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Losses, Risks and Reputation: Bolstering the Bank of Canada for the Road Ahead

by Janet Cosier

- Central banks around the world, including the Bank of Canada, are dealing with a hangover from the quantitative easing (QE) policies undertaken during the pandemic. Ensuing inflation and interest-rate hikes have created balance sheet mismatches and net interest losses. As an example, the interest rate the Bank of Canada earns on its bond portfolio is lower than the market interest rate it owes on the settlement balances of financial institutions held at the Bank in payment for the bonds.
- Given these circumstances, concerns have arisen about the ability of central banks to carry out their monetary policy mandates. Reputation and independence issues have come to the forefront. Questions have also emerged regarding the implications for public finances with the cessation of profit transfers to governments.
- This paper provides an overview of the issues facing the Bank of Canada and how it can best prepare for emerging risks.
- One of the main recommendations is that the federal government make an additional capital investment in the Bank of Canada so it can effectively manage its current losses and future financial challenges and risks. The paper also provides guidance on enhancing the Bank of Canada's financial risk management framework to make it more robust and transparent in a world of elevated balance-sheet risk.

Central banks need a relatively high degree of independence to design and implement monetary policy with the aim of maintaining low and stable inflation. To be financially independent, a central bank needs an earning capacity large enough to cover its annual operating costs, as well as sufficient buffers to absorb losses when it is acting during periods of financial crisis.

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Over the last year, central banks around the world, including the Bank of Canada, have started to report negative equity positions on their balance sheets. With the rapid rise in inflation last year, central banks responded by sharply increasing interest rates over a relatively short period of time. These decisive actions have created mismatches on the balance sheets of the Bank of Canada and many other central banks, including the US Federal Reserve, the Reserve Bank of Australia, the Bank of England, the European Central Bank, to name a few.

In many instances, these mismatches have arisen because central banks are now paying higher interest rates on financial institutions' deposit liabilities (settlement balances held at the banks) than they are earning on their bond portfolios. As a result, they are reporting large net interest losses (what this paper terms financial losses). As is the case for the Bank of Canada, these losses are expected to continue over the next few years – thereby stopping remittances of profits to the government in the foreseeable future.

Given these circumstances, questions have arisen about the ability of central banks to carry out their monetary policy mandates. Reputation and independence issues have come to the forefront. And concerns exist regarding the financial independence of central banks and the implications for public finances of the cessation of profit remittances to governments.

This paper[1] explores a number of risk governance topics for the Bank of Canada including:

- the significant expansion of its balance sheet under QE;
- the ensuing financial losses and the design options to manage these losses;
- the adequacy of capital provisions to cover financial losses;
- improvements to enterprise risk management frameworks; and
- the issues of reputation, confidence and trust.

The paper concludes that, in order for the Bank of Canada to be financially and functionally independent from government, the Bank needs an earning capacity large enough to cover its annual operating costs in the future as well as sufficient buffers to absorb losses from actions undertaken during periods of financial stress.[2]

Given this requirement, one of the main recommendations made in the paper is that the government should make an additional capital investment in the Bank of Canada so it can effectively manage its current losses and future financial challenges and risks. The paper also provides guidance throughout to enhance the Bank of Canada's financial risk management framework to make it more robust and transparent in a world of elevated balance-sheet risk. The Appendix summarizes the specific proposals for consideration by the Bank of Canada.

1 Although this paper does not address the appropriateness of quantitative easing (QE), an unconventional monetary policy tool used by the Bank of Canada and other central banks to respond to the economic and financial conditions during the pandemic, the paper recommends that such a study should be undertaken by the Bank. See Levin, Lu, and Nelson (2022) for an example of such an analysis.

2 Central banks and private banks operate under different principles. Central banks are owned by the government, thus making it possible for central banks to effectively operate and fulfill their mandates with negative equity without the risk of bankruptcy or insolvency like private banks. Since central banks have the ability to create money, they can continue to meet their obligations as they come due and so they do not become insolvent.

Balance Sheet Expansion

During the pandemic, quantitative easing, an unconventional monetary policy tool, was implemented by the Bank of Canada and other central banks to ease financial conditions and to strengthen economic recovery. Quantitative easing under the Bank of Canada's Government Bond Purchase Program involved large-scale purchases of longer-term government bonds from financial institutions in secondary markets, which significantly increased the assets of the Bank's balance sheet.

The funds used by the Bank of Canada to purchase the bonds were placed in the deposit accounts held by the financial institutions at the central banks, which dramatically increased the total amount of interest-earning deposit liabilities.

With interest rates rising sharply in 2022 to combat inflation, the Bank of Canada started to pay out considerably higher interest rates on its deposit liabilities than it was earning on its bond portfolio.[3] The difference in the interest rates has resulted in significant net interest losses – what this paper calls financial losses – for the Bank of Canada (and many other central banks), which are expected to continue over the foreseeable future.[4]

Financial Losses

Over many years, central banks have earned significant profits; and they have remitted these profits to their governments. However, more recently, as just discussed, many of these central banks have realized large financial losses. As a result, central banks' profit remittances to their governments have been reduced significantly and, in many instances, the remittances have been eliminated entirely.

In the case of the Bank of Canada, the Bank's profit remittance to the government was significantly reduced in 2022 compared to its remittance in the previous year because of the sizeable net income loss that the Bank recorded for fiscal year 2022.[5]

In the current high-inflation, high-interest-rate environment, financial losses related to quantitative easing are expected to continue over a number of years.[6] The cumulative financial losses are expected to be substantial. Indeed, these losses have sent the Bank of Canada into negative equity territory.

Notwithstanding academic research on the expected size of these losses (see, for example, Tombe and Chen

3 The regional US bank failures in early 2023 had some similarities since these regional banks purchased government securities with long-term maturities; and the banks had deposit liabilities with interest rates that were increasing in line with the Federal Reserve's interest-rate moves.

4 According to Tombe and Chen (2023), cumulative losses for the Bank of Canada are estimated at between $3.6 billion and $8.8 billion from 2022-23 to 2024-25, depending on the projection scenario. The paper notes that: "while this does not undermine the Bank's ability to conduct monetary policy, it does create novel reputational and communication challenges for the Bank at a time of elevated public attention on its activities. It also creates a direct financial cost for the federal government."

5 In 2022, the Bank of Canada recorded a loss in net income for the first time in its history. It incurred a net loss of $1,111 million in 2022 compared to net income of $2,401 million in 2021.

6 Toni Gravelle, Deputy Governor, Bank of Canada, noted in his remarks at the National Bank Financial Services Conference on March 29, 2023, that "quantitative tightening is happening, but it will take time to run its course."

2023), the Bank of Canada should generate its own estimate of cumulative losses over the medium term under different interest rate and economic assumptions.[7] The results of the estimation process are critical not only for the Bank of Canada to understand the implications for its capital reserves, but for the government's finances as well.[8] The cumulative expected loss information should be made available publicly, and included in the Bank's annual audited financial statements[9] and annual reports.

Central banks around the globe have different approaches to managing and reporting their expected financial losses, including the following.

- **Capital investment** – In this approach, the government invests additional capital in the central bank to bolster its capacity to cover its operating costs and financial losses.
- **Indemnity** – Under this approach, the government provides the central bank with an indemnity to cover the losses under certain conditions.[10]
- **Negative equity** – By the negative equity method, the financial losses are reported against the central bank's current level of capital reserves, resulting in a negative equity position over the medium term. Under the negative equity method, when the central bank starts to earn profits, all or a portion of the profits are retained by the central bank for a number of years to reduce the total negative equity position and restore the capital structure to its original level. This approach may have serious drawbacks since negative equity is typically regarded by the private and public sectors as a sign that the financial health of an organization is under distress. A restructuring plan is usually required to restore financial strength and public confidence.
- **Deferred asset** – In this approach, the financial losses of a central bank are reported as a deferred asset.

7 As an example, see Reserve Bank of Australia, "Review of the Bond Purchase Program," which presents four scenarios to illustrate how the Bank's future earnings and negative equity positions may vary with different assumed paths for policy interest rates.

8 The Bank of Canada is included in the listing of enterprise Crown corporations and part of the government's consolidated financial statements. Enterprise Crown corporations are defined as those Crown corporations which are not dependent on the government for financing their activities and whose principal activity and source of revenue is the sale of goods and services to outside entities.
The government's investment in an enterprise Crown corporations is accounted for under the modified equity method of accounting in the government's financial statements. Under this method, the government aggregates a business enterprise's net assets and net income by adjusting the investment shown on the government's consolidated statement of financial position and by presenting the net income as a separate item on the government's consolidated statement of operations. As a result, annual losses of the Bank of Canada over the next several years will affect government finances.

9 The Bank of Canada's financial statements and accompanying notes are prepared in accordance with International Financial Reporting Standards (IFRS). The Bank transitioned to reporting under IFRS effective January 1, 2011.

10 The Bank of England is indemnified against losses on its quantitative easing program under the agreement signed with the Treasury in 2009. In July 2023, the Bank of England published its latest estimate of £150 billion for transfers from the Treasury to cover expected losses on the central bank's quantitative easing program. The Bank of England expects the Treasury to transfer about £40 billion in each year of 2023, 2024, and 2025. This is equivalent to about 4 percent of gross domestic product. The Bank of England underlined that its latest estimate was highly sensitive to the underlying assumptions on interest rates and the pace of asset sales.

> This accounting treatment is an "unconventional" approach to reporting financial losses. Financial losses are not assets of a central bank with future economic value.[11] The deferred asset approach is not consistent with Generally Accepted Accounting Principles (GAAP) such as, conservatism, materiality and consistency. The deferral approach does not follow International Financial Reporting Standards (IFRS). Furthermore, a deferred asset approach is not consistent with the international banking regulatory reforms designed to enhance the financial stability of financial institutions.[12]

In 2023, the Government of Canada chose the negative equity method by introducing legislative amendments to allow the Bank of Canada to temporarily retain its net income in the future instead of remitting it to the government. Once sufficient positive equity is restored, the Bank would resume remitting to government.[13] However, this paper proposes a less *ad hoc* and more transparent structured approach that involves additional capital investment by the government for the following reasons:

- The Bank's cumulative financial losses are expected to continue to be substantial in the short to medium term.[14]
- It will likely take several years for the Bank to recoup its losses and start to restore its capital to the original level, thus leaving the Bank with negative equity for an extended period of time.[15] In addition, the Bank's current level of reserves will not likely be sufficient to meet the Bank's future needs given the fundamental changes in the global economy and financial systems.
- The Bank's indemnity agreements with the government do not cover net income losses.[16]
- In a period of enhanced scrutiny on central banks, a long-lasting negative equity position could be

11 A deferred asset is defined by the accounting profession as a resource with economic value that, in this case, a central bank owns with the expectation that the asset will provide a future benefit.

12 Given country-specific legislative and governmental arrangements, there are different approaches across central banks to manage the financial losses. For example, the US Federal Reserve does not follow International Financial Reporting Standards (IFRS); it has developed its own set of financial reporting standards, including reporting the financial losses as deferred assets. The deferred asset approach was recommended for Canada in Ambler, Koeppl, and Kronick (2022). In the case of the Reserve Bank of Australia, financial losses are reported as negative equity. The Bank of England has an indemnity with the Treasury to cover its quantitative-easing financial losses.

13 In addition, effective May 16, 2022, the Government of Canada ceased earning interest on its deposits at the Bank of Canada. Since these deposits have been sizeable, the Bank of Canada's agreement with the government has helped the Bank to reduce its net income losses.

14 See Bank of Canada assets and liabilities: Weekly; the Bank's negative equity was reported at $4,390 million on September 20, 2023.

15 As an international comparison, see Nordstrom and Vredin (2022). "Does central bank equity matter for monetary policy?" Sveriges Riksbank, Staff Memo. Page 16, "….. the Federal Reserve and the DNB can be expected to recover losses in slightly less than ten years. … For the Riksbank and the RBA, it is likely to take longer to restore the level of equity through operating surplus."

16 During 2020, indemnity agreements between the Government of Canada and the Bank of Canada were put in place so that the Bank could support provincial, corporate and Government of Canada bond markets. If the Bank decides to sell assets, any losses resulting from these sales within the Government Bond Purchase Program, Provincial Bond Purchase Program, Provincial Money Market Purchase Program, Commercial Paper Program and Corporate Bond Purchase Program are indemnified by the federal government. Gains on disposal are remitted to the government. The indemnity agreements are accounted for as derivatives on the Bank of Canada balance sheet.

> interpreted as a sign of poor financial health. This approach may also lead to questions about the Bank's financial strength, its policy credibility, and reputation.[17] A capital investment will enhance the Bank's earning capacity to cover its operating costs and cumulative losses.

Increasing capital reserves openly recognizes the costs related to quantitative easing in a timely manner in the financial statements of the Bank and in the government's finances.[18]

Looking forward, building a strong capital structure will support the Bank of Canada's implementation of unconventional policy tools during times of economic and financial stress. Maintaining adequate capital reserves in the future respects international capital requirement reforms promulgated for the banking sector. Furthermore, a strong capital structure to meet the Bank's future needs promotes the Bank's financial independence, accountability and transparency when central bank leadership is paramount.[19]

The Bank of Canada, as well as other central banks that used quantitative easing as a policy tool, should provide transparent estimates about the costs and benefits of this policy on the economy. Given the large impacts these policies have had on governments' consolidated financial statements, providing these estimates would help to justify the additional capital investments.

Capital Adequacy

The above discussion on financial losses and dealing with them through a capital injection is particularly germane in the short run for the Bank of Canada. However, these losses, and the resulting issues around risk governance, are also relevant as we look out in the more medium term.

Central banks, including the Bank of Canada, are responsible for price stability and the stability of the financial system; and, in some cases, they are also responsible for the supervision of banks.[20] The Basel Committee on Banking Supervision, comprised of central banks and regulatory authorities, developed Basel III, an international regulatory framework in response to the financial crisis of 2007–2009.

The Basel reforms are designed to improve the regulation, supervision, and risk management of the banking sector. The reforms set out minimum capital requirements and additional capital requirements (i.e., countercyclical buffers) when required to improve financial institutions' abilities to handle shocks from financial stresses and to strengthen transparency and disclosure.

17 See Bank of Canada, Annual Report 2022, Financial Statements, note 15, related parties, page 41, "The Bank is related in terms of common ownership to all Government of Canada departments, agencies, and Crown corporations. To achieve its monetary policy objectives, the Bank maintains a position of structural and functional independence from the Government of Canada through its ability to fund its own operations without external assistance, and through its management and governance."

18 For the government, the costs of quantitative easing go further. Since the Bank is owned by the government, the purchase of its own debt on secondary markets at a lower interest rate/higher price than it was originally issued at results in a loss that must be reflected on the government's own financial statements. For 2021-22, the government recorded net losses totalling $1 billion, and $19 billion for 2020-21 in respect of the Bank's purchases of Government of Canada bonds.

19 Effective communication on the reasons for strengthening the Bank's capital reserves is essential in order to protect central bank independence in monetary policy decision-making and to maintain public confidence.

20 The Office of the Superintendent of Financial Institutions (OSFI) regulates and supervises financial institutions and pension plans in Canada.

International framework – In the case of central banks, there does not appear to be a common framework to guide the determination of capital adequacy requirements in relation to the financial risks that a central bank faces. The absence of a framework may be explained by the fact that each central bank is established under country-specific legislation, which sets out the mandate of the central bank and the conditions under which it will operate.

Nevertheless, central banks have similar core responsibilities in such areas as price stability, financial stability, and as a lender of last resort. A principles-based international framework, developed collaboratively by central banks and other key stakeholders, may be beneficial as a starting point for each central bank in assessing its own minimum capital requirements and in providing a countercyclical buffer to effectively manage potential future losses under certain conditions.

Capital policy – To enhance its balance-sheet risk mitigation measures, the Bank of Canada should consider developing a capital policy to provide guidance on determining the levels of its capital requirements, and countercyclical buffers, under certain conditions. As an example, the Bank could bolster its current agreement with the government to retain a certain percentage of its profits to build up the necessary reserves and buffers in such a manner that allows the Bank to effectively and expediently manage new and emerging risks. The capital policy would identify how any additional capital would be built up, if capital is below the target level. It would also explain any indemnities from the government, including the terms and conditions.[21]

As is the case with other accounting policies, the capital policy should be published by the Bank on its website to promote accountability and transparency. Annually, the Bank would disclose any financial risks related to the adequacy of its capital reserves in the Bank's audited financial statements. The financial risks would also be discussed in the Bank's annual report.

Risk Management

To respond to the rapidly changing external and internal environments, the Bank of Canada and other central banks are continuing to enhance their financial and enterprise risk management frameworks to make them more robust and forward looking.

Financial and enterprise risk management frameworks should identify potential future, unforeseen risks that could compromise the achievement of their goals and desired outcomes over the medium term for their core responsibilities, in such areas as price stability, financial stability, and lender of last resort. These forward-looking risks are referred to as emerging risks.

In many instances, emerging risks are considered to have a low probability of occurrence but moderate-to-serious consequences under certain conditions. Given the rapid changes in the global and domestic economies and financial systems, emerging risks need to be identified and assessed because they may lead to serious financial, operational, or reputational consequences for the Bank of Canada.

Balance-sheet financial risk – Two broad categories of balance-sheet financial risk need to be considered – financial risks and emerging financial risks. The first category encompasses the traditional financial risks relating to the investment portfolio of a central bank such as, credit risk, interest-rate risk, market risk, and exchange-

21 The capital policy should be developed in consultation with other central banks, the government, and external experts.

rate risk. Typically, these risks are evaluated by the Bank of Canada and other central banks using well-developed market-based risk evaluation tools such as value-at-risk analysis and scenario-based stress tests.

The second category, emerging financial risks, covers the risks that may arise when the central bank implements, for example, new tools and systems to support its price stability, financial stability, and lender-of-last-resort operations. This was the case with the quantitative easing program. Although there are economic and financial benefits from using quantitative easing, researchers are also aware that potential future risks can arise under certain conditions such as, inflation, decreased demand, and others. As a result, on an ongoing basis, emerging financial risks need to be identified, monitored, and taken into consideration in assessing the total financial risk exposure of the Bank of Canada's balance sheet and the adequacy of its capital reserves.

Scenario analysis is a valuable tool that helps central banks to identify potential emerging risks. Identifying and discussing a range of scenarios can reveal potential hidden, unforeseen risks to the central bank. Scenario analysis is a particularly effective tool when it is performed with a diverse group of professionals with different knowledge and expertise to identify the various possible scenarios and potential consequences.

The Bank of Canada's website provides an overview of the Bank's risk management framework including financial, operational, strategic, and environmental and climate-related risks. In the case of financial risks, the Bank indicates that it conducted in 2022 additional quantitative analysis and stress testing of its net income (Bank of Canada, Risk Management). Given the information on the website, it is not evident how emerging financial risks for all of the Bank's core functions are considered in assessing the Bank's total financial risk exposure and the adequacy of the Bank's capital reserves.

Risk management reporting – From a risk governance perspective, emerging financial risks for each of the Bank of Canada's core functions should be included in the Bank's enterprise risk management reports.[22] Emerging risks should be openly discussed with senior management, as well as with the finance and audit committee and the board of directors.

To enhance accountability and transparency on an annual basis, the Bank of Canada, as well as other central banks, should disclose any significant emerging financial risks in their audited financial statements. The emerging risks should also be discussed in the Bank's annual reports.

Reputation, Confidence, and Trust

For decades, many central banks around the world have been successful in achieving their policy objectives in the areas of price stability, financial stability, and lender of last resort, which have contributed to economic growth, safe and efficient financial systems, and secure banknotes that people can trust.

More recently, with high rates of inflation, high interest rates, large financial losses, and economic and financial uncertainties about the future, criticisms have been expressed by groups such as investors, businesses, politicians, and the public about the Bank's ability to conduct monetary policy, its independence, and the need for enhanced accountability and transparency.

Some of the current criticisms may relate to the complex interlinkages of decisions taken by the central bank and the associated costs and risks (domino effects) regarding quantitative easing whether they concern the

22 The core functions of the Bank of Canada are: monetary policy, financial system, retail payments supervision, funds management, and bank notes.

economy, monetary policy, the central bank balance sheet, capital reserves, or profit remittances to government, government finances, and accountability.

To effectively manage these criticisms, clear, concise and consistent communications are essential covering such topics as: the objectives of the quantitative easing program; the need to wind down the program; the need to raise interest rates to unprecedented levels in the last three decades; the funding of financial losses and annual operating costs, etc.

A comprehensive communications approach using for example, simple language, charts, and graphs for the average reader will help to protect the Bank of Canada's reputation and to strengthen confidence and public trust. Accountability and transparency are foundational elements of central bank communications.

Conclusions

The Bank of Canada and other central banks have responded to high inflation by increasing their policy interest rates. Central banks are paying higher interest rates on their deposit accounts held by financial institutions than they are earning on their bond portfolios. As a result, they are experiencing large financial losses and negative equity positions, including at the Bank of Canada. These losses are expected to continue in the short to medium term. Central banks are considering different approaches to fund and report these losses in consultation with their respective governments.

Given the drawbacks of accounting for the financial losses as negative equity – the current *ad hoc* approach implemented by the government in 2023 – or as a deferred asset, recapitalization of capital reserves is a more transparent structured approach for the Bank of Canada to manage its balance-sheet financial risks currently and in the future. Taking this decisive step will strengthen the Bank's financial health, independence, and accountability and transparency.

Looking out further, the Bank of Canada and other central banks may not always have sufficient financial independence. A central bank's financial position will need to be strengthened over time to take into account changes in the external environment as well as in the scope of the Bank's operations. From a risk governance perspective, central banks around the globe, including the Bank of Canada, are strengthening their enterprise risk management frameworks to encompass the identification of emerging risks, including emerging balance-sheet financial risks. Building the Bank of Canada's capacity and knowledge of these financial risks is critical input into the periodic assessment of the adequacy of the Bank's capital reserves and buffers.

In addition, taking time to reflect on the lessons learned from past experiences, and sharing these lessons publicly, are important elements of the Bank's leadership and accountability. The Bank of Canada, in the short term, should consider undertaking an independent review of its monetary policy forecasting tools and decision-making processes related to the quantitative easing program, by external monetary policy and public communications experts.[23] Enhancements to these processes, including how decisions are taken and implemented, are essential to ensure that a wide range of risks are identified, assessed, monitored and communicated.

23 In July 2023, the Bank of England announced that Dr. Ben Bernanke will lead a review into the Bank's forecasting and related processes in times of significant uncertainty. The review aims to develop and strengthen the Bank's support for the Monetary Policy Committee's (MPC's) approach to forecasting and monetary policy in such times. The review will consider the role of the forecast and how procedures and analysis support the MPC's deliberations and decision-making. The terms of reference for the review were published on the Bank's website in September 2023 (see Bank of England 2023).

Appendix – Summary of the Proposals for Consideration by the Bank of Canada

1. **Review of quantitative easing program** – provide estimates about the costs and benefits of the quantitative easing policy tool on the Canadian economy, given the large impact of this policy on government finances and other key stakeholders including the public.

2. **Future losses and negative equity** – estimate the future losses under different scenarios to better understand the implications for the management of the Bank's capital reserves and for the federal government's finances. Communicate the cumulative expected loss information publicly, and include this information in the Bank's annual audited financial statements and annual reports.

3. **Capital investment** – strengthen the Bank's capital structure needed currently and in the future to enhance its resilience, financial independence, and accountability.

4. **Capital policy** – enhance the Bank's balance-sheet-risk mitigation strategies by developing a capital policy to provide guidance on determining the levels of capital requirements, and buffers under certain conditions:

    - identify how any additional capital would be built up, if the capital is below the target level;
    - explain any indemnities from the government, including the terms and conditions;
    - disclose any financial risks related to the adequacy of the Bank's capital reserves in its audited financial statements. And discuss these risks in the Bank's annual report.

5. **Emerging financial risks** – identify, monitor and take these risks into account for each of the Bank's core functions in order to assess the total financial risk exposure of the Bank's balance sheet and the adequacy of its capital reserves.

6. **Enterprise risk management reporting** – enhance the focus on emerging risks for all of the Bank's core functions and discuss these risks with the finance and audit committee and the board of directors, as the need arises. To enhance accountability and transparency, on an annual basis, disclose any significant emerging risks in the Bank's audited financial statements, and discuss them in the annual report.

7. **Independent review of the Bank's operations** – undertake, in the short term, an independent review of the Bank's monetary policy forecasting tools and decision-making processes related to the quantitative easing program by external monetary policy and public communications experts.

8. **Communications** – enhance communications for the average reader with clear, simple, concise and consistent messages deploying different tools during these unprecedented times of high inflation and high interest rates to promote the transparency and accountability of the Bank.

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