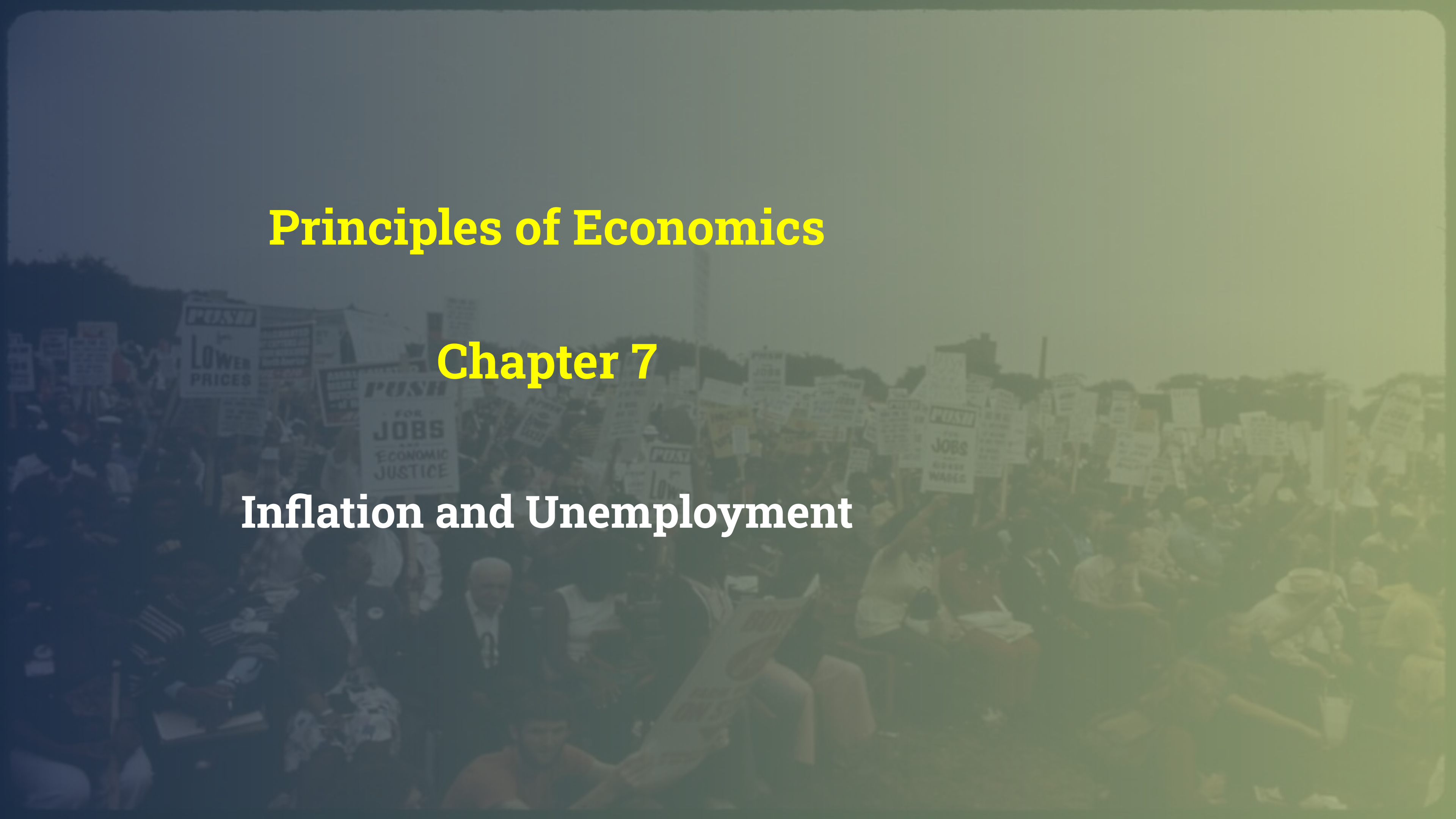
Principles of Economics

Chapter 7

Inflation and Unemployment



Measuring joblessness

One aspect of economic performance is how well an economy uses its resources. Because an economy's workers are its chief resource, keeping workers employed is a paramount concern of economic policymakers.

The unemployment rate is the statistic that measures the percentage of those people wanting to work who do not have jobs. Every month, the Bureau of Labor Statistics computes the unemployment rate and many other statistics that economists and policymakers use to monitor developments in the labor market.

The Unemployment Rate

Employed: This category includes those who at the time of the survey worked as paid employees, worked in their own business, or worked as unpaid workers in a family member's business. It also includes those who were not working but who had jobs from which they were temporarily absent because of, for example, vacation, illness, or bad weather.

Unemployed: This category includes those who were not employed, were available for work, and had tried to find employment during the previous four weeks. It also includes those waiting to be recalled to a job from which they had been laid off.

Not in the labor force: This category includes those who fit neither of the first two categories, such as a full-time student, homemaker, or retiree.

The Unemployment Rate

The labor force is defined as the sum of the employed and unemployed, and the unemployment rate is defined as the percentage of the labor force that is unemployed. That is,

Labor Force = Number of Employed + Number of Unemployed

$$\text{Unemployment Rate} = \frac{\text{Number of Unemployed}}{\text{Labor Force}} \times 100.$$

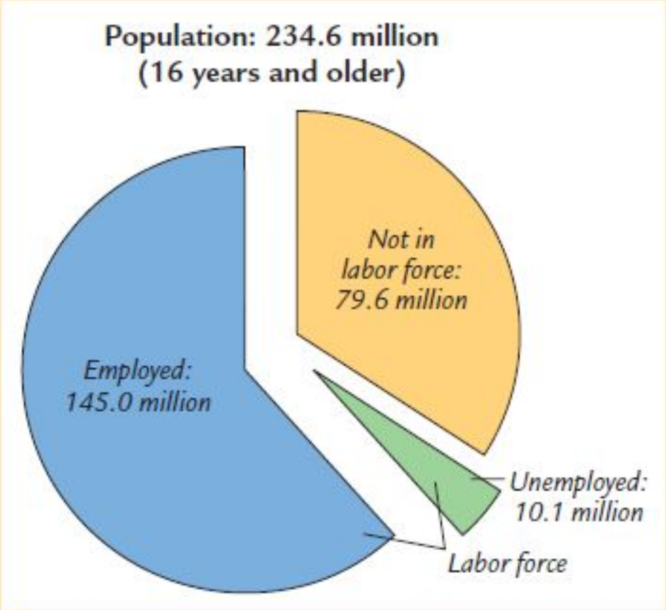
A related statistic is the labor-force participation rate, the percentage of the adult population that is in the labor force:

$$\text{Labor-Force Participation Rate} = \frac{\text{Labor Force}}{\text{Adult Population}} \times 100.$$

The Unemployment Rate

Calculate

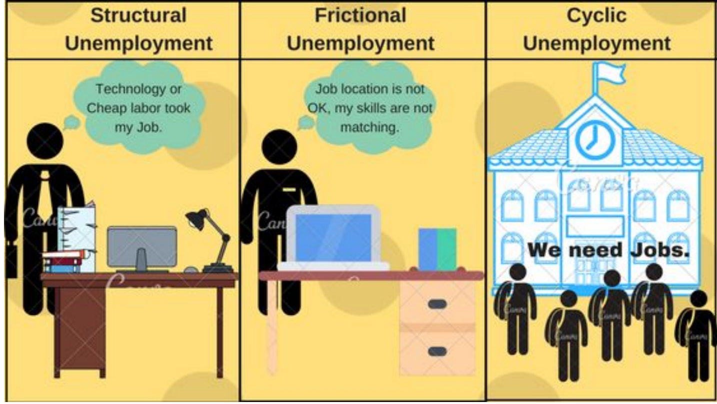
Labor force
Unemployment rate
Labor force participation rate



The Three Groups of the Population When the Bureau of Labor Statistics surveys the population, it places all adults into one of three categories: employed, unemployed, or not in the labor force. This figure shows the number of people in each category in October 2008.

Source: U.S. Department of Labor.

Types of unemployment



Structural unemployment occurs when there is a mismatch between the jobs available in the market and the skill levels of the unemployed. It occurs due to an underlying shift in the country's economy that makes it difficult to find a job for some groups. Structural unemployment is also responsible for keeping the unemployment rate high even after the end of the recession period.

Frictional unemployment is self-caused unemployment as it occurs when workers leave their jobs to find a better or a right one. As a matter fact, frictional unemployment is unavoidable because the job market is continuously changing. Workers have to find new opportunities, go to interviews and even relocate before they can get into the emerging job market. It's an inevitable part of the job search process which requires time, effort, and expense. The only good thing about frictional unemployment is that it's short-term.

Cyclical unemployment depends on the economy of the country. Whenever there is a fall in country's GDP, the unemployment rate rises. This happens due to downturns in the business cycle and if the economy contracts for two quarters or more then the country is under recession. When the unemployment rate crosses 6% then it is considered to be high and cyclical unemployment is the main reason for this.

Types of unemployment: identify

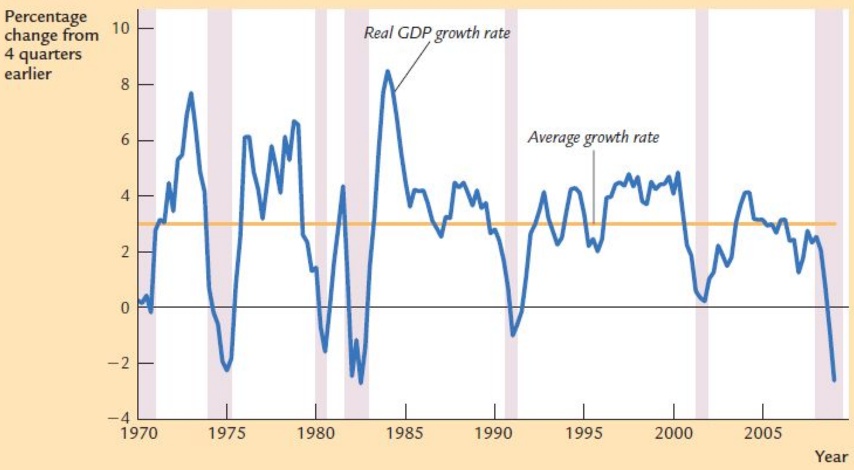
A factory worker loses their job because the factory has automated its production line, replacing manual labor with machines.

A recent university graduate who is actively looking for their first job in marketing after finishing school.

A construction worker loses their job during a recession because demand for new homes and commercial buildings drops sharply.

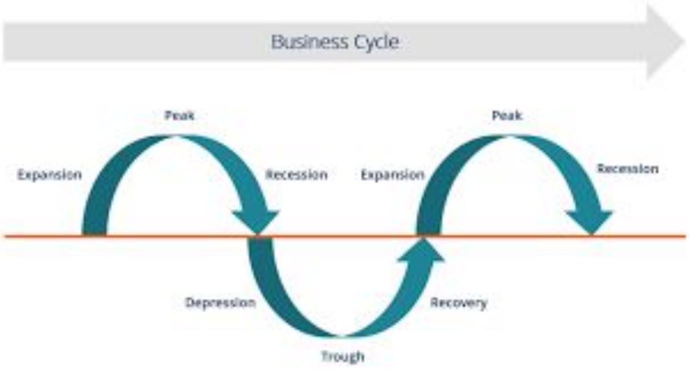
Business cycle

Business cycles are a type of fluctuation found in the aggregate economic activity of a nation -- a cycle that consists of expansions occurring at about the same time in many economic activities, followed by similarly general contractions (recessions). This sequence of changes is recurrent but not periodic.



Real GDP Growth in the United States Growth in real GDP averages about 3 percent per year, but there are substantial fluctuations around this average. The shaded areas represent periods of recession.

Source: U.S. Department of Commerce.

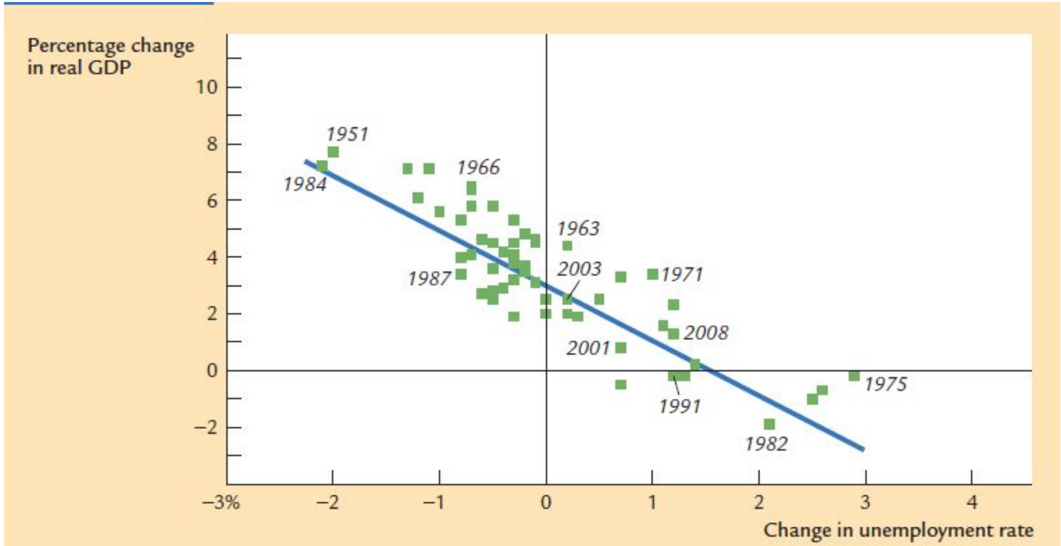


Unemployment and GDP: Okun's law

What relationship should we expect to find between unemployment and real GDP?

Because employed workers help to produce goods and services and unemployed workers do not, increases in the unemployment rate should be associated with decreases in real GDP. **This negative relationship between unemployment and GDP is called Okun's law, after Arthur Okun, the economist who first studied it.**

$$\text{Percentage Change in Real GDP} = 3\% - 2 \times \text{Change in the Unemployment Rate.}$$



Okun's Law This figure is a scatterplot of the change in the unemployment rate on the horizontal axis and the percentage change in real GDP on the vertical axis, using data on the U.S economy. Each point represents one year. The negative correlation between these variables shows that increases in unemployment tend to be associated with lower-than-normal growth in real GDP.

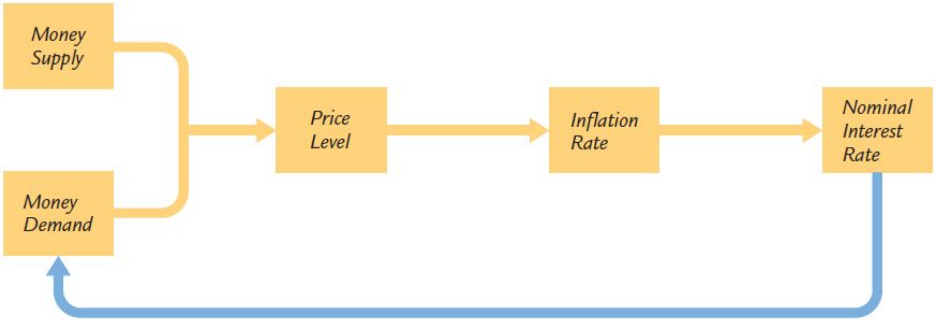
Inflation

The rate of inflation—the percentage change in the overall level of prices: 9.17% (April 2025) in Bangladesh.

Extraordinarily high inflation, called hyperinflation: Germany in 1923, when prices increased an average of 500 percent per month. In 2008, a similar hyperinflation gripped the nation of Zimbabwe.

Growth in the quantity of money is the primary determinant of the inflation rate- Milton Friedman

Increase in expected inflation raises the nominal interest rate. The higher nominal interest rate increases the cost of holding money and therefore reduces the demand for real money balances. Because the central bank has not changed the quantity of money available today, the reduced demand for real money balances leads to a higher price level. Hence, expectations of higher money growth in the future lead to a higher price level today.



Inflation

Demand-Pull Inflation:

This happens when demand for goods and services exceeds supply. It's often summarized as "too much money chasing too few goods." Example: A booming economy where people have more money to spend.

Cost-Push Inflation:

This occurs when the costs of production (like wages or raw materials) rise, and businesses pass those costs on to consumers. Example: A spike in oil prices raising transportation and production costs.

Built-In Inflation (Wage-Price Spiral):

As prices rise, workers demand higher wages. When businesses grant these wage increases, they may raise prices again to cover higher labor costs—creating a cycle.

Monetary Inflation:

When a central bank increases the money supply too quickly, it can lead to inflation if it outpaces economic growth.

Monetary policy: expansionary and contractionary

Expansionary Monetary Policy	Contractionary Monetary Policy
1. Goal Expansionary monetary policy aims to stimulate economic growth and increase aggregate demand by lowering interest rates, increasing the money supply, and encouraging borrowing and investment.	**1. Goal** Contractionary monetary policy, on the other hand, aims to slow down the economy and control inflation by raising interest rates, reducing the money supply, and discouraging borrowing and spending.
2. Interest Rate Expansionary monetary policy typically involves lowering interest rates to make borrowing more affordable, which encourages spending and investment.	**2. Interest Rate** Contractionary monetary policy, on the other hand, involves raising interest rates to make borrowing more expensive, which can discourage spending and investment.
3. Impact on Inflation Expansionary monetary policy can potentially lead to higher inflation if the increased money supply fuels excessive spending.	**3. Impact on Inflation** Contractionary monetary policy, on the other hand, aims to control inflation by reducing the money supply and slowing down economic activity.
4. Timing Expansionary monetary policy is generally implemented during periods of economic slowdown or recession to stimulate growth.	**4. Timing** Contractionary monetary policy is typically employed during periods of high inflation or economic overheating to cool down the economy.

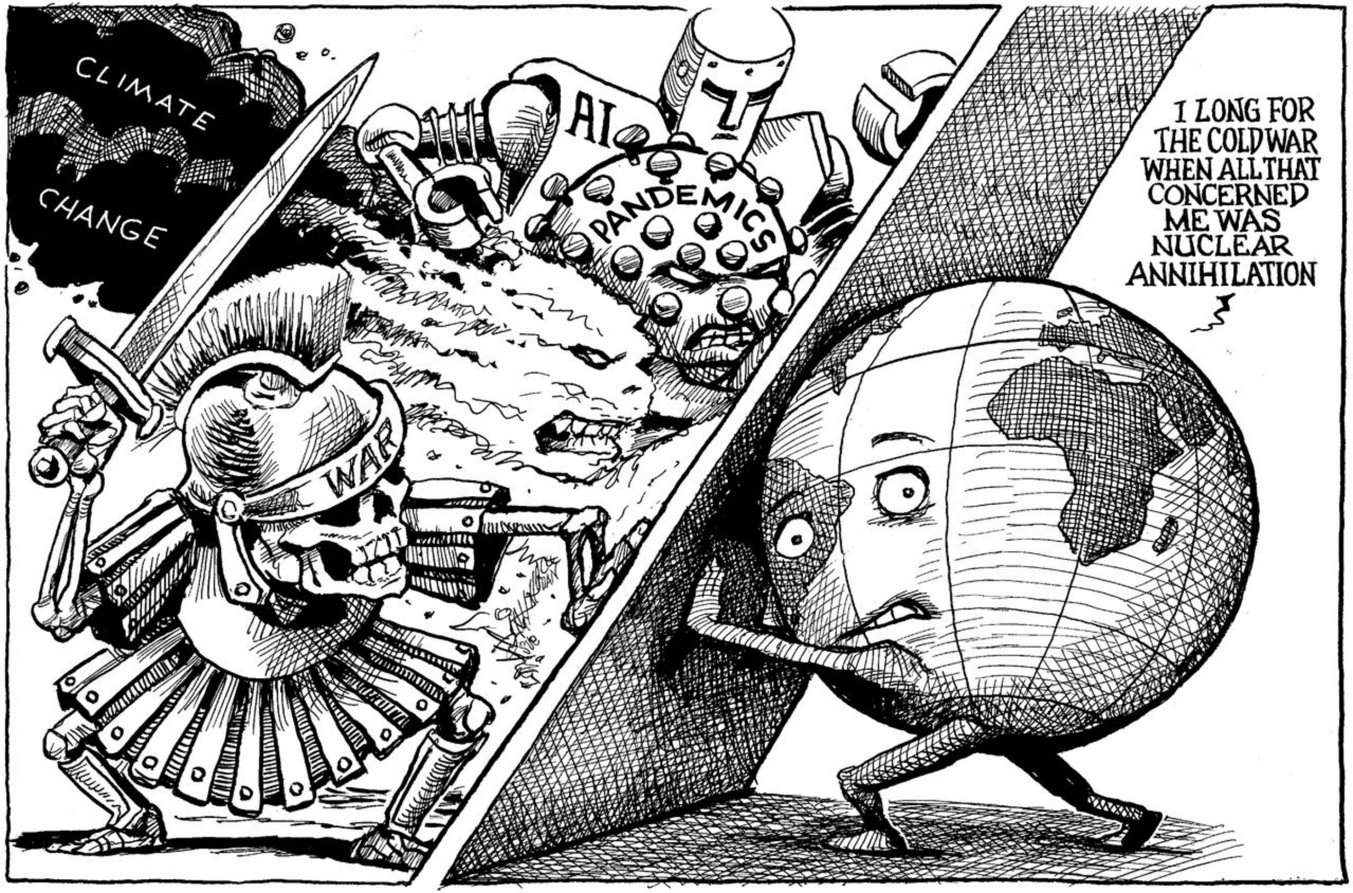
The Central Bank

A central bank is the term used to describe the authority responsible for policies that affect a country's supply of money and credit.

More specifically, a central bank uses its tools of monetary policy—open market operations, discount window lending, changes in reserve requirements—to affect short term interest rates and the monetary base (currency held by the public plus bank reserves) in order to achieve important policy goals.

Three key goals of modern monetary policy:

- Price stability or stability in the value of money, means maintaining a sustained low rate of inflation
- A stable real economy, often interpreted as high employment and high and sustainable economic growth. Another way to put it is to say that monetary policy is expected to smooth the business cycle and offset shocks to the economy
- Financial stability, encompasses an efficient and smoothly running payments system and the prevention of financial crises


CLIMATE CHANGE
AI
PANDEMICS
WAR
I LONG FOR THE COLD WAR WHEN ALL THAT CONCERNED ME WAS NUCLEAR ANNIHILATION