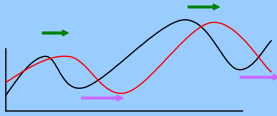


## Describing Business Cycles



## Wesley Mitchell

- Founder of modern business cycle data



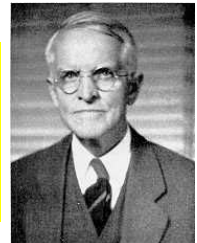
## Sunspots

- Peaks occur, on average, every 12 years.
- If peak (say) 3 years ago, negligible chances of a peak.



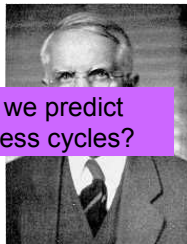
## Sunspots

- Peaks occur, on average, every 12 years.
- If 12 years since a peak, chances of a peak are high.
- If 13 years, chances are even higher of a peak.



## Sunspots

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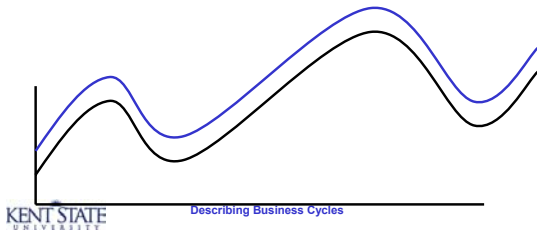
Can we predict business cycles?

## Business Cycles

- Economic Indicators
  - Coincident
  - Lagging
  - Leading

## Business Cycles

- Economic Indicators
  - Coincident

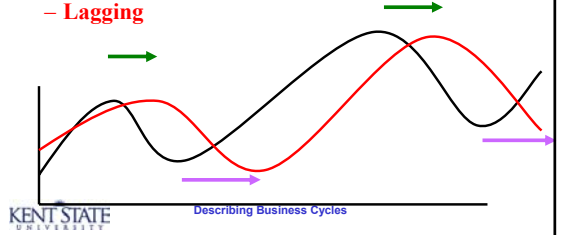


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Describing Business Cycles

## Business Cycles

- Economic Indicators
  - Coincident
  - Lagging

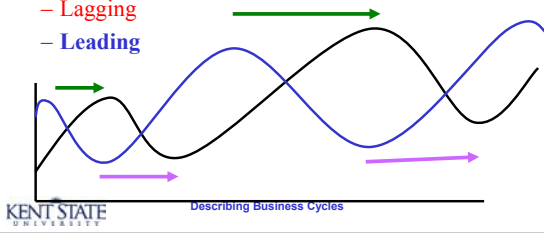


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Describing Business Cycles

## Business Cycles

- Economic Indicators
  - Coincident
  - Lagging
  - Leading



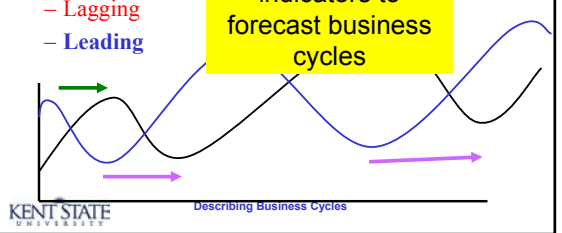
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Describing Business Cycles

## Business Cycles

- Economic Indicators
  - Coincident
  - Lagging
  - Leading

The general idea: use leading indicators to forecast business cycles

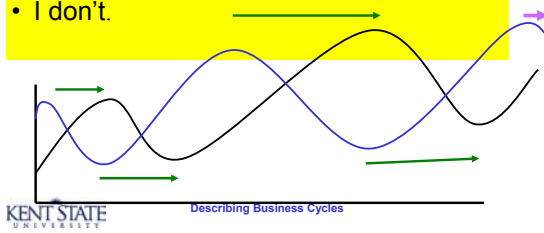


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Describing Business Cycles

## Are Business Cycles Predictable?

- Some Economists follow the [Index of Leading Economic Indicators](#).
- I don't.



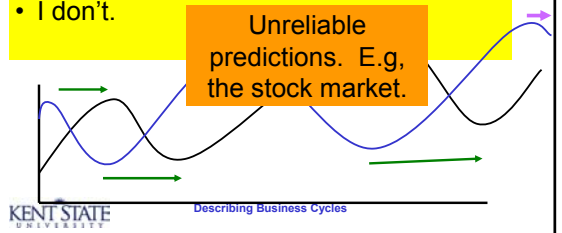
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Describing Business Cycles

## Are Business Cycles Predictable?

- Some Economists follow the [Index of Leading Economic Indicators](#).
- I don't.

Unreliable predictions. E.g, the stock market.



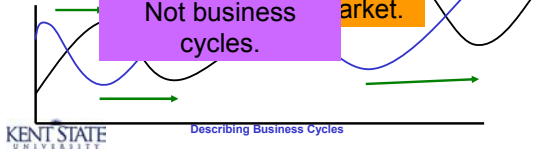
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Describing Business Cycles

## Are Business Cycles Predictable?

- Some Economists follow the Index of Leading Economic Indicators.
- I don't.

Unreliable  
Predict sunspots.  
Not business cycles.  
E.g, market.



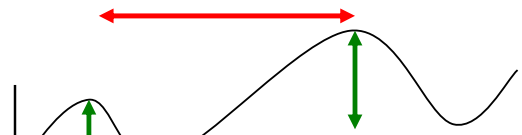
## Counter Cyclical and Pro Cyclical Indicators

- Pro Cyclical Indicator:
  - When the economy is growing, this indicator is growing (and vice versa)
  - Perhaps coincident, or leading, or lagging.

## Counter Cyclical and Pro Cyclical Indicators

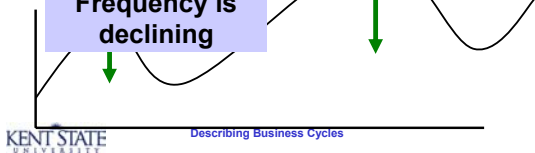
- Pro Cyclical Indicator:
  - When the economy is growing, this indicator is declining (and vice versa)
  - Perhaps coincident, or leading, or lagging
- Counter Cyclical Indicator:
  - When the economy is growing, this indicator is declining (and vice versa)
  - Perhaps coincident, or leading, or lagging

## Amplitude and Frequency



## Amplitude and Frequency

Some Economists conclude the Amplitude and Frequency is declining



## Are Business Cycles Less Severe

Peaks and Troughs of Business Cycles in the United States, 1854-2001

| Peak           | Trough        | Peak          | Trough        |
|----------------|---------------|---------------|---------------|
| ???            | December 1854 | August 1918   | March 1919    |
| June 1857      | December 1858 | January 1920  | July 1921     |
| October 1860   | June 1861     | May 1923      | July 1924     |
| April 1865     | December 1867 | October 1926  | November 1927 |
| June 1869      | December 1870 | August 1929   | March 1933    |
| October 1873   | March 1879    | May 1937      | June 1938     |
| March 1882     | May 1885      | February 1945 | October 1945  |
| March 1887     | April 1888    | November 1948 | October 1949  |
| July 1890      | May 1891      | July 1953     | May 1954      |
| January 1893   | June 1894     | August 1957   | April 1958    |
| December 1895  | June 1897     | April 1960    | February 1961 |
| June 1899      | December 1900 | December 1969 | November 1970 |
| September 1902 | August 1904   | November 1973 | March 1975    |
| May 1907       | June 1908     | January 1980  | July 1980     |
| January 1910   | January 1912  | July 1981     | November 1982 |
| January 1913   | December 1914 | July 1990     | March 1991    |
|                |               | March 2001    | November 2001 |

## Some Are

*Peaks and Troughs of Business Cycles in the United States, 1854-2001*

| Trough         | Peak          | Trough        |
|----------------|---------------|---------------|
| September 1854 | August 1918   | March 1919    |
| September 1858 | January 1920  | July 1921     |
| June 1861      | May 1923      | July 1924     |
| September 1867 | October 1926  | November 1927 |
| September 1870 | August 1929   | March 1933    |
| October 1873   | May 1937      | June 1938     |
| March 1885     | February 1945 | October 1945  |
| March 1887     | April 1888    | November 1948 |
| July 1890      | July 1891     | July 1953     |
| January 1893   | August 1957   | April 1958    |
| December 1895  | June 1897     | April 1960    |
| June 1899      | December 1900 | December 1969 |
| September 1902 | August 1904   | November 1973 |
| May 1907       | June 1908     | January 1980  |
| January 1910   | January 1912  | July 1981     |
| January 1913   | December 1914 | July 1990     |
|                |               | March 1991    |
|                |               | March 2001    |
|                |               | November 2001 |

These were small

## Others are Bad

*Peaks and Troughs of Business Cycles in the United States, 1854-2001*

| Trough         | Peak          | Trough        |
|----------------|---------------|---------------|
| September 1854 | August 1918   | March 1919    |
| September 1858 | January 1920  | July 1921     |
| June 1861      | May 1923      | July 1924     |
| September 1867 | October 1926  | November 1927 |
| September 1870 | August 1929   | March 1933    |
| October 1873   | May 1937      | June 1938     |
| March 1885     | February 1945 | October 1945  |
| March 1887     | April 1888    | November 1948 |
| July 1890      | July 1891     | July 1953     |
| January 1893   | August 1957   | April 1958    |
| December 1895  | June 1897     | April 1960    |
| June 1899      | December 1900 | December 1969 |
| September 1902 | August 1904   | November 1973 |
| May 1907       | June 1908     | January 1980  |
| January 1910   | January 1912  | July 1981     |
| January 1913   | December 1914 | July 1990     |
|                |               | March 1991    |
|                |               | March 2001    |
|                |               | November 2001 |

These were small

This one was not

## Frequency

*Peaks and Troughs of Business Cycles in the United States, 1854-2001*

| Peak           | Trough        | Peak          | Trough        |
|----------------|---------------|---------------|---------------|
| ???            | December 1854 | August 1918   | March 1919    |
| June 1857      | December 1858 | January 1920  | July 1921     |
| October 1860   | June 1861     | May 1923      | July 1924     |
| April 1865     | December 1867 | October 1926  | November 1927 |
| June 1869      | December 1870 | August 1929   | March 1933    |
| October 1873   | March 1875    | May 1937      | June 1938     |
| March 1882     | May 1885      | February 1945 | October 1945  |
| March 1887     | April 1888    | November 1948 | October 1949  |
| July 1890      | May 1891      | July 1953     | May 1954      |
| January 1893   | June 1894     | August 1957   | April 1958    |
| December 1895  | June 1897     | April 1960    | February 1961 |
| June 1899      | December 1900 | December 1969 | November 1970 |
| September 1902 | August 1904   | November 1973 | March 1975    |
| May 1907       | June 1908     | January 1980  | July 1980     |
| January 1910   | January 1912  | July 1981     | November 1982 |
| January 1913   | December 1914 | July 1990     | March 1991    |
|                |               | March 2001    | November 2001 |

## Our Objective Here

- Begin our discussion of cycles.
- Warning: This is not a complete discussion.

End

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