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The Financial Sector and the SDGs

Interconnections and Future Directions

Olaf Weber

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Governance Innovation

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CIGI Masthead

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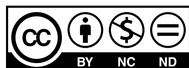

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About the Author

Olaf Weber joined CIGI as a senior fellow in March 2015. His research with CIGI focuses on sustainability and the banking sector, including sustainability guidelines and regulations for central banks and regulatory bodies. He is currently associate professor and program director of the Master's Program in Sustainability Management as well as professor in the School of Environment, Enterprise and Development at the University of Waterloo. Since 2010, Olaf has held the Export Development Canada Chair in Environmental Finance.

Olaf's background is in the areas of environmental and sustainable finance, with emphasis on sustainable credit risk management, socially responsible investment, social banking and the link between sustainability and financial performance of enterprises. His current research interests include financial risk and opportunities caused by climate change and environmental regulations.

Previously, Olaf was managing partner at GOE in Zurich, Switzerland, developing credit risk management and sustainability rating systems, and was head of the sustainable finance group at the Swiss Federal Institute of Technology, Zurich. He earned his Ph.D. from the Technical Faculty, University of Bielefeld, Germany and his M.A. from the Department of Psychology, University of Mannheim.

About the Global Economy Program

Addressing limitations in the ways nations tackle shared economic challenges, the Global Economy Program at CIGI strives to inform and guide policy debates through world-leading research and sustained stakeholder engagement.

With experts from academia, national agencies, international institutions and the private sector, the Global Economy Program supports research in the following areas: management of severe sovereign debt crises; central banking and international financial regulation; China's role in the global economy; governance and policies of the Bretton Woods institutions; the Group of Twenty; global, plurilateral and regional trade agreements; and financing sustainable development. Each year, the Global Economy Program hosts, co-hosts and participates in many events worldwide, working with trusted international partners, which allows the program to disseminate policy recommendations to an international audience of policy makers.

Through its research, collaboration and publications, the Global Economy Program informs decision makers, fosters dialogue and debate on policy-relevant ideas and strengthens multilateral responses to the most pressing international governance issues.

Acronyms and Abbreviations

FC4S	International Network of Financial Centres for Sustainability
GRI	Global Reporting Initiative
IFC	International Finance Corporation
LDCs	least developed countries
MDBs	multilateral development banks
MDGs	Millennium Development Goals
NGO	non-governmental organization
ODA	official development assistance
PRI	Principles for Responsible Investment
SASB	Sustainability Accounting Standards
SDGs	Sustainable Development Goals
SIBs	social impact bonds
SRI	socially responsible investment
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNEP FI	United Nations Environment Programme Financial Initiative

Executive Summary

The Sustainable Development Goals (SDGs) are a recent framework that defines the main goals to achieve sustainable development until 2030. The SDGs combine major social and environmental goals to achieve sustainable development and address environmental issues much more prominently to protect the life-support systems necessary for sustainable development. Furthermore, they connect sustainable development and sustainable business issues, such as responsible production and consumption, while still promoting economic growth to create decent workplaces. It is estimated that $5 to $7 trillion will be needed annually until 2030 to achieve the SDGs. The World Bank estimated that domestic governments would provide between 50 and 80 percent of the funding for the SDGs and that the remaining funds should come from investors. Hence, the SDGs might be an opportunity for the financial industry to further establish sustainability principles and to engage in financing sustainable development. To engage the banking industry in financing the SDGs, this paper recommends that the banking industry enhance current financial sector codes of conduct by integrating the SDGs; align existing sustainable finance strategies with the SDGs; standardize SDG accounting and reporting to identify strengths and weaknesses of, as well as risk and opportunities for, the banking industry in addressing the SDGs; and develop innovative financial products that address the SDGs. Furthermore, it recommends that governments and financial regulators align financial regulation with sustainable development and the SDGs; offer financial mechanisms to mitigate financial risks in addressing the SDGs; and align development banks with the SDGs.

Introduction

Although estimates of the amount required vary, there is no doubt financing is needed to achieve the SDGs adopted by the United Nations in 2015. On the other hand, the SDGs might be a huge market opportunity for businesses (Elkington 2018). This paper will first describe the financing needs of sustainable development and the SDGs in order to achieve the SDGs until 2030. Second, it will contrast the SDGs with the banking industry's current sustainability approaches. Finally, it will present some policy recommendations to achieve the financing needed to achieve the SDGs.

Sustainable Development

The notion of sustainability and sustainable development became increasingly popular after the report of the World Commission on Environment and Development (chaired by Gro Harlem Brundtland), *Our Common Future* (also known as the Brundtland report) was published in 1987. This report described sustainable development as meeting the needs of the present without compromising the ability of future generations to meet their own needs. The report also emphasized the balance between north and south and bringing together the environment and development. The concept was a response to the growing contradiction between conserving the environment and promoting the economic growth needed to improve the situation of people in developing countries. In 1992, the UN Earth Summit passed Agenda 21, which integrates environmental and economic goals. Agenda 21 addresses social and economic dimensions, conservation and management of resources for development; strengthens the role of major groups; and describes the means of implementation (Selman 1998).

Twenty years later, the United Nations Conference on Sustainable Development, or Rio+20, focused even more on the economic aspects of sustainable development. Instead of trying to mitigate the negative impacts of economic development needed to eradicate poverty, the so-called green economy is expected to create positive environmental impacts in tandem with economic development (Barbier 2011; United Nations Environment Programme [UNEP] 2011). Hence, through engagement in the green economy, businesses, including the financial industry, could contribute positively to sustainable development instead of just mitigating negative impacts. Consequently, the business sector has been playing an increasingly important role in addressing environmental and social sustainability. One example of the new role of business with regard to sustainable development is

the engagement of the World Business Council on Sustainable Development during the Twenty-first Session of the Conference of the Parties. Businesses have been a major driver for addressing climate change for some years. Currently, they play an important role with regard to addressing climate change through developing codes of conduct and other activities, such as initiatives to account for the sustainability impacts of businesses. The same is true for the financial industry — the UNEP Finance Initiative (UNEP FI), a group of more than 100 banks from across the globe, recently came up with a positive impact manifesto outlining the positive contribution the industry could have on sustainable development (UNEP FI 2016).

Sustainability is an integrative approach. As described above, it addresses environmental and development issues and also economic, societal and environmental aspects. One of the most famous sustainability approaches connecting the economy and businesses with environmental and societal concerns is the triple-bottom-line concept, first described by John Elkington (1998) in his book *Cannibals with Forks*. This concept proposed that businesses should not only focus on a single bottom line, the financials, but also on environmental and societal impacts. Doing so, according to Elkington, will create a win-win situation for businesses, the environment and society. Although there is some criticism about how and whether it is possible to address the triple bottom line (Hacking and Guthrie 2008; Vanclay 2004), the concept is widely used in business, for instance, by the World Business Council on Sustainable Development, and is one of the basic concepts of the Global Reporting Initiative (GRI). Also, the shared value approach, developed by Michael E. Porter and Mark R. Kramer (2011) is based on the triple-bottom-line approach of sustainability and claims that businesses can only be successful if they address sustainability concerns.

Sustainability is also used in finance and banking. In 1999, Jan Jaap Bouma, Marcel Jeucken and Leon Klinkers published their book *Sustainable Banking: The Greening of Finance*, which related sustainable finance to mainly environmental risks and opportunities, such as cost savings through reduced resource use. Ali M. Fatemi and Iraj J. Fooladi (2013) addressed the emphasis on short-term results of conventional finance and investment and stated that sustainable finance should account for all social and environmental costs and benefits. Since then, however, sustainable finance and investing have been more connected with long-term and stable financial returns. Different types of sustainable finance, such as socially responsible investing and impact investing, are discussed below in more detail.

The SDGs

The SDGs, approved by the United Nations in 2015 (Sachs 2012), are the successor of the Millennium Development Goals (MDGs). The MDGs mainly addressed development issues, such as poverty and hunger, education, gender equality, child mortality, maternal health and global diseases (such as HIV and malaria), while ensuring environmental sustainability. They were founded in 2000 and were more focused on individual problems than on integrating different goals. Furthermore, the MDGs missed addressing the triple bottom line and the need to stay in the safe operating space for the global environment (ibid.).

The SDGs combine major social and environmental goals to achieve sustainable development and address environmental issues much more prominently to protect the life-support systems necessary for sustainable development. Furthermore, they connect sustainable development and sustainable business issues, such as responsible production and consumption, while still promoting economic growth to create decent workplaces. As Jeffrey D. Sachs (2012) described it, the SDGs focus on the triple bottom line plus good governance. Hence, the new definition of sustainable development based on the SDGs is the following: “Development that meets the needs of the present, while safeguarding Earth’s life-support system, on which the welfare of current and future generations depends” (Griggs et al. 2013, 305).

The primary reason for addressing environmental issues are findings that global development might exceed global environmental limits if it is conducted without taking planetary boundaries into account. Recent publications suggest that planetary boundaries for genetic biodiversity and nitrogen flows are already crossed.

Furthermore, land-system changes and climatic change are likely to cross those boundaries

(Griggs et al. 2013; Rockström et al. 2009; Steffen et al. 2015). Losing life-support systems, such as land and biodiversity, however, meant that many other goals could not be achieved or will be harder to achieve. One example is climate change. Climate change might affect alleviating hunger because of extreme weather events that might increase the risk of floods and droughts, which might have a negative impact on the agriculture required to provide food. Therefore, goal 7 of the MDGs, ensure environmental sustainability, has been split into four goals addressing the environment (goals 7, 13, 14 and 15). Finally, the SDGs address the impact of the economy on the environment through goal 12, responsible consumption and production. The SDGs accept that the main pillars of economic growth, namely consumption and production, have to be conducted responsibly.

The SDGs consist of 17 goals that address both development and the environment. The goals are presented in Table 1.

Table 1: SDGs

Goal 1: No poverty
Goal 2: Zero hunger
Goal 3: Good health and well-being
Goal 4: Quality education
Goal 5: Gender equality
Goal 6: Clean water and sanitation
Goal 7: Affordable and clean energy
Goal 8: Decent work and economic growth
Goal 9: Industry, innovation and infrastructure
Goal 10: Reduced inequalities
Goal 11: Sustainable cities and communities
Goal 12: Responsible consumption and production
Goal 13: Climate action
Goal 14: Life below water
Goal 15: Life on land
Goal 16: Peace, justice and strong institutions
Goal 17: Partnerships for the goals

Source: https://sustainabledevelopment.un.org/sdgs.

There is a continuing discussion whether some of the goals, such as climate action, have to be achieved to enable other goals to be attainable. However, what is clear is that partnerships (goal 17) are needed to achieve the goals. These partnerships include businesses, non-governmental organizations (NGOs) and public institutions. Furthermore, as described in more detail below, substantial financial inputs are needed to achieve the goals. A part of the necessary funding might come from non-governmental funders, such as businesses.

A recent report shows that businesses seem to address the SDGs in their corporate social responsibility strategies, mostly addressing goal 8, decent work and economic growth; goal 12, responsible consumption and production; and goal 13, climate action (PWC 2018). Also, the financial industry mainly addresses goal 8 and goal 12 but focuses on goal 4, quality education, as the third main goal. In contrast, citizens want to address goal 1, goal 2 and goal 4 (ibid.). Differences between businesses and the financial sector on the one side and citizens on the other side might be a risk or could be an opportunity. There is a risk that businesses only address SDGs that are beneficial for their bottom line; however, it is possible that the business sector addresses goals that are less likely to be addressed by public institutions.

Financing the SDGs

Without a doubt, financing will be needed to achieve the SDGs. The United Nations Conference on Trade and Development (UNCTAD) (2015) estimated an investment gap for developing countries of $2.5 trillion.[1] Overall, $5 to $7 trillion will be needed annually until 2030 to achieve the SDGs. The World Bank estimated that domestic governments would provide between 50 and 80 percent of the funding for the SDGs (Niculescu 2017). Some of the biggest institutional funds, however, such as the Norwegian Sovereign Wealth Funds or the California Public Employees Retirement System manage assets of about $1 trillion and the value of global financial assets is more than $290 trillion, with a growth rate

1 Unless otherwise stated, all figures are in US dollars.

of five percent per year (du Toit, Aniket Shah and Wilson 2017). Compared to these figures, the $5 to $7 trillion needed for the SDGs does not look that big. Financing the SDGs should be possible if there is a willingness to do so.

Traditionally, a crucial part of the funding for international development is official development assistance (ODA). However, only a few countries have achieved the UN target to use 0.7 percent of their gross national income for ODA (Lebada 2017). According to the Organisation for Economic Co-operation and Development,[2] ODA was $142.6 billion in 2016 (Niculescu 2017), while private sector direct foreign investment was $523.3 billion and personal remittance was $383.2 billion in 2015. These amounts, however, do not add up to the $5 to $7 trillion needed to address the SDGs (ibid.). Therefore, private investment might be needed to complement public assistance.

It is also important to mention that funds for, and investments in, the least developed countries (LDCs) are on the decline (Lebada 2017). The world's 31 LDCs only received $18 billion in investment in 2016. Since the SDGs also address LDCs, this could have a major impact on achieving the SDGs. Consequently, the Finance for Development Forum encourages multilateral development banks (MDBs) and financial institutions to collaborate with private sector investment and to address investor needs. Furthermore, the forum encourages private sector efforts to align internal incentives with long-term investment goals supporting the SDGs and sustainable development (ibid. 2017) instead of only rewarding managers for the achievement of short-term success.

Furthermore, countries have to create financeable and bankable projects in food and agriculture, energy and materials, health and well-being, and other sectors to attract investments in addition to funding. Maria Niculescu (2017) estimates that addressing the SDGs through investments in these fields could create 380 million jobs by 2030. Impact investment, a new form of investment that will be described below, could invest in these fields as well as conventional finance.

Finally, as described above, some of the SDGs are more attractive to private investments than others. It will be easier to find private investment for goal 8, decent work and economic growth; goal 12, responsible consumption and production; and goal 13, climate action, than for goal 1, no poverty and goal 2, zero hunger. As mentioned above, the latter three goals have been prioritized by citizens but not by businesses (PWC 2018), while the first three goals seem to be more material for businesses.

Sustainability in the Banking Industry

The following sections mainly discuss the banking industry, including public and multilateral development banks. A discussion of other financial industry players with regard to the SDGs, such as insurance companies, would go beyond the scope of this paper.

In the early 1990s, banks started to address sustainability issues, primarily by focusing on their internal operations. The goal was to decrease costs by saving energy, water and materials, such as paper, and to be a role model for clients to do the same. The aim of influencing clients has been to enable them to reduce their environmentally induced costs and, therefore, decrease their credit and investment risk (Weber & Feltmate, 2016). Other impacts of the banking sector on sustainable development have been perceived as small since the industry is not a high polluter and is not an industry with a bad reputation for its job quality. The next phase of banking sustainability centred on environmental risks in the credit business. Because of newly implemented environmental regulations, such as the Comprehensive Environmental Response, Compensation and Liability Act, also known as the Superfund, in the United States and environmental regulations addressing soil, water and air, environmental risks became material mainly in commercial lending. While before sites that had been used as collateral could be easily sold in case of credit default, the new regulations established the "polluter pays" principle and regulated the disclosure of contaminations in case of a land transfer.

As a result, lenders either had to disclose the contamination of a site used as collateral or had to clean up the site before being able to sell it. In both cases, the value of the site has often been reduced

2 See www.oecd.org/dac/stats/beyond-oda.htm#dataviz.

significantly. The reduced value of contaminated sites and changes in environmental regulations that created financial burdens on commercial borrowers, motivated banks to integrate environmental and social risk criteria into their credit risk assessment (Weber, Fenchel and Scholz 2008). As a result, lenders were able to decrease the credit risks caused by sustainability risks (Weber, Scholz and Michalik 2010) and to retain their reputation as a non-polluting industry. In many cases, the use of sustainability criteria prevented lending to environmentally risky clients and consequently reduced credit defaults. The introduction of environmental and social credit risk assessment criteria has been material for the banking sector.

The banking sector's next step with regard to sustainability has been to address opportunities. The increasing popularity of the topic, among others, pushed forward by the report of the World Commission on Environment and Development, *Our Common Future*, which defined sustainable development, led to the development of sustainable asset management and investment products, such as socially responsible investment funds or green loans. The banking sector became aware of the opportunity to finance the change to more sustainable development instead of just focusing on risks for their lending business. In 1996, Stephan Schmidheiny and Federico J. L. Zorraquin published the prominent book *Financing Change: The Financial Community, Eco-efficiency, and Sustainable Development*. The book presented business opportunities for the financial sector, including banks, that have a positive impact on both sustainable development and the financial bottom line. At the same time, in cooperation with the United Nations, NGOs and public entities, the industry established financial sector codes of conduct focusing on sustainable development, such as the UNEP FI, the Principles for Responsible Investment (PRI) and the Equator Principles for project finance. These codes of conduct presented guidelines for the financial industry to address sustainable development.

Initially, the activities described mainly addressed conventional financial products and services, and the connection between social and environmental issues on the one side and financial risks and reputation on the other side. This changed after 2000. Social banking and impact investing became increasingly prominent (Weber 2016b; 2016c). This type of banking tries to create a positive impact on sustainability issues through financial products and services (see below) based on the sustainability case of banking (Weber 2014). For impact investors and social banks, sustainable development is not only a means to increase the business performance, but a main strategic goal.

Development banks play a major role in financing sustainable development, for example, in climate finance (SDG 13) or in financing ecosystem services (Sell et al. 2006). Amar Bhattacharya, Jeremy Oppenheim and Nicholas Stern (2015) argue that development banks have an essential role to play to help move nations and regions from "business as usual outcomes," to "sustainable infrastructure outcomes." The social and environmental guidelines of the World Bank and the International Finance Corporation (IFC) are a basis for many social and environmental risk assessment schemes, such as the Equator Principles[3] (Weber and Acheta 2014b). With its standards, the IFC is a de facto norm-setter for environmental and social risk assessment in project finance and helped the sector to increase its sustainability performance. Consequently, the World Bank and IFC could be a trendsetter in addressing the SDGs. The Sustainable Banking Network (SBN) conducted under the IFC's umbrella, for instance, could support financial regulators in addressing sustainable finance and help these organizations to address the SDGs.[4]

Furthermore, MDBs, regional and domestic development banks, and green banks issue a major part of green bonds and climate bonds. They started issuing these types of bonds before domestic government financial institutions and private issuers engaged in green bonds. Green bonds are fixed-income bonds issued to finance sustainability-related projects, such as renewable energy, climate mitigation and adaptation, and water.

Finally, MDBs can help domestic financial institutions to integrate sustainability into their business by making financing dependent on the implementation of social and environmental sustainability guidelines for banks. The IFC is already coordinating the development of financial sector sustainability regulations in some emerging countries, such as Nigeria and Bangladesh,

3 See http://equator-principles.com/.

4 See www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/company-resources/sustainable-finance/sbn.

and should continue to do so to support the sustainability case for the financial sector (Oyegunle and Weber 2015). One consequence has been that in some countries, financial sector sustainability guidelines currently exist to guide banks in assessing environmental, social and sustainability criteria in financial decision making.

In general, the SDGs explicitly address the role of the private (business) sector in achieving sustainable development (Bebbington and Unerman 2018). Furthermore, the financial sector might be a major player with regard to achieving sustainable development, but the industry is relatively slow in adopting sustainability principles (Jones, Hillier and Comfort 2017; Weber, Diaz and Schwegler 2014). A recent report by the Bank of England (2018, 3), for instance, stated that "many banks have some way to go to identify and measure the financial risks from climate change comprehensively." If banks are behind in assessing sustainability risks for their business, strong efforts are needed to enable them to create positive impacts on sustainable development.

Hence, the SDGs might be an opportunity for the industry to further establish sustainability principles. According to the United Nations Global Compact and KPMG International (2015), four categories for the financial industry to address the SDGs have been identified. They are financial inclusion; financing renewable energy and sustainable infrastructure; including sustainability risk analyses in financial decision making; and influencing corporate clients to address environmental, social and governance criteria in their businesses. However, although proposals exist on how the financial industry might contribute to sustainable development, there is not a coherent definition of financial sector sustainability.

What Is Sustainable Banking?

Recently, the International Network of Financial Centres for Sustainability (FC4S) (2018) of the Group of Seven published a taxonomy on green and sustainable finance to define what sustainable finance is and how it could be assessed. This statement made it quite clear that there is no common definition of sustainable finance yet, nor is it clear what sustainability means for the banking industry. Even the book *Sustainable Banking* (Bouma, Jeucken and Klinkers 1999), one of the standard publications in the field, did not define sustainable finance or sustainable banking comprehensively.

Olaf Weber and Blair Feltmate (2016) distinguish between the business case for sustainability and the sustainability case for banking. The business case for sustainability approach claims that banks only address sustainability issues, such as environmental and social risks and opportunities, if they contribute to their financial bottom line, either through increasing financial returns or decreasing costs. Peter Jones, David Hillier and Daphne Comfort (2017) claim that this sustainability approach is the dominant one, but that it has to be transformed into the sustainability case for banking to better address the SDGs. The sustainability case for banking states that banks start with the main sustainability issues, for instance, by analyzing the importance of different SDGs, and try to develop products and services that can address the issue and are financially attractive at the same time.

Due to the lack of a definition of sustainable finance and banking, different players in the banking industry have different approaches to sustainable finance. While for some institutions sustainability does not play a role at all beyond financial sustainability, others base their products and services on sustainability or consider sustainability criteria in their business decisions. Microfinance organizations, for instance, directly address goal 1, no poverty, as well as goal 8, decent work and economic growth, or, in the case of microfinance institutions for women, goal 5, gender equality.

Climate bonds, which facilitate investing in climate change mitigation and adaptation, address goal 13, climate action. Green bonds address environmental issues, such as goal 14, life below water; goal 15, life on land; and goal 7, affordable and clean energy. Some credit unions' business is to finance sustainable cities and communities (goal 11), and many global banks address goal 5, gender equality, through their employment policies. Investors following the socially responsible investment (SRI) approach consider the environmental, social and governance criteria in investment decisions (Weber and Feltmate 2016) and therefore addresses goal 12, responsible consumption and production. Finally, impact investors invest in certain SDGs

Table 2: Financial Products and Services Addressing the SDGs

SDG	Products and Services
1 No poverty	Private international development finance through impact investing
2 Zero hunger	Microfinance for smallholder farmers
3 Good health and well-being	Health-care investments
4 Quality education	Philanthropic donations to schools
5 Gender equality	Microfinance and lending to women and female entrepreneurs
6 Clean water and sanitation	Socially responsible mutual funds investing in water
7 Affordable and clean energy	Renewable energy investment
8 Decent work and economic growth	General investments into the real economy
9 Industry innovation and infrastructure	Project finance and commercial lending integrating social and environmental criteria for lending decisions
10 Reduced inequalities	Fair payment of financial sector employees
11 Sustainable cities and communities	Mortgage lending
12 Responsible consumption and production	Socially responsible investing
13 Climate action	Climate finance
14 Life below water	Financing ecological services
15 Life on land	Financing ecological services
16 Peace, justice and strong institutions	Lending to public institutions

Source: Author.

already. One example is the Bill and Melinda Gates Foundation addressing goal 3, good health and well-being. Table 2 presents examples of products and services, including financial sector philanthropic activities, that can address the SDGs.

Except for financial institutions and financial products that directly address sustainability issues, such as social banking and impact investing, the integration of sustainability issues into finance decisions is mainly driven by risk management purposes, new business opportunities or cost savings (Weber and Feltmate 2016). Often, however, sustainable products and services are offered in parallel with conventional products that might even contradict the principles of sustainable development. Also, most of the products, and services listed in the table are niche products and even social banks and impact investors that exclusively address sustainability issues are a very small group inside the banking industry (ibid.).

Types of Banking and the SDGs

There are different types of banking as well as financial products and services that might address the SDGs, including conventional banking. These are SRI, impact investing, social banking, green and social impact bonds, development banking, project finance and green lending. Table 3 presents a short overview of these types of banking and how they might address sustainable development.

The following sections will describe the types of banking and how they might address the SDGs in detail.

Table 3: Types of Banking Addressing the SDGs

Type of Banking	Addressing Sustainable Development
SRI	Using positive and negative environmental, social and governance criteria in addition to financial criteria to identify investments and risks
Impact investing	Investments that try to create a positive environmental or social impact
Social impact bonds	Bonds that try to involve private investments in solving social problems
Green bonds	Public or company bonds for environmental investments, such as sustainable infrastructure, clean energy, water or ecosystem services
Development banks	Lending and investing in projects and other activities addressing sustainable development
Project finance	Applying the Equator Principles (social and environmental criteria as well as standardized processes and reporting) to mitigate the sustainability risks of projects
Sustainable credit risk assessment	Applying social and environmental risk indicators in credit risk assessment.
Microfinance	Financing for the poor to start a business to make their living and providing access to finance
Green credit	Loans for commercial borrowers with businesses addressing environmental issues

Source: Authors.

SRI

SRI is a form of investment that uses non-financial criteria to screen investments for social, environmental or governance reasons or to pick investments that perform well with regard to both financial and non-financial indicators (Geobey and Weber 2013). SRI, also called responsible investing, started as a financial niche product but found entrance into mainstream investing because it improves the risk management in investment decisions through the integration of social, environmental and governance criteria (Weber 2015). It conducts "social" screening, community investment and shareholder advocacy (O'Rourke 2003a) to guarantee sustainable financial returns. The main goals of SRI are to achieve attractive financial returns through investments that take long-term sustainability concerns into account (Weber, Mansfeld and Schirrmann 2011). Furthermore, SRI strives to channel financial capital toward sustainable businesses (Buttle 2007; Weber 2006).

Many of the non-financial SRI criteria are taken from sustainability rating systems, such as the Dow Jones Sustainability Index or Sustainability Accounting Standards (SASB). These indicators help investors to address the SDGs and channel investments accordingly. Since the share of SRI has increased during the last decade, more funds will be directed into sustainability-related issues. Currently, $22.89 trillion are managed responsibly (Global Sustainable Investment Alliance, 2017). This amount exceeds the $5 to $7 trillion needed to achieve the SDGs, although it is not specifically aimed at the SDGs. Although not all of these investments are directed to the SDGs, there is an opportunity to connect the SDGs with the SRI field in two ways. First, SRI could be directed to finance the SDGs and, second, the SDGs could provide sustainability criteria that could be used by SRI investors to analyze investments. However, the SDGs could provide socially responsible investors with investment criteria and therefore tap into the SRI resources.

In addition to directing investments, SRI also conducts shareholder engagement (O'Rourke 2003b). Some SRI investors engage with firms they are invested in to convince them to follow a more sustainable business approach. Usually, they table motions at the companies' annual general meetings that ask for certain sustainability activities or the disclosure of sustainability-related activities. With regard to the SDGs, investors might ask companies to disclose how and whether they address the SDGs, and, in cases where they do not address them, ask them to do so.

Impact Investing

Impact investing is often seen as the main source of private SDG investment (Niculescu 2017). Impact investing intends to address social or environmental challenges while generating financial returns for investors. Its main goal is to create a positive societal impact through capital investment. The spectrum of financial returns can vary. Some impact investments achieve financial returns that are comparable to conventional investments, while others may not achieve financial returns. Impact investing had its origins in philanthropy and emerged as a result of philanthropists trying to find ways to invest their endowments to support social or environmental issues. Impact investors typically invest in equity of social enterprises or quasi-equity of charitable organizations or non-profits (Weber and Feltmate 2016). Many of them, however, invest in international sustainable development issues, such as reducing hunger and poverty or eradicating diseases such as malaria (Weber 2016b). In Europe, impact investing achieved $107 billion in 2016; it has a much bigger share in the United States with more than $4 trillion (Global Sustainable Investment Alliance 2017). Since impact investment is increasing in all parts of the world, it might become a type of finance that could significantly contribute to the SDGs.

Social Impact Bonds

Similar to green bonds, social impact bonds (SIBs) strive to achieve a double return — financially and socially. The first SIBs were issued in the United Kingdom in 2010 to attract private investors to solve social problems. In contrast to green bonds, SIBs use a pay-per-performance approach. This means the interest paid on the bond depends on the outcome of the project financed by the bond (Trotta et al. 2015). Current SIBs address employment and public safety (goal 8, goal 11), reducing reconviction rates of former prisoners (goal 11), education (goal 4), health (goal 3) and housing (goal 11) (Mulgan et al. 2011; Trotta et al. 2015). In Canada, CDN$5 million has been issued in SIBs for education (goal 4), health (goal 3) and for workplaces (goal 8) (Khovrenkov and Kobayashi 2018).

Although SIBs lost some of their momentum after a powerful start in 2010, they might be a financial product that could address the social components of the SDGs. As described above, the challenge will be to lift SIBs from a mainly regional level to an international level to address the SDGs. Furthermore, it will be crucial to find ways to assess the efficiency of the SIBs (Jackson 2013). Currently, it is estimated that the total value of investments in SIBs is about $210 million (Floyd 2017).

Green Bonds

Global issuance of green bonds exceeded $160 billion in 2017 and is estimated to be more than $200 billion in 2018 (SBN 2018). Green bonds address sustainability issues, such as climate change (goal 13), water (goal 6), clean energy (goal 7), industry, innovation and infrastructure (goal 9), and sustainable cities and communities (goal 11). According to the SBN, they are an effective financial product to address climate change and the SDGs (Sustainable Banking Network 2018). They enable investors, in particular institutional investors, to direct their investments toward sustainable development while maintaining comparable financial returns compared to conventional bonds. Because many institutional investors today conduct environmental, social and governance disclosure (either on a voluntary or mandatory basis), their appetite for green investments that are in-line with fiduciary duty increases. Therefore, green bonds are already a way to finance environment-related SDGs and offer an opportunity to further close the SDG financing gap, in particular in emerging countries that might issue bonds to attract private investors. Since currently guidelines for green bonds are developed to increase their transparency, the SDGs could provide an ideal basis for green bond assessments.

Development Banks

Overall MDB climate finance, addressing goal 13, will be a significant source of all climate finance planned and needed in the future (Westphal et al. 2015). In 2015, after China pledged to infuse $3.2 billion into a developing country fund for

climate change, the Asian Development Bank, the World Bank and others began pledging major funds as well. The World Bank pledged to increase climate finance to $29 billion (an increase of one-third) by 2025, and the Inter-American Development Bank pledged to make climate finance 25–30 percent of total lending by that time (Yuan and Gallagher, 2015). All these activities address SDG 13.

Furthermore, domestic development banks, such as the newly founded Canadian FinDev, the European Development Bank and others, are main contributors to development finance and consequently address the SDGs. One main issue of development finance will be to analyze financing activities that might address certain SDGs but contradict others. Financing decent work and economic growth (goal 8), for instance, might contradict other SDGs that focus on safeguarding the environment, such as goal 13, goal 14 and goal 15. Again, the SDGs could be a guideline for these banks to streamline their portfolio toward sustainable development.

Currently, it is estimated that the MDBs have outstanding loans of about $1.5 trillion (Munir and Gallagher 2018). This amount does not include grants and contributions of domestic development banks. Therefore, the total loans given by development banks are estimated at about $2 trillion. Because these funds are allocated to development funding, it is assumed that most of it also addresses the SDGs.

Project Finance

Project finance is a means of finance for big projects, such as infrastructure, energy and tourism projects. This type of finance addresses goal 9 directly and other SDGs, such as goal 6, goal 7 and goal 11, indirectly.

After NGOs and affected communities criticized some of the negative impacts of projects on communities and the environment, project financiers founded the Equator Principles in 2003 to provide guidelines for assessing the social and environmental risks of projects (Weber 2016a). The Equator Principles guidelines are based on the IFC's Performance Standards on Environmental and Social Sustainability (IFC 2012). The Equator Principles include principles for environmental and social assessment, stakeholder inclusion, grievance mechanisms, independent reviews and reporting guidelines (Weber and Acheta 2014b). Although the Equator Principles are sometimes criticized for being toothless and because of their focus on risk avoidance instead of on promoting sustainable development (Wright and Rwabizambuga 2006), they deliver a social and environmental industry standard that might at least help to avoid negative impacts of project finance on sustainable development. About 80 percent of financed projects by value follow this standard (Weber and Acheta 2014a), representing total project finance of around $200 billion per year, extrapolated to $3 trillion for the 15 years of existence of the Equator Principles. This significant amount might contribute to achieving the SDGs. Because the Equator Principles are updated regularly, the SDGs could provide some input for a future version that also includes the assessment of the positive impacts of projects on sustainable development.

Sustainable Credit Risk Assessment

To date, commercial lenders conduct environmental and social credit risk assessments regularly (Weber, Diaz and Schwegler 2014). Studies suggest that sustainable credit risk assessment reduces credit defaults because it analyzes risks that could be material for the borrower. If conducted seriously, sustainable credit risk assessment could lead to channelling loans to greener and more social clients, as studies on green lending in China (Cui et al. 2018), North America (Gracer 2009; Robbins and Bisset 1994), South America (Zeidan, Boechat and Fleury 2015), Europe (Weber, Scholz and Michalik 2010) and Bangladesh (Weber, Hoque and Islam 2015) suggest.

Hence, lenders are able to integrate sustainability indicators into their credit risk assessment systems. Consequently, they might also be able to integrate criteria based on the SDGs. To incentivize them, however, the materiality of addressing the SDGs should be analyzed. If analysis could demonstrate that it makes sense to integrate the SDGs into credit risk assessments from a credit risk point of view, lenders will do so.

Microfinance

Microfinance has been a means of development finance for many decades. It has been growing at a rate of about nine percent per year. In 2017, microfinance reached about 139 million low-income clients and had a loan portfolio of about $114 billion (Convergences 2018). The focus of microfinance is on South Asia and South America. In general,

Table 4: Potential Amount of Investment in Sustainable Development by Type of Banking

Type of Banking	Amount	Comment
SRI	$18 trillion	Based on Global Sustainable Investment Alliance (2017). Total SRI minus the impact investment part.
Impact investing	$4.6 trillion	Based on Global Sustainable Investment Alliance (2017).
Social impact bonds	$210 million	Based on Floyd (2017).
Green bonds	$160 billion	Based on Sustainable Banking Network (2018).
Development banks	$2 trillion	Only loans of major MDBs and estimation for domestic development banks. Based on Munir and Gallagher (2018.)
Project finance	$3 trillion	Projects financed by Equator Principles members. Based on Weber and Acheta (2014b).
Sustainable credit risk assessment	-	Cannot be estimated because of missing data.
Microfinance	$114 billion	Based on Convergences (2018).
Green credit	$1 trillion	Only China; based on Stanway (2016).
Total	$29.1 trillion	

Source: Author.

microfinance institutions are profitable, making investments into microfinance profitable as well.

Microfinance mainly addresses goal 8, decent work and economic growth, by offering loans to start a small business. It has additional impacts, however, on goal 5, gender equality, because microfinance often addresses women who do not have access to conventional loans (Weber and Ahmad 2014). Furthermore, microfinance addresses goal 18, reduced inequalities, through offering inclusive finance. The United Nations Capital Development Fund even states that inclusive finance additionally affects goal 1, no poverty; goal 2, zero hunger; goal 3, good health and well-being; goal 9, industry, innovation and infrastructure; and goal 10, reduced inequalities.

As a profitable financial approach that has a record of a positive cost-benefit and outreach, microfinance has been able to influence sustainable development positively and to attract investors at the same time (Khanam et al. 2018). Therefore, there is a high likelihood that it will continue to contribute to financing the SDGs.

Green Credit

Green credit is a form of credit that is promoted by the Chinese Green Credit Policy (China Banking Regulatory Commission 2014; IF,C n.d.; Zhang, Yang and Bi 2011). With this policy, the People's Bank of China promotes lending to green industries and tries to decrease lending to polluting industries. Chinese banks have to disclose key performance indicators about the amount of green lending to the financial supervisor. Green lending addresses diverse environmental impacts, such as air (goal 3) and water pollution (goal 8, goal 14), waste, climate change and environmentally efficient production (goal 12).

The Chinese Banking Regulator estimates that nine percent of all loans from the major Chinese banks are green loans. This equals a total amount of about $1 trillion in green loans (Stanway 2016).

Amount of SDG Finance by Different Types of Banking

The section above has demonstrated that a crucial amount of banking sector funding is already allocated to sustainable development. These figures, however, do not include conventional banking that might also deliver funds to the SDGs. Table 4

presents an estimation of the funds that different types of banking invest in sustainable development.

Although the estimation in Table 4 only refers to particular green or sustainable financial products and services and is a very rough estimation, it suggests that there is some funding already directed to the SDGs. Furthermore, the figures show that there is some potential to tap in for further finance, for instance, with regard to SRI. It is estimated that about $60 to $84 trillion is needed until 2013 to achieve the SDGs. Funding by the banking sector through specialized green and sustainable financial products seems to be able to address a crucial part of the funding needed.

Controversies between the Financial Industry and Sustainable Development

As this paper has demonstrated, there are some approaches in the banking industry that address sustainable development and the SDGs. The role of the financial sector, however, is ambivalent as investors contribute, sometimes even at the same time, to both the causes of sustainability problems as well as to the solution to these problems through a variety of different investment and lending practices (Wiek and Weber, 2014). The same financial institutions, for instance, might finance green energy projects addressing goal 13, climate action, and polluting coal power plants at the same time. Even MDBs are criticized for financing climate change mitigation and climate change adaptation projects at the same time as they finance coal power plants (Ghio 2015; Yang and Cui 2012).

In addition, indirect links between finance and the SDGs exist. The banking industry finances all industries and some of them might have negative effects on the SDGs, for instance, through offering poor job conditions (goal 8) or through negative impacts on the environment (goal 14, goal 15). Through financing global processed food producers, banks might negatively contribute to goal 14, life below water, because of the increasing amount of plastic used in the food and beverage sector that has negative impacts on rivers, lakes and oceans because of plastic waste. Risk assessment systems, such as those used in credit risk management or project finance, could be improved to address these negative impacts on sustainable development.

SDG Strategies for the Banking Sector

Current initiatives, such as UNEP FI Positive Impact[5] or the FC4S,[6] work on concepts to better define sustainable finance and to better address the SDGs. The UNEP FI, for instance, states that the financial industry should take an integrated approach to sustainable finance instead of addressing sustainability issues individually and disconnected from other financial products and services. Also, FC4S tries to define sustainable finance to increase the transparency with regard to financial impacts on sustainable development. A better definition will help stakeholders to analyze the sustainability performance of banks and will support the management in the industry to align their business strategy with the SDGs.

Banks can explore how they can engage with sustainable development issues by channelling financial capital and creating innovative products, services and strategies based on an analysis of sustainable development needs. The SDGs are an ideal way to identify the most important sustainability needs. Banks can focus on the 17 goals instead of addressing rather opaque definitions, such as "meeting the needs of the current generations without limiting the opportunities of future generations to meet their needs" in the Brundtland report, which offers a comprehensive but less practical guideline for addressing sustainable development. As the UNEP FI Positive Impact Manifesto states, this includes holistic and disruptive approaches to finance the SDGs (UNEP FI 2016) based on a comprehensive analysis of what sustainable finance means.

A way to make this process transparent is standardized reporting. With a few exceptions, sustainability reporting to date has been decoupled from financial reporting and is based on major

5 See www.unepfi.org/positive-impact/positive-impact/.

6 See www.fc4s.org.

guidelines, such as the GRI (GRI 2013), including a financial sector supplement (GRI 2011). Standards such as the GRI have already started to integrate the SDGs into their reporting guidelines. Therefore, it can be expected that banks will also integrate the SDGs into their sustainability reporting. If the SDG reporting is conducted in an integrated way, it will connect impacts on the SDGs with financial figures and will be able to report about the benefits and risks of addressing the SDGs through financial products and services (Eccles, Cheng and Saltzmann 2010) for both the banks and the SDGs.

Policy Recommendations

The following policy recommendations for the banking industry and financial supervisors, such as central banks and governments, are from an international and a Canadian perspective. The recommendations address the banking sector as well as governments and financial regulators. They are intended to increase the funding for the SDGs from the banking sector.

Recommendations for the banking industry are:

- enhance current financial sector codes of conduct by integrating the SDGs;
- align existing sustainable finance strategies with the SDGs;
- standardize SDG accounting and reporting to identify strengths and weaknesses of, as well as risks and opportunities for, the banking industry in addressing the SDGs; and
- develop innovative financial products that address the SDGs.

Recommendations for governments and financial regulators are:

- align financial regulation with sustainable development and the SDGs;
- offer financial mechanisms to mitigate financial risks in addressing the SDGs; and
- align development banks with the SDGs.

Enhance current financial sector codes of conduct by integrating the SDGs: Current financial sector codes of conduct already address sustainable development. These codes of conduct comprise nearly all banking products and services, such as lending (UNEP FI), investing (PRI) and project finance (Equator Principles). As described above, many of them mainly address environmental and social risks. To date, however, there is a shift toward describing opportunities with regard to sustainable development as well. Examples are the UNEP FI Positive Impact Manifesto (UNEP FI 2016) and PRI's Montreal Pledge, which defines the financial industry's carbon goal. These codes of conduct should integrate the SDGs and develop guidelines for addressing them to provide members with standardized guidelines about how to address the SDGs.

Align existing sustainable finance strategies with the SDGs: SRI, social banking, impact finance, green lending and microfinance are already established products and services in the banking industry that address sustainable development. Compared to conventional products, their share is continually increasing, and most of them are financially viable. Therefore, the banking industry has the opportunity to align their products and services and market them under the umbrella of the SDGs to improve their market share. Clients, such as institutional investors interested in sustainable finance, could influence banks to go in this direction.

Standardize SDG accounting and reporting to identify strengths and weaknesses of, as well as risks and opportunities for, the banking industry in addressing the SDGs: Conducting standardized SDG accounting and reporting in the banking industry should address both positive and negative impacts on the SDGs. The industry should develop reporting standards with regard to SDG finance. Similar to other reporting standards, such a standard could improve the transparency of the financial industry. On the one side, transparency is important for stakeholders. On the other side, accounting and reporting are important for the management to be able to analyze and develop SDG-related banking strategies. The SDGs offer a unique opportunity to develop standardized accounting and reporting guidelines because they are structured and offer indicators that are relatively easy to measure. International guidelines, such as the GRI and the SASB, have already started to address the SDGs.

Develop innovative financial products and services addressing the SDGs: The SDGs could offer the opportunity to develop innovative banking products and services. Since current sustainable financial products and services increase their market share, this could offer the banking sector the opportunity to increase their market and deliver attractive products to clients interested in sustainable investing. Since both international government bodies and national governments support the SDGs, they might provide a good marketing tool for innovative products and services that address them.

Align financial regulation with sustainable development and the SDGs: Some institutional pressure is likely needed to better integrate sustainability into the core business of the banking industry. Governments and financial sector regulators could exert this pressure. Recently, some central banks and financial regulators have begun to integrate sustainability into their risk analyses and regulations. The Bank of England published a report on the impact of climate change on the UK banking sector, stating that financial risks from climate change for the banking industry should be supervised to mitigate the risks for the industry (Bank of England 2018).

Furthermore, the Chinese Green Credit Policy is addressing environmental issues that are also related to the SDGs (Weber 2017). The European Union has published a policy on financing a sustainable European economy (EU High-Level Expert Group in Sustainable Finance 2018). Finally, Canada has established an expert panel on sustainable finance.[7]

These efforts suggest that financial regulators have begun to integrate sustainability criteria into their regulations and supervision. Introducing indicators that measure the performance of the banking industry with regard to sustainable development and establishing a connection between the sustainability performance and the financial stability of the industry would be a step financial regulators could take to align the SDGs with financial regulation.

Offer financial mechanisms to mitigate financial risks in addressing the SDGs: Often, banks and other investors hesitate to finance development, environmental and social projects because of their financial risks. In development finance, for instance, many government development agencies offer first-loss guarantees for private investments in development finance. Mitigating the risks of financing the SDGs might help to attract more private funds and, consequently, to leverage public spending for the SDGs. What is needed to establish risk-mitigating mechanisms are funds and budgets for international, regional and domestic public development agencies and banks to establish such risk-mitigating instruments. In addition to first-loss guarantees, public-private partnerships, for instance, in syndicated loans for the SDGs, would de-risk SDG financing and attract private sector investors and lenders.

Align development banks with the SDGs: Development bank finance does not meet all the SDGs. For example, the World Bank is still a major financier of fossil fuel projects with contributions of $4.4 billion, contradicting goal 13 and goal 3. Other development banks, such as the European Bank for Reconstruction and Development and the Asian Development Bank, invest billions in fossil fuel projects (Ghio 2015; Yang and Cui 2012), although some have already announced plans to reduce these investments. Therefore, development banks should align their financing with all the SDGs.

Conclusion

The banking sector can play a crucial role in financing the SDGs. Financial institutions can help to close the financing gap and enhance their business at the same time. In addition to enhancing current strategies, products and services that already address sustainable development, the industry might start to develop additional innovative financial products to address the SDGs. Governments and regulators could support the industry through establishing risk-mitigating mechanisms and through the integration of sustainability aspects into supervisory activities. Finally, analyses should be conducted to enable the banking industry to identify financial activities that are detrimental to the SDGs. If addressed the right way, the SDG financing gap might be a big business opportunity for the banking sector.

7 See www.canada.ca/en/environment-climate-change/services/climate-change/expert-panel-sustainable-finance.html.

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