



Trading Insights

SWI Continuing Education

Technical Analysis Part 3

Intermarket Analysis

Introduction

Intermarket analysis is a branch of technical analysis that examines the correlations between four major asset classes: stocks, bonds, commodities and currencies. In his classic book on Intermarket Analysis, John Murphy notes that chartists can use these relationships to identify the stage of the business cycle and improve their forecasting abilities. There are clear relationships between stocks and bonds, bonds and commodities, and commodities and the Dollar. Knowing these relationships can help chartists determine the stage of the investing cycle, select the best sectors and avoid the worst performing sectors. Much of the material for this article comes from John Murphy's book and his postings in the Market Message at Stockcharts.com.



Inflationary Relationships

The Intermarket relationships depend on the forces of inflation or deflation. In a "normal" inflationary environment, stocks and bonds are positively correlated. This means they both move in the same direction. The world was in an inflationary environment from the 1970's to the late 1990's. These are the key Intermarket relationships in an inflationary environment:

- A POSITIVE relationship between bonds and stocks
- An INVERSE relationship between interest rates and stocks
- Bonds usually change direction ahead of stocks
- An INVERSE relationship between commodities and bonds
- A POSITIVE relationship between commodities and interest rates
- A POSITIVE relationship between stocks and commodities
- Commodities usually change direction after stocks
- An INVERSE relationship between the US Dollar and commodities

POSITIVE: When one goes up, the other goes up also. INVERSE: When one goes up, the other goes down. Interest rates move up when bonds move down



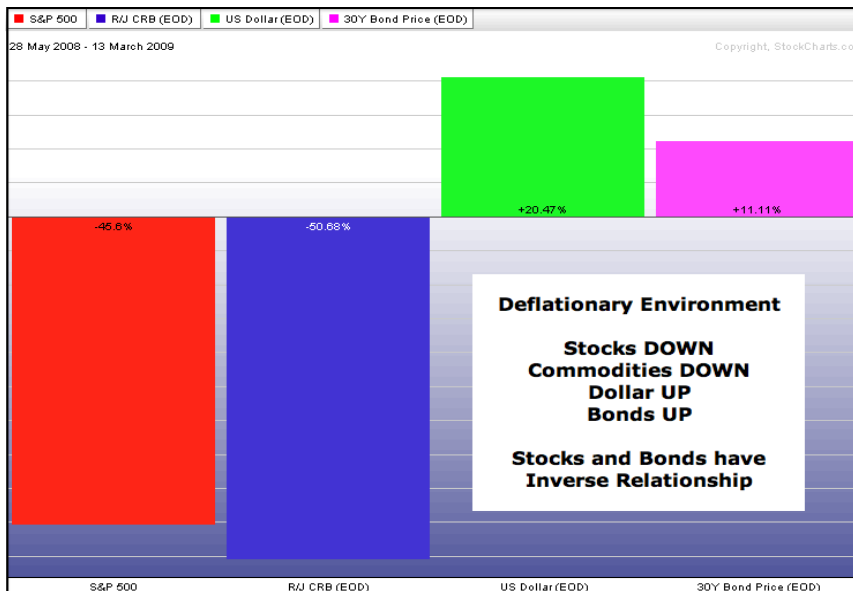
In an inflationary environment, stocks react positively to falling interest rates (rising bond prices). Low interest rates stimulate economic activity and boost corporate profits. As interest rates fall and the economy strengthens, demand for commodities increases and commodity prices rise. Keep in mind that an "inflationary environment" does not mean runaway inflation. It simply means that the inflationary forces are stronger than the deflationary forces.

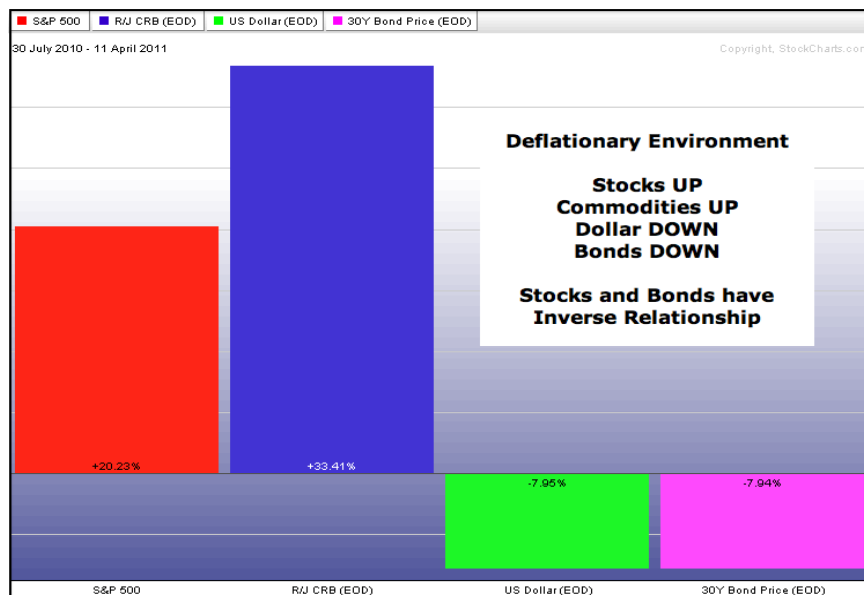
Deflationary Relationships

Murphy notes that the world shifted from an inflationary environment to a deflationary environment around 1998. It started with the collapse of the Thai Baht in the summer of 1997 and quickly spread to neighboring countries to become known as Asian currency crisis. Asian central bankers raised interest rates to support their currencies, but high interest rates choked their economies and compounded the problems. The subsequent threat of global deflation pushed money out of stocks and into bonds. Stocks fell sharply, Treasury bonds rose sharply and US interest rates decline. This marked a decoupling between stocks and bonds that would last for many years. Big deflationary events continued as the NASDAQ bubble burst in 2000, the housing bubble burst in 2006 and the financial crisis hit in 2007.



The Intermarket relationships during a deflationary environment are largely the same except for one. Stocks and bonds are inversely correlated during a deflationary environment. This means stocks rise when bonds fall and vice versa. By extension, this also means that stocks have a positive relationship with interest rates. Yes, stocks and interest rates rise together.





Obviously, deflationary forces change the whole dynamic. Deflation is negative for stocks and commodities, but positive for bonds. A rise in bond prices and fall in interest rates increases the deflationary threat and this puts downward pressure on stocks. Conversely, a decline in bond prices and rise in interest rates decreases the deflationary threat and this is positive for stocks. The list below summarizes the key Intermarket relationships during a deflationary environment.

- An INVERSE relationship between bonds and stocks
- A POSITIVE relationship between interest rates and stocks
- An INVERSE relationship between commodities and bonds
- A POSITIVE relationship between commodities and interest rates
- A POSITIVE relationship between stocks and commodities
- An INVERSE relationship between the US Dollar and commodities

Dollar and Commodities

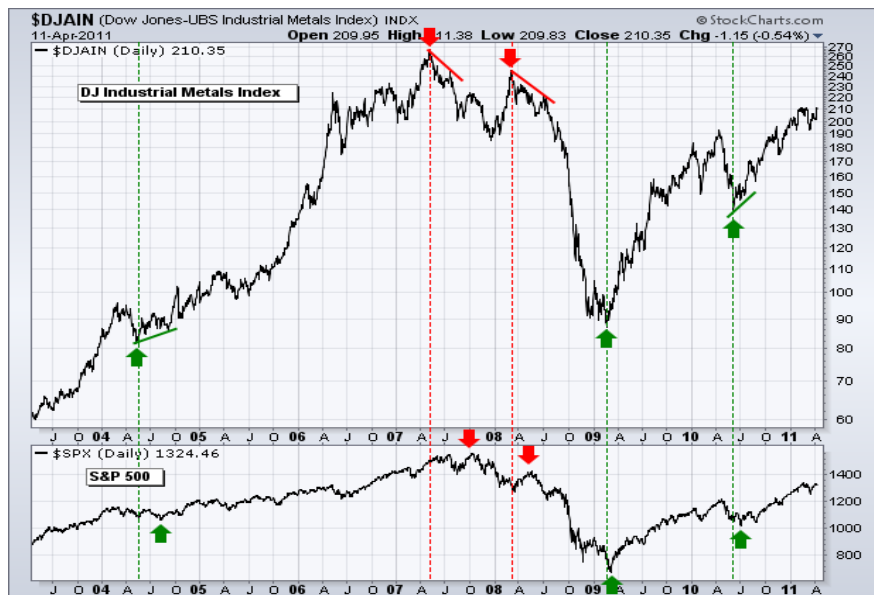
While the Dollar and currency markets are part of Intermarket analysis, the Dollar is a bit of a wild card. As far as stocks are concerned, a weak Dollar is not bearish unless accompanied by a serious advance in commodity prices. Obviously, a big advance in commodities would be bearish for bonds. By extension, a weak Dollar is also generally bearish for bonds. A weak Dollar acts an economic stimulus by making US exports more competitive. This benefits large multinational stocks that derive a large portion of their sales overseas.



What are the effects of a rising Dollar? A country's currency is a reflection of its economy and national balance sheet. Countries with strong economies and strong balance sheets have stronger currencies. Countries with weak economies and big debt burdens are subject to weaker currencies. A rising Dollar puts downward pressure on commodity prices because many commodities are priced in Dollars, such as oil. Bonds benefit from a decline in commodity prices because this reduces inflationary pressures. Stocks can also benefit from a decline in commodity prices because this reduces the costs for raw materials.

Industrial Metals and Bonds

Not all commodities are created equal. In particular, oil is prone to supply shocks. Unrest in oil producing countries or regions usually causes oil prices to surge. A price rise due to a supply shock is negative for stocks, but a price rise due to rising demand can be positive for stocks. This is also true for industrial metals, which are less susceptible to these supply shocks. As a result, chartists can watch industrial metals prices for clues on the economy and the stock market. Rising prices reflect increasing demand and a healthy economy. Falling prices reflect decreasing demand and a weak economy. The chart below shows a clear positive relationship between industrial metals and the S&P 500.



Industrial metals and bonds rise for different reasons. Metals move when the economy is growing and/or when inflationary pressures are building. Bonds decline under these circumstances and rise when the economy is weak and/or deflationary pressures are building. A ratio of the two can provide further insights into economic strength/weakness or inflation/deflation. The ratio of industrial metal prices to bond prices will rise when economic strength and inflation are prevalent. This ratio will decline when the economic weakness and deflation are dominant.



Staples/Discretionary Ratio

Chartists can also compare the performance of the consumer discretionary sector to the consumer staples sector for clues on the economy. Stocks in the consumer discretionary sector represent products that are optional. These industry groups include apparel retailers and produces, shoe retailers and produces, restaurants and autos. Stocks in the consumer staples

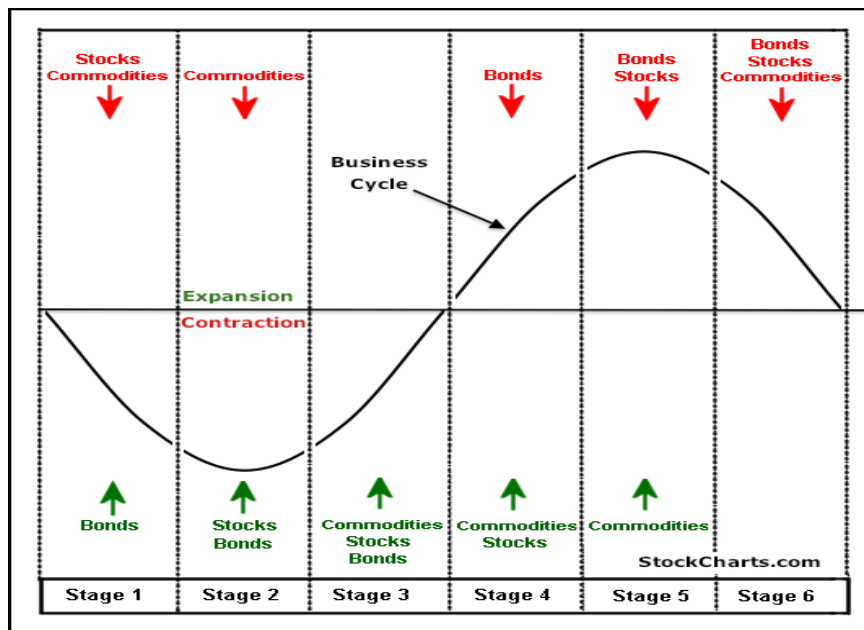
sector represent products that are necessary, such as soap, toothpaste, groceries, beverages and medicine. The consumer discretionary sector tends to outperform when the economy is buoyant and growing. This sector underperforms when the economy is struggling or contracting.



Chartists can compare the performance of these two with a simple ratio chart of the Consumer Discretionary SPDR (XLY) divided by the Consumer Staples SPDR (XLP). The chart above shows this ratio with the S&P 500. The ratio was rather choppy in 2004, 2005 and 2006. A strong downtrend took hold in 2007 as the consumer discretionary sector underperformed the consumer staples sector. Put another way, the consumer staples sector outperformed the consumer discretionary sector. Also, notice that this ratio peaked ahead of the S&P 500 in 2007 and broke support ahead of the market. The ratio bottomed ahead of the S&P 500 in late 2008 and broke resistance as the S&P 500 surged off the March 2009 low.

Business Cycle

The graph below shows the idealized business cycle and the Intermarket relationships during a normal inflationary environment. This cycle map is based on one shown in the Intermarket Review by Martin J. Pring (www.pring.com). The business cycle is shown as a sine wave. The first three stages are part of an economic contraction (weakening, bottoming, and strengthening). Stage 3 shows the economy in a contraction phase, but strengthening after a bottom. As the sine wave crosses the centerline, the economy moves from contraction to the three phases of economic expansion (strengthening, topping and weakening). Stage 6 shows the economy in an expansion phase, but weakening after a top.

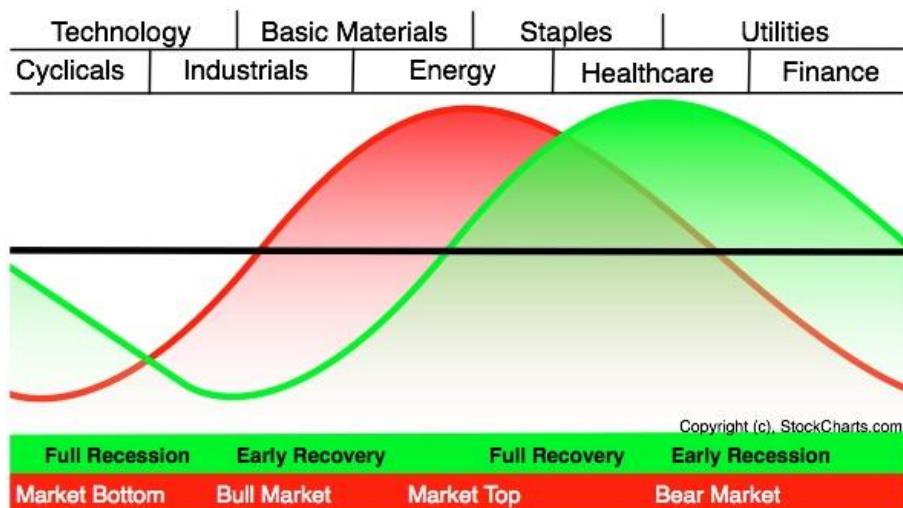


- **Stage 1** shows the economy contracting and bonds turning up as interest rates decline. Economic weakness favors loose monetary policy and the lowering of interest rates, which is bullish for bonds.
- **Stage 2** marks a bottom in the economy and the stock market. Even though economic conditions have stopped deteriorating, the economy is still not at an expansion stage or actually growing. However, stocks anticipate an expansion phase by bottoming before the contraction period ends.
- **Stage 3** shows a vast improvement in economic conditions as the business cycle prepares to move into an expansion phase. Stocks have been rising and commodities now anticipate an expansion phase by turning up.
- **Stage 4** marks a period of full expansion. Both stocks and commodities are rising, but bonds turn lower because the expansion increases inflationary pressures. Interest rates start moving higher to combat inflationary pressures.
- **Stage 5** marks a peak in economic growth and the stock market. Even though the expansion continues, the economy grows at a slower pace because rising interest rates and rising commodity prices take their toll. Stocks anticipate a contraction phase by peaking before the expansion actually ends. Commodities remain strong and peak after stocks.
- **Stage 6** marks a deterioration in the economy as the business cycle prepares to move from an expansion phase to a contraction phase. Stocks have already been moving lower and commodities now turn lower in anticipation of decreased demand from the deteriorating economy.

Keep in mind that this is the ideal business cycle in an inflationary environment. Stocks and bonds advance together in stages 2 and 3. Similarly, both decline in stages five and six. This would not be the case in a deflationary environment, when bonds and stocks would move in opposite directions.

Sector Rotation

Unsurprisingly, the business cycle influences the rotation of stock market sectors and industry groups. Certain sectors perform better than others do during specific phases of the business cycle. Knowing the stage of the business cycle can help investors position themselves in the right sectors and avoid the wrong sectors.



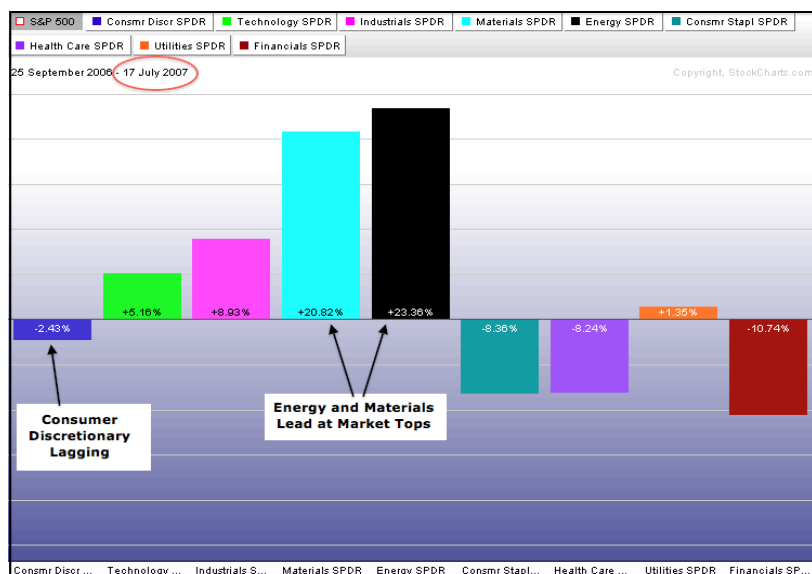
The graph above shows the economic cycle in green, the stock market cycle in red and the best performing sectors at the top. The green economic cycle corresponds to the business cycle shown above. The centerline marks the contraction/expansion threshold for the economy. Notice how the red market cycle leads the business cycle. The market turns up and crosses the centerline before the economic cycle turns. Similarly, the market turns down and crosses below the centerline ahead of the economic cycle.

Cyclicals, which is the same as the consumer discretionary sector, are the first to turn up in anticipation of a bottom in the economy. Technology stocks are not far behind. These two groups are the big leaders at the beginning of a bull run in the stock market.

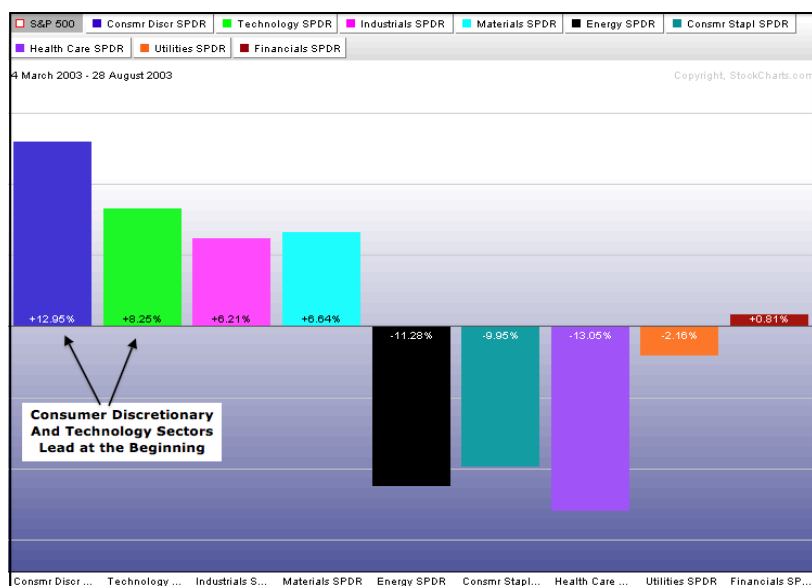
The top of the market cycle is marked by relative strength in materials and energy. These sectors benefit from a rise in commodity prices and a rise in demand from an expanding economy. The tipping point for the market comes when leadership shifts from energy to consumer staples. This is a sign that commodity prices are starting to hurt the economy.

The market peak and downturn are followed by a contraction in the economy. At this stage, the Fed starts to lower interest rates and the yield curve steepens. Falling interest rates benefit debt-laden utilities and business at banks. The steepening yield curve also improves profitability at banks and encourages lending. Low interest rates and easy money eventually lead to a market bottom and the cycle repeats itself.

The two sector PerfCharts below show relative performance for the nine sector SPDRs near the 2007 peak and after the 2003 bottom. The S&P 500 peaked from July to October 2007 and broke down in the fourth quarter of that year. In the summer of 2007, the energy and materials sectors were leading the market and showing relative strength. Also, notice that the consumer discretionary was lagging the S&P 500. This section action matches what is expected at a market top.



The S&P 500 bottomed in March 2003 and began a powerful bull run that lasted until the peak in the summer of 2007. The consumer discretionary and technology sectors led the first move off the March 2003 low. These two showed relative strength that affirmed the importance of the 2003 bottom.



Conclusions

Intermarket Analysis is a valuable tool for long-term or medium-term analysis. While these Intermarket relationships generally work over longer periods, they are subject to drawdowns or periods when the relationships do not work. Big events such as the Euro crisis or the US Financial crisis can throw certain relationships out of whack for a few months. Furthermore, the tools shown in this article should be used in conjunction with other technical analysis techniques. The XLY/XLP ratio chart and the Industrial Metals/Bond Ratio chart could be part of a basket of broad market indicators

designed to assess the overall strength or weakness of the stock market. One indicator or one relationship should not be used on its own to make a sweeping assessment of market conditions.

PerfChart

In addition to the SharpCharts, StockCharts.com provides PerfCharts to compare sector performance or study Intermarket relationships. The S&P Sector PerfChart shows the performance of the nine Sector SPDRs relative to the S&P 500. This means only performance above or below the S&P 500 counts. Relative performance is positive when the sector is up more than the S&P 500 and negative when the sector is up less. If the Technology ETF (XLK) is up 8% and the S&P 500 is up 4%, relative performance for XLK would be +4% ($8\% - 4\% = +4\%$). If the Consumer Discretionary SPDR (XLY) is up 2% and the S&P 500 is up 4%, Price Relative for XLY would be -2% ($2\% - 4\% = -2\%$). [Click here for a live Sector PerfChart.](#)

John Murphy's Intermarket Study PerfChart allows chartists to compare the performance of the S&P 500, CRB Index, US Dollar Index and the 30Yr US Treasury Bond. The slider at the bottom of the chart makes it easy to go back in time and see the relationship changes as they happen. [Click here for a live Intermarket PerfChart.](#)

To be continued in Part 4 “Irrational Exuberance”

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