Introduction to the *Research Handbook of Finance and Sustainability*

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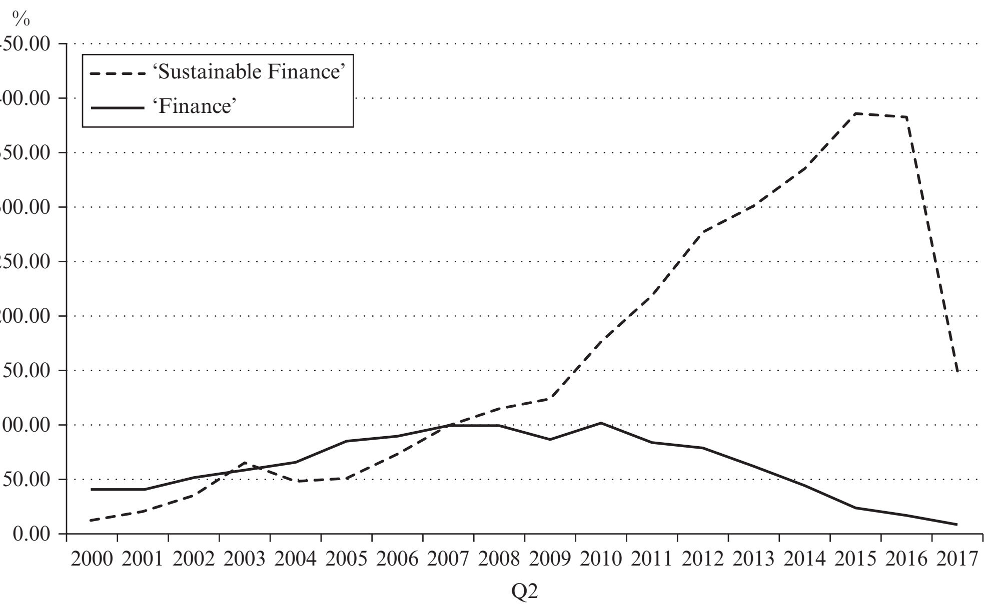
Research on sustainable finance is on the rise, while research on finance in general is on the decline. Since the global financial crisis in 2008–10, research on finance in general has dropped off by 84 per cent in respect of new research articles as tracked by Google Scholar. By contrast, research on sustainable finance has increased by over 380 per cent (Figure 0.1). There are a variety of potential explanations for these changes, including a growing awareness that finance goes hand in hand with matters of social responsibility and sustainability, and the difficult aftermath of irresponsible finance that led to the recent global financial crisis.

In this handbook, we explore some of the exciting new topic areas in sustainable finance. The handbook is organized into four parts. Part I covers matters pertinent to corporate social responsibility in seven chapters. Part II examines the intersection between environmental and entrepreneurial finance in nine chapters. Part III comprises



Note: This figure reports Google Scholar hits for 'sustainable finance' and 'finance' over the years 2000–2017(Q2). The hits are indexed to 2007 at 100 per cent where there were 213 hits for sustainable finance and 829 000 hits for finance.

Figure 0.1 Google Scholar hits for 'sustainable finance' and 'finance' nine chapters on topics pertinent to governance and sustainable finance. Part IV presents six chapters of material related to sustainability, fraud, and agency problems. Overall, the handbook comprises 31 chapters from 62 authors around the world.

The book begins in Part I with a study by Shawn Pope, Chapter 1, 'The horn that didn't toot: The surprisingly weak relationship from advertising to CSR'. There are theoretical and political reasons to expect a relationship between advertising and corporate social responsibility (CSR). Among other things, CSR may have a marketing benefit. However, the empirical evidence from nearly 30 studies shows the opposite. New evidence from an international panel is further offered in Chapter 1, which shows very weak evidence of a link between advertising and CSR. The evidence examined in Chapter 1 is consistent with a variety of other motivations for CSR adoption.

Chapter 2 by Stevan Bajic and Burcin Yurtoglu covers the topic 'CSR, market value and profitability: International evidence'. The authors note that there are three challenges – construct validity, limited data, and endogeneity – in the study of the link between CSR, firm value, and profitability. The authors resolve these issues by providing new evidence from a panel of 35 countries over the years 2003–12, and find that there is a strong relation between CSR and firm value but scant evidence of a relation between CSR and profitability.

Chapter 3 by Hao Liang and Luc Renneboog titled 'Is corporate social responsibility an agency problem?' shows that CSR investments are more likely in firms with high levels of managerial discipline in terms of corporate investing, and in better legal environments. Also, they show that there is a positive relation between CSR and firm value as proxied by Tobin's Q.

Chapter 4 by Sylvain Marsat, Guillaume Pijourlet, and Benjamin Williams is titled 'Disentangling financial and ethical effects of corporate social responsibility on firm value'. The authors use an experimental design where subjects are asked to assess stocks. There is a tendency for respondents to overvalue stocks of a company with an AAA CSR rating compared to when they do not have access to this information, and this overvaluation is large (one-third on average). Conversely, subjects did not penalize a poor CSR rating with a lower valuation.

Chapter 5 by James Hazelton and Stephanie Perkiss examines 'How useful are CSR reports for investors? The problems of comparing environmental and social disclosures'. The authors consider issues of aggregation and comparability reporting in the context of energy, water, human rights, and corporate political donations. They show that contextual comparable information is needed, not mandatory reporting standards, to properly convey information about CSR to investors.

Chapter 6 on 'Corporate social responsibility and firm innovation' by Dongyoung Lee examines whether CSR is associated with corporate innovation (patents and patent citations). He finds that CSR engagement in both environment and employment areas is, *ceteris paribus*, a main driver of the positive association between CSR and patents.

Chapter 7 by Zhichuan (Frank) Li conducts 'A survey of corporate social responsibility and corporate governance'. The chapter provides an overview of the evidence on agency and value-added activities of CSR, with a focus on specific mechanisms that include board monitoring, executive compensation, institutional ownership, accounting and auditing, firm culture, and law and regulations.

Part II of this book covers topics in environmental and entrepreneurial finance, and begins with Chapter 8 on 'The birth of environmental finance' by Huy Pham and Vikash Ramiah. The authors explore the origins of the different sources of literature from economics and accounting as they extend to finance.

Chapter 9 covers the question 'Can entrepreneurship be sustainable without being sustainability-driven? Some historical perspective' by Erwan Queinnec and Pierre Desrochers. They focus on the junction of sustainability, market processes and entrepreneurship. While sustainable entrepreneurship has numerous benefits for firms and markets, there is a need to be aware of market failures. The authors focus on the case of industrial waste recycling in the nineteenth century to illustrate how green entrepreneurial opportunities can improve standards of living and remediate environmental harm.

Chapter 10 by Frank M. Werner and James A.F. Stoner reviews the 'Sustainability and the evolution of the shareholder wealth maximization paradigm'. While the Shareholder Wealth Maximization (SWM) paradigm is a foundation of most finance theory and practice, its pursuit has led to significant environmental damage. The authors argue that the SWM paradigm will need to evolve to explicitly incorporate sustainability.

Chapter 11 titled 'Issue spread determinants in the green bond market: The role of second party reviews and of the Green Bond Principles' by Stefano Gatti and Andrea Florio documents the massive growth in the green bond market ($US72 billion in 2015). The authors also empirically analyse these bonds and the determinants of the spreads on these bonds. The authors show that the Green Bond Principles enabled lower-quality bonds to enter the market, and that second party reviewers lowered spreads.

Chapter 12 by Hans Byström examines 'Structured microfinance in China'. It is argued that there is significant potential for commercial microfinance in China for three reasons: (1) scant currency risk, (2) significant scale advantages, and (3) the significant interest from local and international financial firms. There would be a number of policy implications of structured microfinance in China, including reducing unemployment, and circumventing corruption and government bureaucracy.

Chapter 13 by John Creedy and Hien Hoang focuses on 'Microfinance and joint liability lending'. In particular, the authors provide a theoretical analysis of the benefits of group lending (where two or more borrowers are liable for repayment) as a way to deal with adverse selection, moral hazard, and contract enforcement.

In Chapter 14, the issue of 'Microfinance as an alternative to the imperfections of the financial system' is considered by Isabel Sainz-Fernández, Begoña Torre-Olmo, and Carlos López-Gutiérrez. The authors explain the advantages of microfinance relative to traditional finance. They consider the economic and social objectives of microfinance, and the intersection between traditional finance and microfinance.

In Chapter 15, Jennifer Walske, Mariarosa Scarlata, and Andrew Zacharakis engage in 'Comparing founders' specific human capital in traditional versus philanthropic venture capital firms'. The key difference between philanthropic and traditional venture capital is in the social returns sought by philanthropic venture capitalists. The authors show that the philanthropic venture capitalists are more experienced in government, social enterprise management, and social startup experience.

Chapter 16 by Guldem Gokcek provides an 'Examination of the relationship between venture capital and economic growth in emerging markets'. In view of the structural and institutional differences between emerging and developed markets, it is not necessarily the case that the value-added of venture capitalists in developed markets will likewise be the same as in emerging markets. Chapter 16 therefore explores differences in the motivations and success of venture capital in emerging markets.

Part III of this book encompasses Chapters 17–25, which cover topics in governance and sustainable finance. In Chapter 17, Walid Ben-Amar, Philip McIlkenny, and Karim Mhedhbi pose the question 'What explains voluntary corporate carbon disclosures in emerging markets?' The authors focus on carbon disclosure in four emerging markets (Brazil, India, Turkey, and South Africa). The data examined shows a positive link between country-level transparency standards, firm-level financial performance, and cross-listings in the United States.

Chapter 18 by Michael S. Pagano, Graham Sinclair, and Tina Yang is titled 'Understanding ESG ratings and ESG indexes'. Ratings for environmental, social and governance (ESG) investment are proliferating. The authors explain the history of these ratings, and their methods, strengths, idiosyncrasies, and weaknesses. Further, the authors evaluate the impact of these ratings on investors, corporations, and corporate managers.

Chapter 19 by Imad Moosa and Vikash Ramiah considers the intersection between 'Environmental regulation, financial regulation and sustainability'. The authors show how each type of regulation is pertinent to the other, and how these regulations affect decision making, financial stability, and sustainable investment.

Chapter 20 by Brian Bolton and Carolyn Niehaus reviews 'Impact investing in social enterprises'. The authors focus on the positive role of crowdfunding and changes in crowdfunding regulation in May 2016 in the United States that enable better access to social impact capital.

Chapter 21 by Carolin Schellhorn focuses on 'The low-carbon transition and financial system stability'. The Paris Agreement on climate gives rise to stringent standards, and firm-level responses may not be feasible if firms are not fully prepared. If left on their own without government intervention, there could be economic instability. The role of government and financial public policy in achieving these climate outcomes is discussed.

Chapter 22 by David A.L. Coldwell examines 'Environment, economics and ethics: Towards an integrated model of "strong" corporate sustainability'. The chapter focuses on resource-exploitive, resource-conservationist, resource-preservationist and extreme preservationist perspectives in corporate sustainability. The analysis considers sustainability that incorporates environmental, economic, and intergenerational equity.

Chapter 23 by Roberto Bianchini and Gianfranco Gianfrate evaluates 'Climate risks and the practice of corporate valuation'. The authors examine the change in the global landscape and the relevance of climate change for equity value across different industries and jurisdictions. An alternative set of valuation models are considered, including scenario-based valuations, Monte Carlo simulations, decisional trees, and real options.

Chapter 24 by Zuraida Zuraida, Muhammad Nurul Houqe, and Tony van Zijl also considers the 'Value relevance of environmental, social and governance disclosure'. The authors examine a large sample of firms across 38 countries from 2008 to 2012. The data examined show a strong value relevance of ESG disclosure. This value relevance is stronger in common law countries.

Chapter 25 by Anthony Ng and Zabihollah Rezaee explores 'The emergence of business sustainability: Educational, practical and research implications'. The authors examine over 12 000 public companies worldwide in terms of their sustainability reports on economic, governance, social, ethical and environmental (EGSEE) dimensions of sustainability. The authors evaluate the trends in the types of reporting, and systemic gaps in terms of challenges and opportunities for practitioners and sustainability education.

Part IV, the final section of this book, covers topics in fraud, governance, and agency problems. Chapter 26, by Yan Alperovych, Riccardo Calcagno, and Philipp Geiler, reviews 'Corporate governance and fraud: Causes and consequences'. The chapter surveys the literature on fraud and the role of governance in mitigating the frequency and severity of fraud. Future research and policy recommendations are discussed.

Chapter 27 by Eswaran Velayutham considers the relation between 'Sustainability disclosure and earnings management'. While earnings management has become commonplace, it is helpful to remember that it is akin to financial misreporting over time. The chapter considers ethical and opportunistic orientations of the relation between sustainability disclosure and earnings management, and the pressure that sustainability disclosure can have on earnings management.

Chapter 28 by Suhee Kim, Karen Maas, and Paolo Perego analyses 'The effect of publication, format and content of Integrated Reports on analysts' earnings forecasts'. Integrated reporting incorporates financial and sustainability information in the same report. The authors examine 156 integrated reporting firms across 18 countries in 2014 and 2015, and find evidence of improved forecasts and reduced uncertainty about a firm's information environment, thereby enabling more accurate analysts' forecasts.

Chapter 29 by Sunghan Ryu studies 'Crowdfunding as a two-sided platform: Development of a Crowdfunding Participation Model'. The chapter focuses on the role of the platform in connecting entrepreneurs with their potential funders in the crowd. Particular attention is paid to the characteristics of the campaign creators, and how contributor motivations intersect with these characteristics and actual funding outcomes.

Chapter 30 by Dina Al-Ghamdi, Tahir M. Nisar, Guru Prakash Prabhakar, and Lubica Strakova examines 'Crowdsourcing, co-creation and crowdfunding in the video-game industry'. In particular, it focuses on collaborative approaches in crowdfunding and explores whether value and risk exist for both firms and customers when collaborating during the development process in the video-game industry. The authors base their analysis of two separate case studies on contemporary approaches for understanding user collaborative activities; these approaches are also further developed and critiqued during the course of the research. The authors also consider the risk and value perspectives of collaboration in crowdfunding.

Finally, Chapter 31, by Antoine Rebérioux and Gwenaël Roudaut, looks at 'How to foster responsible corporate governance? Voluntary versus legislative approaches'. The chapter focuses on how French listed companies (SBF 120) complied with the AFEP-MEDEF code of corporate governance, which pertains to board independence and mandatory board gender quotas. The authors review theory and evidence of the role of independent directors and gender-diverse boards in facilitating better governance and mitigating fraud and other agency problems. Policy and regulatory options are discussed.

All these topics are important to a variety of stakeholders ranging from students, academics, practitioners, and policy makers. The issues covered show the importance of corporate social responsibility and sustainability to a firm's stakeholders, ranging from investors to employees for firms in different social and political environments around the world. Sustainability is critical for finance and innovation, entrepreneurship, and entrepreneurial finance. Firms that adopt successful sustainability strategies are more likely to be successful in the twenty-first century. The wide array of issues to reflect upon are considered in detail in this handbook.

We are indebted to the excellent commitment of the authors of the chapters in this handbook. We hope that these chapters inspire firms and their stakeholders to engage in more innovative ways to develop sustainability and finance, and to make use of the financial value improvements associated with a sustainable approach. Likewise, we hope these chapters inspire further research on these topics so that we are all better informed and inspired by this important and growing research area.