

**SECTOR INVESTING**  
**AND**  
**BUSINESS CYCLES**

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## FOREWORD

This is my second book and deals with “*Sector Investing and Business Cycles.*” It is a “work in progress” and is free to all investors who wish to learn about my research on the subject. The book’s content has been planned and drafted. I need to fill the blanks. Chapters are posted on this web site [www.peterdag.com](http://www.peterdag.com) when I complete them.

Several friends are helping me in this endeavor.

Ed Pritchard has been instrumental in encouraging me to write it. He helped me in designing the flow of the material, the content of each chapter, and how to make the subject easier to understand.

Mary Ann Kenny and Lou Schott are following closely my efforts and are helping to edit the material. Their suggestions on how to streamline the presentation are very important and are making the subject much easier to read. I really appreciate the gift of their time.

You, the reader, have also an important role. Please send me your comments and suggestions. They will be greatly appreciated.

Good reading!

A handwritten signature in black ink, appearing to read "Best, George", written in a cursive style.

George Dagnino  
11/15/2003

# INTRODUCTION

Managing a portfolio is not easy. If someone tells you there is an easy formula to successful investing it is not true. Especially if you want to manage all your money, not just play money. A portfolio requires time, study, and analysis. If you want to manage play money, find someone who gives you tips, and go gamble. In order to manage all your assets, you need an investment process.

This book starts from where “*Profiting in Bull or Bear Markets*” concluded. *Profiting in Bull or Bear Markets* presented a detailed analysis of the relationships existing between financial markets and business cycles. In any economic system, business cycles impact financial markets and financial markets impact business cycles. That book provided a framework to understand these relationships and showed that history does indeed repeat itself.

## **What you learn in this book**

- An investment process is based on the following decisions:
  - a. What to buy or sell
  - b. When to buy or sell
  - c. How much to buy or sell
  - d. Why to buy or sell
- The need to understand the business environment
- How the business environment affects the financial markets
- How to recognize the factors affecting the strength of a stock sector
- How to select the strongest stocks in the strongest sectors
- How to develop an action plan and develop an investment strategy
- How to establish an investment portfolio
- How to use the past performance of the portfolio to improve future profits

Most investors are not satisfied with their investment results because they do not have an investment process. In fact, investors may not know about an investment process. When markets rise, their portfolio performs well and investors feel satisfied with their financial results. In a bull market environment, any stock tip may show profits because a rising tide lifts all boats. Of course, as the market goes up, investors become confident that they are superb investors and that they do not need any help.

As a gradual and steady upward move of the market takes place, financial conditions change. Many investors do not recognize the meaning and implications of how these changes impact portfolio returns. When investors make money, they feel secure. Eventually, the gains do not seem to materialize anymore as they did earlier. Their portfolio begins to show mixed results. What to do?

At this point, typical investors convince themselves that the market is in a minor correction and think they should not worry. They do not take action because they are hoping that their stocks will come back. They may buy more of the declining stock thus

averaging down their positions. Investors continue to lose money. They worry more and more about the market and begin to act irrationally.

Soon the market goes through a serious correction of 10 – 15%. The losses begin to accumulate and investors rationalize the painful losses. They put their heads in the sand and the losses become staggering. At this point, they are so disgusted with their portfolio performance they do not even look at their portfolio. They do not know what to do. This is why investors need an investment process.

The reason portfolios show disappointing results is because of the changing financial and economic environment. Investors need an investment process to accommodate these changes. An investment process answers the following questions:

1. What to buy and what to sell;
2. When to buy and when to sell;
3. How much to buy and how much to sell.

These crucial questions need to be answered often -- at least every month -- after evaluating the performance of the portfolio. An investment process lets data not emotions rule decisions.

The first question -- what to buy and what to sell -- addresses the issue of asset selection, purchase, and sale. To make a selection, the process must lead investors to make a decision to add or delete a particular asset in the portfolio.

The second issue -- when to buy and when to sell -- guides investors to time a purchase or sale of an asset. The need is for a method to find the correct and consistent answer.

Once you have selected and bought an asset, how do you manage the amount invested in that particular position? Some people think, “Buy.” Others think, “Sell,” or “Hold.” This is not the most successful way to look at investing. Investors should think in terms of how much to add or how much to sell from an existing asset. The objective of money management is to increase or decrease a position, gradually, reflecting changes in the financial environment based on the levels of risk of a particular stock, stock sector, or asset.

The investment process evaluates the relationship between financial markets and the business environment. Investors can determine the stock sectors most likely to outperform or under perform the market. Once the strongest stock sectors are targeted, techniques are developed to find the strongest stocks within the strongest sectors.

As the business environment changes, the strongest sectors become less attractive and other sectors become more attractive. Our investment process helps investors decide when to buy or sell, what to buy or sell, and how much to buy or sell. This dynamic approach to money management uses the attractiveness of stock sectors depending on the phase of the business cycle. For example, if the Fed aggressively lowers interest rates, financial sectors are likely to benefit. When interest rates rise, other sectors become attractive and financial stocks become risky.

As the economy changes, investment strategies and asset attractiveness change. The decision making process is dynamic. Investors adjust their strategy to changes in the business cycle.

The first step is to assess the economy with practical and useful indicators. We analyze the relationship between indicators to determine what is happening and what is most likely to happen. Then, we have solid tools to predict the market.

Part 1 focuses on identifying the likely direction of the economy, the stock market, short-term interest rates, commodities, inflation, bond yields, and the dollar. These important indicators need to be understood to choose the right assets for the right times. Our analysis enables us to develop an investment process and an action plan based on the most likely scenario.

Part 2 provides tools to select the market sectors most likely to outperform the market trends analyzed in Part 1. The market sectors and the companies in each sector are listed. Data sources for measuring the relative sector strength are explained.

The attractiveness of each sector is dictated by what happens in the business cycle. Each sector is analyzed to determine when the sector offers above average or below average investment opportunities. Guidelines help us select the most helpful economic indicators. The indicators help us decide which sectors to buy or sell. It is vital to know the favorable and unfavorable economic and financial factors influencing a sector before investing money in a specific stock in that sector.

Within the strongest sectors, the strongest stocks are chosen based on stock value, management effectiveness, and business model. For each sector, the analysis is applied to each candidate stock. What are the strongest financial and business variables affecting the price of a stock? If a growing money supply is strongly related to stock appreciation, investors can profit from knowing this relationship. The same approach helps us decide when to sell.

Part 3 provides practical guidelines to develop and implement an investment plan. Concrete steps are outlined and discussed to assemble a viable investment approach. We tell you where and how to find data to use in your investment process. Then, using these tools to establish an investment process, you can start your portfolio.

Measuring the performance of your portfolio gives useful insights into your strategy and how to react to changes in the value of your portfolio. This is important in the successful management of an investment portfolio. Performance data give investors useful information on the quality of their decisions. This assessment provides investors with guidelines to correct weak choices.

Chapter 1 explains the importance of an investment process and offers an overview of: setting realistic objectives, establishing a strategy with a disciplined methodology to measure and to respond to changes in the risk profile of the markets.

Chapter 2 offers the essential indicators needed to gauge financial and business environments.

Chapter 3 examines the relationships between indicators. These relationships provide a sense of timing. The risks of the financial environment are managed by focusing on turning points in these indicators.

Chapter 4 develops a detailed framework on how to develop a personal investment system. Understanding the economic environment and developing a series of forecasts for various assets provides direction for money allocation.

Chapter 5 introduces and defines the market sectors available to individual investors.

Chapter 6 examines the behavior of various sectors in terms of volatility and risk. Business and financial indicators are used to determine the type of environment or phase of the financial and business cycle. As the configuration of indicators changes, and a new financial environment develops, new sectors emerge and become more attractive.

Chapter 7 shows you an approach to select timely stocks within the selected sectors.

Chapter 8 through Chapter 11 include the analysis of the behavior of the business cycle from 1997 through 2004. These were turbulent years when fortunes were made and then lost. The material discussed in this book is applied to study the response of various asset classes and stock sectors to changes in the business cycle. The book ends by spelling out the conditions that will trigger then next great bull market in stocks.

## **Part 1**

### **DEVELOPING AN INVESTMENT PROCESS USING BUSINESS AND FINANCIAL CYCLES**

#### **Introduction**

In Part 1, we analyze asset prices and business cycles to develop a successful investment process. The current business cycle determines the correct selection of stock sectors and of assets. A careful selection of stocks will maximize profit and minimize risk. Using this approach, portfolios become more reliable and predictable.

#### **What you learn in Part 1**

- The importance of establishing an investment process to manage your money
- Identifying the steps of an investment process
- Economic and financial indicators needed to establish an investment process
- The cause and effect relationships between these indicators
- How the financial markets and the economy affect each other
- Identifying the likely direction of
  - a. The economy
  - b. The stock market
  - c. Short-term interest rates
  - d. Commodities
  - e. Inflation
  - f. Bond yields
  - g. The dollar
- How to develop an investment process based on likely scenarios
- How to identify an action plan

At the end of Part 1, investors have the knowledge, tools, and techniques to develop an economic scenario and an investment plan. This is helpful because all asset prices from stock prices to commodity prices, short-term interest rates, long-term interest rates, and currencies are driven by economic developments and economic growth patterns. At the end of this part, investors have the tools to answer the questions:

1. What kind of an economy are we going to have?
2. What is our investment environment?
3. What is the best investment strategy to benefit from what is going to happen?

# Chapter One

## MANAGING RISK AND THE INVESTMENT PROCESS

### 1. Introduction

This chapter deals with the concept of investment process. Lack of investment process is the main reason why investors lost fortunes after 2000. They bought because the markets were going up and they were making 20-30% a year. They did not protect their capital because they did not see what was happening. In particular, they had no system, or investment process, to answer the questions:

- When to buy or sell,
- What to buy or sell,
- How much to buy or sell,
- And why to buy or sell.

The investment process is a mental framework. The framework recognizes the implications of professional money management. One of the main objectives in portfolio management is to recognize the meaning and sources of risk. Investors must set realistic objectives to make money. The issue of not losing money seems obvious. Sadly, defensive investing is not well understood by the average investor. This chapter discusses the need for an investment strategy to hedge against uncertain outlooks.

For an in-depth discussion on the relationships between financial markets and business cycles, please read my book on *Profiting in Bull or Bear Markets*.

### 2. The Need For An Investment Process

Successful investors practice a disciplined investment process. Professionals have a detailed step-by-step approach to structure their portfolio management. Individual investors need to learn the tools used by professionals if they want to make money. Learn to discipline yourself. If you do not know what, when, why, and how to change positions, you cannot be a successful investor. Reacting to current events without a game plan is bound to end in financial disappointment. We are not talking about play money; we are talking about all of your money. The investment process manages all your assets.

A common mistake of a novice investor is to imagine they know how to succeed because of previous accomplishments. Frequently, accomplished business people think they can invest with the same high degree of success. Within a business environment, the challenge is to develop a product or service, organize an enterprise, hire people to produce, market and sell a product or service. Many successful business people think investing money using financial assets is very similar. More often than not successful entrepreneurs



are not good portfolio managers. Investing capital in the financial markets requires very special skills.

Investors should be very humble about their knowledge of investing. The second half of the 1990s gave a false impression that success was easy because of the exceptional returns of the stock market. Many people, however, lost fortunes during the debacle that took place after 2000.

Investing in the financial markets is a game you play against very astute professionals. Notice the large number of people on the other side of the table who want your money. They know the rules of the game better than you. When you invest, know the rules of the game! The winner has the most chips at the end of the game.

This book explains the rules of the game based on my experiences of managing four billion dollars in currencies, interest rates, and various other assets. Please, for your benefit, use an investment process with a structured set of tools to invest your hard earned money. Our tools tell us what, when, why, and how much to sell or buy. They help us determine what is successful; the tools are not a rigid system. They need to be flexible to fit the personality of the individual investor. Managing money is not easy. It takes time and dedication.

### 3. Market Risk and Investment Strategy

Any investment process must recognize the importance of risk. The best way to appreciate the concept of risk is to compare it to the idea of probability. What is the probability of making money? Or ... losing money? If the probability is low, risk is high. On the other hand, if the probability of making money is high, risk is low. Investors should invest more money when risk is low because the probability of making money is high. This is the time to be aggressive. On the other hand, when the risk is high, the odds of making money are low. When the odds of making money on a specific asset are low, sell the asset. Become defensive. Raise cash if you do not know what to do. Risk shapes a good investment strategy.

As the environment changes, risk changes. In our game of investing, the other players are the investors. The board, or table, is the market. Poker players know the probability of winning changes as the game evolves. Realize the investment game is dynamic, like poker or any other game of strategy. As the game is played, the odds change. For instance, the odds of winning in team sports change depending on shifts in morale, injuries, and how the other team plays.

An in-depth knowledge of the rules of the game helps to determine the risk of the game and establish the chances of winning with a given set of strategies. Strategy improves the odds of winning. As the game changes, we continually evaluate how risk has changed and devise a new strategy. Poker offers a good analogy. Players do not bet the same amount each time. They begin with a small bet because they do not know how their hand will develop. They increase their bet only if their hand looks promising. Depending on what the other players do, they raise their bet only if the odds of winning increase. If the odds turn against them and the risk of losing becomes high, they fold their hand.

Investing your money offers similar challenges. Like it or not, we all participate in the investment game. The economy and financial markets is the table upon which the game is played. Investors continually change the risk/reward profile of each market by getting new cards, raising their bets or dropping from the game. We need to adapt our investment strategy and change the size of our bet (investment). Because risk changes during the game, we change our bet accordingly. Adapting your portfolio to the changing risk is the only tool under your control to avoid serious losses as in 2000. The major advantage in lowering the risk, thus lowering the volatility of your portfolio, is to make your returns more predictable.

When inflation rises, risk increases because the Fed shifts to a restrictive monetary policy and stocks decline. When inflation declines, the risk in the financial markets is low. Bond prices start going up, followed by a rising stock market. By looking at economic indicators (like inflation), investors can assess the direction of risk and develop their investment strategy.

How do we plan for the risk of an event like war or an act of terrorism? There is no protection against these types of events. History shows that the country with the strongest economy always wins the war. Now you know where to place your bets. In general, investors cannot protect themselves against event risk. The only protection is to adopt an investment strategy based on value and prudent investment strategies. Do not panic when a sudden crisis occurs. A portfolio based on value rises to its proper level.

Many events dramatized by the press are irrelevant in developing an investment strategy. The so-called energy shortage is one example. When the price of crude oil spikes and rises sharply, the press dramatizes the event. The comments on TV and newspapers explain the rise as due to shortages. At other times, the financial press talks about shortages in natural gas. The idea of shortages is very misleading. All commodity prices move in the same direction. This includes short-term interest rates. Short-term interest rates in effect are the price of the commodity money. If crude oil spikes, the odds favor a strong upward move in copper, aluminum, natural gas, and short-term interest rates.

If investors believe OPEC drives crude oil prices higher, they must also believe that OPEC controls copper prices, aluminum prices, or short-term interest rates. All of these prices move in the same direction. In other words, cartels (like OPEC and the Fed) do not control the price of the commodity they manage. Cartels react. For example, OPEC supposedly controls the price of crude oil, while the Fed supposedly controls the price of short-term interest rates. That is far from the truth. Cartels only create volatility in the price of the commodity. Ultimately, the market drives the price of oil. The Fed may control short-term interest rates for limited periods. Ultimately, the market decides the level of short-term interest rate (the price of money). Cartels can control prices for a very short time like they did in the early part of the 70's. However, eventually, the markets drive oil prices or interest rates sharply higher or lower.

Risk also depends on the knowledge of the investor. The successful investors recognize there is always room to learn in a field of failures. Financial markets require a specialized, in depth, diversified, flexible knowledge, and attitude. Lack of investment knowledge is highly correlated with big losses. Smart investors satisfy themselves with modest returns and protections against loss. They know that if they lose money they must

work harder to regain the losses. The professional investor gears their portfolio to that outcome. The individual investor doesn't recognize this possibility.

Formula investing, indexing, averaging down, buy and hold, diversifications are all easy to understand, but they are not necessarily profitable. Beware of anything that sounds simple!

In more than 30 years in this business, I have never found a formula that predicts with certainty. At some point in time, they all eventually fail miserably causing painful losses. Indexing was in vogue in the 1990s. Investors paid dearly by following this strategy after 2000. All major stock market indexes, bloated with technology stocks, collapsed when the tech bubble exploded in 2000. Indexing proved to be disastrous for investors in that period. Only the mutual funds that touted indexing gained a benefit.

Averaging down is another formula for financial suicide. Buying Enron's stock as the company sagged into bankruptcy allowed investors to own nothing. Diversification is a concept similar to indexing. This idea says, "Buy a bit of everything to spread the risk." Unfortunately, when you buy a bit of everything, portfolios perform like the averages. When the market drops, the value of the portfolio drops.

#### **Investment fallacies**

- Formula investing
- Indexing
- Averaging down
- Buy and hold
- Over diversification

Many advisors suggest a buy-and-hold strategy to solve the problems. Like all attractive formulas, a buy-and-hold strategy has serious drawbacks. Buy-and-hold assumes stock prices will go up over the long-term. The problem is that by the time an investor has saved enough money to invest, he or she is likely to be about 50 years old. If our 50 year old investor were living in 1929, in 1968, or 2000 they would have to wait more than a decade before they could recover their lost capital and then finally make money in stocks. And yet, many advisors continue to recommend this strategy. The collapse of the market in 2000 is the latest example of a faulty strategy. Try to tell a 70 year old investor to think long-term after they lost 75% of their capital. If a person loses 75% of their capital, they have to almost triple the remaining 25% of the capital just to break even. Tripling your money is very difficult, especially in uncertain market conditions. Tripling your money takes more than one decade using average rate of returns. Thus, a 50 year old investor has to ask, "How many decades do I have to live?"

Making money is not easy. It takes work, dedication, and discipline. It takes a keen understanding of market interactions. By using tools in a disciplined manner, we can select sectors and stocks to minimize setbacks from falling prices and capitalize on the rising prices in the markets. This book explains the tools developed through many years. Are they the best ones? No! But, they served me well. They allowed me to survive the carnage of severe bear markets in the past 30 years.

#### 4. Setting Realistic Objectives

In the last part of the 1990's, the stock market rolled ahead accompanied by a red-hot economy and stimulated by excess liquidity from the Federal Reserve System. This occurred at a time when Mr. Greenspan talked about 'irrational exuberance' and the Fed was injecting liquidity into the banking system at rates between 7% and 15%. The Fed's actions ignored the average growth rate in liquidity since 1955 was close to 6%.

The excessive liquidity created a booming economy and a soaring stock market. The main feature of the market in last part of the 1990's was an enormous creation of debt. The belief that 20-25% a year returns in the stock market was normal justified many accounting irregularities. At that time, day traders used computers to trade online and make thousands of dollars. Sadly, it was not their skills that made them rich, but a soaring stock market. Traders believe their profits were generated by their skills. People speculated with their retirement plans. Just throw the dart at the page of the stock market. It was impossible to make a mistake. Everything was going up.

During those times, I spoke around the country about setting realistic objectives. Many investors in the audience just smiled. The smiles of disbelief are hard to forget. My presentations focused on prudent careful investing. Why should people be prudent and careful if they can make 20-30% a year with some stocks doubling in a month? After 2000, stock prices suffered tremendous losses of 50-70%. This meant that losses could only be regained if the remaining capital would double or triple.

If investors make 15% in the 1<sup>st</sup> year; then make 15% in the 2<sup>nd</sup> year; then make 15% in the 3<sup>rd</sup> year; but for some unexpected reasons they lose 15% in the 4<sup>th</sup> year, the return over those 4 years is slightly higher than 6%. All the efforts to make money in those 3 years are totally wiped out by just one loss of 15% in the 4<sup>th</sup> year. Look at it this way. If you lose 50% of your money, you have to make 100% to come back and break even. If the market provides 7-8% a year on average, it will take roughly 9-10 years before you break even. Thus, the paramount strategy is to protect a portfolio against price drops. Any decision to buy or sell must be geared to preserve your capital.

After 2000, investors realized some of their mistakes and the need to be prudent with their money. This issue is important. When we set realistic objectives, we fight two major emotional extremes: one is greed and one is despair. Around 2002, after a 70% decline in the market, some people felt despair. Many decided to simply forget about their investments. Further, they rationalized that investing was either not for them or they would eventually recover. Instead, the savvy investor targets the golden median between greed and despair. I call the golden median being realistic.

History shows that the long-term return of the stock market is very close to 7–9% depending on who computes it and how it is computed. This 7-9% return is very close to the average growth rate in credit expansion. It is about equal to the growth in the economy. It is very similar to the growth of earnings per share. It is very similar to the growth in stock market prices and to the growth of income. This is not a coincidence. The growth of the economy generates wealth and this wealth is distributed among the economic players. Returns above the norm should signal caution, not greed. When politicians try to convince us we are in a new economy, be especially cautious. Simply, set a return of 7-9% as a realistic objective. Keep the 7-9% return in mind, when markets soar or collapse.

Another important lesson taught from the late 1990's bubble is that when chasing unrealistic objectives, people add volatile stocks to their portfolio. When the volatile stock price rises, the excitement is satisfying. The problem is volatility causes great losses when the market declines. The high volatility of a stock adds to the volatility of a portfolio. Thus, your returns become less reliable and more difficult to manage.

The experience of 1998-2003 proves that the strong volatility on the upside was followed by the same volatility on the downside. In other words, the 20% profit was followed by 20% losses if you failed to leave the table. As a portfolio becomes more volatile, it becomes a liability. Investors must be keenly aware of when to sell. A volatile environment increases the difficulty of this decision.

Wise investors aim for steady returns. A steady return is valuable because is predictable. Achieving predictable returns is the main point of this book. This point becomes clear when we discuss the concept of predictable sectors and stock volatility in detail. After 2000, the investors who had salvaged their money gratefully realized the wisdom of managing for a predictable return.

## 5. Defining the Investment Process

The investment process provides a framework for making investment decisions. Thus, investors step through a series of decisions as follows:

1. Why to buy and sell,
2. What to buy or sell,
3. When to buy or sell, and
4. How much to buy or sell.

Each decision is supported by information guiding your decision toward the best course of action. As investors learn and use the disciplined steps of the investment process, managing their portfolio becomes easier.

The first step is to answer why to buy or sell a stock. Investors decide if the conditions to buy stocks are favorable. We look at the past to determine what happened at major turning points in the stock market. The same analysis can be used to see what happened at major turning points in the bond market, commodities, precious metals stocks,

or other sectors. The challenge is to extract relevant information from the past and use it to decide on investments - now.

For example, how does understanding the economic environment impact our decisions on when to buy or sell? Let's assume the Fed is concerned about low inflation and the weakness of the economy. They inject considerable amounts of liquidity into the banking system and lower the inter-bank rate (fed funds) to raise inflationary expectations and strengthen the economy. If the administration is Republican, they generally propose cutting taxes. This type of political and financial environment is typically associated with a major market bottom.

The end of the 1995-2000 bubble was anticipated by rising short-term interest rates and less liquidity in the banking system. These signals were there for everybody to see. Greed, however, distorted the decision making process of most people. In those years, the economy roared ahead, growing at well above the 6%. Inflation was rising. The Fed started to speak about inflation and the need to lean against the winds. Our moves should become more conservative. Thus, we look at the big picture and try to understand what is happening. The environment tells us if the trend is bullish or bearish.

The decision to buy or sell a specific asset depends both on the environment and the specific value and conditions associated with that asset. For instance, a stock may be overvalued as measured by a P/E ratio for the stock relative to the P/E ratio of a market index. Although Treasury bonds may be doomed to trade in a range, corporate bonds or high-yield bonds may still be attractive. Later, we discuss these types of indicators in detail. The same tools guide us to decide if bonds are more attractive than stocks.

The second step in our investment process is to decide what to buy or what to sell. After we decide the environment supports a bull market, we decide which stocks or bonds to buy. Let's limit our discussion to stocks. The attractiveness of some sectors and stocks within a sector depends on the level and trend of inflation. If the Administration policies are inflationary, we look at commodity driven (precious metals and energy) stocks. If interest rates decline, bank stocks become attractive. When interest rates rise, bank stocks become unattractive. In this book we develop a methodology to make these type of choices.

The third step in the investment process is when to buy or sell. The level of risk in the system determines when to buy or sell. Remember, risk relates to the probability of making money. When risk rises, the odds of making money drop. When risk drops, the odds of making money increase. We follow indicators to find if risk is increasing or decreasing. We need to know the current level of risk. Is risk high or low? Because this step relates closely to the next step we position ourselves to decide how much to buy and how much to sell.

The fourth step concerning how much to buy or sell depends on the level of risk associated with that specific asset. If the risk is very low then our strategy is to buy. If the risk is high then our strategy is to sell. If risk is low and expected to rise, what do we do? To answer this question, we need to look at how a poker player plays the game. When we begin the game, the unknowns are what the other players will do and what cards the other players will have. Yet, we want to play the game. If we do not play the game, our returns are below average. We put a chip on the table to play the game and expect a return. As

investors, we do the same thing. We want to always be fully invested. The challenge is to invest in an optimal way.

The next step in the poker game is to look at the cards we are dealt. After we look at the cards, we can establish the level of risk we encounter if we play our hand. The level of risk is the odds of how much money we can make with our hand of cards. We start to discard cards based on the odds of getting better cards and winning over the cards held by the other players. As we play our hand, the game evolves and we establish who may hold a better hand. Based on that assessment, we raise our bet. As the game progresses and the bets increase, the amount of money put on the table increases with the probability that we will get the jackpot. If we realize the risk is high and the probability of making money is low, we fold and stop playing. This is the kind of decision process used to decide how much to invest in any market asset.

As investors, we go through the same mental exercise to decide how much to buy or sell. At the bottom of a bear market investors do not know how the game will evolve. In the beginning, investors chip in a little to stay in the game. Similarly, the poker player begins with a small bet to stay in the game. As the probability of making money increases, investors raise their ante. As market prices go up, the size of the investment increases because the odds of making money increase. When risk becomes too high, the same strategy is reversed. Investors gradually reduce their holdings in stocks. If the market keeps declining, we sell more. How much to buy and sell is the focus of money management. Thus, we continually adapt our portfolio to the changing financial markets and economic conditions.

Frequently, people hesitate and wait for more evidence. They want to see what the markets will do next. This could cost dearly. There is a saying in Zen: When in doubt, act. Hesitation is the worst enemy. Always sell a little or buy a little. But act. It is important to play the game. The worst attitude for investors is to think in terms of all or nothing. This leads to emotional conflicts. By buying or selling small amounts, investors stay in the game. It is important to play the game.

## 6. The dynamics of risk management

With respect to managing money and risk, we must establish a timetable to review our portfolio and strategies. Professionals review their strategies every day, every minute, as the data come through the screens. Avid investors may review their strategies every day or every week. Others prefer every month. What is important is that strategy and the assessment of risk is reviewed with regularity. The closer we keep our eyes on the performance of our portfolio, the more successful we become. If you do not have the time to do this task you have too many investments, too many stocks and/or bonds, and too many other assets. Choose a few assets and follow them very closely. If you do not have the time, ask a professional portfolio manager to provide a weekly summary of the value of your investments. If close monitoring of the performance of your portfolio is absent then odds of increased profits are low.

Each of us has our own personality and emotional preferences in life with respect to investing. Our ability to invest successfully also depends greatly on the rules we want to

follow as we make decisions. Whatever your personality and emotional preferences, remember to:

- (a) Review the environment for investments on a regular timetable,
- (b) Review the performance of your portfolio on the same timetable,
- (c) Review what caused a decision to buy or sell, and
- (d) Modify your decision if the reality of a situation requires a mid-course correction.
- (e) Take small steps to avoid painful mistakes when a change in investment posture is required.

A systematic approach is required to manage portfolio risk. Use a framework to collect the essential data needed for an investment program. Investors who follow a short horizon need to collect different information from those who follow a longer-term horizon.

Once we have the information, interpret the information using the tools presented in this book. For this purpose, we need to develop the skills to understand the meaning of the information that has been collected. The ideas in this book offer a way to interpret the data available from markets and government sources.

### **The dynamics of risk management**

1. Collect the information.
2. Process the information using the tools in this book.
3. Develop investment scenarios.
4. Establish the odds of being right for each scenario.
5. Develop a strategy for the most likely scenario.
6. Implement your strategy gradually.
7. Measure your performance. Does your strategy and choice of assets provide the expected results?
8. Go to 1.

After the information is processed and the indicators are computed, we develop investment scenarios. This crucial phase of the process drives the investment strategy, selection of stock sectors, and types of assets for investment. The interpretation of the data may not lead to only one economic and financial scenario. Two or three scenarios may be formulated to reflect the position of the indicators. At turning points in financial markets and business activity, the use of multiple scenarios is helpful.

Some scenarios are more likely than others. For instance, if short-term interest rates drop, commodity prices drop, and the money supply grows for a few months then the odds favor higher stock prices. Another common scenario is a strong economy, higher interest rates, and lower bond prices. Growing commodity prices make commodity driven stocks attractive. If the economy is likely to grow slowly, we anticipate stable or lower interest



rates and firm bond prices. We expect commodities to trade in a narrow range or head lower. Inflation would remain subdued. In a slow growth environment stock prices rise strongly. Thus, we must predict a most likely scenario. When we document a most likely scenario, we can develop an investment strategy and a plan to take advantage of it.

Even though we identify the most likely scenario, recognize that other scenarios exist. Doubts may arise on interpreting the data and other scenarios become credible. This exercise focuses on the issues and risks of the times. By assigning a probability to each scenario, we formalize the uncertainty in our analysis of the data.

### **Examples of scenarios and their impact on asset prices**

#### **1. Strong economy**

- Higher interest rates and lower bond prices
- Rising commodity prices
- Rising inflation
- Stock market very selective

#### **2. Slow growth economy**

- Stable or lower interest rates and firm bond prices
- Stable or lower commodity prices
- Stable or lower inflation
- Rising stock prices

#### **3. Very weak economy**

- Lower interest rates and strong bond market
- Lower commodity prices
- Lower inflation
- Higher stock prices

After assigning a probability to each scenario, we develop a strategy that limits our losses. We re-design our strategy to take advantage of the new most likely scenario. All of these concerns integrate into our selection of assets (types of stocks or bonds) for our portfolio. To protect our portfolio from the downside risk and avoid costly mistakes, we gradually act on our investment plan. At some point in time, new evidence triggers an adjustment in our strategy. Thus, we recognize the change in our environment and adapt with a modified strategy.

Measuring the performance of our portfolio helps to choose investments and manage risk in our portfolio. If our strategy is successful, the returns of our portfolio are favorable. Even with a favorable return, we must monitor the performance of our assets and separate the strong from the weak ones. If our strategy is wrong, the returns are poor. We must go back to the first step in the dynamics of risk management and reconsider the whole process. The question is, “What did we miss?” Thus, we reevaluate the whole investment scenario,

sector selection, and the choice of stocks. When we find and understand the reasons for poor returns, we avoid catastrophic results. Now, our management abilities come into play.

The above steps should be repeated at least every month to evaluate the success of our investment process. Does our strategy provide satisfactory results? Investors lose money because they do not use discipline to manage their investments. Quite often, people feel enthusiastic about the strong growth in market prices and their choice of assets. They forget to maintain the discipline to find out if the cards from the dealer were changing the risk of the game. They forget to ask, “Do I need a better strategy?” Successful investors do not just make money when assets go up in price. Successful investors make money when assets go down in price. For this reason, discipline is the order of the day. Review of our environment (the conditions that justify a strategy) is a repeating pattern. Any new strategy must be formulated to match the new environment.

## 7. Conclusions

The most important concept in managing money is an investment process. The investment process is a method that provides the tools to manage all your money, not just play money. People lose money because they forget to use discipline and to review the success and failure of their investment choices and strategies on a repeating pattern. A major cornerstone of an investment process is to assess the risk in the market place. The concept of investment risk is similar to the concept of risk in a game of strategy. A successful poker player constantly computes the risk of the game as the game is played. If the odds of winning increase, they raise their bets. If the odds of losing increase, they fold quickly. By comparison, if the odds are high of an asset price going up then buy now.

Realistic objectives are crucial. Investors recognize that chasing 20% returns, as in the late 1990's, is not a helpful investment objective. A high investment objective implies the ownership of volatile assets like technology stocks in the late 90's. The problem with volatile assets is, while their appreciation is rapid, their decline is equally swift. Investors avoid those pitfalls and use discipline to recognize that investments for the long term, at about 7–9%, are realistic. Realistic objectives point investors to sound strategies and investments; recognized values are less prone to sharp setbacks.

Successful investors achieve predictable and stable returns if they use methods and tools that encourage a review of their portfolio. They need to systematically establish, when, why, what, and how much they should sell of any specific asset. These decisions depend on what happens in the financial and business environment. Understanding financial environments is essential for selecting the investments in our portfolio.

Risk changes as businesses march through the various phases of the business cycle. Within a phase, the indicators tell us when to buy or sell. The decline of risk makes some investments particularly attractive. In contrast, the rise in risk will force investors to start selling and reduce their exposure to a particular investment. By acting gradually and adjusting our portfolio to the new level of risk we limit our losses and open up to new opportunities. Rather than think “buy” or “sell,” we think gradually increase or decrease our position in any given investment. Thus, we avoid major mistakes and painful losses.

Our choice of assets depends on our investment strategy. An investment strategy depends on the outlook and the kind of economic features we expect. A strong economy warrants a strategy based on rising inflation, rising interest rates, rising commodities, and probably an uncertain outlook for stock prices. On the other hand, a weak economy justifies a strategy based on aggressive buying of certain stock sectors, and other assets like bonds. During such times, avoid assets like commodities, precious metals, and hard assets in general. Establish economic scenarios using the tools discussed in this book to develop strategies and invest successfully.

Finally, we discussed risk and the dynamics of managing risk. This process uses a series of steps to collect and process the information. The next step is to develop investment scenarios and establish the odds of profiting within each scenario. Successful investors develop and implement an investment strategy based on the most likely scenario and set limits to avoid large losses. Measuring and analyzing the portfolio performance is the final step to maximize the portfolio. We sell the losers and keep the winners after a keen analysis of our decisions.

In the next chapter, we begin to build the framework to develop an investment process. The first step is to introduce the economic and financial indicators needed to assess what is the most likely path of the financial markets and the economy. They are simple to follow. The indicators interact in a reliable repeating pattern. In the following chapters, you will learn how to use and interpret these indicators and integrate them into your investment process.

## Chapter Two

### FINANCIAL AND ECONOMIC INDICATORS

#### 1. Introduction

In Chapter One we discussed the concept of risk and the importance of protecting a portfolio from losses. Managing your investment risk should be your primary objective. When we look at games of strategy, like poker, we develop an investment strategy centered on flexibility and sensible risk-taking. As poker players (investors), we plan our bets, based on the odds of winning, and change our bet (investment) in each asset based on the odds of making money.

One objective of this book is to develop an investment process based on investing in the strongest sectors of the financial markets. Our process is driven by changes in economic conditions and the corresponding reaction in the price of assets.

As the economy moves from a period of fast growth to slower growth, asset prices change to reflect evolving economic conditions. As we understand how and why prices change, we develop our investment strategy. The investment strategy is the keystone of the investment process.

In Chapter Two, we review the forces acting on the economy and their relationships. The economic indicators are introduced and divided into three categories. A detailed discussion of the indicators and how they interact can be found in my book *Profiting in Bull or Bear Markets*. In contrast, this text is updated and based on recent experience with these indicators and discusses only the most reliable ones.

The indicators are simple and useable by a novice investor. These methods and tools forecast the direction of the markets and to recognize risk. The indicators provide the confidence to distinguish the useful investment advice from the useless. Our process is similar to a doctor who orders tests on a patient, analyzes the results, and diagnoses the current condition of the patient.

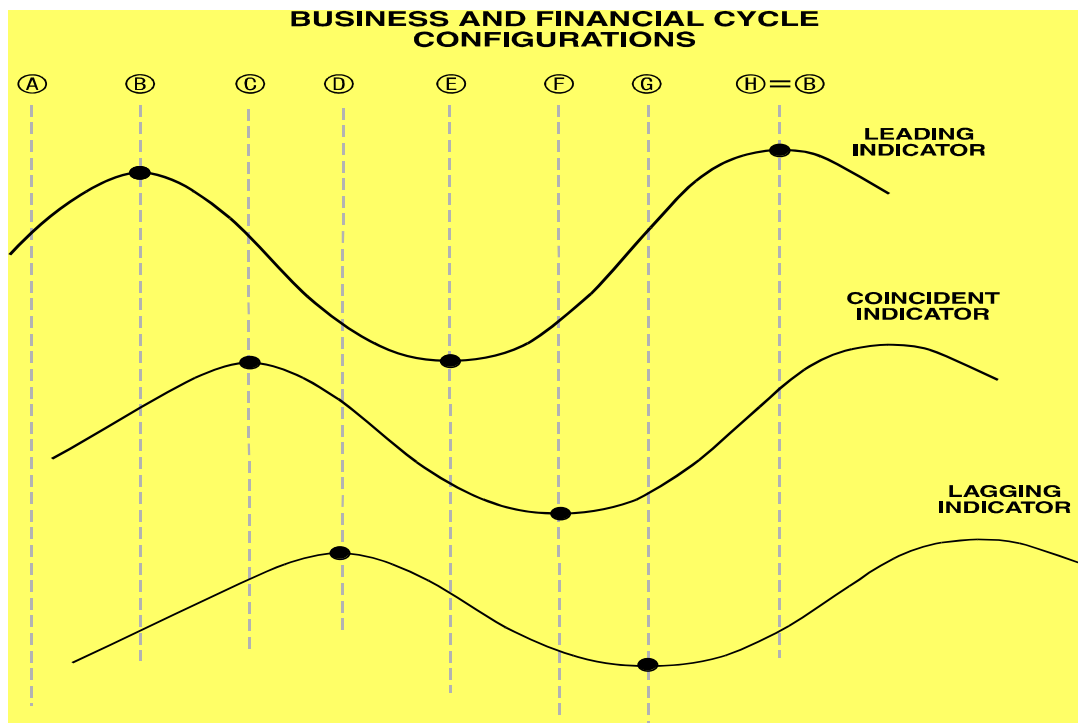
#### 2. Economic and financial indicators

Years of research show how the economy and financial markets interact with cause-and-effect relationships. Business and financial cycles last 5 to 7 years. Our indicators help to select the stock sectors to buy and to avoid as the business and financial cycles go through their phases.

The majority of economic indicators available to investors fall into one of these categories: leading, coincident, and lagging indicators. The main thread tying them

together is their lead-lag relationship and feedback feature. The feedback between these indicators dampens the cycles and helps predict the future of the economic and financial system. For instance, when an economy expands at an above average growth rate, workers expect a rise in personal income. Consumers borrow more money to purchase items they want. More borrowed money raises the level of interest rates. Higher interest rates cause consumers to borrow and buy less. Producers cut production and the economy slows to a more sustainable growth rate. The feedback created by rising interest rates reduces the appetite of consumers for goods and maintains the economy within balanced growth ranges. This is a simplified example. In a complex economic system, other feedbacks exist.

We call the vertical line separating each phase of the business and financial cycle a configuration. The configuration identifies the turning point (top or bottom) of each cycle (Fig. 2.1). As we move from one turning point to another, market prices move from one extreme to another. Investment risk changes as the business and financial cycles move from one configuration to the next, thus creating investment opportunities. When the configuration favors a specific asset, we assume a higher level of confidence and buy the specified asset.



**Fig. 2.1.** The above graphs show the relationship between leading, coincident, and lagging indicators. Each turning point or configuration is a unique position in the business and financial cycle. By knowing where we are in the cycle, we can develop a strategy to profit from the current trend of the cycle.

The turning points of the leading indicators lead the turning points of the coincident indicators by months. The lead-time is about 12-24 months. The coincident indicators reflect what is happening in the economy.

The growth in monetary aggregates is a leading indicator. It anticipates changes in the financial markets and the economy. A peak in the growth of the money supply leads a peak in the growth of the economy (coincident indicators) by about 1-2 years. A peak in the growth of the economy (coincident indicators) leads a peak in interest rates, growth in commodity prices, and inflation (lagging indicators) by 12-24 months.

A decline in the lagging indicators is followed quickly, usually less than 6 months, by a rise in the growth of monetary aggregates and the dollar (leading indicators). After about 12-24 months from the trough in the monetary aggregates, the economy (coincident indicators) strengthens. A trough in the growth of the economy (coincident indicator) leads a rise in inflation, the growth of commodity prices, and interest rates (lagging indicators) by about 1-2 years.

The rise in the lagging indicators generates important feedbacks and requires a shift in portfolio strategy. For instance, a trough in interest rates, in the growth of commodity prices, and inflation is followed, usually by less than 6 months, by a peak in stock prices, growth in monetary aggregates, and the dollar. Then, the cycle is in position to repeat the pattern.

An understanding of the above relationships helped avoid the debacle of the stock market price bubble in 2000 (as discussed in detail in 1999 in my advisory *The Peter Dag Portfolio Strategy and Management*). In 1997, monetary aggregates (leading indicators) began to rise more rapidly. The Fed encouraged the rise. The Fed was responding to a credit and currency crises in the banking system. In late 1998, about 16 months later, the economy (coincident indicators) grew more rapidly. About a year later, in 1999, short-term interest rates (lagging indicators) began to rise accompanied by higher growth in commodity prices.

The rise in short-term interest rates caused the growth of the money supply to decline in mid 1999. This decline was bound to last for many months. Since stock prices and the growth of the money supply have the same turning points, the conclusion was clear – stock prices were very close to a major downturn. This was a prime time to begin a more conservative investment strategy.

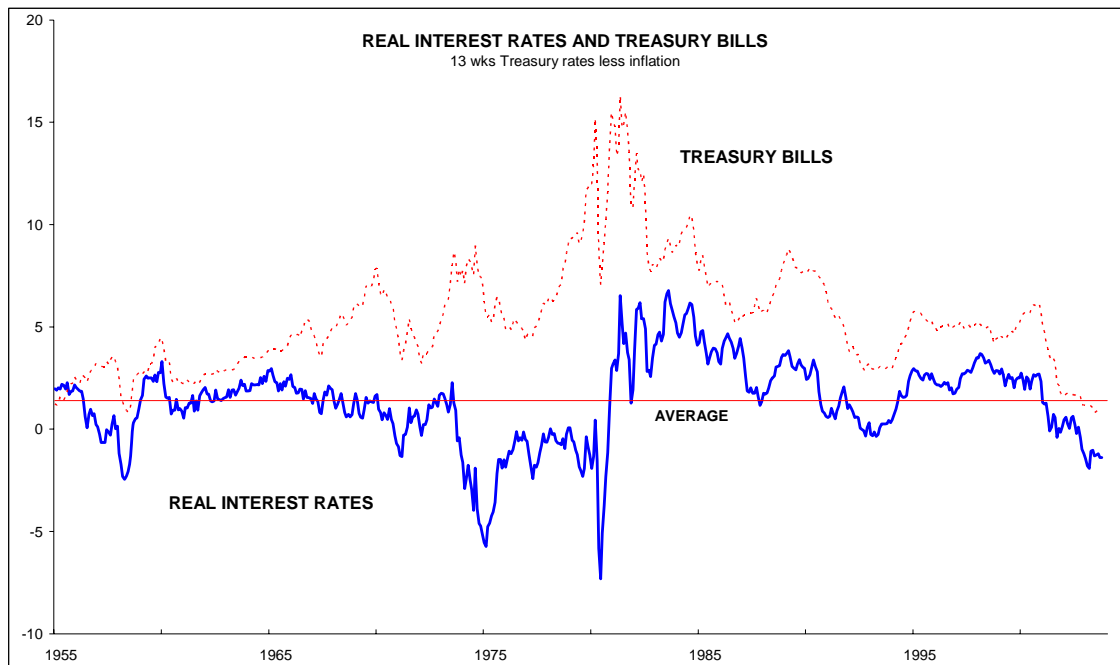
Two important feedbacks exist. The first is the decline in the lagging indicators, followed by a rise in stock prices, the dollar, and growth in monetary aggregates. The second is the rise in the lagging indicators, which precedes a peak in the stock prices, in the growth of monetary aggregates, and the dollar. The action of the lagging indicators is a valuable tool to assess financial risk (Fig. 2.1).

The important indicators are easy to track.

- a. *The leading indicators* are the growth of the money supply, stock prices, slope of the yield curve, and the dollar.

- b. *The coincident indicators* reflect the intensity of economic activity. Employment, production, housing activity, retail sales, car sales, and purchasing manager indexes are the most useful ones. They are reported in the news as they happen and they mirror current business activity.
- c. *The lagging indicators* are the most crucial gauges. The significant ones are short-term interest rates, bond yields, , inflation at the producer and at the consumer level, and growth in commodities

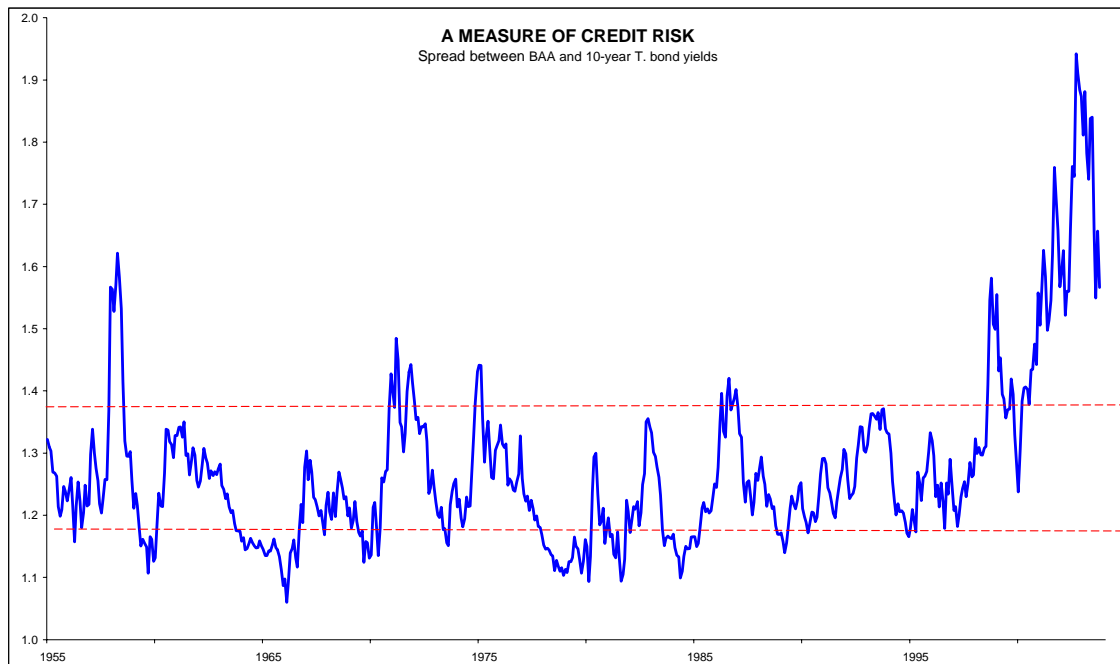
The level of real short-term interest rate (the difference between short-term interest rates and the inflation rate) is a proven measure to assess monetary policy. High real short-term interest rates are associated with periods of declining inflation rates, higher bond prices and lower bond yields, and lower precious metal stock prices, as occurred from 1985 to 2000 (Fig. 2.2). Low real interest rates imply periods of rising inflation rates, lower bond prices and higher bond yields, and higher precious-metal stock prices, and a more volatile business cycle. For a detailed discussion, see Chapter 6 and 9 of my book *Profiting in Bull or Bear Markets*.



**Fig. 2.2.** The level of real short-term interest rates is closely related to inflationary pressures. Inflation rises when real interest rates are below their historical average. Inflation declines when real interest rates are above the historical average.

The degree of financial and economic risk becomes clear when we understand the spread between BAA corporate bond rates and 10-year Treasury rates. When the spread is close to the top of the historical range, the level of credit risk is high. When the spread is at high levels above the historical range, as after 1999, credit risk is unusually high and corporations experience high debt relative to assets (Fig. 2.3). The outcome is volatility in the financial markets, high uncertainty about the future, and slow economic growth. Business is unable to borrow and invest due to abnormally high

corporate long-term interest rates relative to Treasury yields. The stock market bubble imploded when this spread was at historically high levels.



**Fig. 2.3.** The rise in spreads between lower grade (BAA) bond yields and 10-year Treasury bond yields reflects increased credit risk in the financial markets. Large spreads represent high risk for the financial markets. Small spreads reflect low risk for the financial markets.

### 3. Leading indicators

The leading indicators provide information on the future trend of the economy. When the leading indicators begin to grow at a slower pace, the economy is likely to grow at a slower pace within 12-24 months. As the leading indicators increase the pace of their growth, the economy is likely to grow at a faster pace within 12-24 months. The following leading indicators have been selected for their reliability to predict turning points in the economy based on many years of experience in using them.

The money supply is the most important of the leading indicators. Sadly, money supply is widely misunderstood. Money supply is measured in more than one way. Sometimes, however, because of technological innovation or changes in the banking system, some measures of money supply get distorted. So, we follow many measures and expect distortion because of temporary factors.

There are four main measures of money supply. Money supply is a measure of how much liquidity is in the economy. M1 is a narrow definition of the money supply;



M2 is a broad definition of the money supply; and M3 is an even broader definition. We commonly use MZM.

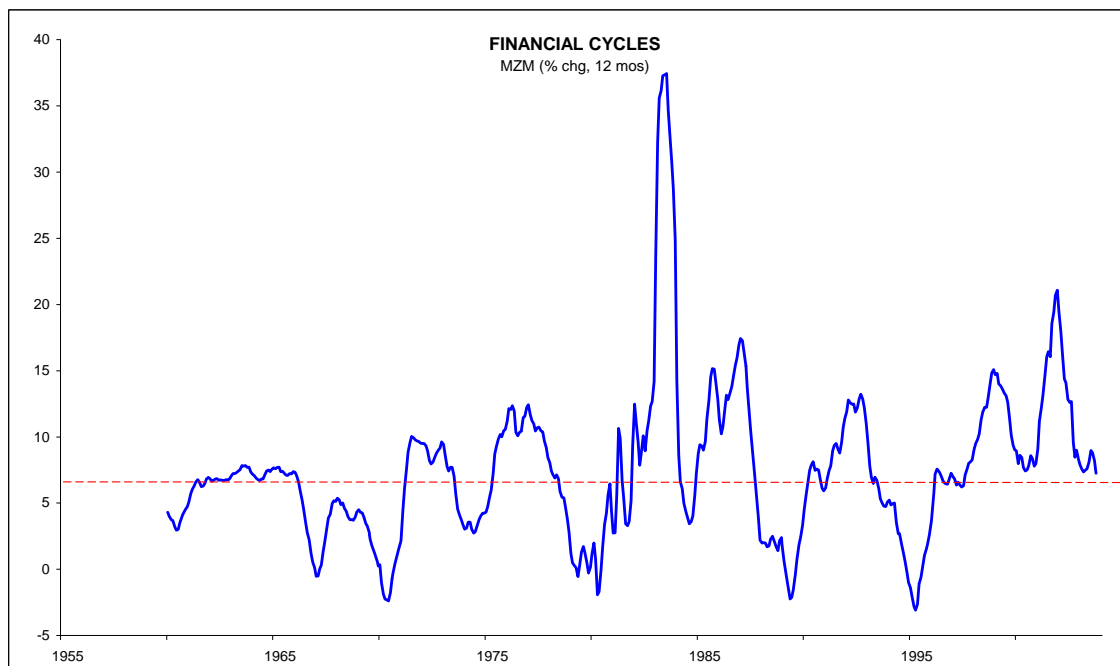
*Money supply - M1:* M1 consists of currency, travelers' checks of non-bank issuers, and demand deposits at all commercial banks.

*Money supply - M2:* M2 is M1 plus savings deposits including money market savings accounts, small denomination time deposits, and balances in retail money market funds.

*Real money supply - M2:* This leading indicator is computed by subtracting the rate of inflation in consumer prices from the growth in the money supply M2.

*Money supply - M3:* The third measure of money supply is M3, which consists of M2 plus large denomination time deposits in the amount of \$100,000 or more, balances in institutional money funds, and Eurodollars held by U.S. residents in foreign banks.

*Money supply - MZM:* MZM is money with zero maturity (Fig. 2.4). It is defined as M2 plus institutional money funds, minus total small denomination time deposits.



**Fig. 2.4.** The change in the growth of MZM is closely associated with the change in the dollar, yield curve, and stock prices. MZM leads turning points in the growth of the economy by about 12-24 months. Cycles of the growth of the money supply last about 5-7 years.

The following is an example of how we can use the growth of the money supply. Let's assume that MZM begins to grow at a faster pace. Inevitably, the growth of MZM (leading indicator) is followed by a stronger economy (coincident indicator) in about 12-24 months. Short-term interest rates (lagging indicator) begin to rise after 12-24

months from the trough of the coincident indicators. The rise in short-term interest rates (lagging indicator) reduces the demand for money and shrinks the growth of MZM and stock prices (leading indicators) after 3-6 months. After 12-24 months from the peak in the growth of MZM (leading indicator), the growth of the economy (coincident indicator) declines and causes short-term interest rates (lagging indicator) to decline after 12-24 months from the peak in the coincident indicators. Lower short-term interest rates (lagging indicator) causes more demand for money after less than 6 months causing the growth in the money supply MZM and stock prices (leading indicator) to rise. And, the cycle repeats.

The growth of the money supply is closely related to the growth of the economy and of the trend of the stock market. In 1992, money supply growth peaked and then declined until 1994. The growth in industrial production peaked in late 1994 with a lag of two years. Money supply growth bottomed in 1995. In 1996, a pick-up in the growth of industrial production took place due to the 1995-1996 monetary expansion with a lag of one year from the bottom in the growth of the money supply. The bottom of the growth in the money supply in 1995 was accompanied by a surge in stock prices until 2000. These examples suggest that money supply growth leads the growth of the economy by 12-24 months, and is associated closely with stock prices.

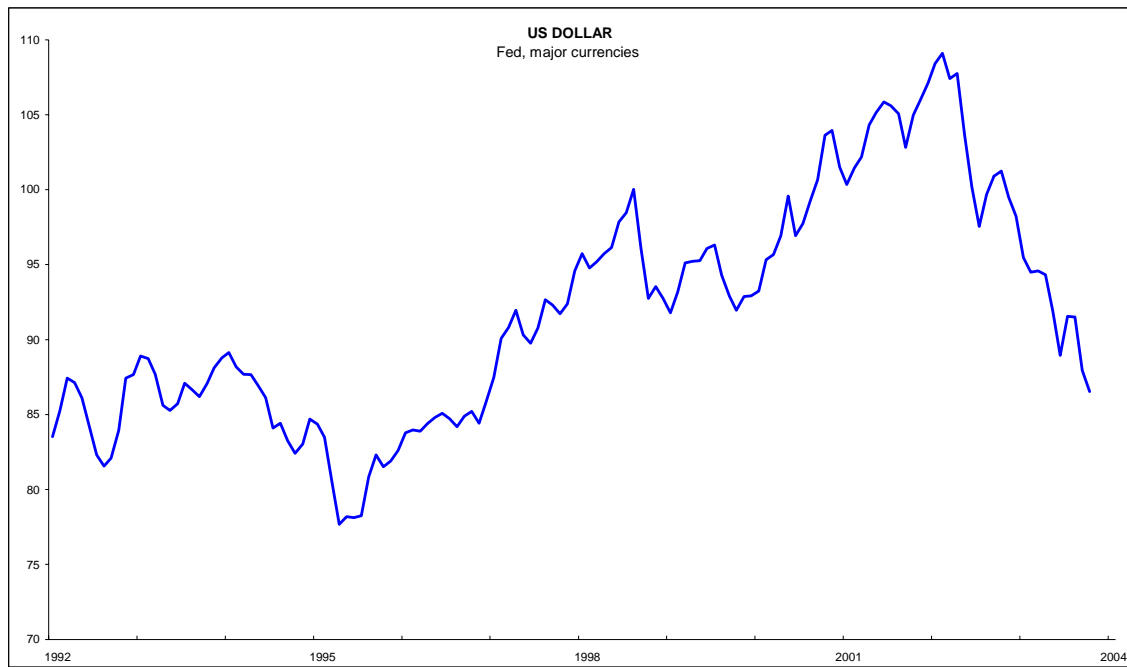
Strong growth in the money supply implies a lot of liquidity is being injected into the economy and ample credit is available to business, investors, and consumers. As this liquidity moves through the economy, more and more people use the credit. Eventually they will spend it and the economy strengthens. However, when the money supply starts to slow down, the stream of credit to business, investors, and consumers slows. Thus, the economy gradually begins to grow at a slower pace as less money is offered and less money is spent. Historical data show a financial cycle, defined as the fluctuation in the growth of the money supply, is about 5-7 years from trough to trough.

The long-term growth rate of the money supply is about 6-7%. The 6-7% growth rate is very similar to the capital appreciation of stock prices, the growth in earnings per share, or the growth in personal income. If the growth of the money supply is so important, why are its growth patterns highly volatile? We know volatile growth patterns cause sharp fluctuations in stock prices, business activity, employment, and income. We know the Fed has the tools to control the money supply (see Chapter 7 of my book *Profiting in Bull or Bear Markets*). Why doesn't the Fed smooth the fluctuations? Sadly, the answer is: they can't! The main function of the Fed is to protect the banking system by injecting liquidity during phases of increasing financial risk.

*The dollar* is another important leading indicator. The Fed publishes a daily measure of the value of the dollar against the major currencies (Fig. 2.5). The turning points of the dollar are very close to the turning points of other leading indicators. The dollar reflects the demand by foreign investors. If our monetary and political conditions are favorable and support a stronger economy, foreign investors buy dollars to invest in the US. The demand for our currency drives the value of the dollar up. The dollar, like the growth of the money supply, rises in anticipation of improving business activity.

Frequently, the media suggests a currency is controlled. This is a common myth. A currency reflects the difference in inflation, productivity, and government

policies of two countries. A government can control a currency for a very limited time by fixing its value when exchanged with another currency. If the fixed value is far different from the market value, speculators will take advantage of the imbalance and eventually drive a currency up or down to its market value. History is full of examples of a currency crisis caused by government control of their currency. Eventually, the collapse of the currency is the final verdict of the market. A currency, like all other commodity prices, such as crude oil or short-term interest rates, cannot be controlled for a protracted period.



**Fig. 2.5.** The rise of the dollar points to good economic conditions. A weak dollar typically implies uncertain economic and stock market conditions.

*The slope of the yield curve* (leading indicator) helps to confirm the trends in the growth of the money supply and the dollar. The slope of the yield curve is computed by subtracting the yield on 13-week Treasury bills from the yield on the 10-year Treasury bond. If this difference increases, the yield curve becomes steeper. When the difference decreases, the yield curve flattens. The yield curve is inverted when the difference between the rate on 13-week Treasury bills and the yield on 10-year Treasury bond is negative.

The relative movements of short-term and long-term interest rates determine the shape of the yield curve with short-term interest rates moving more rapidly than long-term interest rates. When the yield curve steepens, the Fed is loosening credit and monetary aggregates rise more rapidly as short-term interest rates decline. On the other hand, when short-term interest rates rise, the yield curve flattens. This is a sign the Fed is tightening credit, trying to reign in an overheating economy and keeping inflation under control. During such times the growth of the money supply is also declining. An extreme shape of the yield curve is when the shape is flat or inverted. This happens

when the yield on 13-week Treasury bills is the same as or higher than the yield on 10-year Treasury bonds. This shape is typical of tight credit conditions and indicates a future recession of above average intensity.

The shape of the yield curve reflects monetary conditions. A steep yield curve encourages lenders to lend. Lenders, like banks, borrow from consumers at low levels of short-term interest rates and lend at a much higher long-term interest rates. When the yield curve is steep, lenders want to lend and liquidity in the system increases and stimulates the economy. In contrast, when the yield curve flattens (due to the small difference between short-term and long-term interest rates), the incentive to lend is less. Then, liquidity in the system decreases and the economy is bound to slow down.

*The growth of the stock market* is a reliable leading indicator in addition to the ones mentioned above. By stock market we mean the action of the S&P 500 index. There are many stock market indexes. They are all helpful, but some indexes represent a small group of companies. The S&P 500 index represents the price performance of the 500 largest companies listed on the NYSE. The stock market is a leading indicator of the economy as it closely relates to the growth in liquidity. An increase in the growth of the money supply reflects an increase in liquidity, which benefits stock prices. In contrast, when credit conditions tighten and the growth of the money supply slows down, stocks make little progress.

Although *bond yield spreads* could be considered a leading indicator, their main function is to measure credit risk (Fig. 2.3). Yield spreads are measured as the ratio between BAA bond yields (lower grade bonds) and 10-year Treasury bond yields. When the money supply grows slowly, credit spreads are low. When liquidity grows at a faster pace, credit spreads rise. When spreads rise to a high level, they signal considerable financial risk. It signals that credit conditions are likely to deteriorate with a negative impact on sectors of the financial markets and the economy. In 2000, credit spreads rose to all time highs, pointing correctly to high risk for the economy and the stock market.

It is important to follow more than one leading indicator because they do not act uniformly. At the turning points in a cycle, indicators do not turn at the same time. We follow all of them to confirm the odds of accurately calling a major turning point. In my experience, MZM is the most reliable leading indicator.

#### 4. Coincident indicators

The coincident indicators have three purposes.

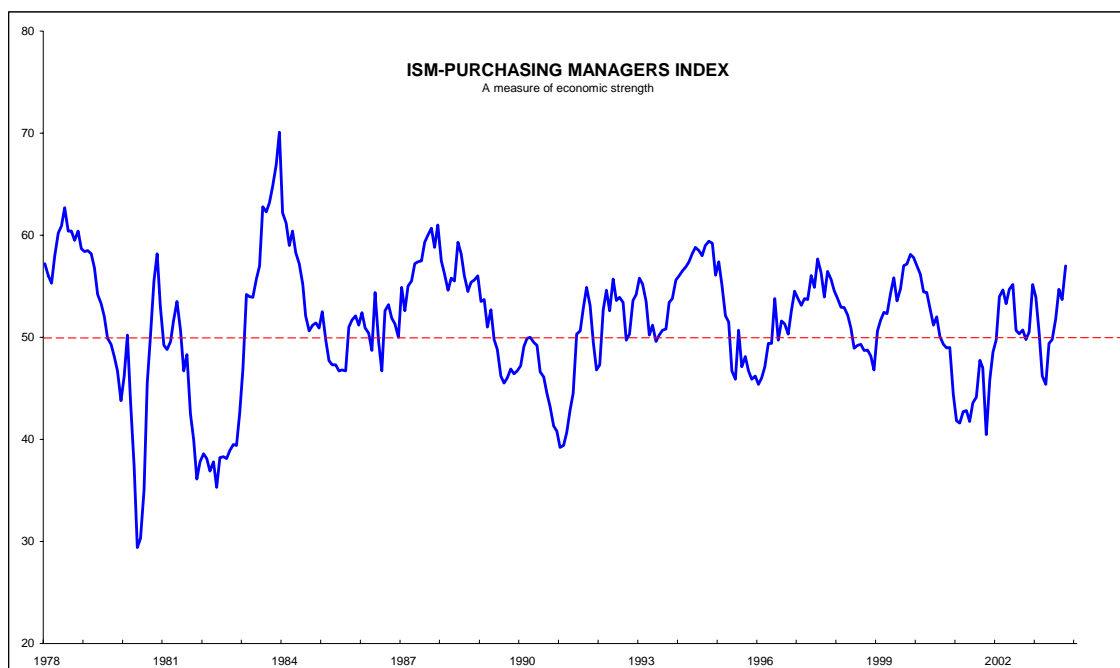
1. Indicate if economic growth is rising or declining.
2. Indicate if growth is above or below average.
3. Indicate when economic growth reaches a peak or a bottom.

The leading indicators anticipate trends of the coincident indicators (economy). When the leading indicators begin to decline, after 12-24 months, we predict a decline in the coincident indicators. When the leading indicators begin to rise, we expect

growth in the coincident indicators to increase after 12-24 months. Similarly, changes in the trend of the coincident indicators (economy) cause changes in the trend of the lagging indicators.

*The Institute of Supply Management (ISM) index* reflect trends in the manufacturing and non-manufacturing sector. Their index oscillates around 50%. Business activity improves when the index rises and moves above 50%. But, business activity shrinks when the index falls and moves below 50%. The economy operates above potential when the index rises decisively above 50% (Fig. 2.6).

*The ISM index of vendor performance* measures the percent of purchasing managers reporting slower deliveries. This index is interpreted the same as the ISM index, is less volatile, and is easier to interpret.



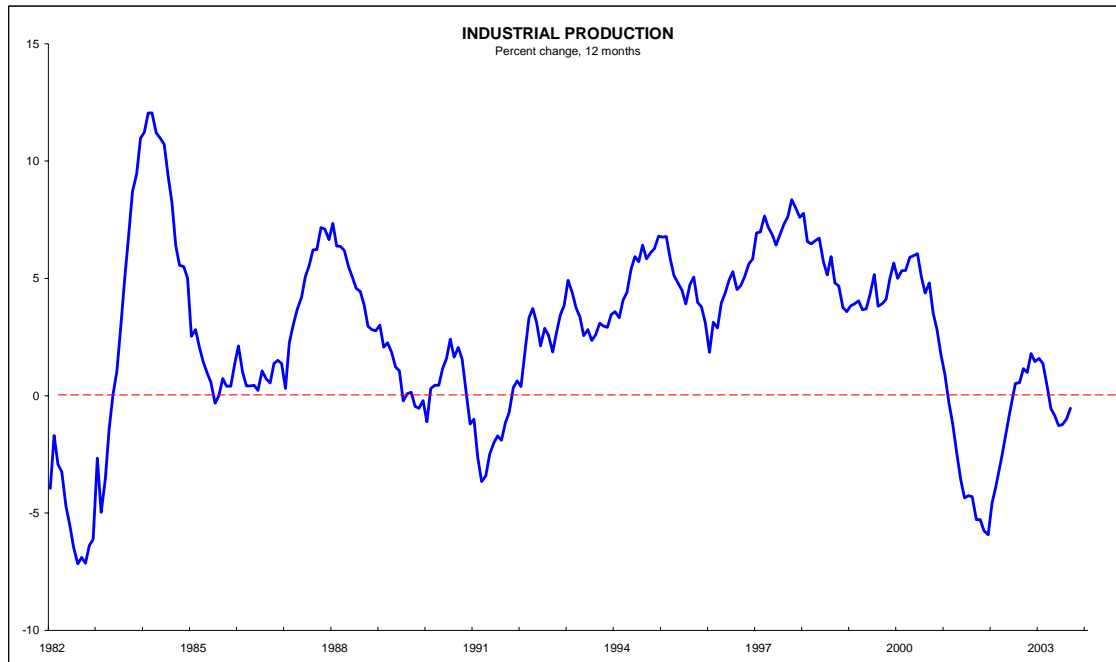
**Fig. 2.6.** The ISM indexes show the pattern of the business cycle. The peaks and troughs of the indexes follow by about 12-24 months the peaks and troughs of the leading indicators.

*The credit manager index* is similar to the ISM report. The credit manager index shows the percent of credit managers who report improving credit conditions. The pattern of the index moves around 50%. The *credit manager index* reports the first day of the month. When the *credit manager index* declines, credit conditions are worse. Credit conditions improve when it rises.

*The index of industrial production* is released monthly by the Fed and provides a picture of trends in the output of the industrial sector. The change in this index correlates to the ISM indexes and the other coincident indicators (Fig. 2.7).

*The Bureau of Labor Statistics* reports on the employment situation on the first Friday of each month. It gives us a glimpse of the economy during the previous month.

*Cars sales* (units sold) reflect the trend of a very important sector of our U.S. economy. *Car sales* are reported in the first few days of the month and give a timely glimpse of trends in the manufacturing sector. When *car sales* are flat or decline, the economy is losing steam.



**Fig. 2.7.** The growth in the *index of industrial production* is closely related to the ISM indexes. The peaks and troughs in the growth of industrial production follow by about 12-24 months the turning points in the leading indicators.

*Housing starts* are a crucial sector in the economy. Its trends have a significant impact on REITs and homebuilding stock sectors.

For a more complete list of coincident indicators, see *Profiting in Bull or Bear Markets*.

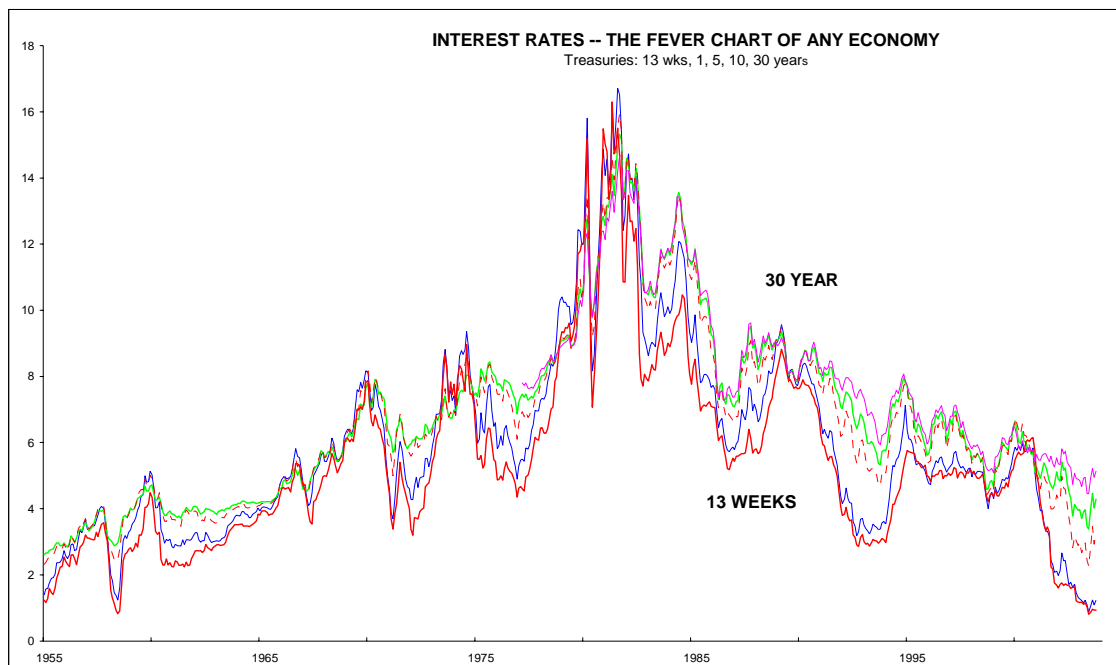
## 5. Lagging indicators

The lagging indicators lag the trends in economic activity. For instance, inflation rises after 12-24 months from a cyclical trough of the economy. The intensity of inflation may be different, depending on the level of real short-term interest rates. But, after many months of strong economic activity, we should expect inflation to rise. During this phase, business activity grows above its long-term average pace of about 3%. Inflation peaks after 12-24 months from a peak of the economy. The duration of the lead-lag time depends on the strength of the economy and the intensity of inflation.

Periods of high inflation and interest rates are associated with volatile business cycles as in the 1970s. The volatility of the business cycles diminishes when inflation and interest rates are close to 2-5%.

*Inflation* measures price pressure at the consumer and producer level. For the consumer, rising inflation means less buying power. For business, rising inflation means higher overall costs. For these reasons rising inflation is a negative factor for the economic system. Consumers scale down their purchases. Business cuts costs. Thus, economic activity is dampened.

The *rate on 13-week Treasury bills* is the price of money when the government borrows for 13 weeks. The *rate on 13-week Treasury bills* tells us the trend of short-term interest rates. Short-term interest rates act like the other lagging indicators (Fig. 2.8).



**Fig. 2.8.** Interest rates represent the fever chart of any economy. Interest rates close to 4-5% indicate a sound economy. As interest rates rise or decline from 4-5%, they signal poor economic conditions. When interest rates rise, they reflect higher inflation accompanied by high volatility in the business cycle and the financial markets. Examples: The U.S. and Europe in the 1970s. When interest rates drop below 4-5%, they reflect the risk of deflation and slow economic growth. Examples: The US in the 1930s and after 2000, and Japan after 1990.

The *Change in Commodity Prices* reflect the growth of commodity indexes like the CRB raw industrial materials (spot prices) or the CRB futures index. Commodity prices are more volatile than inflation. Commodity prices reflect price pressures in real time. Typically, cartels are accused of raising the price of a commodity they control.

This is not accurate. Commodities rise because of demand and demand is unleashed by economic conditions.

*Bond yields* of various qualities (Treasuries, AAA, and BAA bonds) are also excellent lagging indicators. Their trend is mostly influenced by inflation.

## 6. Conclusions

Financial success depends on the investment process. The need for a disciplined approach becomes apparent when markets go through a long and deep period of volatility as in the 1970s and after 2000. What to buy or sell, when to buy or sell, why to buy or sell, and how much to buy or sell are important issues. These issues need resolution before beginning an investment program.

The above indicators are used to establish economic and financial scenarios needed to manage risk. These scenarios help to recognize the level of risk and play a major role in developing investment strategies.

### **The most important indicators to get started**

#### **1. Leading**

- Change in the money supply
- Yield curve
- US dollar
- Stock market

#### **2. Coincident indicators**

- Change in industrial production
- ISM index and ISM vendor deliveries index
- Change in orders for durable goods
- Change in total employment

#### **3. Lagging indicators**

- Change in consumer prices and producer prices
- Change in the CRB futures index and CRB raw materials index (spot)
- Short-term interest rates
- Bond yields (10 year Treasury, AAA, and BAA)

An investment strategy is needed because forecasts, by definition, are uncertain. A strategy helps us when markets do not meet our expectations. An intelligent strategy



protects our capital in the worst cases. Strategies based on formulas eventually end in painful failure. For this reason a process to manage risk is vitally important. A continual review of markets, their direction, and the performance of our investments provide essential clues to the wisdom of our strategy. If the performance is dismal, change quickly.

How do we proceed? We need to understand what occurs in the business and financial world. By tracking economic and financial indicators, we use the necessary tools to find how the financial community plays the game. This chapter lists the important indicators needed to follow the trend of the business and financial cycles. We do not need to use an exhaustive list of all available indicators. We do need to use the reliable ones as I have shared above with you.

The relationships between the leading, coincident, and lagging indicators provide a logical framework to understand the pattern of business activity and the valuable investment assets. The turning points of these indicators are examined in detail in the next chapter.

#### Example of how indicators relate

#### **THE INVENTORY CYCLE AND YOUR INVESTMENTS**

1. The Fed allows liquidity to grow more rapidly to meet increasing credit demand.
2. The increase in liquidity positively impacts stock prices.
3. Because of the increased liquidity, consumers buy more goods and services. Sales improve.
4. Because of strong sales, manufacturing increases production to build up inventories to meet sales.
5. To increase inventories, business borrows short-term to finance enlarged inventories.
6. The outcome is higher short-term interest rates due to higher demand for money.
7. The rise in short-term interest rates eventually discourages consumers from making further purchases.
8. Sales slow down and business borrows less as the outlook becomes more uncertain.
9. Liquidity, which measures credit expansion, begins to decline.
10. The stock market sputters due to slower growth in liquidity and rising short-term interest rates.
11. Eventually business recognizes inventories are rising too rapidly relative to sales.
12. Production is cut to reduce inventories. Eventually inventories decline in line with sales.
13. Short-term funding of inventories drop and the slow demand for money presses down on short-term interest rates.
14. The decline in short-term interest rates encourages business and consumers to borrow and spend more.
15. The Fed lets the money supply accelerate to match the higher demand for credit.
16. Stock prices respond favorably as short-term interest rates decline and liquidity grows more rapidly.

## Chapter Three

### PROFITABLE RELATIONSHIPS BETWEEN ECONOMIC INDICATORS AND FINANCIAL MARKETS

#### 1. Introduction

Chapter One emphasized the need for an investment process. This process represents the decision-making procedure used to invest our capital. The process is not set in stone. It changes. It improves gradually and continuously to fit our personality and time available to invest. Recognition of risk is the first step to find opportunities and avoid unattractive assets. Once realistic objectives are set, we need a strategy to navigate the markets. Like a poker player, we adjust our investments to the changing times and risk profile of the marketplace. Our strategies are updated regularly based on our investment portfolio performance.

Chapter Two discussed important economic and financial indicators. To invest based on stock sectors, we identify the significant trends of the business and financial cycle. Three classes of measures were identified: leading, coincident, and lagging indicators. During a business and financial cycle, we must understand the action of these indicators to recognize the attractive stock sectors.

In this chapter, the relationships connecting these indicators are presented. How is the stock market related to the business cycle? What aspects of the business and financial cycle drive commodity prices? How does inflation begin and how can we benefit from it and avoid costly mistakes? What configurations of indicators suggest gold or bonds as attractive investments? Is the Fed really as powerful as printed in the financial press? Do they really control interest rates? If so, what are their limits?

The study of these relationships has two main objectives. The first is to establish the correct time to invest in a specific asset or stock sector. The second objective is to determine the level of risk of the markets. This type of information is crucial to develop investment decisions and strategies. The next chapter shows how to use this information to devise an investment strategy and an action plan.

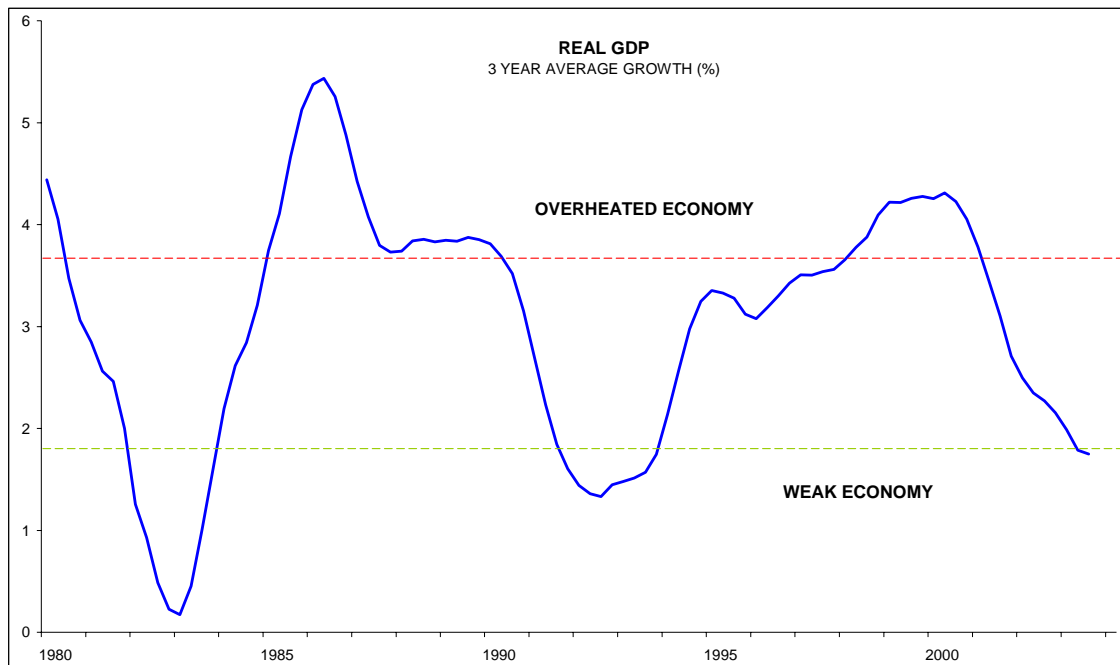
#### 2. The business and financial cycle

The economy is a sensitive and delicate mechanism. Small changes in growth rates put forces into motion with an escalating impact on the economy. The impact ranges from changes in business profit to the value of assets. Everything from commodities to stocks, from interest rates to precious metals and currencies is affected. Oil or lumber will soar one year and decline the next. Gold and real estate were the hot

investment in the 1970s and the dramatic losers in the 1980s and 1990s. Bonds collapsed in the 1970s, but roared after 1982.

As a business and financial strategist, how do you predict when and in which direction these changes will occur? Moving the price of all assets, the driving force is how fast the economy grows relative to its long-term growth rate or growth potential. The long-term growth rate of an industrialized country is close to 2.7%. The average long-term growth for the U.S economy has been somewhere between 2.5% and 3.0% after 1982.

Growth, however, is rarely at its 2.5 – 3.0% average. Sometimes growth speeds up above this range and other times growth slows down below the average (Fig.3-1). Asset prices respond to whether business grows above or below its long-term average. To develop guidelines for investment strategies, we follow the business cycle through the phases of strong and slow growth. We use the business cycle phases to alter our asset allocation and minimize losses.



**Fig. 3-1.** This graph shows the growth rate of the US economy as measured by the gross domestic product after inflation. The growth has been averaged over a three-year span. It shows wide swings between more than 5% and zero percent. Wide swings in the business cycle cause prices of various assets to go sharply up or down.

Economic growth above the 2.5 – 3% long-term average is accompanied by rising lagging indicators, such as interest rates and inflation. Stock prices in this phase grow at a below average pace. Investment risk increases. The prospect of higher profits in stocks and bonds materializes when the pace of the economy shrinks below its long-term average as interest rates and inflation decline. When the economy accelerates, it develops the forces that will make it grow at a slower pace. However, in

spite of all these dynamics, the long-term average growth of the economy remains 2.5 - 3.0%.

This is similar to what happens to a jogger. If the jogger's natural pace is nine minutes per mile, any attempt to speed up will result in a faster pulse rate, higher temperature, shortness of breath and increased fatigue. Before long, the jogger has to slow down and coast until strength returns. Experienced joggers know that a fast, long run above their average pace will force them to slow down to rest with longer recuperation.

The economy acts exactly like a jogger. If the economy grows faster than the growth potential, its temperature rises. For the economy, this rising temperature equates with higher inflation and interest rates, accelerating wages, high capacity utilization of machines and human resources, and eventually lower business profit as productivity slows down. Like the jogger, the economy has to slow if it is to regain strength. Thus, it must grow at a pace below its growth potential. Only then will inflation, interest rates, growth in wages and capacity utilization decline and business profitability improve.

As you read the following pages, a question emerges. If the long-term average growth rate is so important, what do we do to raise it? Research in this area indicates that increasing the country's productivity is the only answer. We can increase productivity through improved education, investments, and low inflation. It is just that simple and enormously difficult to achieve.

Let's analyze what happens to the business and financial markets when the economy comes out of a recession or slow growth and starts to improve. When the economy grows slowly, inflation drops because consumers recognize the difficult times and become cautious buyers. Some cannot find jobs as unemployment rises. Growth in wages declines and income grows slowly. Consumers become cautious buyers and so keep inflation under control. With a slow economy, borrowing is subdued and interest rates decline. A slow growth phase is characterized by slow production. Thus, fewer raw materials are needed and commodity prices decline.

But, good news penetrates every slow growth phase. The decline in wages, interest rates, raw materials, and inflation reflects lower costs for business. So, business profits begin to improve. Most people consider this phase of the business cycle as the worst of times.

Growth in wages, interest rates, and borrowing are all lagging indicators. A decline in the lagging indicators means that cost pressures, excesses generated by the previous growth phase, are finally under control. Thus, the lagging indicators anticipate improvement in the business cycle. In fact, as slow growth brings costs down and efforts to improve productivity kick in, profits begin to improve. For this reason, profits are an important leading indicator. Improved profits encourage business to take an aggressive outlook in their investment plans.

Here is an important aspect of the business cycle. A decline in the lagging indicators is followed by an improvement in the leading indicators. For example, a decline in costs is followed by improved profits. Interest rates decline because the

demand for money is low because business does not borrow due to the slow growth in business activity. As soon as profits improve, demand for money increases. The Fed encourages this process by increasing the money supply needed by business. The process of liquidity creation by the Fed is detailed in my book *Profiting in Bull or Bear Markets*. An increase in the growth of the money supply signals the Fed is increasing the available money in the banking system. Banks have more money to lend to business and consumers. During a slow growth phase, as inflation declines, long-term interest rates tend to decline, indicating lower inflation expectations.

Since the stock market thrives on liquidity, equity prices turn and start rising. This phase of the business cycle represents a pivotal time for financial markets. Interest rates decline and the Fed injects money in the system to favor the expansion. The increase in liquidity goes partly into the real economy. Some of this liquidity goes into the financial markets. That's why the financial markets do extremely well in this phase.

As profits continue to improve and costs remain under control, business expands production capacity and hires more people to jump on the opportunities. More jobs lead to more income. More sales lead to more production and even more jobs. The economy grows as the process feeds on itself with increased business profits. The money supply expands robustly, interest rates decline, bond yields, and commodity prices move lower, and the stock market rises. The dollar, reflecting the confidence of the international financial markets on the future of the U.S. economy, strengthens. This is the phase when the jogger (economy) is rested and able to run faster.

Now, the economy is so robust that growth rises above the long-term average. Employment, production, income, and sales continue to rise rapidly. As unemployment drops, the ability to find skilled workers drops. Wages begin to rise faster. Increased production puts upward pressure on raw materials. Favorable economic conditions and growth in income lead to aggressive consumer buying. The pace of borrowing goes up. Eventually, high consumer and business borrowing cause interest rates to rise. Manufacturing capacity usage reaches high levels and business feels compelled to borrow and increase capacity. But, as capacity utilization increases, improvements in productivity slow down.

Business can no longer absorb the rising costs of commodities, labor, and interest rates. Raising their ugly heads, the lagging indicators warn investors of an overheated economy. Risk is increasing. Profitability is now at stake with profit margins under pressure because of rising costs. Increased costs signal the economy is bound to slow down. Increased costs will force the leading indicators to decline. Increased costs mean business profits are at risk. Business will have to cut costs to maintain profitability. During this phase, characterized by strong growth in the economy, we pay attention to the variables (mostly lagging indicators) that impact decisions causing the economy to slow down.

As interest rates and inflation rise, they negatively impact other important leading indicators. These leading indicators include consumer sentiment and consumer expectations. As interest rates and inflation rise, consumers' real income declines. Thus, consumer attitude is negatively impacted. The main reasons are an increase in inflation and an erosion of purchasing power. Thus, the reduced purchasing power of the consumer becomes a drag for the economy. Higher interest rates raise the cost of

consumer borrowing. This has a negative impact on their ability to obtain credit. A strong growth phase, followed by increasing lagging indicators, forces the decisions that eventually lead to slower growth in the economy.

Like an over-confident jogger, the economy runs faster. When this happens, the Fed understands an overheating economy and too much growth will bring higher inflation. Thus, high interest rates are allowed to rise even higher. Eventually business and consumers are discouraged from borrowing. This action causes a decline in the growth of the money supply and in overall liquidity. Slower growth in liquidity and rising interest rates have a negative impact on stock prices. The stock market peaks. The strong growth now sets in motion a series of events that trigger a slowdown. As the economy downshifts, the dollar weakens, anticipating slower growth.

This is a treacherous phase of the growth cycle. Growth in sales is at the highest level in years. Profits get soft. Interest rates and the inflation rate have risen for some time. The recognition of high rates lags behind. Businesses cut costs and the Fed reduces liquidity. As costs accelerate and sales slow, there is downward pressure on income, sales, employment, and production. As the growth in the money supply declines, consumers and business have less money to spend. The lower level of liquidity, rising inflation and rising interest rates force business and consumers to cut spending. The ultimate effect is a slower economy.

As costs keep rising, business is forced to cut costs even further. The negative feedback between lagging and leading indicators is clearly visible at this point. Business will cut costs until the factors that created declining profits are in control. Business will stop cutting costs when the lagging indicators start to decline. A decline in the lagging indicators (inflation rate, interest rates, growth in labor costs) signals costs are finally under control. It signals that labor costs, commodities, and interest rates are on the way down. It indicates to business that their margins are likely to improve in the near future, and thus, encourages them to spend again. This phase of the business cycle slowdown will continue until the lagging indicators begin to decline.

Finally, the jogger (economy) decides, "I just can't make it." It is time for the economy to slow down to below the average pace. The growth of the economy eventually falls below the long-term average of 2.5 to 3%. With tight monetary policy, the money supply slows down, business cuts costs, and the economy remains weak. Eventually the first signs of recovery begin to appear. As the economy grows very slowly, inflation declines. Consumers do not buy much because the unemployment rate goes up due to business cutting costs. Due to lower inflation and slower growth in the credit demand, interest rates start to decline. Commodities weaken because of slow demand caused by the economy and slow growth in production. Reflecting all these uncertainties, the dollar remains weak.

The forces that caused the slowdown - higher costs, inflation cost, and interest rate cost - now reverse. In other words, the lagging indicators now decline. As the cost factors decline, profit margins improve. At the same time, the Fed lets the growth of the money supply expand to stimulate the economy. Because of greater liquidity and lower costs, lower inflation, and increasing profitability, the economy is positioned to begin to grow faster again. The jogger has rested and has the strength to start running at

a faster pace and the business and financial cycles are ready to start all over again. The dollar begins to strengthen.

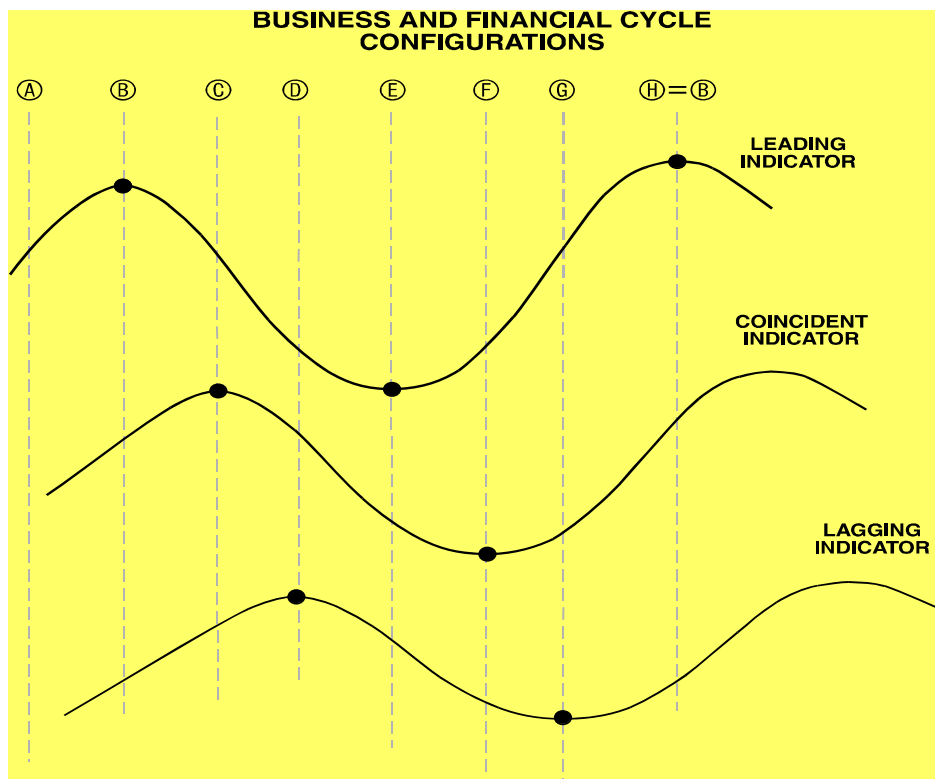
### 3. Turning points in business and financial cycles

This section views economic and financial development in terms of leading, coincident, and lagging indicators - as introduced in Chapter Two (Fig. 3.2). In the next section, this framework is used to forecast the turning points of specific markets.

Let us begin with the business and financial cycle in configuration “B” or “H.” The following trends are visible.

- a. The leading indicators have risen sharply and grow more slowly.
- b. The coincident indicators rise sharply.
- c. The lagging indicators also rise rapidly.

The system is in configuration “B” because the growth in monetary aggregates has risen rapidly for more than a year. Stock prices, in a bull market, mirror the strength in monetary aggregates and now begin to sputter. The dollar has soared, but has traded in a range for some time. Business begins to clamor for a weaker dollar. The yield curve has steepened for some time, as the Fed maintained an easy stance in monetary policy. Now the yield curve begins to flatten.



**Fig. 3.2.** All the information dealing with business and financial cycles is reflected by these graphs.

The protracted strength of the leading indicators is now reflected by a very strong economy. Industrial production expands rapidly. The ISM index of purchasing managers and the index of vendor deliveries are well above 50%. Employment, income and retail sales rise rapidly. All the coincident indicators reflect a booming economy.

Because of the booming economy, inflation becomes an issue. Commodity indexes rise following the economic turnaround. The demand for money is strong. Market-driven interest rates rise and the Fed increases the interbank rate. Bond yields move up due to heavy borrowing by business.

The lagging indicators now negatively impact the financial markets and business activity. The lagging indicators continue to rise well into the next two phases between configuration “B” and “D.”

Sputtering leading indicators, a strong economy, and soaring lagging indicators signal, reliably, the business and financial cycle shift from configuration “B” to configuration “C.” Configuration “C” is documented by the following tendencies.

- a. The leading indicators decline.
- b. The coincident indicators rise rapidly and then more slowly.
- c. The lagging indicators continue to rise rapidly.

The continued rise in the lagging indicators has two main effects. Rising inflation reduces the purchasing power of consumers. Consumers begin to borrow less and trim their purchases. Rising inflation also reflects rising costs for business. Profit margins deteriorate and investment plans are put on hold. Business borrowing is cut. Bond yields move higher because of the rising inflation premium. Alas, the economy slows down.

Lower demand for money is reflected in a decline in the growth of monetary aggregates. Rising short-term interest rates cause the yield curve to flatten. The dollar sputters as the economy becomes less attractive to foreign investors. As less liquidity flows through the system, stocks decline.

As short-term and long-term interest rates rise and inflation goes up, the economy weakens. Meanwhile, business and consumers become more cautious about the future. The economy continues to deteriorate until the initial negative causes self-correct.

When the lagging indicators finally decline, the worst is over. The business and financial cycle is now in configuration “D” and moving quickly toward configuration “E.” Configuration “D” is recognized from the following tendencies.

- a. The leading indicators continue to decline.
- b. The coincident indicators are still heading lower.
- c. The lagging indicators have stopped rising.

The economy has weakened long enough to lower inflation (due to slower growth in demand), lower interest rates (due to lower demand for money), and lower commodities (due to the pronounced slowdown in the manufacturing sector).



The growth in the money supply declines and the yield curve flattens (due to rising short-term interest rates). The dollar remains weak as economic conditions remain uncertain. Stock prices decline as liquidity shrinks.

The lagging indicators, however, following a prolonged economic slowdown, begin to sputter and then decline. As costs (wages, raw materials, and interest rates) decline, business begins to feel more confident, thus setting the stage for the next phase. Due to lower inflation and declining interest rates, consumer confidence improves. Because of pent-up demand, consumers start to borrow and spend again.

Configuration “E” is the direct result of the decline of interest rates, inflation, growth in commodity prices and wages. As costs decline and margins improve, business and consumers get new optimism. Encouraged by the Fed, more money is borrowed. Liquidity improves and the growth of the money supply expands again. Due to lower short-term interest rates, the yield curve steepens. Stock prices gain strength due to the increased liquidity. Foreign investors recognize new prospects and bid up the price of the dollar. The dollar strengthens.

Configuration “E” is therefore characterized by the following trends.

- a. The leading indicators bottom and then rise.
- b. The coincident indicators decline.
- c. The lagging indicators decline.

Before the economy can benefit from the increased liquidity, some time elapses. It takes about 12-24 months for the economy to respond to an increase in the leading indicators.

The economy, meanwhile, continues to grow slowly. The slow growth in employment, income, production, and sales continues to place downward pressure on the lagging indicators. Short-term and long-term interest rates continue to decline. Commodity prices move lower as inflation is subdued.

The business and financial cycles are moving steadily toward configuration “F,” which is characterized by the following trends.

- a. The leading indicators continue to rise.
- b. The coincident indicators stop dropping and show strength.
- c. The lagging indicators remain in a downtrend.

The strong and prolonged liquidity injection gives business the incentive to invest again. Lower interest rates and inflation are a major incentive for consumers to borrow and purchase more goods and services. The economy responds to the stimuli and begins to improve. Increases in output, sales, income, and employment feed on themselves and the economy improves. Business activity remains slow enough that commodity prices, short-term interest rates, bond yields and inflation continue to decline.

The continued rise in the leading indicators and the strong demand for goods and services translate into a stable performance of the lagging indicators. The business

and financial cycle reach configuration “G.” This configuration is characterized by the following trends.

- a. The leading indicators rise.
- b. The coincident indicators rise reflecting an improving economy.
- c. The lagging indicators stop declining and begin to stabilize.

This is a critical configuration. It occurs, on average, 12-24 months after the coincident indicators improve. The coincident indicators (economy) grow above their long-term average of 3%. Capacity utilization rises to high levels. The unemployment rate is close to new lows. Now, the economy operates at close to capacity.

The strong demand for money from consumers and business drives interest rates higher. Rising commodity prices and unit labor costs (labor costs adjusted by productivity growth) are reliable signs inflation will soon begin to rise. Bond yields start rising. Higher bond yields reflect an increasing inflation premium.

The business and financial cycle moves rapidly toward configuration “H,” which is characterized by the following trends.

- a. The leading indicators show signs of peaking.
- b. The coincident indicators remain strong.
- c. The lagging indicators rise.

This configuration takes place a few months after configuration “G.” As soon as short-term interest rates begin to rise, consumers and business lose their appetite to borrow. Less borrowing means slower growth in liquidity. Money becomes tighter due to rising interest rates. The stock market peaks. The yield curve flattens due to rising short-term interest rates. The dollar weakens.

Finally, the business and financial cycle starts all over again at configuration “B.”

#### 4. Predicting turning points in the business and financial cycles

The purpose of this section is to expand the idea of turning points discussed in the previous section to specific cases.

##### a. Predicting turning points in the business cycle (coincident indicator)

The business cycle is represented by the growth of the economy. Changes in GDP or industrial production are a good proxy. The ISM index is also useful because of its timely report on the first day of each month.

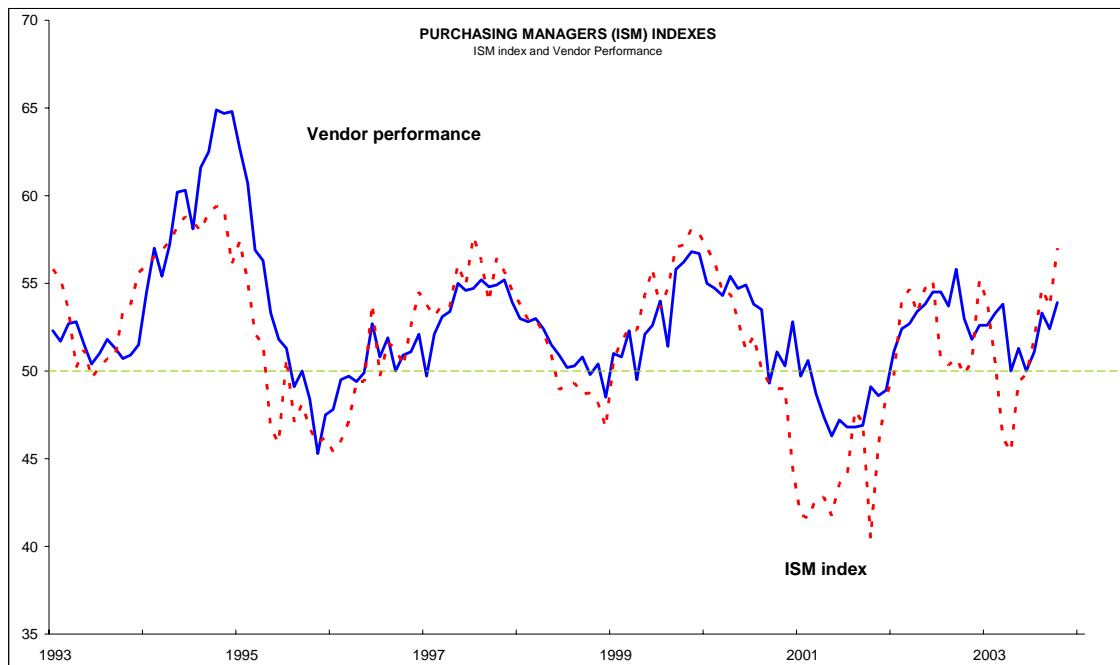
The conditions leading to a downturn in the business cycle are the following (Fig. 3.2, configuration “C”).

- The growth of money supply has declined for at least 12 months.

- The yield curve has flattened for at least 12 months.
- The dollar has weakened for at least 12 months.
- The stock market has declined for about a year.

These trends are reinforced by the action of the lagging indicators:

- Short-term interest rates rising for about a year;
- Bond yields rising for many months;
- Inflation rising for at least a year;
- Commodities moving higher for more than 12 months.



**Fig. 3.3** The ISM index is a timely indicator reflecting turning points in the business cycle.

A lack of progress for 2-3 months in the ISM index confirms the business cycle is close to a peak. At this point gradually adapt your investment strategy to reflect changing economic conditions.

The conditions leading to an upturn in the business cycle are as follows (Fig. 3.2, configuration “F”):

- The growth of money supply has risen for at least 12 months;
- The yield curve has steepened for at least 12 months;
- The dollar has strengthened for at least 12 months;
- The stock market has risen for about a year.

These trends are reinforced by the action of the lagging indicators:

- Short-term interest rates declining for about a year;

- Bond yields declining for many months;
- Inflation declining for at least a year;
- Commodity prices moving down for more than 12 months.

If the ISM index stabilizes for a few months, the business cycle is close to a trough.

b. Predicting the turning points of commodity prices (lagging indicator)

A downturn in commodity indexes like the CRB futures index or the CRB raw industrials (spot) is accompanied by the following conditions (see Fig. 3.2, configuration “D”):

- The growth of money supply has declined for at least 12 months;
- The yield curve has flattened for at least 12 months;
- The dollar has weakened for at least 12 months;
- The rate of growth in stock prices has declined for about 12 months.

These trends are accompanied by the following tendencies in the coincident indicators:

- The ISM index for manufacturing and non-manufacturing has fallen for about 12 months;
- The ISM index of vendor deliveries has fallen for about 12 months;
- The growth in industrial production is declining for about 12 months;
- The growth in employment is declining for about 12 months.

An upturn in commodity indexes like the CRB futures index or the CRB raw industrials (spot) is accompanied by the following conditions (Fig. 3.2, configuration “G”):

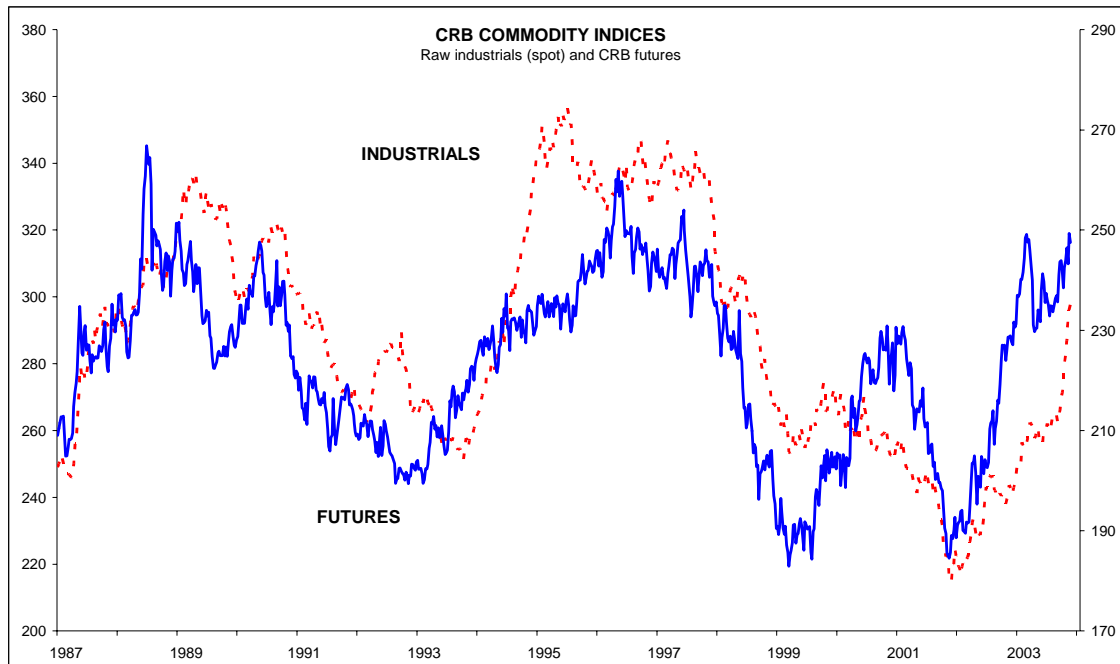
- The growth of money supply has risen for at least 12 months;
- The yield curve has steepened for at least 12 months;
- The dollar has strengthened for at least 12 months;
- The stock market has improved for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:

- The ISM index for manufacturing and non-manufacturing has been rising for 12-24 months;
- The ISM index of vendor deliveries has improved for 12-24 months;
- The growth in industrial production has risen for 12-24 months;
- The growth in employment (manufacturing and totals) has improved for 12-24 months.

The amplitude of the change in commodities depends on the level of real short-term interest rates (rate on 13-week Treasury bills divided by inflation). Real short-

term interest rates below 1.4 are typically associated with high inflation and sharply higher commodity prices. High real short-term interest rates, above 1.4, are associated with declining inflation and muted movements in commodity prices. For an in-depth discussion please read Chapter 6 of *Profiting in Bull or Bear Markets*.



**Fig. 3.4** The commodity futures index follows turning points in the business cycle. Commodities weaken after a phase of slower growth in business activity. They strengthen after a phase of improving economic conditions.

c. Predicting turning points in inflation (lagging indicator)

Like commodity prices, the amplitude of the movement of inflation depends on the levels of real short-term interest rates. Low real short-term interest rates (less than 1.4) associate with above average increases in inflation. High real short-term interest rates (above 1.4) associate with declining or low inflation.

A downturn in inflation, at the producer or consumer levels, is accompanied by the following conditions (see Fig. 3.2, configuration “D”).

- The growth of the money supply has declined for at least 12 months;
- The yield curve has flattened for at least 12 months;
- The dollar has weakened for at least 12 months;
- The rate of progress in the stock market has declined for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:

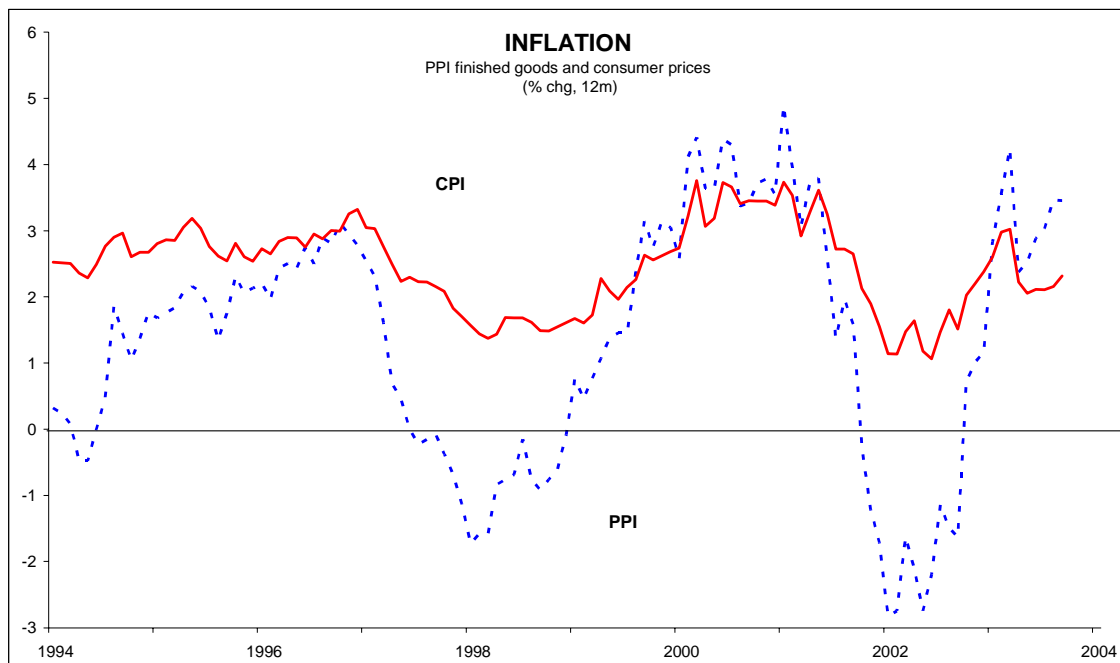
- The ISM index for manufacturing and non-manufacturing falls for about 12 months;
- The ISM index of vendor deliveries falls for about 12 months;
- The growth in industrial production declines for about 12 months;
- The growth in employment (manufacturing and total) declines for about 12 months.

An upturn in inflation, at the consumer or producer levels, is accompanied by the following trends (Fig. 3.2, configuration “G”).

- The growth of the money supply rises for at least 12 months;
- The yield curve has steepened for at least 12 months;
- The dollar has strengthened for at least 12 months;
- The stock market prices have improved for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:

- The ISM index for manufacturing and non-manufacturing rises for 12-24 months;
- The ISM index of vendor deliveries improves for 12-24 months;
- The growth in industrial production rises for about 12-24 months;
- The growth in employment (manufacturing and total) has improved for about 12-24 months.



**Fig. 3.5** Inflation, at the consumer and producer levels, has the same turning points in the cycle as commodity prices. Inflation and commodity prices follow the turning points of the business cycle. After a phase of slower growth in business activity, inflation declines. Inflation increases after a phase of improving economic conditions.

d. Predicting turning points in short-term interest rates (lagging indicator)

Short-term interest rates are driven by market conditions. A stronger economy drives short-term interest rates higher. Short-term interest rates decline when the economy weakens. The Fed adjusts the inter-bank rate (fed funds rate) to match market rates. This process is discussed in detail in *Profiting in Bull or Bear Markets*.

Sometimes the Fed needs to resort to extreme measures because of very weak economic conditions. The Fed can lower short-term interest rates below market rates. During such times, real short-term interest rates fall to unusually low levels. Low real short-term interest rates stimulate economic growth with strong inflation. The market eventually wins and drives short-term interest rates higher. The Fed is forced to adjust the inter-bank rate accordingly. The market always prevails.

The Fed can distort the market pricing mechanism temporarily. But, the longer this distortion lasts, the more drastic the market must correct. In the 1970s, the Fed forced real short-term interest rates to very low levels. The result was soaring inflation from 3% to 15%. At the same time, short-term interest rates jumped from 3% to 20%.

A downturn in short-term interest rates is accompanied by the following conditions (Fig. 3.2, configuration “D”).

- The growth of the money supply has declined for at least 12 months;
- The yield curve has flattened for at least 12 months;
- The dollar has weakened for at least 12 months;
- The rate of progress in stock market prices has declined for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:

- The ISM index for manufacturing and non-manufacturing falls for 12-24 months;
- The ISM index of vendor deliveries falls for about 12 months;
- The growth in industrial production declines for about 12 months;
- The growth in employment (manufacturing and total) declines for about 12 months.

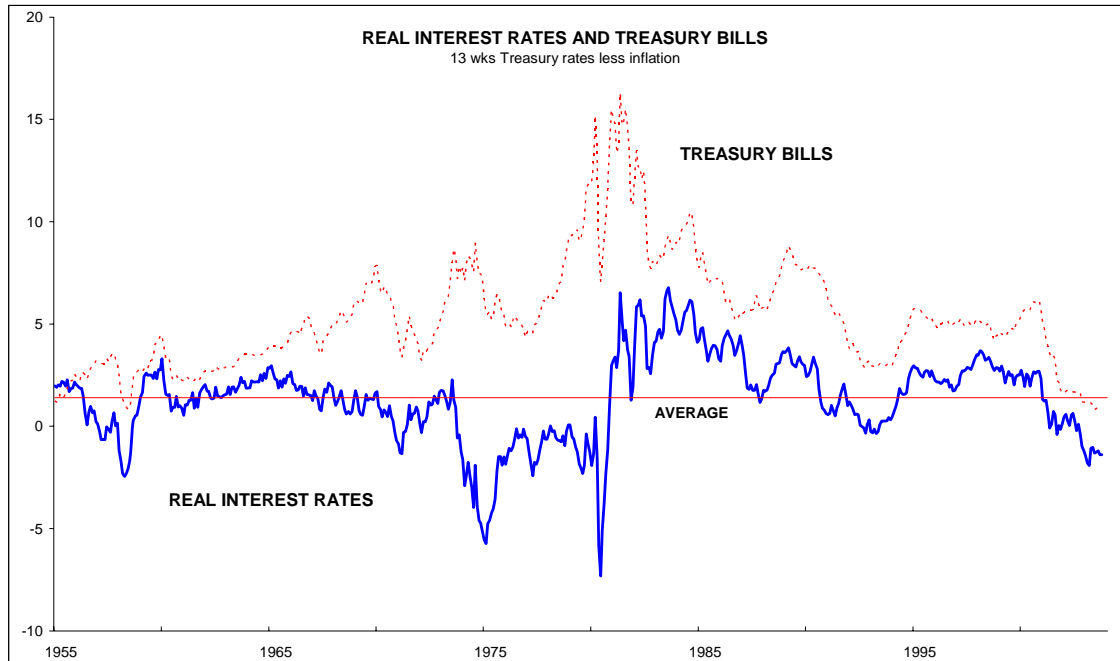
An upturn in short-term interest rates is accompanied by the following trends (Fig. 3.2, configuration “G”).

- The growth of the money supply has risen for at least 12 months;
- The yield curve has steepened for at least 12 months;
- The dollar has strengthened for at least 12 months;
- The stock market has improved for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:

- The ISM index for manufacturing and non-manufacturing rises for 12-24 months;

- The ISM index of vendor deliveries improves for 12-24 months;
- The growth in industrial production rises for 12-24 months;
- The growth in employment (manufacturing and total) improves for about 12-24 months.



**Fig. 3.6** Phases of rising inflation and short-term interest rates accompany low real short-term interest rates. Inflation declines or is stable at low levels when real short-term interest rates are higher than their long-term average. Inflation rises when real short-term interest rates are below their long-term average.

e. Predicting turning points in bond yields (lagging indicator)

Like commodity prices and inflation, the cyclical movement of bond yields depends on the levels of real short-term interest rates. Low real short-term interest rates associate with above average rises in bond yields. High real short-term interest rates accompany declining or low bond yields.

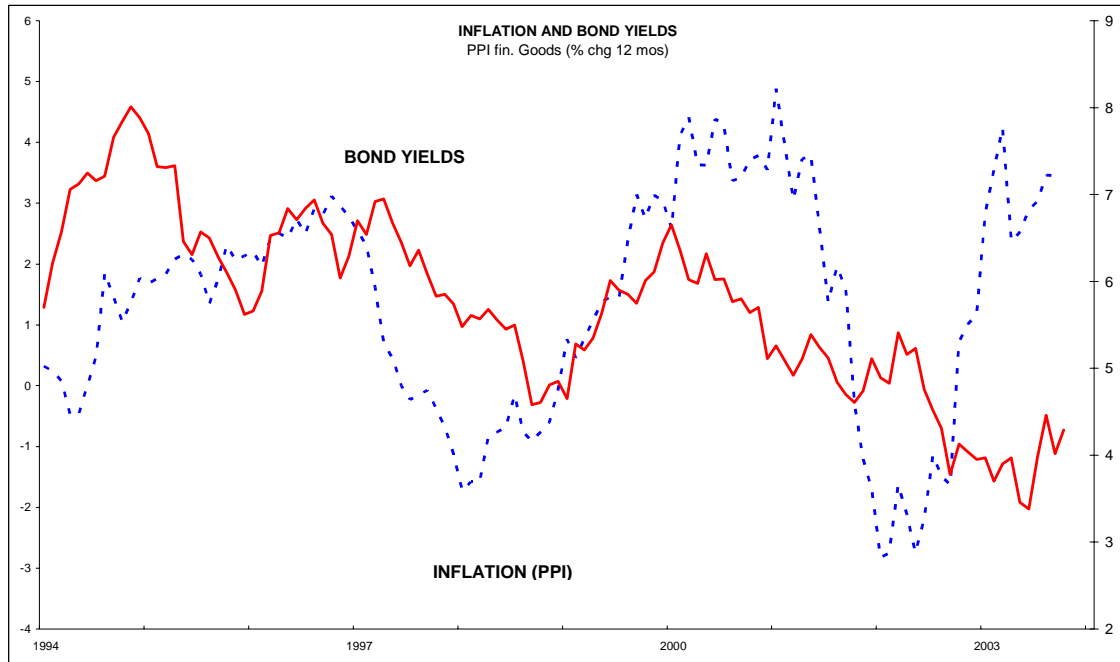
A downturn in bond yields is accompanied by the following conditions (Fig. 3.2, configuration “D”):

- The growth of the money supply has declined for at least 12 months;
- The yield curve has flattened for at least 12 months;
- The dollar has weakened for at least 12 months;
- The rate of progress in stock market prices has declined for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:



- The ISM index for manufacturing and non-manufacturing falls for 12-24 months;
- The ISM index of vendor deliveries falls for about 12 months;
- The growth in industrial production declines for about 12 months;
- The growth in employment (manufacturing and total) declines for about 12 months.



**Fig. 3.7** Bond yields have the same cyclical turning points as inflation and commodity prices. Yields follow the turning points of the business cycle. Yields decline after a phase of slower growth in business activity. Yields increase after a phase of improving economic conditions.

An upturn in bond yields is accompanied by the following trends (Fig. 3.2, configuration “G”).

- The growth of the money supply has risen for at least 12 months;
- The yield curve has steepened for at least 12 months;
- The dollar has strengthened for at least 12 months;
- The stock market has improved for about a year.

These trends are accompanied by the following tendencies in the coincident indicators:

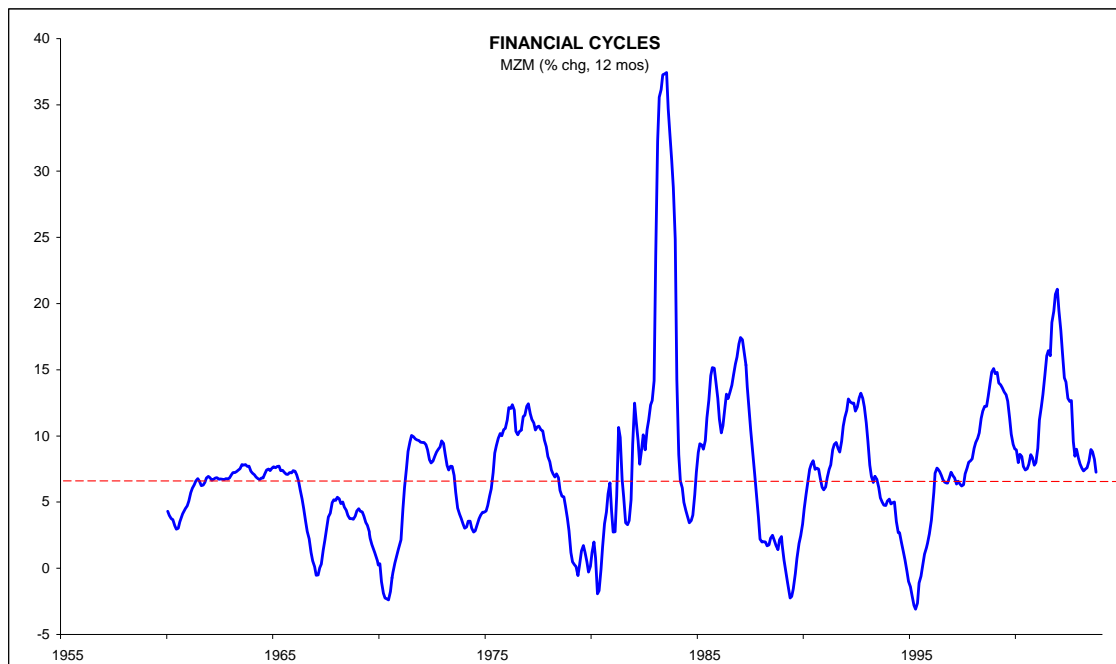
- The ISM index for manufacturing and non-manufacturing rises for 12-24 months;
- The ISM index of vendor deliveries improves for 12-24 months;
- The growth in industrial production rises for 12-24 months;

- The growth in employment (manufacturing and total) improves for about 12-24 months.

f. Predicting turning points in the growth of the money supply (leading indicator)

The growth of the money supply is an important measure because it reflects the borrowing appetite of business and consumers. The rise in the growth of the money supply reflects increasing liquidity in the system. A decline in the growth of monetary aggregates reflects less borrowing by consumers and business and thus decreasing liquidity (Fig. 3.2).

- Declining growth in industrial output, employment, and ISM indexes reflects slower growth in business activity.
- Short-term and long-term interest rates eventually decline because of the protracted decline in the growth of business activity and lower demand for money.
- Lower interest rates encourage business and consumers to borrow more.
- The growth of the money supply increases as banks and other lenders encourage business and consumers to borrow.
- Liquidity increases as funds move from lenders to borrowers (investors, businesses, and consumers).
- The increased liquidity is eventually reflected in a stronger economy. The economy takes about 12-24 months to respond positively to improving liquidity.
- Economic momentum increases as higher sales are translated in higher production, employment, and income.
- Short-term interest rates, bond yields, inflation, and commodity prices start to rise when business growth rises above its average long-term growth rate (about 3%).
- The rise in interest rates and costs discourages business from new investments.
- Consumers become more cautious about spending and borrow less as real income slows down due to rising inflation.
- Business borrows less because of deteriorating margins caused by higher inflation and interest rates.
- The growth of the money supply declines because of lower demand for money.
- Lower liquidity in the system is eventually followed by slower growth in business activity.
- And the cycle starts all over again.



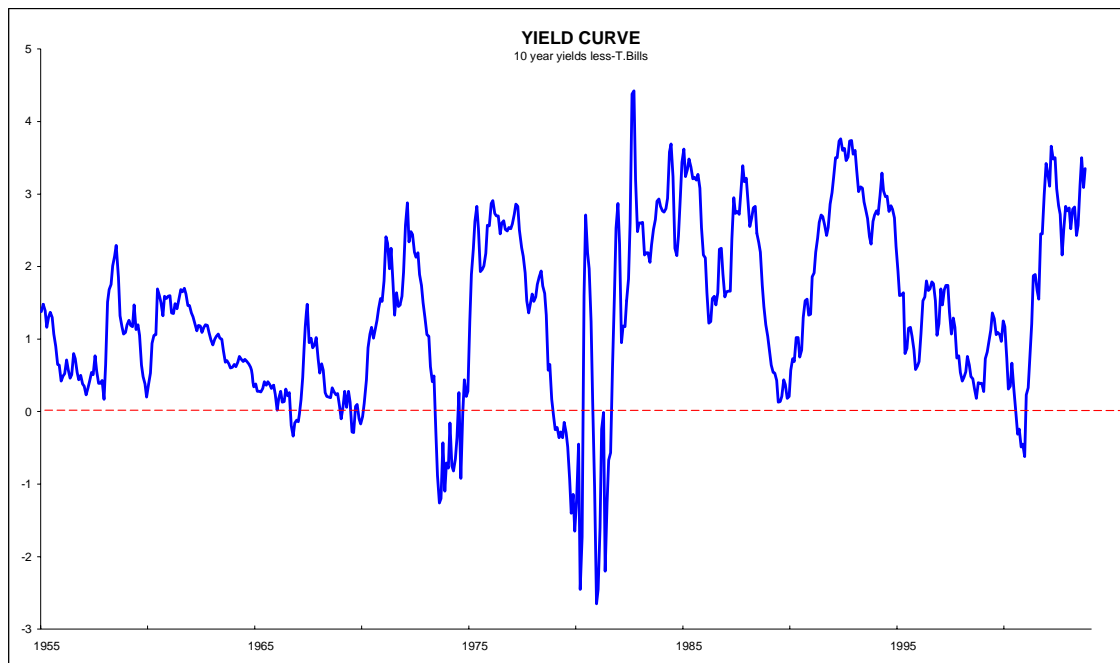
**Fig 3.8** The growth of the money supply averages 6-7%. The average trough-to-trough length is about 5-7 years. The turning points for the growth of the money supply lead turning points in the business cycle. A decline in the growth of business activity follows a peak in the growth of the money supply after 12-24 months. A rise in the growth of business activity follows a bottom in the growth of the money supply after 12-24 months. The growth of the money supply is sensitive to interest rates. Shortly after a rise in interest rates, the growth of the money supply declines as demand for money decreases. A decline in interest rates, on the other hand, is followed within a few months by increased demand for money and rising growth in monetary aggregates.

g. Predicting turning points of the shape of the yield curve (leading indicator)

The shape of the yield curve is measured by the difference between 10-year Treasury bond yields and the rate on the 13-week Treasury bills. The shape of the yield curve reflects the level of liquidity in the financial system. A steeper yield curve suggests liquidity is increasing. Short-term interest rates decline relative to bond yields. A flatter yield curve suggests liquidity is decreasing. Short-term interest rates rise relative to bond yields (Fig. 3.2).

- Declining growth in industrial output, employment, and ISM indexes reflects slower growth in business activity.
- Because of the protracted decline in the growth of business activity and lower demand for money, short-term and long-term interest rates eventually decline.
- As short-term interest rates drop, the yield curve gets steeper.
- Lower interest rates encourage business and consumers to borrow more.
- A steeper yield curve increases lenders' desire to lend money.

- As funds move from lenders to borrowers (investors, businesses, and consumers), liquidity increases.
- Increased liquidity eventually shows up as a stronger economy.
- Economic momentum increases as higher sales translate into higher production, employment, and income.
- Short-term interest rates, bond yields, inflation, and commodity prices start rising when business grows above its average long-term growth rate (about 3%).
- As short-term interest rates rise faster than long-term interest rates, the yield curve flattens.
- The rise in short-term interest rates and costs discourage business from borrowing to make new investments.
- Consumers spend cautiously as real income slows down.
- Business and consumers borrow less because business conditions deteriorate due to higher inflation and interest rates.
- Less liquidity in the system is eventually followed by slower growth in business activity.
- And the cycle starts all over again.



**Fig 3. 9** Turning points of the yield curve lead turning points in the business cycle. As the yield curve flattens, the growth of business activity declines after about 12-24 months. As the yield curve becomes steeper, the growth of business activity goes up after about 12-24 months.

h. Predicting turning points in credit spreads (leading indicator)

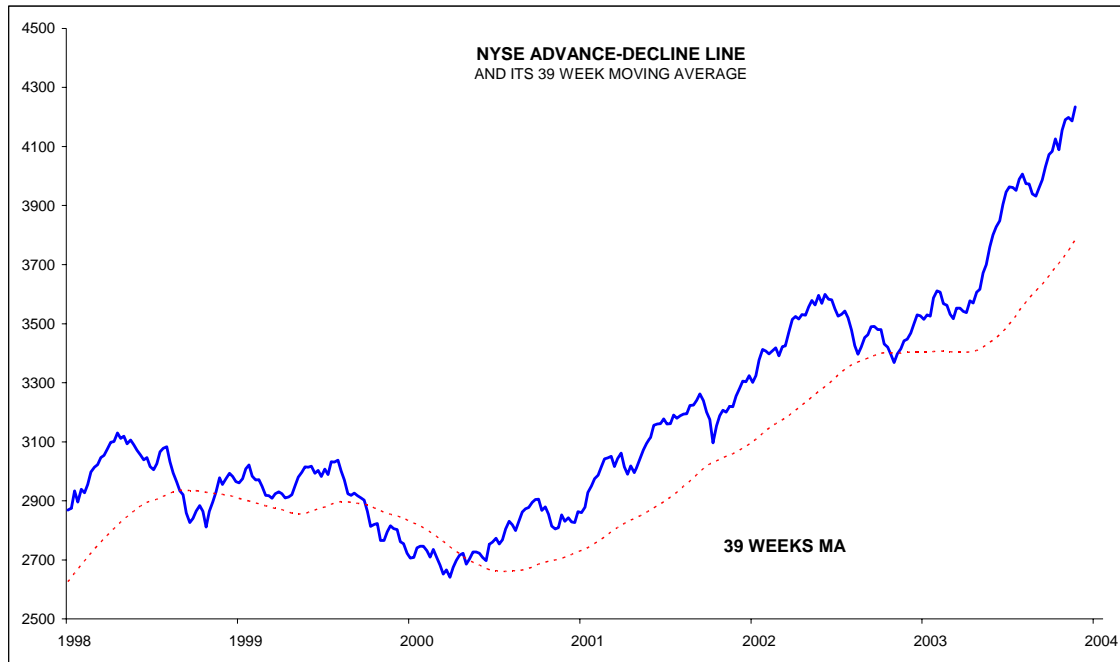
The ratio between the yield on BAA bonds (lower quality bonds) and the yield on 10-year Treasury bonds indicates the degree of risk in the financial markets. When the ratio increases, risk increases. When the spread declines, risk declines.

An increase in the ratio is a sign the market is raising the risk premium to business borrowers. The increased risk premium makes borrowing more costly and difficult for lower credit-worthy companies. This credit crunch creates slower growth in the money supply because business is discouraged from borrowing.

A decrease in the ratio is a sign the market is lowering the risk premium to business borrowers. The reduced risk premium makes borrowing less costly. The increased borrowing stimulates the growth of the money supply (Fig. 3.2).

- Slower growth in business activity is reflected by declining growth in industrial output, employment, and declining ISM indexes.
- Short-term and long-term interest rates eventually decline because of the protracted decline in the growth of business activity and lower demand for money.
- Lower interest rates encourage business and consumers to increase their borrowing.
- Liquidity increases as funds move from lenders to borrowers (investors, businesses, and consumers).
- Credit spreads increase due to the increase in business borrowing.
- The increased liquidity is eventually reflected in a stronger economy.
- Economic momentum increases as higher sales are translated in higher production, employment, and income.
- Short-term interest rates, bond yields, inflation, and commodities start rising when business growth rises above its average long-term growth rate (about 3%).
- The rise in interest rates and costs discourages business from making new investments.
- Consumers become more cautious about spending as real income slows down.
- Business and consumers borrow less because of deteriorating business conditions caused by higher inflation and interest rates.
- Liquidity slows down.
- Credit spreads decline due to a decrease in business borrowing.
- Lower liquidity in the system is eventually followed by slower growth in business activity.
- And the cycle starts all over again.

i. Predicting turning points in the stock market (leading indicator)



**Fig 3.10** Turning points of stock prices lead turning points in the business cycle. A decline in stock prices is accompanied by slower growth in the money supply. A rise in stock prices is accompanied by faster growth in the money supply due to increases in borrowing by corporations.

The change in stock prices depends on the growth of liquidity. Rising growth in liquidity precipitates faster growth in stock prices. A decline in liquidity causes slower growth in stock prices (Fig. 3.2).

- Slower growth in business activity is reflected by declining growth in industrial output, employment, and declining ISM indexes.
- Because of the protracted decline in the growth of business activity and lower demand for money, short-term and long-term interest rates eventually decline
- Lower interest rates encourage business and consumers to borrow more.
- Liquidity increases as funds move from lenders to borrowers (investors, businesses, and consumers).
- Stock prices rise due to the increased liquidity in the system.
- The increased liquidity is eventually reflected in a stronger economy.
- Economic momentum increases as higher sales are translated in higher production, employment, and income.
- Short-term interest rates, bond yields, inflation, and commodities start rising when business growth rises above its average long-term growth rate (about 3%).

- The rise in interest rates and costs discourages business from making new investments.
- Consumers are cautious about spending as real income slows down.
- Business and consumers borrow less because of deteriorating business conditions caused by higher inflation and interest rates.
- Liquidity decreases and stock prices perform poorly.
- Lower liquidity in the system is eventually followed by slower growth in business activity.
- And the cycle starts all over again.

## 5. Conclusions

The business cycle measures the growth of the economy. The growth of the economy is very sensitive to the way consumers and business react to changing economic conditions. A decline in the growth of costs (lagging indicators) improves the profitability of business. A decline in inflation and interest rates (lagging indicators) improves the purchasing and borrowing power of consumers. As business and consumers borrow more, monetary aggregates leading indicator) grow faster. Eventually the economy (coincident indicator) strengthens with a typical lag of 12-24 months from the turning point of the money supply.

The economy gains strength as producers increase production to match rising sales. Employment and income increase. This process is reinforced until the economy grows well above the average (close to 3%). It usually takes 12-24 months for the economy to reach this stage. Because of scarce labor and capacity and the strong demand for money, interest rates, commodity prices, and inflation begin to rise. This controlling mechanism returns the business cycle to sustainable growth.

Rising costs mean less profit to business. A rise in inflation and interest rates diminishes the buying and borrowing power of consumers. Business and consumers begin to minimize how much they borrow. The growth of the money supply declines within about six months from the bottom of interest rates and inflation.

Slower growth in liquidity is followed after 12-24 months by slower growth in business activity. After 12-24 months of a down turn in the growth of the economy then interest rates, inflation, and commodities begin to decline. And the business and financial cycle starts again.

The above lead-lag times are representative. The lead-lag times tend to be longer when the economy is very strong or very weak. They are shorter when the economy is growing close to its potential.

This chapter reviews, in detail, what happens in each configuration of the business and financial cycles. This formal way of looking at business and financial cycle developments helps us forecast turning points in stock prices, interest rates, commodities, the dollar, the growth of the money supply, and inflation.

The model connects all of the indicators we need to follow (see Fig. 3.2).

- A peak in the leading indicators is followed by
- A peak in the coincident indicators, which is followed by
- A peak in the lagging indicators, which is followed by
- A trough in the leading indicators, which is followed by
- A trough in the coincident indicators, which is followed by
- A trough in the lagging indicators, which is followed by
- A peak in the leading indicators.

And the business and financial cycle repeat the pattern.

The business and financial cycle continue to repeat itself with regularity. The above relationships have another crucial attribute. In each phase of the business and financial cycle, there can be only one outlook. In other words, for each configuration of leading, coincident, and lagging indicators, we look for only one answer. By focusing on only one logical outlook, we can develop our investment strategy.

In the next chapter, we use these concepts to develop specific investment strategies and recognize risk. It is possible then to adjust our portfolio allocation to reflect the changing risk profile of each market depending on the changing configurations of the business and financial cycles.



## Chapter Four

### A PRACTICAL APPROACH IN PREDICTING TURNING POINTS OF THE FINANCIAL MARKETS

#### 1. Introduction

In the early 2000s, the main reason investors suffered substantial losses was a lack of a disciplined investment process. The investment process is based on the assessment of risk. Risk changes as the business cycle moves through the various phases. The keystone of an investment process is the development of an investment strategy to take advantage of the changing risk of the financial markets.

We use economic indicators to recognize financial risk. The indicators are identified as leading, coincident, and lagging indicators of the business cycle. The leading indicators reflect trends in the financial markets and define the current phase of the financial cycle. Leading indicators lead the business cycle. The coincident indicators define the current business cycle and its trend. The lagging indicators follow, or lag, the trend of the business cycle. They are important to measure the excesses existing in the system. As such, they help to measure financial risk.

These indicators are used to identify and predict turning points in business and financial cycles. Depending on the direction and configuration of these indicators, we can anticipate the likely direction of the stock market, commodity prices, interest rates, and the dollar. An appreciation of these relationships tells us the direction of risk in each phase of the market cycle.

In this chapter, we analyze markets from a practitioner's viewpoint. Our goal is to understand how risk changes for each market and how to change an investment portfolio. This chapter shows the practical side of what has been presented in previous pages. It shows how to respond in various market situations.

#### 1. Games, investment scenarios, and strategies

We tend to think, “buy or sell.” This is not the mindset of chess players. As soon as an opponent moves a chess piece, a chess player thinks about possible strategies needed to reach the winning move. This is the basic goal for games of strategy.

The first set of scenarios formulated by chess players concerns the likely moves the opponent could make to reach the winning move. For each move of the opponent, a

player focuses on the set of moves needed to win. After every move, both players re-evaluate their scenarios and the possibilities they have to win.

Investing or decision making involves the same mindset. We analyze the available data related to the economic and financial environment. The analysis results in a set of possible scenarios about the future. These scenarios are ranked from most likely to least likely. An investment strategy is then developed for the most likely scenario, keeping in mind, however, that other scenarios may become relevant.

As soon as the markets move, new data become available about the economic and financial environment. So, we need to think like a chess player. We develop new scenarios and rank each scenario per their probability of happening. As the economic and financial environment slowly changes, the amount invested in a specific asset needs to change. By changing our portfolio gradually, we sustain our flexibility to adapt to the changing conditions. In other words, our strategies and investment portfolios must respond to the changing environment.

For instance, assume that short-term interest rates decline after a phase of weak economic conditions. The stock market soon bottoms and start rising. We should initially invest, say, 15% of our capital in stocks until more evidence suggests the conditions are in place for a bull market. New data, like strong growth in monetary aggregates and a strong dollar, support the view that the stock market is in an extended up-move. Our next move is to increase our investment in stocks. If however, in spite of weak economic conditions, short-term interest rates keep rising again, and stocks resume their decline, we should avoid investing more money in the stock market because the bull market scenario is not as likely as originally thought.

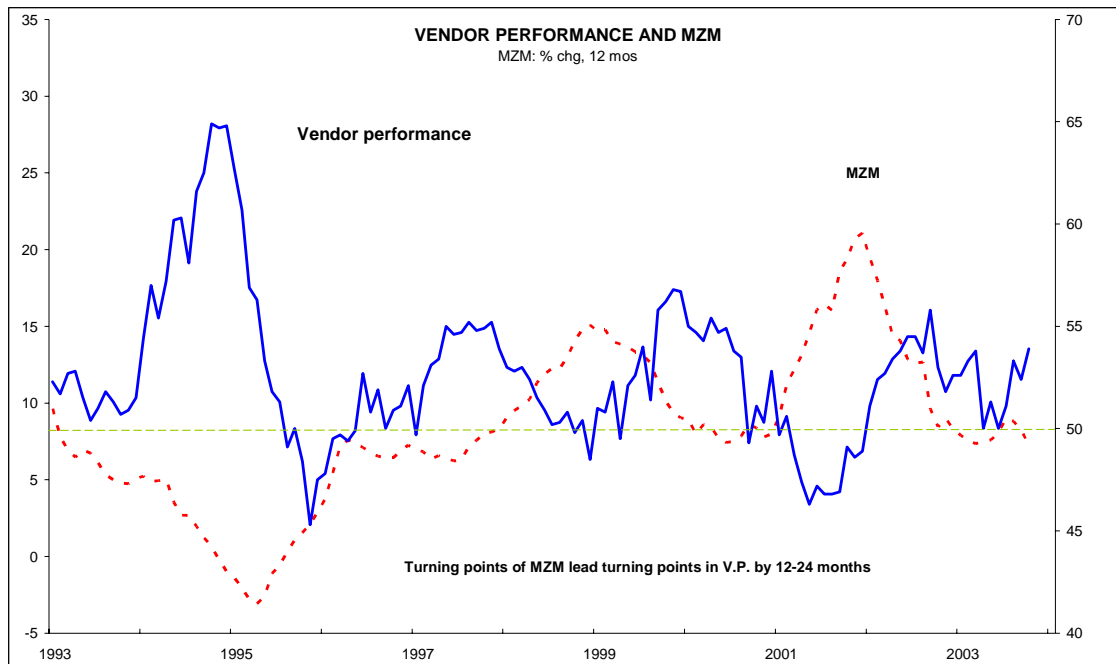
We need to continuously review, evaluate, and possibly modify our investment strategies and portfolios to act on the flow of new data available to us. A portfolio is a dynamic entity and must reflect the changing views of the portfolio manager. This is how professionals view their challenge of managing money. As individual investors, we need to realize we play a game of strategy against sophisticated players. The first step in financial survival is to recognize that the game is played against skilled opponents. Portfolio flexibility and risk management are two major ingredients to win the investment game.

### 3. Predicting turning points in the business cycle

When we know the direction in the growth of business activity, we can measure the risk of investing in commodities, bonds, and the stock market. A decline in the growth of business activity leads to a decline in commodities and bond yields. For this reason, knowing that growth in business activity is likely to decline gives us a framework to develop a strategy for investing in bonds and commodities (see below).

A rise in the growth of business activity leads to a rise in commodities and bond yields. This is the time to be more cautious about bonds and more aggressive in commodity related investments and inflation hedges.

The ISM report (manufacturing and non-manufacturing) is one of the most useful measures. It is reliable and timely. It provides excellent information on the growth of business activity and pricing pressures (Fig. 4.1). The vendor performance index (percent of purchasing managers reporting slower deliveries) is used because of its lower volatility as compared to the other indexes. It is available monthly.



**Chart 4.1.** The growth of the money supply (a leading indicator) leads turning points in the ISM index of vendor performance (a coincident indicator) by 12-24 months at peaks and troughs (Fig. 3.2). Lead-lags become smaller when volatility in economic growth declines.

Assume that the ISM index of vendor performance is declining and the growth of the money supply has risen for several months. We can expect a bottom in the ISM index. For instance in 1996, 1998, 2001, and 2003 the ISM index stopped declining. The continued and prolonged growth of the money supply suggests the ISM index is at a cyclical bottom. As more and more economic indicators turn up, the odds favor a pick up in economic growth. Investment strategies need to change to reflect an investment scenario dominated by a stronger economy.

Are these cyclical bottoms in the index a false reading? Since the growth of MZM has risen sharply for almost a year, we can anticipate the high probability that the ISM index of vendor performance is close to a cyclical bottom. As the growth of MZM keeps rising and the index begins to increase, we have to conclude that a cyclical bottom is at hand (Fig. 4.1). Thus, we initiate new investment strategies. Also, remember that the lead-lags tend to become smaller when economic volatility decreases.

### **Predicting turning points of the business cycle**

#### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising dollar (leading indicator)
3. Rising stock prices (leading indicator)
4. Declining interest rates (lagging indicators)

#### **What is most likely to happen at a peak?**

1. Declining growth in MZM (leading indicator)
2. Declining dollar (leading indicator)
3. Declining stock prices (leading indicator)
4. Rising interest rates (lagging indicators)

The process of identifying a peak is similar to the process of identifying a bottom. If the growth of the money supply declines for several months, we should look for a peak in the ISM index of vendor performance. For instance in 1997, 2000, and 2002 the index stopped rising (Fig. 4.1). Are these cyclical peaks in the business cycle a false reading? Since the growth of the money supply declined for almost a year, we expect the ISM index is very likely at a cyclical peak. As the growth of MZM declines and the ISM index of vendor performance heads lower, we conclude the cyclical peak has passed and new investment strategies are in order.

We can improve our understanding of the process of identifying a peak and a trough in the business cycle by using more than one indicator. The use of more than one indicator helps to confirm the past, present, and future economic and financial events, and the probability of a business cycle peak or trough. These indicators do not turn at the same time. The more indicators follow the pattern of the ISM index, the higher confidence we can have in the nature and intensity of the turnaround.

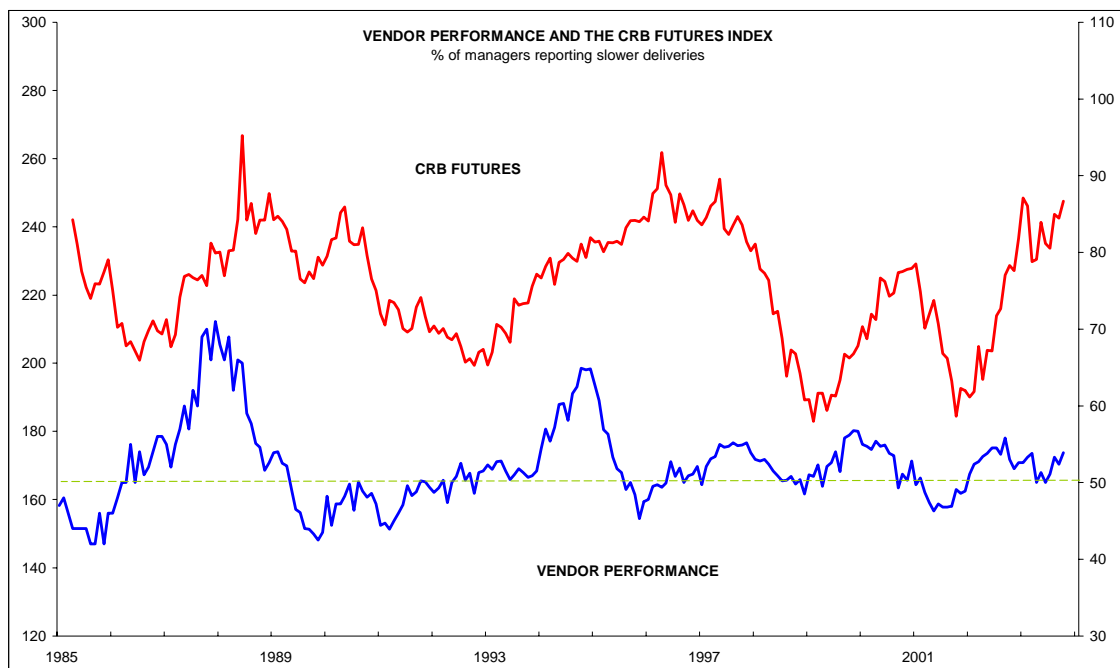
MZM and other measures of money supply like M1, M2, real M2, bank credit, yield curve, and the dollar are other leading indicators we use. The growth in industrial production and in employment validates the interpretation of the ISM indexes.

#### **4. Predicting turning points in commodities**

The most important measure to predict the amplitude of the swing in commodity prices is the level of real short-term interest rates. (For more details please see Chapter 6 of my book *Profiting in Bull or Bear Markets*). When the ratio between the 13-week Treasury bills and inflation falls below 1.4, we should expect above average increases in commodity prices (including gold) and inflation. When real short-term interest rates rise above 1.4, cyclical swings are less pronounced.

As soon as a cyclical bottom for the ISM index is taking place (see discussion in the previous section), we should anticipate a cyclical bottom in commodity prices. The bottom in commodity prices is close when the ISM index rises above 50%. This is more likely if the growth in MZM is also rising. For instance, the bottoms in 1993, 1999, and 2002 in the CRB futures index were preceded or accompanied by bottoms in the ISM index (Fig. 4.2).

A decline in the growth of MZM followed by a decline in the ISM index is a strong indication that we should look for a peak in commodities. For instance in 1989, 1996, 2001, and 2003 the CRB futures index was preceded or accompanied by a decline in the ISM index.



**Chart 4.2** The ISM index of vendor performance leads turning points in the CRB futures index. This is an example of the more general rule that turning points of coincident indicators lead turning points of lagging indicators (Fig. 3.2). The lead-lags decrease with the volatility of the index of vendor performance.

As the odds rise that a cyclical bottom is occurring, we should gradually increase our investment in commodities or commodity driven investments. We should reduce our positions when the ISM index declines, the growth in MZM declines and commodities begin to sputter. As long as the ISM index of vendor performance stays below 50%, the odds favor a muted action in commodity markets.

## **Predicting turning points of commodities**

### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index, possibly moving above 50% (coincident indicator)
3. Rising short-term interest rates (lagging indicator)

### **What is most likely to happen at a peak?**

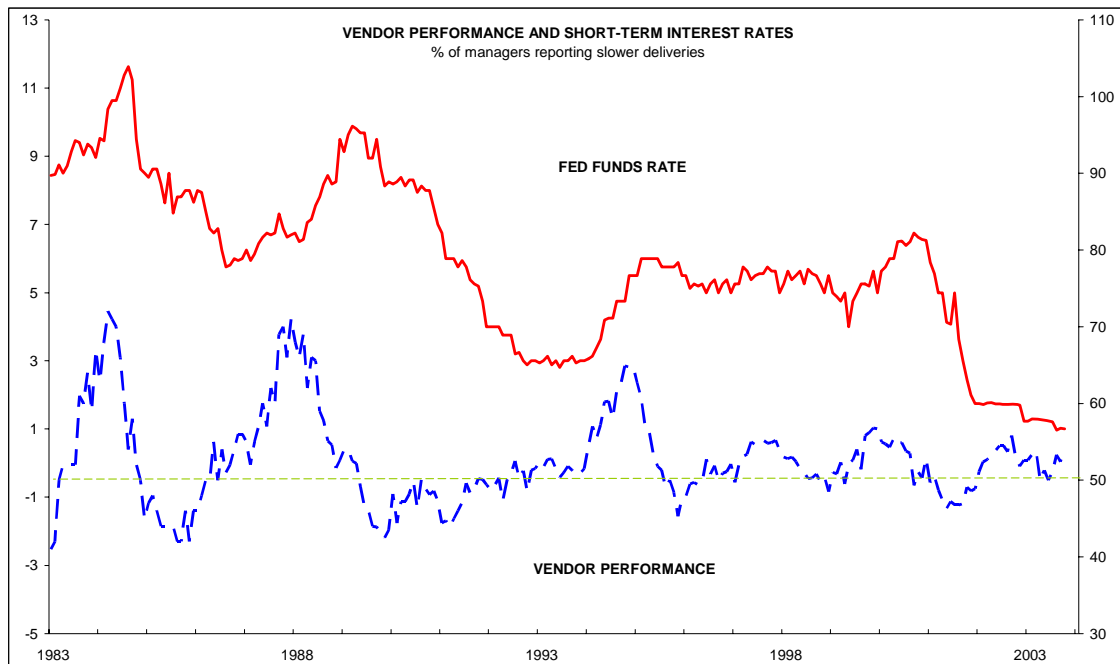
1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index, possibly moving below 50% (coincident indicator)
3. Declining short-term interest rates (lagging indicators)

## 5. Predicting turning points in short-term interest rates

The market sets short-term interest rates. The demand for money is increased by the need to replenish inventories, pay wages, and reduce other short-term payables. The increased demand for money sets the trend of short-term interest rates. A strong economy encourages business and consumers to borrow to buy goods and to invest. Because of the strong demand for money, short-term interest rates rise. Short-term interest rates decline following a phase of slower economic growth, as demand for money declines. Slower economic growth reduces the incentive to buy and to invest. Thus, the demand for money declines and short-term interest rates head lower (Fig. 4.3).

The Fed attempts to understand the market level of short-term interest rates and fixes the inter-bank rate (Fed funds rate) as close as possible to the perceived market rate. During a crisis, the Fed forces short-term interest rates below the market rate. We can identify a crisis by the level of real short-term interest rates. Low real short-term interest rates signal aggressive easing by the Fed, determination to stimulate the economy, and avert a crisis.

Changes in the trend of short-term interest rates help establish which sectors and stocks are attractive and the level of risk in the equity market. Also the trend of short-term interest rates relates closely to the performance of high-yield bonds. When the configuration of the cyclical indicators points to a weaker economy and lower short-term interest rates, we should plan aggressive investment strategies in equities. If, on the other hand, conditions point to a much stronger economy and higher short-term interest rates, we should plan more defensive investment strategies. These implications are discussed in detail below.



**Chart 4.3** Declining short-term interest rates are preceded by slower growth in monetary aggregates and declining ISM index of vendor performance. Rising growth in the money supply and rising ISM index of vendor performance point to higher short-term interest rates. This is another example of the more general rule that turning points of coincident indicators lead turning points of lagging indicators (see Chart 3.2).

### **Predicting turning points of short-term interest rates**

#### **What is most likely to happen at a bottom?**

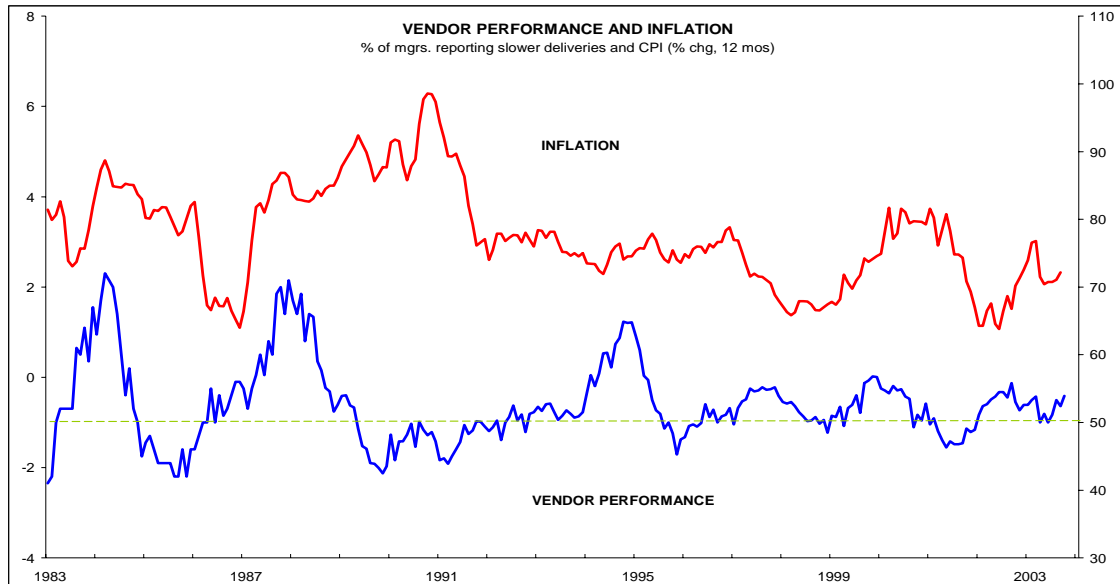
1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index moving above 50% (coincident indicator)
3. Rising commodities (lagging indicator)

#### **What is most likely to happen at a peak?**

1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index moving below 50% (coincident indicator)
3. Declining commodities (lagging indicators)

## 6. Predicting turning points in inflation

Inflation is driven by the strength of the economy (Fig. 4.4) and by the level of real short-term interest rates. Low real short-term interest rates are accompanied by periods of higher than average inflation. Phases of high real short-term interest rates have characterized times of declining or low inflation.



**Chart 4.4** Inflation is a lagging indicator like short-term interest rates, bond yields, and commodity prices. After a phase of rising ISM index of vendor performance, inflation rises. Inflation declines after a phase of declining ISM index of vendor performance. Inflation is likely to rise when the index is above 50% and decline when the ISM index of vendor deliveries declines below 50%.

### Predicting turning points of inflation

#### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index and moving above 50% (coincident indicator)
3. Rising commodities and short-term interest rates (lagging indicator)

#### **What is most likely to happen at a peak?**

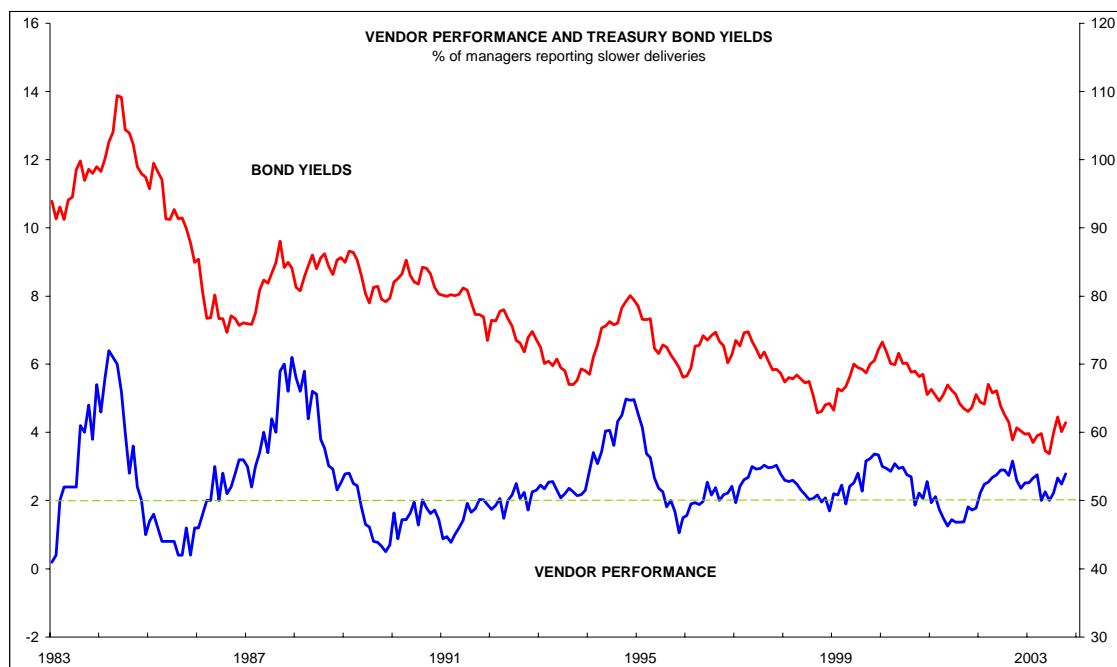
1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index and moving below 50% (coincident indicator)
3. Declining commodities and short-term interest rates (lagging indicators)



## 6. Predicting turning points of bond yields

The process of predicting turning points in bond yields is similar to predicting the turning points in the other lagging indicators such as commodities, short-term interest rates, and inflation. Rising bond yields follow a stronger economy. The ISM index of vendor performance moves higher during such times. Yields decline following a phase of weaker economic growth. This is the time when the ISM index of vendor performance heads lower (Fig. 4.5).

A weaker economy followed by lower commodities, lower inflation and soft short-term interest rates is a strong indication we should use a more aggressive bond investment strategy and gradually lengthen the duration of the bond portfolio. A stronger economy followed by higher commodities, higher inflation and rising short-term interest rates suggest a more defensive bond strategy. During this phase, we shorten the duration of the bond portfolio. For more details on selecting bonds, please see *Profiting in Bull or Bear Markets*.



**Fig. 4.5.** Bond yields are a lagging indicator like short-term interest rates, inflation, and commodities. Bond yields rise after a phase of rising ISM index of vendor performance. They decline after a phase of declining ISM index of vendor performance. Bond yields are likely to rise when the index is above 50%. Bond yields decline when the ISM index of vendor deliveries declines below 50%.

After about a year of rising growth in the money supply, we should track closely the ISM index of vendor performance and other coincident indicators. As soon as the ISM index fails to decline following a protracted rise in the growth of MZM, we initiate a new set of strategies. The most likely scenario is that bond yields are close to a bottom and will move within a range for a few months. When the evidence shows the economy is improving and its strength has staying power then bond yields rise. Under this

scenario, we sell, in small amounts, bonds with long maturities and buy short-term issues like 13-week Treasury bills. If the economy remains strong in the following months, we continue the strategy. If, however, the economy remains sluggish, we adopt a wait-and-see strategy.

After about a year of declining growth in the money supply, we start to track the ISM index of vendor performance and other coincident indicators. As soon as the ISM index fails to rise, we initiate a new set of strategies. The most likely scenario is that bond yields are close to a top and will move within a range for a few months. When the evidence says the economy is weakening and its weakness is likely to last, bond yields decline. Under this scenario, we buy, in small amounts, bonds with longer maturity and sell short-term issues like 13-week Treasury bills. We should continue to follow this strategy if the economy remains weak in the following months. If, however, the economy strengthens again, we should adopt a wait-and-see strategy.

High-yield bonds are attractive long-term investment vehicles. Their price action follows closely the stock market. For this reason, high-yield bonds are a solid investment during phases of declining or stable short-term interest rates.

### **Predicting turning points of bond yields**

#### **What is most likely to happen at a bottom?**

1. Rising growth in MZM (leading indicator)
2. Rising ISM vendor delivery index and moving above 50% (coincident indicator)
3. Rising commodities, short-term interest rates and inflation (lagging indicators)

#### **What is most likely to happen at a peak?**

1. Declining growth in MZM (leading indicator)
2. Declining ISM vendor delivery index and moving below 50% (coincident indicator)
3. Declining commodities, short-term interest rates and inflation (lagging indicators)

## 7. Predicting turning points of stock prices

The stock market reflects the trends in financial liquidity (growth in monetary aggregates). An increase in liquidity drives stock prices higher. A decline in liquidity drives stock prices lower. When the financial and economic systems shrink the growth of liquidity, stocks are riskier. Risk decreases when the monetary aggregates grow at a faster rate. The lagging indicators (short-term interest rates, commodity prices, inflation, and bond yields) give us an excellent tool to establish the level of risk in the market (Fig. 4.6).

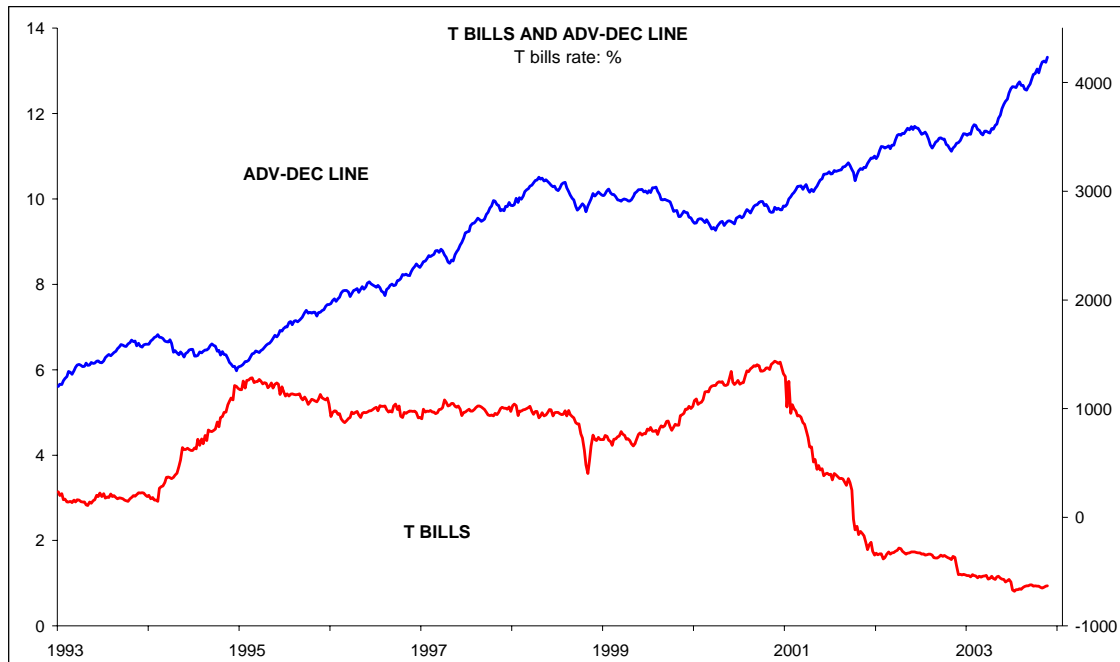
Recognize that by *the market* analysts may use an index to represent the collective moves of all the stocks traded on the NYSE or Nasdaq. One index, used for this purpose, is the S&P 500. The use of one index to the exclusion of other indexes may create problems. For instance, during the financial bubble of the late 1990s, the S&P 500 was overwhelmed by the soaring prices of technology stocks. When the bubble burst, both technology stocks and the S&P 500 plunged in price. The price action of the S&P 500, however, did not accurately show the trend of the broad market.

The advance-decline line (see *Profiting in Bull or Bear Markets* on how to compute it) is an excellent tool to assess the overall direction of the majority of stocks. As the S&P 500 sunk, the advance-decline line kept rising. So, the majority of stocks were actually going up. Investors who missed this development lost an important opportunity to profit. For this reason we should also track the advance-decline to see the movements of the market.

The stock market is a leading indicator. As shown in Fig. 3.2, the turning points in a lagging indicator are very useful in forecasting turning points of a leading indicator. A reliable lagging indicator is the rate on 13-week Treasury bills (T-bills). The sequence of turning points of T-bills and stocks is the following.

- A decline in T-bills reflects a significant slowdown of the economy.
- The Fed encourages banks to lend, to increase the liquidity in the system.
- The growth of the money supply increases.
- Within two months from the decline in T-bills, the stock market bottoms and rises as liquidity in the system increases.
- Stock prices go up at a significant rate in this initial phase. Market prices go up more rapidly when T-bills decline.
- Eventually the economy begins to improve and T-bills stop declining. The risk profile of the market changes. It begins to be less favorable to stocks.
- The growth of the money supply continues to rise but at a slower rate.
- The stock market prices follow closely the action of the monetary aggregates by rising at a slower pace. Wall Street observers begin to say, “The easy money has been made.”
- Now, the economy expands above its long-term trend of about 3%. Resources are stretched as demand for goods and services soar.
- T-bills begin to rise. This is the first sign risk is rising and we move to a more cautious investment strategy.
- After a short phase of time – about two months following the rise in T-bills – the growth in monetary aggregates begins to decline.

- Stocks follow closely the trend in liquidity and peak. A top in the advance-decline usually precedes by several months the peak in the market.
- After a phase of 12-24 months from the peak in the growth of monetary aggregates, the economy begins to slow down and correct the excesses (rising inflation, labor costs, interest rates, commodities) generated during the expansion phase.
- The economy continues to slow for about 12-24 months until T-bills (and the other lagging indicators) begin to decline.
- Now, financial risk declines to much lower levels and the stock market begins its cycle again by rising.



**Fig. 4.6.** The advance-decline line rises rapidly when the rate on 13-week Treasury bills declines. It rises as long as T-bills decline or stay stable. The advance-decline line peaks when T-bills begin to rise and the growth of the money supply declines.

### **Predicting turning points of stock prices**

#### **What is most likely to happen at a bottom?**

1. Declining short-term interest rates (lagging indicator)
2. Declining bond yields (lagging indicator)
3. Declining commodity prices (lagging indicator)
4. Declining inflation (lagging indicator)
5. Rising growth in the money supply (leading indicator)

#### **What is most likely to happen at a peak?**

1. Rising short-term interest rates (lagging indicator)
2. Rising bond yields (lagging indicator)
3. Rising commodity prices (lagging indicator)
4. Rising inflation (lagging indicators)
5. Declining growth in the money supply (leading indicator)

#### 8. Developing an action plan

Serious investors must recognize the nature of the economic environment. In the 1970s, the financial markets were dominated by war and an aggressive social agenda. Washington decided to pursue these policies without an increase in taxes. The Fed accommodated the administration's plans by forcing short-term interest rates down, well below market rates. The outcome was very low real interest rates. The environment created by the Fed was inflationary as it encouraged people to borrow and to buy assets. The conventional wisdom in those days was to borrow because inflation was going to bail you out.

Rising inflation created volatile financial markets and business cycles. This nightmare lasted from 1968 to 1982 with the broad stock market averages finishing unchanged and interest rates and inflation soaring from 3% to more than 15%.

After 1982, the country realized that the inflationary policies of previous administrations were a total failure. The climate was right for a change in leadership. The Fed stopped controlling aggressively the level of short-term interest rates. They let them adjust to market rates, well above the level of inflation. High real interest rates placed a cap on inflation. So, inflation started to decline. As inflation declined, the business cycle stabilized and fluctuations became smoother and more predictable. Stocks and bonds soared until the financial orgy of the late 1990s stopped it. The financial bubble that burst in 2000 was driven by excessive growth in monetary aggregates rising at a rate well above the historical norm.

An understanding of the major trends is crucial for developing investment strategies. The economic environment does not change overnight. The ability to view the economic horizon allows us to adapt to the jolts of the markets and keep a steady course.

The important indicators to follow what is happening are:

- Growth in monetary aggregates.

If the money supply (MZM) has grown below 6% for a long time, the economy grows slowly. If, on the other hand, the growth in MZM is above 6% for many years, expect a strong economy with an inflationary bias.

- Real short-term interest rates.

Low real short-term interest rates always accompany difficult economic events when crises are the norm. In the 1970s, the economy experienced war, social spending, and soaring inflation. In the early 1980s, the economy suffered in the wake of a real estate bubble. In the 1990s, the burst of a major financial bubble was accompanied by global overcapacity. These were periods when real short-term interest rates fell below their historical average of 1.4.

The development of a realistic plan to act within broad economic trends is based on the following considerations.

- Trends in the growth of monetary aggregates and the other leading indicators provide information about when the economy is going to turn around.
- The level of growth of the money supply points to the intensity of the business cycle.
- If the growth of monetary aggregates is expected to decline, the action plan should reflect caution toward stocks. If the growth in MZM is bottoming, the action plan should invest in stocks.
- Low real short-term interest rates point to higher than average inflation and stronger than average commodity markets. High real interest rates suggest the economy is characterized by decreasing or low inflation and a stable business cycle.
- When real interest rates are high, bonds are attractive because of stable or declining inflation. Commodity driven stocks are less attractive during such times, as discussed in future chapters.
- During times of low real interest rates, the action plan uses inflation hedge investments and recognizes that bonds may have reached a high risk point.

Using the scenarios discussed in this chapter, we assess the risk of the different markets like stocks, bonds, and commodities. Based on our assessment, we allocate our capital according to the risk of the markets and our personal tolerance for risk.

As we learn new information, our action plan adapts to our revised outlook. The biggest illusion is to believe that our present outlook based on today's data, is also going to be valid tomorrow. Our action plan has to be flexible and respond to the relevant data as they become available.

The investment game is played every day and every minute. The successful investor does not have a better crystal ball. The successful investor focuses on what is happening and quickly adapts to the relevant changes in the economic and financial environment.

## 10. Conclusions

The development of an action plan requires a view of the economic and financial environment. The serious investor cannot avoid this first step. Previous chapters outlined an approach based on a systematic analysis of the markets.

There are three groups of indicators: leading, coincident, and lagging indicators of the business cycle. The leading indicators reflect the trends in the financial markets and describe the status of the financial cycle. Leading indicators lead the business cycle. The coincident indicators provide information on the strength of the business cycle and its trend. The business cycle drives the important lagging indicators.

The lagging indicators help measure the excesses and risk in the system and in the financial markets. Lagging indicators measure the current excesses and corresponding risk in the economic and financial environment. The leading indicators react promptly to the rise in the lagging indicators. The radar like sensitivity of leading indicators senses that risk is rising when the lagging indicators rise and react by turning down. This downturn is followed by economic weakness after 12-24 months of their peak.

Our portfolio needs to adjust to these developments. Action plans and strategies need to gradually adapt and adjust to reflect these developments. This is the major point of this part of the book. Economic and financial outlooks used to develop strategies and action plans are not rigid. We adopt a flexible state of mind to manage our capital.

Managing money is a game of strategy. We play the game of investing around a global financial table. The best minds in the world play against us. When they win, they take our money away from us. They are knowledgeable and astute. Thus, we must flex with the situation. If we are losing, they must be winning. Act quickly. If we do not understand what is happening and greed or confusion clouds our thought process, sell and start all over again.

Greed and ignorance play a major role in losing money. Investing is a game of knowledge. No one has the final answer. The final answer does not exist. The world's

markets change continuously. An open mind and a flexible action plan is the primary attribute of a successful game player and investor. Setting realistic objectives is the next important strategic parameter. The main characteristic of every strategy is not to lose money. If we do not have that conviction, or know-how to measure financial risk, we should avoid playing the game.

The study of stock sectors is the main feature of Part 2. We will learn in detail the process of selecting stocks based on the understanding of the business and financial cycles and how the cycles drive stock sectors.



## **Part 2**

### **STOCK MARKET SECTORS AND BUSINESS CYCLES**

#### **Introduction**

The objective of Part 1 was to introduce the concept of investment process based on the analysis of business cycle indicators. The use of the indicators was twofold. The first one was to understand the position of the business and financial cycles. The second use of the indicators was to understand the level of risk in the various markets and assess how far asset prices are from a turning point. The outcome is to assist investors in developing an investment strategy and action plan to take advantage of the changing risk profile of the markets.

#### **What you will learn in Part 2**

- The 10 Dow Jones stock sectors
- The concept of relative strength of a stocks sector
- Volatility of stock sectors
- How sectors are related to the business cycle
- The concept of predictability of a stock sector
- How to select the strongest sectors using business cycle indicators
- How to select the strongest stocks within the most attractive stock sectors
- How and when to invest in bonds

The issues raised in Part 2 are tactical. They deal with the choice of investments to implement the strategy developed using the tools discussed in Part 1.

## 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.

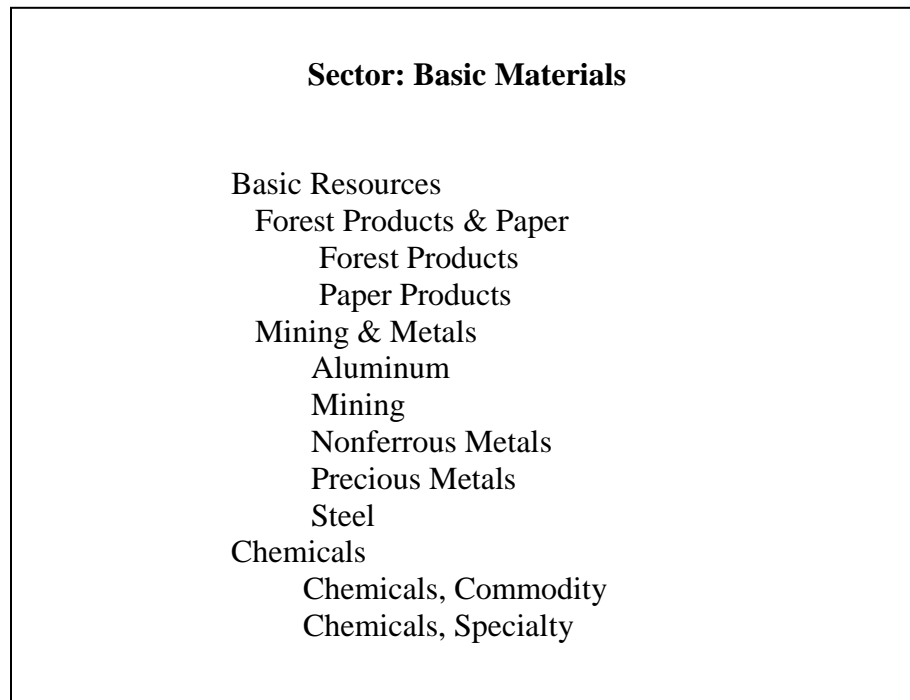
Let's focus first on the relative strength line. The graph shows three distinct periods.

- 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.



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 cyclical is a very loose 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.

<b>Sector: Consumer Cyclical</b>
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. Non-cyclical

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.

<p><b>Sector: Consumer Non-cyclical</b></p> <p>Drinks (alcoholic and non-alcoholic)</p> <p>Consumer services</p> <p>Cosmetics</p> <p>Food</p> <p>Household products</p> <p>Tobacco</p>
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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.

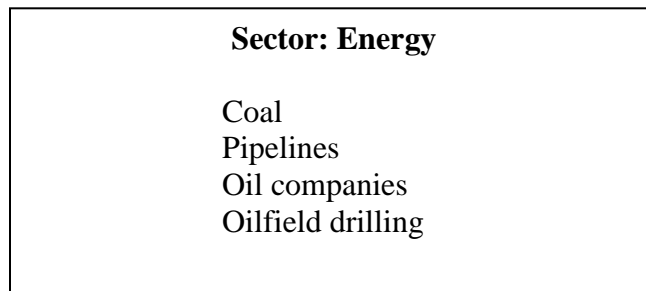
The action of the index shows the following properties.

- 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.



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.

<b>Sector: Financial</b>
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. Technology sector

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.

<p><b>Sector: Telecommunications</b></p> <p>Fixed line communications</p> <p>Wireless communications</p>
--

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.

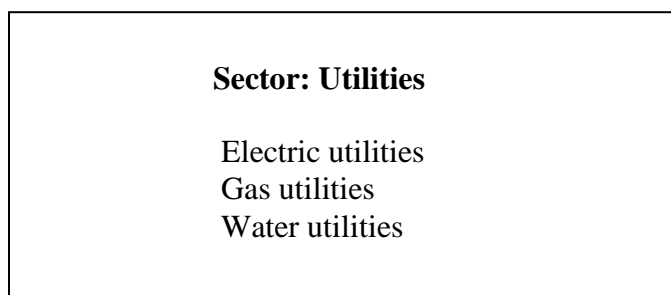
Telecommunication stocks have under performed the market since 1994.

## 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.



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.

## Chapter Six

### STOCK SECTORS AND BUSINESS CYCLES

#### 1. Introduction

The previous chapter introduced the concept of relative strength. Its main purpose is to identify sectors rising faster than the broad market. These sectors show a *rising* relative strength line. In a rising market, sectors with a relative strength line moving higher offer above average profit opportunities and the chance to outperform the market. In a rising market, sectors with a declining relative strength line should therefore be avoided.

In this chapter, investors gain an in depth understanding of the nature of a market move. Business and financial indicators are used to determine the type of environment or phase of the financial and business cycle. Depending on the configuration of indicators, some sectors perform well relative to others. As the configuration of indicators changes, and a new financial environment develops, new sectors emerge and become more attractive. Investing in a sector with above average strength cushions the portfolio from losses because most stocks are in a leading sector. As they say, a rising tide lifts all boats. In so doing the timing in the stock selection is important, but not crucial.

Investors are able to follow changes in market preference as reflected by changes in the relative strength line of each sector and know why this is happening. As the business and financial cycle moves from one configuration to the next (see Fig. 3.2), investors adapt their investment strategy by changing the allocation of their capital to the strongest sectors.

This is achieved by identifying how each configuration of business cycle indicators introduced in Part One is linked to the relative strength of each sector. Investors can invest with a high degree of confidence in those sectors likely to perform best within the economic and financial scenario they anticipate. These sectors offer the greatest profit opportunities with the lowest risk. Diversification, which is widely understood as investing also in under performing sectors, reduces the returns of the portfolio and increases its risk. Diversification is recommended only within the selected sectors. The approach of this book is to focus on a few sectors likely to out perform the market and then choose several stocks – diversify – within the selected sectors.

The analysis presented in this chapter is based on the following approach. First, one needs to identify the periods when a sector has a rising relative strength line. Then, for each of these periods, the main economic and financial indicators are used to explain the strength of that sector. The outcome of this step is to establish what kind of economic and financial environment is favorable to that particular sector. The objective of this chapter is not to determine whether the market is going to rise. This methodology has been extensively explored in the book *Profiting in*

*Bull or Bear Markets* and Part One of this book. The purpose here is to establish when and why some sectors are stronger than the market only in some phases of the business cycle.

The sectors used are those defined by Dow Jones ([www.djindexes.com](http://www.djindexes.com)). They are also found on the site [BigCharts.marketwatch.com/industry](http://BigCharts.marketwatch.com/industry). These web sites show also the stocks used to compute the indexes. Because of lack of space, only representative sectors are discussed. Investors, however, can apply the same approach to all other sectors.

Investors should use predictable sectors. These sectors have a close correlation with a specific business and financial environment, as discussed below.

At the end of this chapter, investors are able to determine:

- *What to buy or sell.* It is possible to determine which sectors are attractive and which ones offer the greatest risk for the economic conditions being anticipated. The most reliable and readily available economic and financial indicators are reviewed for this purpose.
- *When to buy or sell.* As the business and financial indicators move from one configuration to the next, investors have now a blueprint of when they should start accumulating or selling stocks of a given sector.
- *Why should you buy or sell.* To know why to buy or sell is another important step of the investment process. The knowledge of the economic and financial fundamentals driving the prices of stocks within a sector provides reliability to the investment process and information on the risk involved.

In the following chapter, a methodology to select stocks within a sector is discussed in detail. Once a portfolio of stocks belonging to the strongest sectors has been established, it is important to examine how to use the performance of the portfolio to improve its return.

## 2. The indicators used to understand the investment environment

The following business and financial indicators are used in our analysis of stock sectors. They are the most reliable to identify the economic and financial environment favorable to a particular group.

- *Growth of the money supply.* An increasing change in the money supply is a measure of increasing liquidity in the banking system, which will eventually flow into the rest of the economy. A decline in the growth of the money supply suggests that liquidity is decreasing.
- *Yield curve.* A steep -- or steepening -- yield curve is an indication the Fed is committed to providing liquidity to the banking system by agreeing to lower the inter-bank



rate (the fed funds rate). A flattening yield curve confirms that short-term interest rates are rising and liquidity in the system is decreasing.

- *The dollar.* A rising dollar is an indication international investors find it attractive to invest in the US. This is a positive trend for the markets. A declining dollar reflects problems in our economy making US investments unattractive. A declining dollar suggests that domestic and foreign investors prefer to invest their capital outside the USA.

- *Real short-term interest rates.* During periods of difficult economic times the Fed attempts to protect the banking system and the economy by forcing short-term interest rates well below the inflation rate (see also Chapter 6 of the book *Profiting in Bull or Bear Markets*). Higher inflation and much higher commodity prices have accompanied low real short-term interest rates below 1.4. High real short-term interest rates above 1.4 are disinflationary.

- *ISM's vendor performance index.* A rising vendor performance index above 50 indicates the economy is improving and is becoming stronger. A declining vendor performance index below 50 suggests the economy is rapidly weakening.

- *Short-term interest rates.* Declining short-term interest rates are associated with a rising stock market and lower risk. When short-term interest rates stabilize, following a protracted decline, they suggest the stock market is likely to continue to rise, but at a slower pace. Rising short-term interest rates identify periods of high risk for stocks.

- *Commodity indexes (CRB raw industrial index (spot) and futures).* Rising (declining) commodity prices confirm the economy is strengthening (weakening). An above average increase in commodity prices should be anticipated when real short-term interest rates fall below 1.4.

- *Inflation at the consumer and producer levels.* Inflation is closely related to trends in commodity prices. Higher inflation has a negative impact on consumers and business and drives bond yields higher. Declining inflation has a positive impact on purchasing power and the cost structure of business and drives bond yields lower.

- *Bond yields.* They follow closely the trend of inflation and commodities.

### 3. Phases of the business cycle and asset class strategies

Transitions in the growth of the economy have a major impact on the trends of asset classes. Prices rise or decline depending the direction of the growth of the economy. In Fig. 6.1 the idealized pattern of the growth of the economy is shown in a complete cycle.

## BUSINESS CYCLE

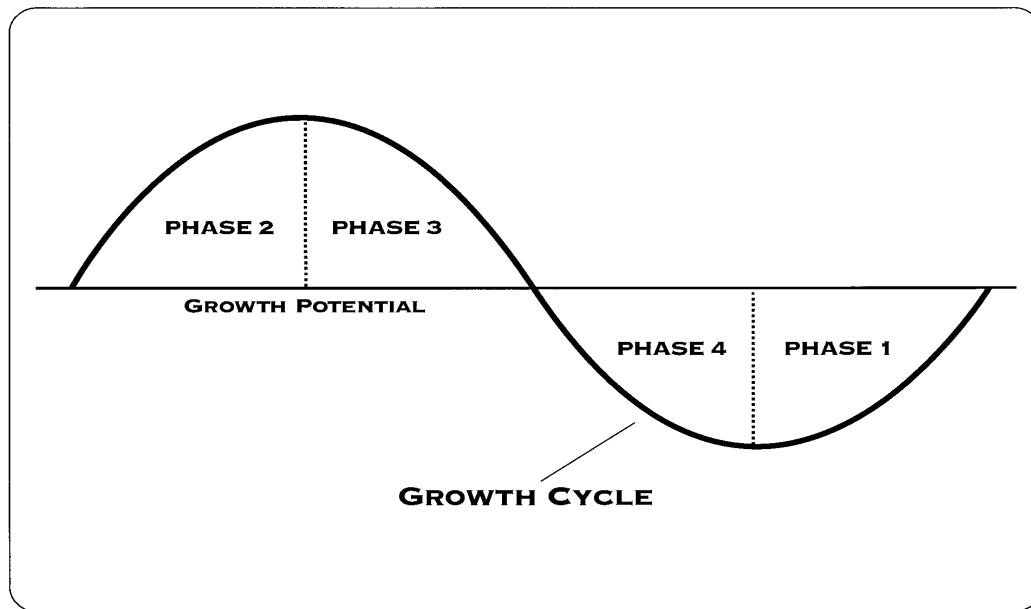


Fig. 6.1 The business cycle, as reflected by the growth pattern of the economy, goes through four distinctive phases. Prices of asset classes change depending on the phase of the business cycle. The growth potential for industrialized countries is between 2.5% and 3.0%. Using the ISM index as a proxy for the business cycle, 50 would be the level associated with the growth potential.

Business activity goes through four distinctive phases. Each phase is characterized by the following unique trends.

### Phase 1.

- ❑ Business growth rises but remains below its growth potential.
- ❑ Money growth, stocks, and the dollar rise. The yield curve steepens.
- ❑ Inflation, commodities, bond yields, and short-term interest rates bottom after this phase is under way.

This phase reflects the end of the disinflationary period of the business cycle. The strength of the dollar and the increase in liquidity, accompanied by low and stable short-term interest rates, support a broad stock market rise.

### Phase 2.

- ❑ Business growth rises above its long-term growth potential.

- ❑ Money growth, stocks, and the dollar peak before the end of this phase. The yield curve also begins to flatten after the peak in the growth of monetary aggregates.
- ❑ Inflation, commodities, bond yields, and short-term interest rates rise during the whole period.

The economy begins to overheat in this phase. Inflationary pressures rise. This is the time to watch closely the level of real short-term interest rates. If they are low as they were in the 1970s, 1992-1993, and after 2001, investors should expect a large movement in commodities and stronger than average inflationary pressures.

Investors should shift their emphasis to hard asset based stocks and asset classes, and away from interest rate sensitive investments.

### **Phase 3.**

- ❑ Business growth declines, but remains above its long-term growth potential.
- ❑ The growth of the money supply continues to decline. Stocks and the dollar are also weak. The yield curve keeps flattening.
- ❑ Inflation, commodities, bond yields, and short-term interest rates continue to rise, but they peak before the end of this phase and begin to trade in a range as the economy continues to slow down.

This is a transition phase. Inflationary pressures begin this phase on the upside. By the end of phase 3 commodities, short-term interest rates, and bond yields begin to break from their trading range and start heading lower.

Investors' have to adjust their investment strategy and gradually shift away from inflation hedge asset classes and get ready for investments that will be more profitable once the business cycle enters phase 4.

### **Phase 4.**

- ❑ Business growth declines and falls below trend.
- ❑ Money growth, stocks, and the dollar bottom and the yield curve begins to steepen before the end of this phase. The Fed lets the inter-bank rate fall and attempts to stimulate the growth rate of liquidity to cushion the banking system from further deteriorating economic conditions. This action sets the stage for the next pick up in business activity. This is the time when the business cycle enters Phase 1.
- ❑ Inflation, commodities, bond yields, and short-term interest rates continue to decline.

Some analysts suggest that the economy may enter into a recession. Investors must recognize that trends in the financial markets are the same as when the economy is in a recession or in a growth recession. In a recession the economy shrinks. In a growth recession, the economy grows below potential. This is the main reason why in this book market trends have been related to growth rates rather than levels of economic activity.

Investors' investment strategy should now be more aggressive relative to the stock market.

Some basic patterns are evident.

- ❑ Turning points in the growth of the money supply, the dollar, and the yield curve tend to be clustered close to each other. They do not turn at exactly the same time, but the pattern of any one of them is confirmed after a few months by the other indicators. If investors see the growth of the money supply and the dollar declining, it is reasonable to assume that the next development to expect is a flattening of the yield curve. The change in the shape of the yield curve usually follows by several months the turning points of the growth of the money supply and of the dollar.
- ❑ Turning points in commodities, short-term interest rates, bond yields, and inflation tend to be grouped together. Changes in commodity prices tend to lead changes in inflation.
- ❑ Turning points in vendor performance follow the turning points of the growth of the money supply and precede turning points in commodities, short-term interest rates, bond yields, and inflation.

These relationships will be used to study the behavior of the most important sectors in the following sections.

### 3. Inflation-hedge stock sectors

These sectors are very important. The main reason is that inflation is not going to go away. Prices will always rise. It is only a matter of degree. Some business cycles experience sharp increases in inflation when the growth of the money supply goes well above the 7% historical average pace and real short-term interest rates are well below inflation.

These are the times when the Fed recognizes there are serious problems in the economic and financial system and they do whatever they can to protect the banking and financial system. Unfortunately, this policy inevitably causes sharply higher inflation, as it happened in the 1970s, or much higher commodity prices, as in 1992-1993 and after 2002.

The only way for investors to protect themselves against the loss of purchasing power is to hedge against higher inflation and the decline of the dollar. One way is to purchase foreign bonds in strong currency countries. ETFs are an excellent vehicle to implement this strategy.

Another way to hedge against a declining dollar and rising inflation is to buy stock sectors that perform much better than the broad stock market during such times. The stocks belonging to these sectors are those of companies mostly involved in the production, transportation, or distribution of commodities.

An investment strategy designed to protect your portfolio from rising inflation is typically implemented in Phase 2 and Phase 3 of the business cycle (see Fig. 6.1 above). Investors should gradually start investing in inflation-hedge stock sectors toward the end of Phase 1 and begin to reduce their exposure to inflation-hedge sectors toward the end of Phase 3. This strategy is particularly effective during times of low real interest rates.

Investors need to follow a very important guideline that will minimize the risk of making costly mistakes. Always invest in sectors with a rising relative strength line; it is the only way to have a chance of outperforming the market. Remember: rising water lifts all boats. It is very difficult, and very risky, to find a strong stock in a weak sector with a declining relative strength line. The odds of outperforming the market with this strategy are greatly reduced.

### 3. The mining sector

The mining sector has a pronounced cyclical behavior. The typical economic scenario favorable to this sector is a strengthening economy and rising commodities. This scenario takes place during Phase 2 and Phase 3 of the business cycle.

Investors should be careful with these stocks when the conditions are in place for an economic slowdown. It is important to remember that commodities peak after the business cycle is well into Phase 3 and the ISM indexes decline close to 50.

This sector performs unusually well in times of low real interest rates when the Fed is particularly and unusually aggressive in lowering short-term interest rates well below market rates and below the underlying inflation rate.

### 4. The precious metals sector

This sector performs very well when real interest rates are low. This situation took place in the 1970s, in 1992-1993, and after 2001. During these years, the precious metal stocks performed well and displayed rising relative strength, a sign suggesting that these stocks were outperforming the market.

This sector is particularly attractive, from a business cycle viewpoint, when the economy is growing and the ISM index is moving decisively toward the 50 level and commodities are rising in response to a stronger economy.

This sector is not attractive and shows poor performance in its relative strength line when the economy slows down, commodities decline, and interest rates rise above the inflation rate.

#### 5. The pipelines sector

The profitability of pipeline companies is closely connected to the energy industry and the transportation of gas and crude oil. Like truck transportation, they make money if the commodity they transport rises in price. It is no coincidence, therefore, to experience a strong pipeline sector when commodities, and natural gas and crude oil in particular, are rising. This scenario is experienced when the ISM index rises strongly, preceded by a large infusion of liquidity by the Fed.

Exposure to this sector should be reduced when the economy begins to slow down, the ISM index declines, commodities begin to show some cyclical weakness, and the growth in the PPI index begins to decline. A weaker economy reduces the demand and the price of the fuels transported by the pipelines. For this reason this sector cannot be expected to perform well toward the end of Phase 3, Phase 4, and the beginning of Phase 1.

#### 6. The oil companies (secondary) sector

This sector offers excellent opportunities to hedge against the loss of purchasing power during times of rising inflation and sharply higher commodity prices. This sector can also be used to hedge the portfolio against a weak dollar. The reason is that the dollar declines the most when commodities display unusual strength. These periods follow times of aggressive Fed easing reflected in unusually low real short-term interest rates and very steep yield curve.

The financial and economic scenario most favorable to this sector is one characterized by a strong economy reflected by rising ISM indexes moving above 50. The strength of the economy is also causing rising commodities and higher growth in the producer price index.

Exposure to this sector should be avoided when the economy slows down, commodities peak, and the growth in producer prices declines.

#### 7. The marine transportation sector

The marine transportation sector is another excellent inflation hedge. As pipeline companies transport fuels through pipelines on the ground, marine transport companies transport

goods, raw materials, and fuels using large ships. The outcome is that a major factor in their profitability, and therefore in the action of the stock, depends on the trend of commodities and inflation.

The economic and financial environment favorable to this sector is one characterized by a strengthening economy followed by rising commodities and much higher growth in producer prices. Like all other inflation hedge sectors, the marine transportation sector is particularly attractive in Phase 2 and well into Phase 3. These stocks are especially strong when the Fed forces short-term interest rates below the inflation rate.

Exposure to this sector should be reduced when the economy begins to slow down, followed by weaker commodity prices and lower growth in producer prices.

#### 8. Stock sectors thriving in disinflationary times

The following sectors perform and out perform the market when inflation declines. Periods of lower inflation are anticipated by many developments and are easy to recognize.

Lower inflation is the outcome of slower economic growth. Some analysts do not agree with this statement. It is a statistical fact, however, that turning points in the growth of business activity are followed by turning points in inflation after one to two years.

A period of declining inflation is first anticipated by a flattening yield curve and slow growth in monetary aggregates. During such times, a weak dollar and an anemic stock market become part of the financial landscape.

After one to two years, the economy responds and begins to slow down. This is the beginning of the disinflationary times. Commodities stop rising after a lag of a few months. Then inflationary news becomes more benign. Bond yields stabilize and decline. These events take place toward the end of Phase 3, in Phase 4, and in Phase 1 of the business cycle. The disinflationary process becomes more prominent when real short-term interest rates are above 1.4.

#### 9. The money center banks sector

The financial sector is one of the most predictable sectors. The relationship with the business cycle is simple and straightforward. This sector outperforms the market when short-term interest rates decline and the yield curve steepens. The decline in short-term interest rates can be compared to the decline in raw material prices for a manufacturing company.

The decline in commodities lowers production costs and improves the profitability for the companies. The same relationship applies between the decline in short-term interest rates and

banks profitability. Short-term interest rates represent the raw material of banks. They “buy” money from consumers and pay a price – short-term interest rates – and “re-sell” it to borrowers by charging long-term interest rates, which are much higher than short-term interest rates most of the time. This is the main reason bank stocks do well when short-term interest rates decline and the yield curve steepens.

Investors recognize that the economic and financial environment most favorable to this sector is toward the end of Phase 3, Phase 4, and the initial part of Phase 1.

This sector under-performs the market when short-term interest rates rise because this trend reduces the profitability of the banking sector. The flattening of the yield curve is also a negative development for banks. As a result, Phase 2 and Phase 3 reflect an economic and financial environment unfavorable for this sector.

#### 10. The Savings & Loan/Thrift sectors

This is an excellent sector to be used as an investment vehicle. Since 1992, it has outperformed the Nasdaq by a wide margin and with much less volatility. As the Nasdaq was collapsing more than 70%, the S&L sector kept rising steadily from 2000 to 2002.

The S&L sector is particularly attractive because of its low volatility, especially during a rising market. This sector tends to outperform the market when business begins to slow down. A good entry point is toward the middle of Phase 3. Stocks in this sector are strong during the slow growth phase of the business cycle (Phase 4) and the improving phase (Phase 1). In other words, this sector is attractive when the economy does not perform well.

Exposure to the stocks in this sector should be reduced when business activity begins to grow at an above average rate. This takes place in Phase 2 and during most of Phase 3.

#### 11. The cosmetics sector

This sector is attractive because of its defensive features. There are two major trends impacting these stocks. Let's review first the long-term developments that impact favorably this group.

There are two main measures of inflation. The most important one is, of course, the change in consumer prices. These are the prices charged by producers to consumers. The other important measure of inflation is the change in producer prices -- prices producers charge each other. If producer prices rise faster than consumer prices, producers have a big problem. The reason is that they cannot pass to the consumer the increase in prices they experience. The most favorable period for producers is when consumer prices rise faster than producer prices. During



such times, producers' margins improve because they can increase prices faster than the increase in the price of goods they have to buy.

Why is this important? This sector is particularly sensitive to how consumer prices grow relative to the growth in producer prices. The cosmetics sector is particularly favorable, performing better than the broad stock market averages when the growth in producer prices declines relative to consumer prices. In other words, this sector is strong when producers of cosmetics have pricing power at the consumer level. This sector performs poorly relative to the overall stock market when producer prices are rising faster than consumer prices.

Another factor impacting this sector is the behavior of the yield curve. This sector is stronger than the market when the yield curve steepens, as short-term interest rates decline relative to long-term bond yields. When the yield curve flattens, however, as short-term rates rise faster than bond yields, this sector under performs the market.

#### 12. The household products (non-durables) sector

This sector does not show the long-term performance that makes it particularly attractive. Since 1992, this sector outperformed the market only during two distinct periods: 1994-1997 and 2000-2002. There have been shorter instances when this sector was strong.

Two conditions are present when non-durable stocks are strong. The first one is that short-term interest rates are declining. The second feature, closely related to the first one, is that the yield curve is steepening. For these conditions to be present, the economy must be weakening with stable or declining commodities (although this condition does not necessarily have to be met).

This sector is unattractive when interest rates rise, the Fed is tightening, and the yield curve is flattening. It is quite common to see commodities strengthening during these times.

#### 13. The electric utilities sector

This sector has two distinct patterns: the long-term and short-term price behavior. Over the long-term, the electric utilities sector has under performed the market from 1993 to 2000. These years were characterized by high real interest rates and a strong dollar. These years were disinflationary years, as inflation declined and commodities showed little volatility. Real interest rates hovered well above 1.4 in this period. Before and after these years, this sector has shown periods of above average performance.

There is no doubt, however, that these stocks fit well in a defensive investment strategy. The reason is that they strengthen when the yield curve begins to flatten. These are times when

the Fed is concerned about inflationary pressures and lets interest rates rise. The economy is quite strong during such times.

The electric utilities sector performs poorly when the rest of the market tends to be quite strong. This sector should be avoided when the yield curve steepens, a sign the Fed is trying to stimulate the economy by letting interest rates fall.

#### 14. The technology sector

This is a very difficult sector to predict because of the considerable speculation and volatility of these stocks. The index soared until 2000 and sank to the bottom in 2002 with a loss of 70% in the Dow Jones Technology index. Investors need to be superb market timers to avoid the financial pain these stocks may cause when they decline. Investing in volatile stocks is not a recommended strategy because of the difficulty in managing the performance of the portfolio and timing when to buy or when to sell.

Aggressive investors can improve the appreciation of their capital by adding technology stocks to their portfolio because they tend to follow closely the trend of the overall market. This is a tricky strategy and only the most sophisticated investors should follow it. If investors expect the stock market to decline, then they should readily reduce the exposure to technology stocks.

This sector tends to be sensitive to economic growth. It outperforms the market when the economy is projected to grow at a strong pace for a prolonged time. Because of its volatility, this sector should be used as an investment vehicle when one expects a strong stock market.

#### 15. High-grade and low-grade bonds

This chapter is not complete without mentioning the bond market. Bonds are an important asset class from the middle of Phase 3 to the end of Phase 1. They are an attractive and convenient asset class to use as investment during disinflationary times. The correlation with the slower growth phases of the business cycle is high enough to produce attractive returns during such times. A more complete discussion on how to select bonds and manage a bond portfolio is found in Chapter 9 of *Profiting in Bull or Bear Markets*.

There are times when bonds offer superb investment opportunities as in the 1982-2002 years. Of course, these are chances of a life time and do not repeat themselves often. There are three main bond categories: high-grade bonds, high-yield corporate bonds (low-grade or “junk” bonds), and Treasury inflation-indexed bonds.

✓ High-grade bond yields. Bond yields decline (bond prices rise) when commodities (futures and spot) decline or inflation at the consumer and producer level moves

lower. These are times when the economy is slowing down and inflationary pressures subside. This typically happens following the beginning of Phase 3 until the end of Phase 1.

✓ Low-grade bond yields. These bonds are one of the most profitable asset classes on a risk-adjusted basis. The main reason, as discussed in several research papers, is that the market prices a risk premium into the yields of these bonds above their average default rate. In other words, investors are so concerned about the viability of the companies issuing these bonds that they require a yield well above the market risk. It is this mis-pricing that makes the total return from this asset class particularly attractive.

The price of these bonds parallels closely the trend of the equity market. The main difference is that they offer a very attractive yield. This is why these bonds represent value and protection on the downside. Their attractiveness is due to their high yield and capital appreciation when the stock market rises, and protection from capital losses due to the high yield.

The simple investment model is to invest in these bonds when long-term interest rates on Treasury bonds are declining or are stable (see also previous section).

Investors should choose mutual funds investing in high-yield bonds. A word of caution is necessary at this point. Investors should select high-yield mutual funds not, repeat not, based on performance. The high performance high-yield funds are very volatile. Investors should look at the long-term performance, which is easily available on the Internet. Look at the number of years showing a positive return and the number of years showing a negative return. Investors should prefer those mutual funds with the lowest number of years showing losses. These are the mutual funds with the best disciplined team experienced in the management of high-yield bond portfolios.

✓ Treasury Inflation-Indexed Securities, often called Treasury Inflation-Protected Securities or TIPS, are a special type of Treasury notes and bonds. As with other notes and bonds, when investors own TIPS investors receive interest payments every six months and a payment of principal when the security matures. The difference is this: Interest and redemption payments for TIPS are tied to inflation.

Based on the Consumer Price Index, the leading measurement of inflation for this type of bonds, the principal value of investors' TIPS is adjusted by the rate of inflation. At maturity the security is redeemed at its inflation-adjusted principal amount or its original par value, whichever is greater. In all likelihood, inflation will occur over the life of the security and the payment to investors at redemption will be greater than the original par value of the security. For the unlikely event of deflation, the final payment cannot be less than the original par value.

Like other notes and bonds, TIPS pay a fixed rate of interest. But this fixed rate of interest is applied not to the par amount of the security, but to the inflation-adjusted principal. So, if inflation occurs throughout the life of investors, every interest payment will be greater than the previous one. On the other hand, in the rather unusual event of deflation, your interest payments will decrease.

TIPS can be purchased directly through the Internet from the US Treasury (Public Debt). These bonds should be in any portfolio as a long-term protection against inflation and should be used as a long-term investment.

#### 16. The broad stock market

The stock market, like all the leading indicators, can best be predicted using lagging indicators such as short-term interest rates, commodities, and inflation. For this reason declining or stable short-term interest rates are an important development because they identify a favorable period for the broad stock market.

The broad stock market can be best understood if investors look also at the advance-decline line. When the advance-decline line rises, the majority of the issues listed, say, on the NYSE are rising. This pattern tells investors that there is an increasing number of investment opportunities.

When the advance-decline line flattens and declines, it reflects weakness in the market. An increasing number of declining stocks is the reason for the poor performance of the advance-decline line. Investment opportunities become more difficult to find during such times.

The market averages can be heavily influenced by specific groups and often tend to obscure the view of what is really happening. The typical example is what took place in 2000-2002 when the technology sector imploded. The averages collapsed because they were bloated with overvalued technology stocks. The advance-decline line, however, after a short period of weakness, resumed its upward trend while the averages sagged. In other words, the advance-decline line was telling investors that the majority of stocks was rising and there were profits to be made in spite of declining market averages.

Of course, there is no single measure that can tell investors what is really happening. Investors should follow many averages and many indicators of market strength. The advance-decline line, however, is an important gauge.

The easiest way to predict the trend of the stock market is to relate its pattern to the trend of short-term interest rates. Depending on the trend of short-term interest rates, investors can identify the phase of the stock market within the business cycle and its level of risk.

There are three main stock market phases.

✓ Short-term interest rates decline. The market moves strongly higher following a peak in short-term interest rates. Investment risk declines rapidly as short-term interest rates decline due to weak economic conditions. The stock market averages and the advance-decline line rise rapidly.

✓ Short-term interest rates stabilize. The economy is now improving, but is still growing slowly. Short-term interest rates cease to decline to reflect improving business conditions. Investment risk is still low, but is now gradually rising and will continue to move higher. The stock market and the advance-decline line are still heading higher, but at a slower pace.

✓ Short-term interest rates rise. The economy is now expanding rapidly. Commodities are strong. Short-term interest rates are rising. They will decline only when the economy slows down to a crawl. This period of rising short-term interest rates is the most crucial one for investors. Risk is very high and a defensive investment strategy is a must. It is difficult to make money during this phase and investors should emphasize capital preservation and those sectors that benefit from rising commodities and rising inflation.

## 17. Conclusions

The main objective of portfolio management is to be invested in those stock sectors that are, or are likely to become, the strongest sectors. This chapter has provided the main elements on how to approach the issue of finding the greatest opportunities. Investment success depends on focusing on sectors that are predictable using business cycle indicators. Investors should avoid those groups that are volatile and difficult to relate to the business cycle. It is inherently risky to invest in sectors that do not follow predictable patterns because of the low probability of success in planning buy and sell decisions.

If the market is likely to rise, this is the time to examine the indicators and sectors presented in this chapter and establish which ones are going to outperform the broad market averages. We have presented only a few sectors. The objective was to discuss a methodology.

If investors want to outperform the market, they need to be in sectors that are likely to perform best under expected economic conditions. It is important to recognize:

- a. The current phase of the business cycle: Phase 1, Phase 2, Phase 3, or Phase 4.
- b. The indicators supporting the assessment. These indicators should also be used to monitor the behavior of the business cycle.
- c. What is the next phase of the business cycle?
- d. Select the sector or sectors that perform well in the current phase.
- e. A strategy based on stock sectors should be planned to make the transition from the current phase to the next one.

The investment strategy should be based on the diversification of the investors' capital only in those sectors favorably impacted by the current phase of the business cycle. Furthermore, by using the stock selection methodology presented in the next chapter, investors are able to

build a portfolio of companies with a business model, which will make them strong market performers during the phase of the business cycle being anticipated.

The important message of this chapter is that two main concepts have to be kept in mind at all times:

1. Always invest in stocks within a sector with a rising relative strength line.
2. Be very focused on how and why the business cycle makes the transition from the current phase to the next.

## Chapter Seven

### STOCK SELECTION

#### 1. Introduction

The purpose of Part Two is to examine the patterns of each of the main Dow Jones sectors and establish relationships between the relative strength line of the sectors and the most important business and financial cycle indicators.

The main issue is that of predictability. Once investors establish how to predict a sector, then they know when to buy or sell, what to buy or sell, and why to buy or sell.

For instance, if the economic environment is driven by easy monetary policy accompanied by strong monetary growth and low real interest rates, the precious metal sector is likely to outperform the market. Investors can therefore begin an investment program based on buying precious metal stocks. Investors also are aware that when short-term interest rates and real short-term interest rates begin to rise, precious metal stocks will become unattractive. The sector, in other words, is predictable, and should be used as part of the investment program.

Chapter Five and Chapter Six showed you how to identify the investment environment and how to select the sectors likely to perform well under the anticipated economic conditions. This chapter shows you an approach to select timely stocks within the selected sectors.

#### 2. Step 1: Establish an investment theme

This is probably the most important step of the investment process. What kind of economic times are you facing? Investors need to answer this question and relate the answer to the likely direction of the business cycle indicators presented in the previous chapter.

Is the economic and financial environment going to be inflationary? What are the reasons for reaching these conclusions? What are the indicators saying? Is the Fed aggressively easing and pushing real short-term interest rates to low levels? Is the money supply expanding rapidly? Is the dollar declining? Is the economy improving? Are commodities turning up?

These are all questions that, if answered positively, tell investors that the economic and financial environment is characterized by a strong economy followed by rising inflation and commodity prices.

If, on the other hand, the money supply has been slowing down for some time, investors should also expect the economy to slow down. High real interest rates point to a disinflationary environment. Under these conditions, commodities and inflation are likely to decline.

The objective of this analysis is to establish to what extent the economic environment is going to be characterized by rising inflation and higher commodities. The presence of inflation points to the selection of commodity based stocks. The lack of inflation favors assets providing high interest or dividend.

What is found in the press is useless. Investors need to reach their own conclusions based on their own assessment of the trends of the data discussed in previous chapters. At the end of this assessment, using the methodology discussed in Part One, investors will have a forecast of the indicators listed in Chapter Six.

### 3. Step 2: Identify the strongest sectors

The challenge of this step is to assemble the data needed for the analysis. It takes time, however, to develop and update (at least once a month) the database and the graphs. The graphs need to be analyzed to determine which sectors fit the environment identified in the previous section. The focus is to determine which sectors are likely to have a rising relative strength line and why.

Let's say that an inflationary environment is the most likely outlook. Real interest rates are below 1.4. The analysis of the sectors shows that precious metal or real estate stocks are beginning to display above average strength and are outperforming the market. A rising relative strength line also reflects these conditions. These stocks are excellent investment candidates.

If, on the other hand, a disinflationary environment is anticipated with declining interest rates, investors need to consider the financial sector and bonds. If the bank or the S&L sectors show a rising relative strength line, stocks belonging to these sectors should be included in the portfolio.

Websites such as *BigCharts* rank sectors in terms of their performance. *BigCharts* shows the performance of the Dow Jones sectors over different periods and ranks them relative to all other sectors and sub sectors. This is also an excellent way to spot emerging trends.

### 4. Step 3: Make a complete list of acceptable stocks

The objective is to find a group of companies that are likely to outperform the market within the chosen sector. Do not necessarily select the well-known companies. Do not approach this step with the assumption you already know which stocks you are going to select. There are a lot of medium size companies that are not well known, yet they are extremely well run enterprises with a superb growth record and a proven business model. Approach this step with the idea you do not know what you are going to find. Be open-minded.

Dow Jones provides the components of the sector or sub sector. *BigCharts* and *Quicken* websites can also be used for this purpose. *BigCharts* lists all the components of the Dow Jones



sectors. It shows also all the stocks listed on the NYSE and Nasdaq belonging to the selected sector and not necessarily belonging to the Dow Jones sectors. *Value Line* or your local library can assist you in finding other available publications that provide the information you need.

You should select stocks with a PE below that of the market. The objective is to find value and to invest in stocks offering a price more attractive than that of the market. It is a way to protect your portfolio from the risk of a broad decline. The assumption is that the most undervalued stocks do not decline as much as overvalued stocks in case of a market correction.

Now that you have a list of stocks to choose from, you have to analyze each stock and find the ones that are promising investments.

#### 5. Step 4: Technical analysis of your stock candidates

The behavior of the price line of a stock over 5 to 10 years contains considerable information about a company. An enterprise with a successful financial record, an above average management team, and a winning business model has a steady loyal following of investors. They are most likely to invest for the long-term because they trust the people and culture behind the success of the company. The price chart of these stocks is likely to present little volatility with a steady up trend through many years.

Companies that have a complex business model, a constantly changing product mix, a volatile financial record due to an ever-changing management team, or a confused vision about the company's future, have volatile stock prices. Investors are not sure on the outlook. Sometimes government pronouncements or legal suits determine the fate of the company and appreciation of the stock. Drug stocks, for instance, fit this model. Other times tobacco stocks. Investors want to avoid these companies. These uncertainties are reflected in a volatile stock price. Companies with proven success, even if not widely known, represent above average value. This is reflected in low volatility and steady appreciation in the price of their stock.

As the companies on the list are analyzed, investors learn to recognize which stocks are the most attractive. As you go through the list, ask yourself: Which company would I like to own? One with a lot of volatility like the one in front of me? Or one with a steadily rising trend over several years?

Another aspect of the analysis is to establish when the major turning points in the price of these stocks take place. Are all stocks turning up or down at the same time? Why? What was happening to the business and financial indicators listed in the previous chapter during such times? Do they all follow the pattern typical of the sector you have chosen?

For instance, most of the S&L stocks show a pronounced decline in 1998-2000. What happened then? Going through the list of indicators helps to confirm that short-term rates were rising during those years. These stocks act like the sector. Select those S&L stocks that seem to behave in the same way. The selection process is not over yet; so, do not try to reach any conclusions. You want to make sure, however, that you have a reliable buy and sell rule like: "I

will start selling S&L stocks when short-term interest rates are going to rise.” Or, “I am going to buy S&L stocks when short-term interest rates are going to fall.”

Select those stocks that have the same turning points and that can be related to the scenario you are expecting. If you find that some stocks in your list do not follow the pattern of the majority of the other stocks, they should be ignored. The business model of these companies is different from the majority and is not as predictable as the majority of the stocks in your list.

At the end of this step, you will probably have eliminated more than a half of the companies you initially selected. It is useful to rank them on the basis of their volatility and appreciation through many years. Many financial websites such as *Yahoo!* or *BigCharts* allow you to compare the performance of each stock relative to the others. Make the comparisons over 5, 2, and one year. The outcome of this ranking, based on appreciation and volatility, gives an excellent idea about which companies passed the test of time.

## 6. Step 5: Financial analysis

You have now a much shorter list of candidates than when you started – possibly five to ten names. The objective of this step is to find which one of the stocks in your list represents value and is a financially successful company. The important word is *value*. In order to represent value they have to have an established financial history that you can analyze.

The following parameters are useful to evaluate your list. You want to go back at least three to five years in the financial scrutiny of your stocks. The performance of these companies has to be compared to the performance of the industry and to that of the overall market. The “*Stock Evaluator*” option on the website *Quicken.com* is highly recommended for this analysis.

1. **Growth rates.** You need to examine the growth in revenues (sales), net income (earnings), and cash flow to see how well a company is translating revenues into earnings, which are necessary for growth. Look for companies whose revenues, net income, and cash flow are rising steadily -- or at faster rates than their competitors.
2. **Total revenue.** The dollar amount of annual sales, net of allowances (discounts, returned merchandise), is the "top line" figure from which costs are subtracted to determine net income. In evaluating stocks, revenue growth is often an indication of a healthy company. However, acquisitions and divestitures will skew revenue growth figures. For all but the most successful companies, the growth rates change quarterly, so these values should be checked often.
3. **Net income.** Net income is the amount of a company's total sales (revenue) remaining after subtracting all of its costs, in a given period of time (also referred to as "net earnings"). This very important figure (literally the source of the term "the bottom line" from where you find it on an income statement) is the best measure of the current operating state of a company.

Earnings per share (or "EPS") are found by dividing this figure by the number of shares of common stock outstanding.

4. **Cash flow.** Cash flow is a measure of the cash receipts and cash payments a company makes over a given time period. If a company has negative cash flow, the company must borrow money to operate its business. If a company has positive cash flow, the company has money available to spend on research and development, to expand operations, and to pay dividends to investors.
5. **Debt.** Long-term and total debt/equity compare the company's debt to its assets minus its liabilities to reveal how much debt is cutting into the bottom line. The higher the debt, the more important it is to have positive earnings and steady cash flow -- at some point, the company must pay off the debt, or interest payments will sap its finances. Some industries have more debt, so compare the company's debt to the industry average and competitors' debt.
6. **Long-term debt.** This is corporate debt coming due in more than a year. Long-term debt includes mortgages, bank loans, and bonds. Investors can find it listed on the balance sheet in a company's annual report. Long-term debt is an important component in the long-term debt-equity ratio, an indicator of a company's debt level. Debt can be a good tool for a corporation. It can help the company invest in new plants and equipment that will increase profitability. Too much debt, however, is risky. It locks the company into regular interest payments whether earnings are up or down. If a company stumbles, it may have trouble recovering under a heavy debt load.
7. **Debt to equity ratio.** The debt to equity ratio is the ratio of a company's liabilities to its equity (total value of stock). Long-term debt-equity is the ratio of a company's long-term liabilities (debt that won't be paid off in one year) to its equity. Total debt-equity is the ratio of a company's long-term and current liabilities (debt that will be paid off within one year) to its equity. The higher the level of debt, the more important it is for a company to have positive earnings and steady cash flow. Debt in and of itself is not "bad," but since it requires the timely payout of interest to debt holders, it is important to analyze a company within the context of the likeliness that it will have adequate resources to meet its payments in the coming business and economic environment. By the nature of certain industries, you will find that some contain only companies with a high ratio (or vice versa). So, for comparative purposes, debt-equity ratio is most useful for companies within the same industry. See also debt-assets ratio.
8. **Management performance.** Return on Equity, Return on Assets, and Return on Invested Capital are used to measure a company's profitability. Are managers successfully converting shareholders' equity, assets, and invested capital into net earnings? Compare to the industry average and competitors to gauge the company's success.
9. **Return on equity (ROE).** This is a percentage indicating how well common stockholders' invested money is being used. The percentage is the result of dividing net earnings by common stockholders' equity. The ROE is used for measuring growth and

profitability. You can compare a company's ROE to the ROE of its industry to determine how a company is doing compared to its competition.

10. **Return on assets (ROA).** ROA is the amount of profits earned (before interest and taxes), expressed as a percentage of total assets. This is a widely followed measure of profitability, thus the higher the number the better. As long as a company's ROA exceeds its interest rate on borrowing, it's said to have positive financial leverage.
11. **Return on investment (ROI).** This measure is also known as return on invested capital (ROIC), a measure of how well a company's management is performing. ROI is calculated by dividing earnings by total assets. It is a broader measure than return on equity (ROE) because assets include debt as well as equity. Companies sometimes define terms differently, but in general, they use earnings before taxes and the book value of assets at the end of the year. Some investors think that ROI is the most important financial indicator because it shows how well management has used the company's resources. Companies with the same sales and earnings may look as if they performed the same. However, a company that needed less investment capital to achieve the same result would actually be the better-run company. It is useful to compare a company's ROI with others in the same industry.
12. **Valuation.** The right company for your portfolio is one with a realistic PE below that of the market. This is an important element in the overall selection process. Another item is the dividend yield, which should also be above the market average. Companies that pay dividends over long time (at least five to ten years) should have a preference. Dividend growth rate is also part of the overall valuation. Dividends play a crucial role in the overall return of the stocks you choose. Investors have been spoiled in the late 1990s because they learned to believe that return from a portfolio was mostly coming from price appreciation. The poor performance of the market after 2000 has shown that relying on dividends should be the norm in assessing the total return from a stock. The long-term return from the stock is close to 9%. Close to 40% of the return comes from dividends and dividend growth according to some studies. For this reason investors should choose stocks with an above average yield and a company with a proven record of dividend growth.

## 7. Selecting the best stocks

You are almost at the end of the selection process. You need now to prepare a table showing in each column, for each stock, the financial performance and growth rates discussed in the previous section. The stocks you want to select have the highest performance and consistency through at least three years. When in doubt, make the most conservative choice. You are looking for above average growth rates, above average management performance measures, low levels of debt, and solid valuation (PE below that of the S&P 500) with a proven history of dividend growth.

Do not be overwhelmed by the stringent requirements. There are many companies meeting these criteria. You will probably be surprised when you find that these companies are

not well known and are seldom mentioned in the financial press or TV. They are likely to be medium size companies that have developed a niche for their products and service and are doing very well because the big companies do not find that particular market attractive.

Choose the best 5-10 companies – depending on the sector you are analyzing -- from the list you have prepared. And now, the final test. Compare the price history of the chosen stocks over one, two, five, and 10 years. Rank them again by market performance and price volatility. Check again when the major turning points took place. What happened when they declined? Were interest rates rising? Were there other relationships you might have ignored? How predictable is the price action of the stock based on the indicators discussed in the previous chapter? Did the stocks outperform the S&P 500 in the past few years?

Low price volatility and steady price appreciation are a sign the market agrees with your selection. Investors feel comfortable with the business model of the enterprise and with the management team. Avoid stocks that show too much price volatility. It means that investors are not unanimous in how the company is managed and/or its business model. Highly volatile stocks are used as trading vehicles rather than an investment. Avoid them!

At this point, a question might arise. How do I know which stocks to select on the basis of volatility and financial performance? The answer is simple. You do not know. You do not know because you are operating in an uncertain world. Nothing in life is one hundred percent sure. For this reason, you do not invest in the best stock of your list. You want to choose the top 2-3 stocks. Invest a minimal amount in each of them, possibly not at the same time, and let their price performance be the final judge. You should not be surprised if some of the stocks fail your expectation. This is the main reason you did not invest much capital in any of them. Give your stocks the chance to prove themselves.

After a few weeks, you will see that some will perform much better than others. Gradually increase your investment in the best performing stocks. Eventually you should sell the worst performing ones. You are now left with the best of the best, until the time comes when you should sell them. The reason is that the indicators, which told you to buy, are now telling you to start reducing your exposure in these stocks and shift your capital to another sector.

## 8. Portfolio management

Diversification across too many sectors is fruitless. Your portfolio is bound to perform like the market because, through excessive diversification, your portfolio is the market. If you want to outperform the market, your portfolio needs to be focused and be invested in a few sectors. These sectors are selected because they have proven to have superior performance during times similar to the current one (see the summary table at the end of Chapter Six).

Your portfolio is likely to contain as many as 30 stocks depending on the size of the portfolio. You will need to monitor the performance of the portfolio and of each stock once a week. The appreciation of your capital tells you if you have been correct in your selection as far as stocks and timing. Emotions have to be set aside. Adjustments of about 1% of your capital have to be made to gradually reduce the losers and gradually increase the exposure to the

winning positions. The author's experience is that investors should not increase their capital to more than 6% in each stock.

## 9. Conclusions

The main objective of this book has been to propose an investment process to help you decide when to buy/sell, what to buy/sell, why to buy/sell, how much to buy/sell. This chapter provides the final item of the process – selecting the attractive stocks in the strongest sectors.

Understanding the economic times and the current position of the business cycle is the keystone step for investing and selecting sectors. The stocks included in your portfolio depend on the trends of the business cycle indicators discussed in Chapter Five and how they relate to sectors, as shown in Chapter Six.

The second most important requirement is discipline. This chapter provides guidelines on how to select stocks and manage your portfolio. You have to be disciplined in investigating which sectors may become attractive and which stocks you should choose. You want to maintain a list of alternative stocks, based on alternative strategies, to use in case your portfolio begins to under perform due to changes in economic times.

Measuring the performance of your portfolio relative to the market is the final test of your success. Whatever the reason for under performing, follow these very simple rules:

1. Be patient. Do not panic. Do not sit on your hands. Make decisions. Be alert. Do not fall in love with your stocks. Investors who fell in love with Cisco or Enron on their way up, lost huge sums of money when these stocks collapsed in 2000-2002.
2. Be focused on the performance of your portfolio. Be responsive to which stocks are out performing and which ones are under performing.
3. Follow closely the stocks that are under performing. They are penalizing the performance of your portfolio. If a stock declines 10%, it is probably a good “sell” candidate.
4. Act slowly. Gradually, repeat – gradually, reduce your investment in the weakest stocks, and increase your investment in the strongest stocks.
5. Be aware of changes in the business and financial cycle. These changes establish which sectors will become more (or less) attractive.
6. Always be prepared with alternative investment strategies, corresponding stocks, and stock sectors to be used.

### **Stock selection and portfolio management**

- ✓ Establish an investment theme
- ✓ Identify the strongest sector(s)
- ✓ List the stocks in these sector(s)
- ✓ Screen the list from a technical viewpoint
- ✓ Use financial analysis to identify the best stocks
  1. Company performance
  2. Level of debt
  3. Management performance
  4. Valuation measures
- ✓ Prune the list using market performance and volatility measures
- ✓ Invest in the strongest stocks
- ✓ Focus on performance evaluation and portfolio management to minimize losses and maximize gains

## **Part Three**

### **STOCK SECTORS AND BUSINESS CYCLES (1997-2001)**

#### **A CASE STUDY**

##### **Introduction**

In Part Three investors will review the practical strategic and investment choices faced during the going from 1997 to 2001 using the approach presented in the previous chapters. The analysis focuses on the behavior of the indicators presented in this book. Political and special events such as the fall of the Asian tigers in 1997-1998, the following Latin America's crises. Russia's bond default, Y2K, and 9/11 are not mentioned.

This is done on purpose. The main objective is show that the data tell the whole story. Investors can benefit greatly by gaining objectivity in the careful understanding of the relationships between economic and financial variables.

The author recognizes this is a bold statement. It reflects the firm belief that economic and financial history is best interpreted by few trends of carefully selected indicators. The markets determine prices, and prices drive consumer and business behavior. The Fed or the political party in power can distort the performance of the market over short period. Eventually the markets take over and change in the price of assets corrects the distortion.

For instance, it is quite typical for the Fed to force short-term interest rates well below the level of inflation. This has happened in the 1970s (a period of war and aggressive expansion of social programs), in 1992-1993 (real estate and S&L crises), and after 2001 (implosion of the a financial bubble). Low real interest rates, however, caused sharply higher commodity prices and short-term interest rates, creating investment opportunities. The point is that focusing on the data, investors can formulate profitable strategies, rather than wondering about the implications of political and economic events.

The objective of this analysis from the investor's viewpoint is to predict the direction of the variables driving the various sectors. It is possible then to formulate a strategy based on the selection of the strongest sectors and in avoiding the weakest ones.



### **Data used**

- ❑ Leading indicators
  - Growth in the money supply
  - Dollar
  - Yield curve
  - Percent change in bond yields (inverted)
- ❑ Coincident indicators
  - ISM index (total and vendor performance)
- ❑ Lagging indicators
  - Short-term and long-term interest rates
  - Commodities
  - Inflation
- ❑ Other indicators
  - Bond yield spreads between BAA and Treasury bonds
  - Real short-term interest rates

## Chapter Eight

### 1997: THE SETTING OF THE FINANCIAL BUBBLE

#### 1. Introduction

1997 was a year when economic growth improved following the lackluster performance of 1996. The ISM indexes improved but economic growth remained within healthy bounds.

This type of environment was caused mostly by developments that took place in 1996. The objective of this chapter is to identify those variables and trends that will drive the economy and the markets in 1997 and 1998.

The focus is to establish the relationships that will continue to repeat themselves in the following years. Once established, these patterns can be used to predict any market at any time.

Like a doctor who reviews the patient's charts without knowing him and can diagnose and recommend a course of action, the investor can develop an investment plan by looking at the right information. The advantage of this structured process is that it can be updated quickly and quickly become an investment tool.

#### 2. Leading indicators

The analysis of the leading indicators, and in particular of the growth of the money supply, is essential to guide investors to the economic environment 12-18 months ahead.

The economic conditions in 1997 were anticipated by trends in the growth of the money supply of 1996.

The growth of the money supply begins to flatten in early 1996 through well into 1997. The sluggish performance of the money supply anticipates slower economic growth beginning 12-18 months after its peak, which took place in early 1996. Investors should therefore expect an economic slowdown beginning in 1997 with the ISM index peaking and then declining.

In 1997 the growth the money supply begins to rise sharply from about 5% to more than 10%, well above the historical average growth rate of 6-7%. A financial bubble was being created, even if economic growth was modest at the time.

This sharp growth in MZM, which began in mid 1997, is anticipating a strong rise in the ISM indexes 12-18 months later. Investors should therefore look for a stronger economy beginning

after mid 1998. The decline in bond yields reinforced the idea that the growth in MZM was sustainable.

The dollar is increasing sharply during this time, reflecting confidence of the international financial community in our economy's ability to grow. The rising dollar, in fact, reflects purchases of our currency and inflows of capital in our country. This trend, of course, bodes well for our economy in the future, thus confirming the implications derived from the analysis of the growth of the money supply.

The yield curve does not have the long lead-lags of the growth of the money supply and the dollar. Its lead-lag, as a leading indicator, is just a few months. The yield curve began flattening in the first half of 1997, thus anticipating an economic slowdown in the next few months. This economic slowdown was also anticipated by the sluggish growth of the money supply beginning in early 1996.

The strong dollar and the sharp rise in the growth of MZM, however, were anticipating strong economic conditions with the typical 12-18 month lead.

The important feature of the trends of the leading indicators is that there was excessive liquidity, confirmed by the strong dollar, being injected into the system. A 10% growth of MZM is an extreme value given that the long-term growth of MZM is close to 6-7%.

The strategic value of this information is that the foundation leading to excesses in economic growth, stock prices and commodities was being set. Investors need to note this scenario and begin to plan an investment strategy to take advantage of the developing extreme conditions. However, extremes are also accompanied by higher volatility and risk in the financial markets. It is important therefore to plan an exit strategy to safeguard gains as the markets become too speculative.

What do you learn from the *leading indicators*?

1. The declines of the dollar and MZM in 1996 were an early warning signal.
2. The average long-term growth of MZM is about 6-7%.
3. Growth of MZM well above 6-7% anticipates a financial bubble.
4. The yield curve has a lead-time of a few months, much shorter than MZM.
5. Take advantage of the coming excesses.
6. Plan for an exit strategy.

### 3. Coincident indicators

In the mid 1997 the ISM index began to show little or no progress around the 55 level for a few months. Because of what was anticipated by the decline in the growth of the money supply of 1996 and the flattening of the yield curve in early 1997, investors are justified to begin to plan for an imminent economic slowdown.

The sharp slowdown in sales and rapidly rising inventories were further anticipating a decline in production as manufacturers attempt to control rising inventories in the face of slower sales by cutting output.

Investors had enough signs pointing to an imminent economic slowdown. Its importance lies in the fact that slower growth in business activity is followed by declining inflation, interest rates and commodities. These trends have a great influence on the class of assets to be chosen as an investment.

The reason is, as shown in chapter six, that the trend in the lagging indicators has a crucial impact on almost all stock sectors. This relationship provides timely guidelines on when to buy or sell a sector and the level of risk of each sector.

#### What do you learn from the *coincident indicators*?

1. The peak and decline of the ISM indexes was anticipated by slower growth in MZM, a weaker dollar, and by the flattening of the yield curve.
2. Slower growth in sales relative to inventories confirmed the weakness of the business sector.
3. Business had to cut production to bring inventories in line with declining growth in sales.
4. The weakness in the ISM indexes is anticipating lower commodities, lower inflation, lower bond yields, and lower short-term interest rates. These developments are crucial in selecting the most profitable sectors (see Chapter 6 and Chapter 7).

#### 4. Lagging indicators

In 1997, all the lagging indicators behaved as expected, responding to weaker economic conditions.

Inflation peaked at around 3% and began to decline. Commodities (spot and futures) peaked and went through a sharp and prolonged correction. Bond yields followed the same pattern. Short-term interest rates also displayed a downtrend.

All the lagging indicators behaved exactly as they should as the economy weakened. They declined because demand for goods and services decreased, thus placing downward pressure on prices of goods and money.

These were important trends, critical in choosing the stock sectors that would outperform the overall market.

One gauge, however, needs special mention. The level of real short-term interest rates (the difference between the rate on 13-week Treasury bills and inflation) rose sharply in 1997 and moved well above the crucial level of 1.4. This trend signaled, without any doubt, that the economic and financial environments were characterized by a strong disinflationary bias.

#### What do you learn from the *lagging indicators*?

1. The lagging indicators decline after the ISM indexes begin to decline.
2. Inflation peaks after the ISM indexes decline.
3. Commodities peak after the ISM indexes decline.
4. Bond yields peak after the ISM indexes decline.
5. Short-term interest rates decline after the ISM indexes decline.
6. High real short-term interest rates are disinflationary and amplify the above trends.

Investors should therefore emphasize those asset classes and stocks that would benefit from declining inflation, commodities and interest rates. The table at the end of chapter six summarizes some of the sectors that benefit from this environment.

## 5. The stock market

Stable short-term interest rates, displaying a mild downturn, declining inflation and bond yields, a rising dollar and higher growth in the money supply are the perfect recipe for rising stock prices. This is exactly what happened in 1997.

Investors should therefore follow an aggressive strategy in those stock sectors that typically outperform the averages during such times. Invest gradually and establish your positions. Investors, however, should always keep in mind that the reason for becoming aggressive in stocks is due to the favorable configuration of rising leading, declining coincident and declining lagging indicators. This relationship of the three sets of indicators has to be monitored regularly. It is important to keep the eye on the ball because the tendency and creeping greed is to follow the stocks and the great gains and disregard the fact that the dynamics of the three sets of indicators may be signaling rising risk and the need to reduce your exposure to the sectors you selected.

The time to be concerned about the outlook for the stock market (leading indicator) is when short-term interest rates and commodities rise (lagging indicators). Short-term interest rates, however, rise after a strong and protracted period of economic growth (coincident indicator). But in 1997 the economy just began to slow down. The implication was that short-term interest rates were going to remain stable or decline for several more months because they rise only after several months of strong economic growth.

The lagging indicators could not rise for a while, justifying aggressive investment in equities and selected stock sectors.

### Strong stock market in 1997. Why?

1. The dollar was strong.
2. The growth of MZM was rising.
3. Short-term interest rates were stable or declining.
4. Inflation was declining.
5. Commodities were declining.

## 6. Conclusion

The important development in 1997 is that the economy begins to weaken. The slowdown is likely to last well into 1998 since the growth of the money supply began to rise in mid 1997, and it takes 12-18 months for the increased growth in the money supply to be reflected in a stronger economy.

The trend that needs to be followed closely is the level of the growth of the money supply which finished in 1997 at around 10%. This level is well above the historical average of 6-7%, suggesting that liquidity was growing at an excessive rate to maintain a balanced economic growth and stable financial markets.

The decline in interest rates and commodities, which started in 1997, could not be reversed anytime soon. They rise, in fact, after 12-18 months of rising growth in the ISM index. This environment was therefore very favorable for the financial markets through 1998.

1997 ended with high real interest rates, suggesting strong disinflationary forces were at work reinforcing the idea that the lagging indicators were in a pronounced cyclical decline.

### The investment environment in 1997

The investment environment in 1997 was very favorable for financial assets. The following trends drove the investment strategy and the selection of the most attractive stock sector (see Chapter 6 and Chapter 7 for details).

- a. The dollar was strong.
- b. The growth of the money supply was rising rapidly.
- c. The economy was weakening.
- d. Inflation was declining.
- e. Commodities were weak.
- f. Short-term and long-term interest rates were declining.
- g. The economic conditions were favorable for rising stock prices.

## Chapter Nine

### 1998: SOARING MARKET AVERAGES HIDE A MAJOR TOP

#### 1. Introduction

The casual investor has difficulty to relate the financial markets to trends in business activity, commodities, interest rates, and inflation. The reason is what happens today is the direct result of events that have taken place some time ago. For instance, the trend of the dollar and changes in the growth of the money supply precede movements in the economy by 12-18 months.

Often commentators say the reason for a rising stock market is the strong economy. This is wrong. A rising stock market, accompanied by a strong injection of liquidity, anticipates a stronger economy sometime after 12-18 months. In other words, a strong economy follows a strong stock market. In Wall Street parlance the market is a discounting mechanism.

1998 is a typical year to emphasize this point. The economy was turning weak. Yet, the stock market was very strong. According to the conventional wisdom, stocks should have been weak.

Investors need to look forward. The only way to recognize what will happen is to analyze the three sets of indicators as we have been doing in this book. The behavior of the leading, coincident, and lagging indicators helps to recognize what has really happened and what will take place in the financial and business cycles.

#### 2. Leading indicators

The growth of the money supply MZM continued to soar in 1998. Growth exploded from close to 10% at the beginning of the year to a torrid 15+% by mid-year. It is important to remember that the average long-term growth of MZM is 6-7%. This is the average growth rate of the economy (3% real growth and 3% inflation), close to the average growth in income, in earnings per share, and capital appreciation of the stock market. 15% growth in MZM, therefore, was anticipating very strong growth in business activity because it was well above anything experienced in recent times.

Investors need to review the trends of MZM to predict what is going to happen next. The growth of the money supply MZM bottomed in 1997 and kept rising until 1998. The behavior of



the money supply was suggesting that the economy would start improving toward the end of 1998 or in 1999 after the typical 12-18 months from the bottom of growth of MZM.

The strong dollar in 1998 confirmed the rising trend of the growth of the money supply. It reflected the inflow of foreign capital to be invested in the US financial markets and in the economy. This was excellent news. It suggested that our system was attractive as an investment because it had the right combination of elements to make it grow and generate profits.

In the second half of 1998, however, the dollar tumbled and remained low. The trend of our currency suggested that some elements of our “new economy” (as was described then) were changing. It was anticipating a change in the trend in the growth of MZM in 1999.

The yield curve remained flat with the difference between the yield on 10-year Treasury bonds and the rate on 13-week Treasury bills close to 0.5%. This is a very low value given that this spread averaged 1.5-2.0% in recent times, as the Fed was pursuing a tight monetary policy.

The low differential between long-term and short-term interest rates suggested that the lenders had little incentive to lend given the low spread between the two interest rates. Lenders borrow at the low rate to lend at the high rate. The incentive was not in the 1998 structure of interest rates. In 1992-1994, the last time the Fed forced real short-term interest rates well below 1.4, reflecting an aggressive easing monetary policy, the spread between short-term and long-term interest rates ranged between 2.5% and 3.5%. This range was later surpassed after 2002, another period of aggressive easing by the Fed.

The yield curve, in other words, was saying the economy could not strengthen because there was no incentive to lend due to unfavorable monetary conditions. It is important to remember that the lead-time of the yield curve is only a few months, usually less than six months. Because of the short lead time the yield curve is a timelier leading indicator of the economy. The yield curve was saying that business activity was not going to improve in the near term.

A practical use of the yield curve is as a refinement of the forecast made using the growth of the money supply and the dollar. The growth of MZM provides a long-term forecast. It pointed to a stronger economy toward the end of 1998 or early 1999. At the end of 1998, however, the yield curve remained almost flat, suggesting that strength in business activity could not happen anytime soon.

In 1998, an important development took place, which went totally unnoticed by the financial press. This development, however, was the red flag cautioning about the possibility of a financial debacle. This view was often repeated in the service *The Peter Dag Portfolio Strategy and Management*, edited by the author.

For the first time since 1955, the credit spread computed as the ratio between the yields of low grade and 10-year Treasury bonds jumped to 1.6, above the historical range of 1.20 and 1.45. This is significant because the markets were saying that credit risk was rising to levels not

seen since 1955. After 2000, these levels were surpassed again, reaching the historically high and dangerous level of 2.0. The bubble was fully inflated.

The high credit spread reached in 1998 was a warning for investors to become more cautious. It was saying that the financial conditions of medium to lower credit quality companies were deteriorating to rarely seen levels. This trend suggested prudence because the financial markets usually correct sharply high levels of credit risk.

What do you learn from the *leading indicators*?

1. The strong growth of the money supply points to improving economic conditions 12-18 months after a major bottom.
2. The strong growth of the money supply is confirmed by a strong dollar.
3. The trend of the dollar tends to anticipate the trend of the growth of MZM.
4. A sharp decline in the dollar warns investors that times are changing and it is appropriate to become more cautious.
5. The yield curve leads changes in the business cycle by a few months.
6. The change in the steepness of the yield curve is used to refine the forecast made using the growth in MZM.
7. The change in credit spreads is a cyclical phenomenon. When business increases its borrowing activity, credit spreads increase, and vice versa.
8. Credit spreads moved within a range of 1.20 and 1.45 since 1955.
9. An increase in credit spreads above 1.45 reflects severely deteriorating financial conditions.

3. Coincident indicators

In 1998, the ISM indexes continued to decline from the 55 level reached in late 1997. This cyclical decline was anticipated by the slower growth in MZM that took place in the 1996-1997 years.

Because of the relatively flat shape of the yield curve, business activity could not improve in a visible way in 1998. The sub-par economic growth was the main feature of the business environment in that year and the shape of the yield curve suggested there was no turnaround in the making.

The growth in business sales declined for most of the year reflecting a more cautious consumer. In early 1998, the growth in business sales declined below the growth in inventories. In other words, inventories were growing faster than sales. This was a sign suggesting inventory growth needed to be cut. The manufacturing sector had to slash production to reduce the rate of accumulation in inventories to bring them more in line with the growth in sales. This was another reliable signal that business activity was bound to slow down, confirming the trend of the ISM indexes.

The good news was that in the second half of 1998 the growth in business sales began to increase again. Toward the end of the year, the growth in business sales was almost the same as the growth in inventories. It was a positive sign for the manufacturing sector and for the overall economy in 1999. Production had to be increased because, as sales were going to grow faster than inventories, business had to replenish inventories to meet the stronger demand.

Investors had to remember that the growth in MZM was already rising for almost 18 months. Any sign that the economy could improve following such an extensive period of monetary expansion, had to be looked at as a strong possibility that the economy was turning around. This pick up in business which began to gather some modest momentum at the end of 1998 was therefore anticipated by the bottom in the growth of MZM in 1997. Investors were justified in beginning to look for signs that the economy would be improving in 1999.

What do you learn from the *coincident indicators*?

1. Business activity was weak in 1998.
2. The ISM indexes declined in response to weaker growth in MZM in 1996-1997.
3. As long as the growth in sales is less than the growth in inventory, the manufacturing sector is forced to cut production to reduce inventories.
4. An improvement in the growth of sales relative to the growth of inventories suggests that the inventory cycle is close to an end.
5. The end of the inventory correction points to improving economic conditions.
6. The inventory cycle lasts about three years from bottom to bottom.
7. Weaker economic conditions anticipate lower commodities, lower inflation, lower bond yields, and lower short-term interest rates.

#### 4. Lagging indicators

Prices are determined by the strength of the economy and by the policies of the Fed. The main function of the Fed is to maintain a sound banking system. The reason is that without a sound banking system the economy cannot function properly. If the Fed sees developments threatening the soundness of the banking system, it will make plenty of money available for business and consumers to borrow. This state of affairs is reflected by abnormally low short-term interest rates.

Easy monetary policy is reflected by low real interest rates below 1.4, as it happened in the 1970s, in 1992-1993, and after the implosion of the financial bubble in 2000. When the Fed is not concerned about the economy and the financial status of the banking system, it lets short-term interest rates rise as determined by the market. This level of short-term interest rates is close to twice the value of inflation and is typically associated with disinflationary times. This environment was experienced from 1994 to 2001.

The strength of the economy allows investors to predict the direction and intensity of price pressures of various assets. As mentioned before, rising commodity prices across the board, rising inflation, rising short-term and long-term interest rates follow a strengthening economy. These trends, of course, offer opportunities in specific stock sectors and asset classes. They also reflect signs that financial risk is high and rising. They have an important impact on stock prices in general and stock sectors in particular, as we will see in the next section.

In 1998, real short-term interest rates were still well above 1.4. This level reflected a disinflationary environment with the Fed letting the market set short-term interest rates. Any cyclical rise of inflation would be minor under these conditions.

The lagging indicators behaved as one should expect in an environment characterized by a weakening economy. Inflation kept declining and stabilized below 2%. It stayed at around this level for most of the year. There was little or no risk that inflation would rise as long as the ISM indexes were declining and stayed close to 50.

The growth in producer prices (finished goods) declined more sharply than consumer prices. The growth of PPI finished well below zero for most of 1998, down from a peak of about 3% in 1997. In other words, producer prices actually declined in 1998. The advantage of following inflation at the producer price level is that it provides a more visible and timely information about the trends of inflation. The reason is that changes in PPI are more volatile than consumer prices. There was little or no risk that the growth of the PPI and of the CPI would rise any time soon given the weakness of the economy.

Commodities declined sharply in 1998. The weak economy and the slow growth in the manufacturing sector were reflected in poor demand for raw materials and commodities in general. The trend of the business cycle was therefore conducive to lower commodity prices. Their decline further reinforced the disinflationary forces already at work.

Short-term interest rates declined in 1998 because of the weak economy. There was little or no risk for them to rise because the economy was too weak. Business activity was slowing down and the need to finance working capital was waning. The odds of rising short-term interest rates increase after many months of strong economic growth.

Bond yields followed the overall trend of the other lagging indicators. The decline of inflation at the consumer and producer levels reduced the inflation premium built in yields, thus causing bond yields to decline and bond prices to rise.

Although 1997 and 1998 were plagued by many global disturbances of major significance, trends of asset prices and interest rates could have been predicted by looking only at business cycle developments and ignoring the historic hype presented in the press and based on the spurious and self-serving actions of the Fed. The point is that successful investment strategies are developed by focusing on the relevant economic and financial trends, not on emotions derived from the events of the day.

The decline in the lagging indicators that took place in 1998 can be viewed from two distinct viewpoints. Their decline is in response to deteriorating economic conditions; they therefore are the results of negative trends in the economy affecting the whole system --- from businesses to consumers. Their decline however sets the stage and is the prerequisite for the next economic rebound. The increase in inflation, for instance, reflects a burden for consumers because it reduces their real income, thus having a negative impact on sales. Rising inflation also represents an increase in costs for businesses, forcing them to cut these costs (raw materials, interest rates, and wages) to maintain profitability, thus causing and reinforcing the economic slowdown.

When the lagging indicators decline, it is a sign the excesses built in the system by the previous cycle are being wrung out, thus setting the stage for improved income in real terms and strengthening profitability for business. The decline in the lagging indicators, therefore, is important evidence that the stage was being set in 1998 for a stronger economy in 1999. Investors must recognize the importance of the trends of the lagging indicators because they have superb predictive capability for the economy and the financial markets in general.

What do you learn from the *lagging indicators*?

1. Inflation declines in periods of weak economic conditions following a decline in the ISM indexes.
2. Commodities decline reflecting weaker demand for raw materials caused by the slowdown in inventory accumulation.
3. Short-term interest rates decline because of lower need to finance working capital requirements due to lower short-term needs for liquidity.
4. Bond yields decline because of weaker long-term demand for money due to reduced investment plans.
5. Yields also decline because of declining inflationary pressures.
6. The broad decline in the lagging indicators sets the stage for a stronger economy in 1999.
7. High real short-term interest rates continued to characterize a disinflationary environment.

5. The stock market

In 1998, the S&P 500 soared from close to 930 to about 1200, for a gain of 29%. This type of performance skewed investors' expectations of future market gains. It was quite common then to hear non-professional investors expect a capital appreciation of at least 20% per year. This view of how rapidly markets could grow was the foundation of the coming financial bubble. It was encouraging investors to buy because of the huge rewards lying ahead and of the fear of being left behind. The fact that the historical returns of the equity markets were about 9% (6% capital appreciation and 3% yield) was ridiculed as analysts were speaking of a "new economy." People ignored the traditional methods of valuing stocks and market risk.

A weakening economy, followed by a sharp decline in the lagging indicators (inflation, commodities, short-term interest rates, and bond yields) and accompanied by soaring money growth, as discussed in detail above, was the perfect recipe for soaring equity markets.

At major market peaks, when risk reaches its zenith, investors are faced with exactly the opposite scenario: a strong economy, accompanied by rising commodities, rising short-term and long-term interest rates, rising inflation, slower growth in the money supply, and a weak dollar.

The sharp decline of the dollar that took place at mid-year suggested that something was not perfect. International investors were moving money away from the dollar denominated area. Meanwhile the advance-decline line peaked in the first half of the year. The decline of the advance-decline line, in the face of soaring market averages, was an important and crucial barometer that suggested that the equity markets were becoming more selective.

The decline in the advance-decline line and the weakness of the dollar were two developments that needed to be followed closely because they were both signaling emerging risk. Sectors attractive at this stage of the business cycle were those that benefit from stable inflation and lower interest rates.

#### Strong stock market in 1998

1. A strong dollar reflects the confidence of the international investment community in our economy.
2. A strong dollar suggests foreign investors want to hold dollars and invest them in the US. This is a vote of confidence for the economy in the long-term and for the stock market in the near term.
3. The increased confidence in the prospect of the economy is reflected in a stronger growth in MZM and in overall liquidity.
4. Increased liquidity is conducive to a rising equity market.
5. Declining short-term interest rates, weak commodities, stable or lower inflation, and lower bond yields create an environment favorable to equities.

#### 6. Conclusions

1998 was the perfect year for the equity market. The economy was weakening because of the slow growth in the money supply that took place from 1996 to 1997. Commodities were declining because of decreasing demand due to slower growth in the manufacturing sectors and reduced need to build inventories. Short-term interest rates were heading lower due to the scaled down need of financing working capital. Bond yields were also declining due to the lower inflation premium.

As business activity was deteriorating, liquidity was increasing at a faster pace fueling the stock market and anticipating a stronger economy in 1999.

#### The investment environment in 1998

The investment environment in 1998 remained very favorable for financial assets. The following trends drove the investment strategy and the selection of the most attractive stock sector (see Chapter 6 and Chapter 7 for details).

- a. The dollar was strong.
- b. The growth of the money supply was rising rapidly.
- c. The economy was weakening.
- d. Inflation was declining.
- e. Commodities were weak.
- f. Short-term and long-term interest rates were declining.
- g. The economic conditions were favorable for rising stock prices.

In spite of this perfect environment for stocks, the only fly in the ointment was the lack of progress of the advance-decline line. It suggested that the market was becoming more selective and risk was beginning to rise from very low levels.



## Chapter Ten

### 1999: INVESTORS IGNORE THE WARNINGS OF A MAJOR MARKET TOP

#### 1. Introduction

Writing the history of the financial markets is an interesting and fascinating learning experience. The historical events gradually disappear and become confused as historians debate the various aspects of why and how they took place. The only tangible residue is the amount of data that has been collected. The proper use of these data is an important tool to recreate history, the part of history that really matters to investors. It sounds like a presumptuous statement. This, however, is the overriding reaction that one has when revisiting these important years.

This is not Monday morning quarterbacking. The author, in his investment publication *The Peter Dag Portfolio Strategy and Management*, because of the important signals examined in this chapter became bearish in mid 1999 when the S&P 500 was 7% from the top it reached in 2000.

One of the themes of this book and of the previous book *Profiting in Bull or Bear Markets* is that some economic and financial patterns repeat themselves with reliable regularity. Investors should use them to develop an investment strategy based on the risk present in the marketplace using the stock sectors that perform best in that environment.

In 1997, the economy was strong and peaked late in the year. This peak was anticipated by slower growth in MZM, a weaker dollar, and by the flattening of the yield curve. Slower growth in sales relative to inventories confirmed the weakness of the business sector. Business had to cut production to bring inventories in line with declining growth in sales.

Because of the strong economy, commodities were firm. High real short-term interest rates, however, kept inflation and bond yields under control. They began to decline as soon as the economy started to lose momentum toward the end of the year.

The strong growth of the money supply, accompanied by a firm dollar, was anticipating the next upward phase of the business cycle. The stock market was strong, reflecting stronger growth in the money supply, stable commodities, interest rates, and inflation.

The economy remained weak in 1998 as the business sector continued to reduce inventories. Toward the end of the year, however, business sales began to grow faster, signaling a pick up in the economy. The strong and protracted growth of the money supply was finally having its desired effect.

In 1998, inflation, commodities, and interest rates declined in response to a weak economy. The stock market responded well to this environment, except for a sharp correction in the fall months.

In 1999, the business cycle picked up again, as in 1997. Let's see how, why, and the implications for the financial markets.

## 2. Leading indicators

The leading indicators, because of their long lead-time, do not influence the current economic environment. They have an impact on the business environment of the following year.

The sharp and decisive peak in the growth of the money supply in 1999 was certainly not going to influence the current year. The trend of MZM was going to impact unfavorably the economy in 2000 and beyond. The growth of MZM peaked at a torrid 15% pace in the first quarter. This is exceptional growth, considering its long-term average pace is close to 7%. In other words, 1998 and early 1999 experienced exceptional monetary stimulus which was reflected in the fanatic euphoria in the economy and financial markets.

One has to wonder what the Fed was doing and looking at. They have the tools to control the money supply. In 1999 and 2000, however, the markets took over and overwhelmed their action and policies.

The dollar recovered following the sharp decline that took place in 1998. It declined again quite visibly toward the end of the year. The yield curve steepened considerably.

Credit spreads declined sharply, mirroring the action of the growth of the money supply and of the dollar. They declined from the high levels reached in 1998, suggesting that credit conditions were becoming normal again. Spreads did in fact decline to the lower end of their historical range. This level was not seen again as of this writing (2004). Financial risk was well above average after 2000, creating a background of uncertainty for the financial markets.

The leading indicators were almost unanimous in anticipating slower growth in 2000.

What do you learn from the *leading indicators*?

1. The decline of the growth of the money supply points to deteriorating economic conditions 12-18 months from a major peak.
2. The weak growth of the money supply is confirmed by a weak dollar.
3. The trend of the dollar tends to anticipate the trend of the growth of MZM.
4. A sharp decline in the dollar in 1998 warned of an incoming peak in the growth of the money supply in early 1999.
5. The yield curve leads changes in the business cycle by a few months. In 1999, the yield curve and the business cycle moved almost in synch.
6. The change in the steepness of the yield curve is used to refine the forecast made with the growth in MZM.
7. The change in credit spreads follows closely the growth of the money supply.

3. Coincident indicators

In 1999, the economy finally responded to the record-breaking growth in monetary aggregates from 1997 to the end of 1998. The ISM indexes bottomed at the end of 1998 and kept rising to well above 55 in 1999.

Business sales continue to rise faster, a trend in place since mid 1998. It was in 1999, however, that they began to grow considerably faster than inventories. This was a classic signal suggesting the manufacturing sector was forced to increase production to replenish inventories. Output had to expand, and indeed, it did increase throughout 1999.

The economy kept growing very rapidly in 1999 thanks to outlandish stimulus deriving from the strong growth of the money supply in 1998.

The strong performance of the US economy, however, had in itself the seed that made the great financial bubble burst. In order to see why and how, investors need to focus on the action of the lagging indicators.

What do you learn from the *coincident indicators*?

1. Business activity was strong in 1999.
2. The ISM indexes soared in response to stronger growth in MZM in 1997-1998.
3. As long as the growth in sales is higher than the growth in inventory, the manufacturing sector is forced to increase production to increase inventories.
4. An improvement in the growth of sales relative to the growth of inventories suggests that the inventory cycle is at the beginning.
5. The beginning of the inventory expansion points to improving economic conditions.
6. The inventory cycle lasts about three years from bottom to bottom.
7. Stronger economic conditions anticipate higher lagging indicators.

4. Lagging indicators

One of the major lessons learned from reading the early books on business cycles published between 1950 and 1970 are three.

1. A rise in the lagging indicators (commodities, inflation, interest rates) is a reliable warning that there are excesses built in the system.
2. These excesses create a negative feedback, forcing the leading indicators (broad stock market averages, growth of the money supply, dollar, and yield curve) to decline, setting the stage for the next business slowdown.
3. The severity of the economic slowdown depends on how rapidly the lagging indicators rise. For instance, a sharp rise in inflation is followed by severe economic weakness. A mild rise in inflation is followed by a mild slowdown.

Let's go back now to what happened in 1999. The economy was strong, as discussed above. This strength was followed by a textbook case of cause and effect relationships.

Inflation rose from below 2% y/y to above 3% y/y. Producer prices rose sharply to above 4% y/y. Because of rising inflation, bond yields of all qualities rose rapidly throughout the year. Commodities were strong in 1999. Short-term interest rates rose from close to 5% to 6% in 2000. Not surprisingly, the growth of the money supply and the dollar peaked, showing little or no growth well into 2000.

The most important impact of the trends of the lagging indicators, however, was on the stock market.

What do you learn from the *lagging indicators*?

1. Inflation rises in periods of strong economic conditions following a protracted rise in the ISM indexes.
2. Commodities rise reflecting stronger demand for raw materials caused by the acceleration in inventory accumulation.
3. Short-term interest rates rise because of higher need to finance working capital requirements due to higher short-term needs for liquidity.
4. Bond yields rise because of stronger demand for long-term demand for money due to increased investment plans.
5. Yields also rise because of rising inflationary pressures.
6. The broad increase in the lagging indicators sets the stage for a weaker economy in 2000.
7. High real short-term interest rates continued to characterize a disinflationary environment in 1999.

5. The stock market

It is a simple rule to follow, yet investors ignore it. The main reason is that it is difficult to accept that investment strategies need to change when the lagging indicators rise. Investors are justified to be aggressive in their investment posture when the lagging indicators begin to decline and eventually stabilize. Investment strategies need to become very defensive and selective after a few months of higher lagging indicators.

1999 was no exception to this simple, yet profitable guideline. By mid year it was clear that interest rates, inflation, and commodities were rising because of the strong economy. They could not decline any time soon because business activity has to decline several months for these

measures to decline. In other words, the lagging indicators were rising and were going to rise even more because of the strong economy. This bearish signal came when the S&P 500 was 7% from the peak reached in 2000. Greed, however, kept investors chasing returns that were surrealistic. If one buys just for the sake of making money, but does not have a rule of when to sell and why, eventually profits vanish and losses mount. This is exactly what happened to the majority of investors when the bubble eventually burst in 2000.

An interesting feature of the market in 1999 was that the advance-decline line was already trending lower since 1998. In other words, the advance-decline line was saying that on the NYSE the number of declining issues was larger than the number of rising issues. A prolonged decline in the advance-decline line is a serious warning that the internal structure of the market is deteriorating. The longer the weakening of the advance-decline line is, the more seriously investors should take its warning. This kind of scenario suggests that a more defensive investment strategy is in order.

There are two types of companies listed on the NYSE: operating companies and financial issues such as Exchange Traded Funds (ETFs). The advance-decline line therefore is not a complete assessment of how the “operating” companies are performing. The action of the advance-decline line, however, should be considered as another tool to assess if there are investment opportunities on the NYSE. For instance, in a period of sharply lower broad market averages, a rising advance-decline line points out to investors that more issues are rising than declining, signaling investing opportunities. Investors should then use other tools to find which stocks are strong.

The important feature of the behavior of the market was that the advance-decline line was declining through 1999 and the S&P 500 kept soaring. The reason for this dichotomy was that the averages were being dominated more and more by the hysterical bidding of technology stocks by greedy and myopic investors.

The obvious divergence between advance-decline line and the S&P 500 was suggesting that the market was becoming narrower and narrower as the year progressed. In other words, it was becoming increasingly more difficult to find rising stocks in an environment totally dominated by the technology fever.

### Strong stock market in 1999

1. A weak dollar reflects the lack of confidence of the international investment community in our economy.
2. A weak dollar suggests foreign investors are selling the US currency to invest capital outside the US. This is a vote of concern for the economy in the long term and for the stock market in the near term.
3. The decreased confidence in the prospect of the economy is reflected in a slower growth in MZM, reflecting a decrease in liquidity.
4. Decreased liquidity is conducive to a weak equity market.
5. Short-term interest rates were rising.
6. Inflation at the consumer and producer levels was rising.
7. Commodities were rising.
8. The strength in the lagging indicators created a negative environment for equities.

### 6. Conclusion

The investment environment in 1999 became unfavorable. A strong economy, slower growth in the money supply and a weak dollar accompanied by rising inflation, interest rates, and commodities were the classic signals telling investors to be cautious in spite of rising market averages.

The lessons learned from analyzing historical financial data and business cycles are:

1. Investors should be aggressive in their investment posture when inflation, interest rates, and commodities decline.
2. Investors, however, need to be very defensive and adopt a selective investment strategy in order to preserve their capital when inflation, interest rates, and commodities rise.

The business cycle sets in motion powerful forces when it transitions from periods of steadily improving economic conditions and then transitions to a period of weakness. The typical patterns that have emerged from the analysis presented in previous chapters are the following.

- **Phase 1 of the business cycle.** The economy strengthens from a period of slow growth. Its pace is still slow, below its long-term average. Inflation, bond yields, short-term interest rates, and commodities stop declining. They are likely to move in a narrow range for several months as the economy gains momentum. The growth of the money supply continues to rise as the dollar remains firm. The stock market is still strong, but its appreciation takes place at a slower pace than in Phase 1.
- **Phase 2 of the business cycle.** The economy is strong and growing at well above potential. Inflation, bond yields, short-term interest rates, and commodities start rising. The growth of the money supply eventually peaks before the end of this phase as interest rates continue to rise. The dollar begins to sputter and then declines. The stock market is now growing at a slow pace and begins to decline before the end of this phase.
- **Phase 3 of the business cycle.** The growth rate of the economy peaks and begins to decline under the pressure (negative feedback) of rising interest rates, inflation, commodities, and overall business costs. Inflation, bond yields, short-term interest rates, and commodities lose considerable momentum. They are likely to move in a narrow range and they eventually begin to decline toward the end of this phase. The growth of the money supply and the dollar continues to decline. The stock market remains weak and very selective.
- **Phase 4 of the business cycle.** The economy slows down below its long-term trend. During these times, investors can expect inflation, bond yields, short-term interest rates, and commodities to decline. The growth of the money supply begins to grow rapidly as the dollar strengthens in the first half of this phase. The bear market in equities bottoms and stocks start a new bull market before the end of this phase.

Investors need to change investment strategies when the business cycle moves through the various phases. Each phase presents investment opportunities and risks. Specific strategies need to be implemented to take advantage of what is happening using stock sectors that best fit the trends of each phase of the business cycle. For instance, bank stocks should be bought when the economy weakens and interest rates decline. They should be sold when the economy is strong and the odds favor higher interest rates ahead. See Chapter 7 for specific investment strategies to use with stock sectors.



### The investment environment in 1999

The investment environment in 1999 was unfavorable to financial assets. The following trends drove the investment strategy and the selection of the most attractive stock sector (see Chapter 6 and Chapter 7 for details).

- a. The dollar was weak.
- b. The growth of the money supply was declining.
- c. The economy was strengthening.
- d. Inflation was declining.
- e. Commodities were strong.
- f. Short-term and long-term interest rates were rising.
- g. The economic conditions were unfavorable for stock prices.

## CHAPTER ELEVEN

### 2000 AND BEYOND: CONDITIONS FOR THE NEXT GREAT BULL MARKET

#### 1. Introduction

Historic events distract the strategist. The charts tell what is really happening. A proper classification and interpretation of the indicators allows us to recognize what is happening and what will happen.

Beginning in 2000 the financial markets entered a new era. These were unique times. It resembled the periods going from 1926-1945 or 1968-1982 when stock market averages showed little or no progress and moved between broad ranges. These statistics are saying that from 1926 to 2000 the stock market has shown no improvement 50% of the time.

The historical return of the stock market has been close to 9%. This is an average of long periods when stocks made little or no progress – such as 1926-1945 and 1968-1982 -- and periods when the market appreciated close to 20% per year as from 1995 to 2000.

It is a fallacy to believe the market will provide a 9% return if stocks are held for the long term. If a ready-to-retire person plans for a 9% return in a period like 1968-1982 or more recently from 2000 to 20xx, he will be disappointed by the lack of appreciation of the nest egg at the time of retirement.

Periods when the market trades in a broad range (up 30%, down 30%) require active portfolio management to overcome the unfavorable investment climate. During such times, only active portfolio management based on the selection of asset classes and stock sectors can provide superior returns from a simple buy-and-hold strategy. One of the main objectives of this book is to propose an investment approach based on the selection of stock sectors to overcome the negative tendencies of the overall market.

The purpose of this chapter is to review the conditions that have accompanied the bust of the financial markets in 2000 and the events that have to take place before the next great bull market can materialize.

#### 2. 2000: The financial markets implode

In 2000, the most important event was the sharp rise of the yields on lower grade corporate bonds relative to the yields of the 10-year Treasury bonds. The ratio of the two yields

can be interpreted as a measure of credit risk. Since 1955, the spread has ranged between 1.20 and 1.45. In 2000, the spread soared above 1.45 suggesting that credit conditions were becoming historically unusual. The view of the author has been, as regularly documented in *The Peter Dag Portfolio Strategy and Management*, that a sound financial system cannot be restored until risk spreads fall within their historical range.

As reviewed in detail in previous chapters, the most negative phase of the business cycle for the broad market averages is characterized by a strong economy, rising commodities, higher inflation, and higher short-term interest rates. 2000 was a textbook case of this situation, which was repeated in 2002, and at the end of 2003.

The economy began to slow down in 2000, followed, as it has always happened in the past, by a peak in commodities, inflation, and interest rates.

The collapse of the broad market averages did not reflect what was really happening. The advance-decline line began to rise toward the end of 2000, suggesting that in spite of the carnage, amplified by the colossal decline in technology stocks, the majority of issues listed on the NYSE were rising. Although the rise of the advance-decline line was due mostly to the strength of financial issues including non-operating companies, investors were given a powerful sign that profit opportunities were available.

Investors need to be flexible and recognize that economic and financial times change. As they evolve from one phase to the next, new stock sectors become attractive while others lose their profit potential (see chapter 6). A strong economy is favorable for growth and commodity based stocks, while a weaker economy, such as the one that began to materialize in 2000, makes financial assets and stocks particularly attractive. In spite of the market debacle, 2000 was no exception.

### 3. 2001: The economy slows down

The growth of the money supply, the strength of the dollar, and the sharp steepening of the yield curve suggested that there were strong forces at work. They will ultimately succeed in reviving the economy again following the typical lead/lag of at least 12 months.

The economy kept weakening in response to the lagged effect of lower liquidity, a weaker dollar, and flattening yield curve from 1999 to 2000. But in the second half of 2002 business conditions began to improve in response to the stronger growth in monetary aggregates, a rising dollar, and a steepening yield curve that took place since mid 2000.

Bond yields and short-term interest rates declined following the beginning of the economic slowdown. Lower commodity prices and sharply lower inflation accompanied the weakness of the lagging indicators.

In 2001, the broad market averages continued to sag while the advance-decline line kept rising.

Credit spreads soared, reflecting deteriorating balance sheets and lower credit ratings. The Fed recognized the risk to the system and aggressively cut short-term interest rates well below the inflation rate. Such low real interest rates were a strong statement by our policy makers that the US economy had serious problems. These problems were allowed to materialize when the Fed let the growth of the money supply soar from a 7% growth rate to a 20% torrid year on year pace.

There was no doubt the markets needed to heel themselves following the financial orgy of the late 1990s. The Fed could help. President Bush helped with the tax cut. However, the market needed time to solve the problems and the huge distortions originated by excessive money creation, a phenomenon totally ignored by the Fed.

Credit spreads needed to decline within the 1.20-1.45 historical range to reflect that the excesses created in the previous cycle were purged. Only then could short-term interest rates rise safely to their market level of 4-5%. This is the historical norm during sound economic times in the US or any other country with an inflation rate of close to 3%.

From the investor's viewpoint, the new economic and financial environment had several implications for the years that followed.

- ❑ The high credit risk reflected by the high credit spreads was going to cause below average growth in monetary aggregates and overall stock market appreciation.
- ❑ Only a carefully implemented stock sector strategy would provide attractive returns.
- ❑ Because of low real interest rates, commodity volatility would be above average, as discussed also in *Profiting in Bull or Bear Markets* (see Chapter 6).
- ❑ Low real interest rates below 1.4 were inflationary, as they were in the 1970s.
- ❑ The Fed's policy geared to protect the banking system from the overhanging credit risk will continue to keep interest rates at below the inflation rate until credit spreads declined to within historical range.
- ❑ The Fed strategy gave the incentive to invest in high yielding instruments and stocks. In fact, this was exactly the purpose of the Fed – to divert funds to high-risk instruments and sectors to facilitate their financial healing.

In 2001, the financial and economic environment turned favorable for stocks and financial assets. The collapse of the technology sectors obscured this important development.

Once again, weak economic conditions accompanied by lower commodities, lower inflation, and lower interest rates were setting the stage for another investment opportunity in equities. The relationship between business cycle and stock prices was repeating itself again with impressive regularity in spite of the implosion of the technology bubble.

#### 4. 2002: The recession bottoms and commodities respond to low real interest rates

Not surprisingly, the economy was strong in 2002. The strength was anticipated by rapid growth in the money supply and a rising dollar in 2001. The yield curve also steepened sharply in 2001. This development caused additional economic stimulus in 2002.

The inventory cycle kicked in and the manufacturing sector began to increase production to raise inventories in line with sales.

The increased demand for raw materials, due to the increase in output, placed upward pressure on commodities, which began to soar also stimulated by an unusually aggressive monetary policy. In fact, in spite of accelerating inflation at the producer and consumer levels, the Fed lowered interest rates with the rate on 13-week Treasury bills falling to 1.2%.

The policy of the Fed remained unusual, especially at a time when the economy was strong and commodities and inflation were rising. Under normal circumstances, they should have let interest rates rise to their market levels of close to 1.5-2.0 times inflation, bringing the rate on Treasury bills close to 2.5% instead of 1.2%.

The reason for this policy, in the view of the author, had been the sharp increase in credit spreads, which soared to an all time high toward the end of 2002.

The high spreads were caused by the sharply deteriorating financial position of business mostly caused by the bursting of the technology bubble. The high spreads eventually discouraged borrowing and created the conditions for the next economic slowdown. The Fed, fully aware of what was happening, cushioned the banking system from a rapidly deteriorating credit environment by lowering aggressively the inter-bank rate to 1%. This policy was also driven by their fear of deflation as producer prices showed negative growth on a year-on-year basis in 2002.

The broad stock market averages continued the relentless decline, which started in 2000. Not all issues listed on the NYSE, however, were being punished. The advance-decline line in fact kept rising, signaling to the astute investor that the majority of the issues were moving higher.

Interest rate sensitive issues like bank stocks, high yielding stock partnerships with a commodity driven business, and bonds did very well in this environment. Precious metal stocks began to respond favorably due to the low real interest rate policy pursued by the Fed.

The scenario that characterized the financial markets, and the stock market in particular, required the kind of disciplined strategies discussed in this book. This was clearly not an environment favorable to naïve strategies such as buy-and-hold, indexation, and averaging down.

## 5. Conclusions: After 2002 -- the unwinding of the excesses of the late 1990s

As of late 2004, the economy and the financial markets were still healing. Credit spreads were declining but still historically high. Declining inflation and historically low real interest rates reflected a vulnerable economic climate. The outlook for major capital gains in stocks was not likely.

The implosion of the financial bubble caused an enormous destruction of wealth. The Wilshire 5000 index, which measures the value of all stocks, peaked in 2000 at 14,000, meaning that the value of all stocks was \$14 trillion. The size of the US economy in 2000 was \$10 trillion.

By 2003, the Wilshire 5000 index collapsed to 8,000, a loss of \$6 trillion in the value of US equities, or 43%. The loss in wealth of \$6 trillion in market value was about 60% of the US economy in 2000. Technology stocks suffered an even bigger loss. The Nasdaq declined from about 4700 to 1210 in late 2002 for a loss of 74%.

Not surprisingly, credit spreads remained unusually high to reflect the unsound financial foundation of US business.

This kind of wealth destruction was accompanied by a 23% decline of the dollar, an indication of the loss of purchasing power of the US consumer.

As the dollar collapsed, not coincidentally, a typical basket of commodities soared more than 50%, with gold going from \$260 to \$420, crude oil jumping from \$25 to \$55, and copper leaping from \$0.65 to \$1.45.

This environment impacted business costs and expectations. The need to control costs in an environment of soaring commodities led to emphasize even further the need for low wages, benefits, and overall production costs.

The consumer experienced low growth in wages below the inflation rate, resulting in a persistent loss of real income.

Corporations responded to the market collapse by cutting benefits. Several companies had pension funds at risk, a serious concern of the Fed. Failing corporations (e.g. Enron) caused the destruction of lifetime savings.

Business responded to new ideas and embraced globalization as a need to survive. Schools in China and Asia started to produce high-level engineers who competed with US engineers in terms of skills and wages. The US responded to 9/11 by restricting the influx of foreign students, thus reducing needed skills.

The Wilshire index was still 20% below the 2000 peak, suggesting that the country had yet to recover \$4 trillion to match the level of wealth it had in 2000.

As of 2004, the Fed was still pursuing an overly loose monetary policy as it was in the late 1990s when the money supply was growing at 15-20% y/y.

The difference this time was that, although rates were kept at 1% to cushion the banking system from the crisis, monetary aggregates were failing to respond as the dollar kept sinking.

The crisis caused by the market collapse was still not over in 2004. The sagging dollar, the historically low level of nominal and real interest rates and the high credit spreads were sending a strong signal that the US economy was still very sick.

What is going to happen next? Fig. 11.1 below is going to help us finding some answers.

The main objective of the graphs is to show that the stock market, as represented by the S&P 500, has moved between a 15-20% channel from 1987 to 2004. During these 18 years, it has risen an 8.8% compounded pace per year.

The striking trend is the above average growth rate from 1996 to 2000. This exceptional appreciation of stock prices was ignited by the aggressive monetary expansion engineered by the Fed. This aspect of the market was extensively discussed in the financial report *The Peter Dag Portfolio Strategy and Management*, published twice per month by the author and available on [www.peterdag.com](http://www.peterdag.com).

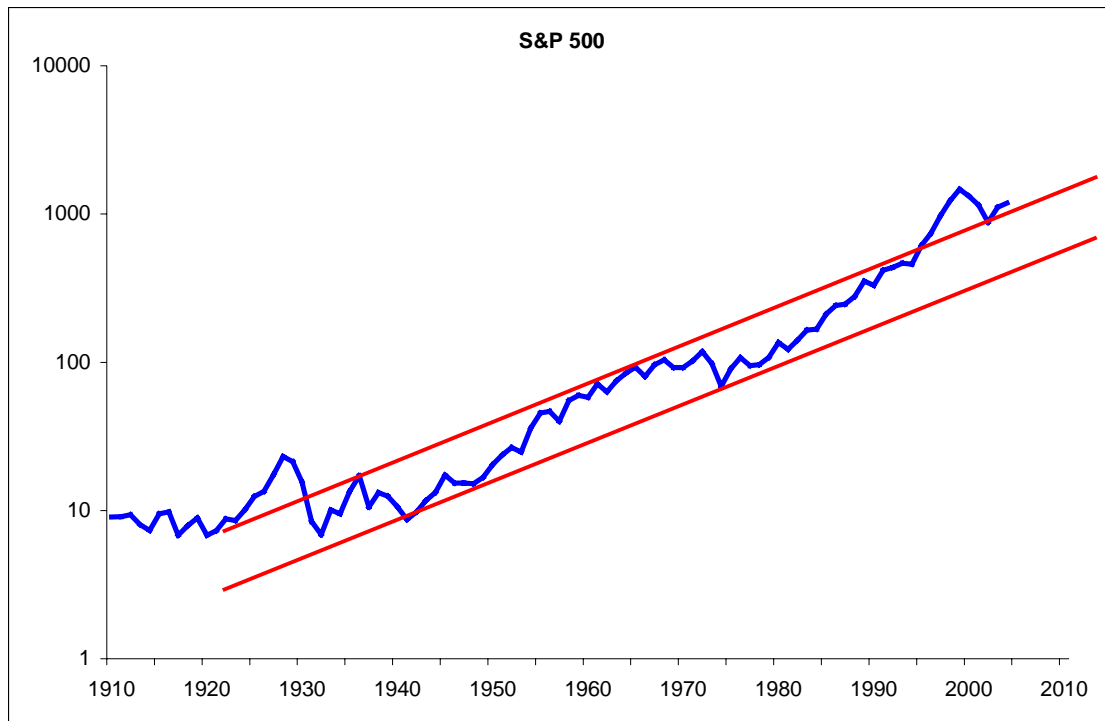
The second remarkable trend is that the S&P 500, after its peak in 2000 caused by overvaluation and rising short-term interest rates, stopped declining when it fell to the historical channel rising at an 8.8% pace.

Now that the excesses of the late 1990s are being brought under control, it is fair to assume that the market will continue to rise within the 30-40% band at an 7% pace. This is the historical capital appreciation of the broad stock market, excluding dividends. At the current pace, the S&P 500 will reach the 1500 level it enjoyed in 2000, by approximately 2008.

Forecasts are fraught with risk. One can safely say, however, what trends investors will have to see to decide that the US economy and the financial markets are back to normal conditions.

- ❑ **Credit spreads** between BAA bonds and 10-year Treasury bond yields will start moving again within 1.4 and 1.2. This is the time when the growth in monetary aggregates will start responding again to changes in interest rates as they have historically done.
- ❑ **Real short-term interest rates** will rise again to their historical level relative to inflation, which is the level accompanied by low inflation and rising productivity growth. They will have to move above inflation, possibly close to 1.5 times the inflation rate.
- ❑ **The nominal level of short-term interest rates** will reach 4-5%. This level has always been a strong signal of a healthy economy in any country in any part of the globe since the times of Babylonia.

- ❑ **Commodities** will stabilize and go through mild cyclical fluctuations because of high real short-term interest rates.
- ❑ **Inflation** will have to be close to 2-3%, as **10-year Treasury bond yields** fluctuate close to 5-6%.
- ❑ **The steepness of the yield curve**, as measured by the ratio between 10-year Treasury bond yields and the rate on 13-week Treasury bills, will have to fall within the historical range of approximately 1 and 1.6.
- ❑ **The dollar** will be strong on the premise of stable economic conditions, low inflation, and reflecting a healed economy and financial system.



**Fig. 11-1.** The stock market, as represented by the S&P 500, has moved between a 30-40% channel from 1930 to 2004. During these 18 years, it has risen an 7.4% compounded rate per year.

The above conditions will create an environment, which has historically been accompanied by the following events.

- ❑ **The growth of the money supply** will respond again to changes in interest rates.
- ❑ **The dollar** will bottom, as investors recognize that the financial environment in the US has finally stabilized.
- ❑ **The stock market** will begin to rise at a rate above the historical 7.4% pace (see next for more details).



As the economy and financial markets transition toward normalcy, they will continue to follow the cause and effect patterns that accompany changes in the business cycle. They always did and always will as discussed in this and the previous book by the same author. Readers are also invited to visit [www.peterdag.com](http://www.peterdag.com) for up to date commentaries on business cycle developments and their implications on the selection of stock sectors.

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## Appendix One

This appendix shows the charts used in Chapter Five and Chapter Six.

The updated analysis of stock sectors can be found in each issue of *The Peter Dag Portfolio Strategy and Management* on [www.peterdag.com](http://www.peterdag.com).

