THE P&C INSURANCE INDUSTRY'S ROLE IN SUSTAINABLE DEVELOPMENT AND COMMERCE

BY

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Executive Summary

This report examines the P&C insurance industry’s methods and motivations that are in place to support sustainable development and commerce. Environmental, social, and governance issues are discussed in terms of how it jeopardizes the sustainability for financing the connected risks insurance firms are responsible for insuring. It is argued that since the industry is embedded in economic development and commerce, insurers are obligated to embed sustainability into all aspects of their operations, including risk management, while involving all stakeholders. As risk managers and risk investors, the insurance industry will be shown to have a significant role in fostering sustainable economic and social development.

This paper delves into how the P&C insurance industry, both internationally and in Canada, is a key player in sustainable development and commerce. A brief case is built for sustainability in the Canadian P&C insurance market, as there are particular environmental, social, and governance issues facing insurers in Canada.

Four main methods the P&C insurance industry integrates sustainability and addresses environmental, social, and governance (ESG) issues in their operations are discussed. The first method is through the industry’s direct environmental footprint. The insurance industry is committed to reduce CO2 emissions as climate-related insurance losses involve massive property damage, commerce interruptions, and legal costs. Most of what has been done to reduce carbon emissions depends on accessible technology aimed to reduce the environmental footprint left by day-to-day operations and corporate social responsibility initiatives. The second method is through investments. Sustainable investing is a way of acting that considers the economics of investing but also compliments ESG concerns. Financing a sustainable economy that addresses ESG issues requires extensive reshuffle of capital by institutional investors, which includes the insurance segment. Sustainable development and commerce requires significant capital allocation for the financial system. Thus, the insurance industry can use capital to support investments that react to sustainability challenges, such as climate-resistant infrastructure. The third method is through insurer products and services. Insurers are developing products and services to reduce risk, while also developing support programs on ESG issues. This paper touches on how the accessibility and affordability of insurance products and services have implications for future investment projects that influence sustainable development results. The fourth method is through risk management. Through risk management, the insurance industry protects individual from devastating losses, promotes innovation and reinforces economic growth which is essential to a sustainable society.

This paper also demonstrates how the P&C insurance industry is being forced to adjust to a variety of environmental, social, and governance risk factors reflected in managing its business, which can have substantial influence on the industry’s sustainability. Finally, significant industry challenges to sustainable development and commerce, such as climate risks, emerging risks, industry commitment, education, and public trust are discussed. Research reflected in this report was gathered through both primary and secondary sources. To attain primary research data, interviews were conducted with company and organizational representatives in the insurance industry.
Introduction

Insurance & Sustainability

The insurance industry is an essential sector of the economy, but it is less recognized as a significant tool of sustainability in regards to the environment, the economy, and society. As a driver of social and economic activity, the insurance industry has methods and motivations in place to facilitate sustainable commerce activity. Operating as a risk manager and economic investor, the insurance industry is at the core of a sustainable financial system. Through risk prevention and risk reduction, the insurance industry helps protect society, foster innovation, and strengthens economic development which are important to a sustainable society. Thus, the insurance industry can be used as a functional tool to leverage sustainable development and commerce. This paper will reveal how the P&C insurance industry is adjusting to a variety of environmental, social, and governance risk factors reflected in managing its business. Significant industry challenges to sustainable development and commerce, such as climate risks, emerging risks, industry commitment, education, and public trust will also be discussed. The research gathered in this report was through both primary and secondary methods. Primary research data was acquired through interviews conducted with company and organizational representatives in the insurance industry. Interview questions can be found in the Appendix.

“Sustainability” is a new concept in many corners of the capitalistic corporate world. Its most accepted definition comes from the Brundtland Commission Report of the United Nations in 1987 which states “sustainability is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). The notion of sustainability has evolved and continues to evolve in terms of social and economic acceptance. In 1994, John Elkington created the term “triple bottom line” to clarify sustainability as the integration of social, economic, and environmental value. (Elkington, 2004) The long-term thinking reflected in sustainability shares the same securities and goals of the insurance industry. The insurance industry’s value creation model is partially dependent on the sustainability of companies selling insurance and its’ contractual agreement to consumers to compensate for losses. However, there are sustainability issues, such as climate change, which jeopardizes the sustainability of the institutions responsible for insuring the connected risks. From an insurance perspective, risk is the possibility that a loss interferes with a person or an organization’s ability to fulfill its objectives. The notion of sustainability in regards to the environment, the economy, and society, speaks to the risk of future generations not being able to meet their own needs or objectives. The danger of not addressing these sustainability concerns through development and commerce may have insurance coverage but the economic disruption, reputational risk increase, deductible and other costs can be significant. Thus, there is a case of overlapping interests of reducing risk, especially those of great magnitude, by both those in the sustainability and insurance front. It is in the interest of the insurance industry to champion sustainable development and commerce in the pursuit of managing risk and reducing losses as it is uniquely placed in the economy as a market mechanism for the sharing of risk. As risk pooling is a major contributory factor for the adept functioning of economies and societies, the insurance industry can also be used as an entity
of regulation and public policy. The merging of public and private interests in the insurance industry brings forward risks and opportunities raised by sustainability. Therefore, the insurance industry’s task in prevailing over globalized environmental, social, and economic issues will be essential to guarantee a vigorous future for upcoming generations.

In sharing the responsibility of addressing environmental, social, and governance (ESG) issues, insurers ought to entrench sustainability into all of its operations and investments in cooperation with all stakeholders involved. This report will demonstrate an accumulating number of industry schemes that couple insurance with sustainable development and commerce. International progression on disaster risk reduction, financial prudence, and climate change agreements provides an example for reflecting on the policies and partnerships necessary to realize the full potential of insurance in harnessing sustainability. Our world is increasingly facing ESG challenges and risks, which presents new challenges and opportunities for the insurance industry. Accordingly, it is sensible for the industry to amend the array of risk factors measured in running its business. ESG issues are progressively prompting outdated risk factors and has the potential on impacting the industry’s sustainability. Therefore, a robust insurance industry depends on holistic and long-term risk management in which ESG issues, along with sustainable development and commerce, are considered. The insurance industry has a vital interest in nurturing sustainable economic and social development, thus better management of ESG issues will reinforce the insurance industry’s involvement in building a sustainable society. However, many sustainability issues around ESG factors are too multifaceted and need widespread actions, innovations, and long-term solutions across sectors.

A Framework for Sustainable Insurance

The United Nations is perceived as a leader in the dialogue of how businesses and industries can address sustainability and ESG issues. Introduced at the 2012 UN Conference on Sustainable Development, the UNEP FI Principles for Sustainable Insurance serve as a global framework for the insurance industry to address environmental, social and governance risks and opportunities. According to The UNEP FI Principles for Sustainable Insurance, sustainable insurance is an attitude where all activities in the insurance value chain, including stakeholders, are done in a responsible way by identifying, assessing, managing and monitoring risks and opportunities associated with ESG issues (UNEP Finance Initiative, 2012). Sustainable insurance’s objective is to reduce risk, cultivate business solutions, while contributing to environmental, social and economic sustainability. The Inquiry into the Design of a Sustainable Financial System, initiated by the United Nations Environment Programme, promotes policy options to enhance the financial system’s effectiveness in consolidating capital towards a green and inclusive economy (United Nations Environment Programme, 2015). The fact that several companies that have embraced the United Nations Global Compact and the Principles for Responsible Investment validates the emerging sway of sustainability in commerce and development. The Principles are also part of the insurance industry criteria in the Dow Jones Sustainability Indices and FTSE4Good.

Endorsed by the UN Secretary-General, the Principles for Sustainable Insurance (PSI) Initiative have led to the most extensive collaborative initiative between the UN and the
insurance industry. As of July 2015, 83 organizations have adopted the principles, including insurers representing approximately 20% of world premium volume and USD 14 trillion in assets under management. (United Nations Environment Programme, 2017) The proposal to cultivate the principles started after UNEP FI conducted a series of research studies from 2006 to 2009, which focused on risks and opportunities in the insurance industry associated with ESG issues. The development of the PSI was overseen and managed by UNEP FI insurance industry members and observer institutions and the UNEP FI Secretariat. From 2009 to 2011, UNEP FI undertook an extensive process of in-depth deliberations to produce and draft the PSI. Then in 2011, UNEP FI convened consultation meetings in Africa, Asia, Europe, Latin America and the Caribbean, Middle East and North Africa, and North America, which involved representatives from the insurance industry, government and regulators, intergovernmental and non-governmental organizations, business and industry associations, academia and the scientific community. After that, UNEP FI produced the final draft of the PSI. The PSI Initiative’s main objective is for the global community to be more risk-aware, while the insurance industry continues to support a resilient and sustainable civilization. The PSI Initiative is also meant to help the industry better understand, reduce, and provide dependable risk protection against ESG risks. The PSI Initiative promotes the adoption and implementation of the Principles globally while being administered within the overall governance framework of UNEP FI. The PSI Initiative is directly governed by a Board comprising representatives from insurance industry signatory institutions and UNEP in which signatories elect board members from the insurance industry representing from nations around the world. The Board supervises the Annual General Meeting, where signatories discuss strategic issues concerning the PSI Initiative such as material changes to signatory requirements. It is important to note that the Principles for Sustainable Insurance are a voluntary and aspirational framework. Consequently, they are not intended to serve as a basis for legal or regulatory sanctions or any form of claim to be brought forward by the United Nations, the signatories, any other stakeholder or any third party. (United Nations Environment Programme, 2017) Ultimately, the PSI is a standardized framework for how sustainability issues can be addressed within the global insurance industry while having positive ESG affects. Each insurance organization’s national strategy can adopt the PSI principles so it can have an impact on local development and commerce.

A Case for Sustainability in the Canadian P&C Insurance Market

The case for sustainability in the Canadian insurance market, particularly in Property and Casualty (P&C), is of worth due to several points. In 2016, Canadian insurers wrote $53.4 billion in direct written premiums ($48.7 billion in net written premiums) for insurance on consumers’ homes, cars and businesses. Of the $48.7 billion in net written premiums, 44.3% as for one line of business: automobile, including commercial vehicle insurance. Personal property, commercial property, and liability made up most of the rest. Specialized lines of insurance, such as boiler and machinery, marine and aircraft, and surety and fidelity, make up about 7.3% of the business. The smallest portion of the business is accident and sickness insurance, which a few P&C insurance companies sell while life and health insurers sell most of this type of insurance. (Insurance Bureau of Canada, 2017) In Canada, property claims as a percentage of total claims have risen
significantly over the last decade (24.4%-39.3%) and more than half of every dollar of premiums received by insurers is paid out in claims (56.6% - claims paid out to policyholders). (Insurance Bureau of Canada, 2017) Insured losses for a given disaster are deemed catastrophic when they total $25 million or more. Canada, like many nations, experience specific catastrophic losses that are unique to its geography and environment. Catastrophic losses for a year are the total of insured losses from these natural disasters. In 2016, catastrophic losses accounted for approximately $5.03 billion, which were the highest ever; of the $5.03 billion, $3.7 billion were a result of the Fort McMurray wildfire that occurred in May 2016. (Insurance Bureau of Canada, 2017) The Fort McMurray wildfire destroyed or damaged 2,500 homes and buildings and thousands of vehicles and resulted in almost 49,000 claims in total. Before 2016, the year 2013 was the record-breaker for catastrophic losses, when insurers paid out more than $3.4 billion, including $1.8 billion as a result of the floods in southern Alberta and around $1 billion as a result of a summer storm and flooding in Toronto. As well, at the end of 2013, a massive winter storm hit southern Ontario and parts of Eastern Canada. Another record year for insured losses was 1998, the year that an ice storm occurred in Quebec and Ontario that included six days of freezing rain, month-long power outages and $2.1 billion in insured losses.

Milestone losses of the past decade include the hailstorms in Alberta during the summer of 2014 that cost insurers $550 million in insured losses. They also include the Slave Lake fire that ravaged a remote area of Alberta, causing $750 million in insured losses in the spring of 2011, and the Toronto rains of 2005 that generated $708 million in claims. (Insurance Bureau of Canada, 2017) In 2016, underwriting posted gains for the 14th consecutive year. Before 2003, underwriting posted losses for 24 years in a row while 2016 was a year of relatively low returns at 2.7%. (Insurance Bureau of Canada, 2017) The Canadian P&C insurance industry is greatly regulated by governments and is required by law to invest its assets prudently. More than 68% of invested assets are placed in bonds and of its $170.2 billion in total assets, the P&C insurance industry has $111.3 billion in invested assets. P&C insurers invest mainly in domestic government and corporate bonds, and in preferred and common stocks. These investments produce a steady flow of income and balance the more variable income from the underwriting side of the business, which tends to fluctuate from year to year. (Insurance Bureau of Canada, 2017) These facts make the Canadian P&C insurance industry a major stakeholder and investor in the national economy.

In terms of sustainability in the Canadian P&C Insurance market, participation by industry organizations is active but junior in scale and growth. As of 2017, there were more than 200 private P&C insurers that were active in Canada and at the end of the year, there were 60 signatory companies to the UNEP FI’s Principles for Sustainable Insurance. Of the 60 signatory companies, 2 are Canadian Companies: TD Insurance & The Co-operators Group. However, other international companies that have significant Canadian operations includes Aviva, HSBC Insurance, and RSA Insurance Group. (United Nations Environment Programme Finance Initiative, 2018) In 2012, The Co-operators was the first North American signatory to the UNEP FI’s Principles for Sustainable Insurance, while in 2014, TD Insurance became the second Canadian-based signatory. These signatory companies have put functioning and investment
faculties in place to put into action the PSI including underwriting practices, product and service development, claims management, stakeholder engagement, and Corporate Social Responsibility initiatives. However, there seems to be evidence of non-signatory insurance organizations, such as Economical Mutual Insurance Company and Intact Insurance addressing sustainability and ESG issues through similar practices of signatories. All of the mentioned facts make it apparent Canada faces significant ESG issues which the P&C insurance industry must pay attention and respond to in a sustainable manner.

Four Methods the P&C Insurance Industry Integrates Sustainability

As the sustainability agenda is relatively new to corporate procedures, not much has been written specifically on the P&C insurance industry’s role in sustainable development and commerce. Even though the discussion around sustainability and insurance seems to revolve around the concept of ‘Risk Management’, the role of the P&C insurance industry in sustainable development and commerce will be discussed in a total of four main ways: (1) Direct Environmental Footprint, (2) Investments, (3) Insurers’ Products and Services, and (4) Risk Management. Over the analysis of these four ways that the P&C insurance industry are engaged in sustainable development and commerce, there will be a brief discussion on the challenges facing the insurance industry in addressing sustainability issues such as emerging risks, commitment and education. It is worthy to note that this paper looks at both international and Canadian examples in the context of sustainability models in the P&C insurance industry.

I. Direct Environmental Footprint

It is accepted by many in the scientific community that carbon emissions is of concern to the environment and its potential to disrupt the sustainability of the economy. Excess CO2 creates unstable weather patterns, higher global temperature averages, and other climate changes, which can translate to higher insurance claims and costs. Thus, it is in the best interest of the insurance industry to do what is required to reduce CO2 emissions as weather and climate-related insurance losses involve property damage, business disruptions, and legal costs. Much of what can be done to reduce carbon emissions, however, depends on accessible technology designed to help reduce the environmental footprint left by day-to-day operations. Due to the industry primarily operating in the service sector, the direct carbon footprint of the insurers is alleged to be comparatively moderate (The Geneva Association, 2009). Most of insurers’ carbon emissions originate from office buildings, business travel, and data centers (Mills E., 2012). Reducing the direct environmental impact of insurers are typically done through environmentally friendly vehicle and building technologies, along with compensating for direct greenhouse gas emissions through corporate social responsibility initiatives. It will be revealed that the industry in Canada is unhurried in reducing its direct environmental footprint and is often pursued as a cost saving opportunity.

“Greening” The Service Sector

Even though it is a lesser influence to resolving environmental issues, compared to the major contributions related to insurers’ investments and core activities, greening the service
sector of the insurance industry is still an important function of supporting sustainable development and commerce. The information on insurers’ involvement with environmentally sound technologies (EST) is limited, but the greening of the service sector through new technologies can be seen as a starting point for insurers. Developments in this segment includes greening of information technologies (IT), open collaboration processes as part of research and development, car-sharing mobility systems, green building materials and infrastructures, and how to reach carbon neutrality (Johannsdottir, Davidsdottir, Goodsite, & Olafsson, 2014). Insurers seem to be also involved in the expansion of ‘green built environment’ technologies and practices (Marsh Inc., 2008) but their involvement in the green building sector is meek compared to insurers’ entire ventures. Insurance and reinsurance corporations such a Swiss Re, Munich Re, American International Group (AIG), and Zurich Insurance Group have financed projects as a part of the Clean Development Mechanism (CDM) of the Kyoto Protocol. This suggests insurers can be influential in the allocation and uptake of ESTs along with assembling information on new technology options, providing knowledge to various stakeholders and economic incentives influencing the actions of economic players contributing to technological development (Johannsdottir, Davidsdottir, Goodsite, & Olafsson, 2014).

Even though the oil and gas sector, followed closely by the transportation sector, is the largest greenhouse gases emitter in Canada (Environment and Climate Change Canada, 2017), the insurance industry is a significant contributor as it has an influence on all sectors of the Canadian economy both directly and indirectly. In the Canadian market, insurers are following suit in their efforts to minimize the industry’s environmental footprint. Signatories of the UNEP FI Principles for Sustainable Insurance disclose their carbon emissions in their annual reports, but non-signatories that have significant market presence in the Canadian insurance market also disclose their carbon emissions in annual public accountability statements. Given the nature of insurers’ business, carbon emissions are generally low among Canadian insurers as they account for non-manufacturing type facilities. Efforts to reduce carbon emissions continue to increase due to continued office consolidation and energy efficiency efforts conducted at regional levels. Through interviews with company representatives, it was discovered that progress by insurance firms is often monitored by CFOs and measured by emissions per gross written premium, which advocates a cost effective approach. Insurance corporations are using environmentally friendly and green technologies as part corporate social responsibility initiatives but mainly as an approach in reducing costs. (Arruda, personal communication, April 20, 2018) Primary research also determined that common activities in reducing carbon footprint included reducing and sharing office space by having employees work from home when possible, giving employees the choice of using an electric company vehicle instead of gas, paper and waste management procedures in place that support environmentally friendly business operations through paperless technologies, and CSR approaches such as planting trees initiatives partaken by employees on a yearly basis. Insurance companies are also developing partnerships to help tackle their carbon footprint. Royal & Sun Alliance (RSA) developed a partnership with the WWF-Canada organization in sponsor of the ‘Living Planet @ Work program’, which supports RSA’s national internal green team program helping them achieve the goal in reducing their carbon footprint. Compared to the major contributions related to insurers’ focal activities,
greening the insurance sector has a minor impact to solving environmental issues but is still an integral part of reinforcing sustainable development and commerce. (Arruda, personal communication, May 2, 2018)

II. Investments

Sustainable investing reflects on the economics of investing while also complimenting and addressing ESG concerns. Financing an economy in a sustainable manner requires substantial reshuffle of capital by institutional investors, including the insurance sector. Many major insurers and reinsurers are contributing investment dollars in sustainable options or increasing capital flows to long-term assets (United Nations Environment Programme, 2017). However, relying on market drive only may not be enough to mobilize the needed capital at the scale necessary of transitioning away from high-carbon investments. Significant for the insurance sector, the adaptation to sustainable development and commerce poses substantial capital allocation along with operational challenges for the financial system. Financial markets, such as the insurance industry can use capital to back investments that react to sustainability concerns, such as developing and building climate-resilient infrastructure. With over US$31 trillion in global assets under management, the insurance sector plays a significant role as an institutional investor (United Nations Environment Programme, 2017). Canadian insurance companies can use sustainable investing frameworks in adapting and responding to ESG issues that are significant to Canada, which would put the country’s economics in a better position than its’ un-adaptive counterparts.

Sustainable Investing

Insurance companies are progressing in the development of sustainable and responsible investment strategies. The UN’s Principles for Responsible Investment is a recognized standard for the assimilation of ESG factors through the investment chain and accounts for US$73 trillion in assets under management (UNEP Finance Initiative, 2012). There is mounting concern of ESG factors for long-term value creation for institutional investors like insurers which is demonstrated in a meta-analyses that found a strong correlation between ESG and corporate financial performance in particular markets. (Friede, Busch, & Bassen, 2015) Likewise, demand for investment products interconnected to sustainability are emerging which suggests a shift in the understanding of fundamental institutional investor responsibilities concerning sustainability and ESG factors. (United Nations Environment Programme, 2017). In regards to investment portfolio risk and strategic asset allocation, it appears that climate change is the most substantial sustainability challenge for investors, including insurance firms. (Arruda, personal communication, 2018) Insurers are drawn to budgeting capital towards sustainable long-term investments but have a point to be concerned of international regulatory frameworks that would coerce their ability to make investment choices that support sustainable development. Thus, an insufficient volume of investable projects can be a crucial obstacle to institutional investment opportunities that support sustainable development, such as low-carbon infrastructure. Even though there are many challenges that affect the supply and demand for green/sustainable investment from institutions, including regulatory constraints, developing new collaborations
across sectors can address some of these challenges. Portfolio de-carbonization is another prevailing strategy, with numerous major multinationals pledging to rid of fossil fuels and redistribute capital to green assets, such as investing in green bonds. (United Nations Environment Programme, 2015) Presently, institutional investor capital apportionment to long-term green assets involving infrastructure is meager, at less than 1% of portfolios (Della Croce & Yermo, 2013). A crucial challenge is to emphasize investor sentiment in areas, such as structure resilience and adaptation to environmental devastations. According to the Global Adaptation & Resilience Investment Working Group (GARI), 78% of 101 surveyed investors and stakeholders understood that the physical risk from climate change was “very important”, while 70% would consider making investments that supported adaptation to climate change or climate change resilience now (Koh, Mazzacurati, & Swann, 2016).

In the Canadian insurance market, companies such as Addenda (affiliated with the Co-operators Group) and Aviva are examples of incorporating sustainability and ESG issues in their investments. Addenda, a signatory to the United Nations-sponsored Principles for Responsible Investment, has investing activities directed by an ESG approach which encourages sustainable financial markets. Addenda does this by requesting organizations to take action on issues of importance to sustainability. For example, Addenda held a letter campaign asking 64 international stock exchanges to issue voluntary reporting guidelines that include ESG factors, thereby supporting the concept of sustainable stock exchanges. In another instance, Addenda signed a letter directed to Alberta leaders on the development of a climate policy. The letter asked the province of Alberta to strengthen its climate policy and implement an effective and broad-based price on carbon that can stimulate innovation and diversification of the Albertan economy. (The Co-operators, 2015) Aviva, an insurance company involved in sustainable investments, was stated to be in the top 10% of socially responsible companies globally in the Dow Jones Sustainability World Index. (Aviva Investors Global Services Limited, 2017) They are also a dedicated follower of United Nations Principles of Responsible Investment, with also having representation on the UN PRI Board. Involved in the development of the United Nations Principles for Sustainable Insurance, Aviva was one of the originating signatory companies in June 2012 through the commitment of their Chairman, John McFarlane. Currently, Aviva is involved in the Financial Stability Board Task Force on Climate-Related Financial Disclosures and continues to play an active leadership role in helping to shape the public policy agenda around the sustainability of capital markets. Specifically, Aviva Investors’ Global Responsible Investment Team is a key element in their sustainable investing strategies, which helps direct investment positions that ensure ESG factors, such as global climate negotiations and social trends in urbanization, are considered when determining the firm-wide macro outlook. (Aviva Investors Global Services Limited, 2017)

III. Insurers’ Products & Services

The insurance industry has the obligation of providing valuable and dependable products/services. This obligation includes working with all stakeholders, including clients businesses, to manage risks that are substantial to the insurance business. Insurers can then develop products and services which reduce risk while developing support programs on risk,
insurance and ESG issues. The accessibility and affordability of insurance is an enabler of sustainable economic growth, which then have inferences for future investment prospects that influence sustainable development results. A primarily risk-based attitude to sustainability challenges can strengthen efforts to accumulate markets for low-carbon assets such as green bonds, a product offered in the insurance market that supports sustainable development. Green bonds, along with other products and services, are examples of the P&C insurance industry is addressing ESG and sustainability issues through their primary business operations. Insurance products that address ESG issues is a strategic economic driver for markets that support sustainable development and commerce. The following insurance products and services that are offered will demonstrate how the P&C insurance industry are addressing ESG and sustainability in current markets, both in Canada and internationally.

**Products**

The market for insurance products that address ESG and sustainability issues is significant. By the end of 2015, the global market volume in environmental insurance was valued to be more than US$600 million and has been increasing since (United Nations Environment Programme, 2017). Demand for environmental insurance coverage is growing due to transforming risk profiles, consumer demand and regulatory activities. A major driving factor is the frequency of environmental claims increasing by 20-30% each year (Keeping, Fried, Dubord, & Callen, 2016). Also, the size of the outstanding catastrophe bond market by mid-2016 rose to a record US$26.5 billion (ARTEMIS, 2016). As the demand for coverage in environmental damage surges, the insurance industry is forced to move towards developing insurance products designed to tackle ESG issues. The benefit from this includes the development of new insurance products for green infrastructure, such as renewable energy construction, energy efficiency insurance, and usage-based insurance for vehicles. Other products revolve around differential pricing for low-carbon options, such as green buildings and low-emission cars, which requires greater comprehension in the risk performance of these higher-performing energy efficient assets. For example, insurance coverage for electric vehicles (EV) are provided to owners which can expect lower insurance premiums as they are regarded as lower-risk clients but premiums charged for EVs vary in the market due insufficient statistical indication to support lower or higher premiums. (Johannsdottir, Davidsdottir, Goodsite, & Olafsson, 2014) In the Canadian insurance market, CAA Insurance offers a 5 per cent discount for owners of hybrid or electric vehicles in Ontario, while TD Insurance offers the same in Ontario, and a 10 per cent discount across the rest of the country. (Will, 2017) The emergence and development of energy-saving insurance coverage is also occurring, including wind power, solar photovoltaic and geothermal energy. (United Nations Environment Programme, 2015) The progress and development of these new insurance products addressing ESG issues involves risks can be moderated with appropriate insurance products. A number of studies have exposed that the energy sector anticipates to use a comprehensive range of risk transfer solutions in the future, including insurance, weather derivatives, and hedge contracts (Economist Intelligence Unit; Swiss Re, 2011). Significant consideration and attention is also being given to the ‘green bond’ market, where earnings are specified for green investment projects. Investors partaking in countries such as UK, United
States, China, India, Nigeria, and Canada see green bonds as offering a new tool to finance their ambitions for sustainable development. Pressure is mounting from clients demanding insurers to cover the cost of recapturing green building certificates and to rebuild both private and commercial buildings by using green solutions after insured losses (Ishihara, 2010). A product solution to this provided by the insurance industry is “green coverage”, which includes the cost to rebuild commercial properties in accordance to the LEED (Leadership in Energy and Environmental Design) building rating system (Mills & Lecomte, 2006), and loss of earnings from alternative energy sources such as solar panel-generated power (Fersko, 2010). As part of their commitment to environmental sustainability, Royal & Sun Alliance has developed a unique endorsement for home insurance policy forms in Canada, where policyholders can opt to replace damaged property with environmentally friendly, non-toxic, and energy-efficient alternatives, even if they cost more to replace. (Arruda, personal communication, May 2, 2018) Price enticements, such as discounts, for customers to utilize energy efficient appliances are also used (Johannsdottir, Davidsdottir, Goodsite, & Olafsson, 2014). Environmental insurance policies are generally accessible in Canada as the agenda is progressing with more targeted products becoming available to address ESG risks. There are three broad developments in environmental insurance that have occurred in recent years in the Canadian market. The first is Environmental Impairment Liability (EIL) policies which cover third party exposures for the manufacturing or servicing industries such as cleanup expenses and pollution from waste material, as well as third party cleanup expenses, bodily injury and property damage arising from a pollution event. The second is Directors and Officers (D&O) insurance policies which have been revamped to include environmental liability coverage. The third development is focused on new entrants in the marketplace as the environmental insurance portfolio is progressing. (Nadarajah, 2017) Berkley Canada, for example, offers expedited cleanup in its environmental policies, a feature which it says is unique in Canada. Expedited cleanup not only ensures that an insured can file a claim for cleanup, but also ensures the cleanup method used is fast and efficient. (Berkley Insurance Company, 2013)

Claims Service

Claims service is essentially the insurance policy in action, thus insurers must respond to clients quickly, reasonably, sensitively and transparently at all times, but also making sure claims processes are explained thoroughly. It can be difficult to address ESG issues through claims service due to indemnity and policy wording, however the insurance industry can be creative in other ways to tackle losses related to these issues to drive cost savings. It will be demonstrated how claims service can provide a significant opportunity for the industry to react in a sustainable way to losses derived from ESG factors, such as climate change. In 2016, Canadian P&C insurers paid out $32.0 billion, or 63%, of insurance company revenues in claims. The Fort McMurray disaster, the largest insured loss in Canada’s history, was also a test for Canada’s property and casualty (P&C) insurance industry. (Insurance Bureau of Canada, 2017) This evidence of spending large amounts of money on claims suggests that insurance companies, including other interconnected organizations, should emphasize integrating ESG issues into repairs, replacements and other claims services. To address sustainability issues in the claims
process, insurers can integrate ESG issues into repairs, replacements and other claims services. An example of this includes TD Insurance’s Green Build Pilot which is part of a claims prevention initiative. TDI ran the pilot to understand how to best implement recommendations from the Institute for Catastrophic Loss Reduction (ICLR). In this pilot, some TDI customers whose assets were damaged as a result of catastrophic events were selected to have their assets rebuilt with stronger, more climate-resilient materials at no additional cost. Green Check Pilot TDI ran a pilot in preventative claims education for customers, specifically targeted at water damage prevention. Also, TDI runs a claims advice line which provides preventative advice to customers including advice on prevention related to damage from severe weather events. (TD Bank Group, 2015)

Mandatory Coverage

Mandatory requirements to possess insurance coverage for risks associated with sustainability are used as a strategy to cope with natural catastrophes, however mandatory requirements can be imposed on individuals for particular types of property insurance and on firms for environmental damage (United Nations Environment Programme, 2017). Many mandatory public schemes are inundated by financing challenges such as a dependence on public subsidies and/or unaffordable premiums for consumers. As a result, specific regions in both developed and developing countries show minimal amounts of coverage for natural catastrophe incidents such as earthquakes and flooding. However, there are instances of successful mandatory insurance schemes and appears to be gaining interest by the insurance industry for coping with environmental risks in both developed and developing countries. Notable examples include:

- Iceland Catastrophe Insurance: Founded in 1975 as a public undertaking, the Iceland Catastrophe Insurance (ICI) functions as an insurance company. Insurance for earthquakes, volcanic eruptions, avalanches, rock slides and floods is mandatory for all real estate in Iceland; as well as for contents insured against fire. Buildings are insured according to their valuation for fire as assessed by the Registers Iceland. (United Nations Environment Programme, 2015)

- Switzerland’s Cantonal Building Insurance: Natural hazard insurance in Switzerland is mandatory and linked to fire insurance. Customers must either purchase this insurance from cantonal public monopolies or from private insurers. Due to public ownership structures and mandatory comprehensive provision, adverse selection is minimized and mutualization is maximized. (United Nations Environment Programme, 2015)

These examples have significant implications to the dexterity that mandatory coverage has in addressing ESG issues. The method of mandatory coverage has the potential to sustain several resilience goals, while lowering the private and public cost in losses that would be otherwise uninsured. Also, mandatory coverage can create a decisive group of contributors, which could work around scale issues presented by markets where susceptible populations are characterized as negative business propositions. Certain fundamental factors should be in place for financially sustainable mandatory coverage before distribution by the insurance industry. Finding the suitable scale for inclusion by the community, state, or national level is of
importance in considering mandatory coverage. Additionally, directed investigation to assess costs, benefits, and risks of different co-financing configurations to ensure a balance between risk-based pricing and affordability is essential in designing mandatory insurance coverage to address ESG issues. (United Nations Environment Programme, 2015) To sustain insurance coverage, the Canadian P&C insurance industry can learn from these cases and integrate mandatory coverage in vulnerable communities where coastal and urban flooding are an issue.

IV. Risk Management & Loss Prevention

The insurance industry’s central business is to understand, manage and carry risk. Through risk management and loss reduction, the insurance industry helps protect society, fosters innovation and underpins economic development which is essential to a sustainable society. It is evident that we are collectively facing environmental, social and governance challenges. This fact alters risk management, leads to diverse and complex risks, and presents new challenges and opportunities in addressing ESG factors. Consequently, it is imperative for the P&C insurance industry to adapt to the variety of ESG risk factors reflected in managing its business which can have a significant impact on the industry’s viability. Therefore, for the insurance industry to be resilient, it will need to depend on prudent and long-term risk management in which ESG issues are considered. The goal of insurers regarding sustainability and risk management is to inaugurate procedures that identify and assess ESG issues inherent in their risk portfolio and create responsiveness to probable ESG-related consequences of their transactions. It is also important for insurers to integrate ESG issues into risk management, underwriting processes, including research and analytics. (United Nations Environment Programme, 2017) Thus, it is necessary for insurers to recognize the effect of ESG factors on their businesses and identify opportunities for enhancing risk management, underwriting practices and customer protection.

Risk Management of ESG Factors

The P&C insurance industry has meaningfully improved its ability to manage environmental risks, especially in regards to the material risks caused by natural disasters. The existing challenge is to expand current models to cogitate a broader range of risks, including contingent risks caused by ESG factors. A Lloyd’s report indicated that the majority of catastrophe models, while significantly improved, do not consider climate change risks sufficiently, and require adjustment alongside historical data that does not adequately consider probable future impacts. (Toumi & Restell, 2014) How the insurance industry handles pure risk in terms of how ESG factors influence them is worth discussion. Pure risks have only two outcomes, are loss or no loss, unlike “speculative risks” where a potential benefit may be an outcome. Insurance companies are only able to make speculative risks at the levels they do through reinsurace or sharing the risk at the portfolio level. The fact that the reinsurer does not operate at the level of underwriting individual insureds, implies that their extension of risk-bearing capacity operates as a de facto investment activity. The reinsurer is underwriting the anticipated performance of the risk portfolio, while the insurer/insurance company will make their reinsurance investment. (Alexander & Sarabia, 2012) This risk transformation process is a
critical component concerning the cognitive operational models of the insurance industry, as each type of risk is closely associated with particular sets of behaviors. Entities dealing with pure risk have cost reduction as their primary goal but insurance companies are more concerned with moral hazard and its control. (Shea & Hutchin, 2013) Reinsurers, whose control mechanism does not typically extend to the individual insured, will seek to substitute tightly delineated alignments of interests as the behavioral motivator for the account-specific level of oversight they are not positioned to provide. (Swiss Reinsurance Company Ltd, 2016) This industry model give rise to two issues that creates challenges in integrating ESG factors as essential elements of insuring risk. The first issue of this industry model is impaired knowledge and information exchange of reinsurers. This refers to the circumstance of the reinsurer being unaware of a particular insured engaging in a unsustainable activities, such as neglecting ecological responsibilities, which presents a reputational risk for all in the chain of commerce providing the insurance. The required data accumulation to fully develop and then price new insurance products is unlikely and is particularly true with new categories of risk. In many cases, antitrust regulations impede the data and information exchanges that would otherwise simplify the development of insurance products for new hazard types, which are often driven by ESG factors. The second issue of the reinsurance model is the diminished aptitude to manage systemic risk. If a risk is great enough, diversification is a process by which the risk becomes systemic and not as much as a risk management technique. As a by-product of the financial leverage deployed, the insurance industry is uniquely positioned to contribute to either the creation or management of systemic risks related to ESG factors. (Shea & Hutchin, 2013) Effective systemic risk management requires mechanisms for exchanging data and early insights on developing systemic risks so the interests of the public good and profit-seeking entities involved are aligned. (Swiss Reinsurance Company Ltd, 2016)

Insurance firms are looking to better understand how risk factors resulting from the transition to sustainable development may affect the value of a variety of asset classes. Several global insurance and reinsurance firms which have applied frameworks to integrate ESG risks and opportunities across lines of business have been examined. Allianz’s approach to ESG factors considers sustainability risks across P&C insurance and investment areas. In underwriting risks, Allianz integrates ESG guidelines on sensitive business areas and develops schemes to engage corporate clients on ESG issues. A global ESG directive for investments was executed in 2014 by Allianz to integrate ESG risks into global training for underwriters and investment officers. (United Nations Environment Programme, 2017) In May 2015, AXA became the first global financial institution to divest from enterprises exposed to coal-related activities. Moreover, in April 2017, AXA was the first global insurer to disengage from underwriting insurance for coal-intensive businesses, in line with its commitment to implement the PSI. The company is also dedicated to tripling its green investments to more than EUR 3 billion by 2020, mainly in clean technology, green infrastructure and green bonds. (United Nations Environment Programme, 2017) Swiss Re’s ‘Sustainability Risk Framework’ is a corporate risk management methodology, which consists of eight policies on sensitive sectors or issues, a process for sensitive business risks in due diligence, and company exclusions. The framework is applied to all business transactions, from underwriting activities to investments. (Swiss Reinsurance
Company Ltd, 2016) Insurance firms, such as Intact Financial, are investing in technology programs aimed at addressing the specific environmental risk of wild fires in Alberta. Intact Financial has teamed up with the University of Alberta in a program using artificial intelligence (AI) to predict extreme fire weather in the province. Although wildfires are a natural part of the environment, large fires lead to property destruction, industry disruption, and fatalities. The partnership has lead to the development of a computer program to recognize large scale atmospheric patterns leading to extreme fire weather using artificial intelligence (AI). The goals of the initiative are to expand research, using AI, to predict extreme fire weather under various climate change scenarios and to move from theoretical research to development of an Extreme Fire Weather AI Application for operational wildfire management. (Arruda, personal communication, April 27, 2018) Another notable Canadian example of insurers collaborating with other organizations to address risk management of ESG issues, such as climate change, is Royal & Sun Alliance Canada. To help Toronto’s youth realize the important roles they can play following a disaster, Royal & Sun Alliance Canada sponsored a storm simulation event in 2017 called “The Youth Economic Opportunities in Disaster Risk Reduction and Climate Adaptation”. The event was organized by York University’s Disaster & Emergency Management programs and CLARION, while Royal & Sun Alliance Canada served as a major sponsor for the activity. The event coincided with the United Nations Office for Disaster Risk Reduction and the Government of Canada’s Fifth Regional Platform for Disaster Risk Reduction in the Americas. (Arruda, personal communication, May 2, 2018)

The Role of Underwriting

Proper risk underwriting is about correctly pricing for the unknown, a fact that drives what is often an onerous and at times an inaccurate practice. In the P&C insurance industry, insurance is priced by an underwriter/underwriting software that rates an applicant based on multiple factors. Insurers attempt to reduce uncertainty by identifying different types of customers based on individual characteristics in order to establish the level of risk. (Thomas, 2012) Generically, the insurance industry refers to new risks marking policies already in force or to be underwritten as “emerging risks.” (Shea & Hutchin, 2013) The insurance industry’s link and experience with ESG factors as emerging risks are substantial in motivating underwriting attention to sustainability, especially with the ESG issue of climate change. However, sustainability challenges for underwriting are developing beyond environmental risks, including an extensive array of interconnected economic and social issues. Several international insurance and reinsurance corporations have applied agendas to incorporate ESG risks and opportunities in several lines of business, such as exclusions for fossil fuels in insurance policies. Insurers are working mutually, as well with non-industry stakeholders including governments and civil society, to share expertise in tackling ESG issues to enhance risk resilience and planning. (Insurance Working Group of the United Nations Environment Programme Finance Initiative, 2009) Consideration is now flowing to underwriting new investments emerging from the low-carbon transition plan, such as renewable energy assets, energy efficiency, and zero-emissions vehicles. Attention is also being brought to utilizing publicly available data to better comprehend the financial performance of loans and credit to assets, such as “green mortgages” provided to
energy-efficient buildings. (Johannsdottir, Davidsdottir, Goodsite, & Olafsson, 2014) This approach would allow the P&C insurance industry to better realize the claims performance and competitive pricing of sustainable assets. While there may be detailed accounts of claims associated with climate-vulnerable or poorly performing buildings, there is less information and data on underwriting performance of A-grade buildings. In a case study by Lara Johannsdottir, research in the perceptions of various underwrites of Nordic insurers confirmed that ESG factors impact insureds and insurers through distinct mechanisms, such as coverage terms versus reputational risk, and presented industry leaders’ shared call-to-arms to accumulate, analyze, and disseminate data to integrate ESG factors into underwriting. (Johannsdottir, Davidsdottir, Goodsite, & Olafsson, 2014) Supporting innovation in the underwriting process is not only an urgency in emerging markets, but also in highly developed and sophisticated markets subjected to specific environmental risks. Technology is significant when underwriting and pricing risks, e.g. by utilizing Geographic Information Systems (GIS), and when working with developers of climate models such as Risk Management Solutions (RMS) and the Benfield Hazard Center in modeling weather-related impacts. (Johannsdottir, Wallace, & Jones, 2012).

The Role of Reinsurers, Stakeholders, and Regulators

To take on the challenges of sustainability and ESG issues, the insurance industry needs to work in partnership with governments, regulators and other key stakeholders. This can be undertaken by having all stakeholders supporting policy, regulatory and legal frameworks that enable risk reduction, while improving management of ESG issues. It is essential to involve governments and regulators to discuss integrated risk management approaches and risk transfer solutions with business and industry associations to better manage ESG issues across industries. Discourse with the academic community to foster research and educational programs on ESG issues in the context of insurance, along with discourse with media to endorse public awareness of ESG issues, also promotes partnerships among all stakeholders. Insurance policy and regulation are significant in guiding the actions on sustainable development challenges by the insurance industry. National insurance regulators are innovating in reaction to sustainability challenges that support the role of insurance in sustainable development and commerce. Insurance policy frameworks that balance the importance of risk, affordability, financial sustainability, and access of insurance will require deep engagement with reinsurers, stakeholders, and regulators. Supervisory guidance and regulatory sustenance is essential in increasing access to sustainable insurance, such as the provision of basic property micro-insurance to support livelihood resilience in the advent of catastrophes. (United Nations Environment Programme, 2017) Within the insurance industry, collaborating with various firms and stakeholders to propel initiatives that address critical ESG challenges, such as natural disaster risk mapping and modeling, urban infrastructure development, city resilience and sustainability, and climate risk insurance are critical to sustainable development and commerce.

Internationally, there is an emerging variety of innovations by multi-stakeholder ingenuities that utilize insurance for sustainable development and commerce. Many multi-stakeholder partnerships have been formed to tackle sustainable development challenges and ESG issues. These partnerships are showing to be valuable in involving multi-stakeholders by
strong policy suggestions, sharing data, and networking in new ways. Insurers are establishing partnerships linking stakeholders with governments to motivate improved policies for risk prevention and resilience. A notable example includes Partners For Action (P4A), where The Co-operators Group initiated a multi-stakeholder research and engagement effort to reduce risk in the Canadian property market from the negative impacts of overland flooding. In 2015, The Co-operators and Farm Mutual Reinsurance Plan announced the creation of the Partners for Action network, hosted at the University of Waterloo's Faculty of Environment, with the goal of improving flood resiliency in Canada. (The Co-operators, 2015) A principal factor of this work was the assembling of stakeholders including property & casualty insurers, policymakers, flood risk experts, professional associations, businesses and the legal community to identify conditions to reduce the risk and loss of flooding. Research efforts have so far included studies on the viability of flood risk insurance, and a recent analysis of 15 cities’ preparedness for floods and key policy options across municipal services, utilities, telecommunications, emergency response, and other issues. (Feltmate & Thistlethwaite, 2014) Another example of stakeholder integration to sustainable development and commerce is the PSI’s Global Resilience Project. The PSI Global Resilience Project is a cooperative venture bringing insurers from around the globe and key stakeholders to build disaster-resilient communities and economies. The project’s goal is to transfer the focus of governments, Non-Government Organizations (NGOs), communities and businesses to invest in processes that reduce disaster risk rather than post-disaster aid and recovery efforts. The Global Resilience Project plans to do this by expanding the understanding of disaster risk reduction activities globally, identifying the social and economic costs of disasters, and assessing the effectiveness of disaster risk reduction measures. (United Nations Environment Programme, 2015) The relevant information collected by the project will be used to provide insight into effective insurance industry engagement strategies that can be carried out by the insurance industry with governments, NGOs, communities and businesses to support disaster risk reduction activities, particularly in highly exposed and vulnerable regions. As a result, much of the insurance industry has taken steps to share knowledge and support public-private collaboration on sustainability and ESG challenges. The risk management expertise of the insurance industry can boost the resilience of the public and governments through direct engagement. Aviva, a multinational insurance company, is a corporate example of working with others in the insurance sector on research, definition of issues, and risk management through participation in groups like ClimateWise, The Chief Risk Officers forum, The Geneva Association and the United Nations Finance Initiative Environment Programme, and Insurance Associations such as the ABI and the Insurance Bureau of Canada. (Aviva plc, 2013) Pressure from the insurance industry and stakeholders have been mounting on the governments roll in addressing ESG issues that affect the environment and economy. Recent parliamentary assessment of the Canadian Environmental Protection Act has confirmed that the country’s main pollution laws are outdated, and the courts have been leaning towards a more generous interpretation of current legislation in order to better protect the environment. Environmental activism is not affecting the insurance portfolio, as actions thus far have been targeted at prospective projects but this may change as consideration rises. (Nadarajah, 2017)
Industry Challenges

There are a range of interlocking sustainability challenges, including emerging risks from natural hazards and climate change. Access and affordability of insurance is a significant factor of economic resilience against environmental hazards. Also, industry commitment and education of required skill sets are critical challenges to champion sustainable development and commerce. The point that management and interpretation of sustainability issues vary from company to company, makes comparability of methodologies challenging. The relevance and application of sustainability priorities vary significantly across lines of business also makes comparability a challenge. In specific markets, activities pursuing to address sustainability issues can pose a competitive disadvantage for insurers. This is because the implementation of frameworks to consider ESG risks may present new barriers in place of mainstream business opportunities. There is also an absence of alignment across the insurance value chain on sustainability priorities. Central to this is the role of insurance brokers in channeling demand for sustainable insurance products, coordinating between clients and insurers as well as with the reinsurance sector. Other key barriers to mainstreaming ESG issues include misaligned market incentives, short-term time horizons and capacity constraints. (United Nations Environment Programme, 2015) It is also important to note that many of the measures described to evaluate ESG issues are relatively new, which makes it challenging to assess.

Climate Change & Emerging Risks

The Paris Agreement on climate change has pushed governments to set a goal of holding global warming and set out steps to refocus the financial system so that it responds to the climate challenge. (United Nations Framework Convention on Climate Change, 2016) In the insurance segment, climate change has created an upsurge of demand for insurance products to protect assets but requires substantial changes in premium from underwriting insurable risks exposed to ESG factors. Currently, insurers’ dominant strategy in adopting climate change risks has been through basic approaches in raising rates and limiting coverage. Climate change, from a risk underwriting perspective, has the potential to give rise to market failures in certain locations where insurance coverage is too expensive for clients to buy or insurers to provide. Climate change demonstrates the necessity for a standard procedure in classifying and reacting to emerging risks to ensure a systematic approach can be applied to insurance underwriting. While the impacts on P&C insurance are more obvious, several other lines of insurance are using historical data sets not sufficiently placed to capture the growing adverse forces of ESG factors, such as climate change. (United Nations Environment Programme, 2017) Thus, existing flood maps based on historical data lose relevance when the causal meteorological factors for losses are undergoing dynamic change. (Shea & Hutchin, 2013) Collectively, climate change and land development have intensified risk by constructing infrastructures incapable to absorb rainfall and triggering flood damages. As demonstrated, the propensity of sustainability suggests the consequences of climate change will affect all participants of the risk industry regardless of their efforts to avoid risk and of their location in the risk industry commerce chain. In the insurance industry’s experience, climate related disasters are becoming more frequent and more severe. Concurrently with population growth, urbanization and climate change, exposure to these risks
are anticipated to result in substantial losses in the near future. Thus, the risk transfer mechanisms of insurance will be crucial in serving communities and economies in the management of these threats in a sustainable manner.

The previous mentioned issues of climate change have a significant impact in the Canadian market and presents a significant challenge to all stakeholders involved. Insured losses for a given disaster are deemed catastrophic when they total $25 million or more. (Insurance Bureau of Canada, 2017) Catastrophic losses due to natural disasters have increased dramatically over the last decade, including in Canada. Between 1995 and 2015, over 90% of disasters were weather-related, causing average economic losses of between US 250-300 billion per year. (United Nations Environment Programme, 2015) In 2016, catastrophic losses in Canada accounted for approximately CAD 5.03 billion, which were the highest ever. Of the CAD 5.03 billion, CAD 3.7 billion was a result of the Fort McMurray wildfire. The wildfire that occurred in May 2016 forced the evacuation of almost 90,000 people from Fort McMurray and surrounding communities. The fire destroyed or damaged 2,500 homes and buildings and thousands of vehicles and resulted in almost 49,000 claims in total. Before 2016, the year 2013 was the record-breaker for catastrophic losses, when insurers paid out more than CAD 3.4 billion, including CAD 1.8 billion as a result of the floods in southern Alberta and around $1 billion as a result of a summer storm and flooding in Toronto. As well, at the end of 2013, a massive winter storm hit southern Ontario and parts of Eastern Canada. (Insurance Bureau of Canada, 2017) Insurers and policy holders need to adapt to the physical hazards of climate related risks, predominantly in coastal and urban flooding, which is the largest cause of property damage in Canada. The insurance industry will be crucial in being an economic safeguard against natural catastrophes by investing in prevention and resilience, managing risk, and assisting in post-disaster recovery. The insurance sector must continue to innovate to manage natural disaster risk. Schemes such as catastrophe insurance pools and index-based insurance solutions can expedite the coverage of disaster risk. (United Nations Environment Programme, 2017) If the insurance industry properly invests in disaster risk reduction, the benefits are substantial. Effective natural disaster risk reduction will lead to less economic, social and environmental losses, while creating more resilient communities and economies. It would also require a reduced amount of public and private funds expended on disaster relief and recovery, enabling further access to affordable insurance to aid communities manage the financial difficulty accompanying losses. Recent research has shown that sufficiently insured natural catastrophe events have inconsequential impacts on economic output, supporting faster recovery, whereas uninsured losses can have significant long-term impacts. (Von Peter, Von Dahlen, & Saxena, 2012) It becomes apparent that investment in disaster risk reduction can lead to lower economic, social and environmental losses, safer and more resilient communities, and ultimately less public and private funding allocated to disaster relief and recovery.

Commitment and Education

It will be important to ensure that commitments are meaningful by moving from ambition to clear directed action by those in the insurance industry. Clear and quantifiable commitments with tools for monitoring and evaluating are necessary for the commitment of insurance
companies in addressing ESG issues. If industry commitments remain drawn-out and aren’t associated to well-defined metrics, there will be less influence on ESG issues and less legitimacy. Thus, coherent frameworks to organize and evaluate commitments, such as the UNEP FI’s Principles for Sustainable Insurance, would increase impression of the insurance firms in tackling ESG issues. It is also imperative to ensure that commitments to frameworks for action do not merely devolve into a label for doing business. As part of making commitments clear and meaningful, industry stakeholders should aim to move from aspirational signaling to clear and explicit requests from policy-makers, such as making commitments central to deals with governments to achieve shared objectives. (United Nations Environment Programme, 2017)

Another issue around industry commitment is a skills gap among insurance practitioners and regulators in their understanding of a range of environmental, social and governance (ESG) issues. (United Nations Environment Programme, 2015) PSI’ principle 1 suggest corporations to integrate ESG issues into recruitment, training and employee engagement programs. (UNEP Finance Initiative, 2012) Most countries have a national insurance institute, consequently national and international insurance institutes, along with academic institutions that provide insurance programs, can help embed sustainable development in insurance education. As there is gap of knowledge in sustainability by insurance regulators and non-industry stakeholders, an opportunity arises for insurers, regulators and stakeholders to collaborate and cultivate an insurance philosophy of sustainability. As a result, there are valuable teachings from the immense experience in developing knowledge on disaster risk management across markets.

Public Trust & Disclosure

Public trust and reputation matters continue to plague insurers and the general financial sector, which will be an important challenge for the industry. An annual international trust and credibility survey regularly rated the financial sector, which includes insurers, as the least trusted global industry. (Edelman Berland, 2014) This suggests that the insurance industry will need to upturn the level of public trust in order to gain support for its sustainable agenda. Increasing transparency across insurance products and operations is imperative towards gaining public trust. A worthy approach would be to have national regulators join the PSI to employ the principles nationally to ensure consistency across the industry, which could provide greater confidence from the public and organizations. To address public trust and disclosure, the PSI suggests the insurance industry develop roadmaps in sustainable insurance to incorporate sustainable development in insurance policy and regulation by mainstreaming ESG and sustainable development issues into regulatory frameworks. (UNEP Finance Initiative, 2012) Also, regulators can be involved in development incentives to direct consumers to sustainable options. Transparency is an essential practice to ensure accountability, especially when done voluntarily. Public disclosure of progress is worthy to the credibility of an organization that has publicly adopted the PSI and its implementation. Public disclosure is also central to the overall credibility of the industry as a whole. Public disclosure will allow the public to directly recognize how companies are progressing in managing ESG issues in their business operations, while also being a motivator for improvement. Even though the main focus on disclosure has been to avoid risk, concentrating on investment portfolios and improved transparency within insurance markets can
have substantial benefits for consumers. A strategy on this is to increase clarity around the sustainability dimensions of specific financial products such as socially responsible investments (SRI). (United Nations Environment Programme, 2015) In the insurance sector, public disclosure of investment portfolios is often used to promote enriched consumer choice due to the collective interest among consumers on the sustainability performance of insurance firms. Regulatory and international bodies have a significant influence on public disclosure of financial firms’ performance against ESG issues. Recently, standards and guidelines established by international bodies, had a significant impact on Canada’s regulatory system due to the global financial crisis of 2008, which prompted an overhauling of financial regulations worldwide. A particularly noteworthy result from this need was the Financial Stability Board and the International Association of Insurance Supervisors, which led the development of the global Insurance Capital Standard (ICS). (Financial Stability Board, 2014) While the ICS is currently in early stages of development, later versions of the ICS are likely to influence the Canadian capital standard by The Office of the Superintendent of Financial Institutions (OSFI). Also, the Insurance Bureau of Canada (IBC) is collaborating with its international colleagues to monitor and comment on the ICS development and with OSFI to ensure that any capital changes are appropriate in the Canadian context. (Insurance Bureau of Canada, 2017)

Conclusion

Outside supporting financial resilience, insurance also fosters solutions that supports both social and environmental sustainability. The insurance industry has the aptitude to support sustainable development and commerce through their investments and operations. An increasing amount of industry firms are transforming in reaction to the challenges of ESG issues such as natural disasters, social exclusion, climate change and long-term finances. Innovations are coming from multiple channels, such as corporate collaborations, multi-stakeholder partnerships, and regulatory frameworks. The goal the insurance industry is to not only support economic prosperity, but also foster consumer trust through industry wide disclosure and adapt to a changing market environment, such as the urgency to address ESG issues that affect economic sustainability. Unfortunately, the Canadian P&C insurance market does not provide industry wide disclosure and few insurance companies show the necessity to address ESG issues. Initially, there were limited insurance industry initiatives focused on addressing sustainable development and commerce challenges, especially in the Canadian P&C market. Index-based and usage-based insurance, insurance for renewable energy and green buildings, and insurance for electric vehicles were virtually non-existent. Growing economic and social losses due to exposure to natural disasters have stimulated complex systems of risk analysis and management of ESG issues by the insurance industry. There is an apparent progression of initiatives that validate the role of the insurance industry in addressing sustainable development challenges, predominantly in the areas of disaster risk reduction, access to insurance, and climate change. In particular, climate change has been a driver in market innovation, policy development, and new regulatory schemes for the insurance industry in many countries, including Canada. There is also growing market demand for new insurance products that encourage the conversion to low-carbon and resource-efficient economies, such as coverage for clean energy projects, green buildings,
energy efficiency, and electric vehicles. Developments in environmental liability insurance covering risks arising from environmental damage continue to gain momentum. Insurance for renewable energy investments, insurance solutions for low-emission transport, and products for green rebuilding and green domestic appliance replacements, are also beginning to emerge. The risk transfer means of insurance, including distribution of its long-term capital, is highly relevant for many of the UN’s 17 Sustainable Development Goals (SDGs) and the goals of the Paris Agreement on climate change. The P&C insurance sector is vital for the resilience of the financial system, providing coverage against losses on various assets. The insurance industry provides risk indicators that impact capital distribution selections by several organizations. The P&C insurance sector also helps communities understand, prevent and reduce sustainability risks. By pricing and carrying such risks, the P&C insurance sector can be a valuable means for managing intertwined ESG sustainability challenges including natural hazards and climate shocks.

The insurance sector is responding to sustainability challenges with strategic action across several initiatives, investments, products and services, risk management, including through the adoption of the UN-backed Principles for Sustainable Insurance. Prominent national and international insurers are incorporating environmental factors into the provision of insurance coverage, underwriting approaches, reallocating capital towards green assets, and integrating ESG factors in all operational aspects. Similarly, several insurance supervisors and regulators are starting to incorporate sustainability and ESG factors into how they supervise the insurance industry. In recent years, there has been an apparent transformation in how supervisory and regulatory institutions are managing sustainability issues. Looking at this evolution, it is clear that progress has been made in many critical areas, including an increasing focus on ESG issues in all aspects of the insurance industry’s operations. However, less advancement has occurred in providing coherence across the different components of the sustainable development agenda throughout the insurance sector. The good news is that the agenda is evolving, with new models being developed to address challenges of access and economic sustainability in insurance products. Many of these models can be used as templates that can be utilized in other jurisdictions, including Canada. There are some barriers that can prevent the realization of the sector’s full potential, including market failures, misaligned policy frameworks, underdeveloped markets, as well as gaps in critical capabilities. Innovations in data analytics and mobile technologies for the P&C insurance industry to properly address ESG factors pose new challenges and opportunities to the across the value chain, from risk pricing to product distribution. Key sustainability factors are now recognized as potentially significant for the success, safety and soundness of the insurance sector, which is demonstrated by the inspiring reactions of several enterprises and regulators. In its role as a risk manager, risk carrier and investor, the global insurance sector will always play a cornerstone role in the management of sustainability-related risks and opportunities.


Appendix

The following are interview questions that were conducted with company and organizational representatives from the Canadian insurance industry/market. Interviewees were presented with a Consent Form, which was signed before the interviews were conducted. Interview questions and protocol were approved by University of Guelph’s Research Ethics Board, REB# 18-01-013.

Interviewees:
Aviva Insurance, C.S., 29/03/2018
Economical Insurance, K.S., 20/04/2018
Intact Insurance, M.D., 27/04/2018
RSA Insurance, P.B., 02/05/2018
Insurance Bureau of Canada, T.R., 01/05/2018

Company Representatives Interview Questions

Q1. Please describe your title, role and duties in your organization in as much detail as possible.

Q2. Does [COMPANY NAME] have sustainable or environmental goals? If yes, what are [COMPANY NAME] sustainability and/or environmental goals?

Q3. What are the partnerships that [COMPANY NAME] has that are involved in helping you achieve your sustainability and/or environmental strategies/goals?

Q4. Which partnerships or stakeholders could [COMPANY NAME] use help from in helping you achieve your sustainability strategies/goals?

Q5. What is [COMPANY NAME] doing in regards to your environmental footprint and carbon emissions?


Q7. What are [COMPANY NAME] Corporate Social Responsibility initiatives?

Q8. What kind of investments is [COMPANY NAME] doing to address environmental issues, such as climate change?

Q9. What other types of investments does [COMPANY NAME] when it comes to environmental and sustainable issues? (ie. Research, Education)

Q10. Does [COMPANY NAME] offer insurance products to “green” or “sustainable” development/commerce risks? (ie. Green Bonds) If yes, please describe.

Q11. What products, services, or policy endorsements does [COMPANY NAME] offer to address sustainability and/or environmentalism?

Q12. What are some of the challenges, as an insurance company, does [COMPANY NAME] encounter in underwriting and insuring environmental and/or sustainable development/commerce risks?
Q13. What are the factors [COMPANY NAME] uses to underwrite emerging risks in sustainable and environmental development/commerce? (ie. Flood Risks)

Q14. What does [COMPANY NAME] do to address environmentalism and/or sustainability in terms of risk management?

Q15. What does [COMPANY NAME] do to address environmentalism and/or sustainability in terms of Loss Prevention?

Q16. What does [COMPANY NAME] do to address environmentalism and/or sustainability in terms of rebuilding private and commercial properties after insured losses?

Q17. If there are any files or resources you would like to attach, please do so and describe below.

**Organizational Representatives Interview Questions**

Q1. Please describe your title, role and duties in your organization in as much detail as possible.

Q2. What should the insurance industry be doing more of to support and/or promote sustainable development/commerce?

Q3. What can the insurance industry do to promote sustainability of environmental, social, governance issues involving risk management and financing?

Q4. What are some of the challenges in insuring emerging risks derived from environmental, social, and governance factors of sustainability?

Q5. Which stakeholders do you think can work most effectively with the insurance industry to promote thinking and action on environmental, social, and governance factors around sustainability?

Q6. What risk management services encourage or could improve the management of sustainability factors by insureds?

Q7. How can the insurance industry help identify future challenges within the financial system, mitigate systemic risks, and avert crisis around sustainability factors?

Q8. If there are any files or resources you would like to attach, please do so and describe below.