in this capacity for the 6th edition.

During its first ten years, the Prize – whose name was changed in 2016 to « Ethics & Trust in Finance » with the mention « previously Robin confidentielle, il est devenu la référence mondiale en matière d'éthique en finance. C'est ainsi que l'ouvrage « Trust & Ethics in Finance », publié en 2012 en coopération avec Globethics, qui regroupe les textes primés des trois premières éditions a été téléchargé plus de vingt mille fois. Un record dû aussi, sans doute, à la recommandation du Fonds Monétaire International. (http://www.globethics.net/documents/4289936/13403236/GE_Global_6_final_1_web.pdf/106c34b4-03d7-4433-88ae-a4d6a4545712)

Après le rappel historique, passons au moment présent, celui de la clôture de la 6ème édition du Prix « Ethics & Trust in Finance, Global Prize ». Cette édition a été officiellement lancée en mars 2017 à Bruxelles, avec une date de remise de travaux fixée au 31 juillet. Si aujourd'hui, la 6ème édition est sur le point d'être clôturée, c'est grâce aux partenaires stratégiques du Prix – CFA Institute et Euroclear – ses autres partenaires – ACCA et l'Association Polonaise de Banques – et surtout l'engagement de quatre personnes : Mme Hannah Soissons et Mme Nati Garcia (Observatoire de la Finance) ; Mme Eve Lacomblez (CFA Institute) et M. Marin Gregson (Euroclear). Nous voudrions exprimer ici à ces personnes nos plus vifs remerciements et nos félicitations. Le succès des auteurs est leur succès aussi.

Dix ans après, les séquelles sont encore visibles tant dans le domaine technique de la solidité du système financier que dans celui de la façon d'aborder l'éthique en finance.

En janvier 2018, la Banque de France accueille la cérémonie de clôture. Le discours de son Gouverneur, M. François Villeroy de Galhau ouvre cette cérémonie pour céder ensuite la parole au Secrétaire-Général de l'OCDE, M. Angel Gurrià. Les deux orateurs insistent sur l'importance de l'éthique pour le développement harmonieux de l'économie et de la société. Sans elle, l'activité financière devient un facteur de risque comme le monde l'a expérimenté durant la dernière crise financière. Dix ans après, les séquelles sont encore visibles tant dans le domaine technique de la solidité du système financier que dans celui de la façon d'aborder l'éthique en finance. Aussi longtemps que des progrès significatifs n'auront pas été réalisés sur ces deux plans complémentaires, la sérénité ne sera pas de retour et les rapports complexes qu'entretient la finance avec le reste de la société et de l'économie resterons tendus.

Le Jury a eu fort à faire durant cette 6ème édition – que ses membres en soient remerciés ici. Quatre nouveaux membres ont rejoint le Jury pour

Cosgrove prize » - has accomplished an impressive journey rending its initiators happy and proud. It started as a confidential initiative, and is today the world reference in the field of ethics in finance. The book «Trust & Ethics in Finance» published in 2012 in cooperation with Globethics, contains the nominated essays of the first three editions of the Prize. It has been downloaded more than twenty thousand times. This has also been achieved because of the recommendation made in 2014 by the International Monetary Fund.

(http://www.globethics.net/documents/4289936/13403236/GE_Global_6_final_1_web.pdf/106c34b4-03d7-4433-88ae-a4d6a4545712).

The time is now ripe to turn to the present, namely the closing ceremony of the 6th Edition of the « Ethics & Trust in Finance, Global Prize ». This edition was officially launched in March 2017 in Brussels, with a deadline for handing in the papers on the 31st of July. The finalisation of the 6th Edition has largely been made possible thanks to the support of our strategic partners – CFA Institute and Euroclear – our remaining partners – ACCA and Polish Banks Association – but above all, this achievement is due to the relentless work and especially the commitment of the four following people: Mrs. Hannah Soissons, Mrs. Nati Garcia (Observatoire de la Finance), Mrs. Eve Lacomblez (CFA Institute) and Mr. Marin Gregson (Euroclear). We take this opportunity to express our warmest thanks to them and also our congratulations. The success of the authors is also their success.

Ten years later the consequences are still visible both in the systemic risk aspects of the financial system as well as in the way in which ethics are dealt with.

In January 2018, the Central Bank of France will host the Award ceremony. Governor Francois Villeroy de Galhau will give the opening speech followed by Mr. Angel Gurria, Secretary General of the OECD. The two speakers will focus on the importance of ethics for a harmonious development of the economy and society. Without it, financial services become a factor of risk as the world discovered during the last financial crisis. Ten years later the consequences are still visible both in the systemic risk aspects of the financial system as well as in the way in which ethics are dealt with. As long as no real progress is made on both issues, we will not return to a harmonious system and relations with the economy and society at large will remain tense.

cette édition. Leurs portraits figurent dans les pages qui suivent. Il s'agit de Mme Jo Iwasaki (ACCA – Londres) ; de M. Stéphane Bernard (Euroclear – Bruxelles & Cracovie) ; de M. Hakan Lucius (EIB – Luxembourg) et de M. Ross Murdoch (FCA – Londres ; 1er prix en 2015).

Le travail de sélection du Jury a été structuré en trois étapes couronnées par une réunion à Londres le 18 novembre 2017 – trois membres ont participé à distance à cette réunion. A cette occasion, le Jury s'est penché sur les onze textes « nominés » pour choisir ceux qui seront récompensés par des prix. Le lecteur pourra découvrir l'ensemble des textes nominés dans les pages qui suivent. Les auteurs – et il s'agit d'un des aspects très positifs du Prix – proviennent à parts quasi-égales du monde de la recherche et de celui l'académie et de celui de l'activité économique ou financière. Deux autres équilibres sont à signaler – la présence des femmes et celle des auteurs provenant de pays qui ne font pas partie des capitales financières mondiales.

D'une édition du Prix à l'autre, les textes soumis offrent une vue panoramique des thématiques qui sont, à un moment donné, au cœur des préoccupations des jeunes générations en matière d'éthique en finance. Dans cette 6ème édition, trois séries de problèmes méritent d'être mentionnés :

- La question technologique avec le questionnement sur le rapport que cette évolution entretient avec l'éthique ; il s'agit notamment de savoir si la technologie est de nature à se substituer à des préoccupations éthiques en permettant une certaine automatisation dans ce domaine, ou bien si, au contraire, la technologie nécessiterait un surcroît d'éthique pour être mieux maitrisée.
- La question de la confiance qui se décline au travers des notions de méfiance systémique, de l'impossible objectivité et de la capacité qu'offrent les bases de données actuellement disponibles aux fabricants de produits financiers de segmenter, voire de discriminer, leurs clients. Ces techniques requièrent des garde-fous éthiques d'une nature nouvelle.

Our thanks go to the Jury who worked intensively on the analysis of the papers. Four new members have joined the Jury for this edition, namely Mrs Jo Iwasaki (ACCA – London); Mr Stéphane Bernard (Euroclear – Brussels & Krakow); Mr Hakan Lucius (EIB – Luxembourg) and Mr Ross Murdoch (FCA – London & 1st Prize in 2015)

The jury's final selection was structured in three steps, which finalized with a Jury meeting in London on 18 November 2017. Three jury members participated via a conference call. The Jury in its final deliberation looked at the eleven 'nominated' texts in order to choose the laureates. The reader will discover all nominated essays in the rest of the book, one of the most interesting aspects of the prize is that essayists were distributed equally between the academic and research and the economic/financial background. two other points of note are the increasing presence of women and that of authors not coming from major financial capitals.

From one prize edition to the other, essays submitted offer a thematic panorama of what the younger generation is preoccupied with in the domain of ethics in finance.in this 6th edition three different key subjects came up:

- Fintech and the different issues on how ethics applies to it; can technology substitute for some ethical concerns due to the automated factor? Or does fintech require additional ethical standards to control it.
- Trust declining as the increasing amount of client data allows financial groups to segment and ultimately discriminate against their customers. These new techniques need a new security system to prevent abuse.
- What initiatives should be continued and which should be abandoned. In this context, a renewed look at the traditionally paternalist

- Les initiatives et actions à imaginer ou à abandonner. C'est dans ce contexte que la question du paternalisme est posée, avec une discussion des conditions dans lesquelles il est acceptable du point de vue éthique de pousser quelqu'un – malgré lui – vers des produits que l'on considère bons pour lui. La question de savoir si le système financier devrait être appréhendé et régulé comme un « common » - un bien commun - s'inscrit aussi dans ce contexte. Finalement, parmi les actions concrètes figure le projet d'un MOOC qui devrait traiter – pour une audience globale – les multiples aspects éthiques des récents scandales financiers.

Le meilleur moyen de se rendre compte de la façon dont les moins de 35 ans abordent les thèmes de l'éthique et de la confiance en finance est de lire les onze textes qui suivent. Le lecteur comprendra ainsi également la difficulté qu'a eue le Jury à choisir ceux qu'il a distingués. En effet, tous les textes publiés sont de grande valeur, et leur juxtaposition fait ressortir leur qualité, à travers les points de convergence, mais aussi de divergence entre les auteurs, la variété des points d'entrée et des conclusions.

Tous les textes publiés sont de grande valeur, et leur juxtaposition fait ressortir leur qualité, à travers les points de convergence, mais aussi de divergence entre les auteurs, la variété des points d'entrée et des conclusions.

Co-Presidents du Prix

Prof. Paul H. Dembinski — Mrs Josina Kamerling role of financial institutions. The appropriateness of 'nudging' and how far it is possible to go in pushing products considered right for the investor profile. Should the financial system be regulated as a common good? Finally, as a concrete measure one of the essays looks at using a MOOC which could treat ethics on a global scale.

All essays were interesting and their variety shows their quality sometimes with converging ideas but also some divergence between authors from the point of entry and in their drawn conclusions.

The best way to understand how the under 35's look and try to apprehend ethics in finance is to read the eleven essays which follow. The reader will understand that the Jury did not face an easy task to choose the laureates. All essays were interesting and their variety shows their quality sometimes with converging ideas but also some divergence between authors from the point of entry and in their drawn conclusions!

Co-Présidents of the Prize

Prof. Paul H. Dembinski

Mrs Josina Kamerling

Global Jury : Sixth Edtion 2016/2017

Co-chairs of the Jury

Prof. **Paul H. Dembinski** is the initiator and Director of the Foundation of the Observatoire de la Finance. The mission of the Observatoire de la Finance is to promote awareness of ethical concerns in financial activities and the financial sector. Paul H. Dembinski is the founder and editor of the bilingual journal Finance & the Common Good/ Bien Commun. In parallel, he is partner and co-founder (with Alain Schoenenberger) of Eco'Diagnostic, an independent economic research institute working for both government and private clients in Switzerland and elsewhere. Paul H. Dembinski is also Professor at University of Fribourg where he teaches "International Competition and Strategy". His latest published book is Ethics and Responsibility in Finance, Routledge, 2017.

Mrs. **Josina Kamerling** is Head of Regulatory Outreach at CFA Institute, responsible for supporting CFA Institute's policy development, in the Europe, Middle East, and Africa (EMEA) region, advancing the impact of advocacy efforts, and promoting capital market integrity and investor protection issues. Prior to joining CFA Institute, Josina was a Specialist Adviser on financial services in the European Parliament for six years, advising most significantly the Economic and Monetary Affairs Committee and the Special Committee on the Financial, Economic and Social Crisis on all aspects of financial services policy issues and technical information. Prior to this, Josina was a banker for 15 years in a variety of functions and locations, most notably as a senior banker in the global clients division of ING (managing a group of multinational clients on a worldwide basis and on all business lines) and prior to that as head of sales in the financial markets division of ING group (overseeing different sales teams in the dealing room). Josina holds a Bachelor of Arts with honours degree from Cambridge University in Law and modern languages.

Honorary Members of the Jury

Dr **Carol Cosgrove-Sacks,** Robin's mother, lives and works in Geneva. She is co-founder of the "Ethics in Finance, Robin Cosgrove Prize" which she co-chaired from 2005 to 2015. Dr Carol Cosgrove-Sacks was formerly Director of Trade in the United Nations in Geneva (1994-2005); since 2006 she is a Professor at the College of Europe, Bruges; a Professor at the Europa Institute, University of Basel; and the Senior Advisor on International Standards Policy to OASIS, the global eBusiness standards organisation. She also maintains interest in some British academic centres, including the Institute of Development Studies (IDS), University of Sussex, and the Centre for Euro-Asian Studies (CEAS), University of Reading.

The Most Reverend **Justin Welby**, Arch-Bishop of Canterbury and a member of the House of Lords, is an Emeritus Member of the Jury. He served as a member from 2006-2013. He was a senior executive in a UK oil company, before ordination in the Church of England. For many years, he was responsible for the reconciliation work of Coventry Cathedral, travelling widely in Africa and the Middle East. Justin Welby has written extensively on ethics and finance. In July 2012 he was appointed to the Parliamentary Commission on Banking Standards.

Members of the Jury

Stéphane Bernard, Managing Director, has been recently appointed CEO of the Euroclear Bank Poland Branch. He is also a member of the Board of Directors of the ESES (Euroclear Settlement of Euronext-zone Securities) central securities depositories (Euroclear Belgium, Euroclear France and Euroclear Nederland) and a member of the ESES Audit Committee. Prior to taking his current position, Mr Bernard was COO for the ESES CSDs as well as being part of its management committee. Mr Bernard was General Manager of Belgian central securities depository, from 2001 until 2006, when CIK joined the Euroclear group. Mr Bernard started his carreer as a broker dealer in 1989. He holds degrees in Commercial and Consular Sciences from the Saint Louis Institute of Commerce in Belgium, a degree in Marketing from Institut Supérieur Economique Ixelles and a Master in Treasury Management from the University Antwerp Management School

Mrs **Marie Casimiro-Crepin** is Compliance Officer Professional Ethics and Privacy BGL BNP Paribas (Luxembourg). She is a former winner of the Robin Cosgrove Prize, 2008-2009 edition. Lawyer by training (Master II at the Assas-Paris II University), Marie Casimiro-Crepin focused her final thesis on history of law, particularly of the budgetary law at the time of the "Ancien Régime". In 2007 she started to work for Ethiea Gestion, a portfolio management enterprise which centers its work on an ethical and behavioural analysis of different societies.

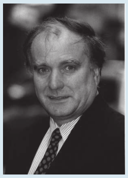
Prof. **Marc Chesney** is Professor of Finance at the University of Zurich. Previously in Paris, he was Professor and Associate Dean at HEC, President of the CEBC (Centre d'Etudes sur le Blanchiment et la Corruption) and an external expert with the World Bank. He has published articles and books in quantitative finance and on financial crime mechanisms. In particular, he is interested in ethics and finance. At the University of Zurich, he is member of the Board of the Graduate Programme for interdisciplinary Research in Ethics and co-organizer of the Ethical Finance Research Series. He is also member of the advisory Board of Finance & Common Good/Bien Commun journal. Marc Chesney holds a Ph.D. in Finance from the University of Geneva and obtained his Habilitation from the Sorbonne University.

Mr **Christopher de Mattos** is a director of London-based investment manager RAB Capital Ltd. He has spent over 20 years in the financial services industry, working as a financial analyst and investment banker in Europe and Latin America. Christopher joined the founding team at RAB in 1999 and, as Finance Director, was instrumental in taking the company to flotation on London's AIM market in 2004. He holds a degree in Mechanical Engineering from Imperial College, London and gained SERC and Kitchener scholarships to study for his MBA at INSEAD. Having reduced his involvement in the day-to-day management of RAB, he has taken a particular interest in the role of the board in promoting corporate governance in financial services businesses. He is an INSEAD Certified Director and chairs the INSEAD Directors' Network.

Dr **Eduard Dommen** is a specialist in economic ethics. He is past President of the Scientific Committee of the Swiss Network of International Studies (www.ruig-gian.org); and was a member of the Scientific Committee of the Swiss Network of International Studies (www.snis.ch). He is a founding member of "Actares, Shareholders for a sustainable economy" (www.actares.ch). He was also a founder of the Ethics Committee of the Swiss Alternative Bank (Banque Alternative Suisse) and a member of the Board of Geneva's Caisse Publique de Prêts sur Gages as well as a member of the Council of the RAFAD Foundation, an institution that guaranteed micro-credit. Edward Dommen has been a university professor, but he spent most of his career before he retired as a researcher with the United Nations conference on Trade and Development (UNCTAD). He has written and edited several books on economic ethics.

Dr **Philippa Foster Back** has over 25 years of business experience. She began her career at Citibank NA before joining Bowater in their Corporate Treasury Department in 1979, leaving in 1988 as Group Treasurer. She was Group Finance Director at DG Gardner Group, a training organisation, prior to joining Thorn EMI in 1993 as Group Treasurer. She was appointed Institute of Business Ethics' Director in August 2001. Philippa Foster Back has a number of external appointments, including at the Ministry of Defence, The Institute of Directors and the Association of Corporate Treasurers, where she was President from 1999 to 2000. In 2006 she was appointed Chairman of the UK Antarctic Heritage Trust.

Mr **Peter Gakunu** was Executive Director at the International Monetary Fund in charge of Africa Group One Constituency. Before joining the Fund, he served as Permanent Secretary and Senior Advisor to the Kenya Government from 2003 to 2004. In 2000 he joined the "Dream Team", a team of high level personalities put together by the World Bank and the UNDP to advise the Kenya Government on economic reforms, including the development of an economic growth and poverty reduction strategy. Prior to that, he worked with the African Caribbean and Pacific Group in Brussels, first as the Trade Expert (1977 to 1986) and later as the Director Trade and Customs Division (1986 to 2000) at the ACP Secretariat.



Dr **Andrew Hilton** is Director of the Centre for the Study of Financial Innovation, a London-based non-profit think-tank, supported by 70 City institutions, that looks at threats to and opportunities in the global financial system. The CSFI was set up 20 years ago, and has since published several books and around 100 reports. More significantly, he has organized well over 1,300 round-tables on issues of pressing interest in the financial services sector – including EMU, the single European market, the Internet, small business finance, high-tech start-ups, microfinance and regulation. Dr. Hilton also runs a small economic and financial consultancy. He has worked for the World Bank in Washington and has run a financial advisory service for the Financial Times in New York. He has a PhD from the University of Pennsylvania, an MBA from Wharton and MBA from New College, Oxford.

Mrs. **Jo Iwasaki** is Head of Corporate Governance within Professional Insights, ACCA. Jo writes regularly on a wide range of corporate governance topics, including governance principles, board responsibilities, and corporate culture. She gives lectures to various audiences, including directors, professional accountants, academics, and students. A qualified accountant, she is trained in tax and audit. In addition to corporate governance, she also has extensive experience in business assurance

Prof. **Dominique Jacquet** is Visiting Scholar at Insead Social Innovation Center and Professor of Corporate Finance at Cedep, University of Paris Ouest and Ecole des Ponts ParisTech. He is a civil engineer (Ecole des Ponts), holds an MBA from Insead and a PhD from the University of Bordeaux. Before starting an academic career, he has been a finance executive in American and French corporations, holding controller, treasurer and CFO positions. His main areas of interests are the relationship with business and finance, the role of incentives in sustainable value creation and the link between uncertainty and financial strategy.

Prof. **Robin Jarvis** is Special Adviser to the European Federation of Accountants and Auditors (EFAA) and Professor of Accounting at Brunel University. He chairs the Advisory Panel of the Chartered Banker's Professional Banking Standards Board and the European Banking Authorities (EBA) Consumer Protection Group. For the last ten years he has been a member of European Commission's Expert Group the Financial Services User Group. Robin has researched and published on SMEs, accounting and banking for a number of years resulting in numerous publications and 10 books. His interest in SMEs and accounting has been recognised through his membership of the International Accounting Standards Board (IASB) SME specialists groups and his membership of the European Financial Reporting Advisory Group (EFRAG).

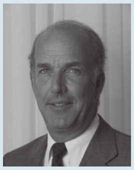
Dr **Hakan Lucius** is Head of Stakeholder Engagement, Transparency and Civil Society at the European Investment Bank, the European Union's bank and largest supranational lender, where he covers the transparency and stakeholder engagement of the institution. Prior to that he was responsible for the financing of operations, ranging from large-scale infrastructure projects, structured operations, environmental investments to SME finance, both through loans and equity. Dr Lucius also serves as the President of the European Investment Bank's Pension Board. He is a member of the European Investment Bank Institute's Social Committee and of the Royal Institute of International Affairs, Chatham House. Dr Lucius received a Ph.D with distinctions in industrial economics, a MBA from INSEAD, France, and an MSc in Engineering from Vienna Technical University. He is also a Professor lecturing on Sustainability issues in Finance and on Cross-Cultural Management

Dr hab. **Róża Milic-Czerniak** is vice President of the Banking Ethics Commission at the Polish Banking Association and is an associate professor at the private economic university in Warsaw. Previously, she has held a number of managing positions in one of the largest banks in Poland, where she was responsible for developing capital management, product management and client profitability. Prior to joining the bank, she worked at the Institute of Philosophy and Sociology of the Polish Academy of Science in Warsaw, where she researched economic behavior of households, including in periods of transition. She is the author of several books and research papers and spent one and a half year in Germany at the Hohenheim University in Stuttgart and University of Kiel.

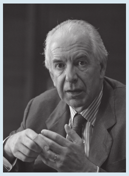
Mr **Ross Murdoch** is a lawyer at the Financial Conduct Authority (FCA) in London, within its Enforcement and Market Oversight Division. Ross specialises in regulatory enforcement proceedings, particularly within wholesale financial markets, including market abuse, benchmark manipulation (e.g. LIBOR), and other market misconduct. Prior to working at the FCA, he worked as a lawyer at a commercial law firm within its Commercial Dispute Resolution & Regulatory practice in London. He is dual qualified as a solicitor in England & Wales (2011) and Scotland (2010). In September 2015, Ross was awarded first prize in the Global Edition of the Ethics in Finance Prize (2014/2015).

Mrs **Clare Payne** is the founder and Board Member of The Banking and Finance Oath and is a St James Ethics Centre Consulting Fellow for Ethics in Banking and Finance. Clare also holds the professional position of Director of Business Partnerships for Good to Great Schools Australia, an organisation focused on education reform, lead by Australian Indigenous Leader Noel Pearson. Clare previously managed the Integrity Office of Macquarie Bank and is a World Economic Forum Young Global Leader. Clare was awarded the Inaugural Robin Cosgrove Prize for Ethics in Finance, Geneva, and in 2011 she was nominated in the FINSIA Pinnacle Awards category for 'Most Outstanding Thought Leader' in Financial Services. Clare commenced her career as a lawyer having completed a Bachelor of Laws and Mass Communications.

Mr **Jean-Christophe Pernollet** is Chief Audit Executive of the Edmond de Rothschild Group, after having been its Chief Financial Officer. Earlier in his career he was the partner in charge of the Geneva office of PricewaterhouseCoopers. He is a graduate from IEP and EDHEC and has completed the Columbia Business School Senior Executive Program. As a former Lead bank auditor recognised by the Swiss Regulator FINMA, he is a financial services industry specialist and benefits from more than twenty years of working experience, of which three in Paris and two in New York. He was Chief Financial Officer of EFG International between 2010 and 2012.



Mr **Charles Pictet** acted as a financial regulator in Switzerland from 2005 until 2012 in his capacity as a member of the board of FINMA. Prior to this, he worked at Pictet & Cie, a Geneva-based Swiss private bank, where he spent 25 years as a partner and senior partner. He was President of the Geneva Private Bankers Association, Vice President of the Swiss Private Bankers Association, and a member of the Board of the Swiss Bankers Association. He also served as Vice President of economiesuisse. He is currently Vice President of the International Red Cross and Red Crescent Museum in Geneva (Conseil de Fondation), and a member of the Board of Europa Nostra. He holds an MBA from the University of St Gallen.



Mr **Domingo Sugranyes** graduated from the University of Fribourg (Switzerland) in 1969. He was Secretary General of the International Christian Union of Business Executives (UNIAPAC) based in Brussels from 1973 to 1981. He moved to Madrid in 1981 and joined the MAPFRE insurance group, a Spanish agricultural mutual which was at the time starting to grow internationally and has developed into a multinational insurance and reinsurance group now present in 44 countries. As one of the vice-chairmen of the group and Executive Committee member, he participated in the internationalisation and the demutualisation process and was in charge of Finance and Economic affairs. After retiring from executive office in 2008, he remained on the Board of the MAPFRE Foundation until reaching the statutory age limit of 70 in 2015. Since 2009 he is Chairman of the Centesimus Annus pro Pontifice Foundation, a Vatican body dedicated to spreading and debating Catholic social teachings in economic and business circles.

http://www.ethicsinfinance.org/about-us/the-jury/

Part I

New & Old Frontiers of Ethics

Ethical Leadership and Ethical Legacies

Ethics & Trust in Finance
Global edition 2016-2017

Third Prize *ex-aequo*

Bibi Mehtab Rose-Palan
Mauritius
Credit Executive Corporate,
The Mauritius Commercial Bank,*
Port Louis

* The views expressed herein are those of the author and do not necessarily reflect those of the Organization she is affiliated to.

Lately, the financial sector has been perceived as being more unethical than any other. This paper will take as an example the Wells Fargo scandal. It shows how, once again, employees are at the heart of an ethical crisis in financial services. Such crises have now become a great concern for moral psychologists, for spiritual leaders, and for behavioural scientists who are trying to understand what led to that situation and what caused such behaviours. How can 5,300 employees all lose their moral compass?

The truth is that we are all vulnerable. Despite our good intentions, we may sometimes be forced to make choices we never thought we would make. According to former prosecutor Serina Wash (*2016*), most of the corruption today comes from "ordinary good people" with whom you "could well have coffee with that morning. And they were still good people who'd made terrible choices."

Lisa Ordonez, Vice Dean and Professor at the University of Arizona talked about how "goals have a strong effect of causing tunnel vision, narrowly focusing people at the expense of seeing much else around them, including the potential consequences of compromised choices made to reach goals."

The first section of this paper is focused on the ethical dilemmas faced by bank employees today and how our financial system is gradually becoming ethically lethargic. Going from ethical to unethical is not a sudden shift, but rather a gradual process that starts with those minor, unethical decisions that employees allow themselves to make. The daily

Le monde de la finance a graduellement passé d'un système hautement éthique à un système éthiquement léthargique. Cette situation de léthargie a été un incubateur parfait pour le dérapage de 5300 employés de la banque Wells Fargo en 2016.

En tant qu'employés de ce système, nous sommes vulnérables et pouvons répéter les mêmes erreurs. La transgression inoffensive de l'éthique que nous nous permettons de commettre régulièrement crée, à long terme, un modèle dans notre subconscient qui force une réaction automatique lorsque nous faisons face à des situations contraires à l'éthique.

Ce papier commence en fournissant au lecteur une analyse situationnelle des dilemmes éthiques auxquels font face les employés de banque dans différents secteurs dans l'organisation et élabore différentes

repetition of dishonest actions creates a pattern in our subconscious. Over time, our reaction to such situations becomes automatic and does not even register as unethical.

By reviving an ancient approach to ethics written some 2000 years ago by Aristotle, I emphasize in the second section the importance of promoting ethical leadership in our organisations to inspire employees' to embrace ethical values in their daily behaviour. I also encourage a re-examination of cultures and whistleblowing systems to facilitate ethical leadership by looking at the following questions:

1. What can management do to create a more ethical organisational culture?

2.How can we optimize the effectiveness of whistleblowing system?

The future and the profitability of our financial system depend greatly on the next generation of employees. It is therefore our responsibility to build an ethical legacy for this digital generation and to ensure that the system that was once created to safeguard the interests of the community still has value and importance in the heart and mind of each person in society.

Tech - no - logic

The transition from one method of communication to another is always morally contentious. Socrates lived in an era when people were moving from communicating orally to a new form of technology which consisted of collecting information in scrolls and books. Socrates refused to write anything down based on his argument that written words "seem to talk to you as though they were intelligent, but if you ask them anything about what they say, from a desire to be instructed, they go on telling you the same thing forever". (*Phaedrus, section 275d*).

Today we live in a world in constant change. Technology has been an important trigger in the evolution that banks have faced over the last decades. Technological development of the banking system and digitalisation of banking channels have enabled customers to have non-stop access to banking services without having to physically enter a branch. Digitalization has swept through bank operations and enhanced customer experience with alternate customer channels. Customers are now being offered multiple interaction points including branches, ATMs, internet banking and, now, mobile banking. The smartphone has brought a real transformation to everyday retail banking. By digitalising customer service, banks have become more effective and faster in their customer interaction. This, in turn, has changed the structure of the organisations: new units have been created such as call centres and back office operations have been extended. At the same time, the front line service is more concentrated on winning business and increasing the firm's portfolio. As a result, employees

solutions selon des approches telles que, (i) un leadership pour promouvoir l'éthique chez les employés, (ii) l'amélioration de la culture et (iii) revoir le système de reporting. Il s'agit de répondre aux questions suvantes
(a) comment peut-on promouvoir le leadership en matière d'éthique dans une organisation ?
(b) comment la direction peut-elle créer une culture d'entreprise plus éthique ?
(c) comment rendre le système de reporting efficace?

La technologie a été un important catalyseur dans la transformation du secteur bancaire de l'ère traditionnelle à l'ère numérique. On offre maintenant des points d'interaction multiples aux clients à travers les agences, les distributeurs automatiques de billets, la banque en ligne et sur mobile, qui permettent de repousser les limites du service client.

Toutefois, comme l'a bien visualisé Socrates, bien que la technologie

often face excessive pressure to meet unrealistic targets.

Call centres- The conflict between the needs of customers and the needs of the bank

An article in the *International Journal of Work Innovation* (Csillag et. al, *2012*) identified how work in a call centre is emotionally demanding, with high pressure and routine, and boring and repetitive tasks. Further, employees' performance targets are based on the number of customers dealt with and the employees have little or no control over how work is allocated. Others have described call centres as the: "high tech workplaces of the future, symbolizing the close and value-creating interactions of information technology and human beings" (Moss et al *2008*; Altieri et al *2002*)

This article goes further to identify two ethical issues that employees in call centre face:

1. Organisational issues: Overregulation and control of the employees, together with and the highly unrealistic performance targets reduces the sense of responsibility that the workers have, may numb their conscience and may encourage them to cheat.

2. Customer interaction issues: If staff are encouraged to lie to customers this will, over time, create a moral distance in an employee's subconscious.

Unethical behaviour seen in call centres is, most of the time, a result of the unrealistic goals and standards imposed on the employees. Moreover, the processes and the organisation itself are constantly in flux, introducing new rules and regulations. That churn discourages employees from putting rules and regulations into practice. The rules, regulations and targets imposed are seen as unfair by the employees and cheating is seen by many as the only solution. Employees are also stuck between the competing expectations of the customers and of the organisation. The loyalty and confidential clauses in the employees' contract bind them to sometimes lie, withhold information and giving wrong information to cover up for their organisation.

Back office operators – The factory workers

The job of back office employees has been undervalued over time causing them to become demotivated and adopt a mechanical approach to work. These employees are invisible to the customers and are often viewed collectively by the management as a processing department. Their individual contribution are generally recognized only by their direct reporting superiors who sometimes neglect to reward them accordingly.

Once again, irrespective of how they behave, these employees find that the targets imposed on them are the only measure of their performance. That is why ethical values are overlooked in their quest

paraisse intelligente, il faut un cerveau humain pour penser et agir pour elle.
Tout ceci débouche sur une pression excessive sur les employés pour suivre la vitesse du développement technologique et respecter les objectifs peu réalistes fixés par les dirigeants de l'organisation.
Pour les besoins de ce texte, nous considérerons trois niveaux différents d'une organisation financière et feront toute la lumière sur les dilemmes éthiques auxquels font face les employés de banque aujourd'hui.

Le Centre d'appels est qualifié comme «le lieu de travail d'avenir et de haute technologie». Ce travail met l'opérateur sous haute pression et il est très exigeant émotionnellement.
L'employé est confronté à deux dilemmes :
1. Réduction de la responsabilité et encouragement à la triche du fait des objectifs inaccessibles et un contrôle rigoureux.
2. Créer une distance morale dans le subconscient de l'employé en le poussant à mentir au clients.

for better reward and remuneration. Knowing that how they behave is not being monitored, but rather how they perform, they have a superficial sense of freedom from having to behave ethically all the time.

Not convinced? Let me put it this way: how do you eat when you are having a formal dinner with your boss in a restaurant compared to having a pizza in front of your television alone? Ethics are like good table manners. If they are not recognised, they are ignored. The rule of thumb is that you will behave ethically only when you are being observed, because being observed makes you feel accountable.

Relationship Manager – The Jehovah's Witness of the bank

One morality-diminishing factor that forced employees at Wells Fargo to modify their behaviours was the aggressive sales target imposed. The employees were forced to work unpaid overtime to meet the target. In an attempt to do so, at least 5000 employees became involved in the Wells Fargo Scandal of 2016, (The Guardian, *2016*) reported. A total of at least 2 million deposit and savings accounts were opened in the names of the customers without their consent. Wells Fargo's internal analysis revealed that more than 1.5 million deposit accounts and at least 565,000 credit cards were set up between 2011 and 2015. "This dishonest and unethical conduct", as the top securities regulator of Massachusetts would eventually describe it, was the result of great pressure on, and low consideration for, the employees.

Cross- selling is at the heart of every financial organisation and it is seen as an aggressive sale pitch to increase the earnings of banks, rather than as a means to inform the customers of their options. On top of that, some banks have selling contests in which they reward their best performers with either cash prizes or vacation as, for example, at Morgan Stanley where a total of $24m of new loans was generated in the period 2014 to 2015.

How far these sales can be considered as good sales? For the sake of achieving targets, old people without computers or mobile phones have been granted Internet & mobile banking access. Large loans that had been rated credit-grade became non-performing, because the risks had been neglected to drive a higher profit margin.

The disconnect between the bank's expectations of ethical behaviour by an employee and the goals and restriction imposed on the employee is counterproductive and it increases confusion and doubt in the minds of bank staff. In order to reduce tension and anxiety, employees create a rational explanation for their behaviour without realizing that, over time, they are losing their emotional sensibility and abandoning their ethics to blindly follow procedures.

De même, les employés du back-office se défaussent de leurs responsabilités éthiques en échange de meilleures rémunérations et de la reconnaissance. En effet, ils sont notés seulement sur la base de leurs performances mesurables ce qui les entraîne à adopter une approche mécanique dans leur travail. Les chargés de clientèle sont ceux qui se battent sur le front sous haute pression pour respecter les délais serrés et reçoivent peu de considération comme dans le cas de Wells Fargo.

La contradiction flagrante entre les attentes de la banque en termes de traitement éthique et les objectifs imposés aux employés, augmente encore plus la confusion dans l'esprit des employés. Pour pouvoir faire face à cette tension, ils choisissent de suivre aveuglément les procédures tout en laissant de côté leur sensibilité émotionnelle.

Employee engagement – The missing carrot

Another major crisis that the financial system has been facing since the credit crunch of 2007-2008 is in employee engagement levels. Although organisations worldwide recognize that employee engagement is crucial for their growth, the level of engagement has barely moved over the past decade. Gallup Daily tracking *(2015)*, reports that only 32% of U.S employees are engaged and on a worldwide scale only 13%. Engagement determines the degree to which ethics are displayed. Most of the bank employees today find themselves stuck in Maslow's *(1943)* first level of employee need, the survival level. They have abandoned their hope for a better life; doing more does not necessarily imply being recognized. To be promoted today, you must either be in the good books of the managers, or, sadly, report on your peers. Subsequently, ethics for employees at the survival and security level are quasi non-existent. They are working only to pay the bills and their children's school fees, and to get a retirement pension at the end. They have no vision of being part of the system as an important stakeholder.

Who is to blame then?

The Gallup Report *(2015)* further identifies some of the causes of this disengagement among employees:

1. A focus on surveying engagement, rather than investing in and mentoring employees.
2. Not treating employees as stakeholders within the chain.
3. The wrong culture.
4. Abusive role models.

In an article published by the Asia Pacific Journal of Human Resources, Eve Anderson *(2009)* mentioned how an organisation can "face difficulties" if the interests of individuals aren't considered "when changing work policies and processes". Employees can be disengaged if they feel that they have no benefit from, and value in, the change process.

So why are we still failing despite the many attempts? How can we solve this ethical crisis in our system? The answer is simple; by calling a spade a spade.

Neuroethics – A social practice

Today there are many standards for defining ethical values. For instance, on the basis of pragmatism or of a belief in what is right and what is wrong. According to Howard Gardner's multiple intelligence theory, moral intelligence is a "form of *neuro-biologically-enabled* social intelligence." Moral intelligence is therefore not a matter of the logical accuracy of language. Neuroethicist Antonio Damasio *(2006)* in his book, *Descartes' error* (p.10) claims that "ethical behaviours are a subset of social behaviours". This close connection between social and moral intelligence suggest that the human brain conceives moral intelligence as a socially-interactive intelligence and that it is visible in our interactions;

Le niveau d'engagement parmi les employés du secteur financier est aujourd'hui à son plus bas. Les employés se battent seulement pour survivre et l'éthique à ce niveau est inexistant. Les causes d'un tel désengagement d'après le suivi journalier de Gallup (2015) sont :
1. l'absence d'investissement dans l'employé
2. une considération faible
3. une culture toxique
4. des modèles de rôles abusifs.

La neuro- éthique est définie comme la pratique sociale de l'éthique. Selon Antonio Damasio (2006), la connexion étroite entre l'intelligence sociale et morale permet au cerveau de concevoir l'intelligence morale comme une intelligence socialement interactive. L'intelligence morale permet à l'individu de distinguer les interactions bénéfiques de celles qui sont nocives ; mentir et frauder d'un côté, donner aux gens les moyens de vivre paisiblement, de l'autre.

for instance, in negotiating agreements, communication, reciprocity, and mitigating conflicts. Matt Ridley, in *The Origins of Virtue (1996)*, further adds that the brain "is equipped with special faculties to enable it to exploit reciprocity, to trade favours, and to reap the benefit of social living." This includes mutually beneficial forms of conduct that encourage positive feedback, and in turn inspire moral actors to repeat these good social behaviours. Most importantly, moral intelligence empowers the actors to live peacefully with each other and to distinguish between beneficial and harmful interactions, examples of the latter being lying and committing fraud. Such a sense of duty is not only anchored in the psychological approach of the individual, but rather a social practice. This is referred to as the practice of mutual obligations, the equivalent of mutual benefit as in the relationship between management and the employees. In such a relationship, there are both rights and responsibilities. By this token, neuroethics, supports a *social deontology* (a concept of duty) and *social utilitarianism* (mutual benefit).

Ethical Leadership –when everything else failed

We are not only concerned about recent scandals in the financial industry but, taking a wider context, about man-made catastrophes *per se* – such as the latest scandal in the oil industry, which resulted in an ecological disaster and was triggered by profit-oriented leadership practice. The public interest in ethical governance and ethical leadership has grown. Ethical leadership has been shown to have a positive impact on how well organisations function by increasing management effectiveness, job satisfaction, improvement in followers' performance and citizenship behaviour within the organisation.

Ethical leadership is defined as leadership that is directed by respect for ethical beliefs and values and for the dignity and rights of others. It thus relates to concepts such as trust, honesty, consideration, charisma, and fairness. (Wikipedia *2015*). It can also be seen as a function of the leader's personal characteristics and of environmental circumstances. (Lewin, *1951*). It is further defined by Brown, Treviño, and Harrison (*2005*) as the "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (p. 120).

Ethical leadership encompasses both a visible and an invisible aspect. The visible side of ethics is revealed in individual behaviour and actions. The invisible part is embedded in the character and moral values of the individual. The first principles of ethical leadership can be traced back to Aristotle. In his work *Nicomachean Ethics*, Aristotle defines *phronesis* as

Le leadership éthique est un leadership qui est dirigé par le respect pour des croyances et des valeurs éthiques et est considéré comme dépendant de la personne du dirigeant et du contexte.
On trouve le premier principe d'un leadership éthique dans l'ouvrage d'Aristote sur l'Ethique de Nicomachean. D'après lui, la phronesis est la capacité qu'a un individu de combiner l'éthique avec l'action pour parvenir au bonheur.

Une approche plus moderne du leadership éthique est le leadership transformationnel, élaboré par MacGregor en 1978. Selon cette approche de leadership, le dirigeant a la possibilité et la capacité de transformer un individu et d'amener des changements positifs pour ses adeptes.

Bernard M Bass (1985) est allé plus loin dans cette théorie en expliquant que la mesure dans laquelle un leader est transformationnel dépend de son influence sur ceux qui le suivent.

the intellectual capability for combining ethics and actions to help people achieve *eudaimonia* (happiness). It is "about having the right feelings at the right time on the right occasion towards the right people for the right purpose and in the right manner." *Phronesis* is essential for decisions towards promoting *eudaimonia*.

According to Aristotle, *phronesis* is more like a practical phenomenon than a purely rational one. Men with *phronesis* have developed through experience an "eye for things so they can see correctly".

The eight traits of an ethical leader have been summarized in quotes from Aristotle below:

1. "To avoid criticism say nothing, do nothing, be nothing."
2. "He who cannot be a good follower cannot be a good leader."
3. "We are what we repeatedly do. Excellence then is not an act, but a habit."
4. "To run away from trouble is a form of cowardice and, while it is true that the suicide braves death, he does it not for some noble object but to escape some ill."
5. "Liars when they speak the truth are not believed."
6. "Happiness belongs to the self-sufficient."
7. "Tolerance and apathy are the last virtue of a dying society."
8. "Patience is bitter, but its fruit is sweet."

Next breed of leaders

Ethical leadership is significantly associated with transformational leadership, which is a more modern approach to Aristotlean philosophy. Transformational leadership theory was introduced by McGregor in 1978 in his book "*Leadership*".

In his approach, (McGregor,*1978*) elaborates on the responsibility of both leaders and followers to raise one another to higher levels of morality and motivation. This leadership approach has the ability and capacity to transform an individual. It brings positive change to followers with the objective of turning them into leaders. Likewise, it becomes an example of ethical and moral values to leader peers.

Bernard M. Bass (*1985*) further elaborated on McGregor's theory by explaining that the degree to which a leader is transformational depends on how much influence they have on their followers. The qualities of a transformational leader – such as the ability to inspire trust, loyalty and respect – empower and motivate followers to willingly work harder towards objectives. Along the way, the followers will also develop and espouse the same ethical values as the leader. By providing an inspirational vision and endowing them with a new ethical identity, the leader is offering the followers more than just work self-gain.

Through charismatic and exemplary influence, which is founded in high ethical values, such leaders

La complexité du monde financier provoque des conflits entre les objectifs éthiques et la pratique permettant de réaliser ces objectifs, ainsi qu'entre les attentes contradictoires des différentes parties prenantes.

Les organisations avec de hauts standards éthiques aident à réduire cette différence en créant une atmosphère propice à la prise de conscience des problèmes éthiques et en développant une sensibilité éthique chez les dirigeants et les employés.
De plus, en tenant les dirigeants responsables de leur conduite contraire à l'éthique, l'organisation envoie un message clair à tous ceux qui en font partie sur le fait que l'éthique est prise très au sérieux.

transform, motivate, and stimulate the intellectual and personal considerations of their followers.

Given the significance of this subject, how can we promote ethical leadership in our organisations?

It is argued that the complexity of an organisational environment is negatively correlated with the development and maintenance of ethical leadership. Sharfman & Dean (*1991*) defined the three dimensions of environmental complexity as: (a) the level of knowledge essential to understand the organisational environment; (b) the level of changeability in the environment; and (c) the level of existing resource from the environment. In complex situations, leaders have to constantly evaluate and monitor unpredictable changes in the environment to be able to provide the appropriate solutions. Edgar Schein (*1985*) emphasised that it is crucial for an organisation to embrace uncertainty as an advantage in order to be more adaptive. He also does a great job in demonstrating how transformational founding leaders succeed in managing internal and external challenges by incorporating other values and perspectives, thus creating shared culture in young organisations. In his book, *Organisation culture and leadership,* 4th edition, Schein (*1985,*) noted that:

"With the changes in technological complexity, the leadership task has changed. Leadership in a networked organisation is a fundamentally different thing from leadership in a traditional hierarchy" (p.12).

Ethical mandate in organisations

In a complex environment like the financial world, conflicts may arise between ethical goals and the practices for achieving these goals, and different stakeholders may have different ethical expectations. Budde, Child, Francis, & Kieser *(1982)* elaborate on how an organisation with a strong policy of ethical behaviour can create an atmosphere of high awareness of ethical issues, and develop ethical orientations in leaders and employees. In such an environment, leaders develop an increased awareness and sensitivity to humanitarian issues, which is then reproduced in their daily interpersonal and leadership behaviour. According to Festinger's (*1978*) theory on cognitive dissonance, it is impossible to work for an organisation that aims to be highly ethical and simultaneously treat others inhumanely. From the employees' perspective, they become more sensitive to the ethical dimension of leadership and appreciate being treated justly, fairly and humanely.

Based on the theory of social learning, employee support for ethical leadership is linked to positive progression and maintenance though reinforcement and through positive feedback loops. (*Bandura, 1977, 1986*)

On peut comparer la culture au caractère d'un individu. Il est décrit par Schein (1985) comme « les phénomènes sous la surface qui contraignent et guident le comportement » et aussi défini comme la façon dont nous « faisons les choses ».

Une organisation doit aussi être prudente lorsqu'elle décide de fusionner afin d'éviter des heurts de culture comme dans le cas de Wells Fargo, une ancienne entreprise de diligences express qui a fusionné avec Norwest en 1998. Bien que fonctionnant sous le nom Wells Fargo, c'est la culture de vente agressive de Norwest qui a continué de prévaloir. La culture prédominante de Norwest a définitivement été un déclencheur dans la conduite contraire à l'éthique des 5300 employés.

Firms with a policy of ethical behaviour moreover attract applicants who embrace greater ethical awareness and higher moral development (*Kohlberg, 1976*), which means they have social motivations beyond getting an attractive salary and career prospects. This candidate self-selection in turn facilitates the development and maintenance of ethical leadership in the organisation. Most of the employees will have a more positive attitude to ethical issues and will have more or less the same preferences for ethical leadership.

Accountability of Leaders (Walk the talk)

Too often, leaders take credit for all achievement but when it comes to taking responsibility for failures find ways to avoid it. Instead, they blame employees, the system and the organisation. By holding leaders accountable for unethical conduct, an organisation sends a clear signal to the rest of the firm and society on how seriously ethics is taken. For instance, Carrie Tolstedt, senior executive of retail banking at Wells Fargo, walked away with only a fine of $67 million. Junior employees, in contrast, were the most severely punished as in the case of the 5,300 employees who lost their job. Accountability in leadership builds trust and promotes ownership in the organisation in contrast to the commonly held view that accountability means people are under constant surveillance. When correctly applied, accountability builds employees' confidence in themselves and in their leader.

Culture review

During his speech at Brooklyn College in New York in 2014, the president of the Federal Reserve Bank of New York, Mr. William Dudley, reiterated the necessity for banks to improve their culture and further suggested that senior executives should lead by example and that the banks should reward the employees who dare speak out.

Simply put, culture is "the way we do things around here". It consists of cognitive entities like leadership style, process, actions and relationship which can be further grouped into **values** and **practices**. A survey conducted in 2016 by MIT Sloan Management review and Deloitte Digital, revealed that financial institutions are investing massively in digital transformation by developing digital products to improve the customer experience and strengthen their engagement. However, many firms today are focusing on the external environment and how to leverage their digital capabilities and are not spending enough resources on the internal development of the organisation and on its culture.

Culture in an organisation can be compared to the character of an individual. Schein (*1985*) describes culture as the "phenomena beneath the surface that constrain and guide behaviour".

Robin et Judge (2009) ont approfondi cinq pratiques qui aident à construire une culture éthique :
1. devenir un modèle de référence visible
2. communiquer des attentes éthiques claires
3. offrir des formations en éthique
4. récompenser des actes éthiques et punir ceux qui y sont contraires
5. installer un mécanisme de protection.

« Le lancement d'alerte » est un système bien connu utilisé par les organisations financières aujourd'hui. Il consiste à offrir un canal anonyme pour signaler des comportements contraires à l'éthique. Selon une étude menée par « Transparency International Global Corruption Barometer» 91500 personnes dans 86 pays sont prêtes à dénoncer les fautes professionnelles pour autant qu'elles soient effectivement protégées.

Is your culture toxic?

Have you ever felt like a cog in a machine and that your contribution is not being recognized? Are told to get on with your work and stop asking questions? Those are all signs of a toxic culture. Employees today have switched to "survival mode" in order to safeguard their jobs or get a raise and this often implies making unethical choices. A good example of an unethical organisational culture was Enron. The firm valued profits over ethical behaviour and it was described by Sims and Brickmann (*2003*) as "the ultimate contradiction between words and deeds, between a deceiving glossy facade and a rotten structure behind". (p.243)

Organisations have to also be cautious when deciding to merge. They are not only combining staff and locations, but corporate cultures. The CEO of Wells Fargo, John Stumpf defended his bank culture and put the blame on the "bad" employees. "Everything we do is built on trust," he said. He further defined his bank culture as "a pattern of thinking and acting with the customer in mind…the habit of doing the right things, and doing things right." However, this is not what the organisation's history tells us. Wells Fargo was established in 1852. The bank was a former stagecoach express that carried valuable goods from gold mines. It had merged with Norwest in June 1998. Although the Norwest name no longer exists, its culture still prevails. Prior to the merger of both banks in 1997, Norwest launched a product campaign called "Going for *Gr-Eight*". In an interview with *Fortune Magazine* in 1998, the then CEO Dick Kovacevich explained that his bank was involved in "selling money" through different financial instruments like ATM cards, credit cards, and loans. All the financial instruments were considered consumer products no different from, for example, the bread sold in a bakery. According to him, the branches were the "stores" and the bankers the "sales people" whose only task was to "cross-sell". He said it was his "business model" and "it was a religion. It was very much the culture".

Norwest's dominant culture was a definite trigger in the unethical conduct of 5300 employees despite the Wells Fargo code of ethics that qualifies such conduct as "gaming": "the manipulation and/or misrepresentation of sales and referrals….in an attempt to receive compensation or to meet sales goals".

What can management do to create a more ethical organisational culture?

Truxillo, Bauer, & Erdogan (*2016*) claimed that an organisational culture that emphasizes ethical behaviour can reduce organisational misbehaviour. They say that whether an organisation adopts a culture that "emphasizes doing the right

L'efficacité de ce système d'alerte peut être optimisée (a) en promouvant une culture basée sur un haut niveau de conscience éthique et de transparence ; (b) en protégeant les employés qui dénoncent les fautes et en ne les traitant pas avec hostilité ; (c) en établissant un cadre de confiance et un système d'examen les faits et les accusations avant d'entreprendre des actions, protégeant ainsi les employés de fausses allégations.

thing even when it is costly comes down to whether leaders, starting with the CEO, consider the ethical consequences of their actions. Leaders with a moral compass set the tone when it comes to ethical dilemmas" (p. 385).

Robbins and Judge (*2009*) elaborate on five practices that help building an ethical culture which have been adapted for the purpose of this paper:

1. **Become a visible role model**
By acting and behaving ethically, senior management sends a positive message to their subordinates. They provide a model of what behaviour is, or is not, acceptable in the organisation.

2. **Communicate clear ethical expectations.**
Communication is an effective tool in eliminating ethical ambiguities. Ethical rules and code of conduct should be clear at all levels of the organisation. It should be first embraced, as mentioned above, by the organisation's elite and cascaded down to the rest of the organisation.

3. **Provide ethics training.**
Training can be used to reinforce the ethical code of conduct by equipping employees with knowledge of, and practice in, what is allowed and what is not.

4. **Reward ethical acts and punish unethical ones.**
Performance measurements in financial firms nowadays are designed to include measurable targets and achievements. They do not include the evaluation of decisions made according to the code of ethics. Appraisals should, however, not only be focused on the results but on how those results were achieved. And, consequently, the right behaviour should be rewarded, while unethical behaviours should be penalized.

5. **Instate protective mechanisms.**
Employees should be encouraged to report any unethical conduct of peers or managers without fear of being reprimanded. I shall further discuss in the next section the importance of creating a proper ethical reporting platform as a proactive measure to detect any sign of unethicality well before it turns into into fraud and crime.

Ethics reporting

Too often ethics is brought up only after a scandal has occurred, or during the yearly compliance policy review. Employees are not really conscious of the code of conduct expected from them. Without a clear code of conduct in mind, it is difficult to differentiate between what's ethical and what's not. Once employees are clear about the ethical goals, there will be less hesitation in reporting ethical misconduct.

One approach, which is being increasingly used in organisations today, is an ethics hotline or '*whistle-blowing*' system. Its first intention is to provide an anonymous channel where employees can report unethical behaviour without fear of retaliation. The Protected

On estime que la génération Z est la première génération qui est née dans un environnement totalement technologique, on présume qu'ils sont très réalistes, avec un esprit entrepreneurial, animés par des valeurs et qu'ils prennent au sérieux les problèmes de stabilité financière. En reconstruisant une forte réputation éthique basée sur un leadership éthique, et en favorisant une culture fondée sur la collaboration et sur la relation bilatérale, nous parviendrons à faire émerger une génération Z d'employés engagés. La seule façon d'atteindre ce but est de retourner aux vieux principes et de recréer un système ancré dans l'éthique pour un meilleur futur.

Disclosures Act (*No. 26 of 2000*), the so-called '*whistle-blower act*', ensures that the employees are protected from occupational disadvantage for reporting offenses.

A survey done by Transparency International's Global Corruption Barometer 2010 revealed that 91,500 people in 86 countries are willing to report misconduct provided they are effectively protected. So why are many employees still reluctant to report transgression?

It depends at which level this transgression is being carried out. For example, employees feel vulnerable when it comes to reporting senior management. They could be at risk of losing their job, a promotion and career prospects.

How can we optimize the efficiency of the ethics reporting system?

First and foremost, the culture of the organisation needs to be conducive to reporting wrongdoings and should encompass high levels of ethical awareness and transparency. Second, the informer should be viewed as a loyal employee safeguarding the interest of the organisation and not be treated with hostility. It takes courage to report such misconduct, and it should be viewed as act of bravery.

Another important factor, which should not be neglected, is the people on the ethics committee. Establishment of a proper trust framework is crucial for the effective functioning of the committee. For example, there could be one committee consisting of board members for the sanctioning of management and another committee consisting of senior management for actions against employees. The actions taken should be matched to the gravity and nature of the charge. The committee should also be aware that this system can lead to false and mischievous reporting. Thus, it is important to also have a review system to verify the facts and accusations before taking action, in order to protect employees from false allegations.

Legacy for the digital generation

Generation Z, born after *1992*, is considered to be the first generation born into a fully technological environment. They are said to be very realistic, entrepreneurial, and very curious and value-driven and, above all, they are said to take financial stability issues very seriously. It is not difficult to see why that might be. They grew up in a period of economic and political instability and have seen the older generation struggle. Gen Zers are determined to avoid committing the same mistakes and they are self-motivated. According to a new global study by EY (*2016*), 71 % of Gen Z view respect and ethical behaviour as the most important characteristic of a future employer. The study also revealed that this generation is not insensible to their parent's experience and that these experiences had a "very or somewhat negative" effect on how much they will trust their future employers.

So how can we ensure the financial system is appealing to the next generation?

My journey as a banker started when I was only 8 years old. One hour spent at the bank with my father was enough to inspire a lifetime's career. The ethical culture and leadership in those days were so strong that it could be felt, although not understood, by a young girl. I believe that by rebuilding a strong ethical reputation based on ethical leadership and authentic brand image, and by fostering a culture built on collaboration and two-way relationships, we will engage Gen Z employees. The striking part is that our system was once built on ethical foundations. However, while we have embarked on a digitalised journey into the future, we have lost track of the ethical values and responsibilities we had in the past. The only way to get back on the right path is to halt and return to the old principles of a system anchored to ethics. That will lead to a better tomorrow.

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The Ethical Challenge of Systemic Financial Distrust

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Second Prize

In one of the opening sentences of his *Meditations on First Philosophy* René Descartes observes that "it is prudent never to trust completely those who have deceived us before" (1996 [1641]: 12). Some 350 years later, Lady Gaga, in her song *Telephone*, agrees: "Trust is like a mirror, you can fix it if it's broke, but you can still see the crack in that [*expletive*]'s reflection!" The near-universal human truth that these two very different thinkers – each in their own idiom – stress is that once it is lost or betrayed, trust is very hard to regain and may never fully recover.

It is this insight that the financial industry has painfully had to confront over the tumultuous last decade. First, there was the *internal* breakdown of trust amongst market participants that triggered, magnified and perpetuated the global financial crisis (Roth, 2009; Shiller, 2008; Krugman, 2013). Second, there was an accompanying *external* breakdown of public trust in those working in the financial industry, its major organizations, and, crucially, the financial system's ability to fairly deliver prosperity. In a 2016 study, only 8% of Americans said that they trust their house-bank or financial intermediary, a figure that used to be well above 50% prior to the crisis (Close, 2016). Another study persistently ranks the financial sector as the least trustworthy industry (de Bruin, 2014; Edelmann, 2016). Perhaps harder to put into figures, but ultimately more consequential is the loss of faith in the economic structure of which finance is an integral part, as witnessed by resurgent populist condemnations of '(financial) globalism' and calls for protectionism and unilateralism. Overcoming

Dans Les Méditations, René Descartes observe qu'« il est prudent de ne jamais faire totalement confiance à ceux qui nous ont déçu auparavant ». Quelque 350 ans plus tard, Lady Gaga, dans sa chanson Téléphone, va dans le même sens : « la confiance est comme un miroir, vous pouvez le réparer quand il est cassé, mais vous pourrez toujours voir la marque dans son reflet ! » La vérité presque universelle qui en découle est le fait qu'une fois la confiance perdue ou trahie, elle est difficile à regagner.

L'industrie financière a dû y faire face avec peine durant les 10 dernières tumultueuses années. D'abord, il y a eu l'effondrement interne de la confiance chez les participants au marché qui a déclenché la crise financière globale. Ensuite, il y a eu une perte de confiance externe du public dans la capacité du système à apporter équitablement la prospérité. La méfiance dans la finance est une préoccupation pour chacun.

internal and external distrust should be a goal for professionals who aspire to work in a prosperous and fair financial industry. But because these breakdowns in trust have the potential to threaten the very existence of a liberal democratic order, distrust in finance is an acute problem that is of *everyone's* concern.

This essay contributes to our understanding of trust in finance. We approach the issue from a new philosophical angle by investigating first the problem of systemic *distrust*. We proceed in four steps: Section two lays the groundwork by offering a philosophically sound account of trust and distrust. Crucially, we demonstrate that distrust is at heart a so-called "thick" ethical concept, which is grounded in the trustee's moral obligations. Section three turns to distrust in the financial system. We distinguish between agential and systemic distrust, and we list some evidence and possible causes. But our goal is more than diagnostic. In section four, we advance proposals for alleviating distrust in the financial system. We present short-term as well as more aspirational ideas, distinguishing three complementary strategies: generating agreement about the obligations of the financial system, introducing reforms to increase its reliability, and communicating improvements.

Trust and Distrust

Trust is everywhere. From the most casual everyday choices to the most agonising and momentous decisions in our lives, we are constantly engaged with assessing whom, what, when and why to trust. Crucially, trust is not just one additional thing to consider – it is almost always a *decisive* concern: As lovers and friends, we end relationships when our trust has been betrayed. As voters and citizens, we do not support a candidate in whose sincerity we have doubts. As consumers and investors, we refrain from purchasing products or shares when we lack faith in the management's truthfulness. Trust relations underpin life as we know it. Without trust, close relationships are inconceivable, democratic politics impracticable, and prosperous market exchanges unworkable.

Some Characteristics of Trust

But what exactly is trust? First, we must distinguish between trust and distrust and trustworthiness and untrustworthiness. Whereas (dis)trust is the *attitude* that we display towards those we *consider* trustworthy, (un)trustworthiness is the property that a trustee must objectively have for trust to be warranted (Hardin, 1996; McLeod, 2015). Thus, we can fail to trust or even distrust those who are objectively trustworthy, and we can trust those who are objectively untrustworthy. With this distinction in mind, let us now confront some necessary aspects that all cases of the form "A trusts B in respect of X" have

La confiance est partout. Comme les amoureux, nous mettons fin aux relations quand notre confiance a été trahie. Comme les électeurs, nous éliminons les candidats pour la sincérité desquels nous avons des doutes. Comme les investisseurs, nous évitons les entreprises dont la gestion ne nous paraît pas sincère. Nous devons distinguer la confiance (méfiance) de la (non) fiabilité: alors que la confiance (méfiance) est l'attitude que nous montrons à ceux que nous considérons comme (non) fiables, la (non) fiabilité est la qualité qu'un administrateur doit objectivement avoir pour être digne de confiance. La confiance est une relation triple entre celui qui fait confiance, celui à qui la confiance est faite et certaines tâches. Faire confiance implique toujours un risque en rapport avec quelque chose de valeur pour celui qui fait confiance. A a seulement confiance en B par rapport à X lorsque A attend que B fasse X. La confiance est basée sur des émotions et des attitudes éthiques.

in common (Baier, 1986; O'Neill, 2002):

1. *Trust is task-focused.* Though we sometimes speak as if there was 'trust *tout court*', trust is to be understood as a threefold relation between a truster, a trustee, and some tasks: When we worry that the average person's trust in bankers is declining, then we of course do not worry about his expectation that his banker will reliably send him flowers on his anniversary, but that she will reliably and faithfully execute those tasks that customers can legitimately expect.

2. *Trust entails risk and vulnerability*. Trusting always involves a risk to something valuable for the truster, and hence vulnerability (Attas, 2016). When I transfer my savings to a wealth manager, I take a risk that trust was misplaced: I may lose my money.

3. *Trust presupposes expectations and reliance*. A only trusts B in respect of X when A expects that B will in fact do X. When I ask my upstairs neighbour to water the tomato plant on my balcony while I am on holiday, but already expect her to forget, then I do not trust her to do it (Holton, 1994: 64).

4. *Trust is grounded in emotions and ethical attitudes*. Trust requires that, when A's belief in B's doing X is frustrated, it is appropriate for A to have certain emotions and attitudes towards B (Jones, 1996). When my slipshod neighbour fails to water my tomato plant, then it is *ceteris paribus* warranted that I am resentful towards her for this omission, and it would be appropriate for her to apologize.

Three Insights About Trust

The aspects identified above indicate that trust is intimately connected to questions of ethics. By its very nature, trust is something that can be betrayed, and when this occurs (and in contrast to cases of mere reliance) morally charged emotions like resentment and blame are in order. Such emotions are *justified* when it is ethically correct to assume that the trustee had a moral duty to do what we trusted her to do. Similarly, we have reason to be regretful when we distrusted somebody and later learn that this distrust was unfounded. So, this is our first insight (Hawley, 2014: 8):

Insight 1*: Trust and distrust (as opposed to reliance) presuppose a moral obligation or commitment between truster and trustee.*

However, the absence of trust is not by itself sufficient for characterising a relationship as one of distrust. While I do not rely on my friend to bring me chocolate if she never does so, it cannot be said that I *distrust* her in this regard. The appropriate response when unexpectedly offered chocolate is thankfulness, not remorse for misplaced distrust. It would be absurd to apologise to my friend for the previous absence of trust in her offering chocolate (comp. Hawley, 2014: 3). This yields our second insight:

Aperçu 1 : la confiance et la méfiance (par opposition à la dépendance) présupposent une obligation morale ou un engagement entre celui qui fait confiance et le trustee.

Aperçu 2 : la méfiance (par opposition à la non dépendance) est le fait de s'attendre à ce que le trustee ne s'acquitte pas de son obligation morale ou de son devoir.

Aperçu 3 : la méfiance systémique est distincte de la méfiance dans un système car elle présuppose la méfiance généralisée entre des acteurs en interaction.

S'il y a méfiance, son existence même contient à la fois une menace et une promesse. La menace est que ceux qui se méfient pensent qu'une obligation morale sera violée. La promesse c'est que ceux qui se méfient croient au moins qu'il y a des obligations morales qui

Insight 2*: Distrust (as opposed to non-reliance) is the expectation that a trustee will fail to perform a moral obligation or duty*.

We started out by considering not merely *distrust* in finance, but *systemic distrust*. One might think that systemic distrust merely is distrust in the financial system, but this is too simple. If an individual distrusts the financial system, this cannot amount to *systemic distrust*. Systemic distrust presupposes that many agents jointly distrust, where this distrust can in turn undermine the system since it emerges from the interaction of numerous agents:

Insight 3: *Systemic distrust is distinct from distrust in a system as it presupposes widespread distrust among interacting agents.*

These insights clarify when there is distrust as opposed to merely the absence of trust and when distrust amounts to systemic distrust. Moreover, if there is distrust, then its existence holds both a threat and a promise. The threat is that those who distrust believe that a moral obligation will be violated. The promise is that distrusters at least believe that there are ethical obligations that can, in principle, be observed. Put more bluntly: financial calamities are not like bad weather – inevitable facts of life that may disappoint us, but about which ethical judgment is nonsensical. The financial system is human-made and changeable, and therefore assumptions about moral obligations (and hence distrust) are apt.

Systemic Distrust in Finance

It's time to connect our philosophical reflection to empirical practice: We saw that people who distrust will:

(A) believe that some agent or institution (the trustee) has some moral obligations or commitments;

AND

(B) expect that the trustee will betray or violate those obligations.

(A) and (B) together suggest the structure for the following empirical diagnosis of distrust: Subsection 3.1 analyses what people – those who mistrust – see as the moral obligations and commitments of the financial system and those in it. What are possible *objects* of a betrayal of trust? In 3.2 we assess the *grounds* for the expectation of non-compliance.

What People Expect from the Financial System

Of course, there is no clear catalogue of obligations that everybody agrees on when it comes to the financial system. Nor need there be complete agreement on this in a pluralistic society. Our moderate goal here is to sketch important values that we think matter to a vast majority of citizens. We do not draw on extensive empirical survey data but trust that our readers, upon reflection, will agree that these are indeed widely-shared expectations. For analytic clarity, we focus on those peuvent, en principe, être respectées. Les désastres financiers ne sont pas comme le mauvais temps – des faits inévitables de la vie qui peuvent nous désappointer, mais sur lesquels un jugement éthique n'a pas de sens. Le système financier est fait par l'homme et peut être changé.

Les gens qui se méfient (a) croient qu'un agent ou une institution (le trustee) a des obligations morales, et (b) et s'attendent à ce que le trustee trahisse ou viole ces obligations. Ainsi, pour établir un diagnostic empirique de la méfiance, nous considérerons d'abord ce que les gens croient être des obligations morales du système financier et jusqu'où ils pensent qu'elles seront honorées. Lorsque les deux sont divergentes la méfiance apparaît. Même s'il n'y a pas de catalogue des obligations clair sur lequel tout le monde est d'accord, les deux points de vue suivants semblent être largement acceptés : (1) l'objectif du système financier de contri-

outcomes that the financial system *as a whole* is expected to produce, and then on the obligations of *individual agents*, notably natural persons and corporations that matter for trust. For these agents, we differentiate between non-compliance that stems from (i) lack of *competence,* or (ii) lack of *motivation*.

Systemic Purpose: Equitable Prosperity

At the most abstract level, the purpose of the financial system is to serve the common good (Hendry, 2013: 46; Shiller, 2012: 7; Steigleder, 2011). What does that entail? Our suggestion is that the financial system must contribute to 'equitable prosperity', which is shorthand for a system that reliably makes people better off whilst ensuring that nobody is treated inequitably. Finance's crucial role for prosperity consists in efficiently allocating capital to productive resources, providing financial services, and managing risk (Boatright, 2013; James, 2012; Santoro and Strauss, 2013).

With regard to equitableness, the obligation is, at the very least, a negative one, namely (i) to avoid contributing to outcomes that are so bad that they amount to *economic harm*, and (ii) avoiding unfair outcomes where massive gains to some cannot be justified in terms of either some ethically relevant criterion (e.g. hard work, talent) or the contribution that inequality makes to overall prosperity (James 2012; Rawls, 1999).

Agents' Obligations: Competence and Motivation

Beyond outcomes, there are moral expectations about agents of finance, their actions, standards of behaviour, and, more generally, their business culture. Assessment of agents is distinct from the moral assessment of structures and institutions: Agents *act*, i.e. they have plans, form intentions and respond to reasons in the pursuit of their aims. When it comes to placing trust in agents, we do not only care about the outcomes they bring about, but also about why and how they do so. We believe agents in the financial system are considered trustworthy by society at large when they meet two conditions:

1) They are capable of performing the function they occupy, where this function is justified in terms of the system's overall purpose.

2) They are motivated in the right way to pursue these goals.

Just to give an example of this dual requirement: As the CEO of a company looking to acquire a competitor, we will trust our M&A advisor only if, first, we are convinced that she is sufficiently competent to counsel us about the industry, corporate finance, and so forth. But secondly, we will only trust her if she is motivated to look out for our interest, as witnessed, for example, by the absence of conflicting mandates, her own investment decisions, and so forth. Both competency and motivation are properties that buer à une prospérité équitable, c'est-à-dire d'améliorer le sort des gens et de ne traiter personne de façon inéquitable. (2) les agents à l'intérieur du système financier doivent être compétents pour exercer la fonction qu'ils occupent et avoir de droites motivations.

Les attentes sont largement basées sur l'expérience passée, nous devons donc prendre en considération les résultats et le comportement dont le public a été le témoin.

Aux yeux de beaucoup, les marchés financiers ont mené à une mauvaise allocation du capital et ont causé la crise financière globale qui a provoqué des réductions dramatiques du bien-être économique général. De même, la promesse de résultat équitable a été ébranlée.

Il y a un sentiment général selon lequel pendant que les gains provenant du boom d'avant crise alimenté par la finance profi-

are not imminently observable, so that we generally seek to establish their presence by reference to past behaviour and current constraints and incentives on action. This, we shall now see, explains the present problem of distrust.

How Past Experience Give Rise to Distrust

Distrust arises if there is the expectation that obligations will not be met. We have identified what the public thinks are the obligations. What are its expectations? We begin by considering outcomes and behaviour the public has witnessed, assuming that expectations are to a large extent based on past experience. In so doing, we focus primarily, though not exclusively, on the 2008-10 financial crisis since it most drastically shaped the public's current perception of financial markets.

Outcomes of the Financial System

Focusing first on the promise of prosperity, it seems clear that this has been called into severe doubt: Rather than facilitate efficient capital allocation, financial markets have in the eyes of many led to a misallocation of capital, including human capital. And instead of distributing and managing risks emanating from the real economy, the financial industry has, at least during the financial crisis, been a source of instability causing dramatic reductions in overall economic wellbeing (Lowenstein, 2010). Thus, the experience-grounded expectation that the system can robustly produce prosperity has been shaken.

How about its ability to deliver equitable outcomes? The first condition here was that the financial system should do no harm. But, to give just one example, IMF and World Bank estimate that as a result of the financial crisis, up to 83 million people more will have to live below the line of severe poverty (United Nations, 2010: vi). More locally, the financial crisis has in many instances had a dramatic impact on the lives of those already worse off, e.g. low-skilled labourers now unemployed. The second component of equity was basic fairness in distributive outcomes. Here too, there is a widespread sense that whilst the gains of the finance-fuelled pre-crisis boom largely benefitted one layer of society, the subsequent costs of the crisis were fully 'communalized' through bank bailouts, jobs cuts and austerity measures, which disproportionally burden those dependent on social assistance and unfairly exempted those responsible for these outcomes. Whether or not these judgments are accurate, they clearly bolster the narrative that "the system is broken".

Behaviour of Agents in Finance

Beyond the failure to live up to the expectations in terms of aggregate outcomes, the financial crisis has also exposed a severe lack of competence among individual as well as institutional agents.

taient à une mince couche de la société, les coûts de la crise ont été complètement « socialisés » à travers des sauvetages.

Quelles sont les perceptions des acteurs financiers ? Distinguons les dimensions « compétences » et « motivation ». La crise financière a mis en évidence un manque de compétence grave : de nombreuses institutions ainsi que les personnes à l'intérieur de ces institutions engagées dans des interactions sur le marché ne comprenaient pas pleinement ce qu'ils faisaient. Même les inventeurs des produits financiers complexes ont finalement perdu la capacité de les contrôler. Il y a non seulement eu des cas particuliers de problèmes légales, mais à un niveau plus général, des segments de l'industrie financière ont engrangé des profits à court terme plutôt que de faciliter la prospérité économique.

At the institutional level, many banks did not comprehend the products they were dealing with. The German Landesbanken, largely state-owned banks that have historically focussed on doing business with small to mid-sized German firms, are an example. Lured by high returns, they started investing in credit default swaps, collateral debt obligations and other structured financial products, blindly trusting the rating agencies' verdicts. As Constantin von Oesterreich, head of the HSH Nordbank, later remarked: his bank was investing "everywhere without being qualified to do so" (The Economist, 2015).

Remarkably, even those who invented the complex financial products that fuelled the financial crisis eventually lost the ability to handle them (Schwartz & Cresswell, 2008). As mortgages were placed in large bundles, claims to which were divided hierarchically and then repeatedly re-sold, even the constructors of these products could no longer gauge their value, though they knew they were risky. Beyond such product complexity, there is also an impairment to manageability and foreseeability from algorithmic high frequency trading that has, in the past, led to 'flash crashes' and arguably increased volatility.

In addition, there have been concerns about motives. By developing and selling such products, parts of the financial industry had alienated themselves from the fundamental social purpose that finance as a profession was meant to fulfil, namely to manage risk and facilitate real economic growth. What these segments of the industry where doing was in fact the opposite: releasing their 'toxic financial products' into the real economy and killing productivity, employment and growth (Stiglitz, 2010).

Beyond this basic failure to meet its social purpose, the public also witnessed the financial services industry display more specific deficiencies of motivation. The recent string of discoveries of fraud on its own is impressive. In 2008, Bernard Madoff was charged with choreographing the largest Ponzi scheme in history (Ionescu, 2010). In 2012, it became public that banks had colluded to manipulate the London Interbank Offered Rate (Libor) for over ten years (Kennan, 2012). The discoveries of often record-setting fraud have become so regular that it seems the industry is corrupt to the core.

But even where financial institutions have stayed within the boundaries of the law, they have often been deemed to have crossed ethical boundaries. A good example is the recent Cum-Ex scandal in Germany, in which local and international banks effectively conspired to receive €31.8bn tax 'refunds' from the treasury on taxes never paid in the first place (Blickle, 2017).

Il y a en principe deux façons d'atténuer la méfiance : changer les hypothèses relatives aux obligations ou modifier les attentes. En ce qui concerne les hypothèses relatives aux obligations, il est important qu'elles ne divergent pas. Pour cette raison, les agents financiers devraient s'engager à éviter de faire des promesses trompeuses, qui alimentent les attentes irréalistes. Puisque les entreprises individuelles peuvent trouver un intérêt dans de telles règles, si elles sont appliquées conjointement, il n'y a pas besoin d'une intervention de l'État. En même temps, plutôt que de blâmer « les banquiers », les politiciens et les organes de presse devraient identifier avec précisions quelles sont les devoirs et obligations spécifiques que le système financier ou les agents individuels n'ont pas respecté.

Alleviating Distrust: Proposals for Reform

There are in principle two ways of alleviating systemic distrust in financial markets. First, one can dispel the assumption of an obligation: if no obligation is assumed, then there can be a perception of unreliability, but no distrust. Arguably, this was the case prior to the advent of modern economic theory and the belief that governments could and should shape the economic landscape. Second, one can remove the expectation that obligations will be violated, which requires convincing people that the financial system is trustworthy.

This section will look at the merits of these approaches in turn. Our proposals are always split into two categories. First, those that could realistically be implemented in the short-term; second, those that are more aspirational. Through this two-tiered approach we hope to provide a comprehensive 'menu of choice', guarding against pure utopianism while not curtailing ambitions by focussing too narrowly on the feasibility constraints of the moment.

Obligations

It matters what obligations the financial system is assumed to have. While we make some substantive (but we hope not outrageous) assumptions about what these obligations are, we want to preface this with a simple, structural idea: for any chance of systemic distrust to recede, assumed obligations need to be jointly realisable, and hence assumptions of different agents within society need to converge. By this logic alone, it is crucial that whatever changes are implemented are the product of democratic procedures. Our proposals here are invitations for citizens and financial professionals to deliberate. With this expectation management and reciprocal engagement in view, we propose the following:

- **Short-Term Proposals**

(a) Forums should be established to discuss the obligations of the financial system, demarcating them from additional obligations society at large has. Such forums could be held from the local level upwards, bringing together professionals, politicians and laypeople.

(b) Financial agents should commit to avoiding deceitful promises, which could contribute to unrealistic expectations about what finance can achieve. Since individual firms may have an interest in such rules, if implemented jointly, this need not require state intervention.

- **Aspirational Ideas**

(a) At a political level, a list should be composed of the obligations the financial system and the agents within it have. This could be done at different levels, with regions or nations adding obligations to a global list. These lists could then guide reforms.

(b) Rather than blaming 'the bankers', politicians and media

La réforme actuelle vise à augmenter la fiabilité du système financier, afin que celui-ci devienne plus digne de confiance. Les faiblesses structurelles sont présentes au niveau macro. Elles proviennent tout d'abord de la présence d'institutions d'importance systémique et ensuite d'un manque de transparence. Des règles plus strictes en matière de liquidités pourraient contribuer à la stabilité et il pourrait être raisonnable de transformer les institutions financières d'importance systémique en des entités plus petites. Des règles additionnelles en matière d'information et un changement dans la procédure pour l'évaluation de la solvabilité des produits financiers pourraient augmenter la transparence.

outlets should be careful to identify specific obligations the financial system or individual agents have failed to meet. As informed debate requires knowledge, better educating students about the financial system may also be an important long-term goal to reinstate trust.

Actual Reform

While there might be disagreement about the precise obligations, those mentioned in 3.1 and 3.2 clearly seem to be part of any reasonable set. On this assumption, the financial system, at least prior to the 2008-10 financial crisis, was not reliable in meeting its obligations, so it was not trustworthy. In order then to effectively and permanently alleviate distrust, there needs to be actual reform to make it more reliable. Our analysis of the origins of the failure of the financial system suggests that there are primarily three sources of unreliability, namely:

(i) structural weaknesses, such as the presence of systemically relevant institutions;

(ii) a lack of competence, such as an inability of asset managers to comprehend the complex products they were dealing with and;motivational shortcomings, such as short-term profit seeking.

A comprehensive strategy should address all three components.

Structural Weaknesses

We suggested that in contrast to agents, trust in systemic institutions is based foremost on outcomes. This subsection considers the financial system at the macro-level. Increasing reliability primarily requires increasing the system's ability to absorb shocks to its components (Goldlin & Mariathasan, 2015). One aspect of this is the presence of systemically important institutions, whose failure could quickly impair the whole system. Another concern is whether market participants are really able, in times of crisis, to quickly evaluate the creditworthiness of financial products and institutions. This form of transparency is vital for maintaining business between banks. In the crisis, it was primarily the collapse of trust in the interbank-lending market that caused havoc in the real economy as credit became unavailable to firms (Krugman 2013).

- **Short-Term Proposals**

(a) To increase the resilience of the financial system, more stringent liquidity rules should be introduced in accordance with each institution's susceptibility to systemic impact (Admati & Hellwig, 2014). The more equity capital financial firms have, the longer they can absorb losses and the lower the likelihood of contagious effects.

(b) Additional disclosure rules could help increase transparency. While it is a task for experts to determine what kind of information should be published, the aim should be to make it easier to reliably evaluate the creditworthiness of financial products and institutions.

Un comportement de prédateur de la part des institutions financières envers les clients pauvres, tels que le chargement par les banques de frais excessifs en cas de retard, devrait être interdit. Une telle mesure pourrait atténuer la méfiance de deux façons : en premier, elle changera la perception aux yeux du client. En second, en tant qu'exemple de prise en compte de la vulnérabilité du client, elle peut aider à mettre en place une culture moins étroitement axée sur le profit.

Plutôt que de purement proscrire certains produits, la charge de la preuve dans quelques domaines à haut risque devrait être inversée. En utilisant les règles actuelles pour l'approbation de nouveaux produits pharmaceutiques, les entreprises financières devraient alors être obligées de démontrer que les bénéfices attendus des nouveaux

(c) Specific, stricter rules should be developed for institutions that are deemed systemically relevant to ensure that they are in a strong position to absorb even pronounced shocks (IMF, 2011).

- **Aspirational Ideas**

(a) If possible at reasonable cost, all systemically relevant financial institutions should gradually be transformed into entities that are not too big (or interconnected) too fail. Such entities not only constitute an inherent weakness, but also create adverse incentives for risk-seeking behaviour (firms know they will be saved).

(b) The way the creditworthiness of products and firms is assessed should be re-examined. There might, for example, be a case for reducing the epistemic weight assigned to credit ratings (de Bruin, 2017) or for changing incentive structures to ensure impartiality.

Lack of Competence

There are two ways to ensure that an agent is competent to accomplish a given task. One can train her to carry it out, or reduce the skill-level required. Valuable products might be complex, but complexity in finance (as in law) is, also, always in the private interest of those who can outsmart others.

- **Short-Term Proposals**

(a) A non-profit institution akin to consumer advice centres should be created with the expertise to advise firms on risks involved in complex financial products. Firms have incentives to train their employees so that they are aware of all risks involved in products they handle, but might lack the expertise to identify risks.

(b) A study should be commissioned to identify products, trading practices and business models that increase the complexity of financial markets, evaluating benefits and costs. The aim is to acquire data on the basis of which to decide (at the political level) which activities to disincentivise or curtail. For example, existing rules on spoofing, layering and front-running in high-frequency trading should be refined to reduce the danger of excessive volatility.

- **Aspirational Ideas**

(a) At a political level, a decision should be made on how to weigh the benefits of highly complex financial products against the risks they give rise to. Complexity in some areas can likely be considerably reduced at little or no cost to social productivity and welfare.

Motivational Shortcomings

It would be neither fair nor productive to place blame for motivational shortcomings solely on individual agents. The structures in which they are embedded matter as they shape norms as well as incentives (Murdoch, 2015). In addressing motivational shortcomings, we distinguish between narrowing a trust gap – by making unreliable behaviour less attractive – and bridging a trust gap – by changing cultural norms (Attas, 2016).

produits l'emportent sur leurs risques. L'atténuation de la méfiance nécessite un changement dans les attentes. Tandis que les attentes du public peuvent s'adapter au fil du temps si le système financier reste fiable, les attentes sur les marchés financiers sont souvent auto-réalisatrices, d'où il est d'importance vitale que les changements soient communiqués rapidement.
Propositions à court terme : imposer un moratoire sur les fonctionnaires voulant travailler dans l'industrie financière ; établir (ou renforcer) des instituts de recherche gérés par l'État afin d'acquérir une expertise publique sur les marchés financiers.
Idées à plus long terme : imposer une séparation stricte entre les régulateurs financiers et les professionnels de la finance (avec pour modèle les relations avocats–juges) ; étant donné les biais dans l'octroi des financements, réguler le financement externe de la recherche académique plus étroitement et introduire un code d'honneur pour les universitaires.

- **Short-Term Proposals**

(a) To curtail reckless behaviour, financial firms could be obligated to share in their customers' risk. For example, Mian and Sufi (2014: 171-184) advocate shared-liability-mortgages, where monthly payments shadow movements in the market value of a property while the amortisation schedule is fixed. Such mortgages could be made obligatory for borrowers with low creditworthiness.

(b) Predatory behaviour by financial institutions towards poor customers, such as the imposition of excessive overdraft fines by banks, should be prohibited. Such a measure could alleviate distrust in two ways. First, it will alter the perception of consumers. Second, as an example of taking vulnerabilities of consumers into account, it may help create a less narrowly profit-driven culture.

(c) Criminal prosecution should be reinforced, with individual agents being held responsible where there was clear illegal behaviour. There has been a sharp decline in convictions for fraud in favour of *deferred-prosecution agreements* (Radden Keefe, 2017), which creates a perception (among the public and finance professionals), that one can get away with breaking the rules in finance.

- **Aspirational Ideas**

(a) Rather than merely outlawing certain products, regulators should shift the burden of proof to providers in some high-risk areas. Taking current rules for the approval of new pharmaceuticals as a guide, financial firms might then need to demonstrate that the expected benefits of new products outweigh their risks (Allen, 2013).

(b) A moderate financial transaction tax could be introduced. This has been proposed e.g. by Darvas and Weizsäcker (2009). Plausibly, such a tax would primarily target highly speculative short-term investments that have little economic benefit. Similarly, some regulators (e.g. the Japanese Financial Service Agency in 2017) have proposed 'speed limits' on high-frequency trading to reduce volatility.

Communication

Reforms of the financial system matter, but are not necessarily sufficient. Alleviating distrust also requires changes in expectations. While the public may adapt its expectations over time if the financial system continues to be reliable, communication is needed. Since expectations are often self-fulfilling in financial markets (Farmer, 2014), it is vital that changes can be communicated quickly, so that the public can adjust its expectations. A sensible aim would be to establish a group of experts who can evaluate progress and are able to reach the ear of the public.

This was historically the role of academics, public regulators and politicians. However, trust in these groups has also declined (Edelmann, 2017: 6,11). There are two plausible

L'analyse philosophique était nécessaire pour déterminer l'anatomie de la méfiance ; nous avons ensuite mis l'accent sur les attentes normatives que les sociétés ont à l'égard des résultats que le système financier produit et du comportement que les acteurs adoptent dans ce secteur. Plus loin, nous avons expliqué quels développements historiques ont donné naissance à des doutes profonds sur la manière dont le système financier remplit ces attentes ; finalement, nous avons examiné comment reconstruire la confiance publique dans la finance, en étudiant la gestion des attentes et des obligations, la réforme institutionnelle, et les pratiques de communication. Vaincre la méfiance dans la finance, comme le fait de reconstruire la confiance dans une relation, nécessite de faire des ajustements peu à peu plutôt qu'un geste exceptionnel. Mais (en revenant à Lady Gaga) il y a de l'espoir : un miroir cassé peut ne plus

explanations for this. First, there is a perception that there are few competent experts. The fact that few economists predicted the 2008-10 financial crisis has contributed to this impression. Second, publicised conflicts of interest have led to doubts about the impartiality of experts: many financial regulators formerly worked in finance; banks provide grants to economists; high-profile politicians have delivered pricey speeches at investment banks.

- **Short-Term Proposals**

(a) Employment moratoria should be imposed on public officials who want to work in industry. Similar restrictions should be imposed for those who wish to switch jobs in the other direction, but possibly gradually, given the need for expertise in regulation.

(b) State-run research institutes focussed on establishing expert knowledge of financial markets should be established (or strengthened). The state can only claim credibility if it does not need to rely on outsiders who may face conflicts of interest.

- **Aspirational Ideas**

(a) There should be a strict separation between financial regulators and professionals in finance. While an exchange of ideas should be encouraged, fraternisation as well as a change in employment across the divide should not. The relationship between judges and lawyers could serve as a guide.

(b) Given empirical evidence of *funding bias* (Krimski, 2013), external funding of academic research should be regulated more strictly. A code of honour could encourage academics not to accept favours from those who might have an economic interest in questions relating to their research.

Conclusion

We began this essay in the lofty heights of philosophical reflection about distrust, and ended it in the messy lowlands of practical proposals. But we see no reason to apologize for this. To (freely) rephrase a famous Kantian dictum: Theory without practice is empty; reform without reflection is blind[1]

To recap: our philosophical analysis was necessary to determine the anatomy of distrust. Based on this, we focused on the normative expectations that society at large has of the outcomes that the financial system should generate and of the behaviour agents of the financial system should display, as judged by their competence and their motivation. We then explained which historical developments and current features have given rise to widespread doubts that the financial system lives up to these normative expectations. Finally, we have chartered the terrain of how to rebuild public trust in finance,

1 The reference here is to Kant's expression "Gedanken ohne Inhalt sind leer, Anschauungen ohne Begriffe sind blind." (Kant, 2009 [1787]:B75), literally translated as "Thoughts without content are empty, intuitions without concepts are blind."

jamais produire le même reflet, mais une réparation prudente peut transformer une fissure en quelque chose de précieux : un aimable rappel de sa fragilité fondamentale.

looking at expectation and obligation management, institutional reform, and communicative practices.

In fact, our colourful range of proposals is as it should be. Overcoming distrust in finance, like rebuilding trust in a relationship, requires piecemeal adjustments on many fronts, rather than grand one-off gestures. But (and to come back to Lady Gaga) there is also hope. A broken mirror may never provide the exact same reflection, but in time, careful mending and frequent polishing can turn a crack into something valuable: a gentle reminder of fundamental fragility.

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Ethics at the New Frontiers of Finance

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Finalist

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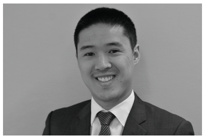

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"Ethics change with technology."

– Larry Niven, American science fiction writer

In 2011, the Court of Justice of the European Union (EU) ruled that European insurers must, after a short transitional period, no longer use a person's gender as a factor in calculating insurance premiums (Court of Justice of the European Union, 2011). The ruling was roundly criticised for being likely to raise the cost of insurance for female drivers and incentivise riskier driving behaviour (HM Treasury, 2011), and even for trivialising the very concept of human rights (Booth, 2011). Equality between men and women is a bedrock principle of the EU. Indeed, Articles 21 and 23 of the EU's *Charter of Fundamental Rights* require gender equality to be ensured in all areas. Why, then, should insurers be exempted from the most basic precepts of anti-discrimination policy? And, as private firms collect more and more data about our driving histories, medical records, and personal lives, what other protections might be needed to ensure equitable access to insurance coverage?

Deep beneath the North Atlantic Ocean lies the Hibernia Express, a 4,600km transatlantic cable system that connects Europe with North America. Completed in 2015 at a cost of US$300 million, the system lowers the latency of communication between traders in London and New York by 2.6 milliseconds (Buchanan, 2015). The Hibernia Express is just the latest addition to a global superstructure of privately-owned fibre-optic cables, microwave and millimetre-wave relays, and laser-

Les assureurs ont pendant longtemps pu utiliser le sexe comme clé pour calculer les primes d'assurance différentiées. La Cour de Justice de l'Union Européenne a maintenant déclaré que c'était illégal. Au niveau global, les opérateurs de marché dépensent des milliards de dollars en technologies pour gagner des avantages minuscules en vitesse sur leurs concurrents.

Quel est le bénéfice sociétal de cette « course aux armements » technologique, et est-ce que cela rend le marché injuste pour les autres investisseurs ? Ces deux exemples illustrent quelques-uns des nombreux dilemmes éthiques urgents auxquels seront confrontés les professionnels de la finance de demain.

based networks that connect the world's most important financial exchanges. Market participants worldwide spent some US$1.5 billion in 2013 on technology to increase trading speeds (Patterson, 2014). But researchers remain deeply divided on the societal benefits of this technological arms race: while high-speed trading improves liquidity, the speed advantage enjoyed by professional traders may have irrevocably rigged the market against pension funds and 'mum-and-dad' investors.

These two examples illustrate some of the many pressing ethical dilemmas that will confront the finance professionals of tomorrow. Past submissions to the *Robin Cosgrove Prize* have explored how the finance industry could be rendered more ethical through avenues like better instruction in behavioural ethics and design thinking. While these ideas are meritorious, I argue that they have three principal weaknesses.

Building on the literature

The first is that past essays have been overwhelmingly concerned with the business of banking and securities trading. But finance is a diverse profession: millions of people work in asset management, insurance, broking, venture capital, financial technology ('fintech'), and other fields. Ethical impasses in these fields are often overlooked in the literature. This essay attempts to partially fill the gap by investigating some of the emerging ethical issues in insurance and fintech.

The second weakness is that past essays (e.g. Murdoch, 2015) have tended to focus on high-profile instances of wrongdoing, like Bernard Madoff's infamous Ponzi scheme, that were clearly *illegal*. Insofar as a nation's laws broadly express the combined ethics of its citizens, it is not hard for a dispassionate external observer to clearly recognise these actions as being unethical. More interesting, from my point of view, are examples of financial practices or innovations that are legal but whose ethicality is presently *ambiguous*.

The third weakness is that past essays (e.g. Godbold, 2015) propose illusorily simple heuristics, like "putting the customer first". These may be suitable for decision-makers working in customer-facing retail financial services, but provide little guidance for professionals in other segments of the industry. In addition, as I write in this essay, putting the customer first does not always lead to desirable outcomes when viewed through the broader prism of distributive justice.

The motivation for this essay comes from my time as an analyst focusing on financial regulation at the Australian Treasury, and then as a researcher at a leading think-tank. I quickly came to see how decisions made by industry executives, regulators, and government ministers are rarely value-neutral. When the Australian state of

Les textes retenus par les éditions précédentes de ce prix, ont trois principales faiblesses. Premièrement, ils portent en grande majorité sur le secteur bancaire et le commerce de titres, laissant de côté d'autres segments d'une industrie financière diversifiée. Deuxièmement, ils ont tendance à se concentrer sur des actes qui sont illégaux. Il est plus intéressant d'examiner les pratiques financières ou les innovations qui sont légales, mais éthiquement ambiguës. Troisièmement, certains auteurs ont conclu que les entreprises pouvaient être éthiques « en mettant le client à la première place » – mais ceci est en conflit avec la réalité. De plus, le fait de mettre le client à la première place n'aboutit pas toujours à des résultats satisfaisants lorsque l'entreprise a de nombreuses parties prenantes en concurrence.

Queensland was hit by a series of massive flooding events over the summer of 2010-11, it was revealed that a great many households were unknowingly uninsured because of their opaque insurance contracts. 'Greedy' insurance companies were quickly portrayed as the villains (Lutton, 2011). Insurers fired back, arguing that poor government policy had rendered large areas of Queensland uninsurable. As a public policy analyst, I was required to reflect on the many competing claims to 'fairness' that this disaster provoked: whether it is reasonable to ask an insurer to pay a claim where it has no contractual obligation, at the expense of its shareholders; whether it is equitable for the government to provide aid to disaster-affected families, but not to those suffering from non-disaster related misfortunes; whether disclosure is a sound basis on which to build a framework of consumer financial protection.

This essay is about ethics in a world where the financial industry is being buffeted by the great winds of technological change. The next section of this paper looks at the insurance sector, and examines the ethics of discriminating between different consumers based on their observed or unobserved risk profiles. The following section investigates the costs and benefits of financial innovation, with a specific focus on the growing uptake of cryptocurrencies and algorithmic decision-making systems. The penultimate section draws out some useful lessons for young finance professionals. The final section concludes the article.

Insurance and discrimination

Insurance is vital to the smooth functioning of modern economies. By mitigating the effects of exogenous events over which we have no control – illnesses, accidents, natural disasters – insurance allows people and businesses to recover from sudden misfortune. This risk mitigation is often a precondition for other productive activities, such as buying a home or starting a business (Geneva Association, 2012). In addition, the price of insurance often serves as an important signaling mechanism that can incentivise *ex ante* risk-management behaviour.

Insurance companies are in the business of discrimination. Insurers aim to charge different premiums to different groups of people based on observable variations in their risk profiles. There are limits, however, to the types of discrimination that society considers tolerable. In the United States (US), for example, federal legislation forbids health insurance companies from considering gender or 'pre-existing conditions' in the underwriting process. However, fewer than half of the American states ban the use of racial factors in life, health, and disability insurance. Only 15 states ban the use of sexual orientation in underwriting health insurance, and

L'industrie d'assurance a fait de la segmentation / discrimination son métier de base. Les assureurs visent à facturer des primes différentes selon le groupe de personnes en se basant sur des différences observables de leurs profils de risque. Il y a toutefois des limites aux types de discrimination que la société considère comme acceptables. Les différents pays, ont des niveaux de tolérance variables pour la discrimination basée sur le sexe, la race, l'orientation sexuelle, etc. Clairement, il n'existe aucun consensus sur quelles formes de discrimination sont justes.

Une majorité de gens pense que les fumeurs devraient payer plus pour l'assurance-maladie. Cependant les coûts et bénéfices d'un tel changement de politique sont incertains. Le fait de facturer aux fumeurs des tarifs plus élevés peut les pousser à renoncer complè-

only nine ban the use of gender in motor vehicle insurance (Avraham, Logue & Schwarcz, 2014).

Clearly, there is no consensus on which forms of discrimination should be permissible. At first glance, the correct moral position might be to suggest that discrimination on the basis of immutable factors outside of one's control – gender, race, sexual orientation, and so on – ought to be outlawed. But this in itself raises at least two new ethical questions. First, is it then fair to charge people higher premiums for factors that are *within* their control? Second, is it fair to charge an individual a higher premium simply because the particular demographic group to which they belong presents a greater risk *on average*?

When is price discrimination fair and equitable?

I argue that the first question has no clear answer. Take smoking, for example. A majority (59%) of Americans say that insurers would be justified in setting higher health insurance rates for smokers (Gallup, 2017). After all, smoking-related illnesses cost the economy hundreds of billions of dollars a year in healthcare expenditure and lost productivity. The theory goes that charging smokers more would encourage them to quit, improving their health and lightening the burden on the public healthcare system. Counterintuitively, however, some studies show that because regular smokers are more likely to die at a younger age, lifetime health expenditure is actually *greater* for healthy people than it is for smokers (van Baal et al., 2008). In addition, charging smokers higher premiums might cause them to forego health insurance altogether, thereby preventing them from accessing insurer-funded smoking-cessation programs (Resnik, 2013). The costs and benefits of penalising unhealthy behaviour are more complex than they seem.

When responding to the second question, it is tempting to conclude that the only equitable approach is to set premiums commensurate with a policyholder's *individual* risk characteristics, rather than proxy factors like their age, ethnicity, or other demographic grouping. But here, too, society faces troubling quandaries. 'Telematics' – the fitting of devices to motor vehicles in order to track real-time driving behaviour – is revolutionising the auto insurance industry. Usage-based insurance might allow safe drivers who would otherwise be considered high-risk based on their demographic profile (e.g. men under the age of 25) to prove to insurers that they should not be punished for the sins of others. Similarly, the 'Internet of Things' may one day provide property insurers with information about our homes and offices, and wearable sensors could transmit real-time biometric data to health insurers, so that insurers rely less on self-reported medical information. However, such tement à l'assurance-maladie. De nouvelles avancées dans la « télématique » et l'idée des primes basées sur le comportement effectif, pourraient permettre aux assureurs de différencier plus facilement les individus sur la base de leurs caractéristiques de risques réels, plutôt que d'après leurs seuls profils démographiques. Il reste encore à savoir, cependant, si de telles technologies valent le prix de l'intrusion dans la vie privée.

Les données peuvent être une épée à double tranchant.
Les tests génétiques peuvent aider les individus à comprendre leurs risques médicaux, mais les assureurs peuvent utiliser les résultats pour identifier les gens avec des gènes à risque.
Certains pays ont choisi de promulguer des lois pour empêcher la discrimination génétique.
De même, la tarification du risque d'inondation a été peu sophistiquée, mais pro-

devices are necessarily intrusive and raise a host of issues around data privacy and security (Schumer, 2014).

Insurance data and public policy

How much data is too much? This question has been given renewed impetus by technological advances in areas like genetic testing. There have already been cases of individuals being denied life, disability, or travel insurance due to their genetic test results. Anxiety about potential discrimination by insurers deters people at high risk of cancer from taking up genetic testing, with potentially damaging consequences for their health (Keogh et al., 2009). The industry's response has varied from country to country. In the United Kingdom (UK), insurers have voluntarily committed to allow customers *not* to disclose adverse genetic test results. The US, Sweden, Germany, France, and Canada have all enacted laws prohibiting genetic discrimination.

In a similar way, advances in flood modelling and satellite technology are a double-edged sword. They threaten to simultaneously make property insurance markets 'fairer' and to render large swathes of flood-prone areas uninsurable (or prohibitively expensive to insure). In the past, knowledge of flood risk was relatively unsophisticated, and the consequence was that insurers applied a degree of collectivisation – where those at low risk informally cross-subsidised those at high risk. In the UK, this cross-subsidy, valued at £180 million per year, is now unwinding (Cullen, 2015). Greater granularity of data is resulting in a greater dispersion of premiums, creating winners and losers. The key issue, of course, is whether it is equitable for those who live in flood-prone areas to be subsidised by other policyholders (or by the taxpayer where government insurance schemes exist)[1]. While some householders might be able to mitigate risks by erecting flood defenses or relocating, others simply may not have the financial means, or may have purchased a property without full knowledge of its flood risk. The trade-off between economic efficiency and social justice is a vexing one.

Developed nations have instituted a wide variety of models for the regulation of insurance. These range from completely deregulated systems to those exhibiting partial or full solidarity (i.e. the prohibition of using certain types of information in underwriting) or mutuality (Liddell, 2002). Until recently, the flood insurance regime in the UK was largely market-based, while in France the principle of solidarity for natural disasters is written into the French constitution itself (O'Neill & O'Neill, 2012). When it comes to health insurance, some countries

1 In the US, the benefits of the National Flood Insurance Program (NFIP) appear to accrue largely to wealthy households concentrated in a few highly-exposed states (Holladay & Schwartz, 2010).

gresse avec la modélisation des inondations et la technologie satellite aide maintenant les assureurs à mieux évaluer le coût du risque. Ces données plus détaillées aboutissent inévitablement à une dispersion plus grande des primes, et crée des gagnants et des perdants. Certains pays autorisent le marché à évaluer le risque d'inondation. D'autres préfèrent un modèle de solidarité ou de mutualité pour les désastres naturels.

Beaucoup d'innovations financières se développent si rapidement qu'il y a eu peu de débat public sur leurs effets sociétaux. Par exemple, les crypto-monnaies résolvent un important problème en facilitant un transfert sûr de valeur ou de propriété entre les parties sans avoir besoin d'intermédiaires. Elles pourraient baisser les coûts pour de petites entreprises et les transferts de fonds. Cependant, comme les utilisateurs ne sont pas soumis à une vérifi-

arbitrarily treat genetic information as different to more observable forms of medical information, such as a person's cholesterol level, so that underwriters can consider one type of data but not the other. Even within countries, there are often significant variations in laws between regions. The World Economic Forum (2015) has noted that the greatest impact of technological disruption in finance is likely to be felt in the insurance sector. The ethics of insurance are unlikely to be settled soon.

The frontiers of financial technology

Financial innovation has been integral to the development of modern life. During the Song Dynasty in China, the invention of paper money provided a way to efficiently transport value across great distances. The growth of finance in Europe in the late 1600s was essential for the Industrial Revolution. Government bond markets have helped to finance wars from medieval Europe, to the American Revolution and beyond (Goetzmann & Rouwenhorst, 2007).

Today, financial services remain surprisingly expensive – in fact, the unit cost of financial intermediation in the US has not fallen for the past 130 years. This helps to explain the emergence of new entrants (Philippon, 2016). Large and unwieldy financial institutions are primed for modernisation. Mobile-money systems like M-Pesa have brought financial inclusion to the 'bottom of the pyramid' in Kenya, Tanzania, Afghanistan, and India. In developed nations, peer-to-peer (P2P) lenders and insurers are disintermediating traditional markets. Cryptocurrencies – new forms of digital currency based on 'distributed ledger' (blockchain) technology – promise to do away with high-cost incumbents altogether. But many of these innovations are taking hold so rapidly that there has been little public scrutiny of their effects on society.

Take cryptocurrencies, for example. By facilitating the safe transfer of value or ownership between parties without the need for middlemen or trusted intermediaries (i.e. banks, credit card companies, payment companies etc.), they solve an important societal problem (Blundell-Wignall, 2014). Distributed ledgers are resistant to tampering and inherently difficult to hack. There is typically no central authority charged with creating units of cryptocurrency or verifying transactions. Because cryptocurrency transactions are cheaper and quicker than traditional payment methods, they could help to lower costs for small businesses and alleviate poverty by facilitating instantaneous, inexpensive remittances or micropayments (Brito & Castillo, 2013). Researchers are now investigating the use of the underlying blockchain technology for managing healthcare records, land title registries, supply chains, aid delivery, and even electronic voting.

A crucial feature of cryptocurrencies like Bitcoin is their cation d'identité, les crypto-monnaies ont été associées au crime et au terrorisme. Les crypto-monnaies de nouvelle génération permettent de faire des « contrats intelligents » directement exécutables. Ceux-ci peuvent faciliter une gamme plus large de crimes comme le kidnapping ou l'assassinat.

Tout indique que le commerce algorithmique améliore la liquidité du marché et la recherche du prix efficient.
Cependant, les ordinateurs peuvent traiter des quantités énormes d'informations à grande vitesse, désavantageant ainsi potentiellement les investisseurs ordinaires. De plus, les sociétés de trading à haute fréquence sont connues pour payer des infrastructures chères ou un accès prioritaire aux données afin d'élargir leur avantage informationnel sur d'autres investisseurs.

provision of *pseudonymity*: while transactions are visible, the 'public keys' associated with transactions are not tied to real-world identities. No personal information is required to create an account on the Bitcoin platform. Bitcoins have consequently been used to purchase illicit goods online, most notoriously through the 'Silk Road' electronic black market. Supporters of Islamic State of Iraq and Syria (ISIS) and other terrorist organisations are actively promoting the use of Bitcoin to mitigate the risks associated with traditional funds transfer methods (Irwin & Milad, 2016). Next-generation cryptocurrencies like Ethereum offer even richer functionality. They support 'smart contracts', self-enforcing computerised contracts[2] that could enable a wider range of new crimes, like kidnapping or assassination. A person with malicious intent could theoretically set up a smart contract to pay for a criminal act to be committed and walk away, allowing the contract to self-execute once it determines that the crime has been carried out (Juels, Kosba & Shi, 2016). The blockchain's distributed trust structure is what facilitates smart contracts between unknown and untrusted counterparties.

2 The critical distinction between smart contracts and other forms of electronic agreement is enforcement. The computers in the blockchain network ensure performance of the contract, rather than any government authority. Sometimes a smart contract may need to refer to facts in the world – such as when a contract pays out if a stock exceeds a certain price on a certain date. In this case, the ability to read an external data feed and verify contractual performance must be coded into the smart contract from the outset. See: Werbach & Cornell, 2017.

Algorithms in finance

More broadly, consider the employment of algorithms in finance. There is good evidence that algorithmic trading – the use of computers to automate certain trading decisions – improves market liquidity and efficient price discovery (Hendershott, Jones & Menkveld, 2011). Recent years have seen the emergence of a new form of algorithmic trading: high-frequency trading. The US Securities and Exchange Commission (2010) notes that the speed of financial markets trading has increased to the point that the fastest traders now measure their latencies in microseconds. Computers are able to process vast amounts of information at superhuman speed, potentially putting ordinary investors at a disadvantage. In addition, high-frequency trading firms go to great lengths to be faster than their competitors – by co-locating their computer servers with those of exchanges, buying access to expensive telecommunications infrastructure (like the subsea cables mentioned in this paper's introduction), and even paying for early receipt of market-moving data (Mullins et al., 2013) – seemingly doing away with any pretense of a level playing field. The social welfare benefits of this high-priced technological arms race are dubious.

Can algorithms make human decision-making fairer?

Les algorithmes de notation en matière de crédit sont déjà utilisés par les prêteurs pour déterminer quels clients devraient recevoir une carte de crédit ou une hypothèque. Souvent, le fait de déléguer ces décisions à un ordinateur peut permettre de corriger les biais dans la prise de décision humaine. Toutefois, les algorithmes d'apprentissage-machine contiennent des biais humains pré-existants. Comme ces algorithmes sont des secrets commerciaux, il existe peu de moyens pour remédier aux biais.

Nous devons commencer à penser comment ces technologies sont appliquées pour s'assurer qu'elles ne renforcent pas les préjugés existants ou ne facilitent pas la violation des lois.

When an algorithm gets things wrong, who is responsible? Credit-scoring algorithms are already used by lenders to determine which customers should receive a credit card or mortgage. In many cases, these systems can help to correct inevitable biases in human decision-making. Most of today's automated credit decisions rely on 'traditional' data inputs, such as disclosure of a prospective borrower's income and assets. Yet the use of such data means that certain minority groups – like the recently widowed or divorced, or new immigrants – are often invisible to the mainstream credit system. They may be forced to resort to high-cost products that do not help them to build a credit history (Bureau of Consumer Financial Protection, 2017).

Here, innovative companies offer a promising path to financial inclusion. Fintech lenders have emerged that assess credit by mining all sorts of alternative consumer data, from mobile phone usage and social media footprints to Web search and e-commerce histories. But machine-learning algorithms could unwittingly internalise pre-existing biases – as is the case in advertising, where it has been discovered that a search on Google for the term 'CEO' returns images almost exclusively of white men, and delivers far fewer advertisements for high-paying executive jobs to women than to men (Walport, 2017). Similarly, underwriting algorithms that factor in where a potential borrower attended college may tend to exacerbate socioeconomic stratification, and those that use measures of residential stability to predict creditworthiness may unfairly discriminate against members of the military (Crosman, 2017).

In insurance underwriting, some types of data may correlate with or act as a partial proxy for race (e.g. where a consumer lives, or what type of food he/she purchases). Using such data for underwriting may be statistically valid but run contrary to anti-discrimination laws (Actuaries Institute, 2016). But because most algorithms are jealously-guarded commercial secrets, the lack of transparency – as well as the lack of avenues for review and redress – makes counteracting bias difficult.

Advocates of novel inventions sometimes argue that while a technology itself may be morally neutral, policies must still be designed to limit the harm they can do (Extance, 2015). In a democratic society, it is chilling to think that algorithms that purport to offer objectivity might simply be holding a harsh mirror to the flaws that we, as humans, like to overlook. We need to start thinking about how these technologies are applied if we are to ensure that they do not reinforce existing prejudices or enable the breaking of laws.

Les futurs dirigeants doivent être préparés à partager les préoccupations légitimes du public sur la vie privée, la responsabilité, l'inégalité. En même temps, ce n'est pas à la régulation d'empêcher des manquements éthiques.

Le secteur privé devrait être prêt à prendre l'initiative en développant des protocoles qui minimisent le risque de conséquences imprévues, et en fournissant aux communautés les moyens d'accéder et de rectifier les données. Les prochains grands fournisseurs de services financiers pourraient bien être des entreprises de technologies comme Facebook, Google, et Apple. Les sociétés feront face à un nouvel ensemble de questions éthiques, par exemple comment utiliser les données présentes sur les réseaux sociaux de façon à promouvoir l'accès à la finance, sans violer la vie privée.

Engage with legitimate public concerns

So what lessons can be surmised for tomorrow's leaders of the financial industry? I offer a handful here.

Future leaders must be prepared to engage with legitimate public worries over privacy, accountability, and inequality. The financial industry has often used its money and political power to hijack the regulatory reform debate, and financiers and regulators have lived and worked in the same echo chamber (Foroohar, 2017). The success of financial innovations is often measured by short-term *efficiency* criteria such as lower transaction costs and expansion of corporate profits. These criteria may be used to retrospectively legitimate an innovation, while negative externalities are glossed over (O'Brien, 2017). As Rodrik (2017) argues, the mistake of many economists and policy technocrats has been their unwillingness to confront serious normative fairness considerations that do not fit neatly with theories of efficiency. Just as the public has grown increasingly concerned about the impact of technology-driven disruption on jobs, so too will public debate be necessary as new financial technologies come to the fore.

At the same time, it cannot fall to regulation to contain ethical failures. The bureaucratic process is, by its nature, cumbersome and regulators will inevitably struggle to keep up with a changing industry. Instead, companies must develop protocols to extensively test new products and services to minimise the risk of unintended consequences. Human executives must ultimately be held accountable for decisions made with the aid of computerised systems. As a recent White House report noted, companies should consider providing individuals and communities with the means to access and correct data, and promulgate industry best practices for the fair and ethical use of 'big data' techniques (Executive Office of the President, 2016).

Finance industry leaders will need to become well-versed in mobile and computer technology. As Bill Gates, the then-Chairman of Microsoft, quipped in 1994, banking is necessary but banks are not. The next big providers of financial services may well be technology firms like Facebook, Google, and Apple. Financial leaders at these firms will face a new set of ethical issues, not the least of which is the question of how vast troves of social data might be 'mined' to expand access to finance without violating society's standards of privacy. In addition, technology may widen the informational gap between providers and customers. For instance, health insurers might soon know more about a consumer's health than that consumer. Even where the law is successful in creating what appears to be a level playing field, markets in reality tend to be defined by asymmetric information. Ethics

Il est possible pour des personnes soucieuses d'éthique de parvenir à des conclusions très différentes sur le même problème. Par exemple, certains investisseurs ont choisi de faire face au changement climatique en se désengageant des actifs liés aux combustibles fossiles; d'autres ont choisi l'activisme actionnarial pour exiger un changement de l'intérieur des entreprises. Il faut reconnaître que les analyses conventionnelles coûts–bénéfices sont inadéquates si elles oublient d'importantes parties prenantes ou négligent des effets distributionnels plus larges. La technologie ne devrait pas être invoquée pour fournir des solutions soi-disant objectives à des problèmes qui concernent vraiment des valeurs sociétales. En conclusion, la finance demeure essentielle, et de nouvelles technologies peuvent aider à en démocratiser l'accès.

should reject the old *caveat emptor* as a regulatory fallback and ethical providers must devise new ways of helping consumers to understand their rights and obligations.

Concluding remarks

It should be remembered that it is possible for ethical people to come to wildly varying conclusions on the same issue. For instance, in 2015, Norway's parliament voted to require its government pension fund – the largest sovereign wealth fund in the world – to divest from companies involved in the coal industry, following the lead of other prominent institutional investors including AXA and the Church of England (Schwartz, 2015). Proponents of fossil fuel divestment often frame their position in stark moral terms: a "moral obligation", as Valerie Rockefeller Wayne, the chair of Rockefeller Brothers Fund, puts it (Goldenberg, 2015). But opponents of divestment activism, like climate researcher David Oxtoby, view divestment actions as little more than symbolic "feel-good measures that have no effect on actual greenhouse-gas production" (Oxtoby, 2014). In 2017, three of the world's largest investment managers – BlackRock, Vanguard, and State Street Global Advisers – took an entirely different approach. They supported a shareholder resolution demanding that ExxonMobil, the world's largest publicly-traded oil and gas company, report on the impact of global measures designed to limit climate change to two degrees Celsius. Here, two groups of influential investors reached diametrically different conclusions on how to tackle the same moral challenge: climate change.

Finally, it must be recognised that conventional cost-benefit analyses of new products and services may no longer be adequate insofar as they miss important stakeholders and neglect broader distributional effects. For instance, a utilitarian analysis of incorporating more granular data into insurance underwriting processes might suggest that more data is always better. But concerns about equity cannot be pushed to the background. The implicit system of cross-subsidies in many insurance markets is not simply a pricing inefficiency – it is also a contributor to social cohesion. Important social policy questions can rarely be reduced to a set of numbers. Technology should not be invoked to provide supposedly objective solutions to problems that are really about societal values. This may be an uncomfortable proposition for an industry built on ever-greater quantification.

At its core, the financial sector is a place where people with ideas can meet people with money, where buyers can meet sellers, where individuals can borrow against their future income to meet present needs, and where people bearing risks can meet others willing to take on some or all of those risks (Peirce, 2014). Finance remains essential. But our

Il est important que les jeunes professionnels aient la créativité et la latitude de réfléchir sérieusement aux problèmes éthiques quand ils apparaissent.

sclerotic industry is in desperate need of an overhaul, with new business models to loosen the grip of incumbents and restore trust in the eyes of consumers. New technologies may help to democratise access to financial services and improve the functioning of modern economies.

Like most things in life, ethics aren't static. What is most important is that young finance professionals have the creativity and latitude to think deeply about ethical issues as they emerge. It falls to our generation to make this happen.

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Objectivity - a Pipe Dream ?

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On Price Indices and Objectivity

What will the rate of inflation be next year? That question can be answered in several ways. A skeptic who adheres to the Pyrrhonic conviction that it is impossible to make predictions will look at last year's inflation figures, which, assuming random changes in this macroeconomic indicator, would be the best estimate. An econometrician will apply his mathematical knowledge and modeling ability to analyze how inflation has been trending over the past years and whether it has been correlated with other variables. A (theoretical) economist will build a mathematical model determining the essential relationship between the endogenous inflation rate and exogeous determinants.

The estimates obtained in these three ways are likely to differ more than the average value of their *ex-post* error. Moreover, even an answer to the question about the inflation rate that was measured in the previous year is ambiguous. It can be given by indicating the value of the Consumer Price Index (CPI) or Producer Price Index (PPI) published by the US Bureau of Labor Statistics. Or one might use the value of the GDP deflator whose estimates are delivered by the Bureau of Economic Analysis. Then, for the sake of simplicity, one might compare the cost of the same basket of shopping bought today and a year ago. Finally, the value of each of the inflation indicators mentioned above can be calculated with the Paasche and Laspeyres indices, which will also influence the estimate. As that

Quel sera le taux d'inflation l'année prochaine ? La réponse dépend de la méthode de calcul. Les évaluations obtenues de différentes façons sont susceptibles de différer plus que la valeur moyenne de leur erreur a posteriori. Même une réponse à la question du taux d'inflation de l'année précédente est ambiguë, on peut la donner en indiquant la valeur de l'Indice des prix à la consommation (le CCPP) ou l'Indice des prix à la production (PPI). Ou, au contraire, utiliser la valeur du facteur de déflation du PIB. La valeur de chacun des indicateurs d'inflation susmentionnés peut être calculée avec les indices de Paasche et Laspeyres qui influenceront aussi l'estimation.

Nous pouvons trouver les exigences d'objectivité dans plusieurs codes de conduite en matière éthique établis tant par des associations de banque internationales que nationales, des autorités de surveillance

shows, any answer to a question concerning an economic fact depends on the methods applied to getting that answer.

We can find demands for objectivity in many ethical codes of conduct in financial services. In those from national and international bank associations, from supervisory authorities, and from professional organizations. For instance, Polish banks have voluntarily agreed to be bound by the *Code of Banking Ethics*, which provides that disputes with clients are resolved "in an objective way" (ZBP 2013, p. 5). Similarly, the *Code of Ethics and Standards of Professional Conduct* published by the CFA Institute (2014) obliges financial analysts to "deal fairly and objectively with all clients" (paragraph III.B) and also "to achieve and maintain independence and objectivity in their professional activities" (I.B). Objectivity is mentioned as principle 2 by the *Code of Ethics and Professional Responsibility* set up by the Certified Financial Planner Board of Standards (2016). Being objective is also mentioned in the codes of conduct of many banks and financial institutions (cf., for instance, JPMorgan Chase&Co. 2016).

Now, though induction is an uncertain source of knowledge, I will take the liberty of claiming that objectivity is, if only implicitly, demanded by all ethical codes of conduct established by financial institutions. (How uncertain a route to knowledge induction is was convincingly argued by Taleb (2010, p. 40), when described the thoughts of a doomed turkey that took what it had seen of life so far as proof that it would live forever. Until, that is, Thanksgiving came along.)

In this essay, I advance a thesis that fulfilling such demands for objectivity is impossible. Objectivity is out of the question not because of the malice or greed of the people working in the financial sector but because an objective or – in other words – true viewpoint either does not exist or is epistemologically inaccessible.

It is clear that most of the issues dealt with by the employees of the financial sector are not matters for philosophical debate. For instance, there is an objective answer to a client's question about the commission in a relevant table of fees and commissions. Similarly, there is one mathematical formula for calculating the profit on a deposit given its value, maturity, and the interest rate. However, as I intend to highlight in this introductory section, situations in which an objective answer cannot be reached occur more often in financial services than is commonly believed. Below, I briefly review the philosophical sources of the idea of objectivity and the accessibility of truth and go on to analyze several case studies that seem to contradict such a viewpoint. Finally, I offer a few solutions.

et des organisations professionnelles. Par exemple, le Code d'Ethique et de Normes de Conduite Professionnelle publié par l'Institut CFA (2014) oblige les analystes financiers à «traiter de manière équitable et objective tous les clients» (paragraphe III.B) et aussi à «atteindre et conserver l'indépendance et l'objectivité dans leurs activités professionnelles» (I.B).
Dans cet essai, j'avance la thèse que satisfaire les exigences d'objectivité est impossible. La raison est qu'un point de vue objectif ou – en d'autres termes – vrai, soit n'existe pas, soit est épistémologiquement inaccessible.

Les sophistes ont rejeté une grande partie des débats philosophiques (particulièrement métaphysiques), parce que «bien que les réponses aux questions philosophiques puissent exister, on ne peut pas connaître la vérité sur les énigmes de la nature et de l'univers». Protagoras a observé avec justesse que «l'homme est la mesure de toutes choses ».

A Few Words on Philosophy

In ancient Greece, beside the mainstream philosophers we recognize today, there were also sophists, who – as Sophie's teacher aptly observed in the fictionalized introduction to the history of philosophy, *Sophie's World* – rejected a huge part of philosophical deliberations (particularly metaphysics), because "although answers to philosophical questions may exist, man cannot know the truth about the riddles of nature and of universe" (Gaarder, 1994, p. 60). One of the sophists making a living out of teaching Athenians, Protagoras, rightly observed that, for human beings, "man is the measure of all things." However, it was not the philosophical viewpoint supported by the practically-oriented sophists that earned popularity. That is why science is now seen as an activity aimed at discovering truth.

Graph1: Plato's Allegory of the cave.

Source: Saenredam J., *Plato's Allegory of the cave*, *http://www.britishmuseum.org/research/collection_online/collection_object_details/collection_image_gallery.aspx?partid=1&assetid=261145001&objectid=1490634*, (CC BY-NC-SA 4.0). Access: 1 March 2016.

This truth is understood as an objective description of reality, rather than as something that offers models to help deal with the world. The objective of eternal truth was established by one of the Socrates' students, Plato, who believed that truth, or – in other words – what science produces, should describe eternal ideas rather than a changeable everyday experience. Plato (2000, p. 220) believed that our experience is mere illusion, similar to the shades of reality, of ideas on a wall of the cave seen by the people held inside.

Mirroring reality

However, Plato optimistically assumed that, through rational inquiries, we can understand the reality which, located in front of the entrance to the cave, casts the shade. Indeed, understanding reality, or, in other words, explaining it, is the main goal of the most popular paradigm of the philosophy of economics – scientific realism. This trend emerged in the mid-20th century in an attempt to respond to the severe difficulties faced by the Vienna Circle positivists. It was also a response to the success of the physical sciences. Even though calling economics a successful science is a risky and questionable thesis, the methodologists of this particular discipline seem to be those most supportive of the idea of scientific realism.

La science est maintenant considérée comme une activité destinée à découvrir la vérité comprise en conséquence, c'est-à-dire comme une description objective de la réalité au lieu d'offrir des modèles pour aider à affronter le monde. Cet objectif de vérité éternelle a été établi par l'un des élèves de Socrate, Platon, qui croyait que la vérité, ou – en d'autres termes – ce que la science produit, devait décrire des idées éternelles plutôt qu'une expérience quotidienne variable.

Selon le réalisme scientifique, l'objectif premier d'un scientifique est d'expliquer les phénomènes analysés. Les scientifiques réalistes croient que les théories et les modèles sont (en général) exacts. En d'autres termes, les entités invisibles (par exemple, les fonctions utilitaires, le PIB (pro-

According to this approach, which gets its strongest underpinning from the work done on the philosophy of economics by Uskali Mäki (2011), an analytic philosopher from Helsinki, the primary aim of a scientist is to explain analyzed phenomena. The truth or rightness of theories and models is defined with reference to "essesimilitude", a term coined by Ilkka Niiniluoto (2002), a Finnish philosopher of science, who attempted to describe a model depicting the key (or essential) aspects of the economic reality. Moreover, scientific realists believe that theories and models are (in general) right in their depiction of unobservable entities. Hence, their ontological status is the same as that of the reality experienced every day. In other words, those entities (e.g. utility functions, GDP and profit-maximizing companies) exist.

If you accept scientific realism you also accept that objectivity can be required of the personnel of financial institutions through their codes of conduct. According to this viewpoint, there is only one appropriate description of reality or a solution to a problem that we attempt to deal with.

That does not hold in two cases: (1) if we do not have full knowledge of the facts (even though it might possible to gain it, at least in theory) and (2) if the economic or financial reality that we are facing is inherently indeterministic. In fact, the difference between the epistemic and ontological indeterminism[1] is negligible for the purposes of further argument. Even though scientific realism is the most popular approach among philosophers of economics, thinkers interested in other, usually more successful sciences, do not support this viewpoint (Tegmark, 1998).

Heterodox approaches

There are a few alternative philosophical approaches to the issue of the truth. Milton Friedman (1953) who developed monetarist macroeconomics, supported instrumentalism. Deidre McCloskey (1983) supported the rhetoric of economics. Ludwik Fleck (1979) advocated sociologically grounded constructivism. According to the most widely supported interpretation of the essay, *The methodology of positive economics,*[2] the creator of monetarism defined the truth in an instrumentalist way: those theories and sentences are true that make fruitful predictions

1 The epistemic indifference is an outcome of our limited knowledge of the mechanisms governing the reality or the initial conditions. For instance, a roulette game is random for us even though it is governed by the perfectly deterministic laws of physics. On the contrary, the ontological determinism constitutes real randomness which could not be dismissed even if we possessed all the information. As if God played dice.

2 However, it should be highlighted that it is one of the most cited and interpreted articles focused on the methodology of economics, which results from Friedman's unclear style of writing and (supposedly) an attempt to appeal to economists holding various points of view.

duit intérieur brut) et les entreprises maximisant le profit) existent. Accepter le réalisme scientifique entraîne l'acceptation d'un point de vue inscrit dans la demande d'objectivité exigée de la part du personnel des institutions financières dans leur code de conduite. Selon ce point de vue, il y a seulement une description appropriée de la réalité.

Contrairement au réalisme scientifique, Friedman (1953) a supporté l'instrumentalisme selon lequel ces théories et affirmations qui rendent possible des prédictions fructueuses, sont vraies/réelles. De façon similaire à un physicien qui applique les lois de la thermodynamique pour analyser le processus de refroidissement du café et la mécanique quantique pour décrire les mouvements des particules de caféine dans sa tasse, un économiste devrait choisir parmi quelques modèles en fonction de leur intérêt. Aucun des modèles n'est vrai/

possible (Friedman, 1953). Similar to a physicist who applies the laws of thermodynamics to analyze the process of coffee cooling down, but quantum mechanics to describe the movements of caffeine particles in his cup, an economist should choose among a handful of models depending on their utility. However, according to the instrumentalist methodology, none of the models is true. They are just useful in particular situations. Or, to put it differently, models are true as long as they are useful.

The professor of history of economics from Chicago criticized the realist approach and, instead, advised that we choose those theories that are an outcome of a discourse among economists. This is because comparing a theory with God's mind (the poetical postulation of the correspondence theory of truth) is virtually impossible (McCloskey, 1998). Ludwik Fleck (1979), an early 20th- century microbiologist (by profession) and philosopher of science (for a hobby) analyzed the historical development of microbiology and discovered that the descriptions of the same phenomenon differed over time and depended on previously created definitions and methods of measurement. His constructivist point of view, according to which theories depend on ways of thinking (thought styles), can be exemplified by the thought experiment that I outlined in the opening section of the article. The dependence of theoretical descriptions on the research methods employed, together with the absence of a unified theory of economics is, according to Fleck (1979), a strong argument in favor of the utilitarian definition of truth.

Shedding the light of anti-realist philosophies (either the instrumentalist one supported by Milton Friedman or the constructivist one coined by Deidre McCloskey and Ludwik Fleck) on the problem of truth shows that being objective is impossible because there is no one, fixed truth. Instead, there are only various theories, methods, and models that deal with the world of finance in a more or less successful manner. Therefore, I can only repeat McCloskey (1998),"[t]he best you can do, then, is to recommend what is good for science now, and leave the future to the gods," (p 186) because "man is the measure," as Protagoras wrote, "of the things that are, that they are, and of the things that are not, that they are not" (Reale and Catan 1990, p. 157). Below, I provide several examples from contemporary economics, which are faced by people working in the financial sector.

Your Truth and Mine

One of the conclusions drawn by Ludwik Fleck (1979) shows that results depend on or, to put it more accurately, are the outcome of, conventional definitions and selected methods. This viewpoint can be best exemplified by comparing the results of marketing research conducted by Coca-Cola and Pepsi Co. Kanner (1981), in his article for the *New York Magazine*, indicated that the two old réel. Ils sont seulement utiles dans des situations particulières. Le fait de projeter la lumière des philosophies anti réalistes sur le problème de la vérité montre qu'il est impossible d'être objectif car il n'y a pas une seule vérité immuable.

D'après Fleck (1979), les résultats sont le fruit de définitions conventionnelles et de méthodes choisies. Par exemple, Kanner (1981) a indiqué que les deux vieux concurrents avaient publié des résultats selon lesquels les consommateurs à qui l'on avait demandé d'indiquer leur boisson préférée au coca ont tendance à choisir le produit fabriqué par le sponsor de l'étude de marketing. De tels résultats empiriques ne sont pas une exception, mais une règle. Selon les estimations grossières de Goldfarb (1997), approximativement un article économique sur dix est en contradiction avec les autres. Un des cas les plus virulents et célèbres du phénomène

competitors had published results, according to which, consumers who had been asked to point to their preferred cola drink tended to choose the product manufactured by the sponsor of the marketing survey. Most of us, educated in the spirit of the realist philosophy, will defend objectivity and the corresponding definition of truth by indicating that these contradictory results must have been obtained fraudulently and with a view to boosting sales and profit. It cannot be otherwise. Researchers struggling for truth and objectivity do not produce contradictory findings. But, is this really the case?

Contradictory results in econometrics

In economics, there are many cases that seem to undermine such a sanguine view of truth. One of the most vocal and famous cases of the 'emerging contrary result' phenomenon[3] is the Reinhart-Rogoff controversy. Given that the most quoted publications are usually the least read ones, I will briefly review the two contradictory articles and have a closer look at their methodologies.

Five years ago, Carmen Reinhart and Kenneth Rogoff (2010) published an article that made a lot of waves in which they analyzed their own database covering public debt and the economic growth of 44 countries and spanning 200 years. They arithmetically averaged the pace of economic growth for each of four buckets of country/year observations organised by the level of debt to GDP ratio (less than 30%; 30-60%; 60-90%; over 90%). The Harvard economists concluded that economic growth is much slower when the ratio exceeds 90%. Their conclusion immediately attracted attention, being quoted by Paul Ryan, the author of the Republican budget, and mentioned by several of most influential politicians worldwide, including Angela Merkel, Wolfgang Schäuble, Oli Rehn, and Manuel Barroso. *Growth in a Time of Debt* was referred to by Paul Krugman (2013) as "surely the most influential economic analysis of recent years".

Three years later, at the peak of popularity of Reinhart and Rogoff's (2010) paper, Thomas Herndon, a Ph.D. candidate at the University of Massachusetts, was asked to replicate their analysis. After many failed attempts, and having received the original spreadsheet of data from Reinhart and Rogoff, Herndon and his research mentors Michael Ash and Robert Pollin (2014) published an article that pinned down three errors made in the original study: (1) a non-standard averaging scheme; (2) a failure to include several post-war observations; and (3) a miscoded Excel formula that caused the exclusion of five countries at the start of the alphabet. According to Herndon, Ash, and Pollin (2014), the adjusted findings give altered results: public debt does not harm economic

3 According to Robert Goldfarb's (1997) rough estimates, approximately one in ten articles on economics contradicts the others.

du « résultat contradictoire émergeant » est la controverse de Reinhart-Rogoff. Reinhart-Rogoff (2010) et Herndon Ash et Pollin (2014) ont donné des réponses opposées à la question de savoir si des mesures d'austérité étaient nécessaires. La controverse est le résultat de préférences méthodologiques différentes plutôt que de formules Excel mal codées. (Maziarz 2017).

Un autre exemple montrant qu'il n'y a pas de connaissance objective en économie est la recherche selon la cliométrie sur l'hypothèse de contraction fiscale expansionniste. Alberto Alesina et Silvia Ardagna (2009 et Jaime Guajardo, Daniel Leigh et Andrea Pescatori (2010) ont analysé comment les coupes dans les dépenses publiques influencent l'économie à court terme. Les deux groupes d'économètres américains ont essayé de démontrer si, comme le proverbe anglais le dit, le toit

development in a non-linear way.

In spite of commonly held beliefs, a precise analysis of the two methodologies and other cliometric studies of the issue (cliometrics being an analysis of economic history using quantitative methods), show that only one of the three challenged errors (the miscoded Excel formula) is actually an error. On the contrary, the other two deficiencies identified by Herndon, Ash, and Pollin (2014), i.e. the averaging method[4] and the data exclusion[5], should be seen as methodological decisions rather than errors. Considering the negligible influence of the spreadsheet error (up to 0.3 pp) compared with the impact of the two methodological decisions (up to 1.7 pp in the case of choosing the averaging scheme), a dispute on which of the two conclusions is justified should be dismissed. Though I will refrain from choosing a winner in the "Growth in a Time of Debt" controversy, the controversy is the outcome of differing methodological preferences, rather than of a miscoded Excel formula. (Maziarz 2017).

If one only reads the popular press, one might develop the mistaken belief that the Reinhart-Rogoff controversy is an extraordinary case. It certainly garnered considerable attention, but there are many econometric disputes[6] similar to the one discussed previously where – as Ludwik Fleck wrote almost a century ago – the findings are determined by a conventionally chosen research method.

Reinhart and Rogoff (2010) and Herndon Ash and Pollin (2014) reached different conclusions on the question of whether austerity measures are needed. Alberto Alesina and Silvia Ardagna (2009) from the National Bureau of Economic Research and Jaime Guajardo, Daniel Leigh and Andrea Pescatori (2010) employed at the International Monetary Fund analyzed how government spending cuts influence the economy in the short term and also had divergent findings. However, in this case, the discussion appropriately focused on methodological issues instead of on picking on mistakes and a purposeful fudging and flubbing aimed at arriving at the expected result. Their main aim was to attempt to determine whether, as the English proverb says, the roof should be fixed while the

4 Reinhart and Rogoff (2010) employed a weighted averaging scheme calculated in two steps. First, they averaged the pace of economic growth for each country in every of the four baskets. Second, they calculated four average paces of economic growth for every basket (i.e. averaged over countries regardless of a number of country/year observations). In contrast, Herndon Ash and Pollin (2014) applied an unweighted averaging scheme, arithmetically averaging the pace of economic development observed in each of the four baskets. Both methods are justified to a similar degree (for a more detailed analysis, see my recent article (Maziarz 2017).

5 Similarly, excluding the post-war period in a few countries was attributed to the lack of an appropriate estimation of the GDP of Spain and the existence of two divergent estimates for New Zealand.

6 To be honest, I believe that theoretical economics is even more contradictory than the empirical branch, but it is not my field and hence I limit myself to discussing cases from econometrics and finance.

devrait être réparé pendant que le soleil brille, ou, au contraire, si les réparateurs devraient attendre jusqu'à la fin de la récession. Comme dans le cas de la controverse de Reinhart-Rogoff, les constatations sont divergentes, mais la discussion s'est concentrée de façon adéquate sur les problèmes méthodologiques au lieu de s'en prendre aux erreurs.

Le phénomène de parvenir à des résultats contradictoires est-il spécifique à l'économie?

Au début des années 1999, le gouvernement kenyan décida de financer l'administration de médicaments antiparasitaires aux enfants en âge scolaire. Miguel et Kremer (2004) ont analysé cette initiative. Les deux économètres spécialisés dans l'économie du développement ont indiqué qu'en plus de réduire l'épidémie parasitaire, le programme a limité l'anémie, a amélioré la nutrition infantile et a réduit l'absentéisme scolaire (d'un tiers).

sun is shining, or, in contrast, the roofers should wait till the end of the recession.

The basic issue in such a research project is to grasp the timing of the spending cuts made by governments. In many cases, the changes in public debt levels can be attributed to other factors, such as a volatile macroeconomic situation, which has an impact on tax income. Alesina and Ardagna (2009) identified years in which tax reforms took place based on an analysis of changes in the cyclically-adjusted primary balance. A team at the IMF employed a divergent methodology, which was based on analyzing government papers (e.g. official documents, reports from financial institutions and international organizations, etc.). The two methods pinpointed different years as the time of fiscal reforms (to be exact, they concurred only 30% of time), even though the question of the timing of spending cuts seems to be easy to address as a historical fact.

On the one hand, of course, the results are to some degree similar. Namely, both studies demonstrate that fiscal reforms involving spending cuts and not raising taxes are better for economic development. On the other hand, they produce conflicting answers to the question whether fiscal contractions have a positive influence on economic growth in the short term. Alesina and Ardagna (2009) support the 'expansionary' fiscal contraction hypothesis. In contrast, Guajardo, Leigh, and Pescatori (2010) oppose it and argue that fiscal contractions cause a short-term recession because of reduced demand. An important conclusion for this essay is that both methods are widely accepted among the cliometric fraternity.

An objective medical treatment?

Cases such as the expansionary fiscal contraction hypothesis, in which econometricians arrive at contradictory results because of a preference for alternative methods, are not uncommon. Such problems also surface in the analyses of scientists working in different fields. For instance, in early 1999, the Kenyan government decided to finance administering antiparasitic drugs to school-age children. Miguel and Kremer (2004) investigated this initiative. The two econometricians from Berkley and Harvard, specializing in development economics indicated that, apart from helping to control the epidemic of parasites, the program reduced anaemia, improved child nutrition and cut school absenteeism (by one-third). Their results, published by *Econometrica,* become very influential and made the World Health Organization advise dosingthe whole population with the antiparasitic drugs every six months, without prior screening tests.

Eleven years after the original research, Aiken et al. (2015) attempted to replicate it. Their results were published in the *International Journal of Epidemiology*. The researchers from the London School

Leurs résultats ont eu une grande influence au point que l'Organisation Mondiale de la Santé a recommandé de donner des médicaments antiparasitaires tous les six mois à toute la population sans tests de dépistage préalables. Des années après la recherche originale, Aiken et al. (2015) ont essayé de la reproduire. Les chercheurs n'ont pas trouvé que la différence en ce qui concerne les enfants anémiques et l'absentéisme entre les deux groupes était statistiquement significative.

Les décisions et la connaissance dépendent de suppositions et des méthodes d'évaluation aussi dans la finance. Au cours des dernières années, on a reproché aux banquiers polonais d'offrir des hypothèques en monnaies étrangères. À cause de la fluctuation

of Hygiene and Tropical Medicine employed an alternative method of model estimation and slightly redefined the test groups (control and treated) because, in their opinion, the trial was not strictly randomized. Aiken et al. (2015), contrary to the econometricians who first analyzed the issue, concluded that the treatment under consideration was not efficient. Namely, they did not find statistically significant differences between the two groups with regard to anaemic children and school absenteeism. These three cases show that, as Ludwik Fleck observed in the case of medical research, the findings depend heavily on the methods employed. Thus, constructing the truth – instead of discovering it – seems to be the main aim of the researchers. If that is the case, and if employees in the financial sector find themselves in situations similar to those dealt with by academics, the demands of objectivity cannot be met.

The struggle for objectivity in the financial sector

In the last few years, Polish bankers have been reproached for offering foreign currency mortgages. Because of unfavourable way in which currency exchange rates fluctuated, the value of such loan often exceeded the actual value of the property. In addition, some of them are likely to turn into bad debt in the near future. So, can advising customers to take foreign currency mortgages be called unethical in the light of the above arguments? In other words, is the creditor – at the time of conducting the analysis (which, according to the ethical codes of conduct, should be objective) – able to predict that a mortgage denominated in Swiss francs is likely to become he less optimal product, i.e. more expensive than the one denominated in the domestic currency? A few years ago, when the Swiss franc was cheaper (and devaluating) and the interest rates were much lower, taking out a foreign currency mortgage was more efficient. At that point, it was considered a better choice even if moderate and unfavorable exchange rate changes were to occur. As in the case of calculating how public debt might affect economic growth, what advice should be given to someone applying for a mortgage depends on the assumptions used. In this case, calculating the risks for various foreign exchange rate distributions may change the advice given to a property buyer applying for a mortgage. Of course, from today's perspective, it is easy to reproach financial advisors for underestimating the risk of changes in foreign exchange rates. However, a few years ago, say in 2008, when the Swiss franc was constantly devaluating, almost no one could predict how much this currency would appreciate in the next few years. Behavioral psychologists coined the term outcome bias to describe the human tendency to condemn decisions that lead to a bad (défavorable) des taux de change, la valeur d'un tel prêt a souvent dépassé la valeur réelle de la propriété. Dans ce cas, le fait de calculer les risques pour des distributions de taux de change variés peut modifier le conseil donné à un acheteur de propriété sollicitant une hypothèque. Bien sûr, en se basant aujourd'hui, il est facile de reprocher au conseiller financier d'avoir sous-estimé le risque de fluctuation des taux de change.

Le problème a aussi été expérimenté par plusieurs institutions financières américaines qui ont échoué à évaluer le risque.
Si nous supposons qu'il y a un risque objectif de défaut d'une entreprise X, qui vient de demander un prêt, il est impossible d'anticiper le fait de devenir insolvable et n'importe quelles suppositions ou estimations faites par les analystes de risque de crédit sont hautement différenciées. On peut comprendre le problème de l'évalua-

outcome without actually considering what those decisions were and why they were made. .

However, there are many other problems where there is no single, objective solution. When applying for a mortgage, in addition to choosing a currency, borrowers ask their financial advisors whether a fixed or variable interest rate is more efficient, better, or – simply – cheaper. This question also cannot be answered in an objective way. Advisors do not have the knowledge to do so. That is, advice given to a loan applicant depends on estimated future interest rates over the repayment period and the risk appetite of the financial advisor's customer. Even economists who think such things can be modelled would admit that the forecasts depend strongly on the methods used and – as is the case when predicting future inflation rates, the forecasts differ more than their *ex-post* error will. There is no one, true answer to such questions. Therefore, the demands of objectivity cannot be met by a financial advisor because, in some cases, objective knowledge is out of reach – as demonstrated by the cases discussed above.

Similarly, from the point of view of a financial institution, obtaining objective information is also impossible. For instance, in order to make a profit, financial institutions should estimate credit risk appropriately. Mistakes and negligence in this area resulted in the major crisis of 2007/2008 when several major financial services companies declared bankruptcy and others were nationalized. However, even if we assume that there is an objective risk of default that can be assigned to a company X, which has just applied for a loan, insolvency[7] is impossible to foresee and any guesses or estimates made by the credit risk analysts vary hugely. However, sometimes, as was the case just before the last financial crisis erupted, though the ratings published by rating agencies did not vary much at all, the consistency did not indicate their accuracy.

The problem of objectively estimating credit risk can be seen when looking at the differences in estimated future gains and the profit actually earned by companies. For instance, Barber et al. (2001), in their work, [*Can*] *investors profit from the prophets?*, simulated the strategy of buying (or short selling) stock with best and worst recommendations produced by security analysts applying fundamental analysis. According to their calculations, when transaction costs are incorporated, buying undervalued stock and selling overvalued stock generates profit that does not significantly differ from zero. Many researchers analyzed different time periods, markets or the details of trading strategy, and their conclusions are comparable.

The strategy of finding overvalued and undervalued stocks failed

7 This would imply that our world is perfectly deterministic and none of us, even the CEO managing company X, has a free will (Lawson, 1997, p. 29).

tion objective de risque de crédit quand on voit les différences entre l'estimation des gains futurs et le bénéfice effectivement réalisé par les sociétés. Par exemple, Barber et al. (2001) ont indiqué qu'en achetant un stock sous-évalué et en en vendant un surévalué génère un bénéfice qui ne diffère pas significativement de zéro.

D'un côté, selon les codes de conduites existant, les gens qui travaillent dans le secteur financier devraient être objectifs et donner des informations vraies à leurs clients. De l'autre, de nombreuses études de cas analysées montrent qu'il y a bien des situations auxquelles sont confrontés les chercheurs économiques, les employés de banque et les institutions financières où les exigences d'objectivité sont impossibles à respecter.
La raison n'est pas l'avidité. Au contraire, même lorsqu'on travaille de bonne foi, être objectif est impos-

because financial analysts, referred to by Barber et al. (2001) as "prophets," failed to predict the future profit levels. Considering the efficient market hypothesis and the fact that smaller markets are less likely to be efficient, it might be better to look at an analysis based on the Polish Warsaw Stock Exchange instead of the New York Stock Exchange. Kowalke (2015), contrary to Barber et al. (2001), did not analyze whether it is possible to profit from listening to the fundamental analysts but compared their predictions (strictly speaking, the net profit and earnings before interest and taxes (EBIT)) with the actual data published by companies. The Polish economist found the accuracy of financial analysts' forecasts was "considerably low".

However, being objective is impossible not only in estimating risk or the likelihood of insolvency. Financial advisors are often confronted with a question of how to invest the customer's money. On the one hand, there are more profitable (and more risky) options, such as stock markets and investment funds. On the other, banks offer a safe haven approach to deposits. Of course, the majority of economists point out that the stock market is more profitable in the long run. However, how long is the long run? And, as Keynes (1971) wrote in *A Tract on Monetary Reform,* "in the long run we are all dead." In the short term, say five or ten years, stock market profits will depend on the macroeconomic situation. To predict it is, based on my experience, much more complicated than foreseeing the income of a single company. Of course, the risk aversion of a customer seeking a piece of financial advice can be measured and professional help appropriately adjusted. However, such a measurement, based on a psychological test, will not be objective either. Just think of acquiescence bias (e.g. Friborg et al., 2006). According to this, people are more likely to agree with the questions asked in questionnaires rather than oppose them. Therefore, an unethical financial advisor who makes a living out of commissions from selling financial products could set up a test in a way that reduces their customers' risk aversion in order to sell, for instance, shares instead of bank deposits and make a higher commission. But, even without finding fault with employees in the financial sector (and that is not my intention in this essay), it is impossible to say which of the scores aimed at measuring risk aversion based on a handful of options is objective.

How to Make the Pipe Dream Come True?

On one hand, according to existing codes of conduct, people working in the financial sector should be objective and provide true information to their customers. On the other hand, several analyzed case studies show that there are many situations faced by research economists and the personnel of sible car les résultats des estimations, les modèles développés et les indices financiers de prédiction ainsi que les mesures de risque dépendent fortement de suppositions et de méthodes conventionnelles et, assez fréquemment, arbitraires.

Puisque le fait de choisir une des alternatives ne peut pas avoir lieu d'une façon rationnelle (sachant que des arguments tels que «c'est ce que la plupart des gens font»), il n'y a pas une seule vérité objective. Il y a seulement des modèles et des hypothèses qui sont construits. Les exigences d'objectivité ou le fait de donner une information vraie sont, dans bien des cas, impossibles à remplir et il faut l'attribuer à une raison épistémique. Est-il possible d'assurer les intérêts des clients des institutions financières sans établir des normes éthiques qui sont impossibles à respecter ?

banks and financial institutions where the demands of objectivity are impossible to meet. The reason is not greed or malice on the part of the financial sector. On the contrary, even if they worked in good faith, being objective is impossible because the results of estimations, models and predicted financial indices, as well as of risk measures, depend heavily on conventional and, not infrequently, arbitrary assumptions and methods.

Consider, for example, each of the following choices: the weighted averaging scheme preferred by Herndon, Ash and Pollin (2014) or the unweighted one employed by Reinhart and Rogoff (2010); one of the methods of indicating when governments cut their expenditures based on assessing credit risk, or quantifying the inflation rate with the Paasche or Laspeyres formula. Both are supported by a number of arguments and these methodological choices create alternative truths. Since choosing one of the alternatives cannot be conducted in a rational way (assuming that arguments such as "this is what most people do" or "it is conventionally right" do not convince us), there is no single, objective truth. There are only models and hypotheses that are constructed. Of course, in everyday practice, the employees of the financial sector mostly deal with the situations of a lower epistemic complexity. I certainly do not argue that there is no objective answer to the question: "what is the euro/dollar exchange rate now?", but the situations described above are much more interesting from an ethical point of view.

The above considerations lead to the conclusion that the demand of being objective or providing true information is, in many cases, impossible to fulfill and this is attributed to an epistemic problem. Can we make the pipe dream come true? And, if yes, how? In order to answer these questions, we should have a closer look at what the demands of objectivity are aimed at. Is it "the love of wisdom" (i.e. literal translation of the Greek term A life without objectivity φιλοσοφία – *philosophia*)? Or, in contrast, were those who penned ethical codes of conduct – supervisors, bank and financial institution executives or professional associations – driven by the desire to safeguard customers' interests? Paraphrasing Richard Rorty's (2009) book title, the truth cannot be mirrored because, as Ludwik Fleck argued, it depends on the methods applied. Hence, various analysts, using alternative methods, arrive at different and sometimes contrary "truths." However, I should highlight that the microbiologist used this word in a way similar to that done by Milton Friedman (1953) to refer to the high utilitarian value of a model compared to verisimilitude understood in the realist way.

A life without objectivity

Since the viewpoint of people interested in ethics in finance, despite their philosophical erudition, is closer to the one presented by

À la place des exigences d'objectivité, les codes de conduite éthique devraient inclure l'exigence d'agir dans l'intérêt des clients. Cependant il y a deux défis à cette approche. Tout d'abord, même si les banques et les institutions financières fournissent des services utiles, leurs intérêts sont parfois en opposition avec ceux des clients. Ensuite, nous ne savons toujours pas si les gens sont des individus guidés par des principes moraux ou des homo oeconomicus centrés sur le profit. Au lieu d'exiger l'objectivité, les employés du secteur financier devraient être rémunérés de façon à ce que leurs revenus dépendent du bénéfice des clients ou de l'efficacité de leurs décisions.

the instrumentalist economist/philosopher or the constructivist microbiologist/philosophers rather than the realist philosophers (only), the second of the above two reasons for demanding objectivity is more likely. Is it possible to ensure the interests of customers of financial institutions without setting ethical standards that are impossible to meet? Instead of demanding objectivity, ethical codes of conduct should include a demand for acting according to the customers' interest. However, there are two challenges to this approach.

First, even though banks and financial institutions deliver useful services, their interests are sometimes at odds with those of the customer. Apart from the obvious conflicts (e.g. banks want their commission to be higher, customers want to see them lower), there are also a few epistemically interesting cases. For example, a bank analyst is likely to estimate company's creditworthiness in a conservative way in order to reduce the risk to the bank. The company's management, in contrast, in planning to build a new factory, will prefer estimates that reduce the interest rate they have to pay on borrowings.

Second, it is a pity that the question of whether codes of conduct should be followed remains open. Even though a lot of water has passed under the bridge, we still do not know if people are individuals driven by the moral principles described by Adam Smith (2005) in *The Theory of Moral Sentiments* or, on the contrary, profit-focused *homo economicus* as described in *The Wealth of Nations* (Smith, 2003). Since the latter possibility cannot be eliminated (not to say that it is more likely based on common sense), a better solution for the problem described in the essay is to reform institutions in such a way that the interests of bank clerks and financial advisors are aligned with those of their customers.

Financial sector personnel should not be required to be objective, but should be incentivised in such a way that their earnings depend on customers' profit (in the case of financial advice) or on the efficiency of their decisions (when, for instance, estimating creditworthiness). Once implemented, this approach would most likely resolve the problem of the impossible-to-meet demands of objectivity and the provision of 'true' information. This approach would also omit the question of whether ethical standards shape human behavior. Reforming the remuneration system in the financial sector and removing the demand of objectivity from ethical codes would help favor those analytical methods and models that would be conducive to arriving at such results that would be most beneficial for both financial institutions and their customers. And these results, according to the terminology coined by Milton Friedman and Ludwik Fleck, will be true.

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Part II

What Ethical Harness for Technology

Hard Coding Ethics into Fintech

Ethics & Trust in Finance
Global edition 2016-2017

Third Prize ex-aequo

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* The views expressed herein are those of the author and do not necessarily reflect those of the Organization he is affiliated to.

Fintech[1] fuses digital technology with traditional finance. The field of digital finance that results is often claimed to be a disruptive hybrid that will displace 'old' finance. However, a significant amount of fintech innovation can best be understood as the automation of traditional finance, or the automation of its user-experience layer. Many fintech start-ups build platforms that either replace financial professionals with algorithms – for example, an automated 'robo-advisor' wealth manager[2] – or that replace front-office customer service staff with self-service interfaces, as in the case of artificial intelligence 'chatbots'[3].

1 Financial technology
2 See, for example, Wealthfront (https://www.wealthfront.com/) and Betterment (https://www.betterment.com/)
3 See, for example, Kasisto (http://kasisto.com/) and Cleo (https://meetcleo.com/)

These innovations increase the speed and lower the costs of providing financial services, and may enable services to reach a wider range of people. That said, they do not necessarily challenge the underlying principles of the existing financial system. Indeed, fintech mostly aims to make the existing system faster, more convenient and cheaper for people to interact with. We should thus ask whether the digital format challenges or reinforces established systems of financial ethics. Furthermore, we should consider whether it introduces new ethical issues previously not as prominent within finance, such as data ethics.

This essay aims to lay out a programme for the ethical study of fintech. Since the financial crisis, much attention has been given to the ethics of 'high finance', the world of

Fintech fait fusionner la technologie numérique avec la finance traditionnelle, et peut être le mieux appréhendé comme l'automatisation de la finance traditionnelle. Les start-ups de fintech cherchent à remplacer les professionnels de la finance par des algorithmes, et à remplacer le personnel au service du client par des interfaces numériques. Il se peut que cela rende l'interaction avec le système financier plus facile pour les gens, mais il faut nous demander quel est son impact sur l'éthique en finance.

Cet essai énonce un programme pour l'étude éthique de la fintech en quatre parties. La première partie décrit la différence de puissance entre l'industrie financière qui crée des contrats financiers et les clients de détail qui accepte ces contrats.
La deuxième partie montre comment le Fintech est en train d'automatiser la création de ces contrats.
La troisième partie

investment banks and trading. The everyday finance of retail banks and pension funds, despite scandals such as PPI, has often escaped attention. Furthermore, the fintech companies building services on top of these institutions have been viewed largely as positive innovators who will only benefit customers. A more balanced and critical view needs to be developed. We cannot allow ethical considerations to be *post hoc* 'add-ons' to technological innovation. They must be considered prior to us building dependence upon digital finance.

This essay will proceed in four parts:

1. I start by describing finance as a realm of monetary contracts, but draw a distinction between the professional financial industry that creates these contracts and the retail customers who accept them.

2. I then argue that the fintech industry is attempting to automate the creation of these contracts, and our interaction with them.

3. In order to assess how this process impacts ethics, I then establish a baseline snapshot of the ethical dimensions of existing retail finance.

4. This makes it possible to consider how the digital format might impact those existing ethics.

It is impossible to comprehensively assess every ethical issue raised by fintech within a single essay. It is possible, however, to identify what we should be looking at and watching out for. Part four of this essay thus sets out five discreet research programmes that are required if we are to understand the ethics of fintech.

The power dynamics of monetary contracts

Basic finance – debt or equity – involves the creation of contracts that give one party rights to future money in exchange for granting rights to present money to another party. The latter party may use the money to mobilise labour, resources and technology to produce goods and services, which in turn are exchanged in markets for money, which creates the flow of future money promised in the contract.

In an idealised sense, a contract implies a certain equality between signatories to the contract. In reality, though, when it comes to *retail finance* many people experience financial contracts as a one-way 'service' offered to them – or perhaps forced by circumstance upon them – by a large financial institution.

In the best case this can be a mutually beneficial contract. In the worst case it can involve 'asking permission to be exploited'. A power differential exists between individuals and institutions. For example, a person 'applies' for a mortgage from banks who advertise their willingness to entertain such contracts, but the legal, informational and political resources of the banks are often much greater than that of the customer. Likewise, a retail établit un instantané de l'éthique de la finance de détail. La quatrième partie propose cinq programmes de recherche pour examiner comment le nouveau format numérique peut impacter cette éthique.

La finance implique la création de contrats monétaires, mais beaucoup de gens appréhendent les contrats proposés par la finance de détail comme une proposition à sens unique, émanant d'une grande institution financière aux pouvoirs légaux et politiques bien plus importants qu'eux. La finance de détail consiste soit en de grandes institutions qui offrent de petits contrats standards à un grand nombre de personnes, soit en de grandes institutions qui agrègent l'argent de petits investisseurs afin de leur permettre d'offrir collectivement des contrats à plus grande échelle à d'autres grandes institutions. Le client de détail moyen est se sent écrasé par les grandes institutions financières qu'il utilise. Elles sont souvent si grandes qu'elles ne sont pas

investor trying to invest for future returns often operates via a large intermediary like a mutual fund. Retail finance thus either involves large institutions offering small-scale contracts to large numbers of people, or it involves large institutions pooling the money of small-scale investors to enable them to collectively offer large-scale contracts to other large institutions.

The automation of financial contracting

We can thus distinguish between two camps. On the one hand we have the *financial sector*, consisting of large, well organised financial institutions that specialise in offering financial contracts, or in investing in those on other's behalf. Then we have the general public, the dispersed, uncoordinated retail customers who often feel like passive *receivers* of 'financial services'. We may distinguish between members of the general public who are subject to obligations to financial institutions – like someone who must pay their mortgage – and those who feel the institution is obligated to them, like a pensioner or a bank depositor, but the common factor is their feeling of being on the 'receiving end' of a contract.

The disparity of scale is crucial. The retail customer may feel dwarfed by the financial institutions they use, and those institutions are often so large as to be unable or unwilling to engage with the particular circumstances of each customer. The impulse of financial companies is to present retail customers with standardised menus, interfaces and rule-sets for interaction: *If you want this mortgage, fill out this form and prove X, Y and Z.* The scale necessitates bureaucratic rule systems, brings a tendency to rely upon statistics and modelling rather than personal interaction, and creates pressure to automate processes to lower the costs of interacting with so many small players.

Following the distinction established above, we can see two broad components of financial services that can be automated. The first is the internal activities of financial professionals within financial institutions. The second is the institution's points of interaction with customers who approach to make requests.

Automating financial professionals: machines to robots to AI

In principle, financial contracts require little more than a written document with a legal system to enforce it. Indeed, an ancient financier may have used manual *tools* such as a quill pen and paper, along with an abacus and calculation methodologies to work out a contract. Modern financial institutions, however, use more advanced technologies to speed up the process for deciding who gets to enter contracts, for calculating contract terms, for executing the contracts, for valuing the contracts once created, and for transferring them.

capables de prendre en considération les caractéristiques particulières de chaque client. La grande taille est à l'orgine d'une pression pour automatiser les processus afin de baisser les coûts d'interaction avec autant de petits acteurs.

Des pans entiers des services financiers peuvent être automatisées. En premier, les activités des professionnels financiers à l'intérieur des institutions financières. En second, l'interaction de l'institution avec les clients extérieurs.

Les institutions financières modernes utilisent des technologies pour accélérer le processus de création, de valorisation et de transfert des contrats financiers. Un exemple de machine financière est le système de notation de crédit automatisé. Les robots financiers sont des machines qui sont capables d'intégrer des intrants variables et d'exécuter des décisions définies d'avance, tel qu'un système pour approuver automati-

Manual tools have been surpassed by *financial machines*. For example, an Excel spreadsheet partly automates and greatly speeds up the process of storing and analysing large amounts of data. Likewise, an automated credit-scoring system may take in data inputs about a person – such as their spending behaviour, location and age – and output a score for them.

Increasingly, though, we are seeing the rise of *financial robots*, machines endowed with the ability to take in variable inputs and execute pre-set decisions based upon that data. Automated trading algorithms are perhaps the most well-known of these, but a 'robot' might also include, for example, a system that automatically approves a loan to a person who scores above a certain threshold on a credit-scoring model.

At the frontiers we have *financial artificial intelligence*, financial robots with variable parameters that can shift depending on the data presented to them, allowing them to make more advanced decisions or predictions. A traditional credit-scoring model operates with a pre-set methodology implemented as a step-by-step algorithm that takes data inputs and converts them deterministically into data outputs. A *machine-learning* system, though, can calibrate its operations in response to past data, 'learning from past experience' rather than merely 'following orders'.

These technologies are being used to remove human calculation and decision-making processes within financial institutions. While they may not immediately threaten professionals who work in corporate finance – such as experienced bankers financing a major infrastructure project – they are proliferating within retail finance, where large numbers of smaller decisions have to be made.

Automating the user-experience layer: from service to self-service

Financial institutions are increasingly automating the process via which customers interact with financial professionals. This is made possible by technologies like home computers and smartphones that allow people to communicate their intentions to institutions via an Internet connection. Interaction options can be presented to customers via smartphone apps and internet banking portals. This also necessitates the development of ways for people to prove who they are when communicating, such as smartphone biometric finger-print readers. To make these self-service experiences feel more 'human', institutions are experimenting with 'chat-bots', digital interfaces presented as living beings with personality, equipped with natural language processing (NLP) capabilities that allow them to interpret human speech or writing. Institutions are also developing new ways to automate customer support.

quement des prêts à des gens qui obtiennent un bon score de crédit.

L'intelligence artificielle appliquée à la finance, implique des robots qui peuvent prendre des décisions plus avancées, telles que le système d'apprentissage automatique qui peut calibrer ses opérations en réponse aux données passées, « en apprenant de l'expérience passée » plutôt qu'en « suivants des ordres ».

Les institutions financières sont en train d'automatiser le processus par lequel les clients interagissent avec les professionnels financiers. Les options d'interaction peuvent être présentées via des applications de smart-phone, qui nécessitent de nouveaux moyens pour que les clients s'identifient, tels que des lecteurs d'em-preintes numériques sur smartphone.

Le vieux modèle selon lequel un client rentre dans une succursale pour consulter le mana-

The digital institution

These innovations give rise to visions of completely digital financial institutions that integrate an automated customer interaction process with an automated decision-making process. Thus, the 'old' model in which a customer walks into a branch to consult with a manager – who looks over their business plan and makes a loan decision – may be replaced with a customer inputting data via a smartphone interface into a machine-learning model that has been granted power to approve or reject the application. At the frontiers are systems that do not even require the customer to input data, but that extract data about them from external sensors, such as the location data on their phone[4].

The digitisation process can be applied on both sides of banks' balance sheets, with automated interfaces presented to both depositors and borrowers. In the case of fund management and financial advisory, points of interaction with retail investors are being automated. These different strands of automation are also enabling the rise of umbrella platforms that mediate between a single customer and multiple underlying institutions via APIs[5]. A person might interact with a bank, FX company, wealth manager and short-term loan company via a single smartphone app[6].

Towards an ethical assessment of fintech

The replacement of financial professionals with algorithms, and the replacement of customer service staff with self-service interfaces may cut costs and allow financial institutions to deal with a greater volume of customers, but what are the ethical implications? To grapple with this, we must first sketch out a baseline model of retail finance ethics, against which we can assess fintech.

Retail finance ethics are complicated by the power differential between the large-scale financial institutions and the small-scale customers. The greater level of power, expertise, information, and co-ordination possessed by large institutions suggests that they should be subject to greater ethical scrutiny and responsibility than the individual customer. Using this lens, we can see three broad fields of potential ethical concern:

1. How retail borrowers are treated
2. How retail depositors and investors are treated
3. The ethics of what gets financed by large institutions that take money from retail customers

4 See, for example, Costa et al. https://www.omidyar.com/insights/big-data-small-credit

5 Application Programming Interfaces. This is a theme of the EU PSD2 directive. For a summary, see https://www.evry.com/en/news/articles/psd2-the-directive-that-will-change-banking-as-we-know-it/

6 See, for example, the services offered by Fidor (https://www.fidorbank.uk/) and solarisBank (https://www.solarisbank.de/)

ger qui prend une décision de prêt peut être remplacé par le client qui rentre des données à travers l'interface du smartphone dans un modèle d'apprentissage automatique qui a le pouvoir de valider l'application. Il existe déjà des systèmes qui n'ont même pas besoin que le client rentre des données, mais qui extraient des données sur celui-ci à partir de censeurs externes, tels que des données de localisation du téléphone. Le processus de digitalisation peut être appliqué des deux côtés des bilans de banque, avec les interfaces automatisées présentées aussi bien aux déposants qu'aux emprunteurs.

Pour pouvoir analyser les implications éthiques du Fintech nous devons d'abord ébaucher un modèle de base de l'éthique dans le contexte de la finance de détail.
Il y a trois larges champs de préoccupation éthique potentielle. Premièrement, comment les emprunteurs de détail sont traités. Deuxièmement, comment les déposants et les investisseurs de

We see historical examples of abuses in all these fields. The predatory issuance of punitive loans to vulnerable borrowers might be an example within the first category. Scandals around banks' mis-selling insurance products to small businesses, or funds charging excessive fees may fall into the second. This essay, however, will focus on the third category.

The ethics of financing

An institutional equity investor helps to finance a property company developing an office block. In such a process, things are created – a building – and things are destroyed – forests used for timber. The workers who built it could be treated fairly or unfairly, and the tenants who move in might be subject to dangerous conditions or safe ones. The financier thus becomes implicated in webs of ambiguous ethics. Their money is used to mobilise energy towards ends that impact both ecosystems and other people, and they receive monetary benefit from that.

Property development is – comparatively speaking – an uncontroversial industry, but whole industries like weapons, tobacco and fossil fuels are viewed by many as being fundamentally problematic. Within the financial sector this is sometimes resolved by making a distinction between 'normal finance' and 'ethical finance'. The former is presented as a default realm of rational and amoral economic principles, a world of mathematical projections and equations. The latter is presented as fuzzy and emotional, a discretionary realm where you can bring in your personal values.

This distinction is false on two grounds. Firstly, within 'normal finance' there are embedded ethical principles that are so taken-for-granted that they are almost invisible. For example, it is taken for granted that it is unacceptable to knowingly finance a company that uses slave labour. 'Rational' 18th century financiers financed slave plantations, but once slavery was rejected as a norm, an anti-slavery principle was incorporated as a baseline principle into ordinary finance. Thus, what ends up being called 'ethical finance' really only concerns those issues that are still morally debated, such as whether undermining ecological systems is acceptable. Mainstream financiers continue to finance ecologically destructive projects, while the 'ethical finance' sector may self-consciously choose not to.

This relates to a second point, which is that the term 'ethical' is often used shallowly to refer to being self-consciously 'good'. This is in contrast to a more holistic notion of ethics as any principles people use to guide their interactions with others. Ethical finance is presented as the realm where you go to overtly *act with ethics*, implying that normal finance is somehow outside the realm of ethics, an amoral zone where you focus on 'being rational'. This narrowly defined 'rationality', however, *is* an ethical détail sont traités. Troisièmement, la place de l'éthique dans ce qui est financé par de grandes institutions qui utilisent l'argent des clients de détail. Cet essai va se concentrer sur la troisième catégorie.

Les financiers sont impliqués dans un tissu de relations ou prévaut une éthique ambiguë. Leur argent est utilisé pour des investissements qui ont un impact sur les écosystèmes ainsi que sur les autres gens. À l'intérieur du secteur financier, ceci est parfois reconnu du bout des lèvres par la distinction entre « la finance normale » et « la finance éthique ». La finance normale est une zone dans laquelle les acteurs sont des « êtres rationnels ». Cette « rationalité » étroitement définie est, cependant, une position éthique. Spécifiquement, il s'agit d'une forme de conséquentialisme que nous pouvons appeler égoïsme monétaire, une version de l'égoïsme éthique qui énonce qu'un investissement est « bon » s'il permet des gains financiers personnels.

position. Specifically, it is a form of consequentialism[7] we might call *monetary egoism*. This is a modified version of *ethical egoism*[8], and states that an investment is 'right' if it leads to personal monetary gains.

This is given formal expression in the mathematical risk-reward calculations of investment: '*How much future money will I get, relative to how much money I have to put in now, relative to how much risk I must take in the process?*' These calculations are nested within a substrate of norms seen to be outside the realm of egoist calculations, like slave labour.

Ethical neutralisation techniques

If we believe in concepts like 'the public interest', it is necessary to instil deeper ethical reflection beyond monetary egoism among financial professionals. This faces hurdles. When confronted with ethical criticism, financial professionals have a range of neutralisation techniques, all of which need to be subject to ongoing challenge. These include:

1. Arguing that a controversial investment or behaviour is not bad (morally neutral), or that it is in fact good.

2. Arguing that the moral character is undetectable, multi-faceted, ambiguous or unknowable in advance. This was used in the wake of the financial crisis, where 'we didn't know that would happen' was a common refrain.

3. Arguing that, even if it is bad, the financier is not ethically responsible, or is subject to a higher-order duty or good that overrides the bad.

This latter category of *justification strategies* is aided by the scale and hierarchal management structure of financial corporations. Large projects may be fragmented into smaller sections, such that nobody feels responsible for the whole. Such settings also allow individuals to assign blame to an 'irresponsible' junior or a dominant senior. Additionally, the sheer scale and geographic dispersion of financing activities can add layers of abstracted distance. A controversial coal mining project in Colombia, for example, is reduced to numeric models on a screen in London. *Indirectness* abounds, such that few feel directly responsible, or even *perceive* distant injustices.

Even when direct responsibility can be ascertained, financiers can justify actions by asserting a higher moral priority (*I had a good reason for it*). A common version is to simply invoke monetary egoism. When a fraudster defends themselves by saying 'I needed money to feed my kids', they appeal to their children's wellbeing as a justification. A

7 An ethical school that considers the outcomes of an action to determine the moral character of that action

8 Ethical egoism asserts that a moral action is one that maximises an individual's self-interest. This weighing of personal costs vs. benefits is unlike consequentialist utilitarianism that weights up costs and benefits to a collective. For a short summary, see Shaver https://plato.stanford.edu/entries/egoism/#2

Il est nécessaire d'insuffler une réflexion éthique plus profonde au-delà de l'égoïsme monétaire parmi les professionnels financiers. Cela fait face à des obstacles, car les professionnels ont une série de techniques de neutralisation pour contrer la critique éthique. Celles-ci incluent soir le fait de nier qu'un investissement controversé est mauvais, soit d'argumenter que même si l'investissement n'est pas éthique, le financier n'est pas éthiquement responsable, car il est assujetti à un ordre supérieur bon qui prime sur le mauvais. Les stratégies de justification incluent l'égoïsme monétaire, en affirmant que la poursuite privée d'intérêt personnel monétaire est vertueuse et qu'elle prime sur les conséquences publiques qui peuvent découler de l'activité financière. D'autres stratégies de justification comprennent le fait de nier l'autonomie de l'action personnelle (« je n'avais pas le choix, je fais simplement mon travail »), assumant le rôle d'un loyal serviteur (« j'ai une responsabilité envers mes clients »),

monetary egoist might leave off the 'feed my kids' part. Financiers may not be engaged in anything illegal, but within the sector it remains comparatively common to assert that there is some inherent rightness to the private pursuit of monetary self-interest that overrides whatever public consequences might stem from a financing activity[9]. Monetary egoism is the counterpart to the concept of 'negative externalities', social losses incurred as a result of economic agents' private pursuit of individual gain.

To illustrate other justification strategies, let us take a hypothetical example of a paper company engaged in irresponsible rainforest destruction, financed in part by a large diversified fund manager. When challenged, the portfolio manager might:

1. Deny personal agency (*I had no choice*): Subsets of this might include presenting themselves as a 'jobsworth' ('*I'm just doing my job. I take orders from senior management*'), or presenting themselves as an embattled follower of the 'invisible hand' ('*we just respond to what the market demands. We'd go out of business if we didn't*').
2. Assume the role of a loyal servant, as in '*I have a responsibility to my clients. Speak to them if you have a problem*'.
3. Deny direct causal responsibility: The fund's scale and diversification add moral dispersion and responsibility dilution, allowing statements like '*we invest in many companies and cannot follow them all, or be held directly responsible for their actions*', or '*we are but one investor among many*'.
4. Appeal to collectives: The presence of a competitive market with other investors allows moral escape hatches like '*many others are doing it*'.
5. Assert inevitability: This includes statements like '*If I didn't do it, somebody else would*', the implied argument being '*It will happen anyway, therefore I'm not really responsible*'.
6. Add diversionary moral indignation: '*It is irresponsible for us to not to. Without these forestry companies you wouldn't have paper*'. This ignores that paper can be produced more sustainably.
7. Finally, they can resort to, '*If you don't like this, we also offer an ethical fund*'.

The financial ethics of the public

One fall-back position of institutional investors is to assert that they are only responsible for the financial interests of their clients, and that it is up to those clients to specify acceptable investments. There is some merit in this argument[10], but

9 This inspires ethical finance practitioners to try win support in mainstream finance by arguing that you can 'make money by being good', an attempt to align monetary egoism with broader ethics

10 There are debates on the nature of the fiduciary duty institutional investors owe to their clients, relative to environmental and social responsibilities. See for example, the 2014 UK Law Commission report on the topic http://www.lawcom.gov.uk/app/uploads/2015/03/lc350_fiduciary_duties.pdf

refusant la responsabilité causale directe (« nous investissons dans de nombreuses compagnies et nous ne pouvons pas être tenus directement responsables de leurs actions »), faisant appel à des comportements de groupes (« beaucoup d'autres le font »), faisant valoir la fatalité (« si je ne l'avais pas fait, d'autres l'auraient fait »), et l'indignation morale de diversion (« ce serait irresponsable de notre part de ne pas le faire »).

Les investisseurs institutionnels affirment souvent qu'ils sont seulement responsables des intérêts financiers de leurs clients, et qu'il revient à ces derniers de préciser ce que sont pour eux les investissements acceptables. Ceci ne tient pas compte de la grande différence de pouvoir entre les clients de détail et les institutions. Les connaissances en matière financière dans le secteur public demeurent faibles et les normes éthiques des établissements financiers spécialisés sont acceptées comme « du bon sens financier ».

it glosses over the large difference in information and power between retail customers and institutions.

While there are campaigns – such as divestment campaigns[11] – that try to mobilise retail investors into demanding higher ethical standards from institutions, public levels of financial literacy remain low, and ordinary customers may be authentically perplexed about finance beyond a shallow surface understanding.

In such a context, it is easy for the ethical norms of expert financial institutions to be accepted by the broader public as 'financial common sense'. These ethical standpoints are embedded within the marketing language of financial products, and many customers do not have enough time or energy to deconstruct this. Indeed, financial products are often marketed to people in narrow *functional* terms that focus on 'what this product will do for you individually', rather than broader *structural* descriptions of 'how it will do that and who else it impacts in the process.'

Combatting ethical indifference

One need not agree with every element of the assessment of financial ethics above to agree that – in general – it would be a positive step to challenge any process that allows both financial professionals and the general public to ignore the ethical consequences of financial decisions.

We can thus argue that a more ethical financial system would actively:

1. Encourage greater ethical reflection from financial professionals prior to their decisions.
2. Connect them more closely to the ethical outcomes of their decisions.
3. Encourage customers to take a more active and demanding stance on ethics.
4. Encourage customers to understand what is happening behind the scenes with their money.

We might generalise these by saying the financial system should aim to create opportunities for moments of *ethical pause*, reflection on the implications of investments beyond monetary returns. This is different to asserting that people should be 'good'. Rather, it is to say they should understand and take responsibility for investments they are implicated in, rather than denying responsibility.

Assessing the ethical implications of digital finance: a proposal

In the context of the ethical angles sketched above, the process of automating finance raises two broad sets of questions. Firstly, does the process of automating various elements of the jobs of financial professionals alter the ethics of their decision-making or lead to new ethical justification strategies?

11 See, for example, the GoFossilFree movement https://gofossilfree.org/

Un système financier plus éthique devrait encourager les professionnels financiers à mener une réflexion éthique plus ample avant de prendre leurs décisions, à les associer plus étroitement aux résultats étiques de leurs décisions, et à encourager les clients à prendre une position plus active et exigeante envers l'éthique.

Le processus d'automatisation de la finance soulève deux séries de questions. En premier, le processus d'automatisation de différents éléments du travail des professionnels financiers altère-t-il l'éthique de leur prise de décision ? En second, l'automatisation affecte-t-elle la prise de conscience du client des problèmes éthiques, et de ses droits ?

Comme les processus de prise de décision sont de plus en plus automatisés, les professionnels financiers individuels peuvent se sentir de moins en

Secondly, does the automation of the customer experience affect customer awareness of ethical issues, and customer rights?

It is beyond the scope of this essay to comprehensively answer this. The aim rather is to propose the outlines of a comprehensive research agenda that we urgently need to undertake if we are to evaluate the ethical impacts of fintech. What follows are short summaries of five areas of concern that need to be tackled by dedicated research programmes.

Research programme 1: Does automation reduce the ethical awareness and responsibility of financial professionals?

A cynic might flippantly argue that ethical awareness among financial professionals is already low, but it seems unlikely that automation would *increase* ethical awareness. It is plausible that as decision-making processes are increasingly automated, individual financial professionals will feel increasingly less responsible for the decisions, or perhaps will not even be *aware* of the decisions.

Once set up, automated financial systems can take on the superficial appearance of being external to, and autonomous of, the individuals that manage them. This may allow financial professionals to use them to further deny moral agency and responsibility. The process of deferring to a non-human third party that apparently makes decisions is common in society: we see it in simple examples like an indifferent waiter shaking his head and pointing to a menu when a customer makes a request for something that is not on it. The menu has no agency, and yet becomes an objectified 'actor' in the situation. With advanced financial machines, robots and AI, this process of pointing to a third-party 'actor' may increase. Furthermore, as financial robots *execute* decisions themselves, professionals may increasingly feel 'it wasn't me'.

Research programme 2: Does automation reduce customer awareness of ethics?

Fintech companies put a positive spin on the speed, ease and *frictionless* nature of digital finance, but does frictionless finance increasingly detach the customer from deeper awareness of what lies behind financial instruments? 'Friction' can be a negative way of framing 'contact', 'engagement' or 'texture'. Much like shopping online can feel 'less real' than testing products in a shop, so interacting via a smartphone interface with financial contracts is a more detached psychological experience. The frictionless interface may further reduce scope for moments of ethical pause. Indeed, robo-advisor services and startups like Nutmeg[12] actively tell people that they need not think about what to invest in, marketing the

12 See https://www.nutmeg.com/

moins responsable des décisions. Les systèmes financiers automatisés peuvent sembler superficiellement être indépendants des individus qui les gèrent, ce qui permet aux professionnels financiers de nier toute nature morale de l'action et la responsabilité.

L'incapacité d'avoir accès au crédit peut mettre en péril le bien-être économique d'une personne, et les établissements devraient rendre compte de leur action quand ils le refusent. À l'inverse des modèles financiers courants où la cause du refus peut être communiquée à un client, les managers des systèmes d'apprentissage automatique II ne peuvent pas nécessairement dire pourquoi un client a été exclu de ces services.

La numérisation signifie que les gens remettent des quantités toujours plus grandes de données plus complètes. Les gens ne sont souvent pas conscients que de telles données sont collectées, et puisque la technologie

ability to obtain a diversified portfolio at the click of a button. Could this create a sense of investment as a 'magical process', that 'just happens', rather than a deep process with real moral implications?

Research programme 3: Does automation reduce accountability to retail borrowers?

The inability to access credit can be damaging to a person's economic wellbeing, adding credence to the idea that institutions should offer accountability when rejecting them. The indifference displayed by ordinary automated systems is famously encapsulated in the phrase 'Computer Says No', but this could become acute as we move into the realm of machine learning.

Unlike ordinary deterministic models where the cause of rejection can be identified and communicated to a customer, machine learning designers cannot necessarily account for why a customer gets placed in a certain bracket. In a traditional algorithm, the designers take past human learning and encapsulate it within an '*if-then*' algorithmic form (for example, *if person has less the X income, then not desirable)*, but in the case of machine learning, the automated system is designed to make inferences itself, which may remain unknown to the creators of the system.

Research programme 4: Does automation lead to financial surveillance?

Digitisation increases personal data trails. As non-digital interaction options are removed, people are handing over ever greater amounts of richer data, such as the exact *time* at which they paid for something and their smartphone *location* when they did it. People are often unaware that such data is being collected, and fail to understand where it is taken from and what it is used for.

They may be pushed into giving consent for its usage as a condition for accessing basic services. In innovation areas like 'insurtech' (insurance technology) smartphones and wearable devices like Fitbits can be used by large institutions to monitor behaviour to determine a person's risk profile[13]. These systems are currently optional, but as the technology becomes ubiquitous it could become mandatory for individuals to grant access to this data, or else face exclusion and punitive costs.

Many people feel intuitively concerned about questions of privacy – like '*Am I being spied on?*' – but a potentially deeper concern is the use of peoples' data to steer their behaviour. Financial data reveals very deep insights into how people act in the world, and – when combined with other data sets – potentially allows institutions to 'know you better than

13 See, for example, Fitsense (http://fitsense.io/) and WeSavvy (http://wesavvy.com/)

devient omniprésente, il pourrait devenir obligatoire pour des individus d'accorder l'accès à ces données, sous peine d'être exclu et d'être exposé à des coûts punitifs. Ceci soulève des problèmes en matière de protection de la vie privée. Les données financières révèlent aussi des informations très précises sur la façon dont les gens agissent dans le monde. Ainsi, les établissements peuvent non seulement prédire potentiellement votre comportement, mais aussi le manipuler avec une exactitude de plus en plus grande.

La finance numérique est souvent présentée comme permettant au consommateur d'augmenter ses choix, mais ce qui débute comme un choix peut s'avérer être obligatoire plus tard. Les établissements financiers présentent actuellement de nouvelles options numériques, qu'elles utilisent ensuite pour justifier le retrait des options non numériques qui sont plus coûteuses pour elle. Le self-service numérique implique que les clients

you know yourself'. We already sense this trend in online recommendation engines that use your past interaction data to suggest future paths of behaviour. These fall within the broader field of *predictive analytics*, which not only allow institutions to potentially predict your behaviour, but also to potentially manipulate it with ever-increasing accuracy. While this may be narrowly useful, it can also feel disconcerting, and reduce peoples' sense of autonomous agency.

A related long-term question concerns the psychological impacts that occur when people learn they are being monitored. Are we seeing the incremental growth of a financial 'panopticon' that might cause people to censor and regulate their own behaviour out of fear that their every private move may be subject to monitoring?

This question complements Research Programme 3. The fields of *big data* and *machine learning* are linked, in that machine learning models are trained using large amounts of data collected from multiple sources. Advanced artificial intelligence systems may use such data to come to a deep understanding of your character, but what if – on the other hand – the systems are incompetent and make arbitrary, unaccountable, *Kafkaesque* decisions? The rejected borrower seeking accountability might face a dead-end, trying to guess what element of their behaviour has caused the rejection.

Research programme 5: Does automation reduce customer autonomy?

Digital finance is often presented as increasing consumer choice, but what starts as a choice can later become mandatory. *Email,* for example, started as an exciting new communications option but quickly became *required*, resulting in economic exclusion for those who did not use it. Likewise, automated self-checkout counters at supermarkets might initially be pitched as an *option*, but simultaneously provide supermarkets with a justification for reducing the number of checkout clerks, which in turn may reduce the convenience of using the clerks. Institutions seeking to cut costs through automation gradually make it harder and harder to use non-automated options, 'inspiring' people to 'choose' self-service.

We are currently in the stage where financial institutions are competing to showcase new digital options, but we are likely to see them converge on a common set, which they will then gradually use as a justification to remove non-digital options that are costlier for them to maintain. At that point, we may get locked into dependence upon digital finance.

This raises perhaps the most philosophical concern. Let's return to the waiter analogy used in Section 4.1. An empathetic, innovative waiter can rise above a menu, showing flexibility towards customers. The interagissent avec des managers cachés à travers un menu établi par ses managersL'élargissement des choix peut être une illusion.

Alors qu'il y a de grandes opportunités d'utiliser fintech pour promouvoir le bien social et environnemental, il est crucial de rechercher les potentiels éthiquement négatifs de nos innovations. Sinon nous risquons d'être des somnambules dans un système financier de plus en plus handicapé éthiquement.

self-service world, however, only has customers interacting with hidden managers via a menu set by those managers, with no 'waiter' figure to mediate between them. Menus both define available choices – by highlighting acceptable options – and limit them, by rendering invisible options that are not tolerated. Digital interfaces and apps might come in many colours and designs, but if financial institutions begin to converge on a common set of options, the sense of wide choice may be an illusion. Without an intermediary connection to company management via flexible or empathetic frontline customer service staff, users may find themselves feeling even more like passive acceptors of services from distant, unfathomable financial gods.

In closing

Above, I have speculated on some potentially negative ethical implications of fintech. These need not transpire and, indeed, there are great opportunities to use fintech for promoting social and environmental good[14]. That said, unless we actively start to research these questions and embed awareness of them into our innovations, we may sleepwalk into an increasingly ethically-disabled financial system.

14 See UNEP 2016

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The Digital Panopticon: a Chance for Ethical Change

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Finalist

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The Price of Immorality

In 2016, it was estimated that, over the last 15 years, market misconduct has cost the UK Financial Services industry £53 billion in fines, legal fees and compensation pay outs alone (Treanor, 2016). Additionally, market enforcement research identified that in 2014, market integrity violations accounted for 84% of total FCA fines (Duff and Phelps, 2015, p.16). With such damming statistics, alongside a plethora of misconduct cases hitting the headlines and instances of mis-selling, rate-fixing and front running tarnishing industry integrity, it is no surprise that trust in financial services is at an all-time low (CII, 2017). It all portrays an industry where opportunistic behaviours are rife and ethical considerations are a mere afterthought.

Steep financial penalties, when compounded by the reputational impact to firms and individuals actors, are a significant price to pay at both a macro and micro level, but as more examples of misconduct emerge, it appears that many banks view such penalties simply as an operating cost. This was underscored by the 2014 CEO of BNP Paribas, who stated that the $9bn fine imposed for violation of US Sanction laws would have "no major impact on the business" (Plender, 2014). This dismissive culture is now deeply engrained within the industry, and the European Systemic Risk Board acknowledges that the "fear of penalties alone is unlikely to prevent misconduct" (ESRB, 2015). Such thinking has

En 2016, on a estimé que durant les 15 dernières années, les irrégularités commises sur le marché ont coûté à l'industrie des services financiers britanniques £53 milliards uniquement en amendes, frais juridiques et indemnisations. Dans une industrie où les comportements opportunistes sont monnaie courante et les considérations d'ordre éthique ne surviennent qu'après coup, les régulateurs ont à faire face au défi considérable de traiter les irrégularités commises par des entreprises où prévaut une forte complaisance à l'égard des écarts de conduite. La réponse de la part des fonctions de vérification et de conformité vient par la multiplication des technologies novatrices en matière de réglementation (RegTech). Dans le sillage de ce mouvement RegTech, cet article examine les moteurs contextuels qui favorisent les abus du marché et explore l'efficacité des nouveaux contrôles à composante technologiques pour décourager la mauvaise conduite au sein du service financier.

been evidenced more recently. One market analyst stated in reference to PPI compensation remediation: "It is a sign of Lloyds strength that it can shrug off £1.6bn of misconduct charges to post a strong rise in profits" (Burton, 2017).

Against this cultural backdrop, industry regulators face significant challenge. In 2015, we saw the FCA impose the industry's largest ever fine to date – on Merrill Lynch for transaction reporting failures. The penalty, £18.9m, sought to reflect Merrill Lynch's continued failure to address the "root cause" of their misconduct and sent a firm regulatory message to the industry (FCA, 2015). However, as the volume and size of fines intensify to address firms complacency with regard to misconduct, regulators are faced with a tough economic balance: banks are "highly leveraged and any fine that does have a palpable impact… could have systemic implications" (Plender, 2014). With this in mind, a clear need exists to evaluate the effectiveness of alternative market controls in deterring market abuse.

In response to this regulatory challenge, there has been a shift in the focus of industry supervision and across the industry in recent years. Regulators have increased the intensity and focus of their oversight, "to deliver pre-emptive, rather than reactive… supervision" (Financial Stability Board, 2014). We have seen the introduction of enhanced supervision strategies and regulatory reporting requirements, embedded in legislation such as EU Market Abuse Regulation, Banking Conduct Rules, MiFID II and REP-CRIM to name but a few.

In parallel, compliance functions are responding by leveraging innovative regulatory technologies (RegTech) to meet these enhanced supervisory controls. The global demand for regulatory, compliance and governance software is expected to reach $118.7 billion by 2020 (Accenture, 2017).

In the light of this evolving and dynamic RegTech movement, this paper examines the environmental drivers that foster market abuse and goes on to explore the effectiveness of the new technological controls that serve to discourage misconduct in financial services. At the macroprudential level, it explores whether the threat of enhanced market surveillance is truly effective to deter market abuse in an industry where individual self-interest is culturally engrained and driving substantial negative social externalities for the industry and, indeed, society.

Finally, applying a forward-looking lens, it focuses on the social ecology of the industry and considers cultural reform, with a view of holistically remoulding the conduct framework that underpins opportunistic behaviours within the financial services sector today.

Pour évaluer l’efficacité des solutions RegTech, il est utile d’examiner d’abord ce que signifie être « éthique » et ce qui conduit à des comportements contraires à l’éthique à l’intérieur des services financiers. Rousseau suggère que c’est l’environnement qui corrompt l’individu, une théorie renforcée par Bandura dans la Théorie d’Apprentissage Social (1977) qui affirme que les individus apprennent des comportements acceptables en observant leurs modèles de comportement. Les études de la prison de Bentham (Semple, 1993) nous offrent un aperçu précieux par lequel l’individu « se contrôle lui-même de peur d’une punition » depuis la garde du panoptique central. Tandis que la surveillance réglementaire et de conformité a toujours été répandue à travers l’industrie, elle n’a jamais été aussi plus puissante ou agile (Deloitte, 2016). Comment cette vague RegTech va-t-elle changer la face des services financiers ?

The Environmental Incubators and Ethics of Misconduct

To evaluate the effectiveness of RegTech solutions in deterring market misconduct, it is useful to first consider what it means to be “ethical” and what drives unethical behaviours within financial services.

The question of ethics is one is one of the very fundamental drivers of human behaviours, entrenched in the norms and mores of society and a complex topic that has challenged businesses for decades (Stead et al., 1990). A plethora of literature exists in the field of ethical behaviours, with researchers considering an individual’s social, economic and religious background to name but a few factors (Treviño and Youngblood, 1990).

However, this paper leans on research by Hamlin et al., (2011), that assessed the ability of a child to distinguish right from wrong. Their experiments highlighted innate feelings of empathy as well as the repeated tendency to “choose good” when faced with a moral decision.

Revealingly, analysis conducted by MoralDNA™ for the Chartered Management Institute contradicts these findings, evidencing that financial services leaders tend to suppress empathy, with their sense of ethical care stronger at home than at work (CMI, 2016). Rest (1986), suggests that “moral awareness” – the identification of a moral issue – is the first stage of the ethical decision-making process. This statistic is particularly interesting, suggesting weakened integrity when faced with moral awareness, leading to unethical business decisions and, consequently, market abuse.

Fundamentally, this research leads us to question what the environmental factors are that drive financial services representatives to cast aside this innate, human moral awareness in the workplace and act opportunistically. Rousseau (1987) offers an interesting perspective, suggesting that it is the environment that corrupts the individual, a theory reinforced by Bandura’s social learning theory (1977), which asserts that individuals learn acceptable behaviours through observational learning from their role models. Somewhat revealingly, a study by the Chartered Management Institute found that 29% of financial services managers interviewed rated their organisation as having mediocre or poor standards of ethical behaviour (CMI, 2016).

On balance, a view of the industry is depicted whereby misconduct is broadly accepted by the masses, and regulatory and legal penalties are cast off as a simple operating cost, a relatively small item on a firm’s profit-heavy balance sheet.

From a macro perspective therefore, consideration should be given to how we protect the industry and society from the negative externalities of such opportunistic behaviours. Further, at a micro level, how can firms prevent “good

Depuis quelques années, l'industrie a observé une percée technologique majeure quand un foisonnement de start-ups techniques ont inondé le marché alors que les entreprises s'emploient à démontrer la rigueur de leurs contrôles internes et investissent de plus en plus dans des solutions RegTech pour aider leurs écosystèmes internes à promouvoir une conformité plus efficace (Accenture, 2017). En substance, l'industrie financière est entrée dans l'ère du panoptique numérique, avec des solutions techniques qui fournissent un contrôle rapidement renforcé et un aperçu détaillé dans des analyses jusqu'alors inexploitées.

Cependant, comme l'histoire l'a démontré, la peur du contrôle et de la surveillance n'ont pas dissuadé les services financiers de commettre des abus. Tandis que les solutions RegTech permettent certainement aux entreprises de prendre des décisions de risque plus adéquates grâce à des analyses de données améliorées et

people from doing bad things"? (Kaptein, 2012). The Bentham prison studies (Semple, 1993) offer us some valuable insight in to the human psyche. Hobbes (Hobbes cited by Bennett, 2015) asserted that the "bestial nature" of man drives self-interests and that as such, the "intervention of a higher authority" is a necessary control. Bentham's prison studies introduced a central panopticon that provides complete oversight for the watchman (the regulator), however those under observation are unable to look in. As Foucault (1977) describes it:', "he is seen, but does not see; he is the object of information but never communication". As a result of this asymmetric information, the individual "polices himself out of fear of punishment".

In the wake of the global financial crises, many financial institutions have invested heavily to remediate existing control weaknesses and respond to the heightened regulatory focus on oversight. Despite these efforts however, firms "continue to fall short of regulatory expectations, by maintaining highly manual regulatory and compliance processes which lack meaningful data insight" (Humphries, 2016). Further, nd whilst regulatory and compliance surveillance has always been prevalent across the industry, it has never been more powerful or agile than the technological offerings that are flooding the market today (Deloitte, 2016).

This leads us to the question, how will this disruptive RegTech wave, impact the face of financial services?

The RegTech Panacea

Over the last few years, the Industry has observed significant technological disruption as a flurry of tech start-ups has inundated the market, offering technologies in the trade surveillance, risk analytics and fraud prevention spaces to name but a few. As regulatory requirements increase and supervisory controls tighten, firms are eager to demonstrate the rigour of their internal controls. They are increasingly investing heavily in RegTech solutions to support their internal ecosystems and to facilitate more efficient compliance across their lines of defence (Accenture, 2017). In essence, the industry has entered the age of the digital panopticon, with vendors providing firms with rapidly enhanced oversight and offering data solutions that can provide detailed insight in to previously untapped analytics. For example, vendors are offering solutions that can identify "internal collusive networks" through holistic analysis of a firms e-communications and therefore enable firms to take pre-emptive action against misconduct (Catelas, 2017).

However, as history has demonstrated, the threat of oversight and surveillance has not deterred misconduct in financial services to date. Further, whilst RegTech solutions certainly empower firms to à un puissant aperçu du risque, est-ce que le seul fait de se concentrer sur de telles solutions permettra de réduire l'abus du marché ?

Afin d'explorer cette question plus loin, il est utile de s'appuyer sur le paradigme de l'Ancien Testament d'Adam et Eve dans le jardin d'Éden. Bien qu'il s'agisse d'une pseudo réalité simplifiée, cet exemple soulève des considérations très pertinentes autour de l'efficacité des contrôles du marché et du rôle important de la culture quand on cherche à pousser les gens «aux bons choix» (Hamlin et al., 2011).

En offrant aux entreprises un aperçu très pertinent et intelligent, il y a un risque réel que l'adoption rapide de solutions RegTech devienne une panacée inefficace pour tous les défis de conformité d'une entreprise (Deloitte, 2016 p.g 6).

La surveillance du marché, renforcée selon des solutions RegTech est nécessaire pour détecter et empêcher les abus de marché et la mauvaise conduite.

make more informed risk decisions through enhanced data analytics and powerful risk insight, will a focus on such solutions alone truly be enough to curb market abuse?

The Effectiveness of Regulatory Surveillance in the Garden of Eden

To explore this question further, it is helpful to draw on the Old Testament paradigm of Adam and Eve in the Garden of Eden. Parallels can be drawn between the opportunistic behaviours prevalent within the financial services industry and the ethical challenges faced by Adam and Eve. Further, and in particular, this example gives rise to interesting considerations around the effectiveness of powerful RegTech solutions in curbing misconduct.

In this Biblical paradigm, we are told that a set of simple, governing principles has been established within the Garden of Eden. Acting against these, Eve plucks the forbidden fruit from the tree of knowledge and colludes with Adam, aware that their act is prohibited and that it will invoke the wrath of the all-seeing, all knowing regulator.

Although a simplified pseudo-reality, this old-world example raises very relevant considerations around the effectiveness of market controls today and the important role of culture when seeking to drive people to "choose good" in the face of moral hazard (Hamlin et al., 2011). Kaptein (2012) asserts, that "fencing organisations in with procedures, systems and structures provides no guarantee that people will do the right thing". Certainly, the Old Testament example helps to bring this to life. In this instance, Eve's debate with the Serpent evidences her "moral awareness" (Rest, 1986) and despite the threat of powerful, all-seeing market surveillance alongside the inevitable threat of consequence, opportunism and self-interest prevail.

On balance therefore, whilst offering firms very relevant and intelligent insight, there is a very real risk that the rapid adoption of RegTech solutions will become an ineffective, supposed, panacea for a firm's compliance challenges (Deloitte, 2016 p.g 6). Market supervision, reinforced by RegTech solutions and regulatory parameters are necessary controls to detect and prevent instances of market abuse and misconduct. However, as demonstrated by Adam and Eve, ultimately "without strong ethical cultures, regulation and compliance will never be enough". (CII, p.4, 2017).

Cultivating an Ethical Conduct Culture

The European Systemic Risk Board states that the prevention of misconduct is the preferred approach, rather than addressing the issue after the event has occurred (ESRB, 2016, p.9). From an environmental perspective, we have identified that the threat of surveillance, along with

Cependant, comme cela a été démontré par Adam et Eve, en fin de compte « sans une forte culture éthique, la régulation et la conformité ne seront jamais suffisantes ».

D'un point de vue environnemental, nous avons constaté que la menace de surveillance, avec seulement des représailles réglementaires, ne sont pas suffisants pour dissuader les abus du marché. Comment pouvons-nous dès lors assurer un changement dans la conduite éthique de l'industrie et favoriser une culture par laquelle « les bonnes personnes font les bonnes choses » ? La première ligne de défense est vue comme un mécanisme de contrôle intégral dans le « combat contre les abus du marché », cependant, dans un contexte culturel complaisant est-ce que les fonctions de conformité sont suffisantes? Entre 2014–2015, l'industrie a comptabilisé une augmentation de 24 % des Rapports sur des transactions suspectes (Financial Times, 2015), par des entreprises cherchant

regulatory reprisal alone, are simply not sufficient to deter market abuse. How therefore can we achieve a shift in the ethical conduct of the industry and nurture a culture whereby "good people, do good things"? (Kaptein, 2011).

The first line of defence is viewed as an integral control mechanism in the "fight against market abuse" and serves to "protect against, detect and to help prevent against market abuse" (FCA Market Watch, 2016 p. 5). However, against this cultural backdrop we need to ask whether Compliance functions doing enough to effectively prevent market abuse. Between 2014 and 2015, the industry observed a 24% increase in the volume of suspicious transaction reports raised (Binham, 2015), with firms seeking to identify and report instances of market abuse before they were uncovered by regulatory scrutiny (Duff and Phelps, 2015).

This statistic is particularly revealing, demonstrating as it does an environment in which firms are focused on reporting post-misconduct detection, rather than on employing truly effective control mechanisms to prevent misconduct and market abuse. This culture is further illustrated by the Merrill Lynch transaction reporting scandal touched on earlier in this paper. Here the firm exhibited a blatant disregard for known misconduct over a period of eight years. This highlights that efforts are required to uplift the ethical standards of the financial services industry.

Spreading Ethical Conduct from Grassroots to Tree Tops

Misconduct breeds mistrust, and in a fragile political and economic environment such a combustible equation threatens irrevocable, systemic damage to the health of the economy as a whole. It is therefore clear that the financial services industry has a very real, social responsibility to embed good, ethical practices across its workforce and to discard the culture of "unfettered misconduct" (McLannahan, 2017) embedded across the sector.

As established thus far, managing the conduct of the financial services is a complex task, requiring careful balance of regulation, compliance and culture. As previously noted: "without strong ethical cultures, regulation and compliance will never be enough" (CII, p.4, 2017). However, to observe a true shift in conduct, dedicated reform efforts are required across all organisational levels within both the industry and individual firms.

Finding the Right Cure for the Misconduct Pandemic

When considering how to address this challenge, it would be imprudent to not reflect on the management of ethical conduct in other industries. This paper begins this analysis at the macro level, examining the medical industry for direction on ethical leadership, and à rapporter les cas d'abus avant qu'ils n'aient été découverts par l'examen minutieux réglementaire (Duff et Phelps, 2015). Les entreprises se concentrent sur la détection et le rapport sur la mauvaise conduite a posteriori plutôt que d'employer des mécanismes de contrôle véritablement efficaces pour sa prévention.

Le comportement inapproprié et la faute suscitent la méfiance, et dans un environnement politiquement et économiquement fragile, une telle configuration devient explosive et entraîne des dégâts irréversibles pour la santé de l'économie dans son ensemble.

Il est donc évident que l'industrie des services financiers a une responsabilité sociale réelle afin d'inculquer de bonnes pratiques éthiques à ses collaborateurs et de rejeter la culture permissive dominante.
Gérer la conduite des services financiers est une tâche complexe, qui exige un équilibre prudent de régulation, de conformité et de

then goes on to reflect on ethical conduct at the organisational level.

At the core of the healthcare profession sits medical ethics. Essentially, this is centralised around four key principals (Clinical Ethics Network, 2017), further underpinned by the Hippocratic oath, that create a moral code that governs ethical practices and conduct within the field:

I. Autonomy: enabling individuals to make informed decisions

II. Beneficence: promoting what is best for the patient

III. Non – Maleficence: avoiding the causation of harm

IV. Justice: distributing benefits, risk and cost fairly

As in every industry, cases of negligence and misconduct do of course exist within the medical field. However studies have identified that "doctors, nurses and other medical practitioners emerge as the most trusted" roles within the profession. The top three reasons for this trust were: the professional expertise of the practitioners; having no reason to doubt them; and belief in their honesty and integrity (Wellcome Trust, 2016).

The relevance of this particular research to the financial services Industry is two-fold. Firstly, how much of society's trust in these professionals, can be put down to the symbolic moral code to always act in the best interests of the customer? And secondly, to what extent does this personal ethical pledge rein back an individual's "bestial instincts" (Hobbes cited by Bennett, 2015) when they are faced with moral hazard?

Addressing the first of these questions, the introduction of an ethical code for banking is one that has been heavily debated and continues to divide opinion. In 2013, the Dutch Banking Association introduced a mandatory oath applicable across the workforce. The pledge echoed that of the four medical principals. Critically, employees pledged not to misuse their banking knowledge and to be aware of their social responsibilities to society throughout their business transactions (Fox, 2015).

ResPublica, a leading British think tank championed adoption of such an oath in the UK. However the Parliamentary Commission on Banking Standards found that "investing too much in a single solution might be a false summit" (BBA, 2014). Instead, in 2015, the Financial Conduct Authority and Prudential Risk Authority introduced the final rules for "improving accountability in the banking sector" outlined in the Senior Managers Regime, The Certification Regime and Conduct Rules (FCA, 2015).

This paper argues, however, that, although such guidelines are a necessary component of managing misconduct and unethical behaviours, without cultural foundations ultimately such efforts are "devoid of purpose" (Fox, 2015). Further, it challenges the Parliamentary Commission's statement that suggests an oath would be an ineffective "single solution", whilst acknowledging that the management of misconduct is a delicate balance of regulation, compliance and conduct. Although seemingly abstract, this is evidenced in the medical field, where social trust and confidence in the medical profession in many ways can be attributed to the moral code of ethics embedded in the professional discourse. Essentially, therefore, this paper offers the view that an industry-wide pledge would act as a symbolic social commitment and complement the other market controls that serve to deter misconduct in the financial services sector.

The Death of Distance

Again looking to the healthcare industry, we explore the effectiveness of such a pledge at the individual level, examining to what extent such oaths prevent an individual from acting opportunistically when faced with moral hazard.

The patient – doctor relationship is particularly revealing, with trust acting as "the defining element in the patient/physician interpersonal relationship" (Pearson, S and Raeke, L., 2000). Alongside cases of misconduct, the decline of trust in banking can to some extent be attributed to the modern face of banking today. In essence the "death of distance" (Cairncross, 1997) has contributed to the death of relationships and trust, with technological advances removing the interpersonal relationships prevelant in traditional banking.

A plethora of research suggests that the likelihood of misaligned behaviour is significantly reduced when trust and a common, human relationship exists (Griffin, R and O'Leary, K., 2004). In an increasingly digital age, driven by technological advancement, an industry-wide oath would certainly serve as a reminder to financial service professionals of their duty of care to society.

Ethics Are More Than Just Skin Deep

In 2017, the French beauty company L'Oréal was recognised by the Ethisphere Institute as the World's most ethical company (Ethisphere, 2017). Aside from their strong corporate social responsibility, what is it that sets this company out from the rest? From an operating perspective, in 2000, L'Oréal was one of the first companies in France to establish a code of ethics and later, in 2007, they appointed a dedicated chief ethics officer (L'Oréal, 2017).

In essence, this suggests that, at firm level, operating model reform is required across financial services with greater emphasis placed upon ethical conduct. To some extent, we are seeing evidence of this change being championed with many banks seeking to manage "bad behaviour at the source" (Engler, 2017). JP Morgan and Goldman Sachs, for example, are amongst a few Banks

culture. Sans de fortes cultures éthiques, la régulation et la conformité ne seront jamais suffisantes. Cependant, si l'on veut constater un vrai changement dans les comportements, des efforts de réforme sont indispensables à tous les niveaux organisationnels de l'industrie et des entreprises.

A cet effet, il serait imprudent de ne pas examiner la gestion de conduite éthique dans d'autres industries. Des études de l'industrie médicale ont identifié que « les médecins, les infirmières et d'autres praticiens médicaux apparaissent comme des rôles de référence » à l'intérieur de la profession. La pertinence de ce constat pour l'industrie des services financiers est double. Tout d'abord, quelle part de la confiance de la société dans ces professionnels peut-elle être mise sur le compte du code moral symbolique de toujours agir dans les meilleurs intérêts du client ? Ensuite, dans quelle mesure cet engagement éthique personnel décourage les « instincts bestiaux » d'un individu (Hobbes cité par Bennett, 2015)? Un engagement large de la part de l'industrie agirait comme une volonté sociale symbolique complétant les autres contrôles du marché qui servent à dissuader la mauvaise conduite.

La relation patient–médecin est particulièrement révélatrice, ou la confiance agit comme « l'élément déterminant dans la relation interpersonnelle patient–médecin » (Pearson, S et Raeke, L., 2000). La baisse de confiance dans les banques peut être attribuée dans une certaine mesure au visage moderne du secteur bancaire aujourd'hui. En substance, «la mort de la distance» (Cairncross, 1997) a contribué à la mort des relations et de la confiance, et les progrès technologiques ont éliminé les relations interpersonnelles qui prévalaient dans le secteur bancaire traditionnel. Une pléthore de recherches suggère que la probabilité d'un comportement inadéquat est significativement réduit lorsque la confiance et une relation humaine,

establishing proactive "central supervisory teams" that seek to identify problem areas and strengthen the firm's internal supervisory framework, acknowledging that a new organisational structure is required to truly confront misconduct (Engler, 2017). Ultimately however, with reference to Bandura's (1977) social learning theory, if change is to be successfully adopted, it is important for senior leaders to set the standard for the organisation's cultural agenda. The introduction of the role of chief ethics officer to a firm's board, alongside dedicated, preventative supervisory teams certainly sets the organisational tone in favour of ethical conduct.

Managing the Delicate Ecology of Financial Services Conduct

On balance, therefore, the management of misconduct is a delicate ecology composed of a fine equilibrium of industry regulation and organisational compliance. At the core lie ethics and culture. Throughout this paper we have explored these individual constructs in turn and conclude that, in isolation, these components are quite simply ineffective and will have limited effect without being cultivated as part of an ethical culture.

Returning to the question this paper set out to explore, RegTech is certainly an effective asset to this ecology offering powerful insight to compliance functions and regulators. However, as earlier highlighted, it should not be viewed as a panacea for market abuse. Rather, as the industry continues to adopt disruptive RegTech solutions, we should embrace the opportunity to leverage this change to realise a real and effective shift in conduct across the industry. This should be a shift to a culture in which the innate human desire to want to "choose good" overrides the opportunistic behaviours that business can present.

Certainly, it is fair to argue that this is a topic far wider than the realms of financial services alone, with misconduct an ailment afflicting society as a whole. However, as in the old adage "be the change you want to see" (perhaps somewhat ironically), the first step in this journey starts with us. The financial services professionals of today must chart the new ethical culture of tomorrow.

commune existent (Griffin, R et O'Leary, K., 2004). Dans un monde de plus en plus numérique, un serment propre aux professions financières servirait certainement à rappeler aux professionnels leur devoir de prendre soin de la société.

L'exemple de l'Oréal suggère que le secteur des services financiers a aussi besoin d'une réforme opérationnelle au niveau des entreprises, avec un accent plus grand mis sur la conduite éthique. L'introduction d'une fonction de directeur en éthique au sommet de l'entreprise, à côté des fonctions de surveillance dédiées à la prévention, pose certainement le cadre organisationnel adéquat pour la conduite éthique.

Tout compte fait donc, la gestion des écarts de conduite est un exercice d'équilibrisme dans un contexte où se chevauchent la régulation de l'industrie, la conformité organisationnelle, avec au cœur, l'éthique et la culture. Prises une a une, ces composants sont tout simplement inefficaces et de portée

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limitée. RegTech est un apport certainement valable qui offre un aperçu puissant aux services de conformité et aux régulateurs ; mais ne devrait pas être considéré comme une panacée pour contenir les abus du marché. Au lieu de cela RegTech devrait être mis à profit comme l'occasion de passer à une culture dans laquelle le désir humain inné de « choisir le bien » l'emporte sur les comportements opportunistes caractéristiques des milieux d'affaires. Ceci est certainement un sujet beaucoup plus large que les seuls royaumes des services financiers, cependant, la première étape de ce voyage commence peut-être par nous ; les professionnels des services financiers d'aujourd'hui affrétant la nouvelle culture éthique de demain.

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Bringing In the Underbanked

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Finalist

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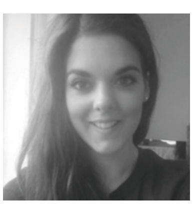

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Current banking provisions leave an estimated 2.5 billion (Chaia, Goland, Schiff, 2010) adults worldwide without access to a formal bank account. This means they are deprived of the opportunity to save and to borrow money at the best, regulated rates. Whilst 2.2 billion of these underserved adults reside in developing markets such as Africa, Asia and Latin America (Chaia et al, 2010), there are also 106 million adults in North America (Ashoka, 2013) and 1.5 million in Britain (FIC, 2016) without the necessary banking provisions.

These individuals may be from low income families, with no credit history. They may have no fixed abode, choosing to live in unconventional accommodation such a boats or caravans, or may be refugees, or internally displaced people who cannot provide formal identification. Furthermore, segments of the populace who are unable to leverage technological developments such as online and mobile banking may also find themselves isolated from these rapidly growing credit channels.

It is these individuals who are defined as 'the underbanked'.

Their inability to access traditional financial provisions can, in part, be due to difficulty in providing the official identity verification documentation that is necessary to open a bank account. This paper will therefore explore a number of barriers that the underbanked face when looking to provide identity documents and the positive impact new technology can play in capturing and storing proof of identification

The inability to open a traditional bank account restricts someone's affiliated to.

Bien que l'activité bancaire trouve ses origines dans l'octroi de financements aux paysans, puis plus tard aux hommes d'affaires de toute l'Italie (Beattie, 2017), une institution financière cherchait alors et cherche encore aujourd'hui rendre accessible à tous des financement à des prix équitables et de manière responsable. Une institution qui limite ses options de financement à certaines catégories de la population, élimine non seulement des sources de revenus potentiels, mais aussi remet en cause l'objectif d'une banque qui consiste à soutenir divers secteurs de l'économie.

opportunity to build a credit score, which is necessary if one is to present oneself as a reputable and trustworthy borrower. Therefore, many underbanked individuals are deprived of the opportunity to take out mortgages, access savings products, and utilise credit provisions from standard financial service providers. Those who want to borrow are forced to seek alternative methods of finance such as 'payday loans'. Such loans can see an average APR of 627.9%[1] and fall outside consumer protection schemes such as the FSCS Deposit Guarantee Scheme (FSCS, 2017) and do not comply with the wide array of regulations that traditional financial institutions adhere to. The underbanked then become trapped in a cycle whereby they cannot build the necessary credit score to access traditional financing. This paper will discuss how innovative approaches to credit scoring could benefit the underbanked and help them to build a holistic score that is accepted by traditional financial institutions.

Inhibitors for the underbanked

The personal cost to individuals who cannot access mainstream finance is not the only question to consider of course. The moral and financial implications for an institution that limits financing to certain segments of the population should also have weight. Not only does such a policy eliminate potential revenue streams, it challenges the purpose of a bank in financially supporting diverse segments of the economy. As such, this paper will explore the benefits for a financial institution of extending financing to the underbanked, and how emerging technologies can be used to capitalise on these benefits while mitigating the associated risks.

"…inclusion is not always about the poor and 'invisible', it's about equal opportunities to access various kinds of products and services, to knowledge, innovation and the ability to make an educated choice." (Mesropyan, 2017)

Given that an estimated 1.1 billion people live without an officially recognised identity (ID2020, 2017) many underbanked customers are unable to prove either their identity, or their creditworthiness, to financial services firms.

Inability to Provide Official Identity Documentation

To open a UK bank account, it is necessary to provide two forms of documentation: proof of identity and proof of a current UK address. The following are examples of satisfactory documentation:

- Full and valid UK or foreign passport
- Full UK or foreign driving licence
- Student ID card
- UK mortgage statement

1 On a £200 loan over 3 months (KnowYourMoney, 2017)

Sans le soutien d'une institution traditionnelle qui fournit un compte bancaire, les personnes « non-bancarisées » sont incapables d'accéder à des prestations d'épargne ou de crédit qui permettent de construire un historique financier et une cote de solvabilité. Cependant, afin que ces personnes puissent accéder aux services bancaires, elles doivent fournir la preuve qu'elles sont solvables et qu'elles disposent d'une identité vérifiable.

- Council tax bill
- TV license or direct debit schedule (Barclays A, 2017)

However, one should note that providing such documentation carries difficulties for many of the underbanked. Firstly, many identification documents are either too costly to obtain or irrelevant for those in low income households. For example, those who do not have the necessary funds to travel abroad or own a personal vehicle may not hold either a passport or driving license. Furthermore, proof of student identification requires the person to be in further education, either at college or university level. However 18 year-olds from disadvantaged backgrounds are nearly 2.5 times less likely to enter higher education than their more affluent counterparts (OFFA, 2017), and mature students may not be able to access funding for a course unless they can commit to full time study (Shaw, 2010) – something not possible for those looking to continue supporting a family.

Where identity documentation is held, there are further difficulties in the verification process as the majority of banks are unable to verify accounts outside of their branch network. However, because 1,032 UK bank branches have been closed in the last 2 years (Boyce, 2016), prospective customers may be forced to travel many miles to their nearest branch and to attend an appointment within work hours.

Evidently this would cause difficulty for all customers. However, for those on low income or with no fixed abode, the ability to attend these appointments may be further hampered by their lack of personal transport, or by inflexible working arrangements. Those in developing nations, where branches are more dispersed and access to official documentation may be even more costly, due to government inefficiencies or corruption, find that the same problems are magnified. All of this means that the underbanked are often unable to open a traditional bank account in order to begin their saving and borrowing journey since no bank is comfortable with the risk of lending to, or holding the finances of, an 'unknown' customer.

Inability to Build a Credit Rating

This creates a catch-22 situation where borrowing cannot be extended as there is no history on which to base a credit decision. Those who are unable to open a traditional bank account from a young age become locked out of the system and, as the period of exclusion grows, the likelihood of their accessing funding in the future decreases.

Leaving traditional financial products on one side, the underbanked may be also disadvantaged by lack of access to other routes that contribute to a credit score. These include: monthly mobile phone plans, internet subscriptions, electoral roll registration, house moves, and timely bill payments (MAS, 2017).

Those from low income families may not be able to afford an internet connection, or pay-monthly mobile contracts. Those with no fixed abode or recent immigrants may have a limited record of accommodation and not be on the electoral register. In addition, those who have found difficulty in adopting more online and digital business channels, as well as mobile banking provisions, may not be able to process payments and set up facilities such as direct debits, thus affecting their ability to manage their funds with regular repayments.

Cela crée un cercle vicieux où le crédit ne peut pas être accordé puisqu'il n'y a aucun historique sur lequel baser une décision. Ceux qui n'ont pas accès aux comptes bancaires traditionnels dès leur plus jeune âge se retrouvent exclus du système et, à mesure que la durée de l'exclusion augmente, la probabilité qu'ils accèdent à un financement à l'avenir diminue.

However it is not only those who are unable to build a credit score who are disadvantaged but also those who have a low credit score – which impacts not only whether they can borrow but also how much, and at what cost. Therefore, those who may require financing at more affordable rates are often prohibited from accessing it – forcing them to utilise insufficient borrowing at a higher cost.

Moral Responsibility vs Profit Pressure

Il est de la responsabilité des banques d'évaluer la solvabilité et les exigences d'un emprunteur potentiel et de décider s'il est prudent d'avancer les fonds.

It is the responsibility of banks to assess the creditworthiness and requirement of a potential borrower and to decide whether it is prudent to advance monies. In such a decision, one must also consider the moral and reputational conditions around the request. This is reflected in the way many banks close the accounts of persons linked to nefarious activities and of businesses that operate in sanctioned countries, but also – more positively – in campaigns to offer financing to socially-responsible businesses and for socially desirable projects.

In doing this, banks must formulate their own internal guidance on where these boundaries and opportunities lie, as well as seeking counsel from governments, NGOs, and lobbyists. However, whilst pressure has been exerted on banks to, for example, exit relationships with companies associated with palm oil production (Paddison, 2017), to increase financing to SMEs (Qell Group, 2017), to desist in dealing with those associated with the gambling (Wessex, 2011) and to promote green bond funds (Deutsche Bank, 2015), there has been limited pressure for banks to increase their appetite for serving the underbanked.

This is in some part due to the perceived risk/return value of an underbanked client, in which the potential for a low-income earner to not repay borrowing is deemed to be greater than the possibility of tapping a larger revenue stream, should the client be assisted with transitioning to the middle-income bracket. Similarly, since methods of assessing the borrower risk remain limited to traditional credit scoring and the collection of a limited number of documents, those who fall outside this scope are unable to demonstrate their true risk profile. Therefore they are provided with the default 'computer says no' response that is

Afin de faciliter l'évaluation de la solvabilité et la vérification sans encombres de l'identité des « non-bancarisés », les institutions financières doivent développer leurs méthodes de collecte de données et élargir l'éventail des documents acceptés. Pour ce faire, elles pourraient envisager d'utiliser les technologies biométriques et de blockchain afin de favoriser la saisie et le stockage de ces documents et également faciliter la collaboration entre les banques et le partage des données.

all too familiar to the underbanked.

The upshot is that the inability to provide identity documentation and build up a credit score inhibits the underbanked from utilising traditional banking provision. In addition, it limits potential revenue streams for institutions that, due to slowdowns in global markets, increasing regulatory requirements and competitive pressure from the *fintechs* (financial technology companies), increasingly find their margins under pressure. Institutions need to strike a balance between meeting shareholder expectations and having too much risk appetite, and to understand how segments, such as the underbanked, can be responsibility served.

This paper will explore how the growth of emerging technologies, and innovative application of digital services within the wider financial ecosystem, brings new opportunities to improve financial inclusion for the underbanked whilst mitigating the associated risks.

Biometrics and Blockchain Technology: Identity Documentation Capture and Storage

In order to facilitate frictionless identity verification for the underbanked, financial institutions must expand their data collection methods and the range of accepted documents. To do this, they could look to implement biometric and blockchain technology to aid the capture and storage of these documents and also better facilitate cross-bank collaboration and data sharing.

Biometric Technology – The Basics

This is most easily seen in common biometric applications such as fingerprint and iris scanners. A fingerprint scanner uses infrared waves to map a person's unique fingerprint, encrypt the data into a string of 1's and 0's, and then store the digital representation of the fingerprint within the device's memory. When one wishes to access the phone, this digital record can be accessed and verified by presenting the required finger onto the touchpad.

The above is an example of single-factor authentication, in which one attribute must be presented. However there is a growing move towards multi-factor authentication where multiple attributes must be presented in order to gain access to an account, device, or product. In this, users are prompted to provide something they know (e.g. a password); something they are/have (e.g. a fingerprint); and something they do (e.g. typing pattern). This is an augmentation of the traditional password-only account access, which financial institutions required for their online and early mobile offering. However, due to a conflict between cybersecurity concerns and customer pressure to streamline account access, the majority of banks now offer some level of multi-factor authentication.

L'identification par smartphone, qui couvrirait 81% des adultes au Royaume-Uni, facilite l'accès des personnes « non-bancarisées » à un compte bancaire. Les avantages de l'identification via application mobile sont particulièrement adaptés aux marchés émergents, où sur les 2,2 milliards d'adultes sans accès aux services bancaires traditionnels, environ 46% de la population possède un smartphone (GSMA, 2016). De ce fait, la prolifération des téléphones mobiles – associée à une préférence de 93% des consommateurs pour la biométrie par rapport aux mots de passe – peut aider ceux qui vivent dans des zones reculées à accéder à des produits financiers.

Biometric Solutions for Identity Collection and Verification

HSBC (HSBC, 2017) was an early pioneer in voice biometrics for telephone bank account access and Lloyds introduced TouchID (fingerprint access) to its mobile app in 2016 (Fintech Ranking, 2016) capitalising on the way in which fingerprint readers on smartphones had become increasingly common (Deloitte A, 2016). Whilst the majority of this innovation focusses on account access for those who have existing bank accounts, advances are also being made in using biometric authentication and verification to improve access to financial provision for the underbanked.

An example of the cycle of small improvements that aims to remedy the difficulty in branch-based authentication can be seen at challenger bank Monzo, which uses facial recognition technology within their mobile-only offering to on-board all customers. Monzo customers are required to provide a photo (taken using their mobile) as one piece of identification as well as a video 'selfie'. Their identity is verified using face matching technology and an account can be requested and opened within 7 days.

This means that, for those able to provide a form of verification with a smartphone, which 81% of UK adults are (Deloitte B, 2016), Monzo removes the obstacle of in-person branch account opening. That gives the underbanked quicker, easier access to a bank account. The advantages of mobile-based identification collection are especially relevant within developing markets where, of the 2.2 billion adults without access to traditional banking services, an estimated 46% of the population own a smartphone (GSMA, 2016). Given this, the proliferation of mobiles – together with a 93% consumer preference for biometrics over passwords (Ball, 2017) – can help those who live in remote areas access financial products.

The Impact of Biometric Technology for the Underbanked

Three pioneering projects are: the ID2020 global project, the UK government's GOV.UK Verify initiative, and India's Aadhaar project. These aspire to create digital identities that can be stored on a national database and accessed by corporates and financial institutions for identity verification. Aadhaar, which is a unique personal 12-digit identity number, has been provided to over 99% of all Indian citizens (Wikipedia, 2017) and includes personal information such as name, address and birth date but also biometric information with 10 finger scans and an eye scan. This data can be used by all citizens as a government supported identification document. Similarly, the GOV.UK Verify scheme (GDS, 2017) and ID2020 (ID2020, 2017) projects look to provide a nationally accepted proof of identity to all citizens at zero cost to the consumer.

These projects would provide the underbanked, whether in a developed or developing nation, with an identity document that could be accepted by financial institutions. This, paired with advancements in omni-channel banking, could provide frictionless access to banking provisions for the underbanked. Despite this, one should note that for those with no fixed abode, further steps may be required in order to accommodate their unsettled location. However the digital nature of the project may more easily lend itself to real-time updates through mobile and GPS tracking.

Les projets de vérification numérique fourniraient aux personnes « non-bancarisées », qu'elles soient issues des pays développés ou en développement, une pièce d'identité qui pourrait être acceptée par les institutions financières. Ceci, combiné avec les progrès de la banque multi-canal, pourraient offrir un accès sans encombres aux non ou mal-bancarisées. Malgré cela, il convient de souligner que pour ceux qui n'ont pas de domicilie fixe, d'autres étapes peuvent s'avérer nécessaires afin de contourner la difficulté liée à la précarité de leur lieu de résidence. Cependant, la nature numérique du projet fait que celui-ci est plus adapté à des mises à jour en temps réel grâce à des applications mobiles et à la localisation par GPS.

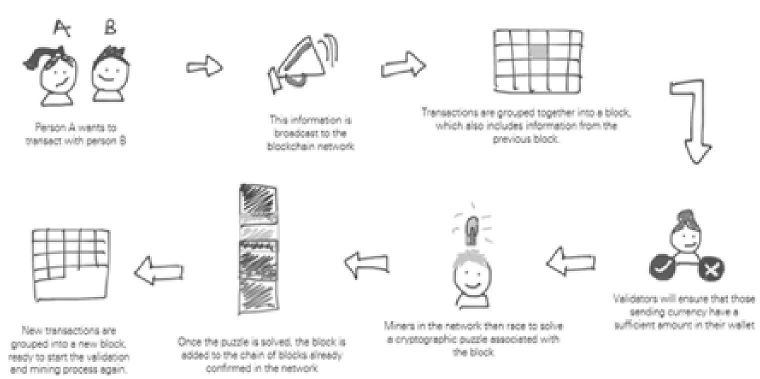
Blockchain Technology – The Basics

Blockchain technology was conceived in a 2008 whitepaper proposed by an anonymous creator using the pen-name Satoshi Nakamoto. It underpins the cryptocurrency bitcoin, an electronic peer-to-peer cash system. However the value of blockchain technology has since been recognised outside of this application and is now being explored by financial institutions worldwide, including its potential to improve provisions for the underbanked.

A blockchain is a shared ledger that records transactions and distributes an updated copy to all participants in the network, in near-real time. Transactions are grouped together in blocks and connected to previously verified blocks in order to form an immutable chain that records the entire history of transactions – hence the term block-chain (diagram 1).

The transactions within each block are verified to ensure that those who are attempting to send funds have the required amount in their accounts. Then, those who

Diagram 1:



(Image: Tara Annison)

Si la création d'une identité numérique offre de nombreuses opportunités aux personnes « non-bancarisées », elle s'accompagne d'un risque accru de vol d'identité par le biais de cyber-attaques. En tant que telle, la technologie de blockchain permet de protéger l'identité grâce au recours à un registre distribué et immuable, vérifié par la cryptographie, laquelle fournit une seule source de vérité, sans aucune défaillance.

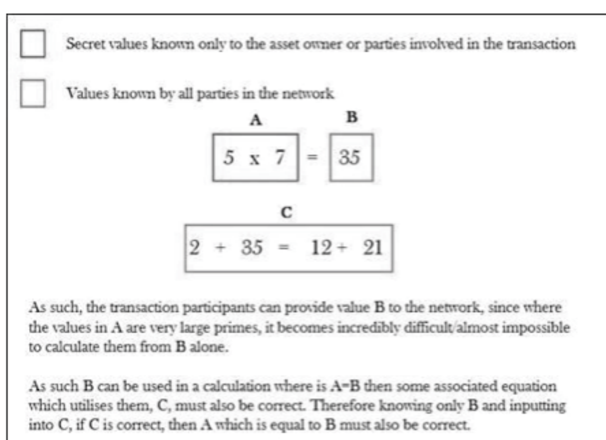
help to maintain the blockchain network (called miners), must solve a mathematical problem associated with the particular block in order to be able to add it onto the chain. This helps the network reach consensus as significant computing effort must be employed by the miners to ensure only valid blocks are added to the blockchain. Once a solution is found, it is broadcast to the wider network and consensus can be reached. After this point, new transactions are added to another block and the process begins again.

Crucially, and unlike traditional ledgers employed within the financial services industry, there is no single copy of the ledger – it is distributed to all participants in the network, without the need for a central counter-party. This helps to provide the security of a blockchain because there is no single point of failure and anyone attempting to 'hack' the blockchain would need to hack every copy of the blockchain in existence.

Blockchain Solutions to Identity Storage

Importantly, this verification can be completed without the content of the underlying asset being made visible to all on the network. This is achieved by encrypting the information before it is uploaded. The decryption keys are shared between the asset owner e.g. the individual and a trusted stakeholder e.g. a benevolent government. As such, access to the underlying content can only be granted should both the asset owner and stakeholder agree. Furthermore, developments in blockchain technology through zero-knowledge proofs (diagram 2) and confidential transactions can allow for information to be validated in encrypted form, allowing for digital

Diagram 2:



(Image: Tara Annison)

En établissant des cotes de solvabilité pour les personnes « no-bancarisées », les banques peuvent tirer parti de la modélisation statistique des profils de risque qui intègrent une grande variété d'indicateurs. Elles pourraient aussi potentiellement utiliser la technologie du blockchain comme une alternative moins coûteuse à l'infrastructure existante. On estime que les applications de blockchain peuvent faire économiser aux banques environ $ 20 milliards par an, à travers des gains d'efficience dans les « middle- et back office », y compris des coûts réduits de traitement des transactions. Par conséquent, il pourrait devenir financièrement possible d'octroyer des prêts de microcrédit aux « non-bancarisés », si les banques, aidées par le blockchain et d'autres technologies émergentes, opéraient dans un contexte de coûts moins élevés.

identity stored on a blockchain to be verified by a third party without revealing the details of the underlying identity information.

Examples of blockchain use for identity storage include the secure identity platform Civic (Civic, 2017) and an initiative led by SecureKey Technologies and IBM (IBM, 2017) who have partnered with leading banks in Canada to build the first ever digital identity network, allowing for the cross-referencing and verification of identities across banks. That means that, should someone be able to provide their digital identity to a bank in Canada, it can also be shared across all other participants in the network in a secure, immutable format. For the underbanked, this secure and distributed network alongside initiatives such as Gov. UK Verify, provides the opportunity to share their digital identity across institutions. This will reduce costs associated with multiple documentation requests and allow greater access to an array of financial products.

However, whilst these innovations look to provide a source of digital identity for the underbanked, a challenge remains around how the underbanked can provide assurance of their creditworthiness to a financial institution.

Blockchain Solutions to Identity Storage

As the use of mobile phones has increased exponentially, so interactions on social media and on applications such as Whatsapp and WeChat have become a dominant form of communication. Technology companies have taken advantage of the data collected by such interactions to provide a holistic personal risk profile. Two companies that utilise such data to provide an alternative credit score are Tala and DeMyst Data.

Holistic Credit Scoring

Tala (Tala, 2017) is a mobile based fintech (financial technology company) that provides micro-financing in developing markets. It assesses the risk profile of customers using their mobile phone profile. By analysing over 10,000 data points per customer including regularity of calls to family and friends, geographical location, finance-related apps on the device, and size of support network, financing can be extended to borrowers within 2 minutes, after asking only 8 questions (Adams, 2016). Whilst the app initially saw default rates of 50-60%, an augmentation of the risk algorithms later reduced this to less than 10% and has resulted in some interesting repayment metrics:

- High regular travel patterns are linked to increases in repayment rates of 4%
- Regular contact with the same family and friends is correlated with a 6% uptick in repayment rates
- A high number of contacts with whom the client is in regular context is associated

with a boost in repayment rates of 9% (Siroya, 2016)

For the underbanked this provides an opportunity to access financing outside the traditional lending model, at affordable rates, and to build a traditional credit score. For Tala it provides margins comparable to those seen at traditional institutions – and all from a segment deemed 'too risky' to bank.

Another company looking to harness mobile data for credit scoring is Demyst Data. It aims to combine both internal and external data sources in order to build the credit profile of a customer. This includes data from governments, from geolocation services and from social media platforms, email and networks. Corporations who leverage the technology have seen a 20% increase in new customers with the same risk level and 45% fraud reduction (Demyst Data, 2017). As such, the implementation of technologies such as this by financial institutions could allow the underbanked to demonstrate their true risk profile by leveraging the plethora of data available, moving beyond the oversimplified traditional credit score.

Les banques jouent un rôle pivot dans l'économie et dans les opportunités qui s'offrent dans la vie d'un individu. Les « non-bancarisées » auxquelles on donne un accès à des financements auraient une opportunité d'emprunter pour acheter des biens et des services à coûts plus élevés, tels que des véhicules ou des formations supplémentaires. Ils auraient également accès à des produits d'épargne sûrs et à des services bancaires en ligne. Dans l'ensemble, les banques offriraient aux « non-bancarisées » une opportunité d'élever leur degré d'accomplissement et leur niveau de stabilité financière. Il y a aussi une dimension morale : les décisions de crédit des banques peuvent avoir un impact significatif sur la qualité de la vie et les opportunités que l'on peut avoir.

Micropayments

This is where a short-term, small (sub $1,000) loan is extended – representing a low capital expense for the bank but providing the borrower with the opportunity to repay funds – therefore possibly improving their credit score.

An example of a fintech utilising micropayments to credit score is Company Mission Asset Fund. It extended microfinancing to 600 low-income individuals based solely on the security provided by signed promissory notes. Of the 260 borrowers which San Francisco State University studied in a two-year review of the project, the average credit score increased by 168 points to reach 603 points (Ashoka, 2013).

This allows a segment of the underbanked to access non-traditional financing whilst improving their credit score. That boosts the possibility that, should they later apply for a financial product with a traditional institution, their request will be accepted.

However, the incumbents are currently restricted in their ability to offer micro-financing because of high overhead costs. These are a result of: inefficient back-end credit processing, primitive risk models that require high levels of capital to be ring-fenced for those within the underbanked category, and of expensive monitoring processes for account utilisation and repayment tracking. However, many institutions are now exploring blockchain technology as a lower-cost alternative to existing infrastructure, and as a replacement for heritage systems. Existing systems are unable to leverage technological advancements due to their inflexible design and as such cannot take advantage of innovations. However implementations of blockchain technology are estimated to save banks an estimated $20billion a year (Perez, 2015) in middle-to-back office efficiencies, including reduced transaction processing costs. Therefore it could become financially feasible to provide micro-finance loans to the underbanked, should banks, facilitated by blockchain and other emerging technologies, operate in a lower cost environment.

Les banques qui offrent leurs services aux «non-bancarisées », en utilisant la technologie pour atténuer les risques, démontreront un engagement aussi bien envers les personnes que les profits. Cela pourrait contribuer à corriger certaines des perceptions négatives des institutions financières qui se sont développées depuis la crise financière globale de 2008/09 – en partie causée par les banques qui se sont concentrées sur les profits plutôt que sur les besoins des emprunteurs.

Morality and Responsibility: Opportunity Capitalisation and Risk Management

The ability of a bank to lend responsibly and fairly contributes to its reputation, therefore a bank with high default rates, an inability to provide access to customer savings, and aggressive sales or repayment tactics, may be perceived negatively. However, a bank that looks to provide financing to those in need, provide a truly omni-channel service, and display a considered but sensible risk appetite, will be understood as serving its customer base.

That is why institutions should look to capitalise on incoming regulations such as PSD2, which mandate data sharing and closer collaboration with fintechs, in order to improve their offering to the underbanked. An example of an app that caters to the underbanked market and could be assimilated within a larger bank offering is Squirrel (Squirrel, 2017), which is designed for low income households and diverts wages into a special account without immediate access. This helps to prevent overspending through the release of small timely payments. Furthermore the use of pre-paid cards such as The Acorns Card (Acorn Accounts, 2017) provides banking services without the ability to enter into unauthorised debt and with automatic saving provisions.

Banks that serve the underbanked, utilising technology to mitigate the risks associated, will demonstrate a commitment to people as well as to profits. This may help to address some of the negative perceptions of financial institutions that have been held since the 2008/09 global financial crisis – in part caused by banks placing greater emphasis on revenue rather than the needs of borrowers. Addressing the needs of the underbanked could help to remove the stigma of 'bad bankers' (Corrigan, 2008).

This is especially important as banks play a pivotal role in the economy and in opportunities within an individual's life. The underbanked who are given access to finance would have an opportunity to borrow to pay for higher cost goods and services, such as vehicles and further education. They would also have access to secure savings products and to online banking. Overall, banks would be providing an opportunity for the underbanked to raise their attainment and level of financial stability. There is also a moral dimension to this: the credit decisions that banks make can significantly impact the quality of life and the opportunities that one may have.

By responsibly extending fairly-priced finance to the underbanked, financial services firms could give them opportunities to help themselves.

Conclusion

Technological improvements in biometrics can assist with personal data collection and identity verification for the underbanked, who have restricted access to branch-based banking or who do not have traditional, and costly, documentation. The implementation of blockchain technology can help to securely manage this digitally-created identity and provide the opportunity for collaboration and data sharing between banks. That means that different institutions could augment an identity profile – thereby removing the burden of verification and authentication from one bank alone and reducing the perception that the underbanked are 'unknown'.

Furthermore, a holistic approach to credit scoring can help banks better understand the true risk-profile of an underbanked customer by capitalising on the vast array of personal data collected through mobile and online interactions. That would allow financing to be extended to those in need without compromising an institution's financial stability.

Finally, we should consider the fundamental role of financial institutions in society and how the erosion of trust, thanks to previous destructive market activity, has impacted customers. Extending financing to many of those most in need, the underbanked, could assist in improving the reputation and image of banks. It also provides the underbanked with an opportunity to utilise this funding to improve their own personal circumstances.

All in all, the technology outlined in this paper can help banks capitalise on this opportunity whilst mitigating the associated risks.

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The Blockchain Revolution

Ethics & Trust in Finance
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Finalist

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Is is a revolt? No, your Majesty, it is a revolution.

An exceptionally quiet and warm night – thought Louis seated in front of an old oak table covered with dozens of gold coins. Recently, he had not had much time to sit in silence and immerse himself in studying his favourite objects: coins. *It would be much easier to be a simple banker*, he sighed. The silence in the chamber was disturbed for a moment. His complaint was finally absorbed by the Persian carpet that lay proudly on the old floor. Obviously, there were thoughts and worries running through the monarch's head but he did not pay much attention to them. *Problems are born out of thinking* – he thought. He could not understand people – those strange creatures were a real mystery to him. *The world turns too fast – let's focus on coins, solid objects that, unlike humans and their ideas, are predictable and easy to inspect*.

Even though the night was calm and very warm, anxiety hovered in the air. Something was supposed to happen, something was lurking in the darkness waiting patiently to reveal its face.

Then, the heavily-decorated doors flew open with a *tumultuous bang*. The silver moon shone on the red, frightened face of the figure that had sneaked, unauthorized, into Louis's private kingdom: "My Lord…the Bastille demolished" – said the figure, who turned out to be the Duke of Rochefoucauld.

"C'est une révolte?"[1] - Louis

1 s this a revolt? No, Sire, it is a revolution – the famous words that King Louis XVI and the Duke of Rochefoucauld exchanged just after the people of Paris took the Bastille.

Blockchain est-il une révolte mineure ou s'agit-il d'une Grande Révolution qui va remodeler le monde que nous connaissons ? Dans ce dernier cas, est-ce qu'il y aura un impact éthique ? Une telle révolution sera-t-elle éthique dans son essence même ? Quelles sont les préoccupations en termes de respect de la réglementation et d'éthique que suscite l'adoption de la nouvelle technologie ?

Le concept de chaîne de blocs est similaire à celui de base de données – il enregistre en permanence les transactions d'une façon qui ne peut être effacée ultérieurement ou manipulée mais qui peut uniquement être mise à jour séquentiellement. La technologie est basée sur une chaîne de blocs dans laquelle chaque bloc regroupe l'ensemble des transactions individuelles une fois qu'elles ont été validées. Chaque bloc

asked – he was tired of those people and their ridiculous demands. *Rebels are just part of the way things are* – he thought - *I will not think about it now, I will think about it tomorrow*.

"Non, Sire, c'est une révolution" – the Duke answered and silence followed…

An unusual way to start an intellectual discourse on blockchain, one could say. Two-hundred and twenty-seven years and 92 days after the famous fortress of Bastille was demolished I could not resist the temptation to refer to that famous conversation between Louis XVI and the Duke of Rochefoucauld. The analogy seemed compelling. Given that, we might ask ourselves: Is blockchain a minor revolt or is it a new Great Revolution set to reshape the world as we know it? If the latter is the case, will there be any ethical impact? Will such a revolution be ethical in its essence? What are the compliance and ethical concerns around the adoption of the technology? Whatever the answers to those questions, we should not underestimate the wind of change in the way that Louis XVI once did. What we now might perceive as an evolution, or as a mere revolt, might turn out to be a storm, a revolution redefining finance and/or ethics.

How does blockchain work?

The concept of blockchain is similar to that of a database – it permanently records transactions in a manner that cannot be later deleted or manipulated and can only be sequentially updated. It contains a record of all transactions that have ever been completed on it, creating a never-ending historical trail (Mougayar, 2016).

The technology is based on a chain of 'blocks' where each block groups together individual transactions once they have been validated. Each block is added to the chain through the process of "mining" and, once added, the transactions within the block are considered valid. Since new blocks are confirmed based on the previous block's information, the more blocks that have been added to an existing block, the more a transaction within that block has received confirmation. In order to keep the ledger consistent, any newly created block is broadcast across the network for everyone to see.

Each successive block contains a unique fingerprint ("hash") of the previous code, thus cryptography (via hash codes) secures the authentication of the transaction source and eliminates the need for a central intermediary (Mougayar, 2015). Addresses and signatures are created with the use of private/public key generation. They can only be produced by a private key holder and be verified by anyone seeing a public key, therefore only the private key holder is able to complete a transaction successfully. "It's a bit like your home address. You can publish your home address publicly, but that doesn't give any information about what your home looks like on est ajouté à la chaîne à travers le processus de « minage » qui permet de valider les transactions à l'intérieur du bloc. Afin de garantir la cohérence du registre, tout bloc nouvellement créé est diffusé sur tout le réseau de façon à ce que chacun puisse le voir. Chaque bloc successif contient une empreinte unique (« hash ») du code précédent ; ainsi, la cryptographie (à travers les codes hash) garantit l'authentification de la source de la transaction et élimine le besoin d'un intermédiaire central.

La tempête de Blockchain est analysée de près par les plus importants acteurs financiers et les institutions financières font des investissements considérable dans l'exploitation de la technologie pour leur propre usage. Blockchain peut potentiellement avoir un grand impact non seulement sur les secteurs spécialisés de l'industrie financière mais sur l'ensemble des marchés. Une percée semble imminente,

the inside. You'll need your private key to enter your private home, and since you have claimed that address as yours, no one else can claim the same address as theirs." (Mougayar, 2015).

Wind of change

Blockchain technology is definitely making headlines in newspapers covering many sectors: IT, music, healthcare, politics, law, and social life, to name just a few. The feeling of a breakthrough is almost tangible. Conferences, publications, new impressive ideas and dozens of solemn phrases about blockchain are present in almost every field. For those outside the race, it might look as if blockchain technology is a secret panacea for the world's problems : hunger, economic exclusion, environmental and human exploitation, government abuse, democracy deficit and so on (Meunier, 2017). Is that all? What is there for the financial world, if anything at all?

Those who try to keep up to date with blockchain news will soon realise that the blockchain storm is far from being unnoticed by large financial players. UBS, BNP Paribas, Santander, Société Générale, Euroclear and many other financial institutions have made significant investments in order to harness, rather than hinder, the technology –

to use it for financial purposes (IBM, 2015). At the same time, blockchain has the potential to severely impact wide swathes of the financial services industry. Potentially, it could leave its fingerprint on almost all layers of the market, starting with capital raising, through trading, clearing and settlement, ending with record-keeping.

This is already happening. NASDAQ – using Linq – enabled the first-ever blockchain-documented private securities issuance (Nasdaq, 2015). More recently, in January 2017, SWIFT announced its launch of a proof of concept to explore whether distributed ledger technology (DLT) can be used by banks to improve the reconciliation of their nostro databases in real time, thus optimising their global liquidity. (Ninety banks representing more than 75% of SWIFT's cross-border payment traffic are authorised to participate in this PoC (SWIFT, 2017)). In January 2016, the Australian Stock Exchange announced that it was building a blockchain as a replacement for its current platform for the clearing and settlement of trades (CryptoCoinsNews, 2016).

These are only a few examples, there are more and definitely more to come. The sector is sensing the potential and constantly expanding its knowledge of this ill-understood technology. According to a Deloitte report, 61% of senior executives surveyed claimed to have broad or expert knowledge of DLT, 42% believed it will disrupt their industry and 55% of them said they will lose competitiveness if they don't adopt elle se produit déjà. Le secteur financier perçoit le potentiel et approfondit constamment sa connaissance de cette technologie mal comprise. Cependant, au-delà de la compréhension de la technologie elle-même, ne devrions-nous pas aussi nous intéresser aux défis potentiels en termes de réglementation et d'éthique qu'elle soulève ?

La technologie a suscité de grands espoirs car elle était censée remédier à de nombreux problèmes économiques et sociaux. Cependant, nous nous sommes rapidement rendu compte que, bien qu'internet se soit avéré un excellent moyen de communication, il n'a non seulement pas permis d'éradiquer de graves problèmes mondiaux mais il a contribué de manière considérable au développement d'autres phénomènes hautement indésirables.

it (Deloitte, 2017). The blockchain storm is so broad that some expect 2017 to be blockchain's make or break year. The time has come, they argue for the numerous proofs-of-concept to finally be implemented (Piscini, 2017).

This is all fair and good. But, beyond understanding the technology itself, should be not also understand the potential compliance and ethical challenges it raises?

The Internet of Value

It began with the Internet and it was good. Great expectations were vested in the technology that, it was hoped, would cure many social and economic ills. We realised quickly that, even though the Internet turned out to be a great means of communication, it not only failed to eradicate serious global problems, but significantly contributed to the development of other highly undesirable phenomena.

It was meant to enable the social and economic inclusion of billions of people, but that remained a pipe dream. The Internet had a great impact on all aspects of life – it has changed our perception of the economy and finance – yet the technology did not make financial intermediaries evaporate. Instead, it was consumed by them and utilised for their own purposes (e.g. Internet banking).

The Internet triggered a lot of problems around privacy rights. It also became a weapon in the hands of criminals involved in illicit activities (pornography, money laundering, cyber-attacks, piracy *etc*.). It turned out to be a way of conducting a brand new type of 21st century war: a war of disinformation. We now lead two lives, the physical one and the one where our virtual equivalent leaves its trace online. This trace can be followed. The information might be collected for a number of purposes (both political and commercial) and we might not have any idea that it is happening. This Internet is the Internet of Information, information that is spread across the Web, uncontrolled by data subjects. It definitely has some value but is not value itself. The technology that is sometimes referred to as the Second Era of the Internet: distributed ledger technology (DLT) or its sub-category, blockchain (terms often used interchangeably), is supposed to address the aforementioned issues – it is said to transform the Internet of Information into the Internet of Value (Tapscott, A., 2016).

Emergence of the technology

The most fundamental problem with the Internet of Information is connected to the issue of so-called "double-spending". If one posts a photo on the Web or sends it to someone, one is not deprived of the ownership of it. Once a photo is posted on the Internet anyone can download it – the same photo can be sent an infinite number of times. The question is, how we can we get back to

Internet a créé beaucoup de problèmes autour des droits à la vie privée. Il est aussi devenu une arme pour les criminels impliqués dans des activités illicites et s'est avéré être un moyen de mener un tout nouveau genre de guerre au 21e siècle : les guerres de désinformation. La technologie du registre distribué (DLT) ou sa sous-catégorie blockchain (termes souvent utilisés de façon interchangeable) est parfois vue comme la seconde ère d'internet. Elle est censée répondre aux préoccupations susmentionnées et ainsi transformer l'internet de l'information en l'internet de la valeur.

Le problème le plus fondamental avec l'internet de l'information est lié au problème dit de la « double dépense ». Si une personne doit envoyer de l'argent numérique via le réseau, le destinataire visé et les autres internautes doivent être sûrs qu'il/elle est effectivement en possession de l'argent envoyé. Le concept de chaîne de blocs est une

the old good days, where the physical transfer of assets (such as photos or CDs) meant that one relinquished ownership. In this case, that would be the ownership of a digital asset. This issue was identified primarily in relation to digital money. If one is supposed to send digital money via the network, both the intended recipient and remaining web users need to be sure he/she actually owns the money sent (Nielsen, 2013). The concept of blockchain is a solution to that problem. It follows the idea first proposed in 2009 in a white paper by the mysterious Satoshi Nakamoto (a programmer or a group of programmers), whose true identity has never been revealed.

Nakamoto's idea constitutes an underlying scheme for Bitcoin – a cryptocurrency and a payment system based on DLT. The currency itself – Bitcoin – takes the form of an address that is a sequence of bits that can be stored in a "wallet" (a computer programme). Unlike government-issued money that can be inflated at will, the supply of Bitcoin is mathematically linked to twenty one million bitcoins and that can never be changed. A bitcoin holder is anonymous unless the Bitcoin address can be associated with a wallet and a wallet with a person. Bitcoin transactions take place on the bitcoin network that is open to everyone (unrestricted distributed ledger). In order to perform a transaction, a bitcoin owner sends a message along with a signature over the network specifying that cryptocurrency is being sent to a new address. All network participants can verify that transactions are legitimate since addresses associated with unspent bitcoins can be identified in a stored ledger or validated by the entire network. That ledger (a set of accounts) is itself a database spread across multiple sites (a shared database) – and it is called blockchain. The bitcoin blockchain is operated by a decentralised authority not a centralized authority as in the case of government–issued currencies. The participants transact with each other directly without the involvement of any intermediary. Physical bitcoins do not exist – they exist only virtually as balances associated with public and private keys (Koeppl & Kronick, 2017).

Bitcoin's early history is shrouded in controversies (Bitstamp – $5 million loss, Silk Route – $200 million of anonymous online drug sales using bitcoins, Hong Kong's Mycoin and a fraud of at least $21.8 million after the bitcoin trading platform suddenly collapsed (Cryptocity, 2015)). Exchange heists, stolen wallets, mysterious bankruptcies and missing CEOs eroded the image of the technology and quickly many ethical concerns arose. The question emerged – is a technology that is surrounded by scandals regarding its illegal and unethical use in its early stages able to address the ethical issues it was aimed to eliminate? Is the medicine more dangerous than the disease itself?

Negative publicity and conceptual confusion laid the ground for people to begin to refer to the underlying technology of bitcoin – blockchain – as the real innovation coming out of the bitcoin phenomenon (Allcoin, 2017). It has been realised that even though bitcoin might not revolutionise the world, its underlying technology can.

Ethical application of DLT

Distributed ledger technology might be an impressive catalyst for a whole range of applications that will promote ethics or address unethical activities both in the financial sector and beyond. This technology could enable the inclusion of billions of people into the economy, especially those who, for whatever reason, don't have a bank account (e.g. widespread use of mobile phones for payments in Africa partially replacing the need for having a bank account). The blockchain might create a true sharing economy by providing lending rooms (participants lending and borrowing among themselves without any middlemen) that could help address the problem of inequality and unfair distribution of wealth. The significant cost reduction (potential to reduce infrastructure cost by up to $ 20 billion a year (IBM, 2015)) may once and for all end the remittance rip-off (transaction costs ranging from 0% to 3%). The forgotten idealistic dreams of the direct democracy where voters supervise their representatives and are given back the control over their lives might be possible now as DLT could help to reinvent the government (European Parliament, 2016). Further, two big ethical nightmares of the Internet of Information might be finally addressed. Firstly, blockchain could enable citizens to own and manage their data and protect privacy. In this regard, data would be treated as an asset class and be given back to data subjects. Secondly, the technology has the potential to finally enable an author to command fair compensation for creative work and to protect their intellectual property rights (Tapscott, D., 2016). Imagine a song that has a smart contract attached to it and manages itself. Each time the song is used for a commercial purpose, viewed or downloaded as a ring tone, it executes a contract thanks to protocols encoded in it. This is not fiction, this is already happening (Imogen Heap – a British singer has already put her music on a blockchain (Mycelia, 2017)). As the blockchain technology removes the problem of double-spending, digital assets such as music can now be traded on the secondary market as old CDs used to be – without the risk of being copied an infinite number of times.

Another possible application is record-keeping. It has been estimated that approximately 70% of people worldwide who hold a piece of land do not have a valid title to it (Tapscott, A., 2016). This is a serious economic blocking factor. Those

solution à ce problème. Tous les participants au réseau peuvent vérifier que les transactions sont légitimes étant donné que les adresses associées aux bitcoins non dépensés peuvent être identifiées dans un registre ou validées par l'ensemble du réseau.

Les débuts de l'histoire du bitcoin sont controversés. La question suivante s'est posée : est-ce qu'une technologie, dont les débuts sont marqués par des scandales relatifs à des usages illégaux et contraires à l'éthique, est capable de résoudre les problèmes éthiques qu'elle était censée éliminer ? Le remède est-il plus dangereux que le mail lui -même ? La publicité négative et la confusion conceptuelle ont conduit les gens à considérer le blockchain qu'utilise le bitcoin, comme la véritable innovation issue du phénomène bitcoin. En effet, on s'est rendu compte que s'il n'était pas certain que le bitcoin révolutionne le monde, la technologie sous-jacente, était bien capable de le faire.

La technologie DLT pourrait être un catalyseur impressionnant pour toute une série d'applications qui contribueront à promouvoir l'éthique ou à résoudre des problèmes liés à des activités contraires à l'éthique dans le secteur financier et au-delà. La technologie pourrait permettre l'inclusion de milliards de personnes dans l'économie, en particulier ceux qui, pour une raison quelconque, n'ont pas de compte bancaire. Blockchain-pourrait créer une véritable économie du partage et contribuer à résoudre le problème de l'inégalité et de la répartition inéquitable des richesses. En outre, deux grands cauchemars éthiques de l'internet de l'information pourraient finalement être éliminés. Premièrement, Blockchain-pourrait permettre aux citoyens de détenir et de gérer leurs données tout en protégeant leur vie privée. Deuxièmement, la technologie peut potentiellement permettre enfin à un auteur de recevoir une rémunération équitable pour son travail créatif et de protéger ses droits de

"squatters" cannot borrow money against their invalid titles, which slows down the economy as a whole. Blockchain might solve this issue thanks to immutable records that cannot be tampered with by any central government or individual. Under the new technology, there could be a full record of ownership starting with the point in time when an asset was "issued" to the network. This could finally enable fair trade as there is an impact on the supply chain. Each blockchain user would have the possibility to verify whether a given product was produced in ethical conditions, whether workers were fairly compensated for their work and who will be a beneficial owner of proceeds from a transaction (making sure they don't support individuals or governments violating human rights, laws, destroying the environment). Furthermore, easier traceability of funds might constitute a serious obstacle for criminal activities such as fraud or money laundering.

All indicated ethical applications of blockchain are not abstract concepts, some of them are already operational such as Everledger – a global, digital ledger that tracks and protects valuable assets (e.g. diamonds) throughout their lifetime journey. An asset's defining characteristics, history, and ownership are collected to create a permanent record on the blockchain. This digital thumbprint is then used by various stakeholders across a supply chain to form provenance and verify authenticity (Everledger, 2017). All the aforementioned potential applications of DLT might enable or at least improve transparency, ethical trade, and contribute to a healthy economy based on ethical foundations.

Ethical Revolution?

William Mougayar in his 2016 book: *The business blockchain: promise, practice, and application of the next internet technology* states that blockchain: "Is making us rethink the old ways of creating transactions, storing data, and moving assets, and that's only the beginning. Blockchain cannot be described just as a revolution. It is a tsunami-like phenomenon, slowly advancing and gradually enveloping everything along its way by the force of its progression… Blockchains are enormous catalysts for change that affect governance, ways of life, traditional corporate models, society and global institutions" (p. XXI). This change entails many ethical issues that should be addressed or at least discussed before the technology is fully adopted. Is blockchain a revolution? It might be the case though that is yet to be seen. We might further ask ourselves whether this potential revolution is ethical. We might even broaden the scope of the question and ask whether any revolution – especially a technological one – has ethics built into its DNA. We should not forget that each revolution has also propriété intellectuelle. Une autre application possible est la tenue de registres. Selon les estimations, environ 70% des personnes dans le monde qui possèdent une parcelle de terre n'ont pas de titre valable.

De telles applications éthiques de Blockchainne sont pas des concepts abstraits, certaines d'entre elles étant déjà opérationnelles. Toutes les applications potentielles susmentionnées de la technologie du registre distribué (DLT) pourraient permettre ou au moins améliorer la transparence, le commerce équitable et contribuer à une économie saine fondée sur des bases éthiques.

Blockchain est-elle une révolution ? Cela pourrait être le cas, quoique cela reste à voir. Nous pourrions, en outre, nous demander si l'éthique est inscrite dans son ADN. L'éthique sous-

an unethical face – the face of those who have been left behind, the face of those who will not embrace the technology and so will miss the innovation train, the face of winners and losers.

Ethics stands behind the values for which blockchain technology was created: depriving centrally-own intermediaries of control over individuals' lives. In its essence, the values behind blockchain are not that much different from those fought for during the Great French Revolution: *Liberté-Égalité-Fraternité*. A revolution, however, can have a will of its own. It can live its life in a total contradiction to and separation from morally beautiful virtues that were supposed to underpin it. Blockchain was designed to enable the economic inclusion of those who are economically weak and it is supposed to be the sword pointed at institutions that for ages benefited from the fact that they provided trust to the market. This weapon as any weapon, however, can easily be misused. Rather than the predicted inclusion, we might witness the exclusion of those who do not understand the technology and are left behind.

Blockchain has the potential to be a great force for societal transformation. It might fix some serious problems in modern society: atrocities, rigged elections, decision-making stalemates, governance crisis (Bulkin, 2016). On one hand, the economy based on DLT can offer unprecedented levels of efficiency and the buy-in needed to establish cooperation at the scale required. On the other hand, if no ethical framework is created, a system designed to counteract power imbalances can be used to generate them. This way "blockchain can support a social system that is, in fact, much worse than what we have today, one in which power abuses will become more prevalent and a lot harder to address" (Bulkin, 2016).

The revolution will certainly do away with some financial institutions in the as we understand them today. The blockchain tsunami might leave behind a brand new world of finance – it might be like a fire consuming everything on its path – it might leave only ash or be the new beginning – the fresh rich soil for plants to blossom. We might as well end up seeing "all the vices of the Old World peering from the new garments;[singing] a new song, but it [will end] ever in the old refrain: Bread, meat, gold, and blood!" (Krasiński, 1835)[2].

Trojan horse?

In April 2016 at Metro Expo the Vice President of Sberbank (Andrey Sharov), Russia's biggest bank by assets, opined that the advent and spread of blockchain technology will see banks disappear by 2026 (CryptoCoinsNews, 2016a). It appears to be a great paradox. The industry whose entire existence is

2 "The Undivine Comedy": the Count to Pancras – reflection on revolutionists behaviour.

tend les valeurs pour lesquelles la chaîne de blocs a été créée : priver les intermédiaires centraux de tout contrôle sur la vie des individus. Les valeurs derrière Blockchain ne sont essentiellement pas très différentes de celles défendues pendant la Grande Révolution française : Liberté-Egalité-Fraternité. Une révolution, cependant, peut avoir une volonté propre. Nous ne devrions pas oublier que chaque révolution a également un visage non éthique – le visage des laissés pour compte, le visage de ceux qui n'adopteront pas la technologie, le visage des gagnants et des perdants.
La banque de détail, les services post-transactionnels et la tenue de registres sont des exemples de services financiers sur lesquels l'adoption éventuelle de cette technologie de Blockchain a un impact. L'industrie dont l'existence même est menacée par l'adoption de la technologie investit en même temps massivement dans son développement. Comment expliquer ce paradoxe ? La technologie est-elle un cheval de Troie ou la

jeopardised by the adoption of the technology is, at the same time, investing heavily in its development. This does not relate purely to retail banking. The industry that is said to be greatly impacted is post-trade securities clearing and settlement (a set of services where the buyer and the seller compare trade details, approve the transaction, change records of ownership and arrange for the transfer of securities and cash). In April 2016 the European Central Bank issued an occasional paper in which it stated that DLT has the potential to speed up the settlement and clearing of financial assets (bonds, equities, *etc.*), eliminating the liquidity and credit risk. It has been concluded that almost all post-trade functions will be impacted by the adoption of the technology: a) custody – due to smart contracts and self-executing algorithms that will update accounts automatically; b) settlement – as trading and clearing will occur instantaneously (trading platforms to be connected to distributed ledgers); c) clearing was said to still be required for some derivative transactions, however netting and margin calls will become automatic; d) safe-keeping will be facilitated by recording of ownership in distributed ledgers; e) ancillary banking services are also to be impacted as, for instance, the need for collateral will be dramatically reduced and its availability on the market will increase. Nevertheless, some functions will still need to be performed by post-trade services providers – such as the notary function – as the involvement of regulated entities will still be required at least in the current regulatory landscape (ECB, 2016). This, however, does not apply to reporting obligations as blockchain technology could facilitate the collection, consolidation, and sharing of data for reporting, risk management, and supervisory purposes. With DLT one could easily imagine the world where regulators have real-time access to all relevant records.

Spirit of Laws

Retail banking, post-trade services and record-keeping are only a sample of financial services impacted by the possible adoption of the blockchain technology. What is the source of this paradox? Is the technology a Trojan horse or is the blockchain revolution simply like Saturn: it devours its own children (G. Büchner)? The said paradox brings with it serious conflicts of interests – it is inadvisable to expect a professional to support the development of the technology that might push him off the cliff. The financial institutions face an ethical dilemma here. They should be aware of this and act very cautiously. Distorting the technology to keep a dominant position in the market would mean eroding its ethical roots.

The fact that blockchain technology faces serious governance, regulatory and legal issues is no surprise. In January 2017 ESMA, in its report pertaining to DLT révolution de Blockchain est-elle simplement comme Saturne : elle dévore ses propres enfants ? Ce paradoxe s'accompagne de graves conflits d'intérêts – il n'est pas recommandé d'attendre d'un professionnel de soutenir le développement de la technologie qui pourrait le pousser en bas du précipice. Les institutions financières sont confrontées à un dilemme éthique ici. Elles devraient être conscientes de cela et agir avec beaucoup de prudence. Déformer la technologie pour conserver une position dominante sur le marché signifierait une érosion de ses fondements éthiques.

Le fait que la technologie de Blockchain soit confrontée à de sérieux problèmes de gouvernance, de réglementation et juridiques n'est pas une surprise. Les régulateurs et législateurs du monde entier commencent à reconnaître l'impact que la technologie du registre distribué (DLT) est censée avoir sur le

and securities market, stated that: "at this stage, [it] believes that it is premature to fully appreciate the changes that the technology could bring and the regulatory response that may be needed, given that the technology is still evolving and practical applications are limited both in number and scope"(ESMA, 2017). It is worth noting that regulators and legislators all over the world are starting to recognise the impact that DLT is supposed to have on the regulatory and legal landscape. Laws, recommendations, opinions, interpretations are issued almost each day in all parts of the word. These relate mainly to digital currency but are expected to change in the near future (Hawaii's Blockchain Exploration Bill (Cryptogolds, 2017), Poland's Financial Ombudsman calling for Bitcoin Exchange Regulation (PolskieRadio.pl, 2017), BitLicense rules by NYSDFS (Morgan Lewis, 2015) – these are only a few examples).

The impact that DLT might have on the legal system is colossal. As the technology storms all aspects of life it will besiege all fields of law and change them. Intellectual property law (fair compensation for the intellectual property), property law (land registers), inheritance law (smart contracts), data protection law, criminal law (AML, commerce crime, fraud), administrative law (record-keeping), contract law (smart contracts), securities law, corporate law (IPOs, proxy voting, DAOs[3]), constitutional law (e-voting), banking law (both private and public), patent law – all those and possibly many others are open to blockchain's assault.

The law in its essence is derivative vis-à-vis the reality. It is being created after certain processes, occurrences, phenomenon emerged – it is not created *in abstracto*. This is where ethics might come into play. The technology is hard to capture by legislation, it sneaks, it winds like a wild river and when you think you have already seized it, it turns out to have flooded the brand new area you have not expected it to occupy. The unregulated space is huge. Is this space where things that are not prohibited, actually perpetuating a problem? Are activities that are not explicitly against the letter of law ethical in the eyes of the public? The ethics of blockchain appears to be that the hidden spirit of the law has not yet arrived. However, this does not mean it is not already applicable. A set of ethical norms might be of great value for legal systems based on Roman Law, especially in continental Europe where legal norms are extracted from legal texts: this is where ethics has the final word. The lack of harmonisation and standardisation is blockchain's biggest challenge. The financial industry should make an effort to create common business rules and sound governance arrangements

3 DAO – decentralized autonomous organization – an automated company operated by hard-coded rules enforced on a blockchain.

paysage réglementaire et juridique.
La technologie me se laisse pas facilement circonscrire par la législation, en conséquence un immense espace non régulé subsiste. Est-ce que cet espace n'est pas à la source du problème ? Les activités, qui ne sont pas ouvertement contraires à la lettre de la loi, sont-elles éthiques aux yeux du public ? L'industrie financière devrait s'efforcer de créer des règles communes et des accords de gouvernance sains, basés sur l'éthique, même en l'absence de lois et de réglementations régissant la technologie.

Si les problèmes relatifs au comportement potentiellement contraire à l'éthique ne sont pas traités suffisamment tôt, la technologie du registre distribué (DLT) pourrait devenir un espace idéal pour le déploiement d'abus généralisés. Comment résoudre ce problème ? L'une des réponses possibles passe par les outils offerts par la

based on ethics, even with the absence of laws and regulations governing the technology.

Ethical Blockchain?

It is time to pose the crucial question: is DLT ethical in its essence? The answer appears to be obvious, a technology cannot be labelled as being ethical or unethical – it is only a tool and the tool is only as ethical as the people who use it. Some claim blockchain could have prevented the DNS's denial of service attack (ConsenSys, 2016), Soros leaks (CoinDesk, 2017), the Wells Fargo scam (Cointelegraph, 2016) or Lehman Brothers collapse (Finance Magnates, 2016), others would rather see the technology as the new Manhattan Project. We have yet to see who is right. However, at this very early stage, some concerns need to be raised.

DLT might consume an unsustainable amount of energy, which is mainly a problem with unrestricted distributed ledgers such as the bitcoin blockchain (and the computing power required for validating transactions). The technology might become a job killer; it might be vulnerable to attacks as the protocols are all based on the same methodology; it might carry operational risks (software can have bugs). The consensus on changes to the network/codes might be difficult to achieve and the management of those codes might give rise to potential conflicts of interest. There is a question mark over the scalability of the technology (can it be replicated on a wider scale?) and over its interoperability with existing systems (Delivorias, 2016). Due to the public nature of a ledger and permanent recording, some personal data protection issues might arise, one of them being the right to be forgotten. Furthermore, there is a potential risk of fraud as private/public keys, when stolen, might be used fraudulently to record fictitious transactions.

A well-known social fact is that people are much more likely to commit violence against victims they can't see. Blockchain is an environment where anonymity is prevalent and physical presence cannot be felt. This might lead to a whole range of unethical behaviour such as child pornography, weapons trade, ransom viruses or attacks on the freedom of speech (Bulkin, 2016). This behaviour might be encouraged by the freedom to use value without restrictions by centralised political powers. The technology might make transactions virtually impossible to trace or control, which can motivate people to abandon essential ethical norms – particularly if there is little or no risk of being found out.

If concerns regarding potentially unethical behaviour are not addressed early enough, DLT might become a perfect space for widespread abuse. How can we solve this issue? One of the possible answers is through the tools offered by the technology itself. The unified technologie elle-même. Un ensemble unifié de principes/règles éthiques pourrait être créé et volontairement adopté par les organisations qui opèrent sur une chaîne de blocs. Ces principes pourraient éventuellement prendre la forme de contrats intelligents, intégrés dans le réseau. Si cela se produisait, les règles éthiques seraient propagées à travers les chaînes de blocs et nous assisterions à une diffusion sans précédent de l'éthique à travers le monde. La révolution de Blockchain se transformerait en révolution de l'éthique.

set of ethical principles/rules might be created and voluntarily adopted by organisations that operate on a blockchain (Bulkin, 2016). Those principles could possibly take the form of smart contracts, embedded into the network. If this were to happen, ethical rules would be broadcast across blockchains and we would witness the unprecedented spread of ethics across the world. The blockchain revolution would convert itself into the revolution of ethics.

The wind of change is coming. However, the explosion of enthusiasm might soon need to be tempered. Is the technology a new Great Revolution? Personally, I would say that it is, bearing in mind all obstacles following from the adoption of DLT. We could legitimately assume there will not be one master blockchain but rather an invasion of separate blockchains gradually flooding different sectors (e.g. Euroclear & Paxos bankchain gold initiative). Segmentation appears to be inevitable with some kind of a governing body in the heart of a blockchain network (a restricted ledger) at least at the first stage of the blockchain storm. There is a great risk that the DLT revolution might devour its own children, therefore financial institutions should tackle the ethical aspects of this revolution carefully – otherwise, they might unintentionally contribute to their own collapse as Louis XVI once did.

* * *

It was a sunny day in January 1793. Louis was standing surrounded by the people of Paris. He looked, surprised, at the shining blade that was supposed to end his, a monarch's, life. It was familiar to him. What an irony – Louis thought – I helped to construct it…[4]

4 Louis XVI was guillotined on the 21st of January 1793. Legend says the king improved the project of a guillotine submitted by A. Louis (Cisek, 2006).

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Part III

Avenues for Action

When Banks do not Always Know Best

Ethics & Trust in Finance Global edition 2016-2017

First Prize

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* The views expressed herein are those of the author and do not necessarily reflect those of the Organization he is affiliated to.

The highly esteemed 20th century British novelist C.S. Lewis once remarked that: "a tyranny sincerely exercised for the good of its victims may be the most oppressive" (Lewis, 1987). He went on to explain that this is because a tyranny that exists for the sake of evil can only be evil for so long – "It would be better to live under robber barons than under omnipotent moral busybodies. The robber baron's cruelty may sometimes sleep, his cupidity may at some point be satiated". A tyranny exercised by people he referred to as "moral busybodies", however, would "torment us without end for they do so with the approval of their own conscience" (Lewis, 1987).

In many respects, such sentiments describe the situation in the financial technology (fintech) world today with regard to the mass issuance of contactless cards by banks and other financial institutions. We are told that contactless cards "are good for us" and we need not question our supposed "betters" who know more than we can ever hope to know with regard to our payment preferences. Those who want to opt out of using contactless technology are told they have no choice in the matter (Collinson, 2015).

Why is this a problem?

This is problematic as it is underpinned by what is known in the academic literature as "paternalism". Paternalism[1] is defined as an "interference of a state or an individual

1 The etymology of the term is also indicative of its meaning. It is ultimately derived from the Latin word "pater", meaning "father", and is also the root word for other words such as "paternal" and "paternity".

Une « tyrannie sincèrement exercée pour le bien de ses victimes peut être la plus oppressive », a affirmé C.S. Lewis, parce que les « bienfaiteurs moralisateurs » « nous tourmenteraient sans relâche car ils le feraient en toute bonne conscience ». Concernant l'émission massive de cartes sans contact par les banques et autres institutions financières actuellement, on nous dit que les cartes sans contact « sont bonnes pour nous » et que nous n'avons pas à remettre en question nos supposés « supérieurs » qui connaissent mieux que nous nos préférences de paiement. On dit à ceux qui ne veulent pas utiliser la technologie sans contact qu'ils n'ont pas le choix.

with another person, against their will, and defended or motivated by a claim that the person interfered with will be better off or protected from harm" (Dworkin, 2017). In its more extreme forms, which some authors distinguish as "hard paternalism", this entails using force to alter a person's actions (Dworkin, 2017). This can range from punishing children for eating unhealthy food, to holding back a depressed man who is about to kill himself by jumping off a bridge. Its counterpart, that is soft paternalism, is distinct from hard paternalism in that it at least seeks to persuade and communicate the consequences of the action to the person in question but does not prevent them from following through with their intended action if they still wish to do so. Thus, it would allow children to eat unhealthy food if they wish to, even after telling them the health risks, or permit a depressed man to jump off a bridge even after he has heard why that might not be a good idea (Dworkin, 2017).

Libertarian paternalism

Thankfully, cases of hard paternalism are few and far between in the fintech world today. But this poses problems of its own as it allows other instances of paternalism to go unchecked. The paternalism that describes the mass issuance of contactless cards is referred to in the academic literature as "libertarian paternalism" (Dworkin, 2017). This was first coined by behavioural economist Richard Thaler and legal scholar Cass Sunstein (Bovens, 2009). It entails allowing people to be technically free to choose, but permitting the government or an organisation like a bank to "nudge" people in the "right" direction (Bovens, 2009). This usually involves exploiting certain cognitive biases such as our tendency to be reluctant to give something up once we already have it (endowment effect) or our apparent preference to read from left to right (left to right bias). In the case of contactless cards, the bias that banks and other financial institutions primarily seek to exploit is what is known as the "default effect". That is, individuals, as a number of experimental studies have shown (Kahneman, 2013), are biased towards what is known as the "default" option. That is to say, if a certain option is given as the default, there is an increased likelihood that it will be chosen, even by those who would not have chosen that same option in an alternative world. In the case of contactless cards, the default effect is seen because people who would not have chosen contactless cards as a means of payment nevertheless remain with it as they don't – either because of laziness, ignorance or some other factor – opt out. Outside of finance, the default option bias has been utilised to increase organ donor rates, boost newsletter subscriptions and combat obesity. Sometimes referred to as "nudge policy", it played an important role in the policymaking of the British Government during David Cameron's premiership (Bovens, 2009).

Ce manque de choix est un problème parce qu'il est sous-tendu par le paternalisme. Le paternalisme est une « ingérence d'un Etat ou d'un individu dans la vie d'une autre personne, contre son gré, et au motif que la personne qui subit cette ingérence se trouvera dans une meilleure situation ou sera protégée contre le mal. ». Dans ses formes les plus extrêmes, il implique le recours à la force pour modifier les actions d'autrui. Le paternalisme qui sous-tend l'émission de masse des cartes sans contact est décrit dans la littérature académique avec la notion de « paternalisme libertaire » et ne comprend pas l'usage de la force. En finance, cela implique généralement d'exploiter certains biais cognitifs tels que notre réticence à abandonner quelque chose une fois que nous l'avons déjà en notre possession.

The relevance of paternalism to ethics

The issue of paternalism strikes at the heart of applied ethics (Dworkin, 2017). Most immediately it calls into question the ability of people (or what ethicists refer to abstractly as "moral agents") to be truly rational. The notion of rational moral agents arises from the argument of the German philosopher Immanuel Kant that morality is nothing else than obedience to the categorical imperative and that we ought to follow the course of action that we wish to have universally applied everywhere (Kant, 2008). If people are not truly rational, if they behave in ways that can even at times seem contradictory or suboptimal, then this raises many questions not only about being moral in our day to day lives, but even raises a fundamental question about the discipline of ethics itself.

Yet the issue of contactless cards being issued by banks by default also touches upon other issues such as the classical liberal belief that people ought to be able to enjoy an ability to pay in a variety of ways. The 20th century Austrian political philosopher and classical liberal Friedrich Hayek argued that an economy should have competing currencies issued by private issuers as opposed to one currency mandated by a government (Hayek, 1976). Not only does this have the advantage of promoting monetary stability, it also ensures that there is diversity to accommodate people's preferences (Hayek, 1976).

The mentality behind contactless technology represents a slippery slope

However, we find today that banks are acting very much like a government as portrayed in classical liberal literature, in that they offer individuals little to no choice in how they pay. Individuals are simply told they must adopt contactless technology for their apparent benefit or do without (Collinson, 2015). Again, it should be stressed that this is no small matter: if banks can effectively "dictate" that people use contactless technology, what stops banks in the future from requiring people to insert an implant in their body if they wish to enjoy the services that the bank has to offer? Indeed, there is an entire genre in Christian eschatology on this very matter[2]. Furthermore, the issue of contactless cards was highlighted by the Financial Conduct Authority (FCA), the independent financial regulatory body in the UK (Salmon, 2017). The FCA insisted that banks ought to make it easier for customers to opt out of contactless technology, reflecting the fact that this issue is now one of growing regulatory concern (Salmon, 2017).

2 Consider the words in Sacred Scripture that a number of Christian groups interpret as an omen for the future: "And he causeth all, both small and great, rich and poor, free and bond, to receive a mark in their right hand, or in their foreheads: And that no man might buy or sell, save he that had the mark, or the name of the beast, or the number of his name." (Revelation 13:16-17, King James Version)

Dans le cas des cartes sans contact, le biais que les banques et autres institutions financières cherchent principalement à exploiter est connu sous le nom de « l'effet par défaut ». L'effet par défaut décrit le fait que les personnes qui n'auraient pas choisi les cartes sans contact comme moyens de paiement continuent néanmoins à les utiliser du fait qu'elles ne décident pas - soit par paresse, ignorance ou d'autres facteurs – d'en sortir.

La FCA a insisté sur le fait que les banques devraient permettre aux clients de se retirer plus facilement de la technologie sans contact, montrant par là-même que cette question est une préoccupation réglementaire grandissante.

Does paternalism necessarily lead to the right decisions being made?

Then there are other issues with contactless cards and paternalism. One of them is whether it is, indeed, pointing people in the right direction. There are some psychological studies that show that contactless cards make people spend more (Poulter, 2016). This can be problematic at a household level – households may find it difficult to live within their means – and could potentially be problematic at the aggregate level for an economy in terms of macroeconomic stability. It was overstretching, after all, that led to the financial crisis of 2007-2008. When this is considered, then one can say that a paternalistic attitude to contactless cards has "unintended consequences".

An overview of this paper

This paper argues that a paternalistic attitude by banks when it comes to contactless cards is unjustified: the benefits arising from greater adoption of contactless card technology, such as the potential for increased convenience and reduction in queues, pales in comparison to ethical considerations, cybersecurity concerns as well as the potential financial implications involved. It instead argues in favour of what is known in the academic literature as the "capabilities approach", a framework developed by thinkers such as Amartya Sen and Martha Nussbaum (Robeyns, 2016).

The capabilities approach argues that development and human flourishing should be seen as an expansion in human freedoms and the ability for people to live a life "they have reason to value". This paper argues that if banks and other financial institutions are to really make a positive impact, then they should not judge themselves on whether they have made people's lives easier in the form of increased convenience or reduced costs – though these factors, of course, play a part – but rather, they should judge themselves on whether they have expanded people's freedoms. In the context of contactless cards, this means the real possibility of being able to opt for a non-contactless card, if one so wishes, and that this opportunity should be made as transparent as possible.

What is libertarian paternalism and how is it relevant to contactless cards?

Libertarian paternalism advertises itself as distinct from other forms of paternalism in that it simply changes the way choices are presented to people, as opposed to eliminating choices, or forcing people to accept particular choices (Dworkin, 2017). Underpinning libertarian paternalism is the notion that people are bad decision makers (Dworkin, 2017). They can make

Le paternalisme libertaire se présente comme étant différent des autres formes de paternalisme, dans la mesure où il modifie simplement la façon dont les choix sont présentés aux gens, plutôt que d'éliminer les choix des gens ou de les forcer à adopter certains choix. Cependant, la liberté est fondamentale à l'éthique.

irrational decisions, or contradictory decisions, or decisions that are plainly incorrect. However, with the help of findings in disciplines such as behavioural economics and psychology, people can be "nudged" into making the correct decision. Indeed, the very term "nudge" is apt as it overlaps with the notion that harks back to Adam Smith of an "invisible hand". This has come to frequently feature in libertarian literature only that, in this context, the invisible hand is being used by policymakers to achieve certain social outcomes.

There is ample evidence in the academic literature that people can make what might appear to be "wrong" decisions – everything from psychological pricing to the Allais paradox shows this[3]. Consider the following question: Would you prefer being paid £10,000 at the end of every year forever, or £200,000 now, both compounded annually at a 5% interest rate? Most people would opt for the first option, but from a purely mathematical standpoint there is no difference between the two and thus a person should actually be indifferent when presented with such a scenario. And in the case of a person who lives a finite number of years (i.e. all of us), it is in fact better to go for the £200,000 now.

Libertarian paternalists point to such lack of rationality as a justification for intervention. Libertarian paternalism can be seen as getting the "best of both worlds" – allowing people to be free and to have a full range of choices available to them, but still indirectly managing them to achieve certain social outcomes.

3 See also Kahneman (2013)

The relationship between libertarian paternalism and contactless technology

Libertarian paternalism is relevant to contactless cards for two reasons. The first is that contactless cards are issued by banks with the belief that the technology is in their interest. One major bank insists that customers are automatically given contactless cards because they are quick, convenient and secure (Salmon, 2017). The bank goes so far as to believe that this benefit is large enough to justify phasing out non-contactless credit cards entirely. That means that those customers who wish to use non-contactless credit cards are simply unable to do so (Salmon, 2017).

The second reason is that the issuance of contactless cards exploits a cognitive bias, one well documented in the literature: the default option. That is to say, rather than customers having to "upgrade" to a contactless card, they are given one from the outset, and this is the default option. Given that people are inclined to stay with what they are given, banks and other financial institutions can advertise that uptake of contactless cards has increased even though this is actually less to do with people's innate preferences and more to do with the psychological reality that people generally remain with the default option.

Does offering contactless cards intrude on freedom?

En outre, la théorie des choix publics nous enseigne qu'à l'instar des gouvernements et des politiciens, les banques et autres institutions financières sont aussi susceptibles de commettre des erreurs. Nous avons relevé que les cartes sans contact soulèvent une grande variété de problèmes de cyber-sécurité, allant du « clonage » de cartes, à la possibilité de dépenser un montant illimité dans une devise étrangère, en passant par le vol de carte et l'autorisation du détenteur de la carte à dépenser de l'argent sans avoir à composer un numéro de code PIN.

The 17th century British philosopher John Locke posed a problem: imagine waking up in a room that you do not know is locked but that is, in fact, locked (Rickless, 2015). To think that one has freedom in such a situation would be mistaken: one is certainly free to remain in the room, but has no freedom to leave because the room is locked. Therefore, it is mistaken to describe the man in the room as free, inasmuch as it is mistaken to describe a man who is paralysed as "free" to move his or her limbs (Rickless, 2015). Any belief in "freedom" in this context is illusory. Locke's account of the man in the locked room has fascinated philosophers ever since.

Freedom is fundamental to ethics. Without the ability to act freely, it is disingenuous to speak of ethical behaviour. The concept of freedom is fundamental to virtually every ethical system. In Christian ethics, it is taught that free will is a gift from God and that furthermore, a "Christian life" is the highest expression of freedom. Hence St. Paul writes: "Where the spirit of the Lord is, there is freedom" (Philippe, 2007). In deontological ethics, the normative branch of ethics that emphasises adherence to rules, freedom is also emphasised very strongly – as one sees in the writings of many of its thinkers. For example, John Callanan notes that much of the reasoning behind Immanuel Kant's agnosticism (Kant being a deontological ethicist), can at least be partially explained by the historical context in which he lived. Kant helped form the thinking of the Enlightenment period and he sought a system that embraced tolerance at a time when religious persecution was still an issue (Immanuel Kant, 2016). Freedom also features prominently in the writings of some of Kant's followers, such as Johann Gottlieb Fichte. Even in utilitarian ethics, the branch of ethics that emphasises the maximisation of happiness and is traditionally seen as the branch of ethics most divorced from an emphasis on freedom, certain branches of the paradigm highly emphasise the importance of freedom.

Infringing on freedom is no small matter

Given the importance of freedom in many ethical worldviews, it naturally follows that violating another person's freedom is looked upon extremely unfavourably. Herein we encounter the controversy surrounding paternalism: to interfere with someone else, and thereby with their freedom, is considered to undermine that person's integrity. Therefore, when it comes to having a paternalistic policy, there needs to be sufficient justification for interfering

L'un des principes fréquemment invoqués pour expliquer la grandeur du libre-marché est celui de la souveraineté du consommateur : l'idée selon laquelle « le client à toujours raison ». Cependant, avec les progrès de la technologie ainsi qu'une meilleure compréhension de la psychologie humaine, de tels principes sont progressivement remplacés par la notion selon laquelle « les entreprises ont toujours raison. ».

with the freedom of others, even if it is, indeed, for their benefit.

In the case of contactless cards, and bearing in mind the words of Locke as mentioned previously (Rickless, 2015), it could be argued that the automatic provision of contactless cards, based on a paternalistic mentality, is an infringement of the freedom of others. This is because, much as in Locke's argument (Rickless, 2015), there is only an illusion of freedom. People, if we are to go by experimental studies at least, are inclined to remain with the default option even if they oppose it. Being presented with two options does not mean that customers are predisposed to picking either using all their rational faculties. Cognitive bias(es) have a part to play.

Indeed, this points to a problem that is inherent within libertarian paternalism. Libertarian paternalists argue that libertarian paternalism is distinct from other forms of paternalism in that it does not restrict the array of choices available to people as, for instance, with hard paternalism, but that the array of choices is simply presented in alternative ways for the good of those in question. But we have to ask ourselves: 'where exactly is the line drawn?'

Take, for instance, the traditional example frequently cited in the literature of the cafeteria (Bovens, 2009). Schools know that, if they place unhealthy food away from eye level in a cafeteria, this will reduce consumption of unhealthy food by children. This is because only the children most eager for it will seek the unhealthy food. By placing the unhealthy food away from eye level, schools can achieve the objective of reducing consumption of unhealthy food among children whilst at the same time preserving their freedom (or at least so libertarian paternalists believe). But suppose schools decide instead to cover unhealthy food altogether with a blanket of some kind so that children are not cognisant of what exactly remains under the cloth. This is problematic because it could be said that the unhealthy food is still there. It could be said that the freedom of the children to choose has been preserved. Yet in covering the food the children are ignorant of the unhealthy food actually being there and, being ignorant, cannot actually exercise their freedom to choose unhealthy food. Freedom means the ability to choose good and the ability to choose evil. This points to the issue raised by Locke with regards to the man in the closed room (Rickless, 2015). It is difficult to see how this is consistent with the claim that libertarian paternalism preserves choice.

Like the cafeteria example, much the same can be said about contactless cards. If people are automatically enrolled onto contactless cards and are not informed about the possibility of remaining with or reverting to traditional "chip and pin", then it could be said that the freedom of customers has, indeed, been infringed.

Dans le contexte des cartes sans contact, les avantages liés à leur adoption accrue ne semblent pas suffisamment décisifs pour l'emporter sur les autres préoccupations éthiques soulevées par l'atteinte à la liberté. Nous espérons que cette contribution sera pertinente pour éclairer les banques et autres institutions financières sur les enjeux éthiques qui découlent de l'inscription automatique des personnes à la technologie sans contact.

What can public choice theory teach us about the problems with paternalism?

Public choice theory is an important school of thought that came to prominence in the 20th century, although its origins can be seen as far back as the 19th century, and perhaps even further back. Public choice theory analyses the decision-making processes of politicians and governments. One of the crucial conclusions of public choice theory is that politicians and the government are people too: they are susceptible to making bad decisions, engaging in unscrupulous behaviour and so on, and so forth. This stands in stark contrast to the belief usually assumed, but never made explicit, in policy debates that the government is objective and unable to make suboptimal decisions[4].

Public choice theory teaches us that, in the same way that governments and politicians are prone to error, so too banks and other financial institutions can make mistakes. A paternalistic relationship conveys the mental image of banks and other financial institutions "knowing more" than the "little people" who are being nudged in this direction and that direction. However, it is also completely plausible that banks and other financial institutions are also prone to irrational decisions and suboptimal choices.

Consider the issue of unintended consequences. This concept describes a situation where a policy has consequences that are not otherwise intended, almost always negative. Imagine throwing a ball upwards with the intention to catch it as it falls back down, only for a strong gust of wind to suddenly blow the ball away from you as it falls back into your hands. Unintended consequences are a result of a complex world with many variables, the effects of which cannot be predicted from the outset. In the case of encouraging contactless cards, whilst some banks have said their use should be encouraged because they are quick, convenient and secure (Salmon, 2017), what hasn't been noted is the potential downsides that could come with increased adoption of contactless cards.

Disadvantages of contactless cards

One such potential downside is the inability for people to live within their means as a result of having a contactless card. Research (Poulter, 2016) suggests that ownership of a contactless card can encourage overspending because it removes the "psychological brake" that occurs when someone has to get money out of a purse and ask themselves: "Do I really need this?" The researchers also found that this over-spend effect is particularly pronounced on those who have low self-esteem (Poulter, 2016). This again points back to

4 In the literature, public choice theory gave birth to the term "government failure", a good counterpoint to frequently used "market failure".

the issue of "manipulation" when it comes to exploiting cognitive biases, raising ethical concerns about paternalism. Most people would not tolerate businesses exploiting the mentally disabled to sell their items, and indeed, there have been a number of scandals in the lending industry already to this effect[5]; in a similar way, it seems unethical to exploit the cognitive biases of others, some of whom invariably will have low self-esteem (Poulter, 2016). Herein it is perhaps relevant to make an allusion to the argument of Kant that such behaviour is unethical as we are treating people not as ends in themselves but as a mere means to an end. As Wilkinson explains: "Nudging uses the clever tricks of modern psychology and economics to manipulate people. We don't like manipulation when it's done to sell us things; we shouldn't like manipulation when our governments do it to us." In the context of this paper, we could change the word "governments" to "banks" (Dworkin, 2017).

Paternalism potentially conflicts with honesty

Of course, it could be argued that this is all "part of the plan". Banks issue contactless cards with the knowledge that people are more inclined to spend using one than using a non-contactless card, which means they can increase their profits. However, this undermines the notion of paternalism, which implies that those being interfered with are being interfered with for nonmonetary reasons. As one bank said, customers are automatically enrolled onto contactless technology because the bank believes that contactless payments are secure, convenient and quick (Poulter, 2016). If, indeed, banks are issuing contactless cards to exploit the cognitive bias of remaining with the default option then this merely highlights the issue that public choice theory raised with regards to politicians and governments: claims of interfering in someone else's freedom for their apparent benefit are usually based on self-interest rather than altruism.

It would not be so bad if banks stated plainly that they are issuing contactless cards to increase their profit margins. However, when it is said that contactless cards are a function of nonmonetary concerns, like convenience and security, and there is some degree of probability that this is not true, we are confronted with a lack of transparency[6] when it comes to libertarian paternalism. Transparency is a fundamental value that many societies in the Western

5 See Poulter (2015)

6 Transparency is particularly pertinent here. It might be believed that those doing the nudging (in this case the banks) would find it more effective if they did not publicly communicate their actual intention. However, Dworkin (2017) notes that findings from psychology show that there is no significant difference in outcomes between a nudge policy that does communicate its intention and one that does not. Therefore, there is really nothing that stops a bank from being transparent about why exactly it is issuing contactless cards as a default option.

world aspire to and libertarian paternalism seems to conflict with that (Dworkin, 2017).

Other disadvantages with contactless cards

There are other downsides that come with the increased adoption of contactless cards. For example, it has been noted that contactless cards are bedevilled by a wide range of cyber-security concerns, from "skimming", through the ability to spend an unlimited amount in a foreign currency, to the card being stolen and allowing the person with the card to spend money without the need to enter a PIN number. If a person has a very high preference for cyber-security, a preference that completely outweighs that of convenience, it seems unethical for those doing the decision-making to say that such a "choice architecture"[7] is wrong and that the customer must prefer convenience to cyber-security. Indeed, we can say here that it is the decision-makers who are being irrational as opposed to those who choose to remain with non-contactless cards. This is because the decision-makers say in many contexts that they value cyber-security and regard cyber-security as the most pressing concern for banks and other financial institutions, but then suddenly discard this preference when it comes to the issue of contactless technology. In fact, this is nothing else than a conflict with the principle of transitivity[8], and thus represents irrational decision-making. This shows that even the decision-makers can be irrational, just as implied with public choice theory and politicians and governments, and therefore also raises the question of the *legitimacy* of their authority in trying to nudge people in certain directions.

A capabilities approach to financial technology

Exchange is vital to human existence. Adam Smith remarked that humans are distinct from other species in that we live by exchange: "Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog. Nobody ever saw one animal by its gestures and natural cries signify to another, this is mine, that yours; I am willing to give this for that". He went on to add that, "But man has almost

7 Choice architecture is the term commonly used in libertarian paternalist literature to describe how choices are presented in order to influence decisions –
eg sweets are removed from a child's field of view.

8 This says that if A is preferred to B and B is preferred to C then A must be preferred to C. Any other arrangement is deemed irrational. The principle of transitivity is violated here because banks and other financial institutions constantly preach that security should be prioritised over convenience. An example of this is found in passwords, with banks advising customers not to choose convenient passwords like "abcd" or "1234" or one's birthday. Yet this same insistence of prioritising security over everything else is quickly forgotten in favour of convenience when it comes to contactless technology, reflecting a violation of the principle of transitivity and thus providing an example of irrational behaviour on the part of banks and other financial institutions (the "choice architects").

constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only" (Smith & Skinner, 1982).

The capabilities approach emerged from the ideas of economist Amartya Sen and political scientist Martha Nussbaum – primarily as a reaction to mainstream welfare economics because it was underpinned by utilitarianism – but also in response to the political theories of thinkers such as John Rawls, who argued that a society should be rationally arranged such that the least well-off benefit from any benefits reaped by society as a whole (Robeyns, 2016).

It is relevant to mention Rawls here because Sen lauds his framework but argues that it does not go far enough, Rawls' framework ultimately boiled down to an assurance that the least well-off were guaranteed the provision of *material* goods, whilst Sen believes that development should be seen as much more. Sen argues, as does Nussbaum, that development should be seen as an expansion of freedoms and the ability to live a life that one has reason to value.

If fintech is to promote human flourishing, then it needs to put freedom at its heart of self-evaluation. Sen gave the example of a person who is fasting. A person who is fasting in a developed country can hardly be said to be malnourished, at least when compared with people in developing countries. The difference between a person who is fasting in a developed country and a person who is malnourished in a developing country is that the person who is fasting in the developed country at least has the freedom – the "capability" – to nourish him or herself. The same cannot be said for someone in a developing country.

How do we gauge progress in fintech?

In a similar way, it is not an example of progress if people are "forced" to use contactless cards, even if statistics show increased convenience, reduced queues or better security. We should analyse the question of whether the growth in contactless cards is a good thing. First, we should ask whether people have naturally chosen to use contactless cards as a means of payment. Second, we should ask whether those who choose not to pay with contactless cards can pay with other means. These are not trivial questions. As mentioned previously, the ability to exchange is fundamental to human existence. Forcing people to pay in certain ways has at times in history been accompanied by persecution. Furthermore, there are cybersecurity concerns as well as concerns about possible unintended consequences.

A capabilities approach to the issue of contactless cards ensures that people can continue to pay using non-contactless means. It guarantees the freedom to live a life one sees fit to live. Upon closer inspection, it is also noteworthy to see how the Rawlsian criterion is satisfied. Older people, for example, are known to be reluctant to use contactless cards. By ensuring that there is always a viable alternative to contactless technology, or by refraining from using cognitive manipulation to surreptitiously encourage the uptake of contactless technology, banks and other financial institutions can make sure that the most vulnerable – such as the elderly – are adequately catered for.

Conclusion

Our liberal society prides itself on diversity. A free market is a subset of that diversity and it is seen as a mechanism through which people's preferences can be satisfied. One of the principles frequently touted as fundamental to the free market is that of consumer sovereignty: the idea that "the customer is always right". However, with the advance of technology as well as a better understanding of human psychology, that principle is gradually being replaced with the notion that: "Businesses know best". This has led to an increased prevalence of a paternalistic mindset: rather than consumers choosing what is placed on the market, businesses are collectively determining what consumers can get in the market. It is an inverted relationship, and that is also seen with the issue of contactless cards. Was any consultation held with customers and other stakeholders about whether contactless cards were wanted? Was any discussion held as to how to provide for those who choose not to opt for contactless cards?

Paternalism is relevant to ethics because it encompasses the issue of liberty and freedom: interfering with someone else's choices is a very controversial issue indeed and makes those who suggest it liable to accusations of "manipulation" and "deceit". It would not be true to say that contactless cards represent the only instance of paternalism by banks and other financial institutions. However, it does serve as a useful microcosm of paternalism in the banking and financial industry and paternalism more generally speaking.

The author is not so ambitious as to try to deal with paternalism as an overarching concept and to try to say whether *all* instances of paternalism are acceptable or deplorable. But in the context of contactless cards, the advantages gained from their increased adoption do not seem compelling enough to override the other ethical concerns raised by the infringement of freedom. It is hoped that this paper proves insightful to banks and other financial institutions regarding the ethical issues that may arise from automatically enrolling people into contactless technology.

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Financial Services as a "Common" Good

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Finalist

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Financial services are essential to the growth of economic activity in both developed and developing economies. However, multiple economic, social and environmental crises have recently called the functions of financial services into question in the public mind (Melé et al., 2017) and financial intermediaries are sometimes considered greedy and untrustworthy (Carucci, 2017). To promote ethics in finance, a number of citizens and practitioners have started to redirect funds into activities that aim to generate social and environmental benefits (Nicholls & Pharoah, 2008). In this article, we investigate how the growing sector of social finance can promote ethics and trust in finance. To this end, we explore whether social finance can be considered as a common good and promote personal and collective wealth.

The concept of the commons is increasingly debated in the academic literature examining social finance (Hudon & Meyer, 2016; Meyer & Hudon, 2017; Paranque, 2016; Périlleux & Nyssens, 2017; Servet, 2013, 2015). The commons refers to collective ways of organizing economic activities according to shared values and ethical principles (Bollier & Helfrich, 2014). This concept is closely tied to the notion of the common good, and these two words share the same etymological roots in the Latin word *communis*, meaning "common" and "which belongs to several or all". The concept of 'commons' can shed new light on finance in that it understands financial organizations as communities of people who share similar beliefs and purposes. It can also be instructive through its openness to new forms

La notion de communs se réfère à des façons collectives d'organiser les activités économiques d'après des valeurs partagées et des principes éthiques. Ce concept est étroitement lié à la notion du bien commun, le terme commun provient du mot latin communis, qui signifie « commun » et « qui appartient à plusieurs ou à tous ». Par conséquent, cette notion peut apporter un nouvel éclairage sur la finance en considérant les organisations financières comme des communautés de personnes partageant des croyances et des buts semblables. Dans cet article, nous examinerons si la finance sociale peut être considérée comme un bien commun pour promouvoir la richesse personnelle et collective. Nous utiliserons trois traditions académiques et tendances de recherche dans la littérature en économie et en gestion : 1) l'économie institutionnelle, 2) les études sur les organisations à but non lucratif, et l'éthique des affaires.

of governance, which are more participatory and inclusive.

To investigate the extent to which social finance can be understood as commons, we use three academic traditions and research trends in the economics and management literature: 1) institutional economics (e.g. Ostrom, 1990, 2010), 2) nonprofit and organization studies (e.g. Bushouse et al., 2016; Lohmann, 2016) and 3) business ethics (e.g. Akrivou & Sison, 2016; Argandoña, 1998; Melé, 2009, 2012). Each of these traditions has investigated commons from a particular approach, whether focusing on the shared resources, the management and governance mechanisms, or ethics and responsibility. Our investigation of finance as commons is based on multiple examples of social finance services, namely responsible investment, stakeholders' banks, community microfinance, and complementary currencies.

This article proceeds as follows. First, we present some characteristics of social finance. Second, we develop three approaches to and theoretical perspectives of the commons, in particular with regard to studies in institutional economics, nonprofit and organization, and business ethics literature. Third, we investigate the extent to which social finance can be considered as commons and promote the common good. Fourth, we summarize our findings and establish how social finance can promote ethics and trust in finance.

The rise of social finance

Social finance is an emerging phenomenon of interest to investors, policy-makers, social entrepreneurs and citizens (Benedikter, 2011; Lehner, 2016). Social finance refers to the deployment of financial resources for primarily social and environmental returns. It is a broad and heterogeneous field that covers a wide range of instruments and practices, such as *socially responsible investment* (Louche et al., 2012), *social banking* (Cornée & Szafarz, 2014), microfinance (Armendáriz & Labie, 2011; Hudon & Sandberg, 2013), and complementary currencies (Seyfang & Longhurst, 2013).

The demand for social finance is increasing worldwide. In the United States, the **Forum for Sustainable and Responsible Investment identified that the sector had** $8.72 trillion professionally managed in assets in 2016 – which represents a 33 percent increase since 2014 (US SIF, 2016). This growing trend is also seen in Europe. Eurosif, the association for European Sustainable and Responsible Investment, identified about 21 trillion euros in responsible investment assets under management in 13 European countries in 2015 (Eurosif, 2016: 56). In Europe, such assets grew by 25% from 2013 to 2015 indicating an increasing market for social finance.

More broadly, this sector raises questions about the nature of financial

La finance sociale se réfère au déploiement de ressources financières pour des bénéfices principalement sociaux et environnementaux. Il s'agit d'un champ large et hétérogène qui couvre un large éventail d'instruments et de pratiques, tels que l'investissement socialement responsable, la banque sociale, la micro finance, et les monnaies complémentaires. De plus, ce secteur soulève des questions sur la nature des services financiers dans les sociétés modernes. La finance sociale représente quelque chose de nouveau dans la société : une aspiration individuelle et collective pour changer le rôle de la finance en faveur de l'intérêt collectif.

services in modern societies. As highlighted by Nicholls and Pharoah (2008) social finance "is about more than just the flow of money into social or environmental projects. It is an ethos about the way money is used […]. So, social investment can be seen as the discourse around such flows that is developing in concrete terms in the new institutions of supply, intermediation and demand" (Nicholls & Pharoah, 2008: 11). Hence, social finance is part of a broader philosophical debate about the role of money in our economies and the ethos it conveys. From this perspective, it echoes the long ethical and theological traditions of condemning greed, speculation and usury (e.g. Aquinas, 1981; Aristotle, 1925). In this philosophical tradition, the pursuit of wealth accumulation as an end and not a means is considered as leading us astray from virtue and the social nature of humans.

As that suggests, social finance conveys certain ethical perspectives toward finance and its relationship with society. Social finance acts as a driver for economic change, particularly when developed by grassroots actors involved in "new social economic movements" (Gendron et al., 2009). *Several* bottom-up initiatives are spreading worldwide to (re)take control of the financial and banking system in order to promote economic stability, community development and financial inclusion (Lietaer et al., 2012). These social actors often aim to build another financial system, one more embedded into local realities and responsive to needs that are not met by purely commercial actors. These grassroots experiments often rely on collective decision-making to decide which activities to finance, while promoting new social ties and sociability among users and investors (Cornée & Szafarz, 2014; Hudon & Meyer, 2016).

All the above arguments show that social finance is a promising and expanding phenomenon. In a context of financial crisis (Sun et al., 2011), it represents something new in society: an individual and collective aspiration to change the role of finance in the collective interest.

The commons and the Common Good

In the encyclical *Laudato Si'- On care for our common home*, Pope Francis (Francis, 2015) highlights the interdependence between ecology, society and the economy. Considering poverty, social inequalities and environmental degradation – from climate change, to the overexploitation of fishing resources and loss of biodiversity – Pope Francis calls for a deep change in the economic system and the adoption of a responsible long-term perspective. From this point of view, individuals and organizations are responsible for their actions and inactions with regard to the environment and social degradation. The preservation of "our common home" therefore requires an economy

Le pape François appelle à changer profondément le système économique et à adopter une perspective responsable de long terme. À cet égard, les individus et les organisations sont responsables de leur action et inaction en ce qui concerne la dégradation environnementale et sociétale. La préservation de « notre maison commune » nécessite une économie qui soit plus inclusive et qui prenne soin en même temps des êtres humains et de la nature. Dans cette ligne, les acteurs économiques devraient suivre des principes éthiques dans le but d'atteindre le bien collectif et individuel. Le concept de communs convient pour établir l'interdépendance entre la société et l'économie. En effet, les communs sont de plus en plus fréquemment développés par la société civile pour résoudre des problèmes socio-économiques à travers une organisation collective.

that is more inclusive and caring, both of human beings and nature. To this end, economic actors should follow ethical principles targeting both collective and individual good (Frémeaux & Michelson, 2017; Melé, 2009).

The concept of commons is sufficient to establish the interdependence between society and the economy. Indeed, commons are increasingly developed by civil society to resolve socio-economic problems through collective organizing (Bollier & Helfrich, 2014). Social movements use the term 'commons' to qualify new organizations with the objective of promoting both personal and community interest (Dardot & Laval, 2014). The academic literature proposes various interpretations and definitions of the commons. In this section, we present three main theoretical approaches to the commons in the economics and management literature.

Commons as accessible and shared resources

The understanding of commons was confined for many years to common goods, or common-pool resources (CPRs). In institutional economics, CPRs are resources that are subtractable through use (consumption by one user decreases the amount of the resource available for others) and non-excludable (excluding someone from having access to the resource is difficult and costly). These two characteristics vary in terms of degree, from high to low. These characteristics incentivized commons scholars to focus on natural CPRs (Ostrom, 1990, 2010), such as fisheries, groundwater and irrigation systems, communal land and the climate. Because of their characteristics of subtractability and non-excludability, CPRs could presumably be overexploited, as individuals would tend to maximize their own appropriation of the resource. This is the so-called "tragedy of the commons" (Hardin, 1968), where users of a shared resource are guided by their own interest and unable to cooperate.

However, the pioneering work of Elinor Ostrom revealed that the tragedy of the commons is avoidable. Ostrom's seminal work *Governing the Commons* (Ostrom, 1990) shows many examples of CPRs that were collectively managed by communities, without requiring public intervention or privatization of resources. Communities can self-organize and develop adequate institutional arrangements to ensure the sustainable use of CPRs for long-term periods. These institutions rely on strong social ties and cooperation among users. Users self-govern and monitor their behavior to avoid overexploiting the resources. Ostrom's work shows that shared resources can be preserved and remain accessible if users set up effective institutions. This analysis of collective governance has been used for multiple settings (Lohmann, 2016), including community finance (Hudon & Meyer, 2016).

La compréhension de ces biens a été confinée durant de nombreuses années aux ressources communes. L'ouvrage précurseur d'Ostrom « Governing the Commons » (Ostrom, 1990) donne de nombreux exemples de ressources communes qui étaient collectivement gérées par des communautés, sans intervention publique ni privatisation des ressources. Les communautés peuvent s'auto organiser et développer des arrangements institutionnels adéquats afin d'assurer une utilisation durable du ressources communes pour des périodes de long terme. Ces institutions reposent sur de forts liens sociaux et la coopération parmi les utilisateurs : les utilisateurs auto-dirigent et contrôlent leur comportement pour ne pas surexploiter les ressources. Ostrom montre que les ressources partagées peuvent être préservées et demeurent accessibles si les utilisateurs mettent en place des institutions efficaces. Cette analyse de gouvernance collective peut être utilisée dans de multiples contextes, y compris la finance.

Collective action in commons

Building on Ostrom's theory of the commons, several nonprofit and organizational scholars have analyzed how non-natural commons could be established (Bushouse et al., 2016; Coriat, 2015). Therefore, the understanding of commons evolved from an "essentialist approach" (Périlleux & Nyssens, 2017), defining commons by their intrinsic nature and the characteristics of CPRs, to a "constructivist approach", based on the idea that commons are socially constructed through practices and cognition (Dardot & Laval, 2014).

Hence, commons can potentially emerge from resources that are shared and collectively managed. This is known as 'commoning' (Meyer & Hudon, 2017). Commoning is a widespread practice in self-managed organizations, and in projects where users co-produce rights and duties linked to a shared resource (Coriat, 2015). Examples of commoning include transition towns, collaborative consumption of food, and complementary currencies (Bollier & Helfrich, 2014; Meyer & Hudon, 2017).

From this we can conclude that commons are created through the voluntary association of people sharing common purposes and values (Lohmann, 2016). Based on the principle of self-management and autonomy (Bushouse et al., 2016), commons are embedded in territorial contexts as users decide how to share and manage these resources for common objectives. These commons therefore both rely on, and strengthen, social relationships at local scale, whilst fostering a shared social identity enabling users to cooperate and act collectively (Bollier & Helfrich, 2014).

The common good of communities and society

Commons are developed by, and provide support to, communities. Commons organizations, like other organizations, are "communit[ies] of persons" (Melé, 2012) in which people meet to achieve common objectives (Gomez & Jones, 2000). However, commons organizations usually go beyond the sole interest of their members and also engage in the interest of society (Nyssens & Petrella, 2015).

Hence, commons organizations follow the common good principle with the objective of contributing to the collective interest (O'Brien, 2009; Sison & Fontrodona, 2012). The common good principle is particularly present in the social teaching tradition of the Catholic church (e.g. Conférence des Evêques de France, 2014), which aims to foster social justice, responsibility and fraternity in modern societies. In this contect, the common good is the philosophical principle that "entails cooperation to promote conditions that enhance the opportunity for the human flourishing of all people within a community" (Melé, 2009: 227). It refers to the inherent tendency of human beings to associate, collaborate and socialize in order to achieve common objectives (Aristotle, 1925).

The common good principle is also attached to the personalist philosophical approach, which holds respect for human dignity and individual rights sacred (Melé, 2012). It assumes that societies should provide conditions that foster humans' flourishing through the achievement of their personal goals. Individual flourishing is crucial for collective well-being since the

Plusieurs chercheurs et experts de la société civile ont analysé comment des biens communs non naturels pouvaient être établis. Ainsi, ils peuvent potentiellement provenir de ressources qui sont partagées et gérées collectivement : ceci s'appelle le « faire en commun ». Il s'agit d'une pratique largement répandue dans les organisations autogérées, et dans les projets où les utilisateurs coproduisent des droits et des obligations liés à une ressource partagée. Les biens communs sont créés à travers l'association volontaire de personnes partageant des buts et des valeurs communs. Ils reposent donc sur et renforcent les relations sociales au niveau local, tout en favorisant une identité sociale partagée qui permet aux utilisateurs de coopérer et d'agir collectivement.

Table 1: Definition and characteristics of the different concepts linked to the commons

Concept and Terminology	Definition and Characteristics
Common goods	We define common goods as the resources characterized by intrinsic dimensions of subtractability of use and non-excludability of access. As such, these goods are synonymous with common-pool resources, or traditional commons. Examples of common goods are environmental resources that are open-access and deplete with consumption. This approach to common goods is used mainly in institutional economics and environmental science.
Commons	Commons can be considered as shared resources that are collectively managed by a group of users who design and implement the rules for their provision, allocation, withdrawal, control and monitoring. Commons are therefore not defined by the internal characteristics of their resources but by collective organization that institutionalizes them as commons. Examples of commons are digital and informational commons, or urban commons. This concept of commons is increasingly present in nonprofit studies, organization theory, and computer science
Common Good	The common good is a philosophical principle guiding individual and collective action to contribute to the wellbeing of society. Taking into account the collective dimensions of individuals in societies, there are multiple meanings, since the common good will depend on collective-choice and virtue behavior. According to this idea, individual and collective action should not be undertaken if it destroys others' wellbeing. This concept is mainly present in business ethics, philosophy and theology.

Les organisations de biens communs suivent le principe du bien commun avec l'objectif de contribuer à l'intérêt collectif. Le principe du bien commun est particulièrement présent dans la tradition de l'enseignement social de l'Eglise catholique qui vise à favoriser la justice sociale, la responsabilité et la fraternité dans les sociétés modernes. Le bien commun est considéré comme le principe philosophique qui « entraîne la coopération afin de favoriser des conditions pour augmenter le bien-être humain de toutes les personnes à l'intérieur d'une communauté » (Melé, 2009: 227). On se réfère à la disposition des êtres humains de pouvoir s'associer, collaborer et socialiser afin de réaliser des objectifs communs. Le bien commun suppose que les sociétés devraient fournir des conditions qui favorisent l'épanouissement humain à travers l'accomplissement de leurs objectifs personnels.

fulfilment of society both results from and contributes to individual welfare (Frémeaux & Michelson, 2017).

For the sake of clarity, Table 1 presents a summary of these three meanings of the commons and their respective scholarly disciplines.

Social finance and the commons

In this section, we investigate the extent to which social finance can be considered as commons, however these are understood. Our analytical framework relies on the three approaches of the commons described in the above section: 1) commons as accessible resources, 2) commons organized collectively, and 3) commons promoting the common good.

Finance as private or common goods?

Commons were historically attached to natural common-pool resources meeting the two characteristics of subtractability and non-excludability (Ostrom, 1990). However, finance can instinctively be considered as a private good as it is easy to prevent people from having access to financial services and the amount of money used by one person is not available for other users. By way of illustration, credit is a substractable good, in the sense that the consumption of credit diminishes the total amount available for others. Also, as billions of individuals do not have access to financial services, these services are not easily accessible and exclusion is prevalent (Demirgüç–Kunt et al., 2015).

Nonetheless, several microfinance organizations aim to promote financial inclusion. In these cases, access is facilitated and contributes to less "excludability" of these resources. For example, in their analysis of a community bank in Brazil, Hudon and Meyer (2016) show that collective and participatory governance can make financial services more "commons-like" and accessible. The authors argue that organizational form and corporate governance affect the nature of the financial services provided. In this case, microfinance community banks include multiple community stakeholders in strategic decision-making. These stakeholders have the tendency to use the microfinance organization to promote local development and financial inclusion. Therefore, they tend to promote inclusive financial programs, ask for limited – if any – collateral and to lend to community members registered with the credit bureau.

Other types of social finance services can be driven by economic inclusion aims. This is, for example, the case with complementary currencies (Lietaer et al., 2012). These monetary systems are developed by local nonprofits and business networks with the objective of promoting supplementary means of exchange to businesses, La gouvernance collective et participative peut rendre les services financiers plus similaires aux biens communs et accessibles. Par exemple, les banques communautaires de micro finance au Brésil incluent dans la prise de décision stratégique de multiples parties prenantes communautaires. Ces parties prenantes ont tendance à utiliser l'organisation de micro finance pour promouvoir le développement local et l'inclusion financière. Des monnaies complémentaires peuvent aussi être centrées sur le but de l'inclusion économique des organisations et les gens qui sont traditionnellement exclus des systèmes monétaires officiels. Ces monnaies doivent aussi permettre de promouvoir une nouvelle sociabilité dans le commerce et les échanges sociaux.

Les organisations qui promeuvent la participation des parties prenantes dans la gestion stratégique et opérationnelle mettent

organizations, and people who are traditionally excluded from official monetary systems (Seyfang & Longhurst, 2013). There is a broad diversity in these systems. Some are used in barter markets, whereas others are shaped as local currencies to promote consumption on a local scale. Well-known examples of complementary currencies are time banks, which are used to exchange services and goods in neighborhoods. For example, people can exchange one hour of piano or language lesson for bike repairing or gardening. These currencies are usually based on reciprocity with the objective of building social ties and promoting social inclusion (Servet, 2013, 2015). They also convey a strong symbolic power as they value territories and local identity (Blanc & Fare, 2016).

A substantial number of these currencies emerged and were used during financial and economic crises. In these cases, citizens started to use these currencies to access goods and services they could not acquire with official currencies. Several inclusion mechanisms are implemented in these monetary systems, such as free access to credit and no demands for previous acquisition of capital or the provision of collateral. These currencies also have the objective to promote a new sociability in trade and social exchange (Meyer & Hudon, 2017).

Stakeholder participation in financial organizations

Both community banks and complementary currencies rely on the participation of multiple local stakeholders – such as customers, staff members, community leaders and representatives of local nonprofits and government – in their governance and management. As Ostrom (1990) explained, the efficient management of natural commons relies on the establishment of rules that are collectively defined, produced and respected. In a similar vein, financial commons could emerge from collective action. Financial commons could refer to the resources that are shared and regulated by institutional arrangement co-established by stakeholders (Nyssens & Petrella, 2015).

Based on this approach, organizations promoting stakeholder participation in strategy and operational management are potentially commons organizations. Co-governance of resources is particularly present in grassroots social finance organizations, such as community banks and complementary currencies, but also in more established organizations, such as stakeholder banks. Stakeholder banks, also known as social banks (Cornée & Szafarz, 2014), are financial institutions promoting both social and financial objectives. They are distinct from

en place potentiellement une logique de biens communs.
La co-gouvernance des ressources est particulièrement présente dans les organisations de finance sociale locale, telles que les banques communautaires et les monnaies complémentaires, mais également dans les organisations mieux établies telles que les banques coopératives.
Les banques sociale sont des institutions financières qui promeuvent des objectifs à la fois sociaux et financiers. Elles se distinguent des banques commerciales traditionnelles car elles veulent promouvoir de la valeur pas seulement pour les actionnaires, mais aussi pour toutes les autres parties prenantes, telles que les employés, les clients et les communautés. La structure organisationnelle de ces banques favorise une orientation sociale plus forte : les banques communautaires et sociales ont une plus grande propension à promouvoir l'inclusion financière et elles ont un impact positif sur le développement économique local.

traditional commercial banks in the sense that they aim to promote value not only to shareholders but also to other stakeholders, such as employees, clients and communities.

Stakeholder participation can take different forms. For example, cooperative banks are owned and controlled by members on the basis of 'one member, one vote' and community banks have community representation on their boards of directors. Nonetheless, participation is not systematic and not easy to organize. Many social banks do not have a participatory governance structure and sometimes larger cooperatives do not use the 'one member, one vote' feature even if they have it.

However, studies investigating stakeholder participation have shown that the organizational structure of these banks favors a stronger social orientation: community and social banks have a greater tendency to promote financial inclusion by dealing with customers who are underserved by commercial banks. By doing this, they have a positive impact on local economic development. According to Almandoz (2014), motivated owners and deposit holders in US community banks aim to focus first on community needs and have a smaller tendency to prioritize profits.

Likewise, Cornée, Kalmi and Szafarz (2016) showed that social banks' depositors and investors share a common social identity with borrowers as they adhere to similar sets of values. The authors argue that a common social identity engenders "reciprocity" among lenders and borrowers: funders accept the "financial sacrifice" of lending below market rate whilst borrowers show a lower probability to default (Cornée & Szafarz, 2014). These results bring to the forefront the difficulty of having both social and financial returns, since social and environmental benefits are often at the expense of financial considerations (Nicholls & Pharoah, 2008). It might be this cost that reflects the individual commitment to the collectivity: it is a personal financial sacrifice for the development of other members of the community.

Promoting the Common Good

Beyond financial inclusion and stakeholders' participation, social finance has features of commons when it promotes the common good. We base our understanding of the common good on the social teaching of the Catholic church: the common good is founded on both societal and individual development and fulfilment (e.g. Argandoña, 1998; Conférence des Evêques de France, 2014; Frémeaux & Michelson, 2017). Social finance, and particularly responsible investment, can promote the common good when using screening mechanisms to direct finance towards ethical activities for individual and collective interests (Louche et al., 2012). Responsible

La finance sociale, et en particulier l'investissement responsable, peut promouvoir le bien commun en utilisant des mécanismes de sélection afin de diriger la finance vers des activités éthiques. Les investisseurs responsables acquièrent généralement des actions d'entreprises basées sur des facteurs éthiques prenants en considération l'environnemental, le social et la gouvernance. La sélection négative consiste à éviter et à exclure l'investissement dans des entreprises qui mènent des activités qui ne sont pas conformes aux valeurs des investisseurs (pornographie, l'alcool et les arme). Au contraire, la sélection positive consiste à investir dans des entreprises ayant une forte responsabilité sociale et des impacts sociaux positifs.

investors typically acquire companies' shares based on ethical factors such as environmental, social, and governance considerations.

Negative screening consists of avoiding and excluding investment in companies that are engaged in activities considered not in conformity with investors' values. Activities in pornography, alcohol and weapons are typically screened negatively. In contrast, positive screening consists in investing in enterprises that have strong corporate social responsibility and positive social impacts. Generally, both positive and negative screenings help promote the fulfilment of human beings, and further social development and/or ecological preservation.

Environmental preservation

Banks and investment funds have an important role to play in preserving and protecting the environment. Recently, they have been urged by several social movements to massively divest from fossil energies to contain climate change. An increasing number of financial actors have agreed that it is their historical responsibility to promote the decarbonization of the economy and have started to divest from fossil fuels (e.g. Mooney, 2017; Morgan Stanley, 2016). To illustrate: the insurance company Axa decided to remove around €500m of coal investments from its portfolio (Harvey, 2015), based on the role of ethics and values in investment decisions and the reputation risk that fossil fuels represent for companies (Carrington, 2015).

Divestment from greenhouse gas emitting activities is an important and necessary step for containing and mitigating climate change. It certainly contributes to promoting ethics in finance and provides concrete examples of what responsible financial actors can do to preserve the environment. It is also worth mentioning that the preservation of the environment should not be restricted to work on climate but also embrace forest, seas, and biodiversity preservation – to name but a few (Francis, 2015). Hence, the responsibility of investors is broad and can also apply to a vast array of natural resources.

Promoting human dignity and decent work

Promoting the common good is inseparable from the promotion of individual and personal good (Frémeaux & Michelson, 2017). According to Catholic social teaching, human dignity is one of the key ethical elements involved in personal good. As work has a central role in our lives, human dignity is increasingly shaped through working conditions and decent work (Conférence des Evêques de France, 2014).

According to the International Labor Organization (ILO) decent work "involves opportunities for

Récemment, les banques et les fonds d'investissement ont été pressés par plusieurs mouvements sociaux de se désengager massivement des énergies fossiles afin de freiner le changement climatique. Un nombre croissant d'acteurs financiers ont reconnu leur responsabilité historique en promouvant la décarburation de l'économie et ont commencé à se retirer des combustibles fossiles. Le désengagement des activités émettrices de gaz à effet de serre est un pas important et nécessaire afin de freiner et d'atténuer le changement climatique. Cela contribue certainement à promouvoir l'éthique en finance et fournit des exemples concrets de ce que les acteurs financiers responsables peuvent faire pour préserver l'environnement. La préservation de l'environnement ne devrait pas être réduite au climat mais devrait aussi inclure la forêt, les mers, la préservation de la biodiversité, pour n'en citer que quelques-uns.

work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men"[1].

However, decent work is a major challenge in global supply chains. This is particularly the case in the textile industry. The Rana Plaza tragedy showed that the working conditions in the textile industry remain dangerous in developing countries (Jopson et al., 2014). In 2013, a textile factory working for international clothing companies – the Rana Plaza – collapsed and killed more than 1,100 workers. This tragedy revealed the parlous working conditions of the Bangladeshi workers and fostered a debate about the responsibility of multinational corporations outsourcing to suppliers who do not respect decent work (Croft, 2016).

To prevent similar disasters, financial actors could promote decent work by financing companies who show responsibility in their supply chain management. Banks and investment funds could invest in companies promoting decent work and having a code of conduct. Since this would increase the due diligence costs of financial intermediaries, investors could refer to auditors and the multiple forums and networks promoting ethics and responsibility in finance. Such networks provide expertise for institutional investors to incorporate environmental, social and governance factors into their investment and ownership decisions. They are present in the USA (US **Forum for Sustainable and Responsible Investment**), Europe (Eurosif, Principles for Responsible Investment), Australia and New Zealand (Responsible Investment Association Australasia), France (Forum pour l'Investissement Responsable), and the United Kingdom (UK Sustainable Investment and Finance Association), to name but a few.

1 Retrieved from http://www.ilo.org/global/topics/decent-work/lang--en/index.htm on 23 June 2017.

Building an inclusive and responsible financial system

Financial resources, such as credit or currencies, are often considered as private goods. However, our investigation shows that some organizational mechanisms increase access to these resources, making them more inclusive and commons-like. This is particularly the case of grassroots microfinance organizations, such as community banks, and complementary currencies. Therefore, based on solidarity and inclusivity principles, social finance can promote access to financial services – a crucial aspect of social integration and a key factor in economic development and poverty alleviation (Hudon, 2009). As argued

La promotion du bien commun est inséparable de la promotion du bien individuel et personnel. Comme le travail occupe un rôle central, la dignité humaine est de plus en plus façonnée à travers les conditions de travail. Un travail décent est un défi majeur dans les chaînes d'approvisionnement globales. C'est particulièrement le cas dans l'industrie textile où les conditions de travail demeurent dangereuses dans les pays en développement. Les acteurs financiers pourraient promouvoir un travail décent en finançant des compagnies responsables de leur gestion de chaîne d'approvisionnement. Comme cela augmenterait le coût de la « due diligence » des intermédiaires financiers, les investisseurs pourraient se référer aux auditeurs et à de multiples forums et réseaux de promotion éthique et de responsabilité en finance.

by Nobel Peace Prize Laureate Muhammad Yunus, access to finance offers those traditionally excluded the means to develop new economic opportunities and, therefore, is instrumental in human fulfilment (Yunus, 1999).

Corporate governance and institutional design are important in conditioning the provision of these resources. Social finance organizations, such as stakeholder banks, use several participatory mechanisms enabling clients, employees and other stakeholders to participate in strategic management. The inclusion of stakeholders in decision-making not only favors collective action in finance but also has a positive impact on the social orientation of finance. Stakeholder banks promote a sense of reciprocity and social identity among financial clients (Cornée & Szafarz, 2014; Paranque, 2016). This can be a strong factor in generating trust in banking activities, even though it has a financial cost for investors.

Finally, with a particular focus on responsible investing, we discovered that social finance can also contribute to the advancement of the common good. More precisely, we explored two possibilities for finance to have positive impacts on climate change mitigation:divesting from oil and coal industries and improving working conditions in developing countries by investing in companies that promote responsible supply chain management. Ethical considerations on environmental preservation, and the promotion of human rights and dignity, correspond to the historical responsibility investors have towards societies and communities.

Financial commons for ethics and trust in finance

The recent crises have damaged the general perception of the financial and banking sectors. Increasingly, society denounces the greed and speculation associated with these sectors and the risk they represent to economic stability (Carucci, 2017). To contain public opinion defiance, there is a need to promote ethics and trust in finance.

In this article, we have adopted the lens of the commons to explore how social finance can contribute to restoring both public trust and ethics in finance. The commons refer to conventions and interrelations in socio-economic activities. They are not only ruled by market mechanisms, but also include reciprocity and gift characteristics among financial users (Servet, 2013). This favors a new form of sociability among users, as well as transforming the relationships between collectives and individuals on one hand and finance on the other. For example, complementary currencies foster new forms of exchange and trade while simultaneously building social ties among exchangers and stakeholder banks bring a common social identity and a sense of belonging to financial intermediation (Périlleux & Nyssens, 2017).

Commons require cooperation and rely on coordination between actors. Greater participation of users in governance allows both depositors and borrowers to determine their common concerns and decide on actions to achieve their interests (Hudon & Meyer, 2016). Hence, the construction of participatory spaces in banking institutions can redefine the financial resources according to the needs expressed by users and their representatives. While financial services are the subject of international deregulation, community redefinition of finance in participatory spaces allows it to be embedded in the social, cultural and political structures of each territory.

To conclude, considering finance as commons enables to reflect on the relationship between finance and society. The commons approach conceives of economic and financial activities as essentially human activities, embedded into social relationships, values and ethical concern for the common good. Therefore, the commons propose to understand what is shared and common in human communities. Considering social finance as commons therefore advances a new project of society in which the collective interest predominates and is considered as essential for individual fulfillment. Hence, focusing on the interdependence and interconnectedness among investors and society can potentially generate a renewed perception of responsibility in the financial sector for human dignity, social justice and environmental preservation.

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Finance Ethics with a Massive Open Online Course

Ethics & Trust in Finance
Global edition 2016-2017

Finalist

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This paper satisfies the objectives of the Ethics in Finance Prize in terms of: *a)* creating awareness of the fundamental role of ethics in the world of finance through education, specifically online education; and *b)* implementing an academic project that teaches ethics in finance in universities and via independent online education providers.

This proposal is a product of the authors' years of teaching (required) Business Ethics classes in the master and doctoral programs and (elective) undergraduate classes in Finance Ethics. The proposed course can supplement the traditional delivery of the more established Business Ethics courses, because this online-based Finance Ethics class builds upon the theories and concepts discussed in Ethics courses. This project is also a good supplement, because it provides solid and rich discussions of case studies related to finance.

Higher Education Challenges

The delivery of, and access to, higher education has faced a number of challenges in the last two decades because of changing learner demographics. The dramatic increase in the number of adult learners, as well as the usual increase in the number of students (both privileged and not) who wanted access to higher education, created a need for open and accessible education. According to an article on the University World News website, the number of students enrolled in higher education is estimated to reach 262 million in 2025, which is almost twice the number in 2012. This number refers

Le nombre d'étudiants inscrits dans l'enseignement supérieur devrait atteindre 262 millions en 2025 ; tandis que 122 millions de jeunes sont illettrés, 775 millions d'adultes n'ont pas une alphabétisation minimale. L'accès ouvert de l'éducation en ligne aidera à résoudre les défis posés par la pénurie de cours disponibles, et le problème plus grand d'analphabétisme.

L'introduction des MOOC en 2008 a été considérée comme une innovation significative dans l'enseignement supérieur susceptible de repousser les limites du système d'éducation traditionnel en termes de coûts et d'accessibilité. D'après un rapport de 2016, les fournisseurs de MOOC offrent plus de 6850 cours à ce jour ; et le nombre estimé de candidats aux MOOC est de 58 millions.
Morrison (2012) considère la plate-forme comme une innovation de rupture qui entraînera des changements fondamentaux et des transformations notables dans l'enseignement supérieur.

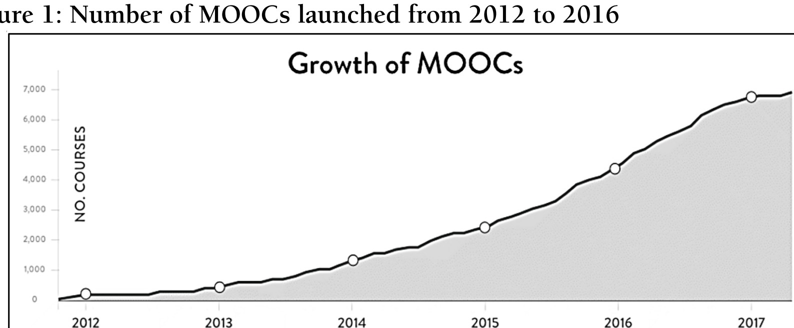
only to learners who can gain access to higher education, and not to those with more limited capability. Furthermore, according to a UNESCO report in 2016, 122 million young people around the world are illiterate, while 775 million adults lack minimum literacy. Open access education plays an important role in solving the challenges of course availability, and the bigger challenge of illiteracy. This dynamic and ever-changing knowledge environment was triggered by the need for an affordable and accessible higher education model that will educate a growing number of learners. The increased access to personal technology and social media is an ultimate solution to these challenges.

Open Online Education Tendering: Necessity

The advent of massive open online courses (MOOCs) in 2008 was considered a disruptive innovation in the delivery of higher education, and a specific solution to the limits placed on the traditional education system by cost and accessibility. According to Kaplan and Heinlin (2016), a MOOC can be formally defined as an open access online course aimed at unlimited learner participation over the web. The online class offers interactive user forums to facilitate improved learning experience among students, professors, and even teaching assistants.

The emergence of MOOCs generated an overwhelming, positive response from online learners and more recently has been receiving attention from researchers in distance learning education. Based on the December 2016 report of the Class Central website, nearly 100 established MOOC providers around the world have partnered with more than 700 universities. These MOOC providers offer more than 6,850 courses to date. Figure 1 shows the growth in the number of courses launched from the beginning of 2012 to the end of 2016. Listed courses in Class Central are growing at a rate

Figure 1: Number of MOOCs launched from 2012 to 2016



Source: Class Central website, https://www.class-central.com/report/mooc-stats-2016/

Par ailleurs, Carré (2013) explique que les MOOC résoudront le problème de contraintes budgétaires parmi les élèves en réduisant le coût des études.

La loi Sarbanes–Oxley de 2002 et la loi Dodd–Frank pour la réforme de Wall Street de 2010 ont été adoptées en réponse à la vague de scandales financiers et à la crise économique. Il en a résulté une industrie financière qui est étroitement régulée. Cependant, en ajoutant plus de régulation on gaspille de grandes quantités de ressources qui sont improductives - à cause de la nécessité de respecter strictement ces règles - au lieu de les utiliser pour créer plus d'activités à valeur ajoutée. À court terme, la solution est d'exiger des législateurs de conduire une analyse coûts- bénéfices où les bénéfices devraient dépasser le coût. La solution à long terme et de demander à l'industrie financière de pratiquer l'autorégulation et l'autodiscipline et de la forcer à prendre l'initiative de faire ce qui est correct.

of 15 courses a day. The report also estimated the number of MOOC enrollees at 58 million. The report also indicated that Coursera remains the largest provider of MOOC with 23 million registered users, whereas edX has 10 million registered users. Other providers, such as FutureLearn, are quickly catching up with its 275% growth in the number of registered users in 2015. FutureLearn became the fourth largest provider with 5.3 million online students in 2016, after XuetangX, a Chinese MOOC provider with 6 million online learners.

The open nature and bigger scale of MOOC-based education offers great opportunities for expanding and improving access to higher education. The emergence of MOOC-based education creates a number of possibilities for experimentation in its delivery. Perspectives, such as that of Morrison (2012), view the platform as a disruptive innovation that will make fundamental changes and create a significant transformation in higher education. These modifications and new approaches generated significant interest from governments (e.g., the US and the UK governments), commercial organizations (e.g., Pearson PLC and Google, Inc.), and academic institutions (e.g., University of South Australia and Chinese Tsinghua University). These players in the evolution of MOOCs are seeking to take advantage of the innovations in massive open online learning. According to Carey (2013), MOOCs will solve the problem of budget constraints among learners by decreasing the cost of degree courses. These developments fulfill the ideal of openness in higher education and achieve the aspiration that learning should available regardless of economic, demographic, and geographical constraints.

Complexities of Financial and Accounting Fraud

The complications arising from financial and accounting fraud are the main reasons why authorities are still learning, and possibly recovering, from the wave of financial and accounting scandals that took place in the early 2000s. Some regulators are still in the midst of uncovering the lapses that happened during the subprime mortgage crisis of 2008. The Sarbanes–Oxley Act of 2002 and the Dodd–Frank Wall Street Reform of 2010 were ratified to respond to corporate scandals and economic crises, respectively, and to keep the financial services industry constantly in check. The financial services industry is one of the most tightly regulated industries because of the great magnitude of its scope. When it fails, it has knock-on effects on other industries. However, it can be argued that adding more regulations wastes significant productive resources, because firms put those resources into strictly complying with the rules instead of creating more value-added activities for the business. The government punishes not only the

Les problèmes éthiques liés à la finance sont répandus et ont tendance à devenir écrasants. Les pratiques financières contraires à l'éthique peuvent continuer pendant des années et des années sans qu'il en soit fait état parce que les gens du haut en bas de l'échelle ont été rendus aveugles par l'attrait du gain personnel.

Les enquêteurs échouent parfois à identifier la cause réelle et l'origine du scandale en raison de l'énorme quantité d'écritures non comptabilisées. Ainsi, la discipline auto imposée semble être une solution plus durable face à la complexité croissante de la fraude financière et comptable.

L'autorégulation dans l'industrie financière peut sembler idéale mais pas impossible, elle est en réalité accessible grâce aux individus éthiquement formés par l'éducation. L'éthique en finance est une discipline académique émergente qui fait partie de l'éthique des affaires (une forme d'éthique

bad apples but also most of the good ones by providing a tightly controlled and anticompetitive environment.

Thus, it can be clearly stated that the supposed solutions (i.e., regulations) are not really solving the problem. Instead, they are producing further problems by creating a restrictive business environment. A short-term solution is to demand that lawmakers be judicious in enacting regulations. They should conduct cost–benefit analyses, to determine where the benefits of regulation outweigh the cost. The long-term solution is to require the finance industry to practice self-regulation and self-discipline and compel it to take the initiative to do what is right. The financial industry is a good starting point for such self-imposed discipline because it holds huge amounts of money. Based on the latest survey of McKinsey and Company of 2013, the total global assets of the financial industry has reached $225 trillion. Because this amount is so staggering, even a small fraction of fraudulent activity can still have huge implications.

Finance Ethics as an Academic Discipline

In academe, most faculties often argue that Finance Ethics (also called Ethics in Finance or Financial Ethics in some universities) as an academic discipline is already included in the Business Ethics course. However, in my years of teaching required Business Ethics classes in both the Master and the Doctoral programs in our college, I noticed that business case study issues are often divided into environment (e.g., BP oil spill), labor (e.g., Nike's sweat shops), social (e.g., Mattel's lead paint scandal), technology (e.g., Apple's intellectual property battles), and financial (e.g., Enron's accounting scandal and Worldcom's financial manipulation). I also noticed that ethical issues related to finance cut across any divisions and tend to become highly significant. This comes down to the fact that it can happen every day from the very simple and fleeting situation of a clerk stealing from a petty cash box to the more complicated and longer-term transactions of a Chief Financial Officer hiding billions in debts through special purpose entities.

These unethical financial practices can continue for years and even decades without being noticed because people across the business, from the lower ranks right to the top, have been blinded by the promise of personal gain. Moreover, involved parties treat the unethical situation as normal, as part of daily business operations, and view such practices as greatly beneficial until a scandal breaks. This practice is the reason Madoff-like financial scandals went on for decades without being detected. (Madoff allegedly began his scheme in the early 1990s.) Issues in Finance Ethics are special because, when compared with, for example, environment or labor issues, one has to dig deeper into the minutiae of what went wrong.

appliquée ou d'éthique professionnelle), qui étudie les valeurs morales, les jugements, les comportements, et les problèmes éthiques qui surgissent dans le domaine de la finance.

Le domaine se concentre sur les arguments philosophiques qui proposent un ensemble de principes éthiques pour régir le comportement individuel et collectif en finance, enquête sur les motivations à l'origine du comportement, et guide la conduite des joueurs dans l'industrie financière.

Il y a un besoin d'avoir un cours MOOC d'éthique en finance dans chaque programme d'études d'un département de la finance et les fournisseurs indépendants en ligne peuvent jouer un rôle important en éduquant les actuels et futurs professionnels des affaires à la gestion correcte des informations et ressources financières et comptables.

Un accès ouvert à l'éducation en éthique et finance peut aider à résoudre la pénurie

Investigators sometimes fail to identify the real cause and beginning of the scandal because of the massive paper trails leave important details unrecorded and because of the lack of cooperation among internal stakeholders. Thus, a stand-alone discipline that focuses on financial ethics is a more sustainable solution to untangling the growing intricacies of financial and accounting fraud.

"Education is the most powerful weapon you can use to change the world."

– Nelson Mandela

This classic quotation from the late Nelson Mandela captures the essence and purpose of having a stronger Finance Ethics education. Self-regulation in the financial industry may seem like a difficult to attain ideal but it is actually attainable – by using education to produce ethically-trained individuals. Unfortunately, Finance Ethics as a formal academic course in colleges and universities has yet to be recognized globally. Based on my research, out of the 163 higher education institutions in Taiwan (where I am currently teaching), less than 5% are actually offering courses related to Finance Ethics. This situation also applies to other academic institutions around the world.

The formal definition of this emerging academic field is also not yet well established in academic papers, as far as I am aware. For that reason, an exact definition online is hard to find. Given that, I want to define Finance Ethics as an emerging academic discipline that is part of Business Ethics (a form of applied ethics or professional ethics), which studies moral values, conduct judgment and ethical problems that arise in the field of finance. The field focuses on the philosophical arguments that seek to propose a set of ethical principles to govern individual and collective behavior in the field of finance; it enquires into the motivations behind behavior, and guides the conduct of players in the financial industry. This is the set of definitions that I am using in my Finance Ethics class, which is a traditional undergraduate elective course being offered by our Department of Finance.

Limited (or non-existent) Finance Ethics Curriculum

Like the traditional Finance Ethics class, there are few, or no, MOOC-based Finance Ethics course at universities and independent MOOC providers. There is a need for a MOOC-based Finance Ethics course in every Finance Department curriculum, and independent online providers may also play an important role in educating current and future business professionals about the proper handling of financial and accounting information and resources. An open-access ethics in finance education could also make good the shortage of this course in the curricula of business colleges and aid in propagating an ethical approach de ce type de cours dans le programme d'études des écoles de commerce et aider à propager une approche éthique dans l'éducation financière. Un cours MOOC peut être un instrument puissant d'éducation en rendant conscient du rôle fondamental de l'éthique dans la discipline financière.

Le cours en éthique en finance proposé en forme MOOC offre une introduction aux problèmes éthiques dans la finance moderne et aide les étudiants en finance et les praticiens à approcher cette discipline académique relativement nouvelle. L'ntroduction traite de la définition, de l'importance, de la promotion et des concepts essentiels en éthique en finance.

La première section définit formellement l'objet de la discipline académique émergente, l'éthique en finance. Elle examine aussi l'importance de la promotion de cette discipline.

La deuxième section

to financial literacy. The primary goals of this MOOC-based course are to promote ethics in finance as an academic discipline, and to encourage colleges and universities and independent providers to create a MOOC-based course related to Finance Ethics.[1]

Course Design: A Case Study Approach

This MOOC-based course could be a powerful educational tool in creating awareness of the fundamental role of ethics in financial disciplines. It could provide learners with the ethical principles to govern the financial services industry, and also help online students to easily identify ethical issues encountered by financial institutions and individuals in both public and private sectors. An online Finance Ethics course could serve as a moral compass in the business curriculum, particularly finance-related topics, that could help prevent fraudulent activities and eliminate the need for excessive regulation. This course, through education, would relieve individuals and business organizations of the economic burdens that arise from fraudulent activities and from the compliance costs that come with excessive regulations.

The proposed MOOC-based Finance Ethics course offers an introduction to ethics in modern finance and helps finance students and practitioners approach this relatively new academic discipline. This online course aims to achieve its learning objectives through the use of case studies and debate topics related to financial companies, individuals, and related financial and accounting issues. The opening topic discusses the definition, importance, promotion, and discussion of essential concepts in Finance Ethics. This MOOC-based course will feature video summaries of the following:

- 17 financial- and accounting-related case studies;
- 4 debate topics on the ethical questions around government bailouts, white-collar criminality, credit card lending malpractices, and auditor independence; and
- a bonus case on the interesting issue of bribery in global business.

The 17 case studies and 4 debate topics are divided into 4 main different sections. The first section talks about cases related to ethical risks in the financial services industry. The second section discusses conflicts of interest and individual misconduct. The third section deals with the misuse and manipulation of financial instruments. The fourth section explores unethical accounting practices. At the end of each main section, a review will be provided to cover the central issues of each case

1 This paper indirectly encourages academic institutions to create traditional Finance Ethics course (i.e., a required or an elective course) to be part of the Business College, specifically the Finance Department's curriculum.

parle des plus grands scandales récents de l'industrie financière et s'interroge sur l'irresponsabilité des corporations financières. Cette section met en lumière la culture de l'arrogance et de la cupidité en accord avec la mentalité "too big to fail". Cette partie soulève aussi la question du rôle du gouvernement dans le fait de discipliner ces grandes institutions financières avec leurs comportements à risque. Ainsi, le thème du débat porte sur la remise en question des sauvetages gouvernementaux pour aider ou tolérer ces faillites. Cette section explorera les sujets suivants en détail :
- La faible surveillance financière d'AIG
- Contribution financière du pays entier à la solution de la crise des subprimes
- La chute de Lehman Brothers
- Les questions éthiques en rapport avec la Taiwan Asset Management Corporation
- L'éthique des plans de sauvetage – l'argent du contribuable contre la négligence de l'entreprise.

study and debate. The final topic synthesizes the case studies and debate topics discussed, mentions some limitations of the course, and provides future directions in the study of Finance Ethics.

The proposed MOOC-based Finance Ethics courses' syllabus can be found in the Appendix. Below are the brief descriptions of each topic.

Finance Ethics Definition, Importance, and Promotion

Section 1 formally defines the focus of this emerging academic discipline based on its relation to Business Ethics. This discussion also argues the discipline's relevance to today's financial environment in the context of fraudulent activities and the cost of excessive regulation. The opening topic suggests how Finance Ethics can be promoted in academic institutions and recommends that every business organization should be clear in its definitions of what is legal, ethical, and profitable.

Finance Industry Blunders

Section 2 talks about the biggest finance industry scandals of the recent times and questions whether financial corporations acted responsibly. This section highlights the culture of arrogance and greed consistent with the "too big to fail" mentality. This part also questions the role of the government in disciplining big financial institutions engaged in risky behavior. Thus, the debate topic questions the extent to which government bailouts furthered or tolerated these collapses. This section will explore the following topics in details:

- *AIG's Weak Financial Oversight*

Synopsis: The AIG case uncovers how a long-standing and venerable institution can be led to eventual demise by a single department, here the Financial Products Unit. The case examines the reckless financial decisions of the unit and explains how the system, though inadequate regulation, allowed AIG's corruption to develop.

- *Countrywide Financial's Contribution to the Subprime Mortgage Crisis*

Synopsis: The Countrywide Financial case identifies the root cause of the subprime mortgage crisis as it points to banks' unethical lending practices, which were designed to generate loans. The abuse of subprime loans created high rates of payment delinquency and mortgage foreclosures because high-risk consumers could not afford to pay.

- *The Collapse of Lehman Brothers*

Synopsis: The Lehman Brothers case examines the largest bankruptcy in the world and the fall of one of the world's biggest investment banks. This case highlights the company's involvement in subprime lending and subsequent allegations of

La troisième section présente des personnalités hautes en couleurs impliquées dans des scandales d'investissement. Cette section porte sur le conflit d'intérêts où les individus concernés utilisent leur influence et leur réseau pour prendre au piège des investisseurs. Cette partie soulève aussi la question de la capacité des investisseurs à identifier les investissements vrais des faux. Cependant, étant donné la participation d'individus hautement crédibles, l'identification de ces investissements frauduleux a été difficile, aboutissant ainsi à des scandales financiers massifs. La section explore si les criminels en col blanc sont intrinsèquement mauvais s'ils sont purement influencés par la culture de l'organisation. Cette section présentera les sujets suivants :

- Le système pyramidal frauduleux de Tom Petters
- Les investissements magiques d'Allen Stanford
- Le système de Ponzi de Bernie Madoff
- Nick Leeson et la chute de la Barings Bank

negligence. This led to a massive exodus of clients, drastic falls in the bank's stock, and the devaluation of assets, all of which contributed to shut-down in access to short-term funding that was needed to keep the company afloat.

Taiwan's Asset Management Corporation's Ethical Issues

Synopsis: This case discusses the ethical concerns thrown up by the processes that Taiwan's Asset Management Corporation (AMC) applied in helping distressed Taiwanese banks recover. The case also examines the advantages and disadvantages of AMC's role in providing financial assistance to local banks.

- *Debate: Ethics of Government Bailouts – Taxpayers' fund vs. Corporate negligence*

Synopsis: This debate examines the benefits and drawbacks of government bailouts for troubled, big corporations. This topic weighs the thousands of jobs that are saved by bailouts against the argument that tax payers' monies are wasted thanks to the reckless behavior of huge firms.

Individual Financial Misconduct

Section 3 features colorful personalities involved in investment scandals. This section focuses on conflict of interest, where the individuals concerned used their influence and network to trap investors into their investment schemes. This part also questions the ability of investors to identify fraudulent investments. Given the involvement of credible individuals, identifying such investments proved difficult, which resulted in massive financial scandals. The debate topic explores whether white-collar criminals are intrinsically bad as individuals or are merely influenced by the business organization culture. This section will feature the following topics:

- *Tom Petters' Fraudulent Scheme*

Synopsis: Tom Petters' case examines a US$3.65 billion fraud carried out by a prominent businessman through the sale of promissory notes to investors. This case explains how Petters fabricated purchase orders from retailers and used them as collateral to borrow money from hedge funds and how this misconduct remained undetected for years.

- *Allen Stanford's Magic Investments*

Synopsis: The Allen Stanford case discusses a Ponzi scheme totalling US$7 to US$8 billion. This case highlights the red flags that should be brought to the attention of managers and other employees, feeder fund managers, and others who typically interact with investment organizations.

- *Bernie Madoff's Ponzi Scheme*

Synopsis: The Bernie Madoff case shows how massive a US$65 billion

- L'implication de Martha Stewart dans un scandale de délit d'initié
- Les mauvaises conduites organisationnelles – Criminels en cols blancs vs. Faiblesse de la culture d'entreprise

La quatrième section parle de l'abus des instruments financiers à travers la sur-spéculation et le gain personnel. Cette section se concentre sur la mauvaise utilisation des produits financiers et sur l'information d'initiés au détriment de l'investissement public. Cette partie enquête aussi sur la capacité des régulations à détecter ces manipulations à cause de la nature secrète et interne des transactions. Le sujet du débat porte sur les questions éthiques entourant le prêt par carte de crédit. Cette section présentera les sujets suivants :
- Questions éthiques dans les transactions sur produits dérivés
- Le scandale de délit d'initié du groupe Galleon
- La crise des cartes de crédit: le cas de Taïwan
- Questions éthiques dans les prêts sur

scheme victimized thousands of investors for a long time. This case illustrates how a successful and a reputable individual, with legitimate success and stature, can be consumed by greed and use their status to start an illegitimate money management business.

- *Nick Leeson and Barings Bank's Demise*

Synopsis: The Nick Leeson case evaluates how one individual can cause the collapse of one of the world's oldest merchant banks. This case explains how a concealed US$1.4 billion loss in unauthorized trading and inadequacy in the bank's internal controls led to the demise of Barings Bank.

- *Martha Stewart's Involvement in an Insider Trading Scandal*

Synopsis: The Martha Stewart scandal is a celebrated insider trading case because of the involvement of a very popular TV personality. This case highlights the abuse of nonpublic information and the use of a private informant, which favored Stewart in an investment position over other investors.

- *Debate: Organizational Misconduct – White-collar criminals vs. Weak Corporate Culture*

Synopsis: This debate presents the argument that serious organizational misconduct can occur in a firm because corporate psychopaths occupy high executive positions and/or because the overall organizational culture is unethical.

Misuse of Financial Instruments

Section 4 talks about the abuse of financial instruments through over-speculation and personal gain. This section concentrates on the misuse of financial products and insider information to the detriment of the investing public. It also inquires into the ability of regulations to detect these manipulations, given the secretive and internal nature of the dealings. The debate topic focuses on the ethical issues surrounding credit card lending, examining the faults in the bank's lending practices and the irresponsibility of the borrowers. This section will feature the following topics:

- *Ethical Issues in Derivatives Trading*

Synopsis: This case explains the history of the risky, yet pervasive, financial instruments called derivatives. It also examines the use of investment instruments, the ethical implications involved, and the reasons why they can sometimes spiral out of control and create financial disasters.

- *Galleon Group's Insider Trading Scandal*

Synopsis: The Galleon Group case examines rampant criminal and unethical activity in the shape of insider trading. The scandal is considered one of the largest insider trading cases in U.S. history. This story of security fraud and conspiracy includes providing false information, withholding key information, and cartes de crédits (prêteurs vs. emprunteurs)

La cinquième section s'occupe de quelques cas classiques de scandales comptables qui ont choqué l'industrie financière. Cette section porte sur des manœuvres financières qui ont pour but de cacher les dettes et d'enregistrer des dépenses fictives. Cette partie soulève la question de la capacité des gardiens du système, particulièrement les auditeurs et les cabinets d'avocats à dénoncer les fraudes comptables. Le sujet du débat se concentre sur les avantages et les inconvénients d'avoir des liens personnels et/ou professionnels avec des auditeurs externes. Cette section présentera les sujets suivants :
- Fraude financière et comptable chez Enron
- Conflit d'intérêts chez Arthur Andersen
- Le scandale comptable de Worldcom
- Les pratiques comptables douteuses de Diamond Foods
- La fraude comptable chez Satyam Computers
- L'indépendance de l'auditeur: relation personnelle vs. profe-

offering bad advice to clients.

- *Credit Card Crisis: The Taiwan Case*

Synopsis: This case discusses the conduct of Taiwanese banks in dealing with bad credit card debts. The case takes a close look at indiscriminate lending practices and the ethics of targeting students and young professionals in marketing and approvals.

- *Debate: Ethical Issues in Credit Card Lending (Lenders vs. Borrowers)*

Synopsis: This debate presents the ethical issues in credit card lending. This topic highlights the indiscriminate and predatory lending of banks to non-creditworthy customers. This debate also argues the case that consumers did not carefully study the terms and conditions and are irresponsible borrowers.

Financial and Accounting Scandals

Section 5 deals with some of the classic accounting scandals that shocked the financial industry. This section focuses on financial maneuvers undertaken to hide debts and pad revenues. This part also questions the ability of gatekeepers, particularly auditors and law firms, to expose accounting frauds. The debate topic concentrates on the advantages and disadvantages of having a personal and/or professional relationship with external auditors. This section will feature the following topics:

- *Financial and Accounting Fraud at Enron*

Synopsis: The Enron case examines how a well-known and lauded company became plagued by unethical, and illegal, business and accounting practices, which resulted in its collapse. This case also explains how stakeholders and gatekeepers failed to stop Enron's business malpractices.

- *Conflict of Interests at Arthur Andersen*

Synopsis: The Arthur Andersen case highlights how conflict of interests at auditors can lead to the sacrifice of accounting standards. The case also illustrates the importance of maintaining corporate culture, values, and integrity in implementing effective reputation management.

- *Worldcom's Accounting Scandal*

Synopsis: The Worldcom case shows that manipulating accounts to flatter the company's financial results can lead to bankruptcy. The case shows that financial fraud can start out small but may snowball over time.

- *Diamond Foods' Questionable Accounting Practices*

Synopsis: The Diamond Food case illustrates how a company that embraces an aggressive corporate culture can allow ethical lapses in its financial accounting practices. The case examines the reputation of the company in making bold and

sionnelle
L'étude de cas du bonus explore les problèmes éthiques liés à la corruption dans des opérations d'affaires au niveau mondial. Cet environnement de haute technologie qui évolue rapidement, associé avec des différences culturelles régionales, incite les sociétés multinationales à recourir à la corruption pour accélérer les processus d'affaires. Ce cas illustre les difficultés de distinguer entre des cadeaux et des pots-de-vin dans les affaires.
La dernière section offre une synthèse des études de cas présentées ici. Elle cite les points principaux analysés dans les sections précédentes et explique comment différents problèmes contraires à l'éthique ont lieu en même temps qu'une activité frauduleuse spécifique.
Chaque sujet MOOC en éthique en finance sera traité en combinant l'explication de l'instructeur et des diapositives PowerPoint. Chaque vidéo comprendra deux épisodes d'environ six à huit minutes pour expliquer la vue d'ensemble de l'éthique en finance,

expensive acquisitions, a practice that eventually forced it to cut corners in the preparation of its books.

- *Accounting Fraud at Satyam Computers*

Synopsis: The Satyam case examines how Ramalinga Raju misrepresented the accounts of the company to the board, stock exchange, regulators, and investors. This case exposes another scheme of fraudulent auditing practice, this time in the Indian corporate setting. This one allegedly had the involvement of auditors and accountants.

- *Debate: Auditor Independence: Personal vs. Professional Relationship*

Synopsis: This debate presents the advantages and disadvantages when a business hires someone from their external auditing firm to be a consultant to the company and still continue the same level of auditing relationship. This topic weighs conflicts of interest against the big contribution such a consultant can make to the management of the finances of the firm.

Bonus Case: Ethical Issues Around Bribery in Global Business

This bonus case study explores the ethical issues surrounding bribery in global business operations. Today's business landscape is more dynamic than ever because of the increased role of social media and technology. This rapidly changing environment, coupled with regional cultural differences, has prompted some multinational corporations to resort to bribery to oil the wheels. This case study illustrates the difficulties of differentiating between gifts and bribes when business is done on a global scale. However, the bribery trend is leading to heightened government enforcement of anticorruption regulation and to more comprehensive anticorruption compliance programmes. This case study offers a significant understanding of the issues that affect the short- and long-term growth plans of firms operating abroad and of the use of bribes to achieve them.

Review of Finance Ethics Case Study

The final section provides a synthesis of the case studies covered. This part brings together the major points covered in the previous sections and explains how a specific fraudulent activity can trigger a variety of ethical problems simultaneously. The review will also talk about potential issues that may arise in the field of Finance Ethics, in particular how cryptocurrencies and financial technology (fintech) are quickly emerging as possible alternatives to traditional ways of carrying out financial transactions.

MOOC-based Finance Ethics Delivery

Similar to the delivery of MOOCs, each topic will be delivered through a combination of instructor explanation and PowerPoint slides.

les principaux problèmes et les études de cas, ainsi qu'un résumé final du sujet abordé. Une discussion de cinq à sept minutes sera consacrée à la présentation de deux aspects des sujets du débat. Étant donné le nombre de sujets à choix dans ce cours en ligne, les instructeurs pourront proposer ces MOOC en éthique en finance en deux parties et diviser les sujets selon la préférence des conférenciers. Les instructeurs pourront aussi inclure des scandales financiers plus récents afin de maintenir ce cours en ligne à jour.

Certaines méthodes pédagogiques et des processus organisationnels spécifiques peuvent aussi être utilisés pour produire une expérience d'apprentissage en ligne de haute qualité en plus de la méthode habituelle d'évaluation par les pairs.

Pour les examens, trois questions peuvent être posées pour chaque présentation vidéo et une question de réflexion peut être formulée pour chaque sujet de débat et le résumé final des sujets

The script and discussion for each case study, and for the debate topics, will be based on independent research carried out by the main instructor, with support from teaching or research assistants. Each video will have two installments, of about 6 to 8 minutes each, to explain the overview of Finance Ethics, the main issues of the case studies, and the final summary of the topics discussed. Discussion of 5 to 7 minutes will be devoted to the presentation of two sides of the debate topics. This video duration follows the study of Guo (2013), which suggests that student engagement time maxes out at 6 minutes and that optimal video length should be 6 to 9 minutes.

Given the number of suggested topics in this proposed online course, instructors could deliver this Finance Ethics MOOC in two parts and divide the topics depending on lecturer preferences. For example, instructors could consider grouping topics under Sections 2 and 3 as Finance Ethics I, and have Sections 4 and 5 as Finance Ethics II. Although topics were arranged in a certain way as outlined above, online students can also create their own individualized learning experience by taking alternative routes through the cases and debate topics. Instructors can also include more recent financial scandals (e.g., the Wells Fargo Fake Accounts Scandal, and Toshiba Accounting Scandal) to make this online course more up-to-date. Some of the case studies covered in this proposed online class might be covered in other online classes of respective students. That is, university students might use this MOOC-based Finance Ethics course as a supplemental resource in their traditional Business Ethics classes, or any related course.

Online Assessment and Completion

Certain pedagogies and specific organizational processes can also be put in place to ensure the delivery of a high-quality online learning experience. This is aside from the usual peer-assessment method that is common for MOOC-based courses. For example, an online Teaching Assistant (TA) can help in facilitating discussions and in realigning the answers of students by providing the key points of the every topic explained. Academic institutions can also require faculty members to allot 4 to 6 hours of their time a week to monitor and assess the learning of their online students. This method will also be more efficiently done with the help of the TA, and can overcome the criticism that there is too little formal quality assurance in MOOCs as mentioned by Daniel (2012). This solution can also offer opportunities for nontraditional teaching approaches and learner-centered pedagogy to become more dynamic where faculty members, TAs, and students can learn from each other's views.

With regard to examinations, three questions can be asked for each video presentation on topics related

peut être discuté.
La forme la plus significative d'assurance de qualité et d'amélioration de ces cours MOOC en éthique en finance viendra des réflexions et des évaluations informelles des étudiants en ligne. Ces communautés d'élèves en ligne peuvent aussi faire du « crowdsourcing » de leurs avis et réponses aux problèmes. On peut délivrer des certificats de formation à certains participants qui pourront même obtenir des crédits académiques officiels s'ils ont achevé avec succès ce cours en ligne d'éthique en finance.

Les cours en ligne ouverts à tous ont inauguré une nouvelle ère dans l'enseignement supérieur et ont permis aux établissements académiques et aux fournisseurs indépendants d'explorer de nouvelles voies pour l'apprentissage. Le MOOC en éthique en finance fournit une manière d'apprendre les problèmes éthiques en lien avec l'industrie financière de façon accessible, flexible et gratuite ou bon marché (selon le fournisseur).

to the overview of Finance Ethics and case studies to measure the degree of understanding of online students. One reflection question can be asked for each debate topic and the final summary of the topics discussed, to determine the opinions and degree of understanding of the learners. The most significant form of quality assurance and enhancement in this MOOC-based Finance Ethics course will come from the reflections and informal evaluations of online students who put answers on the comments of participants using the MOOC platform of the university or independent providers.

These online communities of learners can also crowdsource their opinions and answers to problems. Such an approach can form networks or groups that create additional learning channels, which seldom occur in the traditional classroom setting in universities. Depending on the MOOC platform of the university or an independent provider, online participants can be given Certificates of Accomplishment and may even be able to gain official academic credits upon the successful completion of this online Finance Ethics course.

Conclusions

Open online courses ushered in a new age of innovation in higher education. They allowed academic institutions and independent providers to explore new ways of providing online learning and creative practices in teaching a wide range of learners. This innovation also solves the problem of inaccessible and expensive education and the bigger problem of illiteracy. In the aftermath of the subprime mortgage crisis of 2008, there was a new wave of concern about how best to rethink the way in which the financial services industry operates. The economic crisis also raised questions about the learning we gained from the notorious set of financial and accounting scandals in the early 2000s. A MOOC-based Finance Ethics course has a huge potential to combine these two strands by introducing a stronger ethics in finance course to the higher education curriculum. This online Finance Ethics course can provide accessible, flexible, and free or low-cost (depending on the provider) way of learning about the ethical issues surrounding the financial services industry. Online learners can simulate, and practice dealing with, ethical heterogeneity based on real-life case studies of companies and individuals. This course can also serve as an avenue to discuss the role of ethics in finance based on individual and corporate practices, and how such activities can be understood in a more comprehensive way through ethics.

All stakeholders concerned should ponder the causes of the recent crisis and of past and present financial scandals. They should also rethink the ethical role that finance and accounting practice plays in the sustainable future of the industry. Given the third installment

Les élèves en ligne peuvent simuler et pratiquer l'hétérogénéité éthique basée sur des études de cas réelles. Ce cours peut aussi servir à discuter le rôle de l'éthique en finance basée sur des pratiques individuelles et d'entreprises, et comment de telles activités peuvent être comprises d'une façon plus complète à travers l'éthique.

of the Basel Accords (a.k.a. the Basel III regulations), banking has been under scrutiny again for questionable activities, as well as some related auditing practices. However, financial regulations do not totally solve the complications that arise from unethical practices. In fact these regulations even created unexpected problems as they can lead to a restrictive and anticompetitive business environment. Criticisms should be analyzed and alternatives should be presented to incorporate ethics in support of profitability and efficiency, and to educate and empower professionals in the world of finance to align financial prosperity with personal integrity. The long-term solution is to produce skilled and ethical financial practitioners through Finance Ethics education. That would create massive and sustainable positive transformation in the financial services industry. Through this online Finance Ethics course, students would be expected to gain a holistic understanding of how sound ethics and strong professionalism can contribute to the financial viability of an individual, company, and society.

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Appendix

Course Objectives:

The Finance Ethics online course offers an introduction to the ethical issues in modern finance, and helps finance students and practitioners approach the relatively new discipline of Finance Ethics. This online course achieves its learning objectives through the use of case studies related to financial companies and related financial and accounting issues.

The opening topic discusses the definition, importance, promotion and essential concepts about Finance Ethics. The course will feature video summaries of seventeen case studies including *a)* four debates on ethical questions in relation to government bailouts, white-collar criminals, credit card lending malpractices, and auditor independence; and *b)* a bonus case on the interesting issue of bribery in global business will be also featured.

Case study topics were divided in four different sections: first is on cases related to ethical risks in the financial industry; second is conflict of interests and individual misconducts; third is about the misuse and manipulation of financial instruments; and lastly, there are cases about unethical accounting practices. Each main section will provide a review to cover the main contents of each case study and debate. The final topic summarizes the case studies discussed, and talks about the future and potential issues in the field of Finance Ethics.

At the end of the course, students are expected to:

- identify moral struggles of individuals and ethical problems of business organizations related to finance
- propose solutions and design new strategies in solving and preventing future ethical misdeeds;
- be empowered to properly face unethical practices in the workplace, and be a catalyst for sustainable changes in the financial industry

Finance Ethics MOOCs Content:

1. **Finance Ethics definition, importance and promotion**

2. Financial Industry Blunders

- AIG's weak financial oversight
- Countrywide Financial's contribution to the subprime mortgage crisis
- Taiwan's asset management corporation's ethical issues
- The collapse of Lehman Brothers
- *Debate:* Ethics of government bailouts – taxpayers' fund vs. corporate negligence
- *Section Review*

3. **Individual Financial Misconduct**

- Tom Petters' fraudulent scheme
- Allen Stanford magic investments

- Bernie Madoff ponzi scheme
- Nick Leeson and the demise of Barings Bank
- Martha Stewart's involvement in insider trading
- *Debate:* Organizational misconduct:white-collar criminals vs. weak corporate culture
- *Section Review*

4. Misuse of Financial Instruments

- Credit card crisis: the Taiwan case
- Ethical issues in derivatives trading
- Galleon Group's insider trading scandal
- *Debate:* ethical issues in credit card lending (lenders vs. borrowers)
- *Section review*

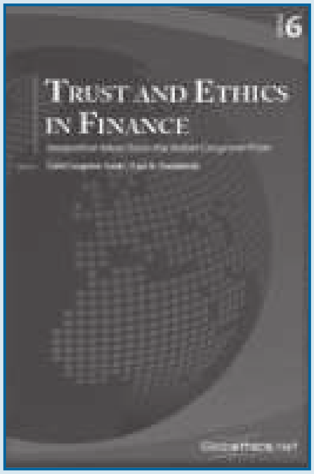
5. Financial and Accounting Scandals

- Financial and accounting fraud at Enron
- Conflicts of interest at Arthur Andersen
- Worldcom's accounting scandal
- Diamond Foods' questionable accounting practices
- Accounting fraud at Satyam Computers
- *Debate:* auditor independence – personal vs. professional relationship
- *Section Review*

6. **Bonus Case:** Ethical issues in global bribery in business

7. Finance Ethics Case Study

Review



Trust and Ethics in Finance Innovative ideas from the Robin Cosgrove Prize 2006-2011

Carol Cosgrove-Sacks and Paul H. Dembinski (eds)
Published by Globethics.net

The values that guide finance professionals and the core role played by trust in the modern finance industry have been the dominant themes of the best papers submitted for the Robin Cosgrove Prize since it was launched in 2006. Inviting young people to submit innovative ideas to advance ethical approaches to the world of finance in its many manifestations has stimulated a global debate on the role of ethics and integrity in finance.

It is important to note that the prize was launched before the topic of ethics in finance became fashionable. It is not a reactive exercise to the current crisis. The aim is to prompt a shift in thinking throughout the world of finance the fresh ideas submitted for the prize have global relevance. The twenty-three essays in this volume come from young researchers on six continents; their innovative ideas will contribute to future-oriented ethical solutions.

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Observatoire de la Finance

Observatoire de la Finance

The Observatoire de la Finance was set up in response to a question raised in the early 1990s: what is the purpose of financial markets? The report entitled *Financial markets: mission impossible?*, which was published in 1993, led three years later to the establishment of the Observatoire de la Finance.

Today, the Observatoire de la Finance is a *think tank* that provides a link between financial techniques and practices and the demands of the common good. In doing so, it endeavours to clarify what is happening, and then investigates why. The Observatoire de la Finance is an independent, apolitical and non-religious body.

The Observatoire's activities are aimed at:

- *Developing and formulating ideas.* The Observatoire engages in inquiry and multidisciplinary diagnosis regarding selected aspects of the economy and finance and their relationship to society.
- *Proposing new leads and views.* Following this process of inquiry, the Observatoire compares, tests and refines the various diagnoses and the most promising avenues in consultation with the operators and institutions concerned.
- *Launching a dynamic process* to enhance the ethical content of the technical debate.

Director of the Observatoire de la Finance: Prof. Paul H. Dembinski

Members of the Board of the Observatoire de la Finance:

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Andrew Hilton - London

Anthony Travis - Geneva

Over the years, the high standard of its work and its ability to initiate dialogue and collaboration have given the Observatoire benchmark status in the field of financial responsibility and ethics. At a time of growing concern about ethics and sustainability, the Observatoire has acquired a degree of skill and credibility which it plans to develop further and make available to its partners and the general public.

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A lack of ethics, coupled with individual ignorance about how complex financial markets function, was at the heart of the financial crisis of 2008. While much has been done to re-balance and address failings of the past, there is still much work ahead for the industry. Restoring tarnished reputations should be tackled collectively to bring back trust in our capital markets. At Euroclear we feel well placed to co-operate with industry peers, clients, regulators and others stakeholders to win back hard-earned trust in our industry. Our reputation for integrity, honesty and fairness, and our values, are at the heart of who we are. We are a trusted capital market infrastructure provider with a strong corporate reputation in the global financial markets, and we are honoured to be associated with the Ethics & Trust in Finance Prize - a key catalyst for our business leaders of the future to debate the burning ethical issues of today.

Martin Gregson, Head of Compliance & Ethics Awareness, Communications and CR - Euroclear

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