



Financial Literacy with Mr. 401(k)
Spring Term 2026
May 6, 2026

Time and Money

Class 22: Price Changes and Interest





Class Discussion

*Suppose you receive
some extra money
in a birthday card.*

*Would your
spending change if
you had more
money?*



When Everyone Has More Money...

Two things tend to happen at the same time.



✓ THE UPBEAT STORY

The Economy Grows



More money to spend → more jeans sold → merchants order more → manufacturers hire more workers → workers earn more money → workers spend it on other things, too.

When people spend and buy more stuff, the whole economy speeds up.

More spending can drive more growth.

⚠ THE SHADOW STORY

Prices Often Rise



If everyone has more money, but the store still has the same number of jeans, and the store can't get more supply timely, what might the store do? It may raise the price of jeans.

More dollars chasing the same stuff means each dollar buys less.

More money can also drive higher prices.



Class Discussion

If more money results in more spending, and more spending can drive economic growth, should the government just keep adding more money to the economy? Why or why not?

What Is Inflation?

Think of it as your money becoming less valuable over time



Inflation

Inflation is when the prices of the things people buy rise over time. It does not mean every price goes up the same amount. It means that, overall, stuff costs more. When inflation occurs, the same \$1 buys less than it did before.



When inflation runs cooler

Prices rise **more slowly**

A snack that cost \$1.00 last year might cost \$1.02 this year. That is a small change, so your money buys almost the same amount.

Your dollar loses some buying power. 💰



When Inflation runs hotter

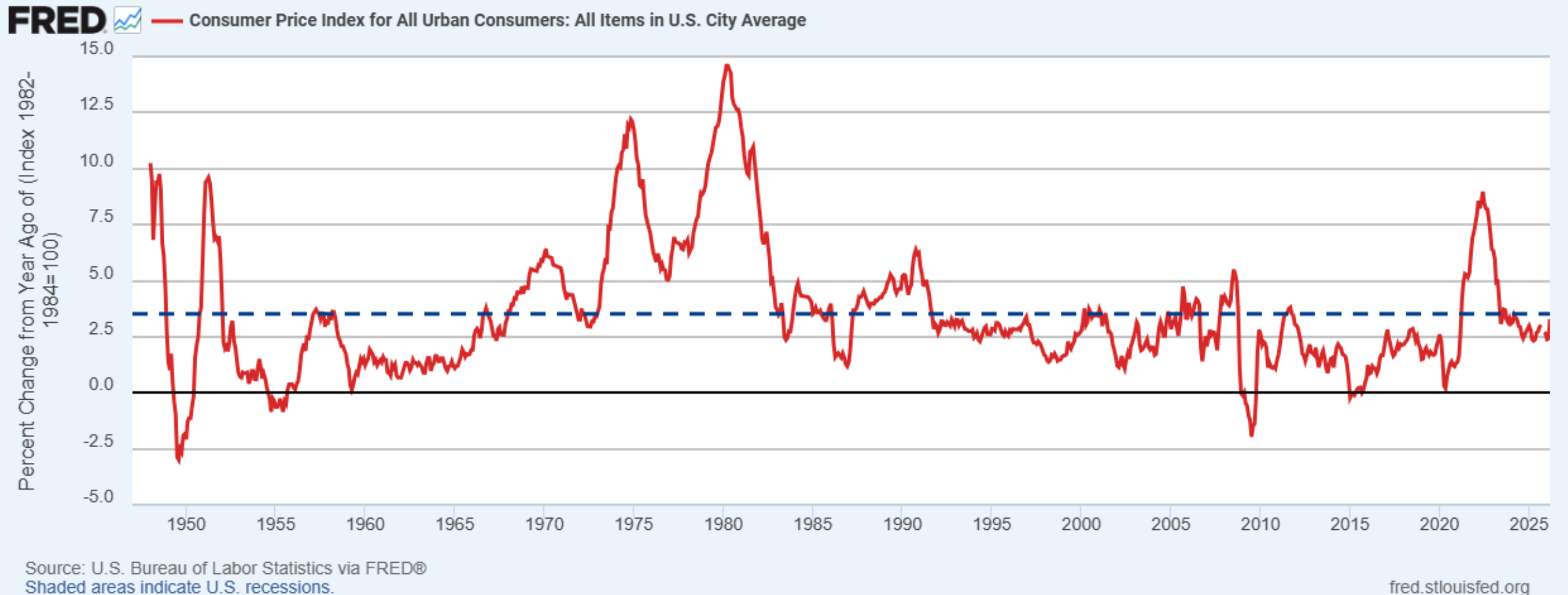
Prices rise **more quickly**

A snack that cost \$1.00 last year might cost \$1.10 this year. That means you need more money to buy the same thing.

Your dollar loses more buying power. 💰

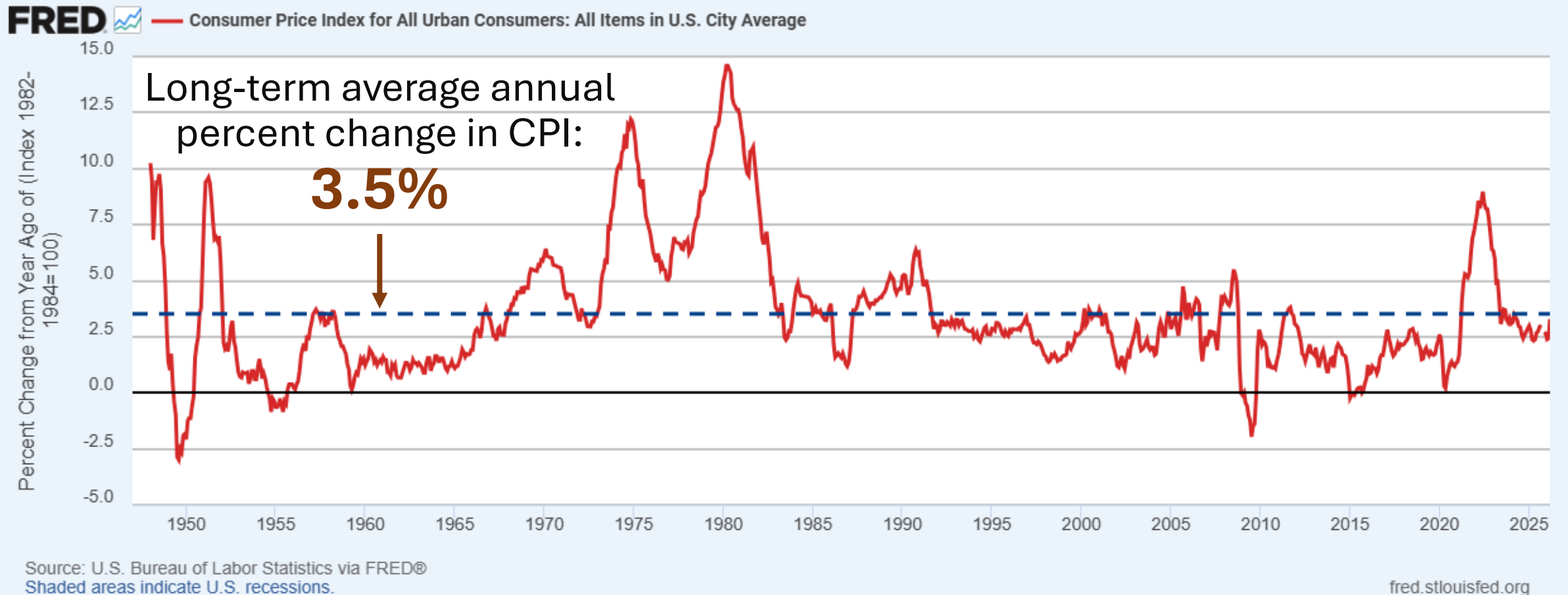
Many Ways to Estimate Inflation

Consumer Price Index (“CPI”) is most common



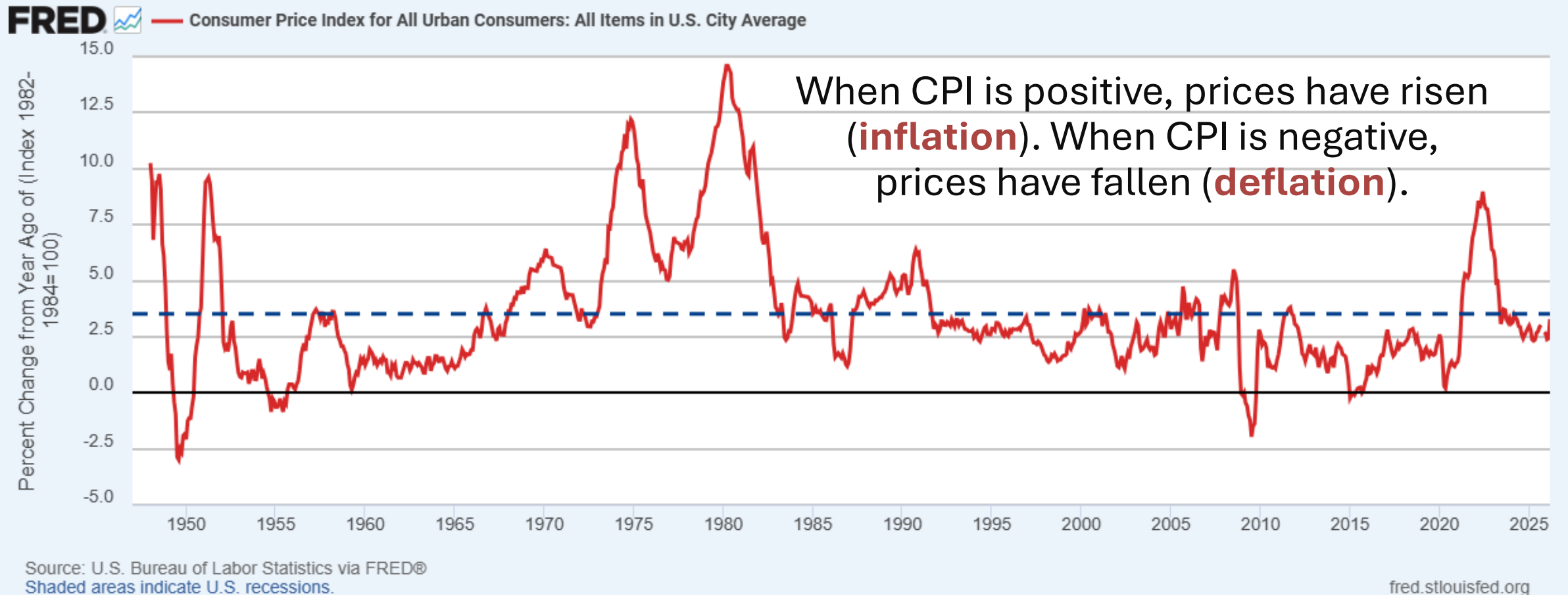
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Consumer Price Index (“CPI”) is most common



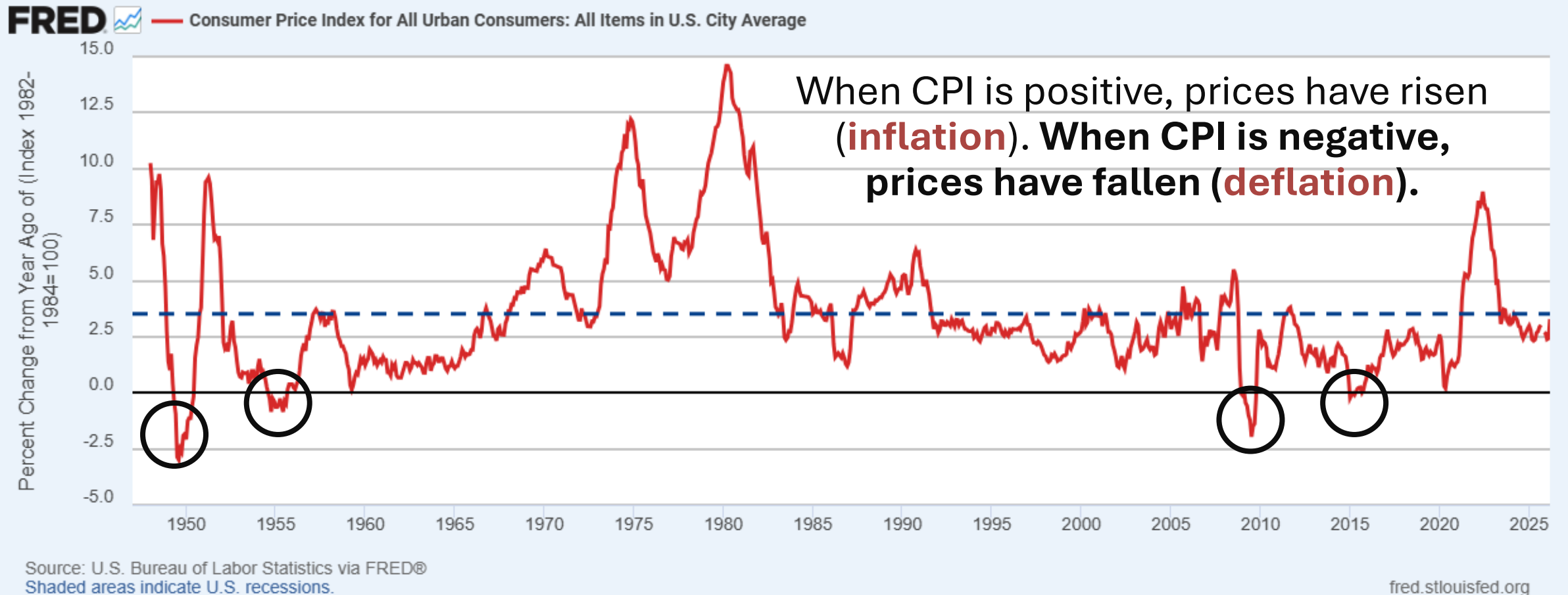
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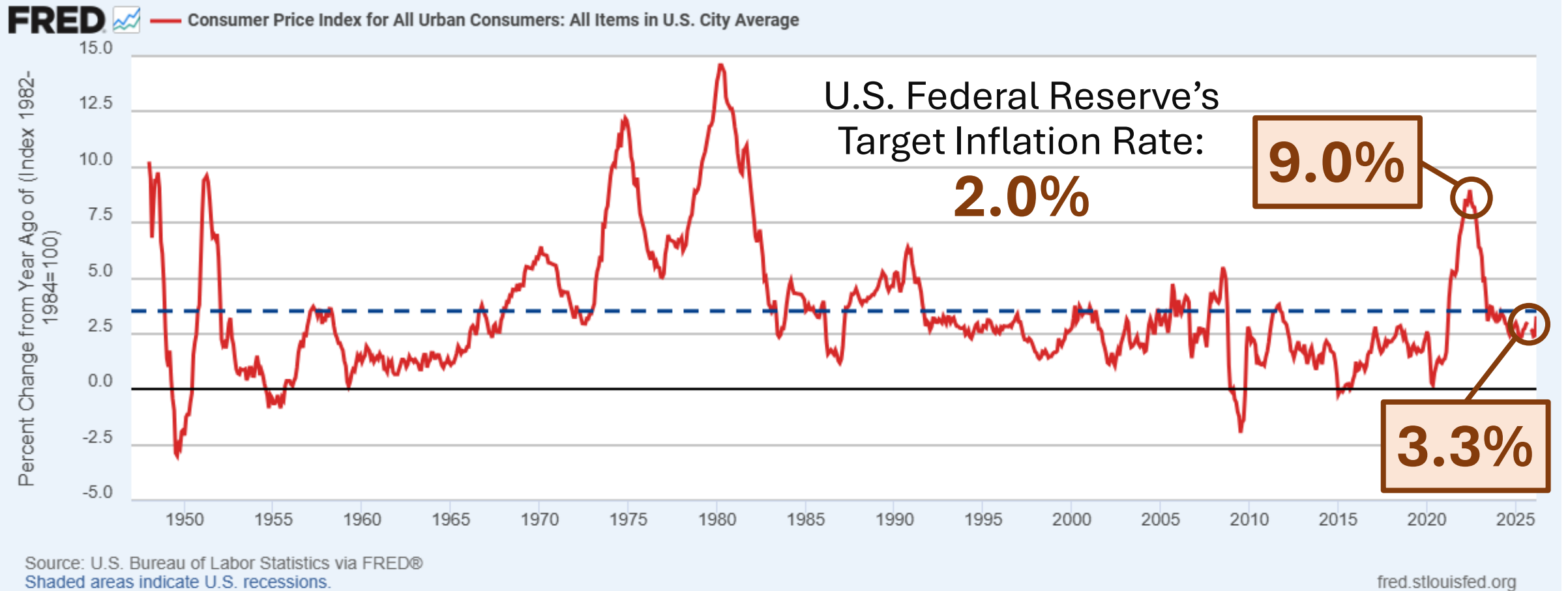
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Consumer Price Index (“CPI”) is most common



High Inflation Leads to...



People Buying Less

When prices go up, people may not be able to buy as much.



Businesses Spending More

Businesses may have to pay more for supplies, workers, and rent.



Loans Becoming More Expensive

When inflation is high, borrowing money can cost more.



Money Losing Buying Power Faster

Your money may not go as far, so you need more money to buy the same stuff.

How does inflation affect us?

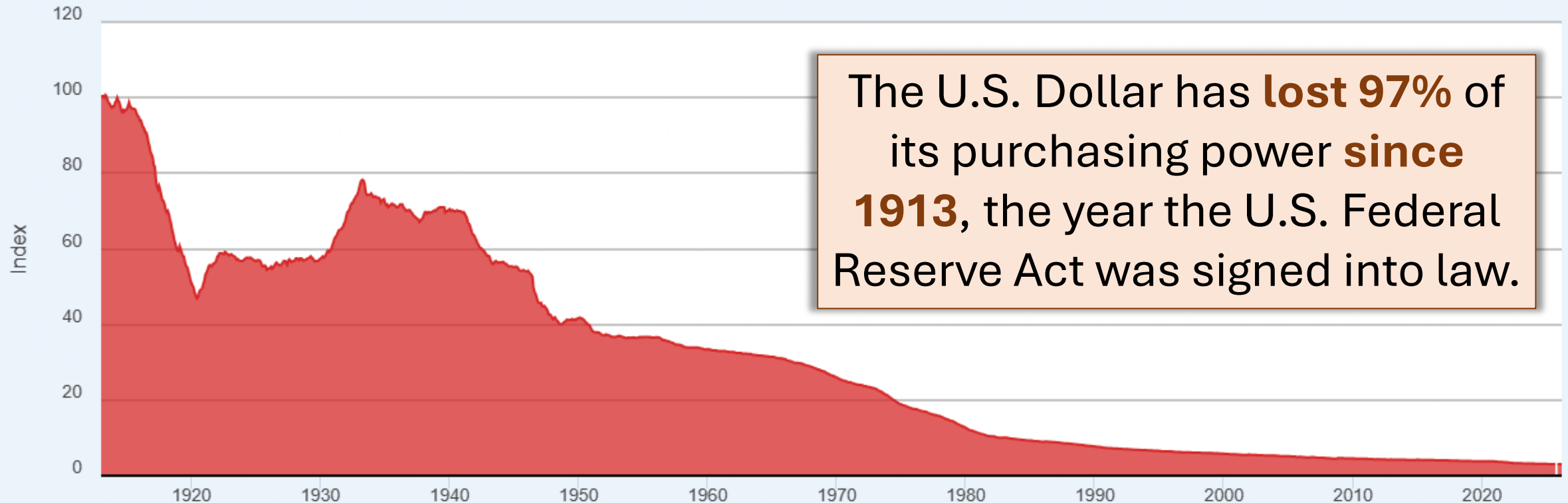


The purchasing power of our money falls over time.

FRED



● Consumer Price Index for All Urban Consumers: Purchasing Power of the Consumer Dollar in U.S. City Average, Jan 1913=100



The U.S. Dollar has **lost 97%** of its purchasing power **since 1913**, the year the U.S. Federal Reserve Act was signed into law.

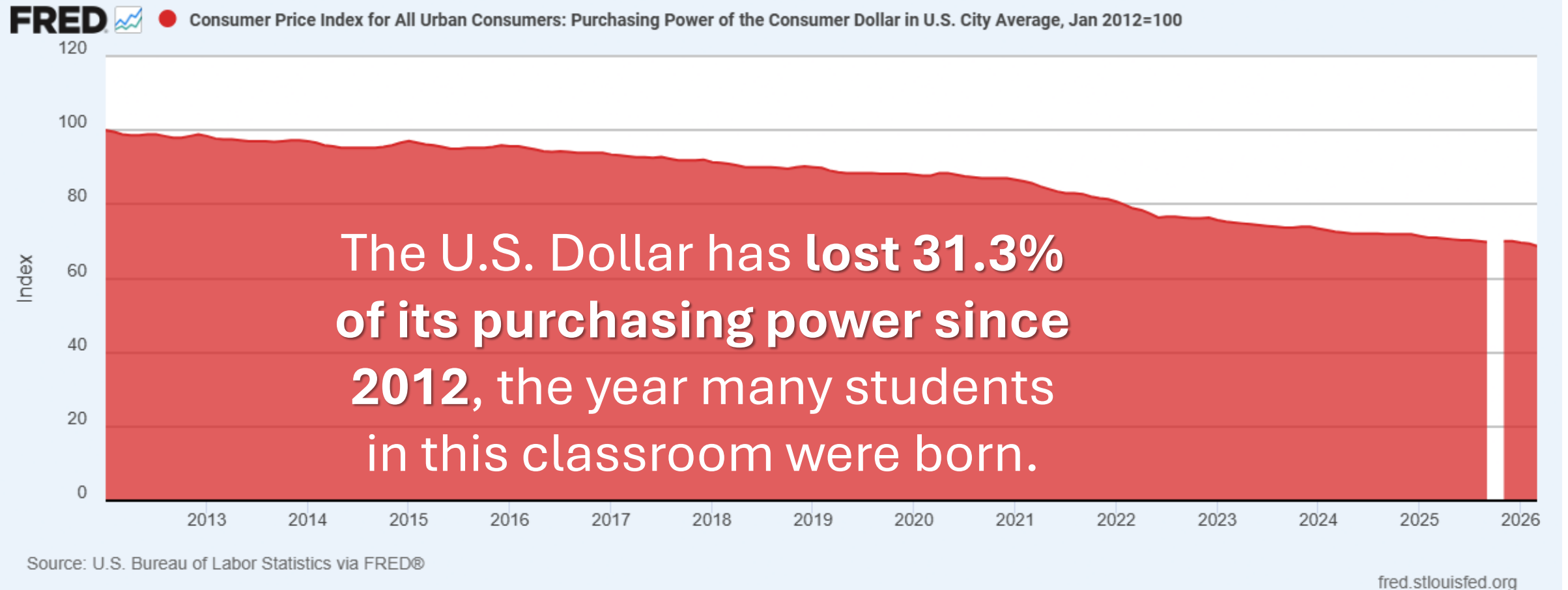
Source: U.S. Bureau of Labor Statistics via FRED®

fred.stlouisfed.org

How does inflation affect us?



The purchasing power of our money falls over time.



Losing Purchasing Power

Put simply → your money buys less!



\$1.00

2012



70¢

2026

 **One Dollar from 2012 has about 70¢ of purchasing power in 2026!**

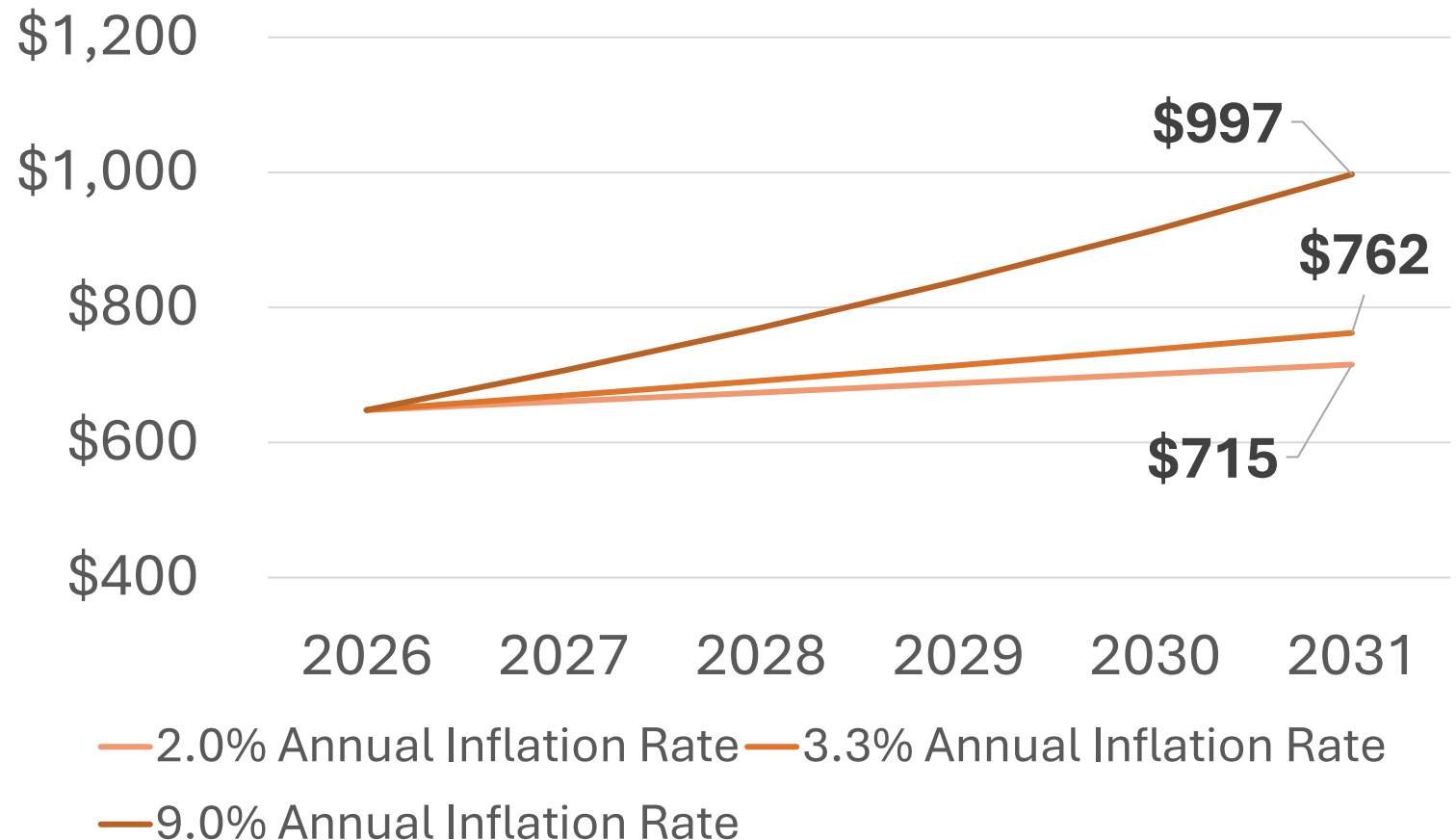
How does inflation affect us?

The stuff we need or want may cost more in the future.



Xbox Series X

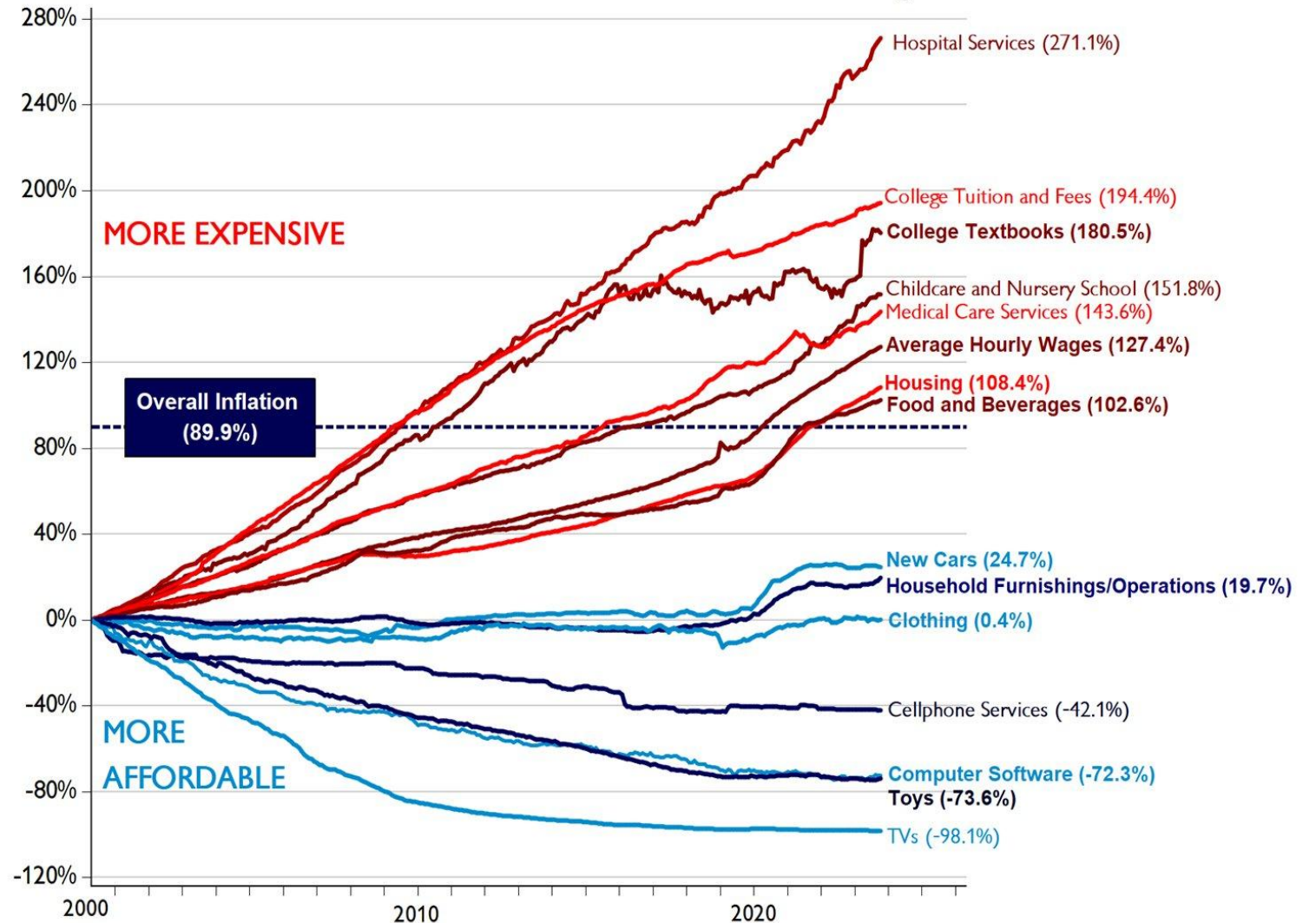
Today's Price **\$648**



Some Prices Rise Faster Than Others

Goods and services inflate (or deflate) at different rates. Categories that benefit from technology innovations and obsolescence tend to deflate.

Price Changes: January 2000 to June 2025
Selected US Consumer Goods and Services, Wages



Source: Bureau of Labor Statistics

Mark J. Perry

College Costs vs. Wages

January 2000 to June 2025 · Source: Mark J. Perry, AEI / BLS

College Textbooks



+180.5%

College Tuition & Fees



+194.4%

Hourly Wages



+127.4%

! Costs rose 60–70 percentage points faster than wages over the same 25-year window.



Class Discussion

If college costs keep rising faster than wages, what does that mean for students?

Why Do Prices Keep Rising?

Three forces that push prices higher.



Too Much Money in the System

When more money is chasing the same amount of stuff, prices tend to rise. Sellers can charge more, because buyers have more to spend.



Resources Become Scarce

When important supplies like oil, food, or computer chips become hard to get, prices rise for everyone. Price can even rise for stuff that uses those supplies indirectly.



People Expect Prices to Keep Rising

If workers expect prices to go up, they ask for higher wages. Businesses then raise prices to cover the higher wages. The expectation itself can keep the cycle going.

What Causes Inflation?

Listen to the Nobel laureate who studied money for 50 years.

🧐 **Listen for:** Friedman's claim is that **inflation is caused by government spending and the money supply**. Also note his observation that Congress spends heavily because we vote for it.

Who is Milton Friedman?

An American economist who won the 1976 Nobel Prize for his work on money and prices. He spent decades arguing that inflation is caused by the supply of money, a view that shaped how central banks (like the U.S. Federal Reserve) think about their job today.



Source:

<https://www.youtube.com/watch?v=F94jGTWNWsA>



What Is Real Return?

Think of it as what your money really gains after prices go up



Real Return

Real return shows whether your money can buy more (or less), after inflation. You find it by comparing your interest or investment return to inflation. If your return is higher than inflation, your money buys more; if it's lower, it buys less.



When Your Money Beats Inflation

Your return is **HIGHER** than inflation

You earn 5% interest. Prices rise 2%. Your \$100 grows to \$105, but the same stuff now costs about \$102.

Your money buys **MORE** than it did before. 💰 ✅



When Inflation Beats Your Money

Inflation is **HIGHER** than your return

You earn 1% interest. Prices rise 3%. Your \$100 grows to \$101, but the same stuff now costs about \$103.

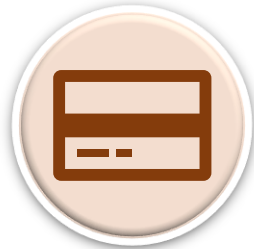
Your money buys **LESS** than it did before. 💰 ⚠️

Interest Recap


the cost of borrowing or the reward for saving



If Borrowing...




The **extra amount** you pay to a person or company that let you borrow their money.

Interest is the **COST**
of borrowing 

If Saving or Investing...



The **extra amount** you receive for letting someone else use your money.

Interest is the **REWARD**
for saving 

Why Lenders Charge Interest

Three reasons every lender is thinking about, even your friend.



1 Default Risk



What if the borrower never pays back?

Lenders take a risk that people won't repay. To make that risk worth taking, they charge extra.

Example: If you lend \$20 to a friend and they never pay you back!

2 Inflation Risk



Money loses value over time.

If a lender gets paid back later, the dollars they get back may not buy as much as the dollars they lent.

Example: A \$5 sandwich today might cost \$6 next year, possibly more.

3 Opportunity Cost



They could be making money other ways.

Lenders could invest their money in other stuff: stocks, real estate, bitcoin, a business, or other loans.

Example: Instead of lending, they could buy stocks or open a shop.

What Is Simple Interest?

Think of it like interest only on the starting amount.



Simple Interest

A method of calculating interest only on the starting amount or principal. Past interest never earns more interest. The balance grows by the same fixed amount every period.



Starting Amount or Principal

The starting amount of money you save, invest, or borrow. Simple interest is calculated only against this number.



Interest Rate

The percentage applied to the principal each period. It is never applied to past interest, only to the original amount.



Linear Growth

Your balance grows by the same fixed amount every period. Plotted on a chart, the line is straight, not a curve.



Preview: Compound interest is very different. We'll cover it next class.

Simple Interest Formula



Interest = Principal × Rate × Time in Years

$$I = P \times r \times t$$

Simple Interest Formula



Interest = Principal × Rate × Time in Years

$$I = P \times r \times t$$

 **Worked Example:** Jane lends John \$100 at 5% for 2 years.

$$Interest = \$100 \times 5\% \times 2 = \$10$$

After 2 years, John pays back \$100 in principal + \$10 in interest = \$110 total

Practical Application



Jane makes a \$1,000 loan to John at a 10% annual **simple interest** rate. John repays the loan principal + interest after exactly 1-year.

1. How much interest did John pay to Jane?

Practical Application



Jane makes a \$1,000 loan to John at a 10% annual **simple interest** rate. John repays the loan principal + interest after exactly 1-year.

1. How much interest did John pay to Jane?

Now, suppose John paid the loan principal + interest at the end of the 3rd year.

2. How much interest did John pay to Jane?



Class Discussion

If your savings earn 1% and prices rise 3%, are you wealthier or poorer next year? Why?



Three Key Takeaways

1. Inflation is the general rise in the prices over time, often estimated by CPI.
2. Interest is the cost of borrowing money, paid by the borrower to the lender.
3. Real returns, calculated as nominal returns – inflation, are what matters most to savers and investors.



Where to Learn More

- [Interest: Definition and Types of Fees for Borrowing Money](#) by James Chen via Investopedia
- [Teaching About Money, Spending, and Inflation Using a Classroom Inflation Auction](#) by Scott Wolla, Ph.D., Federal Reserve Bank of St. Louis
- Video: [Real vs. Nominal Interest Rate](#), by Khan Academy

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Learn it. Earn it. Own it. Grow it.

Teaching young people how
money really works

**Financial Literacy with
Mr. 401(k)**

<https://petros.us/about-finlit>

