

# GRAFT Update on World Economic Forum's 2023 Most Severe Risks

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## ABSTRACT - WEF'S MOST SEVERE RISKS

This paper outlines the updated research on nonfinancial risks used by organizations to support strategic planning. It is specifically supported by the Global Risks and Trends Framework (GRAFT) that is based upon the risks and trends identified by the World Economic Forum (WEF). The WEF's 2023 Global Risk report surveys business and political leaders around the world and prioritizes current risk trends.<sup>1</sup> Non-financial risks once again top the list. This year's WEF list sees the interrelationship of latent effects of COVID-19 (infectious disease) and the Russia/Ukraine war (interstate conflict) resulting in a global cost of living crisis due to broken supply chains, energy supply crisis, cyber crime, and insecurity, heightened sovereign debt, rising inflation, and increased interest rates. The entire environmental risk cluster of natural disasters and extreme weather events, environmental damage incidents, failure of climate change adaptation and natural resource crises are projected to continue to rage as the world is distracted by old world economic and geopolitical risks that "suddenly" re-emerged at the top of the risk ranking. This potentially overlooks the large-scale involuntary migration, erosion of social cohesion, societal polarization and the devastating implications of a cost-of-living crisis to the estimated 95 million people living in extreme poverty<sup>2</sup>.

## GLOBAL RISKS RANKED BY SEVERITY OVER THE:<sup>3</sup>

### SHORT TERM (2 YEARS)

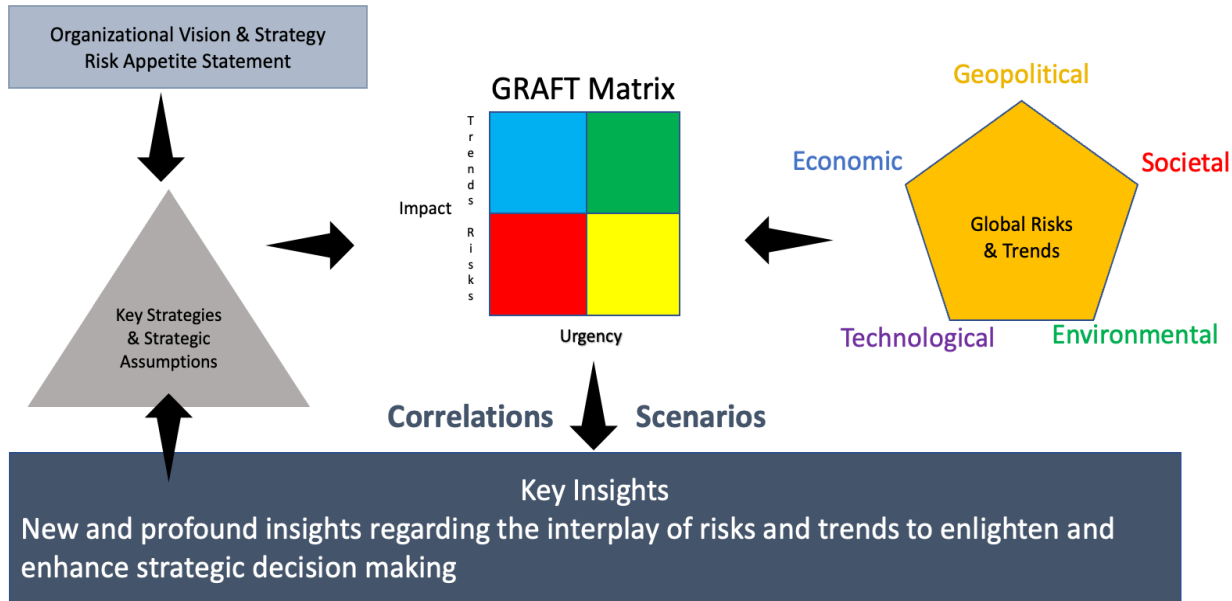
Cost-of-living crisis
Natural disasters and extreme weather events
Geoeconomic confrontation
Failure to mitigate climate change
Erosion of social cohesion and societal polarization
Large-scale environmental damage incidents
Failure of climate change adaptation
Widespread cybercrime and cyber insecurity
Natural resource crises
Large-scale involuntary migration

### LONG TERM (10 YEARS)

Failure to mitigate climate change
Failure of climate-change adaptation
Natural disasters and extreme weather events
Biodiversity loss and ecosystem collapse
Large-scale involuntary migration
Natural resource crises
Erosion of social cohesion and societal polarization
Widespread cybercrime and cyber insecurity
Geoeconomic confrontation
Large-scale environmental damage incidents

Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

## Overview of Global Risks and Trends Framework



Interestingly, despite the unprecedented fiscal stimulus of the past two years, provided to assist society through COVID-19 shutdowns of the economy, globally the debt crisis ranks well below the environmental and societal concerns. The Canadian view on debt levels is markedly different. Each country has a slightly different prioritization of risks, with Canada's top five risks cited as 1) cost-of-living crisis 2) debt crises, 3) rapid and/or sustained inflation, 4) failure of climate-change adaptation, and 5) asset bubble burst. The difference in risk ranking is partially due to the fact that Canada has seen 1) one of the largest global increases in sovereign debt levels from \$250 billion pre-COVID to \$1.3 trillion post COVID, 2) an increase in real estate prices that is higher than that globally, and 3) the fact that Canada is less directly effected by the Russia/Ukraine war.

For the first time, the WEF Risk Report outlines four principles for preparedness in this new era of concurrent shocks. GRAFT provides a structured approach that has been adopted by Canada's largest financial institutions<sup>4</sup>.

1. strengthening risk identification and foresight,
2. recalibrating the present value of "future" risks,
3. investing in multi-domain risk preparedness, and
4. strengthening preparedness and response cooperation.

### Global Risks and Trends Framework (GRAFT)

Twelve Canadian Financial Institutions have adopted the principles of the GRAFT to help them identify and integrate these nonfinancial risks into their enterprise risk management (ERM) framework. GRAFT is designed to help organizations identify, assess, quantify, and respond to global risks and trends in order to avoid pitfalls that could threaten an organization's long-term survival or, conversely to leverage for the benefit of the organization<sup>5</sup>. This paper updates GRAFT with input from the WEF 2023 risk priorities.

## GRAFT INTEGRATES NON-FINANCIAL RISK INTO ERM FRAMEWORK

As organizations face an increasingly complex horizon, it is important for them to reassess the assumptions that underlie their strategies<sup>i</sup>. Geopolitical trends identify the primary shift in the underlying assumption of peace between major powers. The assumption of peace in Europe has significantly shifted with the continuing war between Russia and the Ukraine. The assumption of peace between major powers has also been questioned due to the increased tensions between China, Taiwan, and the United States. Recent events included 71 Chinese air force aircraft entering Taiwan's air defense identification zone on December 26th. On Dec 27th, President Tsai Ing-wen announced that Taiwan will extend compulsory military service from four months to one year in 2024<sup>6</sup>. The shift in the strategic assumption that Taiwan is a safe and independent location to manufacture chips has resulted in decisions to shift future production outside of Taiwan.

The economic risks of sovereign, corporate, and personal debt being at record highs, have shifted the underlying assumption of low inflation and low interest rates. The knock-on effects of COVID-19, loss of peace in Europe, and rising inflation have resulted in the societal risk for 2023 being identified as a cost-of-living crisis. The lingering hangover of COVID-19 variants and reluctance to return to the office, given the freedom provided through work from home, may have permanently shifted our view of how work is performed. Environmental trends watched carbon emissions return to pre-pandemic levels and climate change yielded record temperatures in 2022. This, coupled with the torrent of extreme weather events, brought climate change close to home with hurricane Fiona in Atlantic Canada, southern Quebec and Ontario resulting in the loss of thousands of large shade trees due to a derecho windstorm, and Manitoba experienced rains and flooding which wiped out the summer of 2022. Considering failing global cooperation, the strategic assumption that addressing climate change is globally achievable has come into question.

In 2022, we witnessed the early arrival of "crypto winter"<sup>ii</sup> with \$2 trillion in market capitalization wiped out. This was triggered by fraud, theft, money laundering, and cyber attacks and further questions the underlying assumption as to whether cryptocurrency will be adopted as a method of payment or a store of value. Introduction of the Central Bank Digital Currency led by the e-yuan pilot in China facilitating international oil purchase transactions with Russia and Middle East countries<sup>7</sup> is laying the foundation for further shifts in the underlying assumption of the dominance of the USD as the world trade and reserve currency. At the end of 2022, artificial intelligence (AI) swept across the internet in the form of ChatGPT. AI written articles and essays, and OpenAI created art and avatars. Already, there is noisy speculation about what is coming next with the release of GPT-4 with more parameters and trained on more data, however the inability to understand things at an abstract level is predicted to persist<sup>8</sup>. These events, that have captivated media and shifted underlying strategic assumptions, are the link to (1) ranking the impact and urgency of nonfinancial risks, (2) defining the scenario analysis and stress testing required to quantify those impacts, and (3) establishing the basis for your organization's resiliency strategic and operational plans.

The GRAFT Matrix (following) illustrates the prioritization of risks and trends for 2023 based upon impact and urgency and combines previous and newly prioritized risks and trends. Most notable is the effect of the increased interstate conflict built upon the impact of the spread of infectious disease (COVID-19) on livelihood crisis and the erosion of social cohesion. Once your organization is familiar with the global risks and trends, the next task is to prioritize the risks and trends to create your own organization's GRAFT Matrix based upon impact over an urgent to future time horizon (now 30 years).

Risks and trends do not happen in isolation; this is why the next step is to identify the most impactful inter-relationship

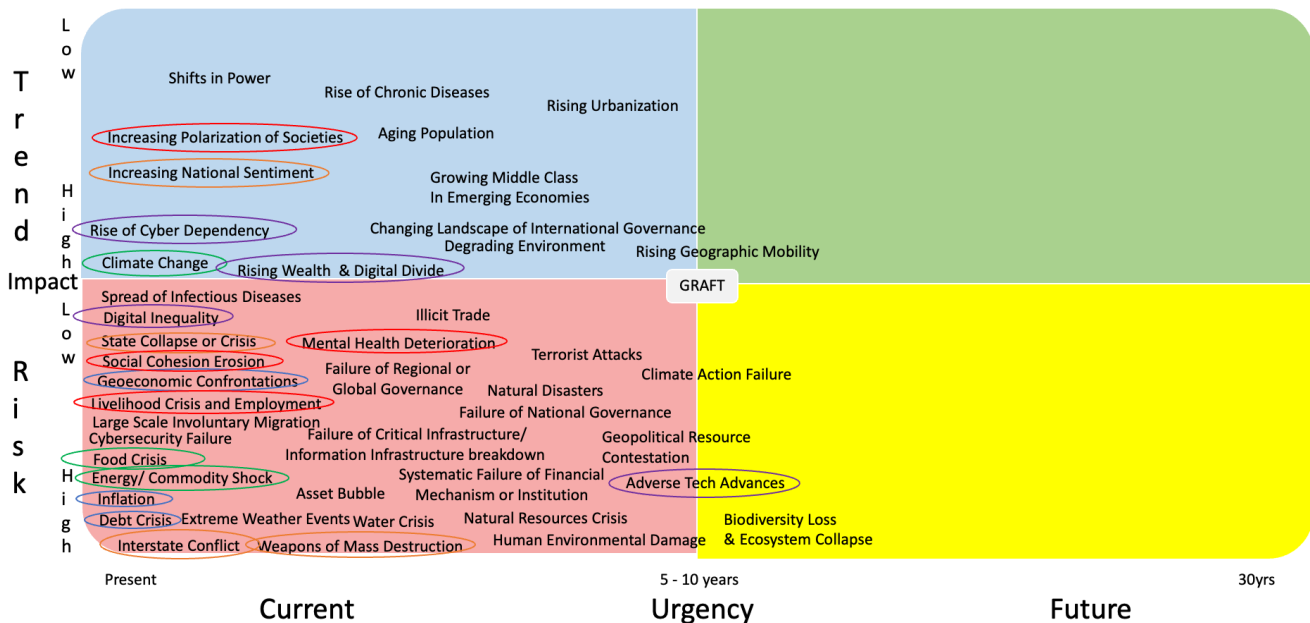
<sup>i</sup> Underlying strategic assumptions are the link to the impact of nonfinancial risks. The 2021 the major shift in strategic assumptions was the COVID-19 spread of viral disease that significantly changed the strategic assumption that most companies had about open borders, access to global free trade and movement of people and goods.

<sup>ii</sup> The term is comparable to a bear market in the stock market. A crypto winter signifies negative sentiment and lower average asset values among a large swath of digital currencies. Research shows that crypto winters have a major impact on investor mentality.

and correlation of risks and trends for your organization. For 2023 the WEF has identified five inter-relationships. The risks and trends have been circled in different colors for easier identification. Risks and trends do not happen in isolation; this is why the next step is to identify the most impactful inter-relationship and correlation of risks and trends for your organization<sup>9</sup>. For 2023 the WEF has identified five inter-relationships. The risks and trends have been circled in different colors for easier identification.

1. **energy shock, food crisis, and climate change;**
2. **inflation, debt crisis, and geoeconomic confrontation or trade difficulties;**
3. **rising cyber dependency, digital inequality, and adverse effects of technology;**
4. **livelihood crisis and employment, social cohesion erosion, mental health deterioration, and increasing polarization of societies;**
5. **interstate conflict, growing national sentiments, and weapons of mass destruction.**

2023 GRAFT Matrix



The quantification of the impact of these risks and trends is identified through stress testing and scenario analysis based upon the correlations identified<sup>10</sup>. Recent innovations in AI are using social media analytics to create a volatility measure which can be used as a risk indicator, in a similar way to how stock volatility is widely used<sup>11</sup>. Insight from this analysis is then fed back into the planning process to adjust or reinforce the corporate goals, key risk indicators (KRI), and key performance indicators (KPI)<sup>12</sup>.

As we go forward into 2023, organizations will be challenged to address the new and existing top risks identified by the WEF. Before implementing GRAFT, many organizations have applied an “as required process” to identify and evaluate the impact of risks that were external to the organization. Financial institutions’ enterprise risk management frameworks have historically focused mainly on credit, market, and operational risk. More recently they have focused on non-financial risks. As part of a strategic exercise, the GRAFT framework provides

a systematic and thorough way for leaders to integrate the risks and trends into strategic opportunities for their organizations. It enables them to confirm their intuitive concerns surrounding interstate conflict, inflation, global climate action failure and extreme weather events. More importantly, the use of GRAFT has stimulated awareness and discussion regarding a broader range of risks, leading to the development of more targeted growth strategies as well as plans to develop enhanced, segmented portfolio monitoring, downside analysis to quantify the magnitude of losses under a variety of downside assumptions and implementation of early warning indicators to prompt early action in the face of actual market deterioration. By implementing GRAFT, senior leaders and boards are able to enhance their approach to both strategic growth and risk management through integrating nonfinancial risks into their traditional ERM framework.

## ENDNOTES

- 1 [https://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2023.pdf](https://www3.weforum.org/docs/WEF_Global_Risks_Report_2023.pdf)
- 2 <https://unstats.un.org/sdgs/report/2022/goal-01/#:~:text=The%20combined%20crises%20could%20lead,compared%20with%20pre%20pandemic%20projections>
- 3 [https://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2023.pdf](https://www3.weforum.org/docs/WEF_Global_Risks_Report_2023.pdf)
- 4 <https://globalriskinstitute.org/publications/global-risks-trends-framework-graft-overview/>
- 5 Ibid.
- 6 <https://globalnews.ca/news/9373512/china-taiwan-air-zone-incursion/>
- 7 <https://www.reuters.com/world/saudi-arabia-gathers-chinas-xi-with-arab-leaders-new-era-ties-2022-12-09/>
- 8 <https://garymarcus.substack.com/p/what-to-expect-when-youre-expecting>
- 9 [https://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2023.pdf](https://www3.weforum.org/docs/WEF_Global_Risks_Report_2023.pdf)
- 10 <https://www.sciencepublishinggroup.com/journal/paperinfo?journalid=173&doi=10.11648/j.ijefm.20210904.12>
- 11 [Softai.io](https://softai.io)
- 12 <https://globalriskinstitute.org/publications/distribution-analysis-for-information-risk-a-cyber-quantification-framework/>