
CRC in Public Banking for Sustainability, Inclusion and Prosperity

A Data Management Plan created using DMP Assistant

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Project abstract:

Getting the financing needed at the right time, place, scale, and pace for achieving the UN 2030 SDGs is a global challenge. Canada too has commitments to the climate, Indigenous peoples, and communities. What role can public banks serve in financing these commitments appropriately and justly?

The vision of the CRC in Public Banking for Sustainability, Inclusion and Prosperity is to co-create cutting-edge scholarly knowledge and evidence-informed policy advice to improve how public banks in Canada and around the world finance sustainable, inclusive, and prosperous communities. To realize this vision, the proposed CRC program has three objectives:

1. To co-create theoretically informed and empirically rich evidence-based understandings of the capacities of public banks to finance sustainable, inclusive, and prosperous communities;
2. To strengthen the interface between public banking scholars, policymakers, practitioners, and communities and, in doing so, raise the profile of public banks in academic, policy, and popular discourses; and
3. To train a new generation of public banking scholars with the capacity for conceptually-innovative and policy relevant research, collaboration, and stakeholder engagement.

Conventional wisdom has held that market-based and private institutions are the most effective entities for financing social, economic, and, more recently, green development. However, academics, policymakers, and civil society are pointing to the abilities of public banks to provide a substantive and preferable solution. Private finance and investors will continue to have a role, but their short-term horizons do not always match long-term societal ambitions.

Canada has some of the oldest, and newest, public banks in the world. Just seven of these Canadian institutions have combined assets of CAD\$973 billion and employ almost 15,000 people. Yet more needs to be known about public banks and how we can tap their potential to help Canada and the world confront our shared global challenges.

The CRC program will apply a dynamic political economy approach to the study of public banks, which enables researchers across disciplines to explore the intersectional forces that shape and re-shape the functions of public banks. Participant action research methodology will support program collaboration, integration, co-design, and feedback. Research methods will include mapping, qualitative case studies and cross-case comparisons, and quantitative studies.

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CRC in Public Banking for Sustainability, Inclusion and Prosperity

Data Collection

What types of data will you collect, create, link to, acquire and/or record?

Data collection during the CRC award/Public Banking Project (PBP) research programme may include, but are not limited to, those gathered from surveys, in-depth interviews, focus groups, group conversations, group meetings, archival documents, and primary documents and reports (confidential and publicly-available).

This means we will potentially generate numeric, audio, image, video, and text-based data.

What file formats will your data be collected in? Will these formats allow for data re-use, sharing and long-term access to the data?

This research project collects a variety of types of data. Examples of these include XML (Extensible Markup Language), XLSX (Excel), and CSV (Comma Separated Values) for databases and spreadsheets; JPG (Joint Photographic Experts Group) or TIFF (Tagged Image File Format) files for images; MP3 (Moving Picture Experts Group Layer-3 Audio) files for sound; and TXT (Text), PDF (Adobe), and DOCX (Microsoft Word) for narrative text. Each of these file types are either non-proprietary or widely used, ensuring ease and flexibility of reuse.

We will be using widely available commercial word processing programmes, for example, the MS365 suite and Adobe, to enable broad transferability.

What conventions and procedures will you use to structure, name and version-control your files to help you and others better understand how your data are organized?

All research programme contributors will use a conventional naming standard.

File names should include the project name (in shortened form), a summary of the file's content, and the date (in the format Day/Month/Year). An example is the following:

PBP_Public Banks Public Water_10June24

Document versions will be named sequentially (with file names ending in v1, v2 etc.). An example is the following:

PBP_Public Banks Public Water_10June24_v1

Data will be saved in non-proprietary or widely available software formats which are accessible to others. Examples of these include XLS for databases and spreadsheets, JPG files for images, MP3 files for sound, and DOC for text.

Documentation and Metadata

What documentation will be needed for the data to be read and interpreted correctly in the future?

In general, most data collected is not appropriate for sharing given anonymity and confidentiality procedures.

In order for data that may be shared to be potentially reused, all relevant data files should include the following:

- A description of team members responsible for creating the data;
- How the data were collected;
- The code book (if involving survey data);
- The interview guide or questionnaire (if involving qualitative data);
- Any issues affecting data quality and other pertinent background information which allows the content to be easily understood by others.

All files containing spreadsheets must include column names which are easily interpreted, even though they will be defined in a code book.

In terms of creating the code book, team members will need to consult best practices. This is not a practice that we have to date used.

In terms of the interview guides and questionnaires, these are generic documents to guide interviews. Completed questionnaires are subject to confidentiality and anonymity procedures and will not be shared (and will be deleted following a period of about 2 years depending on the research project).

How will you make sure that documentation is created or captured consistently throughout your project?

Team researchers engaged in data analysis using software will create logs and text files to ensure that the steps leading to the final results are documented and saved.

As we have not yet made use of data analysis software, team members will review best practices about creating log files and will create a specific project policy for documenting data analysis with software.

No identifying information of participants may be included in data files. Metadata must also include the grant name and funders (e.g., Canada Research Chairs; Social Sciences and Humanities Research Council, SSHRC).

If you are using a metadata standard and/or tools to document and describe your data, please list here.

For large scale data, we make use of a paid subscription database: Moody's BankFocus. Each search result taken from BankFocus has an opening page that specifies the parameters of the specific data search and how the results were arrived at, including the name of the database, version searched, and date of the search. This enables comparability in the future.

This data can be stored in shared cloud space or individually. This is large scale aggregate data on banks that does not include any personal information.

Storage and Backup

What are the anticipated storage requirements for your project, in terms of storage space (in megabytes, gigabytes, terabytes, etc.) and the length of time you will be storing it?

Storage space is expected to be less than 50GB (gigabytes). The data will be stored for 2 to 5 years, depending on the project, with the possibility of extension based on the PI's assessment of research needs.

How and where will your data be stored and backed up during your research project?

The 3-2-1 backup rule will be followed for data storage and backup.

This means that programme researchers and team members will create three copies of all data files, to be stored on two different types of media, with one copy kept in an off-site location.

Specifically, one set of data will be kept on Microsoft OneDrive (effectively off-site) via McMaster University. Team members will use this as their primary location to save data.

Two sets of data, synced to the OneDrive master set, will be kept on-site, saved to the hard-drive of a password protected desktop computer kept in the PI's locked office. This data will be regularly backed-up onto an external hard-drive, likewise kept on-site in the PI's locked office.

Sensitive files are to be password protected.

How will the research team and other collaborators access, modify, and contribute data throughout the project?

Since the programme research team is spread across Canada and globally, cloud servers with encryption capabilities are being used to collaborate. At McMaster University, the host university, Microsoft OneDrive will be used to store, share, and work with data. OneDrive is a cloud-based file hosting platform that works synchronously within the Microsoft Office Suite of desktop and web applications. Microsoft Office and OneDrive have a high degree of data security.

Preservation

Where will you deposit your data for long-term preservation and access at the end of your research project?

It is unlikely that original qualitative data generated will be appropriate for archiving. Data collected during this grant may be indexed/archived on the McMaster University Dataverse in accordance with the SSHRC policy on data sharing. McMaster University Dataverse is a research data repository for faculty, students, and staff. Researchers can choose to make content available publicly, to specific individuals, or to keep it private.

Specific programme members may deposit project-specific data within a two-year period after data have been collected for their particular research projects. However, this will not apply to data deemed sensitive by researchers or the PI or the Research Ethics Board (an example might include qualitative data in which research participants describe institutional or financial misuse of resources). Interview videos and transcripts, even those anonymized, will not be deposited in order to ensure participant anonymity.

Pre-published copies of research outputs (pre-prints) may be stored in PDF formats for open-access accessibility, potentially making use of MacSphere or the McMaster Dataverse, as is most appropriate.

Indicate how you will ensure your data is preservation ready. Consider preservation-friendly file formats, ensuring file integrity, anonymization and de-identification, inclusion of supporting documentation.

When data is to be preserved as a published or pre-print output, the document will in PDF format and already anonymized. When information is not anonymized, we will have written consent by the person providing the information.

Sharing and Reuse

What data will you be sharing and in what form? (e.g. raw, processed, analyzed, final).

Through publication, the research community will know that the data exists. Publications will include appropriate supporting information and analyses of the data. Original data will not be shared beyond the original researchers authorized to gather the data.

Pre-prints and open-access publications will be published on the MacSphere or McMaster Dataverse data repository. The repository will create DOIs that can be shared on the CRC-program and the Public Banking Project research website. Creative commons data licenses will be used for research outputs published as Public Banking Project outputs.

High risk, anonymous, and sensitive data will not be publicly shared.

Have you considered what type of end-user license to include with your data?

For all Public Banking Project outputs (not published by an outlet with restrictions), we will employ Creative Commons License CC BY-NC-ND.

This license enables reusers to copy and distribute the material in any medium or format in unadapted form only, for noncommercial purposes only, and only so long as attribution is given to the creator.

CC BY-NC-ND includes the following elements:

- BY: credit must be given to the creator.
- NC: Only noncommercial uses of the work are permitted.
- ND: No derivatives or adaptations of the work are permitted.

What steps will be taken to help the research community know that your data exists?

The CRC/Public Banking project will make every effort to engage in knowledge mobilization using a variety of means, including but not limited to the following:

- Publications (fire-walled and open-access)
- Blogs
- Public Banking Project website
- Conferences and presentations
- Social media (X; LinkedIn)

Responsibilities and Resources

Identify who will be responsible for managing this project's data during and after the project and the major data management tasks for which they will be responsible.

The CRC/PI in Public Banking holds primary and enduring responsibility for managing during and after the project, including all the major data management tasks. The CRC/PI may assign responsibility to highly qualified personnel within the project, including senior researchers or project manager, should the project employ such personnel. The CRC/PI will maintain oversight and final responsibility for data management and security.

How will responsibilities for managing data activities be handled if substantive changes happen in the personnel overseeing the project's data, including a change of Principal Investigator?

The CRC cannot transfer his role as PI. The project would come to an end in such circumstances. There is a need to prepare an end of project strategy to ensure proper archiving of research outputs and proper disposal of any remaining anonymous data gathered. As a new start-up project, we will need to develop a clear and simple off-boarding procedure for data management, security, and confidentiality based on best practices.

What resources will you require to implement your data management plan? What do you estimate the overall cost for data management to be?

No direct recurring costs attributed to the project as we are using McMaster University OneDrive. We will purchase a new desktop computer to store data and an external hard-drive. Estimated cost: \$3500.00

Ethics and Legal Compliance

If your research project includes sensitive data, how will you ensure that it is securely managed and accessible only to approved members of the project?

Some of the data may be sensitive. Sensitive data will be stored on secure McMaster cloud servers. Only analyzed, de-identified, and freely-consented to data will be made openly available during the course of the research project and afterwards. This will only be made available through published outputs. Original, raw, qualitative data will remain closed and unavailable to anyone but project researchers.

If applicable, what strategies will you undertake to address secondary uses of sensitive data?

No sensitive data will be shared. Any sensitive data will be stored on secure servers for 2 to 5 years. This period could be extended for the purposes of research as determined by the PI. Only analyzed, de-identified, or freely-consented to data will be made available during the course of the research project and afterwards.

How will you manage legal, ethical, and intellectual property issues?

Research has been provisionally approved by the Research Ethics committee at McMaster University as the host university. Participants in research are required to sign informed consent agreements. Participants' identities are by default anonymous and confidential unless otherwise agreed in writing. Participant consent can be freely withdrawn at any time by informing the PI. Researchers maintain their rights to intellectual property by mediating data requests and by determining their own terms of access. Mediation is the responsibility of the PI.