

5.7.2: Budgets and Saving

Savings Among Americans

Personal and household savings are important, both for you and for the economy. For you, savings creates a buffer for unexpected expenses and can also be used to finance a down payment on a house or to help pay for college. You can deposit your savings in a financial institution or buy a mutual fund that invests in the stock and bond markets. In other words, your savings becomes an investment; that is, it is money that you put into a financial institution or instrument for which you receive a return in the form of interest or dividends.

$$\text{Savings} = \text{Investment} \quad \text{\textcolor{red}{\text{nodag}}} \quad (5.7.2.1)$$

For the economy as a whole, these savings create economic growth. Firms borrow money (your deposits) from financial institutions or sell shares to your mutual funds and then use that money to expand their businesses. Before we go further, though, we should break down some of these terms. First of all, it's important to understand that personal savings is equal to income minus personal outlays (or consumption) and taxes:

$$\text{Personal Savings} = \text{Gross Personal Income} - \text{Government Taxes} - \text{Consumption}$$

Then, the Personal Savings Rate for any economy is defined as this ratio:

$$\text{Personal Savings Rate} = \frac{\text{Personal Savings}}{\text{Income}}$$

Disposable personal income (DPI), mentioned above, is your take home pay:

$$\text{Personal Savings Rate} = \frac{\text{Personal Savings}}{\text{Income}}$$

From another perspective, savings can be viewed as the portion of personal income that is used either to provide funds to capital markets or to invest in real assets such as residences.

What happened to the U.S. savings rate in the recent Pandemic Recession is quite unusual, to say the least. As you look at the graph below, you will see that from 2000 to 2020, the Personal Savings Rate averaged about 5% to 7% of Disposable Income. However, as the Pandemic Recession began (in February 2020) the Personal Savings Rate skyrocketed.

- In February 2020, the U.S. Personal Savings Rate was 8.3%.
- In March 2020, the U.S. Personal Savings Rate was 12.8%.
- In April 2020, the U.S. Personal Savings Rate was 33.5%.
- In May 2020, the U.S. Personal Savings Rate was 22.4%.
- In June 2020, the U.S. Personal Savings Rate was 19.0%.

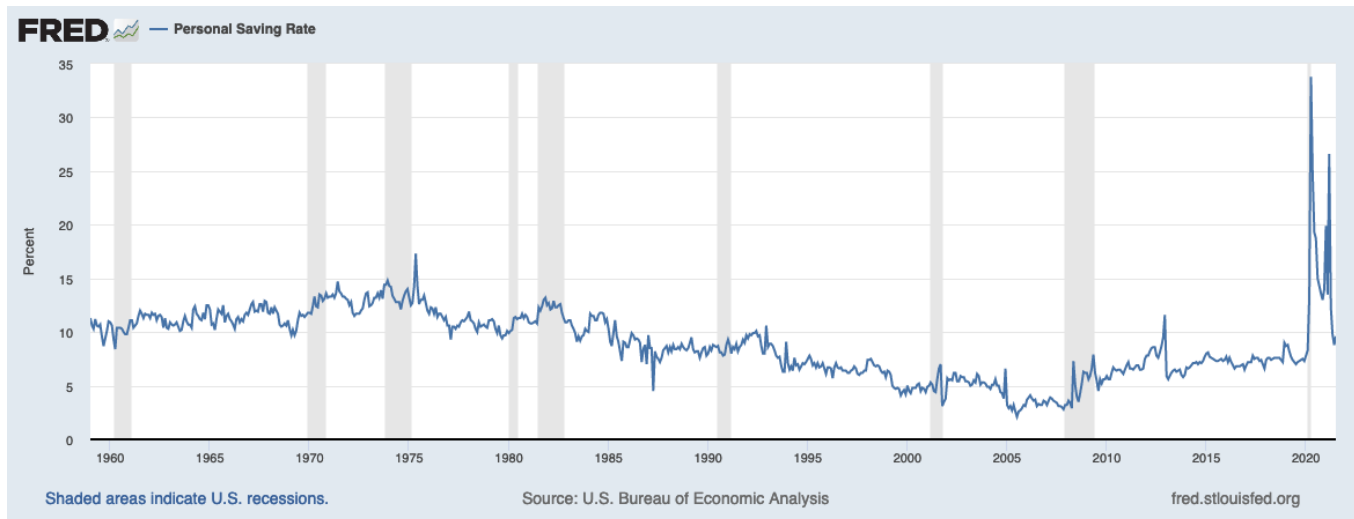


Figure 5.7.2.1: U.S. Bureau of Economic Analysis, Personal Saving Rate [PSAVERT], retrieved from FRED, Federal Reserve Bank of St. Louis; September 30, 2021.

If you look at the gray bars, which indicate recessions, you can see that the Personal Savings Rate does increase somewhat. This is due to consumer sentiment or, as John Maynard Keynes called it, “animal spirits.” During a recession, the sentiment is fear. Even so, the magnitude of the Personal Savings Rate during the Pandemic Recession is unprecedented.

As stated before, the absolute amount of personal savings is the difference between income minus taxes and spending. The graph below shows this difference in absolute dollars from 2014 up to June 2020. From April to July 2020, personal income jumped dramatically from the \$600 supplemental unemployment compensation and other relief payments provided by the CARES Act. However, because of fear, consumers decreased their spending. On top of this, in many states, restaurants, bars, hotels and all non-essential retail stores were shuttered in April, curtailing consumer spending and further increasing pessimistic sentiment.

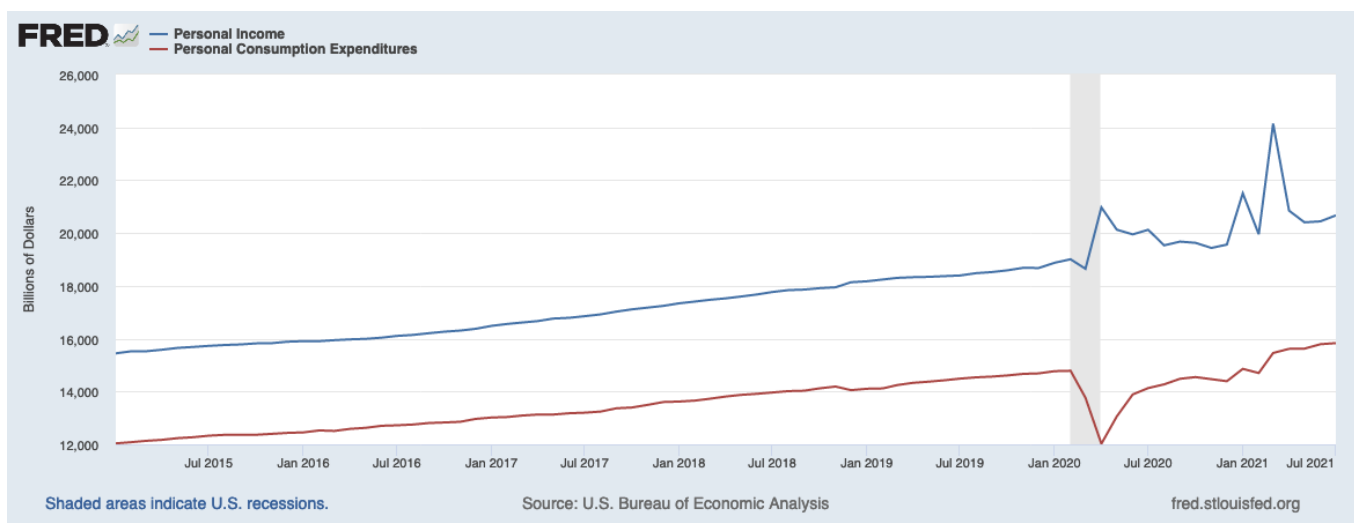


Figure 5.7.2.2: U.S. Bureau of Economic Analysis, Personal Income [PI] and Personal Consumption Expenditures [PCE], retrieved from FRED, Federal Reserve Bank of St. Louis; September 30, 2021.

As this graph shows, even though personal income increased in 2020, spending still decreased, highlighting just how important consumer sentiment is to the economy. If consumers are worried about the economic future, they will put off their expenditures to whatever extent they can. During the Pandemic Recession, restaurants, bars, vacation venues and services took the biggest hit. In comparison, the 2008 Great Recession saw large durable goods expenditures (appliances, automobiles, clothing) decrease by 8%, but spending on restaurants and services stayed relatively the same. According to a recent Gallup Poll, consumer satisfaction in the U.S. has fallen, and this could curtail future spending. However, it’s worth noting that consumer satisfaction is currently not as low as it was during The Great Recession.

Table 5.7.2.1. Household Savings Rates as a Percent of Disposable Income (in %)

	2010	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	9.1	7.4	9	7.1	10	7.3	6.8	7.8	7.7	7.7
Belgium	10.1	8.8	7.5	4.9	8.3	5.1	4.3	3.9	4.8	5.1
Canada	4.8	3.5	5.2	4.8	3.5	3.6	4.6	3.4	1.4	1.6
Czech Republic	6.8	4.9	6.2	5.6	6.6	6.6	6.8	6.5	6.0	6.7
Denmark	-1	-0.6	-1.2	2.3	-1	-2.9	4.3	4.6	6.6	3.9
Finland	3.3	1.1	0.6	1.3	1.3	-0.4	-0.7	-1.8	-1.2	-0.4
France*	15.9	16.2	14.9	14	14.9	14.2	13.8	13.7	13.8	14.7
Germany	10.9	10.4	9.4	9	9.9	9.5	9.7	9.8	11.0	11.0
Hungary	5.4	5.1	4.8	7.1	5.9	8	6.2	8.1	6.9	6.6
Ireland	7	5.4	5.2	4.9	3.9	3.6	4.2	3.8	5.8	5.8
Italy	5.3	4.3	3.1	3.6	6.3	3.9	3.3	3.2	2.5	4.3
Japan	2.1	2.9	1.3	0.3	2.3	-0.4	0.8	2.6	4.3	4.5
Netherlands	3.4	5	6.5	7.3	6.1	9.9	9.6	10	8.4	7.8
Norway	6.1	7.8	8.3	7.6	5	8.2	10.3	7.3	6.5	6.7
Poland	5.9	3.5	2.6	0	1.5	-0.4	-0.4	1.5	0.3	1.4
Portugal*	10.2	10	9.5	7.8	8.4	5.2	5.3	5	6.5	7.0
Slovakia	5.7	4.8	1.9	0.2	1.1	1.5	3	3	2.6	4.0
Spain	13.1	11	4.4	3.8	3.2	3.5	2.9	1.8	1.5	2.3
Sweden	8.3	10	15.1	15	10.4	16.4	15	16	15.4	17.1
Switzerland	11.3	12.7	17.5	17.5	16	18.9	18.2	18.7	17.3	17.6
United Kingdom*	6.6	6	7.3	8.7	8.5	8.6	9.4	6.7	6.1	6.4
United States	5.1	4.2	7.2	5	5.3	7.4	7.6	6.7	7.7	8.1

Source: Organization for Cooperation and Development (“OECD”) European Federation of Building Societies – Annual Report 2019.

*Estimate

China's Savings Rate

China’s economy is the second largest in the world. Its economic growth rates have been extremely high, many years climbing into the double digits. It also has high rates of government, corporate, and household savings. In a working paper from the International Monetary Fund (part of the World Bank), Zhang et al. identify three phases that they contend influenced the savings rate of Chinese households.

1. The first phase was in the 1980s, following the introduction of the one-child policy and de-collectivization of agriculture in rural areas. Beginning in 1976, the one-child policy freed disposable income, and since children traditionally took care of their

parents in old age, the one child policy also incentivized older Chinese to save more. The savings rate rose from 5 to 20 percent of disposable income (albeit with a temporary dip in the late 1980s, possibly due to a GDP growth slow down).

2. The second stage was in the 1990s, after Deng's southern tour reaffirmed China's policy to reform and open-door policy. In addition, the massive lay-offs resulting from the state-owned enterprises (SOE) reform in the late 1990s also put downward pressure on wage growth. SOE reform took center stage in this period and was accompanied by the transformation of the social safety net and job security, leading to savings rising to 25 percent of disposable income.
3. The third stage came after China entered the World Trade Organization in 2001. Savings rose to 30 percent of disposable income during an export-driven boom. Notably, since 2012, household savings have plateaued and gradually begun to decline (2018).

China's saving rate was also affected by its conversion from a centrally planned economy to a market economy. This resulted in massive layoffs; 27 million people lost their jobs between 1997 and 2002. Along with these reforms, the social safety net was dismantled, and as a result, Chinese people paid an increasingly larger share of their healthcare costs (from 20% in 1978 to 60% in 2002, although it has declined since then). The layoffs and unexpected health care costs further incentivized the Chinese people to save.

The Chinese economy shows us some of the reasons savings rates can fluctuate from country to country, largely in response to demographic and economic changes. Let's now take an overview of the reasons individuals and households save.

Influences on the Rate of Savings

In general, people save for the following reasons:

- Emergency/ unforeseen expenditures (especially unexpected medical expenses)
- Down payment on a house (although often a 5% down payment is enough)
- Down payment on a car (although less and less is required these days)
- Retirement Income
- Education for yourself or your children

The savings rates as a percentage of disposable income vary from country to country (in some places, quite significantly). The dominant influences on these differing savings rates are explained below:

1. The social safety net varies significantly from country to country. Is there a national healthcare system (e.g. Canada)? Are there generous retirement pension plans (e.g. Finland)?
2. Certain countries have a cultural disposition to savings (e.g., France and Germany). This is likely due to the trauma of World War II.
3. A national tragedy or recent disaster can cause an increase in the savings rate. For example, China was occupied by the Japanese in the 1920's and again in World War II. After World War II, a civil war erupted between Mao Tse Tung and Chiang Kai Shek with Mao winning and turning China Communist in 1948. After the collectivization of all farms, Mao led the Great March, an event that led to the deaths of thirty million people.

Interestingly, Megan McArdle states that some of the reasons people used to save, such as taking a vacation or for holiday gifts are now just put on our credit cards (2018). This means we are buying what we want without having the money for it, which means we have to pay the credit card bill every month. This increases our monthly expenses and conversely decreases our monthly savings.

Global Consequences of a Lack of Savings

Previously, I stated the following:

$$\text{Savings} = \text{Investment}$$

The graph below shows this correlation in the United States from 1970 to 2019. (I did not include 2020 in the graph due to the extraordinary temporary jump in the savings rate during the Pandemic Recession.)

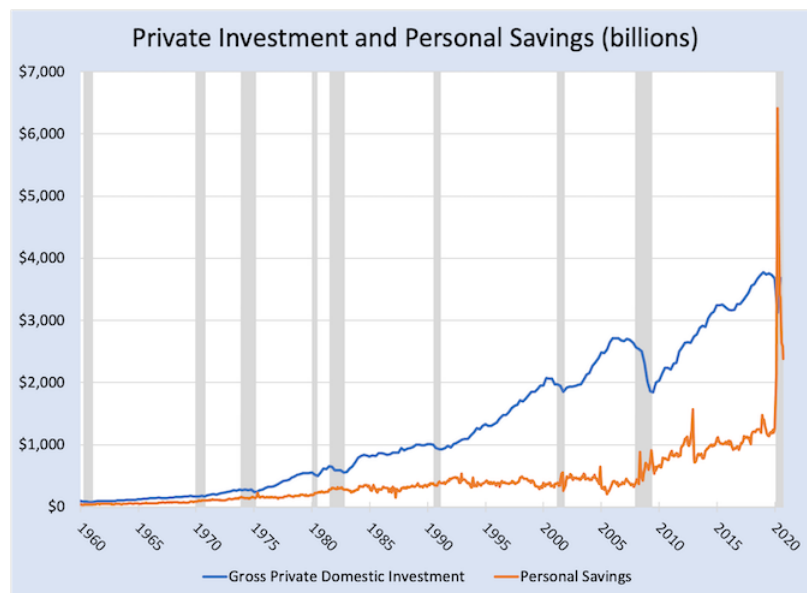


Figure 5.7.2.3: Private Investment and Personal Savings by Fred Rowland is used under a CC BY-NC 4.0 License. Source: Federal Reserve Economic Data (FRED) (12/2020).

This correlation of investment to savings is also true in the rest of the world:

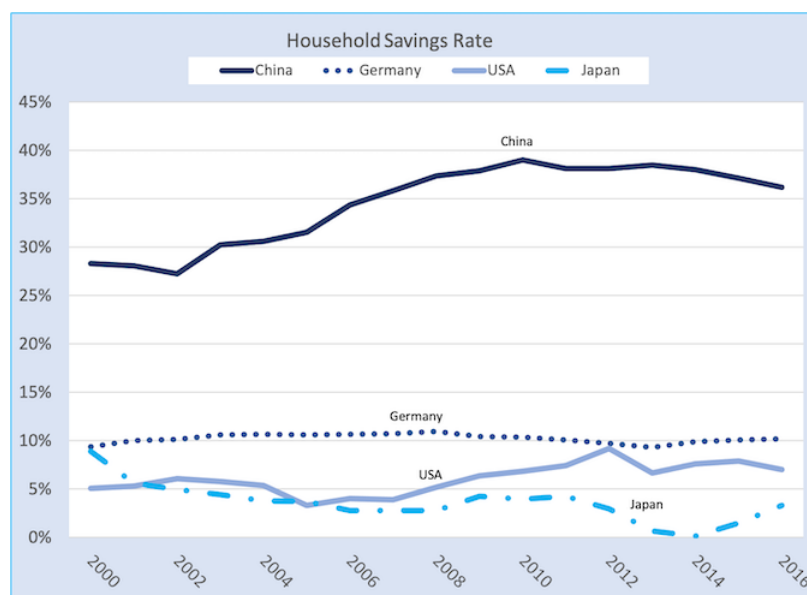


Figure 5.7.2.4: Household Savings Rates as a Percent of Disposable Income (in %) by Fred Rowland is used under a CC BY-NC 4.0 License. Source: OECD iLibrary data (11/24/2020).

From this, we see that one of the things a country can do to stimulate investment (and economic growth) is to encourage higher rates of savings among its citizens. The consequences of low rates of savings can be seen best in Sub-Saharan African countries. Many citizens in these countries are subsistence farmers and have almost no savings. As a result, there is not a large supply of loanable funds, which are essentially deposits in local banks. Since the supply is low, interest rates are high on loans, which curtails investment. Low ratios of capital equipment to labor results in low productivity of workers. Low productivity of workers results in workers being paid low wages. Low wages mean workers have low or non-existent savings. You can see how this is a vicious circle.

How Much You Should Save

You should begin saving now, even if you can only set aside \$100.00 per month. Your goal should be to ramp this up to 10% to 15% of your disposable income, but that is impossible when you are just beginning your career. As we saw in the chart from the

OECD above, the savings rate in the United States from 2010 to 2019 ranged from a low of 4.2% of disposable income to a high of 8.1% of disposable income. That gives us average savings rates of:

2010 to 2019 (10-year average =6.4 % of disposable income
2015 to 2019 (5-year average =7.5 % of disposable income

However, one of the drawbacks of using the average rates is the increasing income inequality in the U.S. Lower income households have a much lower savings rate as a percentage of disposable income than high income households. Therefore, we should look at savings rates for income quintiles or deciles before we decide on a reasonable expectation for a savings rate.

I have my retirement fund at the nonprofit mutual fund company TIAA. The TIAA website contained an article by personal finance journalist Paula Pant, who has been featured on MSN Money, Bankrate, Marketplace Money, AARP Bulletin, and more. Her website, “Afford Anything,” draws 30,000 visitors each month. Paula recommends saving 10% to 15% of your disposable income. However, she also recommends the 20/50/30 Rule for personal budgets (Pant, 2020):

- 20% of your disposable income goes to savings
- 50% of your disposable income goes to necessities
- 30% of your disposable incomes goes to discretionary expenditures, such as entertainment

The 20/50/30 rule seems like an impossible goal. Perhaps more realistically, Vanguard, one of the largest mutual fund companies in the world, advises the following:

- Save at least enough to get the full match offered by your employer retirement plan, if you have one.
- Work your way up to 12%–15% of your pay, including any employer match.

This goal seems more reasonable, although when you are starting your career, it may be very difficult to save anything. The important thing, however, is to begin the habit of saving something every month. As you see your savings grow, you will appreciate the feeling of security and will want to save even more.

Your Budget

Keep in mind that the purpose of budgeting is to get to savings. You do not need a complicated budget; instead, focus on keeping track of your spending. Then just subtract that from your disposable income to get your cash flow. You can easily track your spending with a simple spreadsheet. For a young person, a budget like the example below is all you should need (until you make your first million, that is).

Table 5.7.2.2. Personal Cash Flow Statement

	Budget	Actual	Budget	Actual
Income	Month #1	Month #1	Month #2	Month #2
Disposable (after-tax) income				
Interest on Bank Account				
Dividend payments				
Total Cash Income				
Expenditures				
Rent				
Electricity and Water				
Cable and Internet				
Mobile Phone				
Groceries				
Health Insurance				

	Budget	Actual	Budget	Actual
Clothing				
Car Payment				
Car Expenses				
Entertainment				
Other Expense (Credit Card)				
Total Expenditures				
Net Cash Flow				

Create a budget like the one above to start keeping track of your spending, then track your spending for the month and enter it in the actual column. Next, create a revised budget for month number two based on your actual experience. If you see that your net cash flow is zero or negative, look at the actual spending for month number one and decide where you can cut back. Entertainment is the easiest place to cut spending.

For a real-world perspective, I asked a student of mine to create the monthly budget below for when he is at college.

Table 5.7.2.3. Personal Cash Flow Statement Example

	Budget	Actual	Budget	Actual
Income		Month #1	Month #2	Month #2
Disposable (after-tax) income	0			
Interest on Bank Account	0			
Dividend payments	0			
Income from Summer Work	1200			
Total Cash Income	1200			
Expenditures				
Rent (loan from last year)	650			
Electricity and Water (loan)	165			
Cable and Internet (loan)	60			
Mobile Phone (parents)	45			
Groceries (loan and personal)	200			
Health Insurance (parents)	500			
Clothing	0			
Car Payment	0			
Car Expenses	0			
Entertainment	75			
Other Expense	50			
Net Cash Flow	0			
Summary of Expenditures				

	Budget	Actual	Budget	Actual
Total Expenditures		1745		
Parents Expenditures		545		
Loan Expenditures		1075		
Personal Expenditures		125		

Why Budgets Do Not Work (most of the time)

Budgeting is all about savings. Otherwise, you could just spend your paycheck until there is nothing left (and maybe that is exactly what you do), and then what do you do with all the leftover bills? Unfortunately, budgets are much like diets, and neither diets nor budgets work most of the time. Each is complicated, and both take time to add up your calories or expenditures. Neither is any fun at all. Despite all our good intentions, diets and budgets usually go the way of many of our New Year's resolutions; that is, they do not last.

David Bach, co-founder of AE Wealth Management recently told CNBC his key to getting to savings:

If you want to save more money and build wealth, you do not necessarily have to create a detailed budget that allocates money for categories like clothes, coffee and bars. Instead, simply commit to paying yourself first...Whenever you earn money, set aside a portion for your future self (2019).

In her article "Why a Budget is Like a Diet—Ineffective," Tara Siegal Bernard provides advice from experts (including herself) and concludes that budgeting does not work. Despite this, she still had this to say:

But there are plenty of mental tricks and strategies that can make your budgeting more sustainable now. In fact, the best strategy is not to think about it as budgeting at all. Instead, set up broad goals and automate all savings and other priorities where you can (201).

How to Use Behavioral Economics to Create a Workable Budget

The way to stay committed to your budget is to establish some external controls on yourself. Behavioral economists call these "nudges." The best way to keep on track is to use your accounts at your financial institution to automatically stay on budget. I use the term "financial institution" purposely, because there are certain truths you should know about financial institutions that are not easily evident:

- Commercial banks are not your friends.
- If you have your main checking account at a commercial bank, do not set up automatic bill paying there. You will be stuck! Switch to a credit union first.
- Credit unions are your friends.
- Most online stock trading companies such as Robinhood, TD Ameritrade, E*TRADE, etc. are not your friends.
- Non-profit mutual fund companies, such as Vanguard, and TIAA are your friends.

Almost all stockbrokers and mutual fund companies currently allow you to trade stocks for free—that is, no stockbroker commissions on stock trades. If you want to trade stocks, I recommend Charles Schwab as the best broker to set up an account with.

With these facts in mind, we can now talk about how to use your financial institution to nudge you to stay on budget.

First, keep your checking and savings account at a credit union, not a commercial bank. Commercial banks such as Wells Fargo, Bank of America, JP Morgan/Chase and Citicorp are in business to make a profit. They have to generate enough profit to pay dividends to their shareholders. The upshot of this is that they charge higher interest rates on their loans and pay lower interest rates on their deposits than credit unions.

Commercial banks, savings banks, and credit unions are called financial intermediaries. This means they take money in from depositors (to whom they pay interest) and lend it out to borrowers (who pay the bank interest). In order to cover their overhead (salaries, rent, advertising), financial intermediaries charge higher rates to their borrowers than they pay to their depositors. In addition, commercial banks also borrow money in the short-term money markets (also known as a Commercial Paper Market) at a low rate and lend it out to borrowers at a higher rate.

Since the commercial banks must pay interest to their depositors and interest to the Commercial Paper Market lenders, they are essentially borrowing all their money. Additionally, commercial banks must pay dividends to their owners and stockholders, adding to their expenditures. Thus, commercial banks must do the following:

1. Pay interest to their depositors.
2. Pay interest to their lenders in the short-term Commercial Paper market.
3. Cover their overhead (salaries, buildings utilities, advertising, rent).
4. Pay dividends to their owners and stockholders.

In general, commercial banks add a mark-up on the cost of funds between 3% and 4%. That is, if the bank is paying their depositors 1% on their savings accounts (and 1% on the Commercial Paper they borrow, since all short-term interest rates move in synchronization) this is their average cost of funds. On average, they will then charge 4% on their portfolio of loans.

The difference between what a financial institution charges its borrowers and what it pays its depositors (and lenders) is called the interest rate spread or the net interest margin. Below is the historical data on the interest rate spread at all U.S. Banks.

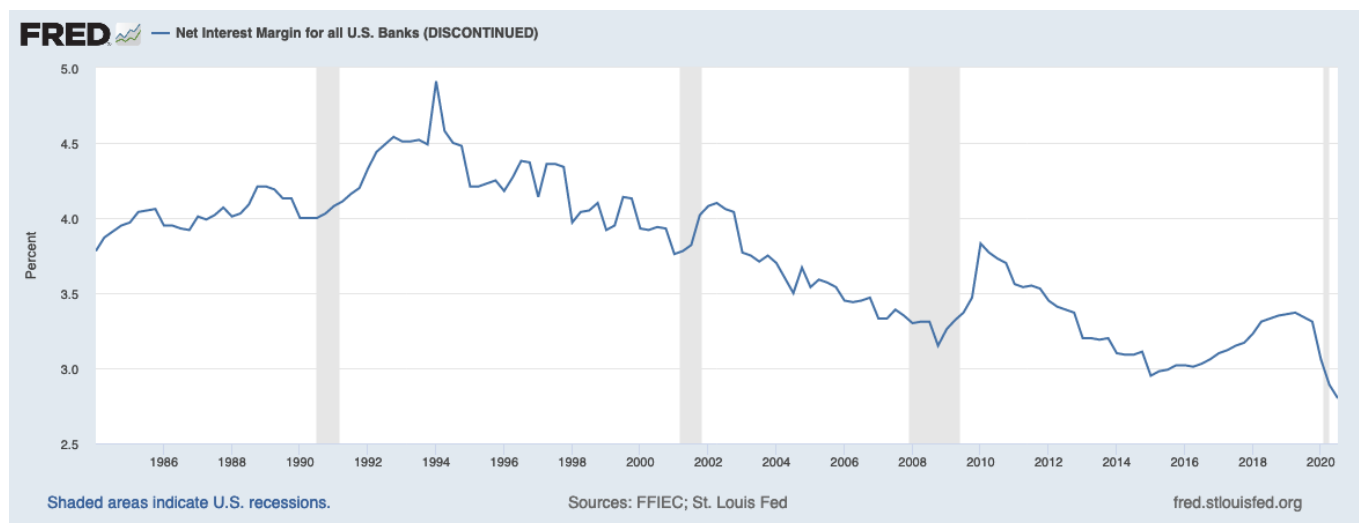


Figure 5.7.2.5: Federal Financial Institutions Examination Council (US) and Federal Reserve Bank of St. Louis, Net Interest Margin for all U.S. Banks (DISCONTINUED) [USNM], retrieved from FRED, Federal Reserve Bank of St. Louis; September 30, 2021.

If you look closely, you will see two big spikes in the interest rate spreads, in 1994 and 2010. In these two years, the Federal Reserve Bank reduced the Federal Funds Rate dramatically as part of Monetary Policy to help the economy recover following recessions. Since all short-term interest rates (including deposit interest rates and Commercial Paper rates) move in lockstep with the Fed Funds Rate, this effectively reduces the cost of funds to banks, allowing them to make larger profits.

Credit unions, on the other hand, are all non-profit mutual institutions, entirely owned by their depositors. Therefore, these are the only expenses they have to cover:

1. Pay interest to their depositors.
2. Cover their overhead (salaries, buildings utilities, advertising, rent).

This is why credit unions can pay higher interest rates on saving accounts and charge lower interest rates on all their loans. They just need a slightly lower interest rate spread to cover their expenses. A recent average interest rate spread for credit unions was 3.15%.

Unfortunately, the basic business model for all financial intermediaries is inherently unstable. They are all subject to what is known as disintermediation. Disintermediation occurs when depositors demand their money back, but the bank does not have it. This can occur because financial intermediaries borrow short term and lend long term. Banks and credit unions borrow their money from

depositors (or Commercial Paper Markets, in the case of commercial banks). and the depositors can demand its return at any time. However, the financial intermediaries have lent the depositors' money out in loans that are paid back over time—auto loans, mortgages, credit card loans, etc.

When depositors demand more of their money back than the bank has on hand, this is known as a run on the bank. During the Great Depression (1929 to 1940) there were several runs on banks, and many banks went bankrupt, while numerous depositors lost their money. As a result, the Federal Deposit Insurance Corporation (FDIC) was created in 1933 by the federal government to insure depositors' money. FDIC currently insures up to \$250,000.00 per account in commercial banks against the bank's insolvency. In 1970, in response to the explosive growth of credit union membership, the National Credit Union Share Insurance Fund ("NCUSIF") was created by the federal government to fulfill a parallel function to the FDIC, but for credit unions. The NCUSIF also currently insures up to \$250,000.00 per account in credit unions against the credit union's insolvency.

Credit unions were initially set up to benefit employees at the same company, such as the Pentagon Federal Credit Union, the General Motors Employees Credit Union, or the AFL-CIO Credit Union. In the expansion of credit union membership after 1970, many of the credit unions relaxed their membership regulations and now anyone can join almost any credit union. Usually to join a credit union currently, you merely need to deposit a minimum of \$5.00 in a savings account. Choose a credit union that has an office convenient to you (although that may not even be necessary, as you can do all your banking with credit unions electronically).

Credit Union Accounts to Facilitate Budgeting

In order to use your credit union to facilitate your budgeting (and savings), you need to set up the following accounts:

1. Checking Account #1 for expenses.
2. Savings Account connected to your checking account.
3. An overdraft Line of Credit connected to Checking Account #1, so if you overdraw your account, the Line of Credit will automatically deposit money into the Checking Account to cover the overdraft. This will save you a lot of overdraft fees.
4. Checking Account #2 for your monthly entertainment.
5. Arrange for Debit Cards for both checking accounts.

This arrangement is analogous to having different envelopes in your drawer with allocations of your cash for expenses, entertainment and savings, but it accomplishes it electronically. Once these accounts and facilities are set up, take the following actions:

1. Have your paycheck electronically deposited to Checking Account #1.
2. Have a certain savings amount automatically transferred from Checking Account #1 to the associated Savings Account.
3. Have a monthly entertainment amount automatically transferred to Checking Account #2. Use this debit card to pay for your monthly entertainment. When the account is depleted, stop spending and wait for your next paycheck.
4. Use the credit union's electronic bill pay for all of your bills. Between this and your debit card, you will have a full accounting of your expenses at the end of each month. Most credit unions will allow you to categorize each payee and will aggregate the payments for each budget category.

For example, say your monthly disposable income is \$3,500. Your budget includes \$2,900 on monthly expenses, \$500 for entertainment, and \$100 for savings. To manage this, you would do the following:

1. Have your paycheck deposited directly into Checking Account #1. Most likely you will be paid on the last day of the month.
2. Set up an automatic bill pay to transfer \$500 into your Checking Account #2 and \$100 into your Savings Account each payday.
3. Use your debit card for Checking Account #1 or automatic bill pay to cover monthly expenses.
4. Use your debit card for Checking Account #2 to pay monthly entertainment expenses. When this account is empty, stop spending until you put more money in the entertainment account.
5. Do not touch your savings account unless you are ready to make a purchase you were saving for, for example, to put a down payment on a car or some other long-term goal.

As I mentioned before, do not set up automatic bill pay at a commercial bank. Studies have shown that 95% of customers who set up automatic bill pay do not leave their financial institution. The customer views it as too much work to set up all the accounts again at another financial institution. Move to a credit union before you set up automatic bill pay.

Establishing Financial Goals

All animals are goal directed: find food, find a burrow, find a mate. The human animal is no exception. Use these innate tendencies to help your budget. The basic necessities of life (rent or mortgage payment, food, transportation) scream at us to be paid every month, so it does not take much to keep them at the forefront of our mind. Getting to savings is the hard part. To do this, we have to set (and write down) financial goals, utilizing one of the key techniques of behavioral economics: making a commitment. You can write your goals down anywhere, but I recommend you write them at the bottom of your budget, ensuring that you will see them regularly.

The priority for your savings account is to keep a stash of money for unforeseen expenses, like car repairs or medical expenses. Try to save six months of your basic expenses, not including entertainment. Six months of basic expenses helps protect against job layoffs, as in normal economic times, 90% of workers find a new job within six months (though this gets skewed during recessions). The goal is to give yourself a safety net in addition to unemployment compensation, because unemployment compensation varies from state to state and pays an average of a little over \$300.00 per week for an average of 26 weeks. Six months of base expenses is an extremely difficult savings goal at the beginning of your career. However, it is a goal you need to work towards. Having this savings will give you great peace of mind.

A second financial goal is to save for future purchases, such as a new car, a down payment on a house, or even just new furniture for your apartment. For example, a house down payment typically equals 5% of the purchase price. Since the median sales price of houses in the United States in 2020 is \$320,000.00, a 5% down payment would be \$15,000.00. Do not be discouraged, though; in a lot of cases, banks will accept a 3% down payment on a house, especially for a first-time home buyer.

The third thing to save for are what are typically the three big purchases in your life.

- The down payment on a house
- College tuition for your children
- Your retirement

We discuss buying a house and saving for retirement in upcoming chapters, but as to education, we can look at the 2019-2020 average cost of tuition to gain perspective. Among national colleges and universities, the College Board (2022) reported the following average cost of tuition and fees for the 2021–2022 school year:

In 2021-22, the average published (sticker) tuition and fees for full-time students are:

- Public four-year in-state: \$10,740
 - \$170 higher than in 2020-21 (+1.6% before adjusting for inflation)
- Public four-year out-of-state: \$27,560
 - \$410 higher than in 2020-21 (+1.5% before adjusting for inflation)
- Public two-year in-district: \$3,800
 - \$50 higher than in 2020-21 (+1.3% before adjusting for inflation)
- Private nonprofit four-year: \$38,070
 - \$800 higher than in 2020-21 (+2.1% before adjusting for inflation)

Add to this anywhere from \$5,000 to \$10,000 per year for room and board, and a state resident at a four-year public college could pay up to \$85,000.

The good news is that with financial aid, very few students pay the full cost of tuition. However, according to the College Board, the average amount borrowed by 2017-2018 bachelor's degree recipients was \$29,000 (\$26,900 for public colleges and \$32,600 for private colleges).

Reviewing Your Budget

In the beginning, review your budget in the middle and at the end of the first month. Reviewing it in the middle of the month gives you some time to correct your behavior; reviewing at the end will help you revise for the next month. Once you feel that you are comfortably running, compiling your actual expenses and revising can be done once per month.

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