

ANNUAL REPORT 2019



MISSION/VISION

MISSION

The Global Risk Institute (GRI) is a premier organization that defines thought leadership in risk management for the financial industry. It brings together leaders from industry, academia, and government to draw actionable insights on risks globally.

VISION

To be a critical resource to government and the financial industry to mitigate and adapt to risks, focused on ensuring the stability of the financial ecosystem.

MEMBERS

GRI FOUNDING MEMBERS

Government of Canada Province of Ontario Manulife Financial TD Bank Group

GRI MEMBERS

AIMCo

BMO Financial Group

Business Development Bank of Canada

Canada Deposit Insurance Corporation

Canada Mortgage and Housing Corporation

CIBC

Concentra

CPP Investment Board

Desjardins

Equitable Bank

Export Development Canada

Fairfax Financial Holdings

Limited

Home Trust Company

Insurance Bureau of Canada

La Caisse de Dépôt et

Placement du Québec

Laurentian Bank

Munich Re Canada

National Bank of Canada

OMFRS

Ontario Pension Board

Ontario Teachers' Pension Plan

Payments Canada

PC Bank

Power Financial Corporation

IGM Financial,

Mackenzie Investments, Canada Life

PSP Investments

RBC

Scotiabank

NATIONAL PENSION HUB (NPH) MEMBERS

AIMCo

BCI

CAAT Pension Plan

Canada Life

CN

CPP Investment Board

Deloitte

Government of Canada

Investment Management Corporation

of Ontario

KPMG

La Caisse de Dépôt et Placement du

Québec

McKinsey & Company

Mercer

OMERS

Ontario Teachers' Pension Plan

OPTrust

PSP Investments

Sunlife Financial

University of Toronto Asset Management Corporation



| MISSION | & | VISION |
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MESSAGE FROM THE BOARD CHAIR

Risk management has become increasingly complex. The range of risks and regulations have increased and become more connected. Processes have matured. With better diagnostic tools and a wider risk taxonomy, we have become better at evaluating risk.

As financial institutions, governments, policy makers and regulators seek to excel in an ever-more complex risk environment, GRI offers robust support to its members as it identifies critical issues and provides intelligence, information and training to enable excellence.

Through our **events** we help our members stay on top of issues, on-going and emerging, and we are diligent in sourcing member input to ensure we host sessions that address their interests and meet their needs. Our **education** programs build the skills of risk professionals - from new university grads to C-Suite executives to Board members- and the talent necessary to sustain and grow Canada's competitive advantage in risk management. Our **research** delivers a wide range of insights, building on connections we establish among academic researchers and financial industry practitioners to assess, report and help mitigate risks relevant to our sector.

I thank all Board members for their dedication and insightful governance as well as past Chair, Tiff Macklem, for recruiting outstanding individuals to our team, providing valuable insights and enhancing the performance and reputation of the Global Risk Institute during his tenure. GRI benefits significantly from the effective use of its committee structure and the quality of its Board participation.

We aim, in 2020, to build on this legacy to meet and exceed our members' expectations. Check in with us at our **ANNUAL GENERAL MEETING**, April 23, 2020.

Mark Hughes



BOARD OF DIRECTORS

Mark Hughes,

Chair, Global Risk Institute

Sonia Baxendale,

President & CEO, Global Risk Institute

Alister Campbell,

President & CEO, Property and Casualty Insurance Compensation Corporation

Francine Champoux,

Executive Vice President, Risk Management, Desjardins Group

Julie Dickson,

Director, Canadian Public Accountability Board, & the Dubai Financial Services Board

Laura Dottori-Attanasio,

Senior EVP & Chief Risk Officer, CIBC

Dwight Duncan,

Senior Strategic Advisor, McMillan LLP

Janet Ecker,

Corporate Director

Graeme Hepworth,

Chief Risk Officer, Royal Bank of Canada

Rahim Hirji,

Chief Risk Officer, Manulife Financial

Paul Langill,

Special Advisor to the Chairman & CEO, TD Securities, TD Bank Group

Daniel Moore,

Group Head & Chief Risk Officer, Scotiabank

Lynn Oldfield,

President & CEO, AIG Canada

Nicola Wickes,

Head of Enterprise Risk, EMEA, Mitsubishi UFJ Financial GroupDon

M. Wilson III,

Chair of the Risk Review Committee, Bank of Montreal

Michael Zerbs,

Group Head & Chief Technology Officer, Scotiabank

Barbara Zvan,

Chief Risk & Strategy Officer, Ontario Teachers' Pension Plan

MESSAGE FROM THE PRESIDENT & CEO



I am delighted to report on our progress made in 2019, my inaugural year leading the GRI team, as we worked with world class institutions, government, regulators and academia to ensure Canada continues to leverage its risk capability as a competitive advantage. Building on the excellent work done since inception in 2011, we've achieved very positive momentum partnering in research and education on issues relevant in today's world of increasingly complex risk. We have added both breadth and depth to our focus and increased our engagement with the financial services sector. To highlight:

- We hosted more GRI member programs than ever before delivering roundtables, bespoke events, the Emerging Leaders Program and the Board Risk Oversight and Insight Program. Our newly introduced Master Class, focused on non-financial risks, was a great success; attendees were highly engaged and rewarded us with tremendous feedback.
- We launched a new Sustainable Finance Hub which will be dedicated to convening key stakeholders to help mobilize finance for sustainable growth. Embracing recommendations made by Canada's Expert Panel on Sustainable Finance, it will encourage effective governance, disclosure and risk management strategies.
- The National Pension Hub (NPH) pilot launched in 2017 as a leading Canadian centre for pension knowledge and research continues to lay the foundation as a pension thought leader for Canada in 2019. Having launched six research projects in 2019, with another four projects commencing in 2020, the NPH is innovating solutions around pension design, governance and investment challenges for our members.
- We enjoyed a record turnout at our 2019 Summit. Topics were tailored to meet the needs of our varied audiences and, by all evidence, our members were highly engaged. We introduced new topics such as open banking, attracting risk management talent and geopolitical perils, and we experimented with a new format by way of our TED-style talks.

We have exciting plans for the year ahead as we look to broaden our reach and engagement. GRI will continue to support its members and partners in the urgent drive towards unlocking financial sector innovation and resources to shift our economy towards sustainable growth. We will continue to provide valuable resources to government and the financial industry through high quality events, education and research focused on timely, relevant risks. And, we look forward to celebrating our 10th anniversary, with our members, at or 2020 Annual GRI Summit – a spectacular opportunity to share more big, bold perspectives, gain new, fresh insights and engage with risk management community colleagues to tackle what the future holds.

Sonia Baxendale

GRI IMPACT

EVENTS & EDUCATIONAL PROGRAMS

Financial risks are continuously evolving and becoming more intricate. Managing, identifying, and mitigating these risks warrant critical attention. In response, GRI has developed educational programs, hosted events, and produced relevant and timely research on risk management issues of priority to our members.

INCREASE IN MEMBER ENGAGEMENT

In 2019, GRI engaged with more individuals from member firms through our events and educational programs.



EDUCATION

Through the Board Risk Oversight Insight Program (BROIP) & Emerging Leaders Program (ELP), GRI trained a total of **125** individuals.



+26%

EVENTS

Hosted **32** events & bespoke sessions.

Spoke at **24** industry events to provide risk management insights to the financial sector.



+12%

RESEARCH

A total of **22,891** individuals accessed GRI's publications in 2019.



+10%

COMMUNICATION HIGHLIGHTS FOR 2019



SOCIAL MEDIA

Increased traffic to GRI website via **social media posts**.

+111%

Social media following increased by **44%**.

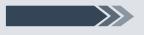
EMAIL

Increased website traffic via **GRI newsletters**.

Mailing list subscriptions increased by 29%.

MEDIA

34 mentions in 2019.



+21%

EVENTS

GRI'S SIGNATURE EVENTS

In 2019, GRI hosted **32** events, where member organizations were able to gain valuable insights from academia, industry leaders, and the public sector. Our hosted events covered a wide range of risk topics and included many integral industry stakeholders. Some highlights included:

To reach us regarding any of our programs, please contact Joel Parsan at:

jparsan@globalriskinstitute.org

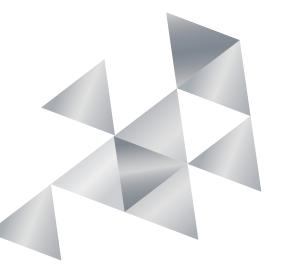
MORTGAGE MARKET UPDATE

Speakers:

Evan Siddall (Canada Mortage & Housing Corporation), **Benjamin Tal** (CIBC), and **Sonia Baxendale** (Global Risk Institute).

Panelists provided attendees with key insights into the impact of the B-20 Mortgage Stress Test for the Canadian Housing Market.





OPEN BANKING ROUND TABLE

Speakers:

Colleen Johnston (Department of Finance Advisory Committee on Open Banking, Board Member), **Andrew Moor** (Equitable Bank), and **Michael Zerbs** (Scotiabank).

Following the Open Banking Consultation paper produced by Finance Canada in January 2019, GRI convened a special panel to provide members an opportunity to hear from industry leaders on next steps in Open Banking.

PRINCIPLE-BASED REGULATION

Speakers:

Maureen Jensen (OSC), Mark White (FSRA), Mary Condon (Osgoode Hall Law School), and Jamey Hubbs (OSFI).

Top regulators from the Canadian finance industry provided updates to members on the implications of Principle-Based Regulation for the sector.



BESPOKE SESSIONS

Senior staff worked with member organizations through bespoke sessions to assist them with their risk management needs in 2019. Topics included:

GEOPOLITICAL RISK

Geopolitical sessions covered foundational concepts in geopolitics, the antecedents and potential consequences of current geopolitical trends, and how geopolitical risk may be defined, measured and assessed within an ERM framework. The U.S. China trade dispute served as the primary case study for discussion.



ENTERPRISE RISK MANAGEMENT (ERM) WORKSHOPS

During 2019, GRI staff worked with public sector and industry members to strengthen their ERM practices. GRI staff held workshops focussing on the following areas: risk appetite; risk identification and selection; key risk indicators; and risk culture. GRI also assisted member organizations through the Global Risks and Trends Framework, which helps incorporate non-financial risks into organizational strategy.

INDUSTRY SESSION

PROPERTY & CASUALTY INSURERS' RISK MANAGEMENT CONFERENCE

In 2019, GRI partnered with the Insurance Bureau of Canada (IBC) to hold our first P&C Insurers' Risk Management Conference to increase our engagement with this industry.

The conference focussed on catastrophic risk, climate change and artificial intelligence (AI). Industry experts provided key insights to attendees in relation to adaptation, disclosure, and sustainable finance along with the risks and opportunities associated with AI.



ANNUAL SUMMIT:

'DYNAMIC RISK: A SHIFTING GLOBAL LANDSCAPE'

Our most well attended and successful summit yet, we delivered big ideas and bold perspectives, providing thought-provoking content and yielding new insights. New topics and new formats, such as interactive break-out sessions and energizing TED-style talks, stimulated rich dialogue and elevated engagement.

The themes covered the many financial and non-financial risks that our industry faces today.

OPEN BANKING: TOWARD A "MADE IN CANADA" SOLUTION

GEOPOLITICS: CANADA AND THE U.S.:
AN ENDURING PARTNERSHIP

HOW A CYBER ATTACK COULD CAUSE THE NEXT FINANCIAL CRISIS

HARNESSING ARTIFICIAL INTELLIGENCE TO FURTHER THE CRO'S AGENDA

SUSTAINABLE FINANCE: MOBILIZING THE FINANCIAL SECTOR TO SUPPORT SMART CLIMATE SOLUTIONS

TALENT: ATTRACTING AND RETAINING RISK MANAGEMENT PROFESSIONALS

BIG IDEAS & BOLD PERSPECTIVES

- Geopolitical Risks in Investing
- Survival of the Fittest the Digital Future of Financial Services
- Re-thinking Financial Risk in the Era of Climate Change

RISK MANAGEMENT BEST PRACTICES CRO PANEL

Please mark your calendars
October 8, 2020

The Global Risk Institute will be celebrating it's **10th** anniversary

2019 Summit participant feedback

"Big Ideas & Bold Perspectives were a great after lunch burst of energy and very diverse topics gave awesome perspective"

"Very professional and a privilege to attend"

100% OF RESPONDENTS
INDICATED THEY WOULD
ATTEND THE SUMMIT AGAIN.

WE ENGAGED **254** MEMBERS, AN **11%** INCREASE FROM 2018.



EDUCATION

PROVIDING INSIGHTS & TRAINING FOR OUR MEMBERSHIP

To help our members build resilience to financial risks, GRI delivers education and training programs. We have several programs underway designed to educate C-suite executives, risk managers, and Board members to enhance their skills.

BOARD RISK OVERSIGHT AND INSIGHT PROGRAM

Launched in 2013, in partnership with the Rotman School of Management, this program engages Board Members and senior stakeholders. A one-and-a-half day program, it provides attendees with risk perspectives necessary to enhance their leadership and governance capabilities.

In 2019, we added a **Master Class** program to further enhance this educational program. The first installment, held over one day, explored the topic of non-financial risks, and it was very well received:

100% of attendees rated the program excellent.

"An excellent, thought-provoking education session with facilitators who are leaders in their field. I will be back for more."

Rodney Hill, CRO, OMERS

EMERGING LEADERS PROGRAM

The Risk Management for Emerging Leaders Program (ELP) is targeted at high potential leaders interested in advancing their knowledge and effectiveness in the management of risk. Through group discussion and presentation of case studies that demand a broad organizational view, participants gain perspective of the management of risk throughout their organization.

"Thanks so much for all of your efforts in making this rewarding and enjoyable training. I look forward to participating in future programs."

Nels Lindblom, Director,
 Global IRM, Manulife



RESEARCH

Through our internal and external research, we have produced reports and held relevant events that have contributed significantly to advancing risk management.

GRI published 34 research reports and academic pieces in 2019

Over 5,000 downloads of publications produced in 2019

Top 2019 Publications by Views

- The Belt and Road Initiative
- Quantum Threat Timeline
- ERM Benchmarking Study: A Focus on Financial Institutions
- 2018-2019 Risk Outlook Survey Results
- Ethics and Artificial Intelligence in Finance

KEY HIGHLIGHTS IN 2019:

Our annual survey, conducted in 2018 and published in early 2019, revealed those risks of top concern to our members. This informed where we chose to focus our research. From among 34 papers and reports published in 2019 these three, pertinent to the top three risks identified, received wide attention:

CYBER SECURITY & FRAUD

QUANTUM THREAT TIMELINE

Michele Mosca, Co-founder,
President & CEO, evolutionQ Inc.
Dr. Marco Piani, Senior Research
Analyst, evolutionQ Inc.

Assesses the challenging quantum threat timeline providing insights derived through surveying thought leaders with questions designed to help those managing the cyber-risk associated with quantum cryptanalysis - followed by an interactive event to help members dive deeper into findings reported.

INDUSTRY DISRUPTION

ETHICS AND ARTIFICIAL INTELLIGENCE IN FINANCE

Alex LaPlante FMR.,
 Managing Director Research,
 Global Risk Institute

Provides insights into how organizations can implement AI prudently and ethically - followed by a panel discussion at the P&C Insurers' Risk Management Conference, where further insights were shared with attendees.

GEOPOLITICAL RISK

THE BELT AND ROAD INITIATIVE

– Erik Brown, Research Analyst, Global Risk Institute

Showcases China's intent to build a mass infrastructure plan to connect neighbouring and distant regions along its southern and western frontiers via roads, rail lines, ports, energy pipelines and digital networks — unprecedented in size and scope, the BRI presents significant global risks and opportunities for investors.



NATIONAL PENSION HUB

The National Pension Hub (NPH), a leading Canadian centre for pension knowledge and research, continued to lay the foundation as a pension thought leader in Canada in 2019. With six research projects underway and another four commencing in 2020, the NPH is proposing innovative solutions to pension design, governance and investment challenges for our members.

In 2019, the Hub hosted 3 events, and published 4 research reports that furnished new insights and knowledge for our members.

NATIONAL PENSION HUB DAY

Held in July, NPH members and researchers discussed research projects in progress, allowing members to ask questions and provide feedback. Members indicated that the interaction was very valuable and beneficial to their needs.

MANAGEMENT OF NON-FINANCIAL RISK: BEYOND REPORTING

Speakers: Neil Beaumont, CRO, CPPIB

Steven Richards, Managing Director, Head of Enterprise Risk, CPPIB

PENSION FUNDS INTERCONNECTIONS & HERDING BEHAVIOR

Speaker: Matteo Bonneti, Maastricht University

RESEARCH REPORTS IN 2019

LEVERAGE TO MEET THE PENSION PROMISE

— Serguei Zernov, Special Advisor, Global Risk Institute

ROBUST LONG-TERM INTEREST RATE RISK HEDGING IN INCOMPLETE BOND MARKETS

— Sally Shen, Research Associate, Global Risk Institute, Antoon Pelsser, Professor, Maastricht University, Peter Schotman, Professor, Maastricht University

THE OTHER LONGEVITY RISK: IMPACT OF POPULATION AGING ON PENSION PLAN FINANCES IN CANADA (FINAL REPORT)

Stephen Bonnar, Douglas Andrews, University of Waterloo, Jaideep Oberoi, Aniketh Pittea
 Pradip Tapadar, University of Kent

DRIVERS OF SUCCESSFUL PENSION INVESTING: LESSONS FROM THE CANADIAN MODEL (INTERIM REPORT)

Sebastien Betermier, Professor, McGill University



FORWARD LOOK:

In 2020, the NPH will be commencing four additional external research projects:

- Pricing the Climate Risk: Evidence from Options Markets during Flood and Hurricane Events - Sati Mehmet Ozsoy, Ozyegin University
- 2. Forced Retirement Risk and Portfolio Choice - Minjoon Lee, Assistant Professor, Carleton University
- Optimal Pension Design for Heterogeneous Individuals with Behavioral Biases
 Marike Knoef, Professor, Leiden University
- 4. Real Estate Valuation: A Deep Learning Approach Erkan Yonder, Professor, Concordia University

GRI'S FORWARD LOOK

Looking ahead, GRI will continue to support its members and partners in the urgent drive toward unlocking financial sector innovation and resources to shift our economy toward sustainable growth through our events, training and research programs.

We will continue to provide valuable resources to government and the financial industry, by focussing our events, research, and education programs on timely, relevant, and emerging risks that we are collectively contending with.

The Annual GRI Summit will be our feature event in 2020, offering more big, bold perspectives presented by industry leaders. Members can look forward to engaging with others in the risk management community and to gaining new, fresh insights concerning the risks our industry is tackling and what the future holds.

OBJECTIVES

Build risk management capacity in the financial services industry.

- Continue to increase our engagement with members to assist them in ensuring the stability of the financial industry.
- Stay up to date on financial risks, and establish programming that allows our members to effectively manage risks.

Leverage our convening capability to foster effective conversations among the public and private financial sectors.

- Bring together key leaders in both sectors, to move the dial on initiatives and projects that alleviate the impacts of emerging risks.
- Organize and host roundtables that focus on knowledge sharing, and collaboration to assist in the mitigation of financial risks.

Deepen and broaden our collective understanding of financial industry risks through research, education, and events.

- Continue to produce thought provoking and unique research that relates to our members' risk concerns.
- Update and continue hosting innovative education programs that provide attendees with the knowledge and expertise that ensures they are equipped to manage emerging financial risks.
- Continue to engage our members through events that offer 'big ideas and bold perspectives'.

Continue to expand our financial industry membership reach and engagement, while building our brand in risk management.

- Share our expertise and grow our presence within Canada and globally through partnerships, media outlets and speaking opportunities.
- Grow the newly launched Sustainable Finance Program.
- Move the National Pension Hub beyond its pilot phase.



SUSTAINABLE FINANCE AND CLIMATE RISK PROGRAM

Climate change is causing structural change to financial markets and is ushering in a host of new risks and opportunities for financial institutions. Coping with changing and more severe weather patterns, along with fast developing policy responses, while seeking to harness new markets opening up around renewable energy and climate change adaptation are just some of the issues facing GRI members.

In response, GRI has formed a new program on Sustainable Finance and Climate Risk that will support Canadian financial institutions through research, events, and education programs.

Our focus will be on:

- Supporting climate risk management practice in the financial sector, specifically climate risk assessment and scenario analysis.
- Insights on how climate change is impacting credit risk and the wider housing finance market, including the interplay between insurance, lending and investing.
- Sustainable finance market development through research, trend monitoring, standards development, and supporting the role of risk teams growing the flow of sustainable finance.

This new program is supported by a Sustainable Finance Advisory Committee comprised of leaders from the Canadian financial sector, academia, and government.



GRI EXECUTIVE TEAM

Sonia Baxendale,

President & CEO

Vanda Vicars,

CO0

Michael Topolnytsky,

Managing Director, Research

Alyson Slater

Senior Director, Sustainable Finance

John Hull

Senior Research Fellow

Bernard Morency

Senior Fellow, National Pension Hub

Jacqueline Beaurivage

Executive in Residence

Drew McFadzean

Executive in Residence

Hugh O'Reilly

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Michael Stramaglia

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