LM 4 - Understanding Business Cycles

KIA Fresh Graduates Program - Economics

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May 24, 2024

Learning Outcomes

The candidate should be able to:

1. describe the business cycle and its phases;
2. describe credit cycles;
3. describe how resource use, consumer and business activity, housing sector activity, and external trade sector activity vary as an economy moves through the business cycle;
4. describe theories of the business cycle;
5. interpret a set of economic indicators, and describe their uses and limitations;

Learning Outcomes

The candidate should be able to:

6. describe types of unemployment, and compare measures of unemployment;
7. explain inflation, hyperinflation, disinflation, and deflation;
8. explain the construction of indexes used to measure inflation;
9. compare inflation measures, including their uses and limitations;
10. contrast cost-push and demand-pull inflation;

Overview

Overview

Business Cycle Definition and Phases

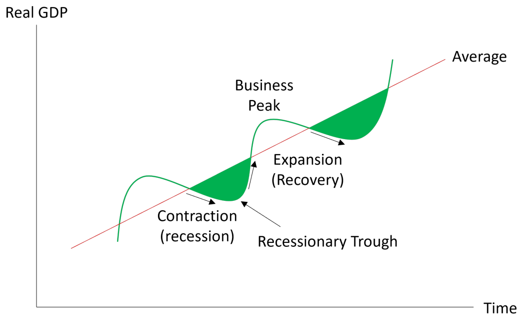


Figure: Phases of the Business Cycle

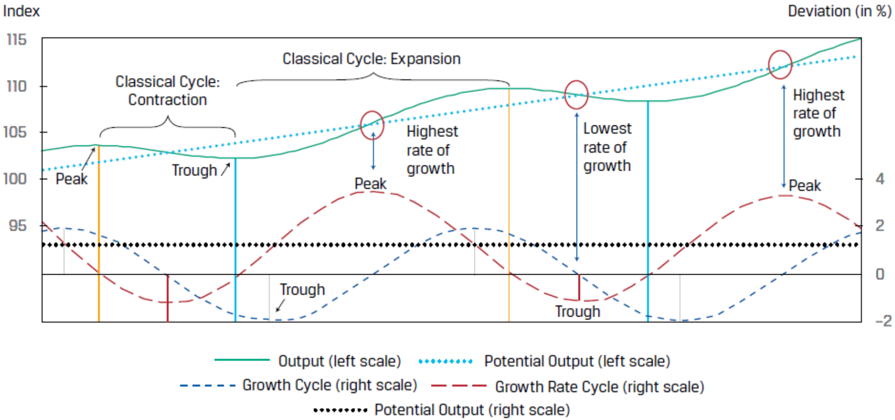
- The business cycle is characterized by fluctuation in economic activity.
- Typically, two consecutive quarters of growth in real GDP mark the beginning of an expansion (recovery) and two consecutive quarters of declining real GDP indicate the beginning of a contraction (recession).

Business Cycle Definition and Phases

Three possible ways of looking at the Business Cycle:

- Classical cycles: consider directly the raw data.
  - An economic cycle that shows fluctuations in GDP.
  - It has shorter contraction phases and longer expansion phases.
  - Not commonly used due to its inability to distinguish short-term fluctuations from long-term trends.
- Growth cycles: decompose GDP data into trend and cycle (using a linear trend or a statistical filter).
  - Focuses on variations around the long-term trend growth level.
  - Compared with classical cycles, peaks generally are reached earlier and troughs later in time.
- Growth rate cycles: focus on variations in GDP growth rate.
  - Economic cycle defined by changes in GDP growth rate.
  - Peaks and troughs are detected earlier than with classical or growth cycle.
  - Does not require long-term growth trend calculation.

Business Cycle Definition and Phases



Business Cycle Definition and Phases

Peak	Trough	Length of Recession
July 1953	May 1954	10 months
August 1957	April 1958	8 months
April 1960	February 1961	10 months
December 1969	November 1970	11 months
November 1973	March 1975	16 months
January 1980	July 1980	6 months
July 1981	November 1982	16 months
July 1990	March 1991	8 months
March 2001	November 2001	8 months
December 2007	June 2009	18 months

Source: National Bureau of Economic Research.

- In the US, the National Bureau of Economic Research (NBER) is in charge of dating recessions:
  - "A recession is a significant decline in activity spread across the economy, lasting more than a few months, visible in industrial production, employment, real income, and wholesale-retail trade."

Determinants of Activity in the Housing Sector

- Mortgage rates.
  - Low interest rates tend to increase home buying and construction while high interest rates tend to reduce home buying and construction
- Housing costs relative to income.
  - When incomes are cyclically high (low) relative to home costs, including mortgage financing costs, home buying and construction tend to increase (decrease).
- Speculative activity.
  - Higher prices led to more construction and eventually excess building. This resulted in falling prices that decreased or eliminated speculative demand and led to dramatic decreases in housing activity overall.
- Demographic factors.
  - The proportion of the population in the 25- to 40-year- old segment is positively related to activity in the housing sector because these are the ages of greatest household formation.

Fluctuations in Housing Sector Activity

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Overview

Economic Indicators

- Economic indicators are variables that provide information about the state of economic activity (i.e. position in the cycle) in a country, region or sector.
- Used extensively in economic forecasting.
- Types of indicators:
  - Leading indicators: have turning points that usually precede those of the economy.
  - Coincident indicators: have turning points that typically coincide with those of the economy.
  - Lagging indicators: have turning points that occur later than those of the economy.
- Composite indicator: index generated from multiple indicators that tend to move in the same direction.

Economic Indicators

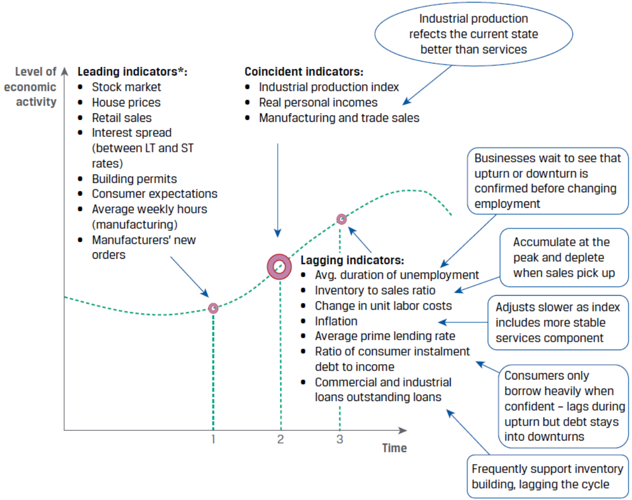

Figure: Types of Economic Indicators.
Source: CFA Institute

Economic Indicators: Example

- In the US, the Conference Board publishes a composite leading indicator called The Conference Board Leading Economic Index (LEI).
- The LEI comprises 10 components:
  1. Average weekly initial claims for unemployment insurance.
  2. Average weekly hours in manufacturing.
  3. Institute of Supply Management (ISM) Manufacturing New Orders Index.
  4. U.S. Census Bureau's Manufacturers' New Orders for Consumer Goods and Materials.
  5. U.S. Census Bureau's Manufacturers' New Orders for Non-Defense Capital Goods Excluding Aircraft
  6. Building Permits for New Private Housing Units
  7. Average Consumer Expectations for Business Conditions.
  8. Interest rate spread between 10-Year Treasury yields and overnight borrowing rates
  9. Leading Credit Index.
  10. S&P 500.

Big Data and Nowcasting: Real-Time Insights

- Big data and nowcasting enables real-time insights by using data from various sources.
- It also provides timely estimates for low-frequency economic indicators.
- Examples: GDPNow, EuroCOIN, Purchasing Manager's Indexes (PMIs).
- Benefits of nowcasting:
  - Gain a more nuanced and dynamic understanding of economic fluctuations.
  - Enables quicker and more informed decision-making across various sectors and industries.

Labor and Capital Utilization

- Firms are slow to hire or fire employees, slow to increase or decrease physical capital.
- Frequent adjustments are costly.
- At the beginning of a contraction (expansion), labor and capital are used less (more) intensively.
- When sales trends persist, firms adjust labor and physical capital over time.

Business Cycle Theories

School of Thought	Cause of Business Cycles	Recommended Policy
Neoclassical	Technology changes	Allow wages, prices to adjust
Keynesian	AD shifts with changes in business expectations; contractions persist due to downward sticky wages	Use fiscal and/or monetary policy to restore full employment
New Keynesian	Same as Keynesian but other input prices also downward sticky	Same as Keynesian

Business Cycle Theories

School of Thought	Cause of Business Cycles	Recommended Policy
Monetarist	Inappropriate changes in money supply growth rate	Steady, predictable growth rate of money supply
Austrian	Inappropriate government intervention in economy	Don't force interest rates to artificially low levels
New Classical (Real Business Cycle theory)	Rational responses to external shocks, technology changes	Don't intervene to counteract business cycles

Types of Unemployment

- Frictional unemployment results from time it takes employers and employees to find each other and commence employment.
- Structural unemployment results from long-term changes in the economy that require workers to gain new skills to fill new jobs.
- Cyclical unemployment results from changes in economic growth; equals zero at full employment.

Employment Measures

- FTo be unemployed, one must be available for work and actively looking for work.
- Labor force consists of those who are employed and those who are unemployed.
- Unemployment rate = Number of unemployed / Labor force
- Participation ratio = Labor force/ working-age population (>16)
- Discouraged workers are not employed or seeking employment; not counted in labor force.

Inflation, Disinflation, and Deflation

- Inflation: Persistent increase in price level over time
- Inflation rate: Percentage increase in price level over a period (usually one year)
- Disinflation: Decrease in positive inflation rate over time
- Deflation: Persistent decrease in price level over time; negative inflation rate.
- Hyperinflation: Out-of-control high inflation.

Two Types of Inflation

- Cost-push inflation begins with decrease in short-run aggregate supply (e.g., increase in price of an important input).
- Demand-pull inflation begins with an increase in aggregate demand that results in short-run equilibrium greater than full-employment GDP.

Calculating Inflation

- CPI (Laspeyres): U.S. inflation measure
- CPI = (base-year basket at current prices / base-year basket at base year prices) * 100
- CPI (Paasche): reduces substitution bias
- CPI = (current-year basket at current prices / current-year basket at base year prices) * 100
- Fisher index
- Geometric mean of Laspeyres and Paasche indexes

Limitations of Inflation Measures

- The CPI is widely believed to overstate the true rate of inflation.
- The most significant biases in the CPI data include:
  - Consumer substitution of lower-priced products for higher-priced products
  - New goods replace older, lower-priced products.
  - Price increases due to quality improvements.

Headline and Core Inflation

- Price indices that include all goods and services measure headline inflation.
- Core inflation refers to prices of all goods excluding food and energy.
- Food and energy prices are subject to large short-term fluctuations that can magnify or mask the true inflation rate.

Overview

Question 1

- The reason analysts follow developments in the availability of credit is that:
  - A. loose private sector credit may contribute to the extent of asset price and real estate bubbles and subsequent crises.
  - B. loose credit helps reduce the extent of asset price and real estate bubbles.
  - C. credit cycles are of same length and depth as business cycles.

Question 2

- The inventory/sales ratio is most likely to be rising:
  - A. as a contraction unfolds.
  - B. partially into a recovery.
  - C. near the top of an economic cycle.

Question 3

- A national government responds to a severe recession by funding numerous infrastructure projects using deficit spending. Which school of economic thought is most consistent with such action?
  - A. Keynesian.
  - B. Monetarist.
  - C. Neoclassical.

Question 4

- The unemployment rate is considered a lagging indicator because:
  - A. new job types must be defined to count their workers.
  - B. multi-worker households change jobs at a slower pace.
  - C. businesses are slow to hire and fire due to related costs.

Question 5

- What is the most important effect of labor productivity in a cost-push inflation scenario?
  - A. Rising productivity indicates a strong economy and a bias towards inflation.
  - B. The productivity level determines the economy's status relative to its "natural rate of unemployment."
  - C. As productivity growth proportionately exceeds wage increases, product price increases are less likely.