Business Cycles

**Agenda**

- What is a Business Cycle?
- Business Cycle Facts.

**What Is a Business Cycle?**

- Business cycles are the short-run fluctuations in aggregate economic activity around its long-run growth path.
What Is a Business Cycle?

• Components of a Business Cycle:
  ➢ Peak,
  ➢ Contraction or Recession,
  ➢ Trough, and
  ➢ Recovery and Expansion.

What Is a Business Cycle?

• Peak:
  ➢ The maximum level that aggregate economic activity reaches.
    • Can only be determined after the fact.
    • Generally, \( Y > Y_c \).

What Is a Business Cycle?

• Contractions, Recessions, or Hard Landing:
  ➢ Popular definition:
    • 2 or more consecutive quarters of declining real GDP.
  ➢ Official definition:
    • A period of significant decline in total output, income, employment, and trade,
    • usually lasting from 6 months to a year, and
    • marked by widespread contractions in many sectors of the economy.

What Is a Business Cycle?

• Growth Recession or Soft Landing:
  ➢ Official definition:
    • A recurring period of slow growth in total output, income, employment, and trade,
    • usually lasting a year or more.
  ➢ Actual growth rate is less than natural growth rate, resulting in a rising unemployment rate.
**What Is a Business Cycle?**

- **Depression:**
  - A recession that is major in both scale and duration.

- **Trough:**
  - The minimum level that aggregate economic activity reaches.
    - Can only be determined after the fact.
    - Generally $Y < Y_n$.

- **Expansion:**
  - Official definition:
    - A period of significant increase in total output, income, employment, and trade,
    - Usually lasting 6 months or more, and
    - Marked by widespread expansion in many sectors of the economy.

- **Boom:**
  - An extended economic expansion where aggregate economic activity is high and rising.
    - $Y$ is well above $Y_n$. 
What Is a Business Cycle?

- Expansions and contractions:
  - The sequence from one peak to the next, or from one trough to the next, is a **business cycle**.
  - Peaks and troughs are called **turning points**.
    - Turning points are officially designated by the NBER Business Cycle Dating (BCD) Committee.
    - Typically wait 9 – 24 months after the fact before deciding on turning points.

What Is a Business Cycle?

- Main features of a business cycle:
  - Pervasive in nature,
  - Recurrent but not periodic,
  - Persistent, and
  - Each cycle differs in length and severity.
    - Expansions are longer than recessions.

What is a Business Cycle?

- Business cycle are **pervasive in nature**.
  - Business cycles are fluctuations in **aggregate economic activity**, not fluctuations in a specific economic variable.
    - Significant changes in total output, income, employment, and trade.
What Is a Business Cycle?

- Business cycle are **recurrent**:  
  - The pattern of *contraction–trough–expansion–peak* occurs over and over again.

- Business cycles are **not periodic**:  
  - Business cycles do not occur at regular, predictable intervals.

What Is a Business Cycle?

- Business cycles are **persistent**:  
  - Declines in aggregate economic activity are followed by further declines; growth in aggregate economic activity is followed by more growth.
  - Because of persistence, forecasting turning points is quite important.

What Is a Business Cycle?

- Business cycles differ in **length** and **severity**:  
  - Recessions are fairly short; expansions are fairly long.

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![Length of Business Cycle Contractions](image.png)
What is a Business Cycle?

- Main points about business cycles:
  - Business cycles are pervasive in nature, i.e., they are fluctuations in aggregate economic activity, not a specific economic variable.
  - Business cycle are recurrent, but not periodic.
  - Business cycles are persistent.
  - Business cycles differ in length and severity.

What Is a Business Cycle?

Business Cycle Turning Points

Business Cycle Facts

- The cyclical behavior of economic variables:
  - Economic variables show co-movement.
    - They have regular and predictable patterns of behavior over the course of the business cycle.
    - Macroeconomic variables can be classified by direction, timing, and volatility of their movement with aggregate economic activity.
Business Cycle Facts
• The cyclical behavior of economic variables:

➤ Direction:
• What is the direction of a variable’s movement relative to aggregate economic activity?
  ➤ Procyclical: moves in the same direction.
  ➤ Countercyclical: moves in the opposite direction.
  ➤ Acyclical: moves with no clear pattern.

Business Cycle Facts
• The cyclical behavior of economic variables:

➤ Timing:
• What is the timing of a variable's movements relative to aggregate economic activity?
  ➤ Leading: moves in advance.
  ➤ Coincident: moves at the same time.
  ➤ Lagging: moves afterwards.

Business Cycle Facts
• The cyclical behavior of economic variables:

➤ Leading indicators have been used to predict peaks and troughs of the business cycle.
• Generally, several leading variables are combined into an index of leading economic indicators.
• A decline in the index for 3 to 6 months warns of a recession.

Business Cycle Facts
• The cyclical behavior of economic variables:

➤ Leading indicators have not been that useful in predicting recessions.
• Although the data are available promptly, they are often revised.
  ➤ Sometimes signals change without warning.
• A number of false warnings have been given.
• Provides little information about the timing or severity of a recession.
**Business Cycle Facts**

- The cyclical behavior of economic variables:
  - Leading indicators suffer from 2 other issues:
    - Structural changes in the economy necessitate periodic revision of the index.
    - Recessions are often caused by sudden shocks to the economy that leading indicators will not pick up.

**Business Cycle Facts**

- The cyclical behavior of key macro variables:
  - **Procylical**: moves in the same direction as Y.
    - Leading: residential investment, inventory investment, average labor productivity, money growth, stock prices.
    - Coincident: industrial production, consumption, business fixed investment, employment.
    - Lagging: inflation, nominal interest rates.
    - Timing not designated: government purchases, real wages.
  - **Countercyclical**: moves in the opposite direction as Y.
    - Timing is unclassified: unemployment, the unemployment rate.
  - **Acyclical**: moves in no clear pattern with Y.
    - Timing is not designated: real interest rates.
Cyclical Behavior of Key Macro Variables

Business Cycle Facts

- The cyclical behavior of key macro variables:
  
  ➢ **Volatility:**
    
    - **High volatility:** Durable goods production and spending, investment, inventory investment, net exports.
    
    - **Low volatility:** Nondurable goods and services production and spending, consumption.

- International aspects of the business cycle:
  
  ➢ The cyclical behavior of key economic variables in other countries is similar to that in the US.
  
  ➢ Major industrial countries frequently have recessions and expansions at about the same time.
    
    • In addition, each economy faces small fluctuations that aren't shared with other countries.