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By John Mauldin

This week we will look at why and when stock markets go up and down over long periods of times, and how to use that knowledge to your advantage. We will examine how to find the next “New, New Thing” as we look at something called the Innovation Cycle.

I must confess that this week's letter is actually a chapter in my book-in-progress. It does contain some material from a letter I wrote a year or so ago, but I have added and edited it considerably. While it is a little longer than most weekly letters, I think you will find it quite valuable.

I am making finishing the book my #1 priority now, and have dropped a lot of other writing projects and private e-letters. There are not enough hours in the day. For those of you who are wondering why I have not written an Accredited Investor E-letter for months, that is the reason. I will get back to a regular schedule in a month or so.

Stock Market Cycles

We are looking for clues as to what the stock market is likely to do in the future so we can adjust our investment strategies and portfolios. If we can get some idea of what the future will look like by reviewing the past, we will be more successful as investors.

We can find more clues in a ground-breaking book by Michael Alexander called **Stock Cycles**. I am going to review his book at length because it will help us understand the fundamental causes of stock market cycles. Armed with this information, we will all be better investors. His book was written over January to March of 2000. His theory has accurately described the markets since then. You can order the book at Amazon, and I suggest this book is important reading for serious investors.

Let's jump to the conclusion first: Alexander's work shows that using past stock market cycles to predict the performance of the stock market one year from now is pretty much a random chance. Statistically, from almost any starting point, you have about a 50/50 chance of the market going up or down, using price movements alone to make your prediction. Even in the years which comprise a secular bear market cycles, the market goes up 50% of the time, and often quite substantially.

But there are certain long term cycles which are not random, and the probabilities of those repeating are very high. As you would expect, the patterns and

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techniques of successful investing changes somewhat dramatically from pattern to pattern and cycle to cycle. The trick, of course, is to figure out where you are in the cycle.

I have long been suspicious of stock market cycle theory, especially Long Wave theory. Long Wave (or Kondratieff Wave) theory says the economy and markets repeat every 56 or 60 years, with discernable periods marking the changing cycles. I readily concede that there are seemingly repeatable past patterns, but there are not enough data points to satisfy my need for any type of statistical certainty. It is an interesting theory that tells you where you have been, and tells you where you are going, but does not tell you where you are or when you will get there with any certainty.

I remember, as will many of my readers, how Long Wave theory predicted the end of the economic world in the late 80's. How many of you remember the direct mail flooding our mail boxes, not to mention the books, screaming gloom and doom? Obviously, they were wrong.

The reason is that too many analysts try to make Long Wave theory a precise predictive model. They do not look at the underlying fundamentals which cause the cycles.

It is like watching two men seemingly walking the same way in a large city. Maybe they are friends and are walking together. They could be total strangers either going to the same location, or getting ready to part ways on the next block. Until you know who the men are and where they are going, using their past travels to predict future events is simply guessing.

It is one thing to use the stars, as the ancients did, to construct a calendar to predict seasons, planting times and weather patterns. It is another to use the stars to predict personal fortunes. One methodology has a basis in fundamentals, the other (astrology) simply notices patterns which (like much stock market analysis) may have no connection or can be manipulated for personal benefit.

Alexander provides, at least for me, the missing link between the patterns in Long Wave stock cycles and the underlying economic fundamentals. He shows us, as it were, a logical connection between the position of the stars and the seasons.

Alexander does not contend these cycles are as precisely predictable as the Spring Equinox. Rather, he suggests that when the underlying fundamental conditions occur, we can look for spring-like conditions. Just as you plant certain types of food and plants in spring and certain types in winter, there are some investments which do better in their respective parts of the stock cycle. Carrying the analogy further, it is easier to grow your portfolio in economic spring than in economic winter. You have a much wider variety of "plants" from which to choose in spring.

You can plant spring crops during the winter, but you're going to have to wait until Spring to see them come up. It can be a long cold winter in the meantime.

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To help us see what part of the cycle we are in, he first describes several types of stock cycles and then he looks at why these cycles may occur.

First, he takes a purely statistical view of the stock market, looking for repeating patterns. For his purposes, a period where the stock market out-performs money market funds is good and where it under-performs is bad. Is there any pattern?

It turns out the only statistically valid non-random cycle he can find is a 13 year cycle. Since 1800, there have been 15 alternating good and bad cycles of 13 years, from stocks being undervalued to being overvalued and back again. There was one period where the pattern instead of reversing, continued for an additional (and exact) 13 years. 2000 was a 13 year peak in his model. There is a probability of only 3.9% that this pattern is random.

Looking at the data, it would suggest that index investors have little hope for capital gains over the thirteen years following 2000. Buy and hold investors will probably be better off in money market funds, just as they were in 1966 and 1929.

Simply based on this statistical model, Alexander concludes that there is a 75% chance of a negative capital gains return for index fund investors over the next 20 years. However, returns in any one year period are essentially random. Even in “over-valued” markets, the odds are essentially even that an index fund will outperform a money market fund for a 12 month period.

“Given today’s low dividends and high valuations, a money market fund is, on average, a better investment over the next 5-20 years than the S&P 500 Index.... In the case of over-valued markets (like today), holding for longer time periods, even up to 20 years, does not increase your odds of success.” He wrote that in early 2000, prior to the first crash.

Let me stop here and say that Alexander is not saying to avoid the stock market. He is simply pointing out, consistent with my long term theme, that buy-and-hold index investing will not work in this next cycle. Simply picking any old mutual fund and expecting a rising tide to raise your boat will only have a random chance of success in the next economic cycle. You have to change your investment strategy if you want to succeed.

In his third chapter, Alexander looks at the historical cycle of bull and bear markets. First, he points out that stocks have returned about 6.8% per year in real returns (adjusted for inflation) over the last 200 years, but about 4.6% or two-thirds have come from dividends. The remainder corresponds to the real annual growth in GDP over that time. A National Bureau of Economic Research study which we will visit in the chapter on earnings demonstrates this very point. **The stock market does not grow faster than the economy. If it goes too high or too low, it always comes back to trend.**

But stock prices fluctuate dramatically. There have been 7 secular bear markets and 7 secular bull markets since 1802. These are periods of at least 8 and up to 20 years where stocks are either generally rising or falling over the entire period. There are, of course, bear market rallies and bull market corrections, but the long-term trend is still either up or down.

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If you were in the stock market during the 95 years of the bear market cycles, you only achieved a 0.3% annual average rate of return. If you picked the 105 years of the bull market cycles, you made a 13.2% rate of return. Your actual returns for any one ten year period would be totally dependent upon when you made your initial investment. The cycle length from peak to peak is 28 years on average.

Is there some model we can use to look at the overall cycle to help us determine why the dramatic price movements? Here Alexander provides a new way to look at price fluctuations.

He looks at a ratio he calls P/R, or Price to Resources. “Resources are simply the things (plant, equipment, technical knowledge, employee skills, market position, etc.) available to the business owner to produce a profit. R is essentially retained earnings, or that portion of profits used to invest in and grow the business.

While P/R (like P/E or Price to Earnings) is not particularly useful for predicting individual company or industry performance, when looking at the market as a whole, a clear pattern develops. P/R peaks at bull market tops and rebounds at bear market bottoms.

But the fluctuations do not appear to be as volatile. That is because while earnings may swing wildly from one year to the next, actual Resources (R) are not subject to such wild swings.

Management continues to use current resources and invest in new resources in an effort to increase the business, even in recessions. Plus, resources tend to accumulate over time. Companies with large resources can weather tough economic conditions better and can come back more quickly.

There is a direct relationship between earnings and resources. As the resources of a company or nation accumulate and are put to work, the company or nation becomes more prosperous, and earnings increase. **If a nation (or its businesses) fails to increase its resources, the ability of those resources to produce a profit will decrease over time. That means earnings will decrease.**

The collective P/R ratio is the estimate of the value investors put on the ability of an economy to produce earnings. **With thus understanding, it now gets interesting, at least for me.**

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Earnings, we are told, are what drive the price of a stock. But real (inflation-adjusted) earnings growth for the period 1965-1982 was roughly the same as for 1982-1999. Yet we all know that the S&P 500 had significantly different results. The first period was one of no stock price growth, and the latter saw growth of over 1000%.

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What was the difference? Clearly, it was how investors perceived the relative value of the earnings. In a period of high inflation, earnings growth of 6-7% is not all that impressive. In today's low inflation environment it is.

“Since the Civil War cycle there have been two effects of inflation. First, inflation reduces the value the market places on earnings, resulting in a flat trend, rather than a rising trend in the index. Secondly, the effect of the cheapening dollar makes the real value of the index fall even further. **As a result, P/R falls to extremely low levels during inflationary bear markets.**”

(Please notice he makes a connection between a falling dollar and market levels. We will show later why we should expect a falling dollar for the next few years.

When inflation ends, you get the benefit of the old earnings growth and new growth, giving the market a double boost. **Investors become very optimistic about earnings growth and adjust their future value of stocks accordingly.** But as I have often asserted, trees cannot grow to the sky. For 200 years, the overall market has not grown much faster than the growth in GDP. (We will show numerous studies later in this book which over and over again demonstrate this fact. It is a crucial point you need to keep in your mind.)

Now we enter a period where the expectations of earnings growth cannot match reality. The stock market must come back to trend, which can be a painful adjustment for some investors. Alexander notes, **“The situation is very similar to 1929. The effect of both the monetary conditions and a very optimistic assessment of the earnings growth still to come are priced into the index. This is shown by the extraordinary high level of P/R. We should expect the current monetary cycle to be followed by a “real” cycle [More later]. It should start with a secular bear market in which lower earnings growth will be the problem, not inflation.**

Growing Pains

The goal of every business is to grow its income and to grow its income at a faster rate over time. The income you get for the money you invested, or the profit you generate from a given level of resources, is called the Rate of Return or ROR.

However, there appear to be very real upper limits on both the absolute value of and the growth of the ROR that can be achieved for a given level of resources. This ROR fluctuates over time, just as P/E and P/R do. Why wouldn't ROR be constant, as many firms try to do? Why can't ROR just grow every year, as market cheerleaders on TV constantly predict?

What appears to happen over time is that firms, in a moment of optimism, either build too much capacity or resource (R) and the ROR drops as capacity utilization drops; or, firms invest too little and thus the growth of ROR is self-limiting.

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Managers simply cannot know the exact amount of future resource needed. They can do their best to make very intelligent guesses, but in the end there is usually either too much or too little resource.

It is a difficult job. Too much resource and you don't get a reasonable return. You use resources which cannot be easily re-allocated to some more productive use. Too little and you invite competition or give up market share. Further, that nasty thing called competition makes it possible for a lot of businesses to build capacity for the same market, all hoping to increase their business and market share. Then you end up with too much capacity and no ability to raise prices. Computers, oil, soybeans, ships, etc., are all examples. The list is endless. Supply and demand works. The business cycle is real.

In the telecommunications industry, management decided the world needed large amounts of fiber optics cable. We now use less than 5% of the capacity of that new cable. Clearly, the industry overbuilt. But all the firms which supplied equipment for that expansion also assumed that the future would look like the past and built large factories capable of building massive amounts of fiber optic cable equipment. The over-capacity went right down the food chain.

The 90's were characterized by the growth of capacity in almost every industry, including "mature" industries like agriculture, shipping, mining, retailing, etc. We now have a new level of total "R" or resources available to US businesses and the world. But since economic growth and profits do not grow faster than GDP, whatever growth we do have will be spread over a larger amount of Resources.

This means the rate of return of "R" will be smaller than it has been for the last ten years. It follows that the growth of earnings will be smaller as well.

Expansions and Expectations

One of the great charts in **Stock Cycles** shows the relationship between the length of economic expansions and the expectations investors have for the stock market. The longer we think economic expansions will last, the more we are willing to pay for earnings which will compound at 15% forever. Every time we come to a period like the one we are in today, we are told that this time it is different.

If earnings truly could compound at 15% forever, a P/E ratio of 25 would not be illogical. But earnings cannot grow faster than GDP. Period. Earnings will come back to trend.

Repeat: this is because we build (or invest in) too much resource for a given market or technology. The potential profit is spread over a greater amount of resource, and earnings growth suffers.

Long Waves Explained (Finally)

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Alexander then jumps to the Long Wave cycle. Greatly simplifying, the theory says that there are two sets of stock market cycles in each economic Long Wave. You have a bull and bear market which are mostly influenced by monetary policy and events and are followed by a bull and bear market cycle which is mostly influenced by “real” events, such as earnings and economic performance.

The theory then says:

“The extraordinary gains in recent years results from investors discounting future earnings growth over longer periods of time. This makes the market extraordinarily leveraged to the economy....The average length of economic expansions was shorter during the 1970’s than they were either before or since. The [coming cycle] could also be characterized by short business cycles like in 1883-96 rather than a lengthy slump like in the Depression. **Shortened expansions would gradually shift the market from a future-oriented to a present-oriented valuation scheme, resulting in a contraction in P/E. The result would be a secular bear market as the valuations slowly adjust, even though economic growth might be fairly good.** This, of course, is what is predicted to be imminent by P/R.”

Alexander shares my concern, which I mentioned previously, about the lack of connection between the Long Wave theory and the actual economy. But he has, in my opinion, found a connection which not only provides the missing link, but when taken to its logical conclusion, offers some very exciting prospects for future investments.

The economists Schumpeter and Mensch both tried to establish a theoretical base for the Long Wave based upon bursts of innovation. More recently, Harry Dent (**The Roaring 2000’s**) has expanded upon their work. Alexander uses Dent’s terminology to put forth his own new thought.

The importance of this process is straight-forward. If you agree with Alexander’s logic, then you will have **“two, largely independent, periodic phenomenon that we can use to characterize the changing economic environment that brings about the stock cycle.”**

Dent sees the innovation cycle being comprised of four periods: the innovation period, the growth boom, the shakeout and the maturity boom. Alexander calls the end of the maturity boom the economic peak, which is the time when the economic impact of the new innovation has been completely played out.

Basically, a new process or technology is invented such as the cotton gin, telephone, electricity, airplanes, computers, etc. Following a period of innovation, there is a rapid growth of the “New Economy.” Not surprisingly, there is too much capacity built and a number of companies falter.

During the shakeout, there is another process going on. We see a second innovation phase of the mature technology. Companies which come up with new innovations now see a second growth boom prior to the final “maturing” seen in the economic peak.

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Now we come to the best part of Alexander's work. He goes to a number of sources and derives 9 different innovation cycles beginning in the early 1500's. While this or similar efforts have been done before, what Alexander does that is new is to relate these cycles to their importance to the overall economy: What proportion of the GDP did these innovations contribute to growth?

Over time, as the innovation becomes mature and new innovations come on the scene, the talk is of the "New Economy" changing the world and replacing the "Old Economy." But eventually even the "New, New Thing" becomes mature and plays a less significant part of the growth of the economy as even newer innovations appear. It is a repetitive cycle. It is no different than what we see today. The cycles and phases are eerily the same.

Basically there is a connection between the Long Wave and the innovation cycle that seems to have "worked" well enough for the last cycles or about 500 years. Alexander notes that the Information Economy seems to have come about 17 years later than the average 53 years. Thus, rather than being mature in the 1980's, it was just beginning. If nothing else, that explains why the Long Wave theorists were wrong.

There is nothing magic about a Long Wave of 53 or 56 years. What is important is the Innovation Cycle. It is the latter which influences the economy. Analysts who used the Kondratieff or Long Wave as a time prediction tool were wrong. The usefulness of the Long Wave is to help us analyze what is the basic nature of the underlying economy and how the Innovation Cycle is affecting the Economy.

Thus, Long Wave theory can help us know what to expect at the end of the Innovation Cycle. It cannot predict the exact timing, but the general shape of things to come is apparent.

Finally, Alexander writes of Harry Dent's projection that the long boom will last until 2007, which corresponds to the Baby Boom generation: "Dent's alignment of generations and the spending wave with his phases of the innovation wave seems to break down after going back more than one cycle." This will become apparent and important as we talk about retirement problems in a later chapter.

Alexander's book is only \$14.95. The last chapters on the innovation cycle alone are worth the price of admission. There is much more in the book than I can hope to comment on here. I suggest you read it. You can get the book at http://my.net-link.net/~malexan/STOCK_CYCLES.htm or from Amazon.com. If you buy the book directly from Alexander's publisher (iUniverse.com) he gets more money. He deserves it. I cannot recommend it highly enough.

Catching the Next Wave: Something New This Way Comes!

As I think about the implications of the Innovation Cycle, two things leap to mind. First, that investing in stocks at the end of the cycle is going to be difficult. Growth slows down and stocks are over-valued relative to the growth potential. Slowly the realization seeps into the mind of investors that the "new, new thing" is slowly becoming commonplace.

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Electricity was once the rage. Railroads were the invention which would change the world forever. Now both seem rather prosaic. Airlines, radio, television and the automobile all had their boom and bust cycles.

In a few years, investors will realize that computers and telecom stocks simply do not have the growth potential they once had. While there will be some astounding winners who develop some new innovation, the large companies simply cannot find the markets to compound at 20-40%. As we will see, compounding at 10% for any length of time is very hard for large companies.

The second implication is the far more exciting: **Something New This Way Comes!**

There is another Innovation Cycle coming in our future. There will be another opportunity to get in at the beginning of a new industry which will change the world as profoundly as electricity, computers or the telephone.

The trick is we do not yet know what it is. Smart minds guess that it will be in the area of nanotechnology or biotech. It could be fusion power or a new type of propulsion system for cars. Or it could be something that is simply not on anyone's radar screen at the moment.

The world is changing ever more rapidly. Knowledge is compounding at faster and faster rates. As freedom and capitalism expand over the world, there will be millions of more inventors and businessmen trying to develop the next new, new thing. Sure, there are problems. The process is inherently messy, but the one thing we can be confident of is that the process will continue.

I should point out that there is nothing in the process that says it has to be about 50-60 years between the rising of a new product which drives an Innovation Cycle. That next New Thing could be invented tomorrow, and begin to have amazing effects upon the world markets within a short time. Or it may be a decade or two or three.

The question then becomes how do we as investors recognize it? My friend Mark Ford, who writes the excellent (and free) daily e-letter, Early to Rise wrote the following review, and I pass it on to you, with a few comments at the end. (ETR is one of my must reads. You can get it at <http://www.earlytorise.com/SuccessStrategies.htm>) This will give you some idea of how to recognize the next New, New thing when it comes.

The Deviant's Advantage: Why You Need to Know the Future

In **The Deviant's Advantage**, a new business book that is getting a lot of good press, Ryan Mathews and Watts Wacker argue that you can predict the future (and thereby enjoy explosive, exponential success) by recognizing a pattern that has characterized most major changes. This pattern starts on the Fringe and moves gradually toward the center of social convention.

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Almost everything that is now extremely popular, the authors argue, was once on the Fringe. To see the future, you must keep your eye on Fringe developments. As really weird stuff gradually becomes less weird, your attention sharpens. Once a trend passes to a certain stage of popularity, you move in and seize it. By “owning” a Fringe product that is about to become mainstream, you give yourself the best chance you’ll ever have of becoming rich and famous.

The trend from Fringe to mainstream has four stages. The outer rim (the Fringe) is the stage in which individual innovators come up with weird, off-the-wall, antisocial ideas. Most of these ideas die on their own accord. A few are taken up by limited audiences of believers. This is the second stage, the Edge. To society at large, ideas at the Edge seem odd, even freaky. But to the true believers, they are sacred.

Most Edge ideas stay at the Edge, but some develop a wider base of followers. They then move into the Realm of the Cool. At that stage, the ideas that were once vilified by the press are now given credence as interesting abnormalities. The mainstream media still don't like them, but the offbeat press is positive.

Every so often, something that is in the Realm of the Cool catches fire. Suddenly, it becomes The Next Big Thing. Major media talk about it. Influential people consume it. The Next Big Thing becomes an icon for marketers. They let the mainstream buying public know it's cool.

There is then, of course, a mad rush to buy The Next Big Thing. The demand is so high that specialty manufacturers can no longer keep up with the demand. This is the stage at which Fortune 500 companies buy up the product and put it on shelves at Wal-Mart or on the menu at McDonald's.

The communicating vehicle for the Fringe is the original deviant who created it. At the Edge, it is promoted by word-of-mouth -- the proselytizing of the apostles. As the following grows, word gets around at events and in special stories in secondary media outlets. Then, as it becomes The Next Big Thing, the major media promote it. At the final stage, it becomes a mainstay for the advertising and marketing world. Here is where it enjoys its greatest triumph and its last hurrah.

How do you take advantage of this information? Whatever you do, whatever you sell, there is a range of ideas out there that span this entire gamut. The products you are most aware of are ones that are heavily marketed and advertised. They're fully accepted by society. They are almost de rigueur. Basing your business on this stage is not a very good idea. By the time a product reaches the point at which it becomes social convention, it is awash in a ton of publicity and promotion -- most of it by savvy professionals who know how to sell. This is a market where victory goes to the strongest and the strongest usually have the most money, size, cash flow, and contacts.

If you don't want to compete at that level (and you probably shouldn't), you need to concentrate your efforts on the next level: The Next Big Thing. By giving special attention to all The Next Big Things vying for competition in your marketplace (and there are usually a half-dozen), you may be able to identify one that is going to become social convention. If

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you can do that correctly, and get into the selling of that product before anyone else does, you stand a chance of having enormous success.

In focusing on The Next Big Thing, you should keep your eye on the Realm of the Cool -- an area of great creativity and motion. Having a reasonably good acquaintance with what people in that world are saying, doing, and thinking about will give you a much-better-than-average chance to predict which Next Big Thing will enter into the Realm of the Cool. Keep abreast of what is happening at the Edge. Although a good deal of it will never go any further than the Edge, some of it will cause a stir and develop an enthusiastic alternative marketplace. If you can get a sense for what is just about to enter the Realm of the Cool, you'll be well positioned to make a lot of money fast when your idea moves from that level to the mainstream.

The biggest money, the greatest fame, and the greatest thrills come from being at the helm of that transition.

Let me be very clear. When I tell you that you that the stock market is not a fun place to be in a secular bear market, that you should avoid index funds and most equity mutual funds, that does not mean I do not think there is a great deal of opportunity to be had by investing in exciting businesses and the stock of those businesses.

Most investors expect the rising tide of the market to deliver their profits. In a secular bear cycle, the tide is not rising, but falling. Yes, the tide will eventually rise, but it will be a long time.

Investing in stocks in this part of the cycle requires a great deal of work. It is not something the vast majority of people can do by combing through data. You must come to know your investments intimately. Think Warren Buffett. Buy a company because you want part of the profits or the potential for future profits, and only buy if you understand the business model and have confidence in the management.

In later chapters, we are going to look at some principles to help you do just this.

Sedona and Meet me in Tucson

My bride has laid down the law. I am going to take some time off to spend with her and relax, so this weekend we are heading to Sedona, one of the most relaxing and beautiful places in the world. I am not supposed to think about business. I may cheat a little and read a new book on stock market crashes, which is kind of relaxing. Next week, I will be in Tucson, Arizona on Friday, April 25th speaking at a private investment conference. For those interested in meeting with me I will have some time. The conference organizers have graciously allowed me to invite a few readers to listen to my speech Friday afternoon.

Easter has always been a time of reflection for me, and I shall take advantage of this weekend to do so. I wish you a very Happy Easter, and encourage you to spend some time meditating this weekend on the real source of Peace in our lives and the world.

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Your soon to be relaxed analyst,

John Mauldin