

## 7.6.4: Banks and Financial Institutions

### Different Types of Financial Institutions

Financial innovation describes the changes in the types of institutions or services offered in the financial marketplace. Here are some financial innovations that have occurred recently:

- The expansion of insurance companies into banking (e.g., Travelers Insurance merged with Citibank to form Citicorp)
- The expansion of automated teller machines
- The invention of online payment systems (e.g., Paypal, Apple Pay, etc.)
- The expansion of investment banks into commercial banking (e.g., Goldman Sachs now offers checking accounts and other services.)
- The creation of completely online banks (e.g., SoFi) and completely online insurance companies (e.g., bestow.com)

As we discussed before, depository institutions are known as financial intermediaries. They accept deposits on which they pay interest and make loans on which they charge higher interest, making a profit on the difference. The loans they make include credit cards, mortgage loans, personal loans, and business loans. All are set at different interest rates.

The difference between the average aggregate rate financial intermediaries pay on their total deposits and the average aggregate rate they charge on their total portfolio of loans is called the net interest margin. This must be enough to pay for the overhead plus make a profit for their stockholders. The net interest margin can vary, so here is a snapshot going all the way back to the 1980's:

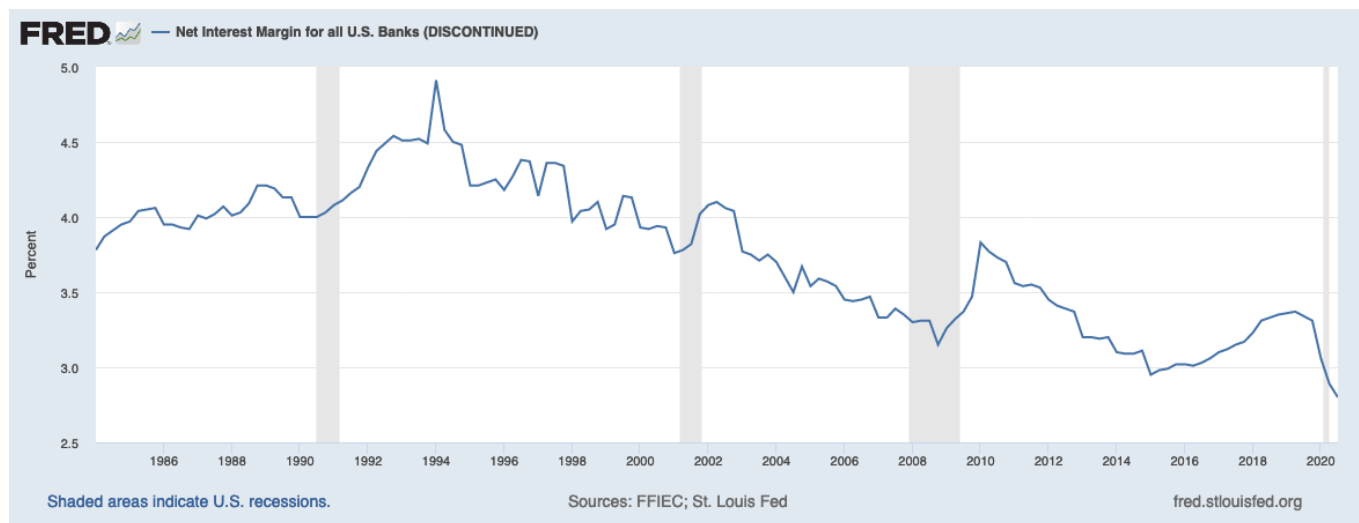


Figure 7.6.4.1: Federal Financial Institutions Examination Council (US) and Federal Reserve Bank of St. Louis, Net Interest Margin for all U.S. Banks (DISCONTINUED) [USNIM], retrieved from FRED, Federal Reserve Bank of St. Louis; September 30, 2021.

Note that there is a lower limit to the net interest margin, and this gives us an insight into the business banking model. If the net interest margin for a bank gets significantly below 3%, the bank will likely be unable to meet its overhead costs, putting it into serious financial trouble. Similarly, according to the National Credit Union Administration, the net interest margin on credit unions have also been running about 3% for the last decade.

The **prime rate**, or the rate that banks give to their most creditworthy customers, is always exactly 3% above the Federal Funds Rate. Of course, most commercial bank customers do not get the prime rate on their loans, but it is the benchmark against which commercial loans are priced. Most customers pay 1% to 2% above prime on their short-term loans.

### Commercial Banks

Commercial banks accept deposits into checking and savings accounts. They use these deposits to make business, personal, and auto loans, as well as issue credit cards and mortgages. These banks also borrow money in the Commercial Paper Market and lend this out at higher rates. Commercial paper is short term loans, secured by promissory notes (essentially I.O.U.s), with terms typically 30 to 180 days. There is a huge market for borrowing via commercial paper from banks. The current outstanding amount

of commercial paper in the U.S. is about \$1.1 trillion. With an average term length of 30 days, banks must reborrow the money every 30 days.

Commercial banks receive a charter from the Federal Reserve Bank that gives them permission to operate. However, they must follow the rules of the Fed and remain solvent. The Fed audits commercial banks regularly and can revoke a charter if a bank is insolvent or engages in prohibited behavior. All deposits in commercial banks are insured by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000 per account. The FDIC is a government sponsored insurance company that charges premiums to commercial banks. If a bank becomes insolvent, the FDIC will usually sweep in on a Friday after close of business, seize the bank, fire the officers, and immediately call the customers to let them know their deposits are insured and therefore safe. Usually, the FDIC will then sell the assets to a solvent bank.

## Savings Institutions

Savings institutions or savings banks accept deposits and provide personal and auto loans, as well as issue credit cards and mortgages. They tend to focus less on commercial loans than commercial banks. As with commercial banks, deposits are insured by the FDIC up to \$250,000 per account.

Prior to 1980, savings institutions were legally limited to only offering checking and savings accounts, and their lending was restricted to mortgages. Following World War II, they paid 3% on deposits and lent mortgages at 6%. Then in 1979, Paul Volker, chair of the Federal Reserve Bank, raised short-term interest rates to 17% to control excessively high inflation. This rate stayed high for years, going up to 19% in 1980 and 1981. This caused disintermediation at the savings institutions, causing them to raise the rate to 8% on savings accounts in order to stay competitive. However, most of their money was already lent out at 6% for thirty-year mortgages. This was a recipe for bankruptcy.

The U.S. Government had to bail out the industry, costing taxpayers about \$100 billion (though this now seems like a bargain compared to the massive bailout during The Great Recession). In 1980, there were more than 4,500 savings institutions insured through federal or state government programs. As of December 2017, FDIC data reveals that only 752 remained.

## Credit Unions

Credit unions are non-profit institutions, and as a depositor, you are a part owner. Like a commercial bank, credit unions offer checking and savings accounts and certificates of deposit. They also offer auto and personal loans, and they issue credit cards and mortgages. Instead of the FDIC, your deposits are insured up to \$250,000 per account by a similar organization, the National Credit Union Administration (NCUA). The NCUA is also responsible for issuing charters to credit unions.

As mentioned before, credit unions tend to have lower fees and better interest rates on savings accounts and loans since they do not have to generate profits. Most people use their local credit union for car purchases because the rate is normally lower than what is offered by dealers and commercial banks. Credit unions are also an excellent place to apply for a mortgage. Despite all of this, it is worth noting that commercial banks' mobile apps and online technology tend to be more advanced.

According to the NCUA, as of 2019, there were 5,335 federally insured credit unions with 117.3 million members. At the same time, there were 5,177 commercial banks and savings institutions. So, the number credit unions and the number of commercial banks in the U.S. are approximately equal. Almost half of all U.S. adults are members of a credit union.

## Finance Companies

Finance companies are non-depository financial institutions that provide personal loans and financing, as well as issue credit cards. These companies lend to individuals who have trouble borrowing from sources such as banks and credit unions, thus they charge higher interest rates and are often ruthless in foreclosing on a defaulted loan. Because of this, you should avoid finance companies.

## Securities Firms

Securities firms, such as Goldman Sachs, do Wall Street work. They sell new issues of stocks and bonds for companies that want to raise money. They also advise companies on mergers and acquisitions. For this work, they earn millions of dollars in fees.

Securities firms also provide stock brokerage services to individuals. In order to buy and sell stocks, you must hold a membership on the stock exchanges, so individuals need to go through brokers. Since there is so much competition for customers, securities firms have reduced the cost for trading stocks to zero, leading to an explosion of amateur stock pickers. We will discuss investing at length in a later chapter.

## Insurance Companies

Traditionally, insurance companies have sold automobile, homeowners, and health insurance, as well as annuities. However, about a decade ago, insurance companies entered personal wealth management, charging fees typically equal to 1% of the assets under management. Many insurance companies like Lincoln Financial and Prudential have aggressively sought this business since it is risk free and quite lucrative. We will discuss insurance in more depth in a later chapter.

## Investment Companies

Investment companies, such as Vanguard and Fidelity Wealth Management, invest other peoples' money in mutual funds. We will discuss this more later, but Vanguard's invention of low cost mutual index funds has brought fees down dramatically. Historically, investment advisors charged fees of 1% of the value of your assets to manage your investments. Now, the average mutual fund fee at Vanguard (and others) is one-tenth of 1%.

## Financial Conglomerates

Many financial institutions combine some or all services listed above. For example, Citicorp was created by the merger of Travelers Insurance Company and Citibank, so its activities include almost all of the above. Also, Goldman Sachs, a securities firm, is now entering retail banking.

## Payday Lenders

Avoid payday lenders at all costs. Their main function is to advance money to people waiting for a paycheck. The fees they charge are exorbitant, and they usually prey on low-income people.

## Banks Are Not Your Friends

Banks have shareholders and are motivated by profit. They run advertisements that implicitly say they will be your best friend and help you achieve your financial goals. However, this is just not true. They are interested in maximizing their profits, and this can come in conflict with your goals. Banks charge higher fees, pay lower interest on savings deposits, and charge higher interest rates on loans. Also, one of the biggest sources of income for banks is what they term in their financial statements as **non-interest income**. This income includes a number of charges, like ATM fees, overdraft fees, and late fees. ATM fees, for example, average \$2.97 per transaction in the U.S. On top of that, if you go to an ATM not operated by your bank, you can be charged an additional fee, averaging \$1.72 nationally.

Typically, overdraft fees are \$35 or higher. In 2017, commercial banks charged \$34 billion in overdraft fees. These fees came from only 9% of their customers, almost exclusively low-income. Additionally, if the overdraft is not corrected right away, the bank will continue to charge fees until the account balance runs down to zero; they will then will close the account. Since the bank is already earning profits from interest they charge on loans, the overdraft fees are pure profit.

Many commercial banks sell their mortgages to Fannie Mae and Freddie Mac, so they must conform exactly to the rules of these institutions. Your mortgage could end up being owned by anybody. A credit union might be a better choice. They will keep all or most of their mortgages, so they are more flexible on their requirements. If you do not have perfect credit, a credit union is more likely to give you a mortgage than a commercial bank.

## Financial Services Offered by Banks and Credit Unions

### Checking Accounts

Financial intermediaries all offer checking accounts. They typically do not pay interest on checking accounts, but some commercial banks charge a fee if the account does not hold a minimum amount of money or has no activity. Some commercial banks charge you \$2.00 or more if you request a paper account summary each month. Commercial banks might also offer fee-free checking accounts for students, but as soon as you graduate, they put the standard fee structure in place. As a rule, credit unions do not charge you fees on checking accounts.

Ideally, you only need to keep money in your checking account to pay bills. Any extra money should be in a savings account. Arrange a "sweep" of your checking account at a certain time each month. A "sweep" is a banking term that means your financial institution will transfer any excess money from your checking account into your savings account, where it will earn interest.

Some securities firms, like Charles Schwab and Goldman Sachs, also offer checking accounts. These firms are insured by the FDIC for up to \$250,000 per account. They often will pay interest on checking because they will invest your balance in money market funds. They both are insured by the FDIC up to \$250,000 per account. The idea is to have one-stop shopping for banking and stock or mutual fund investing.

### Saving Accounts

Savings accounts are where you should transfer any money that you do not need to cover daily expenses. Savings accounts pay interest, but the interest paid is very close to the federal funds rate. The federal funds rate is now 0% to .25%, so savings accounts pay about .5%. This is better than nothing. When you join a credit union, you automatically get a checking and a savings account. I have explained above how to use these to create a budgeting vehicle to nudge you to save each month.

### Credit Cards

All financial intermediaries offer credit cards. They will be lending you their own funds but will contract with VISA or Mastercard to do the billing and collecting. I have an entire chapter on credit cards, so I refer you to that. However, allow me to repeat the cardinal rule for credit cards: only use credit for a purchase if you can pay it off completely at the end of each month.

### Safety Deposit Boxes

Commercial banks and credit unions offer safety deposit boxes for rent at their branches. These offer security for important papers like auto titles and house deeds and valuable jewelry. They are completely confidential.

### ATMs

Commercial banks and credit unions have automated teller machines at their branches for cash withdrawals. You need to be aware of what fees these charge. Commercial banks will charge a fee for withdrawing cash, but credit unions usually do not. In addition, if you withdraw money at an ATM at a convenience store, you will pay an additional fee on top of the bank's fee. This could add up to \$4.00 or more to withdraw cash. However, certain retailers like grocery stores will allow you to withdraw cash without fees.

### Cashier's Checks

Certain legal transactions, such as your payments at closing on a house, require a cashier's check, also called a "bank check." A cashier's check is a guarantee to the receiver of the check that your account will have money to cash it. When you ask the financial intermediary to issue a cashier's check for a certain amount (assuming you have the money in your account), the intermediary will put a hold on the corresponding amount and issue a check under the bank's name.

### Why Banks Want You to Sign Up for Electronic Bill Payment

About a decade ago, there was a huge push by commercial banks for all their customers to sign up for electronic bill pay. A study done by the Banking Trade Association found that if a customer signed up for electronic bill pay, it was so difficult to change all the data that 95% never left the bank. Thus, the bank could continue to charge higher fees and the customers would not leave. If you are currently at a commercial bank, do not sign up for electronic bill paying. Switch to a credit union right away. If or when you are at a credit union, it is a very good idea to sign up for electronic bill pay, since it is so convenient.

### Who Regulates Banks and Credit Unions

The Federal Reserve Banks supervise and regulate commercial banks, and the FDIC insures their deposits. In certain states, old laws say that a Comptroller of the Currency regulates banks, but with all banks being insured by the FDIC, the same regulatory rules apply. The NCUA regulates and insures credit unions, ensuring that all credit unions have to abide by the same rules.

### How Interest Rates on Deposits and Loans Are Determined

The federal funds rate is the rate that banks regulated by the Federal Reserve charge each other for overnight loans. The federal funds rate is set by the Fed as its principal tool of Monetary Policy, and it becomes the "wholesale cost of money" for commercial banks. In 2020, due to the Pandemic Recession, the Federal Reserve reduced the funds rate to 0-.25%. This essentially means that commercial banks can borrow in the short-term money markets at 0% to .25%. It therefore causes savings rates offered by the commercial banks to be about the same. Commercial banks then will pay their depositors the same interest that other banks will charge them to borrow money.

## Supply and Demand of Funds

The familiar law of supply and demand also applies to money and credit. If there is a lot of demand for money or credit relative to supply, interest rates rise and vice versa. However, the Federal Reserve Bank creates all the money, and it is their job to maintain moderate interest rates so economic actors can easily borrow money and keep the economy moving. In times of recessions or credit liquidity squeezes (not enough money supply to satisfy demand), the Fed injects money into the banking system to bring down interest rates. As I said above, in 2020, the Fed injected enough money to essentially bring interest rates down to 0%.

## Bank Runs and Financial Crises

In economics, moral hazard can exist when a party to a contract can take risks without having to suffer consequences. It can also be characterized as cleaning up another's mistakes so they do not have to live with the negative consequences of their actions and so will make the same mistake over and over. As a perfect example, in the Great Recession, every major bank in the U.S. (with the exception of J.P Morgan) became insolvent. The Federal Reserve Bank bailed them all out. Since that bailout, the major banks know that they are "too big to fail," so they will continue to take big risks in the future. This is a prime example of moral hazard.

In the Great Depression, thousands of banks went bankrupt, and people lost their deposits. There were runs on the banks, but the money was gone. That is the reason the FDIC was established, to stop runs on the banks. It guarantees deposits up to \$250,000 per account. Unfortunately, financial crises are cyclical and with the Fed bailouts essentially encouraging moral hazard, bank failures will be cyclical also. When there is a financial crisis, a higher number of borrowers default on loans, banks become insolvent, and the FDIC or the NCUA has to take them over and make the depositors whole.

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