For the first 5 units, we have been looking at microeconomic theory, which focuses on economic decision making by individuals, households, & businesses. In Unit 6, we will begin to study ***macroeconomic theory***, which focuses on the workings of an economy as a whole. However, before we can begin to look at the economy as a whole, we need to understand how we measure the economy. We also need to understand what factors in the economy can influence what is happening in the economy, and how changes in those factors can serve as signals to changes in the economy. This measuring of the economy as a whole, and various aspects of the economy, is done using economic indicators.

Economic Indicators

Economic indicators are different aspects of economic activity that, when evaluated together, indicate the health and direction of the economy. Some are considered ***leading*** indicators; this means that the indicators change ***before*** the economy changes. Some are considered ***coincident*** indicators; this means that the indicators change ***when*** the economy changes. Some are considered ***lagging*** indicators; this means that the indicators change ***after*** the economy changes.

Gross Domestic Product (GDP)

The **Gross Domestic Product (GDP)** is the monetary value of all the finished goods and services produced in the United States (or any nation) during a specified time period. Every nation has its own GDP. In the U.S., the GDP is measured in dollars. Other nations measure their own GDP in their own currencies.

Very simply, to calculate the GDP, you add up the dollar value of every finished good and service sold in the U.S. The GDP is the most important measure of an economy. The GDP of the U.S. is over $16 trillion annually. This means that there are over $16 trillion worth of finished goods and services produced in the U.S. each year.

In the U.S., we focus on what is referred to as the "Real" GDP. The Real GDP is the value of the GDP after taking out the effect of price changes. Using this number takes out the effects of inflation (a rise in the level of prices) and relates to real purchasing power. For example, imagine if the GDP grew from $16 trillion to $16.5 trillion (based on adding up the dollar value of each finished good or service sold in the U.S.); however, the only reason that the number grew was because everything got more expensive, and the actual quantity of goods and services went down. If inflation was not taken into account, the GDP number would be deceptive, since it indicates growth. But if the actual quantity of goods & services went down, that is a reduction in the actual physical economic output of the U.S. (fewer things produced), which is a bad thing.

The GDP is used to measure the ***size & growth*** of an economy. Growth is the change in the level of economic activity from one year to another. The make-up of the GDP includes the following:

- **Consumer Spending**. This is spending by individuals on goods and services. It is referred to as *private consumption*.
- **Business Spending on Capital**. This is when businesses are buying equipment, expanding facilities, etc. It is referred to as *investment*.
- **Government Spending**. These are purchases by the government of goods & services from the private sector. It also includes payments to government employees.

The basic formula for calculating the GDP is:

Consumption (C) + Investment (I) + Government Spending (G)

GDP = C + I + G

For a country, its economic well-being measured by the ***size*** of its GDP. The larger the GDP, the better it is for that country. It means there is higher output in that country relative to other countries. This normally means that more jobs are generally available in that economy, and wages for those jobs are generally good. This usually results in a better standard of living for those in the country. The U.S. has a very high GDP, and relative to the rest of the world, it has a higher standard of living. Things we take for granted in the U.S., like reliable electric power, adequate housing, abundant food supplies, and all the nice-to-haves (cars, TVs, cell phones, etc.) are common even for those who are considered "poor" in the U.S. In many other countries, these are either non-existent or luxuries only available to the richest in those countries.

The smaller the GDP, the worse it is for that country. It means there is lower economic output in that country relative to other countries. This normally means that fewer jobs are generally available in that economy, and the wages for those jobs are generally poor. This usually results in a lower standard of living for those in the country.

Countries with a large GDP, like the U.S., tend to have a lower unemployment, higher wages, and a higher standard of living. Countries with a small GDP tend to have higher unemployment, lower wages, and a lower standard of living. *(Images courtesy ww.reachhispanic.com & africa at www.freedigitalphotos.net)*

Not only is the size of the GDP important for a country, the ***rate of change*** is just as important. Is the economy growing or shrinking? If so, at what rate is it growing or shrinking? Growth is good; shrinking is bad. An economy that is growing (higher output) is generally adding jobs and improving its standard of living. An economy that is shrinking is generally losing jobs and seeing a decline in its overall standard of living.

How fast or slow the GDP is growing or shrinking is important, too. Low growth (<2% annualized growth) is bad, since the economy isn't growing rapidly enough to account for increases in the labor force and/or replace jobs lost in any previous downturn. Runaway growth (>4% annualized growth) is bad, because it is usually due to price inflation for some type of asset (housing, etc.). Ideal growth is between 2% & 4% (2.5 – 3.5% is considered best) per year. At the optimal growth rate, the economy is growing rapidly enough to keep unemployment low, but not so quickly as to cause inflation.

How GDP Is Reported & Evaluated

The Bureau of Economic Analysis (a division of the US Department of Commerce) reports changes in the GDP quarterly (every 3 months). The numbers they report (that you see in the news) are normally the percentage change in the GDP compared to the previous quarter. The numbers represent an annualized equivalent of what the growth rate was during that quarter. For example, if the GDP grew by 1% during the quarter, it would be reported to have grown at a 4% annualized rate. The current trend of the change is of primary importance. You want to see if the rate of change now is better than it was for previous quarters? The ***trend*** in the rate of change is a major economic indicator as to what is happening to the economy.

To better understand this, let's look at some examples:

GDP Change Example #1	
Quarter	**Rate of Change (%)**
Last Quarter	3.0
2 Quarters Ago	2.1
3 Quarters Ago	1.0
4 Quarters Ago	0.4

In Example #1, the rate of change for more recent quarters is larger than in earlier quarters. The rate of expansion of the GDP is increasing. *What it tells us*: **the economy is starting to "pick up".** The economy is growing more rapidly now than it was before. This usually means that more and more workers are being hired, and economic output is getting higher and higher; also, based on the rate of growth being above 2.0%, this means that not only is the economy growing rapidly enough to accommodate new workers entering the workforce, it is also creating jobs for those in the workforce who had previously worked but became unemployed (or entered the workforce during the low economic growth but were unable to find work).

GDP Change Example #2	
Quarter	**Rate of Change (%)**
Last Quarter	0.4
2 Quarters Ago	1.0
3 Quarters Ago	2.1
4 Quarters Ago	3.0

In Example #2, the rate of change for more recent quarters is smaller than in earlier quarters. The rate of expansion of the GDP is decreasing. *What it tells us*: **the economy is starting to "slow down".** The economy is growing less rapidly now than it was before. Since the rate of change has dropped below 2.0%, it is no longer growing fast enough to accommodate all of the new entries to the workforce. Unemployment will start to go up, through some combination of the fact that some of those new workers are unable to find work and/or some workers that lose jobs are unable to find new work.

GDP Change Example #3	
Quarter	**Rate of Change (%)**
Last Quarter	-1.5
2 Quarters Ago	0.4
3 Quarters Ago	1.0
4 Quarters Ago	2.1

In Example #3, the rate of change for more recent quarters is not only smaller than earlier quarters, but it has now gone negative. In this example, the GDP is now decreasing (contracting). *What it tells us*: **the economy is "taking a nose-dive".** Output is dropping. Workers are losing their jobs. New entries to the workforce are, for the most part, unable to find jobs. Consumers, overall, have less to spend (no job = no spending money).

GDP Change Example #4	
Quarter	**Rate of Change (%)**
Last Quarter	1.5
2 Quarters Ago	0.4
3 Quarters Ago	-1.0
4 Quarters Ago	-1.5

In Example #4, the rate of change for more recent quarters is larger than earlier quarters and now has gone positive. The GDP is now increasing (expanding). *What it tells us*: **the economy has "turned the corner".** Rather than continuing to shed jobs in the economy, it is starting to add jobs. Although, in this example, the 1.5% growth rate is not quite high enough to keep up with new entries into the labor force, the economy is starting to add jobs, and the overall picture being painted is cautiously positive.

Economic Indicator: Gross Domestic Product (GDP)
What It Measures: Size of the Economy
Goal: Growth Rate between 2.5% and 3.5% per year

Unemployment

Unemployment is the condition of those who are willing and able to work, and are actively seeking work, but who do not currently work. In order to be counted among the ranks of the unemployed, you must be:

1. Willing and able to work
2. Actively seeking work

Unemployment Rate

The size of the workforce that is unemployed is of great importance. What is most commonly evaluated and reported is the unemployment rate. The **unemployment rate** is the percentage of the civilian labor force that is considered unemployed.

We need to clarify some definitions to better understand what is used to calculate the unemployment rate. The **labor force** is made up of all citizens age 16 or older who are either 1) currently employed, or 2) actively seeking work. If you are not seeking work, you are not considered part of the labor force and are not counted in the employment/unemployment numbers. Some examples of citizens over the age of 16 who are not technically part of the labor force are full-time students who have no job, people who are declared unable to work due to a disability, retirees, people in jail or other institutions, and people who could be working but, for whatever reason, are no longer looking for work.

To calculate the unemployment rate, you simply divide the number of people classified as unemployed (over 16, willing & able to work, and actively seeking work) by the total number in the civilian labor force.

$$\text{Unemployment Rate} = \frac{\text{Number Unemployed}}{\text{Number in Civilian Labor Force}}$$

Problem with Calculating Unemployment This Way

There are several problems with calculating the unemployment rate this way. First, this calculation does not take into account workers who are marginally attached to the labor force. These are people who have looked for work in the past 12 months but have given up on looking for a job even though they want one. Discouraged workers, a subset of this category, are those who have given up due to job-market related reasons. Both marginally attached workers and discouraged workers would like to be working but, because they are technically not actively seeking work, are no longer counted as being among the workforce or among the "unemployed." If all the country focused on was the basic unemployment rate, which excludes these citizens, we might be lulled into thinking that the employment situation is more positive in the country than it actually is.

The second problem is that this calculation gives temporary and part-time jobs the same weight as full time jobs. That worker may only have a temporary job (like someone who gets a temporary office job through one of a variety of temporary employment agencies); however, as soon as that temporary job is over, he/she will be back among the ranks of the unemployed. Also, a worker may want to work full-time, but he/she can't get the hours (underemployed). Underemployment is a bad thing for the economy, but the main unemployment number reported by the BLS does not reflect any differences between full-time permanent employment, part-time permanent employment, and temporary employment (whether full-time or part-time).

Unemployment Is a BAD Thing

A high unemployment rate is bad for the economy. When people are out of jobs, they have less money to spend. If they have less money to spend, then less production is needed from suppliers(less stuff made or services provided). If less production needed, then fewer jobs (or less hours for existing jobs) are needed. If fewer jobs are needed, then businesses start laying off their workers or start downsizing; these actions result in additional increases in unemployment. This larger number of people collecting unemployment compensation is an additional drag on the economy. The government needs to tax or borrow that money to pay them, reducing economic activity that would have otherwise been done with that money. This is why the government strives for low unemployment.

Unemployment is bad for the economy. Those unemployed workers are receiving transfer payments (unemployment compensation) from the government, paid for with taxes collected from those employed. Also, those unemployed don't have as much money to spend as they did when employed, so overall demand in the economy goes down, leading to further unemployment.

An Unemployment Rate that is Increasing is Bad

If the unemployment rate is going up because more people are losing their jobs, it is bad for the economy. When more people are losing their jobs, they have less money to spend. If less is being spent, then less is being bought. If less is being bought, then less is being made by producer. If less is being made by producers, then fewer employees are needed. If fewer employees are needed, then there will be an increase in unemployment. This negative cycle keeps repeating but will eventually stop; however, how bad things get will vary.

When an Unemployment Rate that is Increasing is a Good Thing

Just because the unemployment rate is going up does not automatically mean that more people are losing jobs. Remember that unemployment is calculated by dividing the number of people unemployed by the total civilian labor force, and people no longer looking for work are not counted as part of either number. If the unemployment rate is going up because workers are re-entering the workforce, this is a good thing.

Let's look at a simple example of an economy that has 100,000,000 workers with 10,000,000 unemployed. In this example, there is 10% unemployment. If 100,000 discouraged/marginally attached workers decide to re-enter the workforce, the economy now has 100,100,000 workers with 10,100,000 unemployed. The unemployment rate would now be 10.1%. Although unemployment increases, it is not because workers lost jobs. It is actually a positive thing that formerly discouraged workers are now confident enough in the likelihood that they will find a job that they are willing to re-enter the workforce, which will drive the unemployment rate up; however, the reason for the increase is because of increased confidence in the direction of the economy, not because workers are losing jobs.

An Unemployment Rate that is Decreasing is Good

If the unemployment rate is going down because more people are getting jobs, this is a good thing. If more people getting jobs, that means they will have more money to spend in the economy. If they have more money to spend, then more stuff needs to be provided to satisfy that demand. If more stuff needs to be provided, this will lead to increases in production. If there are increases in production, then normally more workers are needed. When more workers are needed, then you will usually see an additional reduction in unemployment. A positive cycle begins.

When an Unemployment Rate that is Decreasing is a Bad Thing

Just like an unemployment rate that is increasing may not necessarily be a bad thing, an unemployment rate that is decreasing may not be a good thing. It depends on why the rate is going down. If the unemployment rate is going down because workers are leaving the workforce, this is a bad thing. Remember the earlier discussion on marginally attached workers and discouraged workers; both are workers who are willing and able to work, but not actively seeking work, so they are not counted among either the unemployed or part of the civilian labor force.

Let's look at a simple example of an economy that has 100,000,000 workers with 10,000,000 unemployed. The unemployment rate would be 10%. If 100,000 workers give up and leave the workforce, there are now only 99,900,000 workers with 9,900,000 unemployed. The unemployment rate would now be only 9.9%. Unemployment drops, but not because unemployed workers got jobs. The only reason the unemployment rate went down is because workers have left the labor force due to extremely poor employment prospects. Someone who only notes that the unemployment rate went down, and does not analyze why it went down, may think there is something positive happening in the economy. The opposite, however, would be true; things in the economy would be getting worse.

Another reason the unemployment rate may go down is because of an increase in part-time or temporary jobs. If the unemployment rate is going down because the jobs that are created are only part-time or temporary, this is a ***bad*** thing. Remember the other problem with the way the unemployment rate is calculated is the fact that part-time or temporary work as equal with full-time work. Those workers more than likely want permanent, full-time jobs, and those workers are probably under-employed. If we only focus on that basic unemployment number, not realizing that, in this case, the underlying cause for the lower rate is due to part-time or temporary work, we may think that the employment situation is getting better when it really isn't.

Types of Unemployment

There are four main types of unemployment: structural, cyclical, frictional, and seasonal.

Structural Unemployment. Structural unemployment occurs two ways. In some cases, it is unemployment resulting from skills that do not match what employers require. Due to the downturn in the housing industry in 2008, many construction workers lost their jobs. Since relatively few houses were being built, there was little demand for their labor. At the time, though, there was still a great deal of demand for experienced workers in both the health services and transportation industries, but those unemployed workers did not have the skills or experience needed to fill those jobs. In other cases, it comes from the workers being physically separated from the job opportunities for their skills. In 2008, although there was an overall downturn in the construction industry, there were a few areas in the country where the construction industry was doing well (like North Dakota). However, many workers in other parts of the country who had those skills did not want to relocate to North Dakota and therefore remained unemployed.

Cyclical Unemployment. Cyclical unemployment is unemployment resulting from too low a level of aggregate demand. It is also known as demand deficiency unemployment. The cause of cyclical unemployment is because people want less. When people want less, producers make less. Employers reduce the number of employees because of lower demand for their products.

Frictional Unemployment. Frictional unemployment is unemployment when people are temporarily between jobs. Perhaps the worker is relocating to a different area, and he/she is in the process of finding a new job. This worker is not out of work because of economic conditions.

Seasonal Unemployment. Seasonal unemployment is unemployment of people who are out of work because of factors that vary with the time of year. A good example of this is a lifeguard at a resort beach. That lifeguard might work from May to September and be out of work through the winter because the beach is closed for the winter. When spring comes around again, that lifeguard will be employed again. This unemployment is expected and not due to economic conditions.

Economic Goal: Full Employment

The U.S. strives for "full employment." **Full employment** is defined as employment of about 95% of the labor force. This allows for 5% unemployment due to frictional and seasonal employment. If however, the unemployment rate is 5%, but the reason is primarily due to economic reasons (structural or cyclical), then there is still an underlying problem in the economy that needs addressing.

There are several methods of reducing unemployment that directly address structural and cyclical issues. One method is through education and training of the unemployed, specifically job re-training in the skills that are in demand. This helps reduce structural unemployment.

Another method is to better match skill requirements to a job. Some jobs may have unnecessarily high qualifications. For example, a job that now requires a bachelor's degree in a certain field may only actually need an associate's degree and/or special certifications. By lowering the qualifications for jobs in that field, more workers could potentially be employed. Also, labor unions may restrict entry into jobs. There may be workers qualified for a job, but they are denied employment because they are not a member of a labor union.

Another possible way to reduce unemployment is to lower the minimum wage. As was discussed in Unit 5, a high minimum wage can add to structural unemployment because employers don't want to pay that much for the job. Those low-skill, entry-level jobs become unavailable to those younger workers lacking job skills because the higher-than-market wage lures more skilled, more experienced workers to compete with them for those jobs, and the younger, less skilled worker loses that battle.

One other method is by increasing aggregate (overall) demand. If demand in general goes up, employers will hire more people so they can increase production to meet demand. This is the most common justification for the government to increase spending in times of high unemployment to offset decreases in overall demand in the private sector.

Economic Indicator: Unemployment Rate
What It Measures: Percent of Workforce Unemployed
Goal: 5% of workforce, primarily frictional & seasonal

Inflation

Inflation is a sustained rise in the general level of prices. In actuality, some prices may rise rapidly, some may rise slowly, and some may actually fall. In a situation with inflation, more prices rise than fall. Inflation is a problem in an economy, because inflation causes uncertainty in the marketplace for both consumers and businesses.

Less Extreme Inflation May Actually Stimulate an Economy

A modest amount of price inflation in an economy may be a good thing. It may be a situation where wages rise more slowly than the prices of products. In this case, prices are relatively high in relation to wages. Because of this, producers make high real profits. These higher profits serve as an incentive to producers. Production expands; more workers are hired. Workers increase spending because they now have more spending money. In the economy, the overall quantity demanded increases. The economy prospers. For this reason, the goal inflation rate in the US is 2%.

High Inflation Hurts the Economy

Although a modest amount of price inflation can have positive results in the economy, high inflation can actually hurt the economy. With high inflation, prices rise rapidly. Because prices are increasing so rapidly, consumers' real income decreases; for their same amount of income, the quantity of goods they can buy goes down. As a result, fewer goods are purchased. The overall quantity of goods and services demanded in the economy decreases. Unemployment increases as producers cut back on production due to the lower demand for goods and services.

Inflation May Lead to Speculation

One of the negative results of higher inflation is speculation. Speculation is when someone buys a large amount of a good and hopes to resell it at a much higher price. This incentive of selling at a higher price lures that investor into buying that item now. Speculation for the item will continue to drive prices higher. This may result in a misallocation of resources. Money that could have been spent in other parts of the economy is instead tied up in the good that is experiencing price inflation. Speculation is what happens when you buy stocks in the stock market or commodities (like oil, wheat, gold, etc.) in the commodities market. You are buying at what you hope would be a low price, anticipating the price of that stock or commodity going up. You plan to sell that stock or commodity at the higher price, making a profit on your investment. If you and other investors like you all try to buy that stock or commodity at the same time, you will drive the price of it up even higher. At the same time, the money you are putting toward investing in the stock or commodity is not being used for other purchases (opportunity cost).

Who Benefits from Inflation?

Some groups of people actually benefit from inflation. Debtors (people who have borrowed money from someone else) actually benefit from inflation. The reason for this is that the money paid back at a later date actually has a lower value than the money they borrowed. A good example of this is a homeowner. Imagine you bought a house for $200,000. You are paying the lender the $200,000 back. By the time you finish paying the lender back, the same house might be worth $300,000. The $200,000 you pay back could not be able to buy the house now that it could when you first borrowed it.

Who Is Hurt By Inflation?

Other groups of people are hurt by inflation. The biggest group hurt by inflation is people on a fixed income (income that is set and does not change from year to year). Their income loses purchasing power. They cannot buy the same quantity of goods with that fixed amount of money.

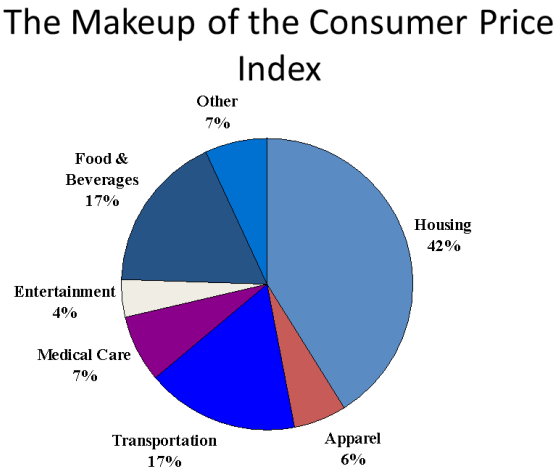
The other main group hurt by inflation is creditors (people who have loaned money to others). The money they are being paid back does not have the same purchasing power it had when loaned out.

Retirees and others on a fixed income are hurt by inflation because their fixed income is able to buy fewer goods and services.
(Image courtesy of Berryhill Retirement Village)

Inflation Is Measured by a Price Index

There are millions of different goods and services available in an economy. How can you measure price changes in all of those different goods and services to tell if inflation is occurring? The way inflation is measured is through the use of a price index. A price index is a number that compares prices in one year with some earlier base date. The number for the price index comes from a formula into which the prices of pre-selected goods and services. A simple example of this would be if you wanted to come up with a "breakfast price index" to determine if the typical breakfast you eat (eggs, bacon, toast with butter, and milk) is getting more expensive. You would develop a simple formula into which you plug in the price of eggs, bacon, bread, butter, and milk. The formula would be written so that, when establishing the index number for the base date (the date from which you would measure changes), the number that comes out of the formula is 100. At any future point in time, when you plug the current prices of eggs, bacon, bread, butter, and milk into that same formula, a new index number comes out. If it is greater than 100, you have experienced inflation. How much the index number has changed from the previous time you calculated it determines the rate of inflation for your "breakfast price index".

The U.S. uses a price index that is much more elaborate than the "breakfast price index" example. The U.S. uses the **Consumer Price Index (CPI)**, which is a number used to calculate changes in the average level of prices for a number of items typically bought by urban families. The most common CPI for the US is the **Consumer Price Index for Urban Consumers (CPI-U)**, which covers approximately **88%** of the US population. The CPI-U does not include every good and service produced in the economy. It actually uses average price for ***400 "common" items***. The way the CPI formula is written is so that the influence of each item is found through a weighting process. What this means is that price changes in items that take up a larger percentage of an urban consumer's monthly budget have a larger effect on the overall CPI number. For example, housing costs usually take up a significant portion of a typical urban family's monthly budget; therefore, changes in housing costs will have a bigger impact on the number produced by the CPI formula than something that does not take up much of a typical urban family's budget. The pie chart below illustrates the makeup of the CPI.



What Does the CPI Measure?

For the CPI, a "base period" is established. For the current version of the CPI, prices from 1982 – 1984 were used for current base period. The prices for the 400 items typically purchased by urban families are plugged into the formula used to calculate the index. The calculation using base period prices results in an index number of 100. Every month/year, current prices are plugged into the same formula to calculate the current index number. The rate of change of the index number is the rate of inflation for the period being calculated. The actual number of the CPI itself is not important; the rate of change of the number compared to the previous measure is the important thing, since that rate of change shows how quickly prices are increasing or decreasing.

How to Use the CPI to Determine the Rate of Inflation

$$\text{Rate of Inflation} = \frac{\text{Most Recent CPI - Earlier CPI}}{\text{Earlier CPI}}$$

$$= \frac{202.416 - 201.800}{201.800}$$

$$= \frac{0.616}{201.800}$$

$$= 0.003 = 0.3\%$$

Limitations of the CPI

Although called the cost of living index, it doesn't actually measure any one person's "cost of living". The "basket of goods" used to compute the CPI (the 400 items commonly purchased by urban families) may not match your "basket of goods". Also, the CPI only includes those items that can be bought and sold in the market. It does not include factors like taxes or government services, which also have an impact on a household's budget.

Also, the CPI does not account for changes in the ***quality*** of goods. Some items may get more expensive, but reason they get more expensive is because they are made of higher-quality materials and/or have more features than the previous versions of the product. The quality of the product has gone up, and with it the price; however, the CPI only reflects the price change, even though the consumer is actually getting more for his/her money.

Changes in the Inflation Rate

The inflation rate varies from year to year; it is not constant. In some years, inflation may go up rapidly. In other years, may only go up slightly. The inflation rate may even be zero or negative (deflation). The inflation rate also varies among the types of goods. Remember that the CPI measures the changes in the prices of 400 common items. The prices of some items rise slightly. The prices of some items rise sharply. The prices of some items even drop. Also, prices may vary by location (remember: prices used in the CPI are average prices across the country).

Economic Indicator: Inflation Rate
What It Measures: Rate of increase or decrease in the general level of prices
Goal: 2% annual inflation

Business Cycle

A nation's economy does not always change in the same way every year. In fact, a typical market economy goes through a pattern of repeated expansion and contraction of a country's GDP. This is known as the **business cycle** (also referred to as the **economic cycle**). A market economy passes through four phases.

Phases of the Business Cycle

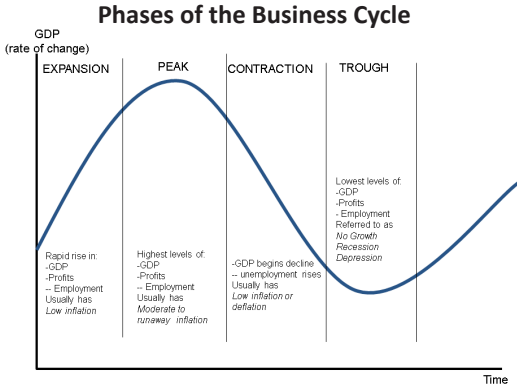
Expansion. In the Expansion phase, there is a rapid growth in GDP, profits, and employment. This phase is normally characterized by low inflation. Businesses are expanding, more workers are being hired, and the economy is prospering.

Peak. In the Peak phase, growth reaches its highest level, as do profit and employment. However, in this phase, the high profits and high wages result in a relatively high amount of money to be spent on relatively few goods and services. That is why this phase is normally characterized by modest to runaway inflation. When inflation starts to get high, the negative effects on inflation (discussed in the previous section on inflation) start to impact the economy, hurting consumers' purchasing power and causing them to reduce the overall quantity being purchased into the economy, sending the economy into its next phase.

Contraction. In the Contraction phase, growth begins to decline. Unemployment starts to rise. Producers have cut back on production so they are not continuing to add to their excess inventories of goods that have resulted from the reduced consumption by the consumers. This phase is normally characterized by low inflation or deflation since the reduced level of consumption by consumers leads to high inventories of goods, and the suppliers start to reduce prices to lure customers back into the market. This leads the economy into the next phase.

Trough. In the Trough phase, the economy reaches its lowest point in the cycle, with increased unemployment. This phase is normally characterized by no growth, recession, or depression. Consumers eventually start coming back into the market, finally starting to make purchases they have been delaying (replacing vehicles, buying new appliances for their homes, new clothes to replace ones that have worn out, etc.), which starts to turn the economy back around and start the Growth phase again.

Phases of the Business Cycle



Recessions & Depressions

Two terms you will normally hear mentioned when an economy is doing poorly are recession and depression. A **recession**, by definition, is a period of declining economic activity usually measured as a decrease in GDP for at least two consecutive quarters (six months). If a country's economy has shrunk (as measured by the GDP) for six months or more, that country is in a recession. If the country's economy is growing, regardless of how slowly it is growing, it is technically not in a recession. A **depression**, though, is a prolonged economic downturn characterized by plunging real GDP and extremely high unemployment. Depressions, however, are extremely rare.

Leading Economic Indicators

Leading economic indicators are different aspects of economic activity that are believed to indicate the direction the economy is heading. They are supposed to predict economic activity *for the next six months*. Positive trends in these indicators are supposed to indicate the economy is improving. Negative trends in these indicators are supposed to indicate the economy is worsening.

Main Leading Economic Indicators

- **Initial Jobless Claims**. This indicator measures the number of people filing first-time claims for unemployment insurance. More workers losing their jobs and having to collect unemployment insurance is a bad thing. It indicates production of goods and services is going down.
- **Average Weekly Hours, Manufacturing**. This indicator measures the average number of hours worked by workers producing goods to be sold in the economy. Increases may indicate manufacturers are starting to produce more goods because they believe demand for those goods is increasing. Since manufacturers must increase production (usually resulting in more hours worked by workers) to have the goods available for consumers to ultimately purchase (and this consumption is the actual component of the GDP), increasing workers' hours is considered to be a positive indicator for the economy in the near future.
- **Manufacturer's New Orders – Consumer Goods & Materials**. This indicator measures changes in the level of orders made by retailers for goods to be purchased by consumers. Increases could indicate expected in increase in consumer demand by retailers. Suppliers like retailers must be prepared for the anticipated purchase of their products (consumption), so they will "stock up" when they anticipate increased consumption of their products.
- **Manufacturers' New Orders – Non-Defense Capital Goods**. This indicator measures changes in orders for capital goods (equipment used by businesses to produce the products they sell). The level of spending, and changes in this level, indicate whether or not businesses are replacing or adding equipment to increase production. This capital investment by manufacturers is also a component of the GDP, and will begin to drive the GDP up.
- **Institute for Supply Management (ISM) Index of New Orders**. This indicator is actually a survey of purchasing executives of roughly 300 industrial companies. It is considered single best snapshot of factory sector health. This gauge of what is going on in the manufacturing sectors in the economy is a good indicator of what those companies are expecting to happen in the economy in the near future.
- **Building Permits – New Private Housing Units**. This indicator measures the level of residential construction permits being issued. Housing construction is a major part of US economy. Increases in construction will have major impacts on the economy. The hundreds of thousands of dollars that will be going to pay for the materials used in the future construction in each of these houses, and the number of skilled workers who will be employed building these houses (and subsequently spending those earnings in the economy), will have major impacts in multiple sectors in the economy.
- **Stock Prices – Standard & Poor's 500 (S&P 500)**. This indicator is a major stock index that is believed to represent the health of the stock market as a whole. Many believe that the stock market tends to go up before the economy starts improving, making it a good predictor of changes coming in the economy.
- **Leading Credit Index**. This indicator is one that has been developed by an organization called The Conference Board. It measures changes in the financial and credit markets. It is in these markets that businesses have access to the capital they need to expand. Changes to conditions in financial markets will impact businesses' ability to gain access to credit in the near future, which will impact those businesses' ability to expand.
- **Interest Rate Spread – Treasury Less Federal Funds**. This indicator is the difference between interest rate on 10-year Treasury Bonds and the Federal Funds Rate (the interest rate banks charge each other for overnight loans to each other). Normally, interest rates on longer-term loans are higher than that for shorter-term loans. If investors are worried about economic downturns, they will usually sell off their short-term bonds and buy longer-term bonds to protect against short-term losses, driving the rate of return on the long-term bonds down. This spread between short-term rates and long-term rates, if negative (long-term rates lower than short-term rates), usually signals the beginning of a recession.
- **Average Consumer Expectations for Business Conditions**. This indicator is measured in the *Consumer Confidence Index*. It judges the mood of consumers toward the future of the economy. Confidence in the economy tends to lead toward increased spending in the economy. If consumers have high confidence in the future direction of the economy, especially as it relates to their job security, they will start to spend their money instead of saving it because they are worried about losing their source of income. Increases in confidence are normally followed by future increases in spending.

Coincident Economic Indicators

Coincident Economic Indicators change *as the economy is changing*. They give a picture of what is currently actually happening in the economy. They can also be used to verify that the anticipated change in the economy expected based on previous leading economic indicators have actually happened. The main coincident economic indicators are:

- **Gross Domestic Product (GDP)**. As was discussed in the section on GDP, this is the biggest picture of what is currently happening in the economy. The current trend of the GDP is, in a sense, a leading economic indicator, since most expect that what is happening in the economy will continue to happen; however, if the leading economic indicators are indicating a change, that trend will not continue. That is why GDP is actually a coincident economic indicator.
- **Employees on Non-Agricultural Payrolls**. This indicator reflects net hiring and firing in all sectors but agricultural and the smallest businesses. This is considered one of the biggest gauges in measuring the health of the economy.
- **Index of Industrial Production**. This indicator covers physical output at all stages of production in all industries. This index historically has captured the majority of fluctuations in output.
- **Manufacturing & Trade Sales**. This indicator measures purchases by wholesalers from manufacturers, and purchases by retailers from manufacturers and wholesalers, both of which are indicators of products moving through the channel of distribution from the manufacturer to the point at which it will be sold to the final consumer. When combined with retail spending by consumers, this indicator measures all spending within the economy.
- **Personal Income less Transfer Payments**. A **transfer payment** is a payment that involves no economic activity. Examples of transfer payments include social security, welfare, and unemployment. In each of these examples, the recipient of the money has not actually done anything to earn that payment (i.e. worked for it by producing something that will ultimately be sold in the economy). This indicator measures personal income due to economic activity and serves as yet another indicator of increases or decreases in production.

One indicator that the economy has changed is a change in industrial production. *(Image courtesy of Microsoft Photo Gallery)*

Lagging Economic Indicators

Lagging economic indicators change *after the economy has changed*. They primarily serve as verification that changes predicted by previous leading economic indicators and confirmed by subsequent coincident economic indicators have actually occurred. The main lagging economic indicators are:

- **Unemployment**. When companies start hiring (or reducing their workforces), those changes won't be indicated in the unemployment rate until it is measured in a subsequent month. For example, if the economy is improving, the workers will get hired and start producing (and spending their paychecks) before the next measure of unemployment is taken (since unemployment looks back at the previous month).
- **Inflation**. Since inflation, like unemployment, looks backward at what happened the previous month, a change to the inflation rate actually indicates past changes, not future changes, to prices.
- **Commercial & Industrial Loans Outstanding**. This indicator measures loans being taken out by businesses. Since businesses normally need to borrow more during times of reduced profit, these loans normally go up after the businesses experience reduced profits. Businesses use the revenues from sales to pay their employees, pay for inventories, and pay for all of their expenses (like rent, insurance, advertising, etc.), and the money left over is their profit. If they are experiencing short-term losses, they still must meet all of their payment obligations, and often have to borrow money in order to do so. Since this borrowing occurs after the loss, it is something that happens after the change in economic activity, and is therefore a lagging indicator.
- **Ratio of Consumer Installment Credit to Personal Income**. Installment credit is the type of credit where the borrower borrows a specified amount of money for a fixed time frame (usually several years), and he/she makes monthly payments on that loan (like a car loan). This indicator indicates if consumers are going into more long-term debt, devoting more of their monthly income to payments on this debt. Consumers tend to hold off on getting personal loans until after a recession ends. This ratio will go up when consumers are more confident about the future, which will occur after the change. Consumers are more comfortable dedicating their income to these monthly payments because they are more secure in their future financial prospects and not worried if they will still have enough income to make these monthly payments.
- **Average Prime Rate Charged by Banks**. The Prime Rate is the key rate on which banks base all of their other loan rates. The Prime Rate is the "cost" of money the bank borrows that it turns around and loans out to its customers. Changes in this rate tend to lag behind movement of general economic activities.
- **Others**. Some other aspects of economic activity that change after the economy has changed are income and wages, the strength of the country's currency (money), and the balance of trade.