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CATALYZING THE GROWTH OF THE GREEN BOND MARKET: INSIGHTS INTO DRIVERS AND BARRIERS GLOBALLY AND IN CANADA

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Executive Summary

Understanding the Green Bond Market Drivers and Barriers

As the face of sustainable finance around the world, the green bond market provides a perfect opportunity to examine how the financial sector is reacting to the opportunities and risks posed by climate change and the low-carbon economy. Given the role of financial institutions in driving capital towards the economy, it is integral to understand what motivates them to participate in this evolving sustainable finance market. In order to meet the challenge for financing the transition, Canadian organizations not only need some guidance to align their investment and issuance priorities, but also help other smaller organizations overcome any existing barriers.

> *"There is a story to be told and green bonds help tell this story when it comes to climate awareness and on what needs to be done"*

Based on findings from market interviews and an online survey, this policy report helps address the knowledge gaps on what can be done to scale-up the green bond market and sustainable finance, especially in Canada. Our research shows that green bonds are able to successfully mainstream the concept of sustainable finance by helping investors and issuers label their financial products or investments as green. Not only do they prescribe the use of post-issuance reporting to track environmental impacts of investments, but they also encourage more educational awareness around climate impacts and its risk to the financial sector. However, due to the evolutionary nature of sustainable finance, challenges like greenwashing or additionality measurement are currently affecting this market. In Canada, the need to tap into this market's potential is amplified by the nature of the economy and its exposure to climate risks.

Recommendations to address these barriers and help scale up the market in Canada include: showing global leadership in terms of aligning resource-based sectors towards the low-carbon transition; documenting additionality by setting trackable climate targets and benchmarks towards this transition; looking more at adaptation projects and nature-based solutions when issuing green bonds; creating more meaningful performance indicators by using scientifically-backed measurement tools; and finally, helping provide liquidity to the market by issuing sovereign green bonds and other forms of government involvement, guaranteeing that green bonds are a means to achieve the transition to a low-carbon economy.

INTRODUCTION

The need for a green recovery and the rise in popularity of sustainable finance tools around the world has put a new spotlight on the green bond market and its achievements in tying together climate change and the financial community.

For the past decade, the focus has been to make green or sustainable finance investments a coveted approach among mainstream investors. On the issuer side, the introduction of green finance has allowed for companies to start the discussion on where they rank in terms of greenness and what projects can be funded by green bonds to transition to a greener business. At the country level, the green bond market has allowed for a re-alignment of public policy in terms of climate action.

However, now the time has come to evaluate drivers and barriers for green bonds to reach their full potential both globally and in Canada. With a growing sense of urgency and costs from climate change impacts, the need to address barriers and tap into drivers for green bonds has never been more prominent. This research has been undertaken to understand how this market can address the financing gap for climate action and whether it can help move the needle on transition efforts being undertaken at the country level.

RESEARCH APPROACH

Our research approach has been two-fold – conducting an online survey with Canadian and international participants, as well as in-depth interviews with key stakeholders of the green bond market to better understand underlying trends and challenges.

Our online survey was emailed to 66 participants and our completion rate was 31.8 percent or 21 participants with a completed survey. Our sample for the interviews was about 22 participants and ranged across the Canadian market as well as those in the global green bond market. The participants were approached after they have submitted the survey, as well as due to recommendations made by other participants during the interview process.

From our survey demographic data, we found that most participants occupied senior to executive level roles in their organizations. The sample consisted of 18 male and 3 female members. Participants also had some previous level of training or education related to sustainable finance, but not specifically to green bonds.

We analyzed the questionnaire using statistical methods. Furthermore, we categorized the interview transcripts using a thematic coding approach and highlighted emerging trends and key words in our analysis. These themes are further explored in-depth using interview data in our *Interview Insights* section.

QUANTITATIVE ANALYSIS OF THE QUESTIONNAIRE

GLOBAL MARKET PERSPECTIVE

The first group of questions addressed the impacts of green bonds on a global market. As presented by the following **Figure 1**, the majority of our participants agreed and some even strongly agreed to the statements that green bonds provide additional environmental benefits, that they are able to address climate mitigation and climate adaptation, and their green credentials provide further value.

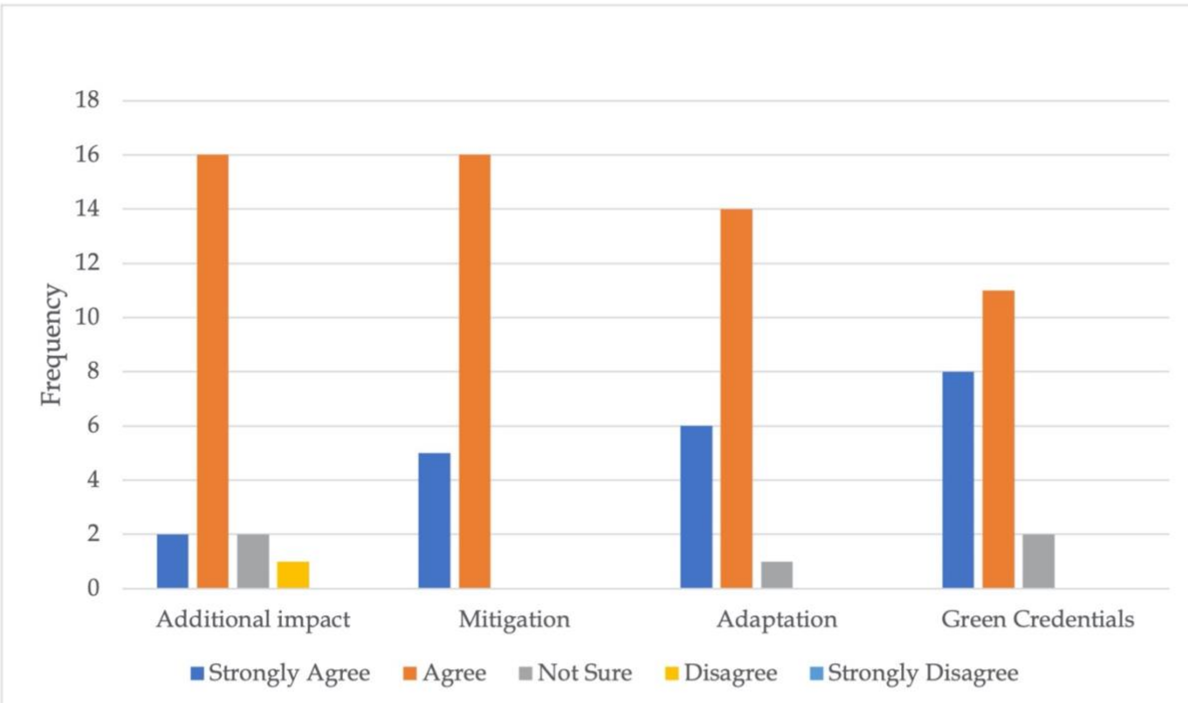

FIGURE 1: RESPONSE ON GLOBAL GREEN BOND IMPACTS, CLIMATE ACTION AND GREEN CREDENTIALS

When it came to choosing the benefits posed by green bonds, our participants found that having a green label, allowed easier identification or tagging of green financial products (see **Figure 2**). Other important green bonds benefits included having a verification component through the use-of-proceed reporting, and reputational benefits of being associated with the green bond market. However, interestingly, direct environmental risk diversification has not been mentioned as often as other additional benefits.

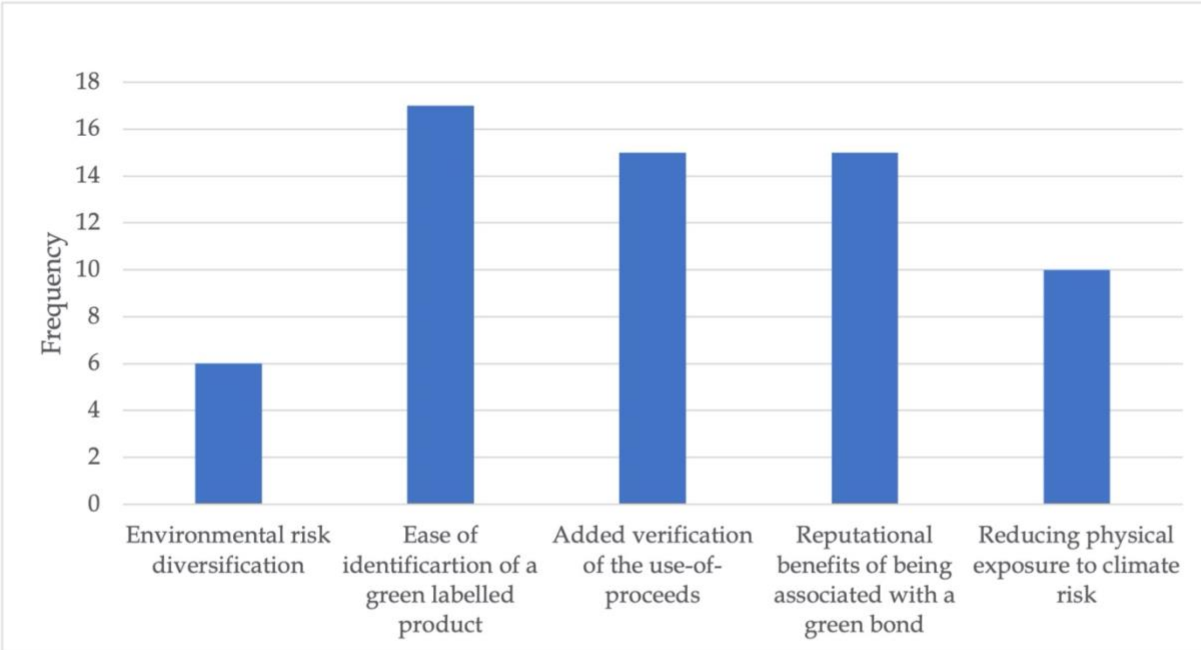

FIGURE 2: ADDITIONAL BENEFITS PROVIDED BY THE GLOBAL GREEN BOND MARKET

The main barriers for the green bond market are presented in **Figure 3**. Participants felt that there is a potential for misuse of green labels, not a clear indication on environmental additionality, and the inability to quantify environmental benefits at the reporting level.

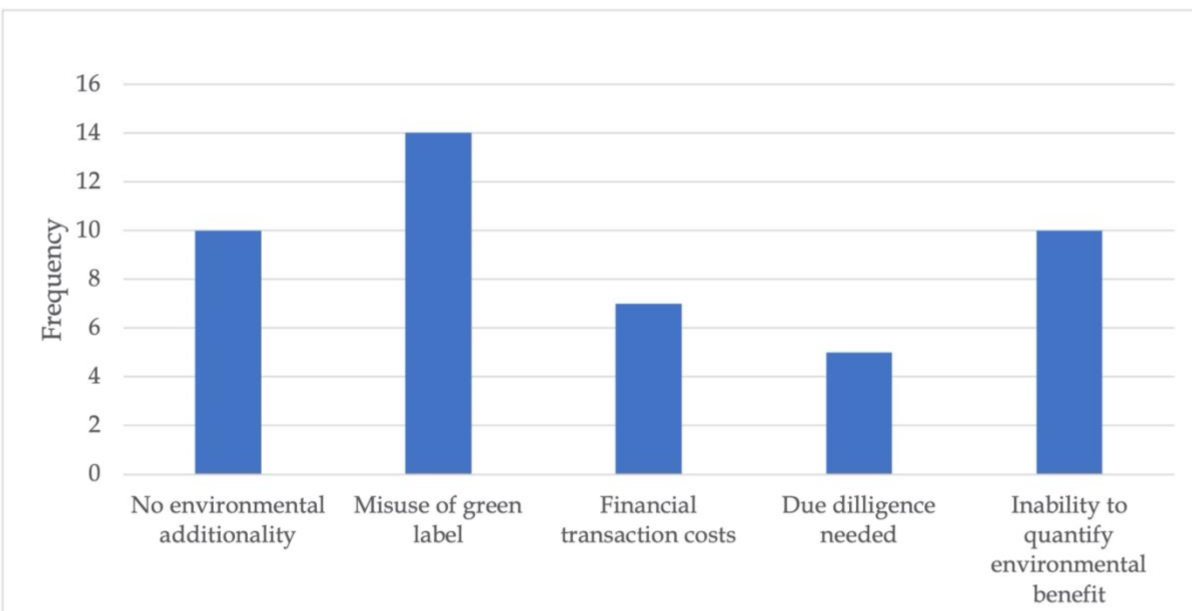

FIGURE 3: MAIN DRAWBACKS OF THE GLOBAL GREEN BOND MARKET

In terms of the financial and environmental aspects of the green bond market, our results shown in **Figure 4** suggest that most respondents agreed or strongly agreed that green bonds were able to address sectoral financing needs. In addition, the need for climate evaluation based on environmental impact was seen to be an important factor as the market develops. Respondents also found that the green bond market is beneficial in providing a first-mover advantage and allows issuers and investors to address long-term strategic goals. The two questions that got a mixed response addressed the evaluation of green bonds' environmental impacts using tools such as life-cycle analysis (LCAs), and whether regulations are required to make this market more attractive.

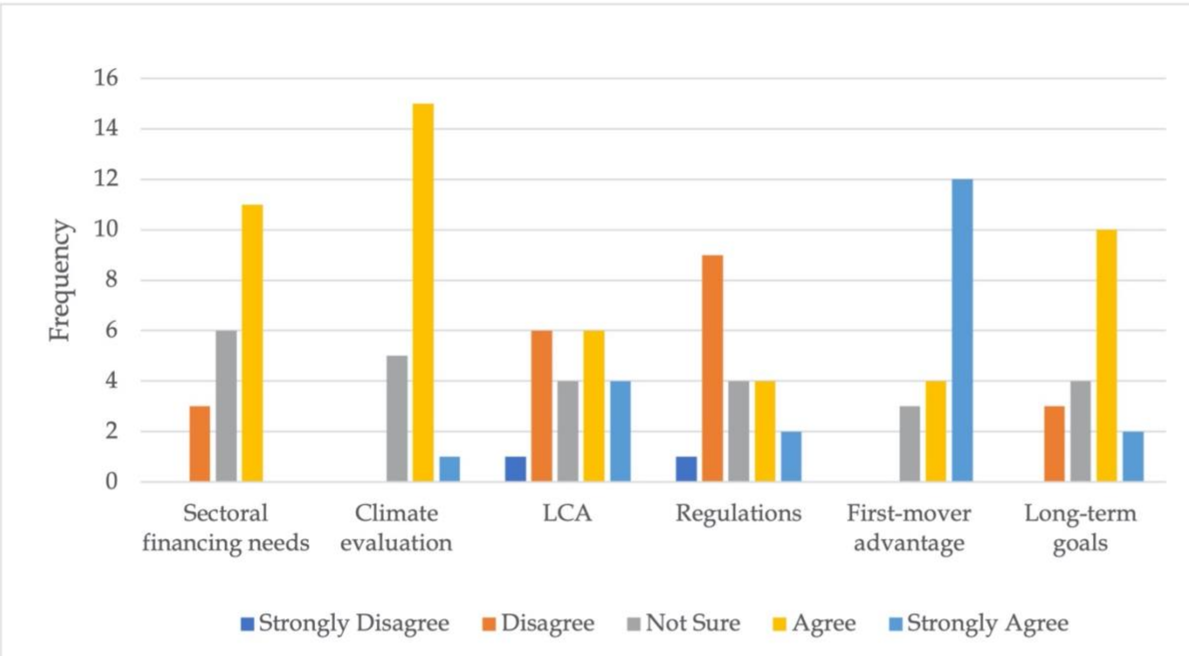

FIGURE 4: FINANCIAL AND ENVIRONMENTAL ASPECTS OF THE GLOBAL GREEN BOND MARKET

CANADIAN MARKET PERSPECTIVE

Given the need to address how to tap into the green bond market potential at the domestic level in Canada, our survey asked similar questions for the Canadian green bond market as for the global market. Our results shown in **Figure 5** show that respondents agreed or strongly agreed to the notion that green bonds are becoming a popular tool to raise capital and signal strong investment opportunities that could create beneficial environmental impact, and address both climate adaptation and mitigation. The green label, the first mover advantage, and signaling opportunity provided by this market were seen as a benefit in Canada as well, especially given the urgent need for transition. In Canada, this need is amplified given the resource-based nature of the economy as well as the increasing need to be evaluated on environmental impacts by the investor community.

Looking at the role of government and other market stakeholders, it seems that financial and reputational incentives could be useful for market participants that are looking to increase issuances or enter the market. However, this should be preceded by a better clarity about transition pathways as well as a better definition for what falls under transition and what falls under green categories. Finally, the only question with a mixed response was whether the Canadian market possesses the growth potential to be a global leader in sustainable finance (see **Figure 5**).

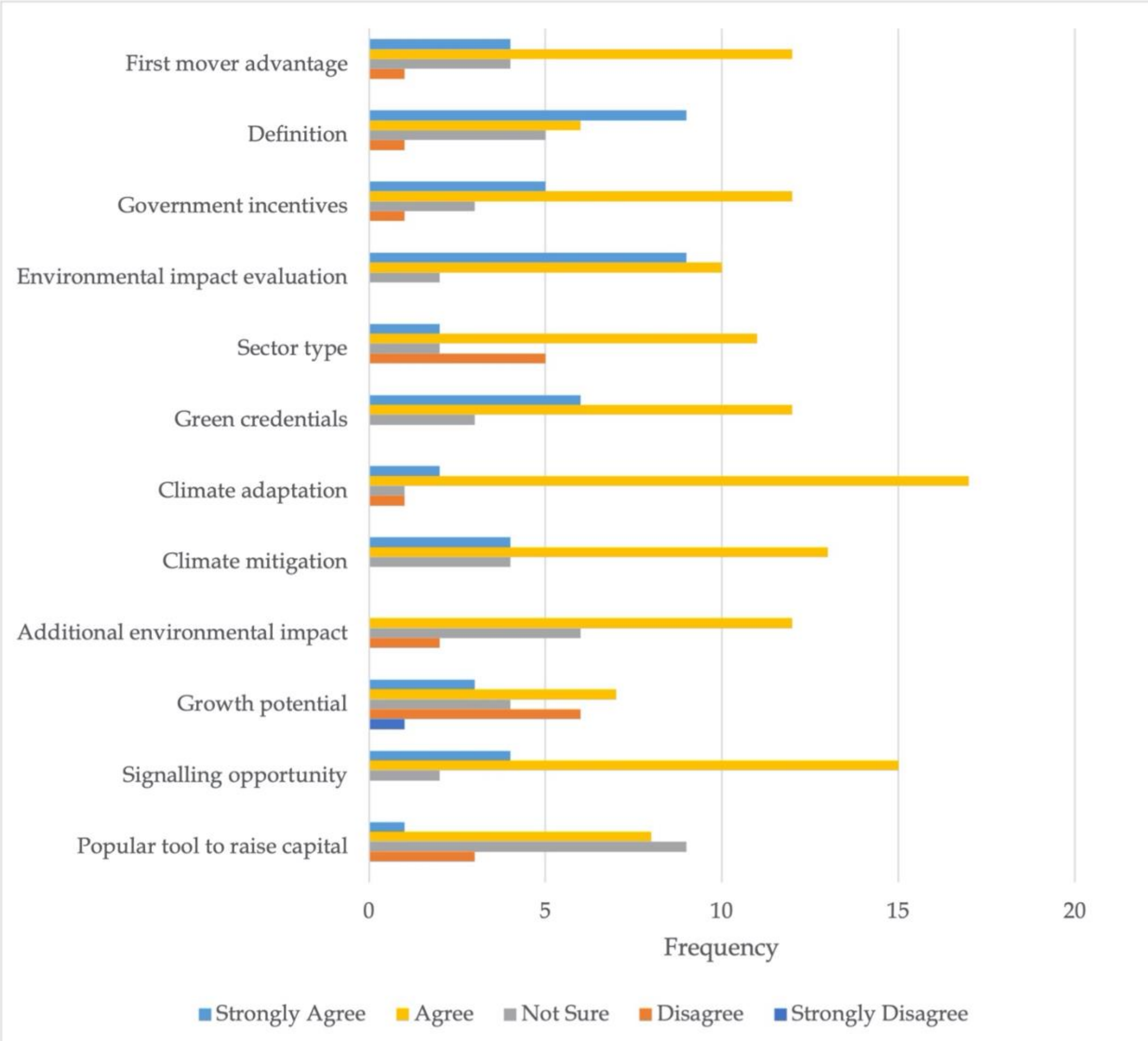

FIGURE 5: OVERVIEW OF THE CANADIAN GREEN BOND MARKET

In terms of examining the main costs affecting the domestic market, our results in **Figure 6** suggest that financial costs are more frequently experienced than other costs.

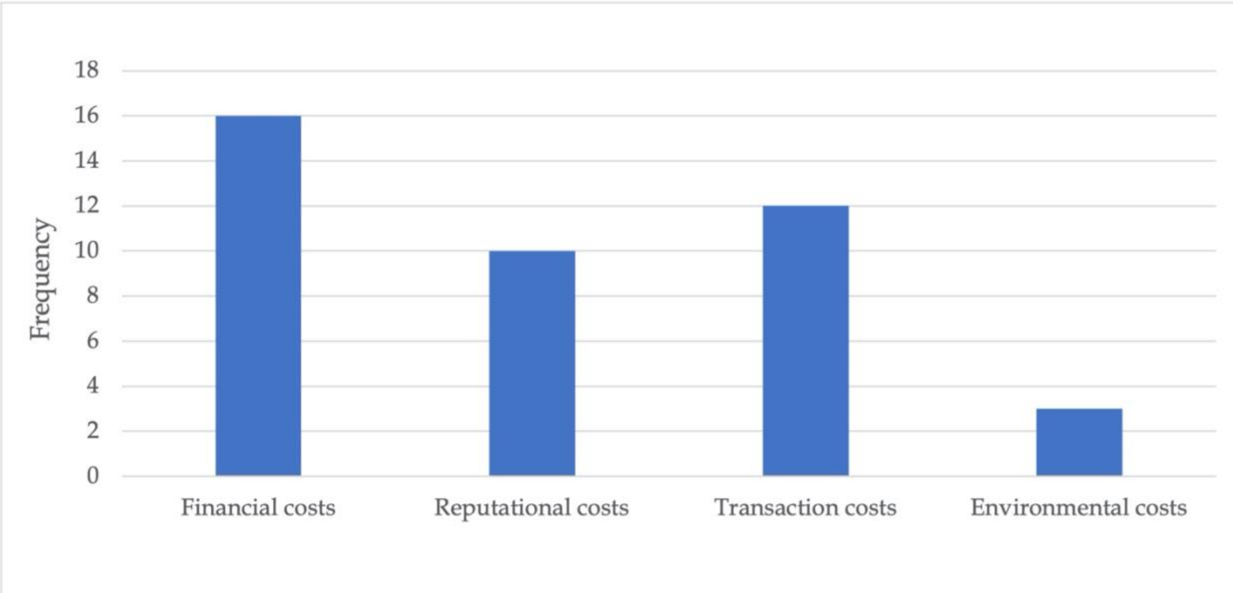

FIGURE 6: COSTS POSED BY CANADIAN GREEN BONDS

With regards to benefits, **Figure 7** shows that Canadian green bonds most often provided reputational and environmental benefits for the respondents.

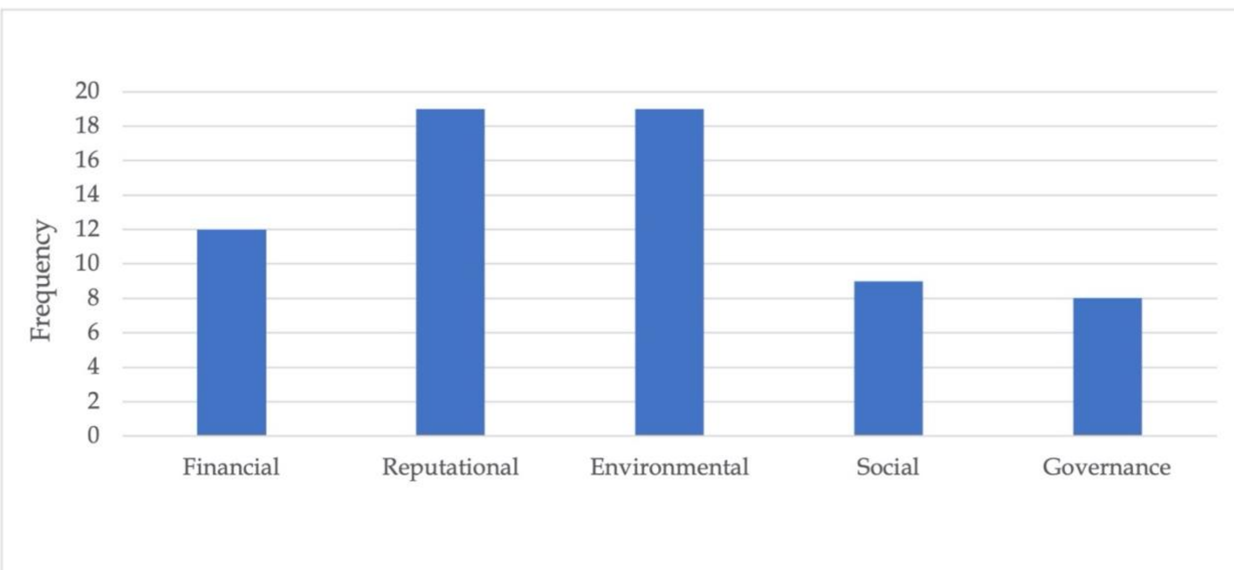

FIGURE 7: BENEFITS OF CANADIAN GREEN BONDS

In terms of overall attractiveness provided for those involved in the green bond market, respondents mainly indicated that motivations were linked to the environmental mandate of the market, adapting or mitigating climate-related risks, marketing and reputational benefits from issuing or investing in a green bond, and new business opportunities (see **Figure 8**).

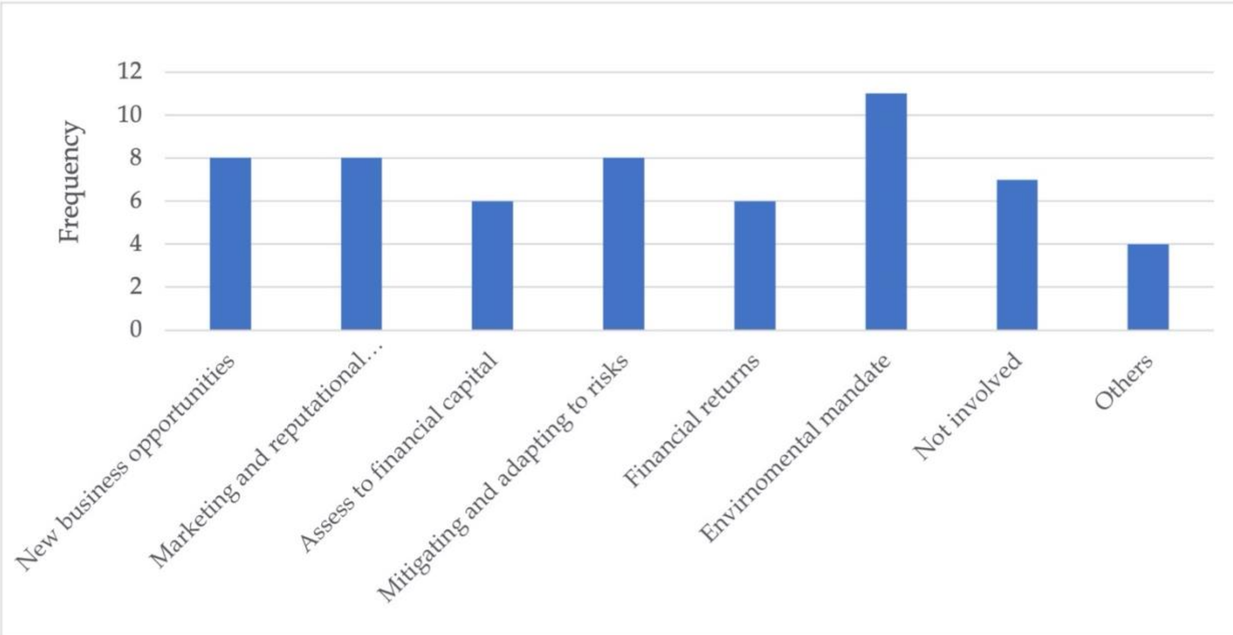

FIGURE 8: MOTIVATIONS TO BE INVOLVED IN THE CANADIAN GREEN BOND MARKET

Finally, we tested whether the participants had different views with regard to the Canadian vs the global green bond market using t-tests. We found statistically significant differences ($p < .05$) for the following aspects:

- The participants agree more strongly to the statement that green bonds provide an ***additional impact in terms of their environmental benefits if it is about global bonds compared to Canadian bonds.***
- The participants agree more strongly to the statement that green bonds are able to ***directly target climate change mitigation if it is about global bonds compared to Canadian bonds.***
- The participants agree more strongly to the statement that green bonds are able to ***directly target climate change adaptation if it is about global bonds compared to Canadian bonds.***
- The participants agree more strongly to the statement that green bonds should be ***evaluated with regard to their green performance if it is about Canadian bonds compared to global bonds.***

Overall, respondent allocated more impact to global bonds than to Canadian bonds, but the green performance was an important component when evaluating Canadian bonds. Furthermore, it looks like the participants evaluated the benefits of green bonds as higher if they are on a global market compared to the Canadian market.

INTERVIEW INSIGHTS

MAIN DRIVERS OF THE GREEN BOND MARKET

As highlighted by the survey and a commonality across our interviewes, the main drivers of the market are the value in highlighting the high demand for sustainable finance products, emerging evidence of preferential financial terms (such as a better cost of capital for green bonds), increased reputational benefits as well as new access to a diverse investor base when issuing a green bond. Apart from these drivers, stakeholder engagement – both internally at the staff level and externally at the stakeholder level – for issuers as well as investors has increased tangibly due to the green bond market. A driver for this could also be due to the generational shift, with younger employees and investors looking to start supporting the shift to the green economy.

VALUING GREEN CREDENTIALS

The benefits provided by the labelled green credentials of a green bond are especially valued by investors and issuer alike. For investors, green labelling acts as an opportunity to fulfill the growing mandate of having climate-friendly investments in their portfolio and the need to reduce environmental risk exposure. For issuers, green labelling provides a marketing argument to attract a diverse investor base. Furthermore, awareness about climate change, and financial benefits are now starting to anecdotally be accrued for issuers. From a reputational perspective, a green bond issuance is also a public commitment to green capital and green business activities. For investors and governments, labelling might be the basis of a robust discussion on what counts as green and how to reorganize public policy to address climate risks and opportunities.

MAIN DRAWBACK OF THE GREEN BOND MARKET

The main drawbacks faced by the green bond market are risks of greenwashing, higher financing costs without a pricing advantage, liquidity concerns, concerns around addressing additionality and lack of investable project opportunities. Apart from these concerns being experienced by issuers and investors, challenges have risen when expertise are required to track and measure impact of green bond's use-of-proceeds. For smaller issuers, these additional reporting requirements can be even more onerous as they might face capacity building constraints and act as an impediment for potential issuers trying to enter the market. A big factor in what makes this market acceptable at the mainstream level can also be having universal standards and retail investor buy-in, and currently this has been a drawback that the market faces when trying to scale-up.

INVESTOR NEEDS

In terms of investor needs, interviewees highlighted the rising need to understand impact additionality provided by green bonds, more meaningful disclosures on how investment was performing over time, the concerns to avoid green washing, and the overall efforts of issuers in addressing their alignment with the net-zero trajectory. The emerging trend among investors is the need to start labelling investments as well as following environmental, social and governance (ESG) and sustainable finance markets more closely. Investors are becoming savvier about these investments and want to avoid investments that increase their financial and reputational risks. A benefit provided by the green bond market is its ability to ring-fence projects in a way that makes sure the investment is going towards outlined projects. However, the need to start evaluating the overall trajectory of an issuer to reach alignment with climate targets has become an important point of scrutiny for those investors that are already involved in the market.

TAXONOMY

Creation or involvement in a taxonomy seems to be a rising trend for those involved in the green bond market. Not only is there a need to discuss the evolution of different types of taxonomies – ranging from purely green to a transition one – but there is also an urgency to set out a clear pathway to a low-carbon economy and to prescribe a nomenclature that bridges the gap between financial market participants and the scientific communities. However, a caveat mentioned in interviews was that if an investment seems good today, it may not necessarily hold up a decade down the line. Hence, the process of building a taxonomy needs to have a long-term perspective and set out a clear but just transition pathway to get there.

TRANSITION TAXONOMY IN CANADA

For Canada's case, the transition taxonomy is an important topic due to its ability to affect how the market will adopt transition finance. Interviewees mentioned that because transition is not necessarily a Canadian only phenomenon, the idea of a transition taxonomy needed to be more broadly acceptable as well to attract international investors and to maintain a good reputation. However, the focus of certain players in the Canadian financial sector is currently to build this taxonomy for sectors that may be fossil fuel intensive. However, a common concern for those outside of Canada is making sure that the taxonomy is truly a bridge that connects brown to green transition rather than just a low-hanging fruit for the fossil fuel sector and its financiers.

CHALLENGES OF A CHANGING GREEN DEFINITION

In terms of challenges faced due to a changing definition of green, interviewees noted the impact of disclosure regulations like the Taskforce on Climate-related Financial Disclosures (TCFD) and the applicability of an issuer's use-of-proceeds framework to internationally relevant frameworks like the Green Bond Principles (GBP). In terms of addressing the use of second opinions for evaluating the use-of-proceeds framework, they were not as valuable as third-party verifications due to the changing use of metrics and frameworks being used to evaluate the evolving definition of green.

FINANCING INNOVATION & NEW PROJECTS

In terms of financing innovation and new project categories, interviewees noted the lack of incorporation of climate change adaptation. For instance, projects that could help with carbon sequestration (ranging from carbon capture and storage to wetland restoration) as well as help reduce disaster risk and insurance costs were currently missing in the issuer's project portfolio. Innovative aspects to these projects would involve creating better natural infrastructure and the ability to generate more jobs and monetize the value of the benefits. Furthermore, sectors like water were not currently being targeted enough in Canada – especially given the abundance of freshwater in Provinces like Ontario. A big challenge noted here is the ability to measure the progress of projects over a short time horizon and their ability to produce financial returns directly.

MEASURING THE IMPACT

Measurement of impact has always been a significant challenge because impact itself can be a subjective notion. However, the need to start looking at impact in the green bond market has been emerging due to questions around additionality and the value-add of having a green label. In terms of measurement, interviewees were asked about how important aspects like Scope I, II and III emissions were, as well as what tools could be useful. A focus question on life cycle analysis (LCAs) was asked, and as highlighted by the survey results (see **Figure 4**), interviewees showed a mixed reaction. On one hand, tools like LCAs could be useful in addressing Scope III challenges (indirect emissions in the supply chain), but they could also prove to be onerous if the market already faced barriers when scaling up. However, an emphasis was made on having a continuity in how assessment was conducted and having these tools employed in sectors or projects that would be important to the low-carbon economy but could potentially have supply chain consequences. Another important barrier was the lack of awareness and education around potential scientific tools and climate data that could be used to track financial investment impact.

ROLE OF GOVERNMENT

When it comes to scaling up the market in Canada, interviewees mentioned the need for the government to be involved in existing efforts centered around the market. For instance, the creation of a transition taxonomy may be led by the private sector, but the end goal is to have it be a part of how Canada can align its transition with its international pledges. Hence, the need to have involvement and oversight on how sustainable finance develops, can be a crucial role that government fulfills. Governments are also able to coordinate across different sectors and industries, and the Canadian government should play this role when looking to chart Canada's transition pathway or shape policy priorities in the budget. There is also a need to have better stewardship and guidance on which climate scenarios can be used by issuers or investors to create baselines and track their projects and investments. Although the green bond market is on the tailwind of policy at the federal level, the need to have it front and center is becoming more evident with rising physical climate risks and window of opportunities.

Policy Recommendations

Tap into potential benefits from green bonds

One of the main benefits of the green bond market is how the use-of-proceeds get prescribed, monitored, and measured as an investment. This should serve as a starting point to encourage better assessment of the green performance of other sustainable finance products in Canada.

Reducing market barriers and risks

Given the concerns around greenwashing, the necessary policy and regulatory guidance on due diligence is missing from financial oversight bodies like the Office of the Superintendent of Financial Institutions (OSFI), securities regulators across various provinces (e.g., Ontario Securities Commission), Bank of Canada, and the Government of Canada.

Building a legitimate taxonomy

There is also a need for government to play a leadership role in designing the taxonomy that will be used by Canada to transition to a low carbon economy. The collaboration with existing international efforts should be encouraged. Given that transition is not a Canada specific case, the taxonomy should be designed in a way that is flexible and could be adapted by other countries, as well as being in-line with national low-carbon strategies. It could also be crucial to involve certain Canadian provinces that may face greater transition pressures and allow a just transition process.

Tackling the question of additionality

Although additionality is a more recent question for the green bond market, it can be enlightening to take a step back to think of how far green bonds have come to champion the cause of climate action around the world. As a solution, the market can help address this concern by creating a preference gradient that helps establish gold standard for green bonds – thereby quelling concerns and addressing a range of investors as well.

Scaling up and improving access to this market

Given that liquidity is a major barrier for scaling up, it can be addressed through issuances of sovereign green bonds by the Canadian and provincial governments. Access to the market should also be improved for smaller issuers by reducing transaction costs to make green capital more competitive and providing internal capacity building training programs. Hence, newcomers can get trained on how to issue green bonds.

Explore climate adaptation and nature-based solutions

Having the option to incorporate a variety of sectors and innovative projects is a major barrier for issuers. This can be tackled by incorporating nature-based solutions into green bond frameworks (allowing for better disaster risk management) and exploring innovative projects within resource-based sectors like climate-smart agriculture, water and mining.

Tracking impact and using measurement tools

To measure the climate-related impact of green bonds, existing tools, such as LCAs, should be explored. However, the assumptions used can be important and should be made transparent in the disclosures. Meaningful and comparable key performance indicators (KPIs) or environmental impact assessments should be part of the audit process. Governments or the academic community could also provide better guidance assessment tools and include a scoring framework for issuers looking to address large-scale project types (e.g., municipal transit), and emission-intensive sectors (e.g., mining or agriculture).

Incentivize the resource sector to transition

Government can help with putting in loan guarantees or using its own credit on the line for certain issuers or sectors that are clear about their transition. In order to do so, it can look further into which sectors will be an expenditure and which ones will be a valuable asset in Canada's low-carbon economy – especially when it comes to a green recovery. To help brown issuers to transition to a low-carbon economy, there is a need to have a reliable transition taxonomy that does not increase their reputational risks and allows them to align their corporate strategies and baseline scenarios with a net zero trajectory.

CONCLUSIONS

"The green bond market can act as a bait to shift thinking on how to re-align investment priorities and public policy with climate risks and opportunities"

Green bonds have been at the front and center of tackling the urgency of climate change using the power of global financial capital to push for change. However, as this sustainable finance market grows around the world and in Canada, questions are being raised on its effectiveness and efficiency to address the low-carbon transition in time. Our research looked at addressing these questions at the ground level and understand what various drivers and barriers are affecting the market. Our survey found that global green bonds are looked upon as an important tool to address climate and green opportunities in the upcoming economy, but there is still some hesitation when it comes to how country-level markets, particularly the Canadian market, is developing. Not only is there a need to address transition risks, especially in a resource-based economy like Canada's, but the need is amplified with concerns linked to greenwashing, additionality and environmental evaluation. Our interviews further delved into these concerns and provided potential solutions like building a legitimate transition taxonomy, creating a pan-Canadian transition pathway for carbon-intensive industries, exploring adaptation and nature-based solutions and creating more market liquidity and guidance through government involvement. Not only do sustainable finance markets, such as the green bond market, push Canada to show better climate leadership, but they also help tap into climate-related opportunities in a low-carbon globalized world.

Hence, to summarize the study resulted in the following recommendations:

- Canada should align resource-based sectors towards the low-carbon transition through green bonds;
- Guarantee additionality by setting trackable climate targets and benchmarks towards the transition to a low carbon economy;
- Addressing adaptation projects and nature-based solutions when issuing green bonds;
- Creating more meaningful performance indicators by using scientifically backed measurement tools;
- Provide more liquidity to the market by issuing sovereign green bonds and other forms of government involvement so as to guarantee that green bonds are a means to achieve the transition to a low-carbon economy.

APPENDIX

Survey Sample

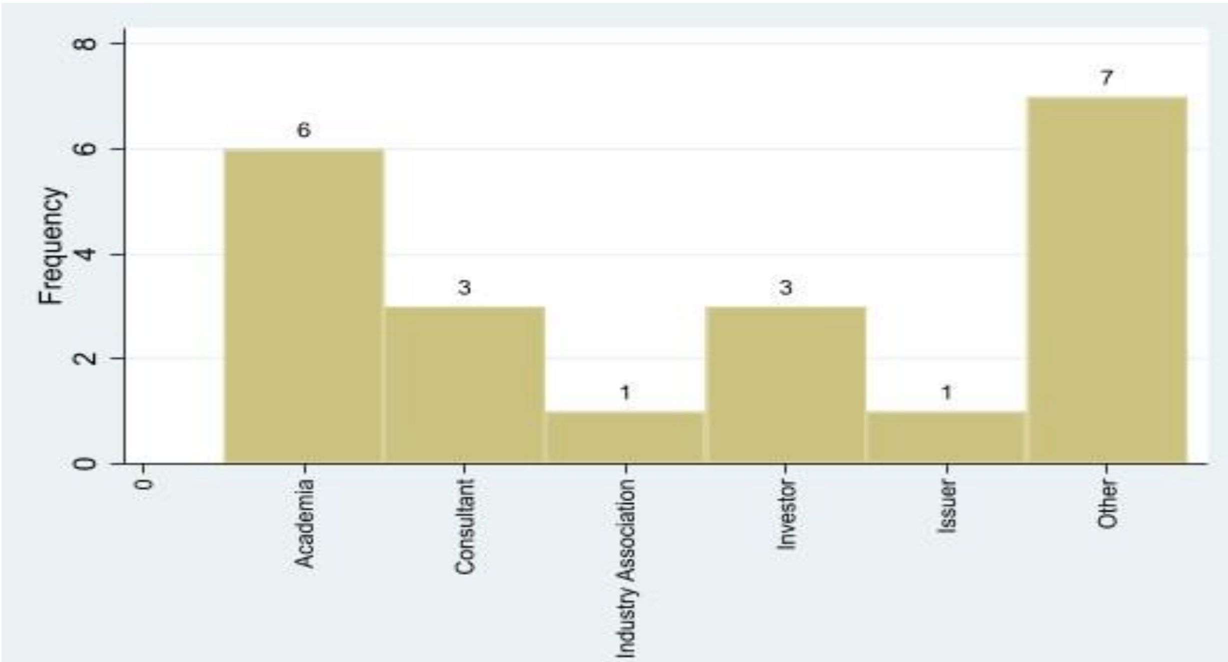

Fig. 9: Participation based on category type in our online survey.