What Pushes the Economic Roller Coaster?

Is there a perfect definite answer as to why the economy goes through ups and downs?

No.

Are there partial answers?

Yes. Two of them.

Supply shocks

Federal Reserve fine-tuning

First Partial Answer: Supply Shocks

What are supply shocks?

Supply shocks are unexpected events that cause a significant change in the economy.

There are two types of supply shocks

Bad supply shocks:

- Examples: Labor strikes, droughts, embargoes
- These bad supply shocks can cause a significant increase in the average price level, a reduction in economic activity, and an increase in unemployment.

Good supply shocks:

- Examples: Mild weather, an unusually good growing season, and the invention of new technologies which lower the cost of production
- These good supply shocks can reduce the average price level, increase economic activity, and increase income.

Can we use supply shocks to forecast economic ups and downs?

No. Unfortunately supply shocks are usually not predictable, at least for the average consumer. As such, this explanation is not particularly useful for forecasting.

Second Partial Answer: The Fed’s “Fine-Tuning”

Why does the Fed do fine-tuning?

The Fed does “fine-tuning” because it tries to counteract bad supply shocks.

How does the Fed do fine-tuning?

By increasing or decreasing money supply

- When the Fed wants to stimulate the economy, the Fed increases money supply - loose monetary policy.
- When the Fed wants to slow down the economy, the Fed decreases money supply - tight monetary policy.

How does the loose monetary policy work?

The result of such money supply increase:

- Short run: lower interest rate, lower unemployment, increased economic activity and increased income.
- Long run: higher inflation rate -> unemployment rate and economic activity return to original levels.
Why Would the Fed Want to Slow Down the Economy?

It is easy to understand why the Fed wants to stimulate the economy by having loose monetary policy. But why would the Fed want to slow down the economy?

That is because if loose monetary policy is used money supply tends to exceed economic growth rate quite a bit. Over a period of time inflation can get quite high. High inflation rate is detrimental to the society. In order to bring down the inflation rate a tight monetary policy is needed to slow down the economy.

Figure: Fed “Fine-Tuning” and Business Cycle

Long-term and Short-term Interest Rates

- Long-term interest rates are interest rates paid on long-term financial investments, like 30-year corporate bonds and 30-year Treasury bonds.
- Short-term interest rates are interest rates paid on short-term financial investments, like 3-month CDs and 3-month Treasury bonds.
- Typically the long-term interest rates are somewhat higher than the short-term interest rates because long-term loans involve more risk.

The Long and Short of Interest Rates: What Does the Spread Tell You?

- Interest rates are not alike. There are interest rates for borrowing, interest rates for saving. Within borrowing and saving, the rates are different as well. For example, credit card interest rate tends to be a lot higher than mortgage interest rate.
- In particular, in the macroeconomic domain, economists are interested in long-term vs. short-term interest rates.

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The Interest Rate Spread

- The interest rate spread = long-term interest rate - short-term interest rate
- The interest rate spread used by the Conference Board (which publishes all the economic indicators) = The yield on the 10 year U.S. Treasury bond - Fed funds rate (the rate that banks charge one another for overnight loans)

Implications of the Spread

- Interest rate spread can be used for forecasting future interest rate trend.
  - Large positive spread (Long-term rates are quite a bit higher than short-term rates) -> Future interest rates should be higher
  - Negative spread (Short-term rates are higher than long-term rates) -> Future interest rates should be lower. Often it is an indication of an economic downturn.

The Federal Budget Deficit

- What is federal budget deficit?
  - Annual budget deficit = Federal expenditure - Federal tax revenue
- The federal government makes up this deficit by borrowing in the form of the sale of Treasury securities and U.S. saving bonds.
- The graph on the next page shows the Federal budget deficit or surplus from 1980 to 2011 (future years projected). Note inflation is adjusted by converting dollars to constant dollars.

Historical Budget Deficit Numbers

- The budget for most of the 20th century followed a pattern of deficits during wartime and economic crises, and surpluses during periods of peacetime economic expansion.
- This pattern broke from fiscal years 1970 to 1997; although the country was nominally at peace during most of this time, the federal budget deficit accelerated, topping out (in absolute terms) at $290 billion for 1992.
- In 1998 - 2001, however, gross revenues exceeded expenditures, resulting in a surplus. In 1998, the Federal budget reported its first surplus ($69 billion) since 1969. In 1999, the surplus nearly doubled to $825 billion, and then again in 2000 to $236 billion.
- However, the budget has returned to a deficit basis, and the U.S. deficit for fiscal year 2009 was $1.41 trillion and 1.30 trillion in 2011, and (current dollars). It got better in 2013.

Budget Deficit as a Percentage of GDP

- As a percentage of the gross domestic product (GDP), within the context of the national economy as a whole, the highest deficit was run during fiscal year 1943 at over 30% of GDP, whereas deficits during the 1980s reached 5-6% of GDP. The deficit was 9.8% of GDP for 2009, 8.8% for 2011, and 4.1% for 2013.
- Data source: [http://www.whitehouse.gov/omb/budget/Historicals/](http://www.whitehouse.gov/omb/budget/Historicals/)
National Debt
• National debt is the current sum of all outstanding budget deficits. It is the total amount of money owed by the United States federal government to creditors who hold US Debt Instruments.
• What is our current outstanding national debt?
  • This depends on whether we include intragovernmental debt obligations, which mostly include money owed to Social Security beneficiaries in the future.
  • If this intragovernmental debt is included, then as of September 2014, the total U.S. public debt was $17.8 trillion.
  • If this intragovernmental debt is excluded, then as of September 2014, the total U.S. public debt was $12.8 trillion.
• For up-to-date data on national debt go to http://www.treasurydirect.gov/NP/BPDLogin?application=np
• Next slide show historical patterns of national debt in the U.S. Note inflation adjustments have been made.

National Debt in % of GDP
• For 2013, U.S. GDP was $16.8 trillion (http://www.bea.gov/national/index.htm#gdp).
• For 2013, U.S. national debt (including intragovernmental debt) was $17.8 trillion (http://www.treasurydirect.gov/NP/BPDLogin?application=np).
• Thus in 2013, U.S. national debt was about 106% of U.S. GDP.

Are Federal Budget Deficits and a High National Debt Bad?
• The worries: High federal budget deficits and a high national debt lead to
  • Higher inflation rate: because federal borrowing increase money supply
  • Higher interest rate: because federal borrowing increase demand for funds
  • Higher tax rate in the future: because somebody has to pay the debt
• There are many different views on whether these worries are warranted. The author of the textbook cited some evidence that these worries are not warranted. However, there is also a large body of research showing that such borrowing is not sustainable in the long run, and unless there is a major policy change, U.S. economy is going to suffer. For an interesting discussion, see GAO (Government Accountability Office’s article on National Debt at http://www.gao.gov/new.items/d04485sp.pdf

What Is the Trade Deficit?
• Trade deficit - means that U.S. consumers are buying more imported products than U.S. producers are able to sell to foreign buyers.
• Trade surplus – means the opposite of trade deficit – in that U.S. consumers are buying less imported products than U.S. producers are able to sell to foreign buyers.
What is U.S. Trade Deficit Situation?

- The United States has posted a trade deficit since the 1970s, and it has been rapidly increasing since 1997. As of December 2012, the trade deficit in the U.S. was $540.4 billion dollars.
- Is such a high trade deficit bad?
  - In general, a high trade deficit can only be dealt with by eventually lowering the value of U.S. dollars against other currencies.
  - As such, a high trade deficit will eventually lead to
    - Higher prices for imported goods.
    - More expensive to travel to foreign destinations.

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Recap on Forecasting

- How to forecast inflation?
  - Predicted inflation rate in year A = Money supply increase rate in year (A-2) - Economy growth rate in year A

- How to forecasting interest rate?
  - Use predicted inflation rate
  - Use interest rate spread:
    - Large positive spread: interest rate will go up.
    - Negative spread: interest rate will go down.

- How to forecast employment opportunities?
  - Use money supply growth rate
    - More money supply -> create boom period -> better employment opportunities
    - Less money supply -> possibly recession -> fewer employment opportunities