

Snazzlefrag's Macroeconomics CLEP Study Notes

Contact: <http://www.degreeforum.net/members/snazzlefrag.html>

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Slope: Rise over run (y-vertical divided by x-horizontal)

Allocative Efficiency: Resources are being used for society's most desired goods.

Capital Goods: (future goods). Satisfy wants indirectly (tools, machinery, facilities, education, research)

Consumer Goods: Satisfy wants directly (cars, clothes, furniture)

Demand: \ The amount of goods or service consumers plan to buy in a given period.

Price up=Demand down.

Shift in demand other than prices = Shift in curve. **Lower Demand = < \ > = Higher demand.**

1) Prices. 2) Related Goods Price. 3) Expected Price. 4) Income. 5) Population. 6) Preferences.

Substitute Effect: High prices = choose cheaper alternatives.

Income Effect: Low prices = buy more AND buy alternatives.

Economic Efficiency: Full employment and full production (assuming the right goods are produced)

Equilibrium: X Above = surplus, Below = Shortage. (**supply = / demand = **)

Full Employment: All capable workers can work, all capital equipment/arable land is being used.

Full Production: All available resources are allocated and being used in the most efficient way.

Opportunity Costs: Cost of goods sacrificed to produce an alternative good.

Production Possibilities Curve: (opportunity cost - Concave graph=Increasing Opportunity Costs)

Graph: Inefficient <) > Unattainable (as you buy more of one, you have to sacrifice another).

1) Full Production/Full Employment (5%). 2) Fixed Resources. 3) Fixed Technology. 4) Only two products.

Shift: Left = Economic Decline. **Right** = Economic Growth (invest in capital goods/new technology).

Productive Efficiency: Least costly method of production is being used to produce goods/services.

Scarcity: Resources = Land, Labour, Capital (plant & equipment), Entrepreneurial Ability

Supply: / The amount of goods or service producers plan to sell in a given period. **Price up=Supply up.**

Shift in supply other than prices = Shift in curve. **Decreased Supply = <) > = Increased supply.**

1) Technology. 2) Resource Price. 3) Taxes. 4) Related Goods Price. 5) Expected Price. 6) # of sellers.

National Income Accounting:

Circular Flow: **G&S <-> Firms <-> Factors of Production <-> Households**. "Income Approach".

Goods & Services/Product: Firms sell, Households buy.

Firms: Produce/sell goods, Hire/Use Factors of Production (Pay wages, rent, salaries, interest to households).

Factors of Production (land/labor/capital/entrepreneur): Households sell, Firms buy (utilize).

Households: Buy/consume goods, Own/Sell Factors of Production (labor) to Firms.

CPI: **(Current Year price of Basket/Base Year price of Basket)*100**. **Cost of Living** (see GDP Per Capita)

Bureau of Labor Statistics (monthly). **Problems with CPI:** Substitution, New Items, Changes in Quality.

Paasche Index: Based on flexible basket. **Laspeyres Index:** Based on fixed basket.

GDP (National Income/Output): Total Market Value of **Final** Goods/Services Produced **WITHIN COUNTRY** in 1yr.

Not non-production goods, second hand sales, financial transactions (except commissions).

Gross Domestic Income Approach: Classical. Add all incomes RECEIVED by producers in the economy.

GDI = W + I + R + PI + Misc (wages, interest, rents, profits, misc non-income charges)

Wages: Largest category. Wages/salaries paid by govt/bus. Pension, Unemp Insurance, workers comp.

Gross National Expenditure Approach: Keynes. Add up all money SPENT by consumers.

GDP = Y = C + I + G + NX (consumption, investment, government, net exports) Firms <---> Households.

Consumption(#1): **Household** goods & services: Durable (cars), Non-Durable(bread), Services(lawyer)

Investment (govt/bus): 1) Machinery/equip 2) Houses 3) New Inventory. NOT financial investment.

Government: Goods and services. SocSec/Defense/Deficit Interest. (minus Transfers: welfare, UI etc)

Net Exports: Sale of exports minus purchase of imports. Can be a negative if imports exceed exports.

Changes in GDP have no effect on I, G, or NX.

Nominal GDP: Total value of G&S produced in a country, valued at current prices (unadjusted for inflation).

Current Yr Quantity x Current Yr Price. (total for every product added together)

Change in output AND prices.

Real GDP: Total value of goods and services produced in a country and valued at base year price.

Current Yr Quantity x Base Yr Price. (total for every product added together) **Change in output, NOT prices.**

GDP Deflator: If prices up **(Nominal GDP / Real GDP) - 1**. *100 (1=100%, 0.5=50%)
Change in prices, NOT output.

Department of Commerce calculates Deflator quarterly.

GDP Growth Rate: **(GDP for yr 1 / GDP for yr 2) - 1**. Can't tell if growth is from changes in output or price.

GDP Price Index: Same as CPI but includes ALL goods/services in the basket.

GDP Per Capita: **GDP / Population**. Income of average individuals. Higher = Higher **Standard of Living**.

GDP Gap: Production (output) decreases b/c Economy doesn't produce enough jobs for willing and able.

GNP: Total market value of **Final** goods/services produced by the **CITIZENS** of a country **ANYWHERE**.

Disposable Income: = Personal Income minus income taxes & property taxes.

National Income (=GDP): = GNP minus indirect taxes and capital consumption allowances.

Nominal Income (Money Income): Number of dollars received by an individual (wages, rent, interest, profit).

Personal Income: = National Income minus corporations minus transfer payments (pensions, unemployment etc.)

Real Income: Purchasing power of \$1.00 (amount of goods and services an individual can buy).

% change in Real Income = % change in Nominal Income - % change in Price Level.

Business Cycle: Expansion > Peak > Contraction > Trough > REPEAT (often measured by GDP)

National Bureau of Economic Research (NBER) uses: Employment, Personal Income, Industrial Production.

Automatic Stabilizers: Natural changes in govt expenditure. Tax Fall/Spending Rises (R), Tax Rise/Spending Falls (I)

Cost Push: Increased cost of production leads to increased prices and increased unemployment.

Deflation: Prices decline over period of years.

Demand Pull: Excess demand for goods/services (more than firm can keep up with) Overtime, job vacancies.

Expansion (Recovery): Output and employment begin to improve. Prices may rise.

Hyperinflation: Usually caused by rapid growth of the money supply, currency loses its value(war).

Inflation: **Change in overall price level** from 1yr to the next. Measured by CPI or GDP deflator. Ave Inflation = 5%

Losers during Inflation: Bondholders, Lenders, Fixed Income (value of saved money decreases).

Inflation decreases value of money. **If Inflation Rate exceeds Interest Rate = Value of Savings go down.**

Winners during Inflation: Borrowers (if before inflation), Appreciation Asset owners.

Inflationary Gap: Real GDP (equilibrium of AS/AD) is higher than Potential GDP

(Long-run AS). Demand exceeds Supply.

Monetary Policy: Govt attempt to influence economy by interest rates, exchange rate, quantity of money.

Peak: Full employments, full capacity (or close to it).

Recession: 6 months+ decline in GDP/income/employment/sav. Business slowdown but **not necess price decrease**.

Recessionary Gap: When Real GDP (equilibrium of AS/AD) is lower than Potential GDP (Long-run AS)

Supply exceeds Demand. Creates excess inventory, low pricing, high unemployment.

Rule of 70: How many years for prices to double. **70 / Annual Inflation Rate**.

Shoelather Cost of Inflation: People walk to bank to withdraw cash, so they don't have to keep cash on hand.

Stagflation: High prices (due to decrease in Short-run AS), low (stagnant) output, high unemployment.

Fix by lowering prices, or increasing AD (curve shifts to the right). Stagflation negates Phillips Curve.

Structural Inflation: Actions of people who **expect** some inflation (union/management, COLA clauses).

COLA: Cost of Living Allowances. Wages adjusted for inflation...so end prices increase.

Trough: Lowest levels of output and employment. May be short or long period.

Civilian Labor Force: "official specification". All 16+, employed or unemployed, except prison, military, retired.

Cyclical Unemployment (normal flucnts): Not enough jobs for willing and able. Affected by fiscal and monetary policy.

Efficiency Wages: Pay above average rate, keeps employees happy, healthy, high productivity. Increases unemp.

Frictional Unemployment: Temporary. b/n Jobs. Typical turnovers in labor market (school leavers, quit, laid off). 2-3%

Full Employment: = When Cyclical Unemployment is zero (5% **Frict + Struct Unemployment is unavoidable**).

Full Output: Level of production when there is full employment.

GDP Gap: Production (output) decreases b/c Economy doesn't produce enough jobs for willing and able.

Labor Force: ALL people who are of legal age to work (16+). Not-looking, retired, homemakers.

Natural Unemployment Rate: = **Frictional Unemployment + Structural Unemployment**. 5%

Okun's Law: For each 1% the Unemployment Rate exceeds Natural Unemployment Rate(5%), GDP Gap increases 2.5%.

% Change in Real GDP = **3% - (2 * change in unemployment rate)**.

Participation Rate: **(Civilian Labor Force / Labor Force) *100**.

Structural Unemployment: Long. Mismatch b/n employee and employer. Wrong skills, live in wrong place (no jobs locally)

Unemployment Rate: **(Unemployed / Civilian Labor Force {ie, Unemployed + Employed}) *100**.

Aggregate Demand: Contraction < \ > Expansion. Changes in total Real GDP demanded in relation to Price Level.

Lower Prices lead to Higher AD (right). People are buying more.

Higher AD (right) then leads to Higher Prices, and Decreases AS...until back to equilibrium.

Higher Prices lead to Lower AD (left). People are buying less.

Lower AD (left) then leads to Lower Prices, and Increases AS...until back to equilibrium.

Substitution Effect: Delay buying until cheaper prices, or buying foreign goods because cheaper.

Wealth Effect: Rise in price will make some people less wealthy, so they spend less.

Shifts in AD Graph: (anything other than Price Level change) **Decrease in AD = < \ >**
= Increase in AD.

Eg, changes in expectations (unemployment, income, inflation, profits), changes in fiscal/monetary/world policy.

Aggregate Supply: Changes in quantity of Real GDP supplied in relation to Price Level.

Higher Prices lead to Higher AS (right). More product = more profit for firms.

Higher AS (right) then leads to Lower Prices, and Increases AD...until back to equilibrium.

Lower Prices lead to Lower AS (left). More product is being bought.

Lower AS (left) then leads to Higher Prices, and Increases AD...until back to equilibrium.

Long-run AS: Relationship b/n quant of Real GDP supplied and Price Level when Real GDP = Potential GDP.

Potential GDP | = Real GDP when all labor, capital, land, ability are fully utilized. **Real Wages** are constant.

Higher GDP = growing economy, cheaper prices due to improved resource usage, and higher production.

Increased Potential GDP b/c of Increased Aggregate Labor Hours, or Increased Labor Productivity.

Increased Labor Productivity b/c of Techno changes, or growth of Capital Stock & Human Capital.

Long-run AS Graph: | when Potential GDP is reached. Money Wage & Prices=**flexible** (Real Wage=Constant)

Short-run AS: / Relationship b/n quant of Real GDP supplied and Price Level when **Money Wage Rate** is constant.

Short-run Equilibrium: When quant of Real GDP demanded = quant of real GDP supplied.

Intersect of AD & SAS \ |. No shortage or surplus of goods, so firms keep prices and production constant.

If prices rise **above** equilibrium, firms cut prices and decrease production to get rid of surplus.

If prices fall **below** equilibrium, firms raise prices and increase production to meet

demand.

Short-run AS Graph: Real GDP is less than Potential GDP < / > Real GDP is greater than Potential GDP.

Shifts: If Potential GDP increases, LAS & SAS curve shifts **right (economic growth - lower prices/higher production)**.

As LAS/SAS curves shift right, equilibrium point is higher on the curve, so lower prices and higher production.

If **Money Wage rises**, SAS shifts **left** (decr), but LAS stays the same. Labor cost push prices up. (**CstPsh Infl**)

Rising Prices w/ an **unchanged Real Wage Rate** (ie, **rising Money Wage Rate**) = LAS rises (more profits).

Rising Prices w/ an **unchanged Money Wage Rate** = SAS rises (firms make higher profits by producing more).

Aggregate Expenditure: Consumption Function - Import Function + I + G + NX. (planned expenditure/Induced).

Aggregate Quantity: (Measured by Real GDP). Sum of quantities of all final goods produced.

Consumption Function: Keynes. **As Income Rises = Consumption Rises.** (but slower: 90-95%)

Relationship b/n **consumption expenditure** and **disposable income**. 45° Line // **Intercept** = Break Even Income Level. **Upper Quadrant** = Savings. **Lower Quadrant** = Dissavings (borrow/withdraw from sav).

Slope of Consumption Function = Marginal Propensity to Consume.

Disposable Income: Real GDP - Net Taxes. As Real GDP increases, disposable income increases (slower b/c tax)

Average Propensity to Consume (APC): **Consumption / Disposable Income.** (AP to Save = Saving / Disposable Income)

Marginal Propensity to Consume (MPC): Ratio: **Change in Consumption / Change in Disposable Income.**

Marginal Propensity to Consume out of Real GDP: $MPC * (1 - \text{marginal tax rate})$.

Marginal Propensity to Import: Change in Imports / Change in Real GDP. Higher GDP = Higher Imports.

Marginal Propensity to Save (MPS): Change in Saving / Change in Disposable Income.

$MPC + MPS = 1$

Multiplier: $1 / (1 - MPC)$. Higher the MPC/Lower the MPS, the larger the multiplier is. Eg, $MPC=0.9$, multiplier=10.

Change in Equilibrium Expenditure / Change in Aggregate Expenditure.

Magnitude of Multiplier depends on the slope of the Aggregate Expenditure curve.

Saving Function: Relationship b/n **savings** and **disposable income**. Horizontal Line.

Disposable Income (DI) = Consumption (C) + Saving Consumption (S). $DI = C + S$.

Slope of Saving Function = Marginal Propensity to Save.

Classical Theory: Supply-side. Wages/Prices adjust naturally/quickly to equilibrate.

Uses NomGDP, not Real.

1) Pure Competition 2) Flexible Wages/Prices 3) Self-interest 4) People can't be fooled.

Say's Law: "Supply creates its own demand". Producing goods = profits equal to value of the goods purchased.

Households prefer to consume than save. Only save if intRate is high. Thus, investment is most sensitive to intRates.

Wages adjust so that decreased spending won't result in less output, employment, or real income.

LAS curve is always Vertical. Prices/Wages/Interest Rates are flexible. AD curve is stable if AS is kept constant.

Higher Aggregate Demand causes change in prices but NOT change in output.

Increase in Money Supply = Increase in NomGDP and Nominal Wages.

Unemployment is Voluntary. Lower your wage demand. No unions, no minimum wages etc.

Higher Savings cause lower interest rates (encourage investment) = Increase Demand to offset loss due to saving.

Crowding Out: Expansionary Policy increases interest rates and reduces investment (b/c govt has to borrow).

Cyclical Deficit: Arises out of a Recession (result of Expansionary Fiscal Policy).

Fiscal Policy: Govt attempt to influence economy by taxes, transfer payments (pension/UI), expenditures, **BUDGET**.

Demand Side: Keynes. Govt **Spending/Taxes** can influence SAD, and affect GDP in the short-run.

More Spending/Lower Taxes > Increase in GDP (but DEFICIT). Expansionary help in time of recession/depression.

Less Spending/Higher Taxes > Decrease in GDP (budget SURPLUS). Contractionary help in time of inflation.

Supply Side: Say's/Class. Economy stagnates w/out work/saving/investment incentives. Govt should stim LAS(right).

Cut taxes > increase Disposable Income > increase Profits > increase Investment > increase Employment.

Expansionary Fiscal Policy (recession): Increase govt spending (employment up), lower taxes (invest/purchase up).

Output increases, Interest Rates increase.

Results in a deficit budget. Increased spending = AD shifts right, SAS shifts left (unless infrastructure expenses)

Expansionary Policy is most effective in increasing Real GDP when the AS curve is horizontal.

Contractionary Fiscal Policy (inflation): Decrease govt spending, raise taxes. Try to stop rising demand/rising prices.

Short-run: Only Variable Costs change. **Long-run:** All costs are variable (firms have more time to adjust levels).

Keynesian Theory: SPEND. Demand-side. "Capitalist economies don't employ their resources fully". Need Govt **Fiscal Policy**

1) Inflexible Wages/Prices ("**sticky** downward"=can't lower prices/wage b/c of union

contracts, long-term contracts).

A decline in Real GDP will have no effect on prices.

2) **SAS curve is always horizontal = Demand Driven Economy.**

3) AD is unstable. So it must be managed by Govt to avoid recession.

4) Loose link b/n Investment and IntRates. Banks may not want to lend, Public may not want to borrow.

Monetarism (Classical): Govt should leave economy alone.

Change in **Money Supply** is most important factor in output, price, employment levels. Direct link b/n MS and AD.

Equation of Exchange: $MV = PQ$ (amount spent = amount received). $PQ = \text{NomGDP}$, $MV = \text{NomGDP}$.

$M = \text{Money Supply}$, $V = \text{Velocity of Money}$ (turnover of \$1/yr), $P = \text{Price Level}$, $Q = \text{Quantity of goods \& services}$.

Crude Quantity Theory: Change in $M = \text{Same change in } P$ (not true). 10% change in Money Supply = 10% change in Price.

Sophisticated Quantity Theory: If close to full employment, Higher $M = \text{Higher } P$. If not, Higher $M = \text{Higher } Q$. (Monetarists)

Progressive Tax: Ave Tax Rate (**Tax Revenue / GDP**) rises with GDP. **Stable. High GDP -> High Tax Revenue.**

Average Tax Rate: Taxes Paid / Taxable Income. **Marginal Tax Rate:** Change in Taxes Paid / Change in Taxable Income.

Ricardian Equivalence Theorem: Higher public debt will have little/no effect on real GDP/employment (people will save more).

People are not fooled by the government borrowing money today. So they will save more today, anticipating higher taxes soon.

Structural Deficit (Natural): Arises from a Fundamental Flaw in the economy. Not enough resources to meet AD.

Money: Medium of Exchange, Store of Value, Unit of Account (standard of value).

M1, M2, M2+, M3 --> Less Liquid (more difficult to turn into cash).

$M1 = \text{Currency} + \text{demand deposits (no interest)}$.

$M2 = M1 + \text{Personal Savings} + \text{Non-personal notice deposits (at Banks)}$.

$M2+ = M2 + \text{Other Deposits (at Trust Co., Credit Unions)}$

$M3 = M2+ + \text{Non-personal Term Deposits} + \text{Foreign Currency Deposits}$.

Money Demand Curve: \ **Higher Interest Rate = Less Money Demanded. Larger GDP = Shift to Right.**

Increased Money Demand = Higher IntRates, Lower Bond Prices.

Money Multiplier: $(1 / \text{Cash Reserve \%}) * \text{Excess Cash Reserve}$. Applies to entire banking system (not individual banks).

Monetary Policy: Federal Reserve policies change size of money supply and interest rates.

Bank Rate: Interest Rate the Fed will lend money to commercial banks (to meet their Cash Reserve Requirements).

Budget Deficit: Reduce deficit by increasing taxes, decrease govt spending, decrease interest rates.

Cash Reserve: **Bank's Assets / Bank's Liabilities**. Ensures banks cover liabilities.

Lower Reserve Req = Lower Int Rates.

Excess Cash Reserves: Amount of cash exceeding a Bank's Cash Reserve = Amount a Bank can loan out. $12-2=10$.

Discount Rate: Paid by banks to Federal Reserve. Higher Discount Rate to banks = Higher Interest Rates to borrowers.

Federal Reserve: Monetary Policy. Interest Rates & Money Supply/Demand. **Money Supply** |, **Money Demand** \.

Higher Money Supply(MS) = People buy bonds (to invest), IntRate falls, AD increases, NomGDP increases.

Higher Money Demand(MD) = People sell bonds (to get cash), IntRate up.

Contractionary in Inflation = Raise IntRate, Raise ReserveReq, Lower NGDP, Decrease MoneySupply ("**Tight**").

Open Market Operation: Fed **sells** govt securities (Treasury Bills), bond prices fall, **Fed takes money in**.

Expansionary in Recession = Lower IntRate, Higher NGDP, Lower ReserveReq, Increase MoneySupply ("**Easy**").

Open Market Operation: Fed **buys** govt securities (Treasury Bills), bond prices rise, **Fed gives money out**.

Interest Rate: Paid by borrower to Banks. Higher IntRate > People Borrow/HOLD less cash (they save instead. Bonds).

National Debt: Accumulation of all past deficits.

National Saving: Increase in NS = Decrease in IntRate, Increase in Investment.

Phillips Curve: \ Shows a stable **inverse** relationship b/n Unemployment Rate and Inflation Rate. High UR = Low IR.

Theory supported Keynesians. Increased Money Supply = Lower Unemployment, Higher Inflation Rate.

Supply Shock: Sudden drastic change in AS curve. OPEC oil up in 1970s (AS curve shifted to left, output down, prices up).

Accommodation: Monetary Policy by Central bank to cushion blow of Supply Shock.

Increase Money Supply --> Reduce Unemployment --> Lower Interest Rates -->

Increase Inv. AD curve shifts right.

Transmission Mechanism (Keynes): Shows how IntRates affect Investment Expenditure, Real GDP, Prices, Unemployment.

Money Supply affects **Investment** affects **AD** affects **Real GDP/Prices/Unemployment**.

Economic Growth: Measured by GDP (and **GDP per Capita**). GDP relies on **Output of Labor * Productivity of Labor**.

Low Economic Growth Rate causes Large Budget Deficit. **Growth = Improve Tech or Raise Capital (inv in P&E)**.

Supply Factors: Quant and Qual of nation's natural resources, human resources, capital stock, technology.

Production Possibilities Curve: Shifts RIGHT. **Increase** in resources, Sav/Inv, new

technology, growth of human capital.

LAS Curve: Shifts RIGHT. More long-run supply, economy adjusts production Demand to accommodate increased supply.

Productivity Function: **Output per hour of work / Capital per hour of work.** Curve Shifts if **new technology**.

One Third Rule: X percent increase in Capital per hr of work = 1/3 of X percent increase in Output per hour of work.

Classical Growth Theory: Population Growth is determined by income per capita. High Income = Pop Grwth = High Labor Supply.

Industrial Growth Policy: Govt should take active role in structure & composition of industry. R&D, Education, Incentives etc.

Neoclassical Growth Theory: Population Growth is determined by technological change. Savings & Investment. Capital Stock.

New Growth Theory: Technological Change results from people's choices and pursuit of Profit = Constant Economic Growth.

Demand-side Growth Policy: Increase AD during recession. Demand uses resources, encourages productivity, profits.

Supply-side Growth Policy: Achieve full production (capacity potential) to shift LAS & SAS to the right. Saving/Inv/Entrepreneur.

Absolute Advantage: Country can produce MORE output with less resources (inputs) **More Efficiently/CHEAPLY**

Comparative Advantage: Country can produce goods at a lower **opportunity cost** than any other country. Better use of resources.

International Specialization: Each country produces more of what it can produce efficiently to get the best **Gains From Trade**.

Trading Possibilities Line: Option to produce more of what another country needs, to trade for more of what you need.

Protectionist Policy: Protect Indus from foreign trade. Protects Employment at expense of other industries and consumers.

Other countries retaliate. Benefits of specialization & trade are reduced. Limits competition, higher prices. No Comp Adv.

GATT: General Agreement of Tariffs and Trade. Nondiscrim of member nations, reduce tariffs, eliminate quotas.

Protective Tariffs: Encourages domestic production of goods by placing an extra tax on foreign products.

Increases domestic price of the good. Increased revenue goes to the domestic govt. Creates Comp Advant.

Revenue Tariffs: On goods not produced domestically.

Subsidies: Govt pays grants to producers to help them develop.

Quotas: Limit on foreign imports. Increases domestic price of the good. Increase revenue goes to the Foreign Exporter.

Exports: (+ cash in) Create foreign dem. for US dollars. Exports paid for with foreign currency. More supply of foreign curr.

As value of US currency increases, exports will decrease. (other nations can't afford as many of our goods)

Imports: (- cash out) Create domestic dem for foreign currency. Imports paid for with foreign currency. Less supply of foreign curr.

Balance of International Payments: Records all foreign-domestic transactions (imports, exports, tourism, fin, shipping, real estate).

Current Account: Tracks all exported (+) and imported (-) goods & services.

Balance of Trade: Whether a country Imported more than it Exported. **Deficit**=More imports, **Surplus**=More exports.

Capital Account: Tracks investments/loans to other countries (- exports). Inv/Loan from other country to this country (+ imports)

Currency: Foreign Exchange (23 hrs/day)

Federal Reserve: Affects exchange rate with Interest Rates. High Demand = Fed lowers IntRates/sells \$.

Higher Demand = Lower Supply. Lower supply = Higher Exchange Rate (price). Real value of Goods will increase.

Exchange Rate, Interest Rates, Expected Future Exchange Rate.

Low Exchange Rate (price) \ = Greater Demand for that currency. Shift: **Decreased Demand < \ > Increased Demand.**

Higher Supply = Lower Demand. Lower Demand = Lower Exchange Rate (price). Real value of Goods will decrease.

High Exchange Rate (price) / = Greater Supply of that currency. Shift: **Decreased Supply < \ > Increased Supply.**

Supply & Demand: **X** Lower quadrant = shortage. Upper quadrant = surplus