

# **MONEY AND MONETARY POLICY IN CANADA**

## **MODULE 3: CANADA'S FINANCIAL SYSTEM**

**“Money and Monetary Policy In Canada” by Gary Rabbior**  
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## 3.1 THE FINANCIAL SYSTEM: SUPPORT FOR A MODERN ECONOMY

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### **Economic**

*Insight: Our financial system facilitates the exchange of goods and services*

### **What is a Financial System?**

A financial system consists of financial institutions and financial markets and a set of rules and regulations that affect how money circulates in the economy. An effective financial system makes it easier for money to serve its various roles and functions.

Our financial system and its financial institutions (banks, credit unions, caisses populaires, etc.) enable the billions of exchanges that occur each year among the millions of people who buy and sell goods and services.

Note that the term financial institutions includes much more than banks. Insurance companies, finance companies, stock investment companies and even retailers are all financial institutions. While banks may operate differently in some respects to these other financial institutions, they are all part of our financial system.

### **Our Financial System Supports Exchange in Our Economy**

The financial system helps in two key ways. First, the system makes it easier to exchange goods and services using cash (coins and bank notes) that it provides and circulates.

Second, our financial system helps the process of exchange by enabling the use of debit or credit cards and other forms of payment. Suppose we had to handle all of our transactions in cash. That would be a real challenge—as well as risky. Imagine carrying \$25,000, \$30,000 or \$40,000 in cash to buy a car or \$200,000, \$350,000 or \$500,000 or more to buy a house.

Financial institutions and the financial system overcome the challenge and risks that come with only having cash to deal in. Cheques and debit or credit cards can be used in many transactions—particularly large ones, such as buying a house or car. Writing a cheque, for example, can make a large purchase or transaction easier and safer.

### **Economic**

*Insight: Our financial system acts as an important intermediary channelling savings into investment*

## **Our Financial System Serves as an Intermediary to Support Investment □ Growth and Innovation**

In addition to providing an effective payments system, the financial system acts as an important intermediary, linking savers and borrowers. It is important to understand this link because the intermediary role played by financial institutions helps to fuel economic investment, growth and innovation.

In a system that operated without financial institutions and with only cash, people might save their money in cookie jars, under mattresses—wherever they wanted to. However, the funds being saved in the cookie jar or under the mattress aren't readily available to anyone else who might need them. Maybe a borrower could find someone, like a friend, to lend them money. But many borrowers would find it hard to get the funds they need for purchases. People wanting to borrow large sums of money would find it especially difficult.

Financial institutions, and the financial system, make it easier to link those who have money to save today with those who are currently looking for funds to borrow. For various reasons, such as the need to build a new plant, factory, ship, pipeline, computer system, training program, etc., a company may need to borrow millions of dollars. The company hopes that the investment will pay off and allow it to pay the money back over time as its ability to earn a profit for shareholders (those who own at least one share of a company's stock) improves. It could be very difficult or even impossible for the company to pay for such an investment from its current funds or cash flow.

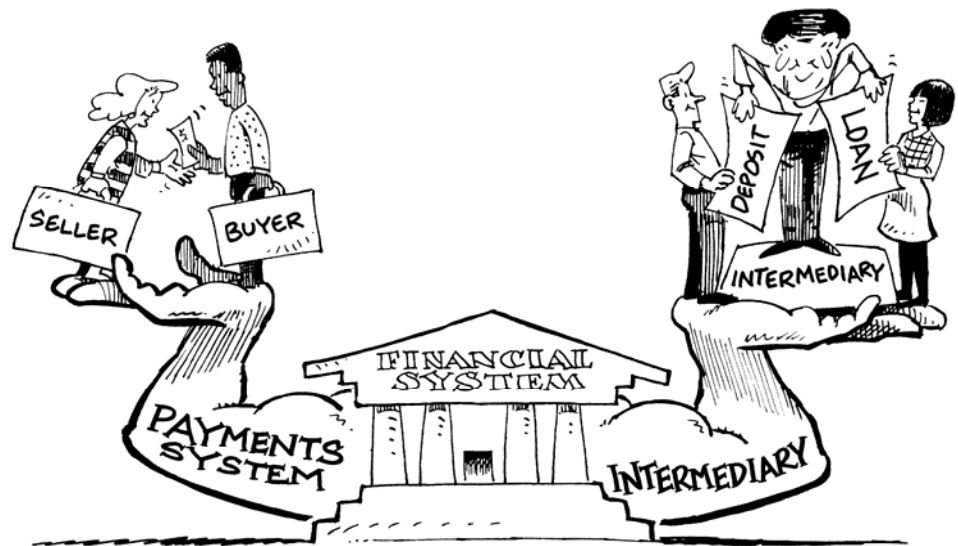
Our financial system creates a pool of all the money deposited by savers. This pool of savings can be made available to borrowers—those who do not have the money they need now but will pay it back over time, with interest.

This link between savers and borrowers helps our economy to grow and expand its ability to produce goods and services, create wealth for our society, generate jobs and incomes, and increase our standard of living. By directing funds from those who currently don't need them to those who do, financial institutions help to support investment and growth in our economy. Without the financial system working in this way, many investments might never take place. Much of the technology, factories and equipment needed for growth, productivity and production might never be developed.



**Economic  
Insight:** Our  
financial system  
links savers with  
investors fueling  
economic growth  
and progress

### 3.1 THE FINANCIAL SYSTEM: SUPPORT FOR A MODERN ECONOMY



*The financial system assists our economy by supporting and facilitating exchange through a payments system and by serving as an intermediary between savers and borrowers.*

So, our financial system helps our economy by (i) providing a payments system that enables the trade and exchange of goods and services; and (ii) linking savers with borrowers, thereby promoting investment, growth and innovation in our economy and a higher standard of living over time.



*Before there was the "loonie," there was the \$1 bill. Many Canadians now hold one as a souvenir from the past.*

## 3.2 THE EVOLUTION OF BANKING AND FRACTIONAL RESERVES

### **Economic**

**Insight:** Banks and other financial institutions facilitate and support the use of money in our economy

### **Economic**

**Insight:** Today's banks have their roots with the goldsmiths from many years ago

### **Economic**

**Insight:** Goldsmiths were paid a fee to protect valuables. Today, banks provide a return to depositors to encourage saving

### **There Was Money Before There Were Banks**

The use of money in an economy does not require banks. As we saw in Module 2, money was in use for many years before there were banks. The banking function evolved, however, to make it easier to use money, particularly in a large, complex, modern economy.

### **The Banking Concept Started With the Goldsmiths**

Modern banking originated in the activities of individuals, such as the goldsmiths of medieval times. Because gold was such a valuable commodity, goldsmiths tended to have good security systems to protect it and developed ways of storing their gold to keep it safe. This was attractive to others who had valuables they wanted placed in safekeeping. So, people looked to goldsmiths to store their valuables. The depositor paid the goldsmith a fee and was given a receipt that guaranteed the return of the item upon request.

### **A Gold Bar Is a Gold Bar—and So ...**

The valuables that people deposited with goldsmiths for safekeeping included gold bars and coins. One thing became important in the evolution of banking—all the gold bars and coins were essentially the same. One gold bar wasn't different from another. One coin looked like another. Depositors weren't concerned with getting back the specific bars or coins they had deposited with the goldsmiths. They were only concerned about getting back the equivalent value in gold when they wanted it. That set the stage for lending—and the recognition that it wasn't necessary to hold on to all the gold that was deposited.



**Economic****Insight:**

*Goldsmiths could  
earn a profit by  
lending gold*

**The Concept of Fractional Reserves**

During the period when goldsmiths provided this storage facility for valuables, they earned a profit through the fees received from depositors seeking protection for their valuables. However, the profit was quite small.

The goldsmiths then became aware of something very interesting. Each week, as some depositors asked for their gold back, others brought more gold in for deposit. On an ongoing basis, those bringing in new deposits provided more than enough gold to service the needs of those who wanted their gold back. It became apparent that a goldsmith didn't always need to keep on hand all the gold that depositors had deposited. A great deal of gold was simply sitting there idle—stored for protection. They could hold on to a fraction of it to conduct their ongoing business.

**Economic****Insight:**

*“Fractional  
reserve” banking  
is a foundation of  
modern banking*

**Holding Fractional Reserves Enables Lending**

The goldsmiths discovered that as long as they always had sufficient gold to meet the requests of those who wanted their gold back, they could put the other gold they had to use by lending gold to others looking to borrow. So, they started to lend out some of the gold and kept in their vaults only the amount needed for their day-to-day business activity.

This was the beginning of fractional reserve banking, an important foundation of our current banking system. Over time, goldsmiths became more knowledgeable about the levels of gold they needed to hold in reserve. The larger the amount of deposits they could lend out safely, the more income they could earn from the interest they charged on loans to borrowers—and the more borrowing, spending and investing activity they could support.

**Managing the Inflow and Outflow of Gold Was Important—  
Losing Confidence Could Lead to a Run**

The goldsmiths counted on the loans being repaid and on a relatively stable, or at least predictable, daily inflow and outflow of gold. Otherwise, if they were unable to provide people with their gold when they wanted it, the other depositors might quickly panic and come seeking their gold back, causing a run on the goldsmiths' deposits. Without all the deposits on hand, the goldsmiths could get into real trouble. Obviously, they had to develop skills in managing and lending the gold deposits.

Modern financial institutions have taken on the role of storing and using people's savings, just as goldsmiths stored and used gold bars and coins. They are then able to make loans to borrowers. As such, they play a key intermediary role in our economy.





*Goldsmiths set the stage for the evolution of today's banking system.*



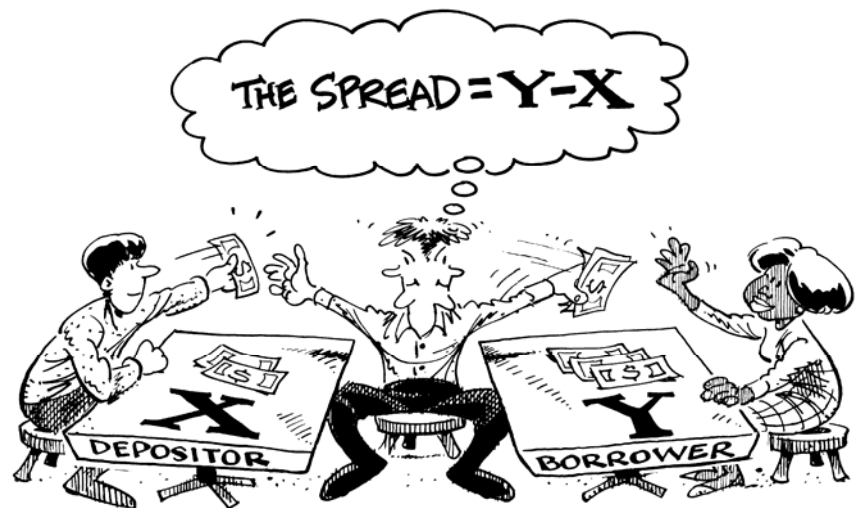
## 3.3 THE INTERMEDIARY ROLE OF INSTITUTIONS

### The Majority of Funds on Deposit at Financial Institutions Are for Saving

Interestingly, only about 10 per cent of deposits in financial institutions are in accounts for making current payments to buy goods and services. The majority of funds are actually held on deposit as savings for future use, as a store of value. These funds can be made available for loans. So, although the financial system exists to provide an efficient system for making payments, its intermediary function of transferring funds from savers to borrowers is particularly significant.

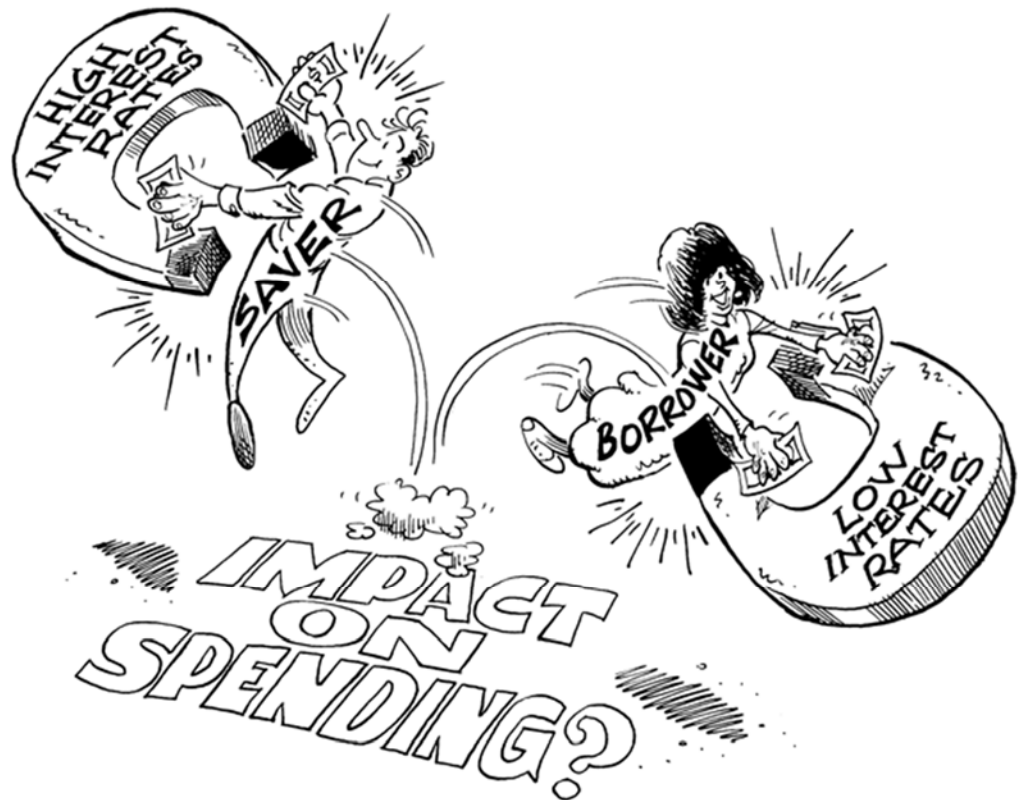
### Interest and the “Spread” Are the Keys to Being an Intermediary

The key to financial institutions' intermediary role is interest—the cost of using someone else's money. The rate of interest is a major factor in what people will do with their funds. Just as with any price change, the quantity of funds saved and borrowed will vary as interest rates change. If the interest rate paid on savings rises, this should motivate savers to save more. If the interest rate on loans rises, it should motivate borrowers to borrow less. As a result, the flow of funds into and out of financial institutions (intermediaries) will be affected by interest rates. Similarly, the flow of spending in the economy will vary with interest rates.



*Financial institutions lend funds out at higher rates of interest than they pay to depositors and cover some of their costs (and earn some of their profits) from this "spread."*

Today, financial institutions attract deposits from savers by offering interest. Rather than charging the depositors a fee to keep their funds safe, as the goldsmiths did, a financial institution pays interest to the depositor. The institution can then lend or invest those funds. Borrowers are charged interest on their loans.



*Higher interest rates tend to attract savers, whereas lower interest rates tend to attract borrowers. The decisions of savers and borrowers will have an impact on the level of spending in the economy.*

Here's the key. The interest charged to borrowers is more than the interest paid to depositors. This results in a spread between the two rates. The financial institution earns a return on the spread. The saver gets interest as a return for saving. The institution gets a return from the higher interest rate charged to the borrower. And the borrower gets a return either in the satisfaction of a purchase (such as a car) or as profit from the investment made with the borrowed funds.

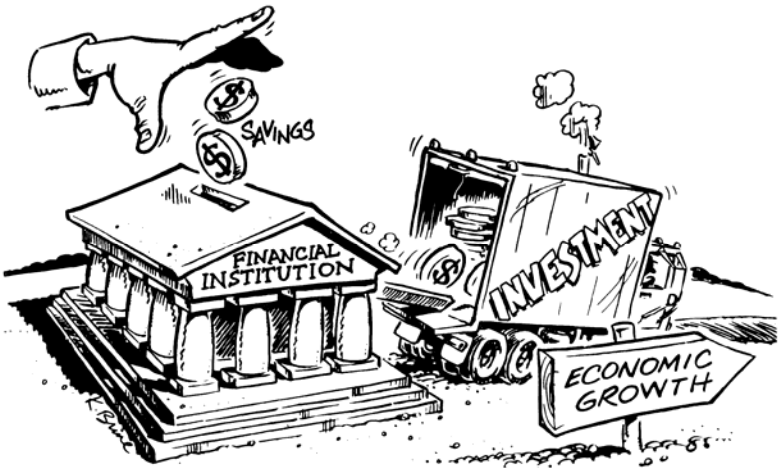
If all works well, everyone can end up pleased with the outcome—the saver, the borrower and the financial institution.

Table 3.1				
Total Canadian dollar savings deposits in Canada, June 2018				
(monthly average or average of month ends)				
			(\$ millions)	
	Chartered banks		1,854,581	
	- personal savings deposits			
	- non-personal demand, notice, and term deposits			
	Trust and mortgage loan companies*		20,038	
	Credit unions and caisses populaires*		325,452	
	Life insurance company individual annuities*		36,065	
	Personal deposits at government-owned savings insitutions*		13,669	
	Money market mutual funds*		22,984	
	* Total deposits			
	Source: Bank of Canada Banking and Financial Statistics (E1)			

Table 3.2				
Credit extended to households and businesses in Canada by financial institutions, June 2018				
(monthly average or average of month ends)				
				(\$ millions)
	Household loans			2,130,698
	- mortgage loans			
	- consumer loans			
	Non-financial businesses			804,946
	- business loans			
	- non-residential mortgages			
	- leasing receivables			
	- bankers' acceptances			
Source: Bank of Canada Banking and Financial Statistics (E2)				

Intermediaries Lead to Investment—Essential for a Growing Improving Economy

This is how financial institutions serve as effective intermediaries between savers and borrowers and help enable investment and growth in the economy. The importance of investment cannot be overemphasized. If we want our economy to grow and become more efficient and competitive, to produce more output to create jobs and incomes, and to improve the standard of living in Canada, investment must take place. The financial system facilitates investment.



Postponing consumption (purchases of goods and services) is important for the long-term health of our economy. If all income earned was spent on current purchases, there would be no savings available for businesses to invest in their ability to produce.

**Economic Insight:** *Creating and maintaining infrastructure requires investment. The quality of our infrastructure will affect productivity and growth*

### **Infrastructure Affects the Productive Capacity of Our Economy**

Over time, our economy needs new and well-maintained infrastructure—roads, bridges, airports, pipelines, power plants, water treatment plants and so on. Infrastructure affects our ability to transport people, goods and services and to communicate easily and effectively, as well as our access to clean water systems and other resources, such as power and energy. Economic infrastructure affects our economy's ability to produce and be competitive. To maintain and improve our infrastructure requires investment. Governments fund some of this investment through tax dollars. However, a great deal of this investment comes from savings channelled to borrowers through the financial system.

### **The Intermediary Role Must be Managed Well**

Our financial institutions must perform the intermediary role well, because it is so important. If they do not, there may be negative consequences for investment and for the economy. For example, if they do not manage the funds of depositors well, some of the savings may find their way into poor investments. Serving in this intermediary role is no simple task. The more effectively financial institutions do this, the better the outcome is likely to be for our economy. We hope that most of the investments are good, productive investments that lead to economic progress and improvement.

**Economic Insight:** *In the economy there are real flows and money flows*

### **Savers Have Options**

There are different types of financial institutions, different types and forms of deposits, and a wide array of assets (property) that can be acquired for investment or saving purposes. One factor that affects where people save money, the form of deposit they choose or the type of asset they acquire as an investment is liquidity. Let's take a moment to examine this concept.

## 3.4 DEPOSITS: LIQUIDITY AND RETURN

### Money Flows in Our Economy

In economics, we say that money flows. It flows from one person to another as purchases are made. It flows from people and organizations to financial institutions as savings. And it flows from people and institutions to others for investment. For spending, saving, borrowing and investing, money flows very easily. It is therefore said to have a high degree of liquidity. It flows like a liquid does.

Assets differ in their liquidity. If you hold money in your hand or as deposits at a financial institution, your funds are very liquid. They are readily available to you and you clearly know their value.

### Liquidity—How Quickly You Can Access the Funds—Varies

However, if you store your funds by investing in real estate, for example, those funds are not as quickly and easily available to you for spending. To use those funds, you would have to sell or mortgage the property. This can be done, but it takes time. The funds held as an investment in real estate are much less liquid than cash. The funds aren't able to flow to you quickly and easily.

So, one aspect of liquidity is how readily an asset can be converted to cash, which is obviously the most liquid asset. Deposits in a savings or chequing account at a bank are also very liquid. The liquidity of other assets varies, depending on how quickly and easily you can convert them to cash or deposits to use them for payments.

### Liquidity Also Depends on the Asset's Value

There is another aspect of liquidity to consider. If you have \$2,500 in cash, you know that you have \$2,500 in spending power. If prices rise, the purchasing power of that \$2,500 may fall, but you will still have \$2,500 in your possession. However, if you hold a piece of real estate, you are never exactly sure of the asset's worth until you put it on the market and see what you can sell it for. So, an asset's liquidity is also determined by how easily it can be turned into cash on short notice, at a known price.

**Economic  
Insight:** *Today's  
assets vary in  
their liquidity -  
that is, how  
quickly they can  
be converted to  
cash - and how  
certain their value  
is*

**Economic  
Insight:**  
*Decisions to give  
up liquidity  
depends on  
potential return*

### Why Give Up Liquidity?

Now, consider this question. Why would you give up the liquidity of, say, \$5,000 by locking it up for a period during which you won't be able to get and use those funds? For example, if you invest \$5,000 in a five-year term deposit, you cannot access the cash for five years. Why might you give up your cash for that long?

The answer is the potential rate of return. For example, if you deposit \$5,000 in a bank account for one year at 1.5 % interest, at the end of the year you will have \$5,075 (your original \$5,000 plus \$75 in interest). It might be that a five-year term deposit is providing a 3 % return. If you think you will not need the cash for five years, you might go after the higher interest rate available with the five-year term deposit. Of course, your decision will depend on such things as where you think interest rates are heading, what other options might become available to you over that five-year period, what the rate of inflation is likely to be and so on. But, depending on the return a saver could earn from putting money in a less-liquid investment, there may be benefit in doing so.

In addition, financial institutions tend to offer higher interest rates on funds deposited with them for longer periods of time. Why? Because this allows them to lend or invest the funds for a predetermined period, knowing they won't have to return the money to you until the end of the term. Longer-term deposits also represent a greater risk to the depositor, because the further into the future we look, the less certain we can be of what will occur. Will interest rates rise or fall?

### What About Inflation—and Your Expectations of Inflation?

Inflation is a very important concept in our economy and can have a significant effect on the decisions people make with their money. What exactly is inflation?

**Economic  
Insight:** *Inflation  
is an increase in  
the average level  
of prices in the  
economy*

If a bike costs \$200 this year and \$225 next year, is that inflation? Not really, even though the price has gone up. Why not? In our economy—and for those who have the responsibility of trying to keep it healthy and on a positive course—the concern is more about prices in general than the price of a single item.

### Inflation Erodes the Purchasing Power of Money

When prices in an economy are rising, on average, we experience inflation. As prices rise, the purchasing power of each dollar tends to fall. Inflation is said to erode the purchasing power of money since, as prices rise, the same amount of money will buy less.





*Savers look for ways to protect the purchasing power of their saved funds and prevent inflation from eating away at their value.*

### **Economic**

**Insight:** Nominal interest rates include a return to cover inflation

Inflation, or your expectations for inflation, can affect your decision about whether to spend now or save to spend later. Let's consider an example. Suppose the one-year return you can get on your savings is 1.5 % and you expect inflation to be 2 % during that year. If that ends up being the case, the money you save for the year will have less purchasing power at the end of the year than it had at the beginning. Inflation will have eroded its purchasing power by 2 %, while the return you received was 1.5 %. If you faced this situation and thought this might be the result, you might decide to spend the money now, when its purchasing power is greater.

In this way, the return you can get on money you save, along with the rate of inflation—or expected inflation—can affect your decision to save for later or spend now.

## Savers and Investors Hope for a Real Rate of Return—the Real Rate of Interest

But there is another important point to raise here. Most savers and investors wouldn't want to earn a return just equal to the rate of inflation. Earning a net return of zero is not a great incentive to save or invest your money. Savers and investors would hope for some *real* return.

And what is a real return? It is how much greater the return is than the rate of inflation. So, the real rate of interest is how much greater the rate of return is than the rate of inflation.

For example, if your return on an investment is 3% and inflation is 3%, in general you are no better off. The purchasing power of your money is the same. The return you have made will be eaten up by higher prices. Your real rate of return—or the real rate of interest—is zero.

Now, in our example, if your return is 3% and the rate of inflation is 1.5%, you would come out ahead. You would earn a real return of 3% minus 1.5%, which equals 1.5%. You would get a real rate of return or a real interest rate of 1.5%.

Financial institutions have to keep this in mind too. If they want to attract savings from depositors, they will have to offer a rate of interest that provides a real rate of return. If they don't attract deposits, then they have fewer funds to lend—and less opportunity to earn a return on the spread.

To encourage depositors to provide funds for the longer term, institutions will usually (but not always) offer higher rates of interest on longer-term deposits. They recognize that the depositor is giving up liquidity and perhaps taking a higher risk, since the future is more uncertain. Financial institutions offer a variety of deposit options that vary according to their term, their liquidity and the rate of return (rate of interest).

**Economic**  
**Insight:** *Today's  
Real interest rates  
take out the return  
to cover inflation*

## 3.5 THE BUSINESS OF BANKING

### **Economic**

**Insight:** *Today's Banks operate as businesses and are accountable to shareholders and a Board of Directors*

### **Financial Institutions Aim to Earn a Profit for Shareholders**

It is important to highlight that financial institutions, such as banks and credit unions, operate as businesses and, as such, aim to make a profit. For the sake of clarity, we'll just refer to them as "banks" from here on. The profit that banks earn can be used in the same ways as the profit of any other business. It can be reinvested, saved for the future or distributed to shareholders—the owners of the bank.

Canadian banks, for example, are privately owned by shareholders, who each receive a share of the profits, called a dividend. Interestingly, although many may not be aware of it, hundreds of thousands of Canadians hold shares of Canadian banks. Some Canadians own shares personally, having made a decision to invest in one or more banks. They certainly know they are shareholders. But many others own shares through their pension fund, and may not even be aware that they are shareholders.

**Challenge for Banks:** *Managing the accounts of depositors*

### **What Do Banks Do with Their Deposits?**

In managing their deposits, banks will distribute them to three general areas: cash reserves, highly liquid assets and less-liquid assets.

- Cash reserves are kept in the bank's vaults or as deposits with the Bank of Canada. Some of these funds are held to cover day-to-day needs for cash, and some to cover potential, unforeseen needs. For many years, some deposits were held to meet legal reserve requirements. These reserve requirements were gradually phased out and were totally eliminated by July 1994. However, banks still need to maintain some cash reserves at the Bank of Canada to settle any outstanding transactions.
- Highly liquid assets, such as treasury bills, earn interest but are quickly convertible to cash if the bank needs additional cash. (Treasury bills are issued by governments as a way of borrowing funds for relatively short periods of time, for example, 91 days, 182 days or 364 days).
- Less-liquid assets, such as commercial, consumer and mortgage loans, return a higher rate of interest to the bank. However, they are less easily or quickly converted into cash and represent a greater risk.

<b>Table 3.3</b> Deposits in Canadian dollars at selected Canadian chartered banks, as at June 30, 2018			
Name	Deposits (\$ millions)	Market share (per cent)	
Royal Bank of Canada	407,803	21.7	
The Toronto-Dominion Bank	361,223	19.2	
The Bank of Nova Scotia	305,205	16.2	
Canadian Imperial Bank of Commerce	255,878	13.6	
Bank of Montreal	221,735	11.8	
National Bank of Canada	109,995	5.8	
HSBC Bank Canada	57,329	3.0	
Laurentian Bank of Canada	29,326	1.6	
Canadian Western Bank	22,269	1.2	
Manulife Bank of Canada	19,000	1.0	
Total chartered banks*	1,880,433	100.0	
* Includes all domestic banks (schedule I), subsidiaries of foreign banks (schedule II) and branches of foreign banks (schedule III), on a consolidated basis			
Source: Office of the Superintendent of Financial Institutions (OSFI)			

**Challenge for Banks:** Ensuring enough cash is on hand to conduct normal business

### Banks Manage Reserves to Carry Out Day-to-Day Business

To fulfill their function of providing an efficient payments system, banks must hold some funds in a very liquid form. This is for day-to-day business, in case some people want all or part of their deposits back. Banks hold enough liquid funds for depositors to feel confident that they can get their money back when and if they need it. Of course, your bank might ask for some notice if you wanted a large amount of cash—say, \$20,000. They may not have enough cash on hand for such a large withdrawal.

The decisions made by banks about the quantity of very liquid assets to hold in reserve are determined by a variety of factors. For example, during the Christmas season, people tend to withdraw more funds and spend more. The banks need to have a higher quantity of liquid assets at such times, usually for very short periods.

**Challenge for  
Banks:  
Monitoring  
maturity dates of  
assets and  
liabilities**

### **Banks Also Have to Manage Funds Based on Maturity Dates**

Another factor affecting the quantity of very liquid assets held by banks is a little more complicated. It is the mismatch that may exist between the maturity dates of the bank's assets (its loans and investments) and its liabilities (what it owes to depositors). For example, if a depositor put some savings in a five-year term deposit five years ago, that deposit represents a liability of the bank that is now payable to the depositor. The bank has to return the funds, plus the final year's interest, to the depositor. (Interest will have been paid annually over the previous four years.)

If the bank had invested those funds five years ago in an asset with a seven-year term, those funds would not be available for another two years. As a result, other deposited funds would have to be used to repay the depositor who took out the five-year term deposit.

Therefore, it is important that banks closely monitor the terms of all their deposits and other liabilities. The quantity of very liquid assets that banks must hold is affected by the maturity dates of their assets and liabilities, as well as by the quantity of funds required to pay back depositors whose term deposits are coming due.

**Challenge for  
Banks: Managing  
settlement  
balances with  
other institutions**

### **Banks Need Deposits for Day-to-Day Business and Clearing and Settlement Purposes**

But, as we noted, not all deposits need to be held in highly liquid form for banks to conduct their operations and serve the ongoing needs of depositors. This is because the vast majority of payments today are made by cheques, debit or credit cards, online transfers, etc.—not cash.

For an example, let's consider what happens with cheques written by clients of the Royal Bank of Canada (RBC) on any given day to make payments for a good or service. Those cheques may be made to those who also bank at RBC—or they may be written to people who do their banking with the Bank of Montreal, the Toronto-Dominion Bank, the Bank of Nova Scotia, the Canadian Imperial Bank of Commerce, the National Bank of Canada or other institutions, such as a credit union or caisse populaire.

**Economic  
Insight: The  
Bank of Canada  
handles clearing  
and settlements  
at the end of each  
business day**

On the same day that RBC clients are writing their cheques to make payments, so are all the clients at the other financial institutions. At the end of the day, all the cheques written and received by clients of all the financial institutions need to be gathered and their amounts totalled. There will be many thousands of transfer instructions indicated by the many thousands of cheques. A cheque, after all, is simply an instruction to your financial institution to transfer some of your money to another institution.

The process of gathering and adding up all the amounts indicated in these transfer instructions and determining the net positions of each institution is done at the Bank of Canada and is referred to as clearing. Let's see an example. Suppose that, on a given day, cheques totalling

\$30 million were written on chequing accounts held at RBC and made payable to account holders at the Bank of Montreal. During that same day, cheques totalling \$25 million were written on Bank of Montreal accounts made payable to account holders at the Royal Bank. How are the accounts between these two banks settled?

As you can see, the total transfer to BMO by RBC clients was \$30 million. The total transfer to RBC from BMO clients was \$25 million. So, on net, the difference is \$5 million. The Bank of Canada makes appropriate adjustments to the respective positions of each bank on its books. The books are updated and, on net, \$5 million in funds is moved from the Royal Bank's deposits (settlement balances) to the Bank of Montreal's account, both at the Bank of Canada. In fact, no funds are moved. The Bank of Canada simply alters its records in the process of settling the two accounts of the two banks.

So, on a day-to-day basis, the banks need to hold only a relatively small portion of all their deposits in the form of deposits at the Bank of Canada and as currency to service the needs of their depositors.

Once sufficient funds are held in liquid assets, financial institutions put the rest of the deposited funds to work as loans or investments to earn higher rates of interest. As noted, financial institutions aim to cover their costs and earn a profit. To maximize the potential for profit, they will try to hold as low a level of liquid assets as is prudent. And we hope that putting these deposited funds to work will help to promote growth and development in our economy.

**Challenge for  
Banks: Managing  
costs**

### **Banks as a Business: The Costs Side**

We noted that banks will aim to earn a profit for their shareholders. Profit is defined as total revenues minus total costs. Let's look closer at the business of banking—and we will begin with the cost side of the business.

What costs does a bank incur in operating its business affairs? We know that there is a cost for the funds held as interest-bearing deposits. That is, a bank must pay interest to depositors. In addition, a bank faces costs such as salaries for employees, property expenses for its branches and offices, advertising, branch operations and taxes. In other words, banks face most of the normal operating costs that other businesses face.

**Challenge for  
Banks:  
Accounting for  
loan-loss  
provisions**

### **Loan-Loss Provisions**

Another potential expense for a bank is not as obvious—the allowance for possible losses on loans. As you can imagine, banks make loans on the assumption that they will be repaid. They do extensive checks on a borrower before providing a loan to try to ensure the loan will be repaid. But sometimes things don't go as planned or forecasted and some borrowers may find

that they can't meet their payments. They may even encounter such hardship that they may not be able to repay the loan—or a portion of the loan.

The banks have to allow for the possibility of such loan losses. Perhaps a company took out a five-year loan and made regular payments during the first year. Then things went off the rails in the second year and it became difficult to make the payments. That is a sign of the risk that the company may not repay the balance of the loan. The bank would then have to account for that possibility. If it did not, shareholders and others looking at the bank's financial statements would not be aware that this loan was at risk.

Table 3.4				
Provision for loan losses,* 2007-2017				
(total Canadian chartered banks, millions of dollars)				
	2007		3,572.4	
	2008		7,130.7	
	2009		13,799.8	
	2010		8,362.6	
	2011		6,735.8	
	2012		7,763.8	
	2013		7,166.7	
	2014		7,186.6	
	2015		7,626.0	
	2016		9,976.9	
	2017		8,144.5	
	* Provisions are based on the consolidated operations (i.e., include foreign operations)			
	Source: Office of the Superintendent of Financial institutions (OSFI)			

To be transparent and accountable, the bank would begin to identify the uncertainty of any loans at risk in its financial statements. If there is a chance that the company can turn things around, then the bank may not write off all of the loan as a loan loss. But as soon as it is clear that the company will be unable to repay, the balance of the loan will have to be written off.



To do so, the bank will make such allowances in reporting its financial statements, and the loan losses will be deducted from the bank's income. This keeps their reporting transparent and enables shareholders and others to better assess the bank's performance.

When a bank analyzes its outstanding loans, it will determine which loans might be at risk—and what the possible loan losses might be. The accounting done for this is referred to as loan-loss provision. For example, during the severe recession that began in 2008, some companies went under—companies that had outstanding loans to the banks. These losses to the banks would have shown up as loan-loss provisions in the banks' financial statements. In general, the greater the value of the outstanding loans at risk, the larger the amounts that the bank will set aside as loan-loss provisions.

That's the cost side of the banking business. What about the income side?

**Challenge for Banks:**  
*Managing fees, administered interest rates, etc*

### **Banks as a Business: The Income Side**

We have noted that banks earn income on the spread—the difference between the interest rate they pay to depositors and the interest rate they charge to borrowers. But that's not the only way banks can earn income. They also earn income from foreign exchange commissions, since people and businesses pay a fee to convert money from the currency of one country to the currency of another. Banks also earn significant income from a variety of possible fees they may charge, such as those for

- bank account maintenance fees
- hard copies of bank statements
- use of automatic teller machines (ATMs)
- lost cards

Banks also invest in assets such as bonds and treasury bills that pay them interest.

**Challenge for Banks:**  
*Reporting and responding to shareholders*

### **Banks' Management Is Accountable to Shareholders**

As with any business, if a bank's total revenue exceeds its total costs, it earns a profit. A person who buys a share of a business, such as a bank, usually does so for one reason. The investment is made to earn a share of the profits—either in the form of dividends paid out or as capital appreciation (an increase in the share price). Note, if you buy a stock at one price and sell it at a higher price for a gain, that is referred to as a capital gain.

Generally, the better a bank is managed, the higher its profit and stock price will be. Both results tend to make shareholders happy. However, if a bank is not managed well, and if its performance doesn't meet expectations, the stock price may decline. Some shareholders might

incur a capital loss (lose some of their capital). If things don't turn around and improve, disgruntled shareholders may exert pressure for changes in the bank's management.

### **Banks Must Be Managed Well or There Can Be Significant Consequences**

Because they handle such massive quantities of funds in the financial system, banks must be managed well, or the consequences could affect large numbers of Canadians—not just shareholders. We would all pay a price if our payments system broke down or if there was significant mismanagement of investments and deposits by the banks.

**Economic  
Insight: The  
Financial Crisis –  
what happened?**

### **The Financial Crisis**

The financial crisis that began in 2008 is a harsh reminder of this. At that time, a number of major financial institutions around the world were involved in some questionable financial investments. Some were buying and selling large quantities of what were called mortgage-backed securities, particularly in the United States. These investments were supposedly backed by the value of mortgages taken out by homeowners.

The whole story is quite complicated, but a big part of the problem arose when housing prices in the United States went into a sharp decline, leaving many home owners with mortgages that were of greater value than their homes. Many abandoned their homes—which one can do in the United States—and financial institutions were left with mortgages that would never be repaid. The value of these mortgages, and the mortgage-backed securities, plummeted and had to be written off by financial institutions that had invested in them.

This led to major losses by many large financial institutions—especially in the United States. The government had to bail out some to help them survive. In other cases, such as with the Wall Street firm Lehman Brothers, the government chose not to provide financial support and the company failed, sending shock waves around the world.

### **Canada Fared Better Than Most Countries**

Canada was fortunate at that time. Our banks were regulated more strictly than those in the United States. In general, most of our financial institutions did not get too deeply involved with the problematic mortgage-backed securities. Canada's economy and financial system remained quite stable.

**Economic**  
**Insight:** *Global interdependence means events in one country will have an impact on other nations*

## Global Financial Interdependence Meant Some Failures Affected Others

But many other financial institutions around the world—in the United States, Europe and elsewhere—that got involved with mortgage-backed securities suffered significantly. With the financial systems of the world now so interconnected, the collapse of some financial institutions affected others. At one point, some feared a collapse of the global financial system. Those were scary and nervous times for many people.

Over time, though, and with some major interventions by governments and central banks, the global financial situation stabilized. But it took several years—and many people, businesses and governments experienced significant hardship because of the crisis.

Canadians can be comforted by the fact that many looked to Canada at that time as a country with well-managed banks operating in a well-regulated financial system.

But the financial crisis clearly showed how important it is for banks to be well managed—and to manage their risks carefully. By making bad investments, a bank can put its stability at risk. And that puts shareholders and depositors at risk too.

As we can see, managing the financial affairs of a bank or other financial institution is a significant challenge and an important responsibility. Public confidence is essential. The financial statements of banks are made public, and poor performance could rock this public confidence.

Given the strong performance of the Canadian financial system through a period of significant global turbulence and financial uncertainty, let's take a moment to consider how our financial system is regulated and the protection that is provided to Canadian depositors.

## 3.6 REGULATION OF THE FINANCIAL SYSTEM

**Economic Insight:** The *Bank Act* governs bank activities and outlines the rules and regulations for operations

### **The *Bank Act* and the Superintendent of Financial Institutions**

The activities of Canadian banks are governed by rules and regulations outlined in the *Bank Act*, which was originally passed in Canada in 1871.

The *Bank Act* provides the legal basis for how a bank can be established, the capital it requires, the qualifications of bank directors, the duties and responsibilities of directors, how mergers and amalgamations are carried out, the distribution and transfer of shares, the financial reports that a bank must present, the type of business that a bank can conduct etc.

### **The *Bank Act* Is Reviewed and Revised Regularly**

The *Bank Act* was originally revised approximately every 10 years to keep it up-to-date with developments in our economy and financial system. However, in 1992, this was changed to every five years. The *Bank Act* was reviewed in 2017 and will be again in 2022.

**Economic Insight:** The *Bank Act* is reviewed every five years

The *Bank Act* is examined by committees of the House of Commons and the Senate. Evidence is also heard from officials of the Bank of Canada, the Department of Finance, bankers, economists, business people, consumer organizations and other interested parties. After intensive review, alterations may be made to the *Bank Act* that can affect Canada's financial system and how it operates.

The *Bank Act* provides a direct link between the banking industry and the Minister of Finance. The Office of the Superintendent of Financial Institutions (OSFI), which is responsible for monitoring federally chartered financial institutions—those that are authorized and regulated by the government. The Superintendent, who is appointed by the government, regularly inspects them to ensure that they are following the provisions of the *Bank Act*. It is also the duty of the Superintendent to monitor the financial status of banks to ensure that each is in a sound financial position.

**Economic Insight:** There are different categories of banks in Canada

### **Categories of Banks in Canada—Schedule I, II, and III Banks**

Three schedules, or types, of banks get their legal operating powers from the *Bank Act*:

- Schedule I banks are domestic banks and are allowed to accept deposits.
- Schedule II banks are subsidiaries of foreign banks that are allowed to accept deposits through branches they set up in Canada.

- Schedule III banks are foreign banks that have limits on the kind of banking business they can do in Canada.

All banks function on public trust. People place their deposits in a financial institution because they have confidence in that institution's ability to manage its affairs responsibly. They are confident that their deposits will be well cared for and will be returned in full as needed or when agreed upon.

**Economic Insight:** Maintaining depositor confidence and trust is key for financial institutions

### Maintaining the Confidence of Depositors Is Essential for a Bank

If people, especially depositors, lose confidence in a bank and question how it is managed or whether their deposits will be returned, there may be a run on the bank. In that case, many depositors will seek to withdraw their deposits at once.

Since a bank invests most of the deposits that it receives in commercial loans and mortgages, a run on the bank can mean it will have trouble giving people back their deposits. Such a liquidity problem may lead to a situation where the bank must seek funds from the Bank of Canada, which acts as a lender of last resort. (See more on this Module 4, which describes the functions of the Bank of Canada.)

**Economic Insight:** Canada's banking system differs from that in the United States

### Canada's Banks Have Significant Asset Holdings

Note, once again, that Canadian financial institutions, which include banks, have large asset holdings that exceed the amount they owe depositors. An institution's assets, minus its liabilities, is called its capital, and Canadian banks have significant amounts of capital. Most Canadian financial institutions also have a history of being well managed. Regulators such as OSFI keep an eye on our banks and their performance, outlook, management, loan-loss provisions, etc. But, by and large, Canadians can feel confident in their banks and other financial institutions and in the financial system.

However, if things should ever go wrong for a financial institution in Canada, all is not lost for the depositors, as we shall now see.

**Economic Insight:** A portion of Canadians' deposits are insured in the event of a banking failure

### Canada Deposit Insurance Corporation

Since 1967, Canadians' deposits have been insured by the Canada Deposit Insurance Corporation (CDIC), a federal Crown corporation. Currently, the maximum coverage is \$100,000. This means that if a financial institution that is a member of CDIC should ever go bankrupt, the depositor would receive his or her money back, up to \$100,000. That is only

**Economic**

**Insight:** Not all deposits are insured

partial consolation to those who have deposited more than \$100,000 with a single institution, but it is significant protection for many Canadians. It is worth noting that to be insured, a deposit must meet several requirements, including being denominated in Canadian dollars and deposited for a term of five years or less.

Here are some examples of insurable deposits:

- savings accounts
- chequing accounts
- term deposits (e.g., guaranteed investment certificates—GICs) with original terms of five years or less
- money orders and bank drafts issued by CDIC members

The CDIC does not insure various other deposits, including the following:

- mutual funds, stocks and bonds
- term deposits, such as GICs with original terms greater than five years
- foreign currency deposits, including U.S. dollars
- deposits at financial institutions that are not CDIC members
- Treasury bills and bankers' acceptances

CDIC members are required to inform depositors whether the deposit they are making is insured.

**Economic**

**Insight:** The financial world is changing as a result of technological change and advancement

### The Changing Financial Landscape—Technological Change

Canada's banks are taking steps to incorporate, and keep pace with, new technologies that are affecting the financial industry. In addition, some new, smaller start-up companies are entering the financial industry as changing technologies enable them to provide financial products and services to Canadians. These changing technologies and start-ups help to keep financial services competitive in Canada. The impact is likely to be ongoing change and evolution of the financial industry. Such changes will lead to further improvements in the financial services Canadians can access to manage their financial affairs.

### Quick Summary

Canadians can be reassured by the knowledge that our financial institutions are relatively healthy and that some insurance protection is available to deposits. But our institutions must continue to be well managed, and depositors should monitor the performance of the various

institutions. And, because not all deposits and investments are insured, depositors should take care to ensure they know which are insured and which aren't.

This ends our examination of Canada's financial system. We have seen that it provides an efficient system for payments and links savers and borrowers, which supports investment, growth and development in the economy. We have also examined the nature of a fractional reserve system and the general business of banking. But there is a major player in our financial system and our economy that we have yet to cover in detail—the Bank of Canada. It is important to understand the role of the Bank of Canada and how it affects the financial system and the performance of the Canadian economy.