Chapter Five

STOCK SECTORS AND THEIR HISTORICAL PATTERNS

1. Introduction

Dow Jones introduced the indexes in 1992. The complete listing of these sectors is in *Barron's*, the weekly financial magazine. In spite of the relatively short history, the time span covers several business and financial cycles that are useful for our analysis. This chapter introduces the ten Dow Jones stock sectors and examines their price patterns relative to the overall market. The price pattern of these sectors provides an excellent tool to understand the basic element of volatility and risk of each sector. The relative strength of a sector tells investors about the action of the sector relative to the broad market. In the following pages the S&P 500 index is used as a proxy for the broad market.

A successful strategy is to invest in sectors, and stocks within those sectors, that outperform the market. In order to identify these sectors the concept of relative strength is employed. In the following chapters, economic and financial indicators are used to determine when a sector is likely to become stronger than the market. Rising inflation, for instance, is unfavorable for the bank sector and bank stocks. It is very likely that during periods of rising inflation bank stocks display a declining relative strength line, thus indicating they are under performing the market.

In the charts presented in the following pages, the important turning points are isolated with the date when these turning points took place. In the following chapter, these turning points are correlated to business cycle variables such as money supply, interest rates, and commodities. Sometimes it is possible to find a correlation. Other times it is not.

The reason for finding a relationship is to determine if the sector is predictable. If there is a relationship between a sector and an economic and financial indicator, investors know what drives the price of the stocks in that sector. This makes the sector predictable. Let's say bank stocks are related to interest rates. If investors believe, due the analysis of business cycle developments, that interest rates are rising and the trend will continue for the reasons presented in Part One, bank stocks should be sold. If, on the other hand, the analysis suggests interest rates are likely to decline, bank stocks should be bought aggressively. In other words, the concept to of predictability provides investors with reliable guidelines to start accumulating or selling stocks in a given sector.

If sectors are not predictable because it is difficult to find correlations between turning points and economic variables, they should be avoided. The odds of making money by investing in these sectors over the long term are slim.

The dates shown below, therefore, are used in the following chapter to determine if the sector is predictable using the economic variables discussed in Part One.

Dow Jones Industry Group

- Basic materials
- Consumer cyclical
- Consumer non-cyclical
- Energy
- Financial
- Healthcare
- Industrial
- Technology
- Telecommunications
- Utilities

2. Relative strength and historical patterns of stock sectors

The relative strength of a sector is computed as the ratio between the sector's index and the S&P 500. The relative strength graph provides important strategic information about a sector. The graphs shown in Appendix One display two lines -- the relative strength line and the index of the specific sector being studied. When the line representing the relative strength of the sector rises, it means the sector is stronger than the market. The sector is either rising faster than the market or is declining at a slower pace than the market.

A decline in the relative strength line of a sector implies that the stocks belonging to that sector are weaker than the market. A declining relative strength line also says that either the sector is advancing at a pace slower than the market or declining faster than the decline of the S&P 500.

The main objective of sector investing is to allocate funds to sectors that have a rising index. This however, is not enough. Investors should choose sectors that also have a rising relative strength line. This approach improves the chances of outperforming the market. Investors therefore should avoid sectors with a declining relative strength line, even if some stocks within a weak sector show unusual strength. The reason is that the odds of making money over the long term are higher when money is invested in a sector where most of the stocks are rising faster than the market, not just a few. By doing so, stock selection becomes less crucial – a rising tide lifts all boats.

An important and unique feature of the relative strength line is that it declines for the overwhelming majority of sectors from 1998 to 2000. The reason is that the bubble that took place in those years was due mostly to the action of the technology sector. As technology stocks skyrocketed, they created a bias in the S&P 500. During these years, only the technology stocks had a rising relative strength line relative to the S&P 500.

The second graph in each chart is the index of the sector. The behavior of the index is important to ascertain the soundness of a sector as an investment vehicle. The index volatility provides a sense of the risk in investing in that sector. A sector with high volatility is riskier than a sector with low volatility. Market participants are using the high volatility sector as a trading vehicle, showing no consensus on the financial merits of that particular sector. A sector with high volatility makes it difficult for investors to determine an entry point. The main reason is that it is easy to be whipsawed. A sector with an index having low volatility offers the opportunity to develop a strategy based on a gradual series of investments because the chances of being whipsawed are minimized. The graphs of the relative strength line and the index line of each sector discussed in this chapter and Chapter Six are shown in Appendix One.

3. Basic Materials

This sector reflects the action of commodity driven companies. These are companies engaged in the mining, production, manufacturing, and distribution of forest products and paper, metals, and chemicals.

Let's focus first on the relative strength line. The graph shows three distinct periods.

- This sector showed the same strength of the market in 1992-1994, as reflected by the flat relative strength line. By investing in this sector, investors performed like the overall market during this period.

- The relative strength line declined for a prolonged period -- from 1995 to 2000 -- reflecting the under performance of this group. Investors allocating money to this sector during these years under performed the market.

- Beginning in 2001 the relative strength line began to increase, indicating the out performance of the sector relative to the market. By investing in this sector, investors' profits rose faster than the market since 2001.

The index of the sector shows more volatility than the relative strength line.

- Rose from 1992 to 1998.
- Declined in 1998.
- Rose from 1998 to 2000.
- Declined in 2000.
- Rose from 2000 to 2002.
- Declined to from 2002 to 2003.
- Started to rise again in 2003.

This sector is volatile. It has several turning points in a short period. The sector mining-diversified has even more pronounced turning points. This sector therefore represents a higher degree of risk. The higher the risk, the more important it becomes to establish when to buy or sell the sector. Because of the high volatility of this sector, prudent investors should not allocate an excessive amount of capital to these stocks.

Sector: Basic Materials

- Basic Resources
  - Forest Products & Paper
    - Forest Products
    - Paper Products
  - Mining & Metals
    - Aluminum
    - Mining
    - Nonferrous Metals
    - Precious Metals
    - Steel
- Chemicals
  - Chemicals, Commodity
  - Chemicals, Specialty

The precious metal sector, however, has considerably less volatility than the mining-diversified sector. Precious metal stocks represent a better choice as an investment.

Because of the pattern of the relative strength line, the basic materials sector was a poor investment -- relative to the market -- from the end of 1994 to 2000.

4. Consumer cyclical

Companies in this sector develop, manufacture, distribute, and sell products or services for consumer use. Because of the cyclical nature of consumers' spending, the stocks belonging to this sector are called "cyclical." It must be pointed out, however, that the concept of cyclicality is a very lose concept when related to stocks and stock sectors.

For instance, rising inflation reduces consumers' income, thus having, supposedly, a negative effect on the cyclical stocks. Rising inflation, however, places upward pressure on interest rates. An environment characterized by rising interest rates is negative for bank stocks, which belong to the financial sector. The point is that there is no such thing as a "cyclical sector," at least from an investment standpoint. They all are. It depends on how they are related to the business cycle.

Sector: Consumer Cyclical

Airlines
Advertising
Auto manufactures
Tires
Broadcasting
Entertainment
Home construction
Furnishings and appliances
Casinos
Consumer electronics
Lodging
Recreation products and services
Restaurants
Toys
Publishing
Retailers
Clothing and fabrics
Footwear

The importance is not how the sectors are classified, but their predictability using business and financial cycle indicators such as inflation, interest rates, or commodities. The wise poker player plays the odds as determined by how well he can ascertain the chances of winning.

The relative strength line shows the following properties.

- Strength from 1992 to 1994.
- Weakness from 1994 to 1997.

- The group performed like the market from 1997 to 2000. It showed somewhat stronger performance (the relative strength line is rising) from 1997 to 1999.
- The sector has been performing better than the market since 2000.

The index shows the following tendencies.

- Rising during 1992-1994.
- Continued to appreciate from 1995 to 2000.
- Declined from 2000 to 2003.
- Strengthened again in 2003.

The relative strength line shows that the consumer cyclical sector under performed the market from 1994 to 2000.

5. <u>Non-cyclical</u>

The companies belonging to this sector produce and distribute alcoholic and non-alcoholic beverages, cosmetics, food, household products, and tobacco. The reason they are called "non-cyclical" is because they are less immune to changes in the business cycle. Consumers will always need to buy toothpaste, tobacco, and soft drinks independently from economic conditions.

Although the relative strength line displays big swings, the index shows little volatility and remained stable during the go-go years of the late 1990s, immune from the violent declines that took place from 2000 to 2003.

Sector: Consumer Non-cyclical

Drinks (alcoholic and non-alcoholic)
Consumer services
Cosmetics
Food
Household products
Tobacco

The relative strength line displays the following patterns.

- Weakness from 1992-1994.
- Strength from 1994-1997.
- Weakness from 1997 to 2000.
- Strength from 2000 to 2002.

The action of the index shows the following properties.

- Flat from 1992 to 1994.
- Up from 1994 to 1999.
- Unchanged from 1998 to 2003.

This sector has pronounced periods of out performance and under performance relative to the market.

6. Energy sector

Companies belonging to this sector are involved in the production and distribution of coal and oil.

Sector: Energy
Coal Pipelines Oil companies Oilfield drilling

The relative strength line shows the following properties.

- Performing like the market from 1992 to 1994.
- Weaker than the market from 1994 to 1999.
- Rising briefly in early 2000.
- Stronger than the market from 1999 to 2002.

The index of the sector shows the following patterns.

- Rising from 1992 to 1993.
- Declining in 1994 and rising from 1995 to 1998.
- Weak from 1998 to 1999.
- Rising from 1999 to 2001.
- Declining from 2001 to 2002.

In spite of energy crises and spikes in the price of crude oil, this sector does not show the signs of above average performance of the market. It acted much better than the market from 1998 to 2002.

7. Financial sector

Companies belonging to this sector are banks, savings and loan, insurance, and real estate.

Sector: Financial
Banks Savings & loan Insurance Real estate

The relative strength line shows the following patterns.

- Rising from 1992 to 1993.
- Declining from 1993 to 1994.
- Rising from 1995 to 1998.
- Declining from 1998 to 2000.
- Rising since 2000.

The index of this sector shows the following features.

- Rising from 1992 to 1993.
- Weak in 1994.
- Strong from 1995 to 1998-1999.
- Rising briefly in early 2000.
- Declining from 2000 to 2002.
- Rising since the end of 2002.

Except for the periods 1998-2000, when technology stocks dominated the market, financial stocks outperformed the market most of the times as reflected by the rising relative strength line.

8. Healthcare

Companies in this sector belong to biotechnology, healthcare providers, medical products, medical devices and supplies, and pharmaceuticals.

The relative strength line of this group shows the following properties.

- Weak from 1992 to 1993.
- Rising from 1994 to 1998.
- Declining from 1998 to 2000.
- Rising from 2000 to 2002.
- Performing like the market from 2002.

Sector: Healthcare

Biotechnology
Healthcare providers
Medical products
Medical devices
Medical supplies
Pharmaceuticals

The index of this sector shows the following patterns.

- Weak from 1992 to 1993.
- Rising from 1994 to 2000.
- Declining from 2000 to 2002.

Healthcare is another sector that has outperformed the market since 1992, as reflected by the constantly rising relative strength line.

9. Industrial sector

The companies in this sector manufacture or service industrial products. These companies are typically capital intensive and use large machines or are involved in the transportation of large cargoes.

Sector: Industrial

Construction
Industrial equipment
Aerospace
Containers
Electric components and equipment
General industrial services
Industrial transportation

The relative strength line has the following properties.

- Rising in 1992-1994.
- Performing like the market from 1994 to 1996.
- Declining from 1996 to 1998.
- Stronger than the market from 1998 to 2001.
- Performed like the market since 2001.

This sector does not offer many chances to outperform the market because periods of out performance are brief and unimpressive as the 1998-2001 years.

The index has the following characteristics.

- Rose in 1992-1993.
- Paused in 1994.
- Rose steadily, except for a brief decline in 1998, until 2000.
- Declined from 2000 to 2002.
- Rising again in 2003.

The industrial sector has under performed the market since 1992, as reflected by the declining relative strength line.

10. <u>Technology sector</u>

Companies in this sector are involved in the production, service, and distribution of technologies used in communication, industrial sector, computers, and software.

Sector: Technology

Industrial
Communication
Semiconductors
Software
Technology hardware and equipment
Technology services

This sector has showed incredible gains since 1998. The bubble eventually collapsed in 2000 causing major losses to the latecomers. The index increased more than 3 times from 1998 to 2000 when it peaked. As of 2003, however, the technology index was about 60% below its 2000 top, at the same levels as in 1998.

This sector has no pattern that can be used in relation to business cycles.

- Rose from 1992 to 2000.
- Collapsed until 2002.
- Showed signs of life again in 2002.

The action of this sector made it impossible to understand the strength of the rest of the market in 1998-2001. The technology stocks became the market. For this reason after 1998, the use of the advance-decline line was helpful in understanding the breadth of the market. Although the advance-decline line is not a perfect measure of how stocks are performing, it provides a useful guide to understand the direction of the majority of stocks.

Technology stocks are very volatile. Volatility, however, does not guarantee above average performance. In 2003, the technology index was at the same levels as in 1998. The relative strength line shows that this sector performed like the S&P 500 since 1995. Unless investors know when to sell a volatile sector, they are bound to perform like the broad market such as the S&P 500 in the long run.

11. Telecommunication sector

The companies included in this sector provide fixed line and wireless communication services. Although this sector could be considered a technology sector, there are several differences. The common feature is volatility.

Sector: Telecommunications

Fixed line communications
Wireless communications

The relative strength line shows the following properties.

- Rose from 1992 to 1993.
- Declined from 1994 to 1997.

- Rose sharply from 1997 to 1999 in response to the technology stocks euphoria.
- Declined steadily from 2000 to 2003.

The telecommunication index shows the following tendencies.

- Rose from 1992 to 1993.
- Declined in 1994.
- Rose almost steadily from 1995 to 2000.
- Declined as steadily as it rose from 2000 to 2003, finishing at the same levels as in 1993.

Telecommunication stocks have under performed the market since 1994.

12. Utilities sector

The companies in this sector provide electricity, gas, or water. Their basic feature is that they have under performed the overall market since 1992.

The relative strength line has the following properties.

- Rose in 1992-1993.
- Declined steadily from 1994 to 2000. This sector under performed the market for six years.
- Rose from 2000 to 2001.
- Declined from 2001 to 2003.

Sector: Utilities

Electric utilities
Gas utilities
Water utilities

The utility index shows the following tendencies.

- Rose in 1992-1993.
- Declined from 1993 to 1994.
- Rose until 1998.
- Declined until 2000.
- Rose from 2000 to 2001.
- Declined to 2003.

In 2002, the utility index was at the same level as in 1994.

13. Conclusions

This chapter introduced the following concepts.

- *Relative strength*. Investors want to invest in sectors having a rising relative strength line because it reflects a sector rising faster than the market. Over the long term, these sectors are bound to perform like the market. If they did not, they would become so big that they become the market.

- *Index behavior*. The action of the index tells investors about the risk involved in investing in a sector. A highly volatile sector offers more risk than a low volatility one. Investors' preference should be to choose the low volatility sector.

- *Predictability*. A sector offers low risk when it is possible to establish a relationship between the relative strength and the index lines with the business cycle indicators discussed in Part One. Using this approach, investors have guidelines to establish when and why to buy or sell a specific sector and stocks belonging to that sector.

- *Reference dates*. There is a pattern in the above dates when major turning points took place. These reference dates will be used to tie the turning points of each sector to the turning points of business cycle indicators.

The investment challenge is to recognize the phase of the business cycle and determine which sectors are likely to out perform the broad market under similar conditions.

The next chapter presents what happened during the periods listed above. The turning points of economic variables will be analyzed and used to establish why the above sectors are strong during some periods and not during others. Sectors that have little or no correlation with the business cycle variables should be avoided because their turning points cannot be predicted.

Because of limited space, only some sectors will be examined. Investors can apply the same process to any other sector not reviewed in the following pages.