

## Reading the Roadmap – Back to the Future

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***“Those who fail to learn from history are  
doomed to repeat it.”***

***Sir Winston Churchill***

Where are we? This is a common question we all ask ourselves on occasion – whether it is in relation to our business, the economy, the government or life in general. Roadmaps are helpful, and in some cases necessary regarding physical navigation. Economic roadmaps are less concrete, but still useful from a comparative and sometimes, an absolute level. This piece is centered on looking at historical economic cycles and providing some guidance as to where we may be in the current business cycle. Some of this exercise includes predictions—which may or may not be accurate. But the benefit of simply knowing what the current business cycle looks like in relation to past cycles is of value.

### **The Building Blocks**

The data which we will use for this exercise encompasses the time frame of 1945 to the present. We will look at past business cycles (broken into recovery, expansion and contraction). We will view duration, magnitude and eventually will examine equity market reaction to various economic periods. We hope to uncover evidence as to where we are in the current expansion and how far we potentially are from the next economic contraction.

Traditionally, economic cycles are driven by hope, greed, shock and fear (pretty much in that order). All are normal human emotions. The study of economics (or some say science) is in essence the study of human emotions—on a mass scale. Human reaction to stimulus (economic input) is what economic forecasting is all about. If I had to go back to college, I would have minored in psychology rather than receiving a dual major in economic/finance. Mass crowd psychology is of the utmost importance to economic predictions—and normally human reaction to certain types of stimulus is reasonably predictable. Consequently, it isn't “soothsaying” or being able to “look around corners” which leads to strong economic forecasting capabilities—it is simply the ability to understand normalized human reaction to certain types of stimulus, which leads to good economic forecasting.

These are the building blocks (meaningful historical information and human reaction to stimulus) which are among the core building blocks to economic forecasting, and are the “stuff” of which economic roadmaps are built.

### Where Have We Come From?

Business cycles, or economic cycles, happen. These cycles are driven by human economic reaction to events and opportunities. Business recovery stems from business contraction (investors and business people sense an opportunity and capital/effort is deployed), business expansion stems from business recoveries (other investors/business people join the expansion party, due to lowering of risk levels) and business contraction stems from business expansion (or over-expansion). It is the process of “creative destruction” which many understand and embrace. Business leaders spend entire careers attempting to control the business cycle. Central bank activities are centered on controlling the business cycle through attempts to control the supply of, and the demand for, capital.

Stock values rise and fall based on the timing and magnitude of the business cycle. There is a strong (almost 70%) correlation between the movement in stock prices and movement in corporate earnings. Corporate revenues have grown by an average of 6.90% per year over the last 65 years. Additionally, corporate profits have risen by an average of 7% for a number of years (S&P 500), and nominal GDP growth rates have averaged 6.8% per year since 1945. Lastly, stock prices have risen by 6.79% per year since the end of 1945. Consequently, a strong relationship exists between the business cycle and stock prices. Perhaps this goes without saying, but some folks like to see data to back up assumptions. From a historical standpoint, if someone asks in general what type of growth we have seen in the U.S. over the long term, simply think “7”.

Have business cycles changed? If indeed the cycles have changed, what are the factors which have led to these changes? Are these factors sustainable, or are they “transitory” in nature? Many questions. Let’s start by looking at some historical comparisons. Let’s take a look at the first eight business cycles which occurred from 1945 until the 1980’s, and then look at data from the last 25 years.

#### First Eight Economic Cycles Following WWII – Accompanying Stable Debt Levels

Date of Economic Expansion	Length of Economic Expansion	Date of Economic Contraction	Length of Economic Contraction
10/45 – 11/48	3.08 years	11/48 – 10/49	0.92 years
10/49 – 07/53	3.75 years	07/53 – 05/54	0.83 years
05/54 – 08/57	3.25 years	08/57 – 04/58	0.67 years
04/58 – 04/60	2.00 years	04/60 – 02/61	0.83 years
02/61 – 12/69	8.83 years	12/69 – 11/70	0.92 years
11/70 – 11/73	3.00 years	11/73 – 03/75	1.33 years
03/75 – 01/80	4.83 years	01/80 – 07/80	0.50 years
07/80 – 07/81	1.00 years	07/81 – 11/82	1.33 years
<b>Average</b>	3.72 years		0.92 years

#### Last Three Economic Cycles Accompanying Rising Debt Levels

Date of Economic Expansion	Length of Economic Expansion	Date of Economic Contraction	Length of Economic Contraction
11/82 – 07/90	7.66 years	07/90 – 03/91	0.67 years
03/91 – 03/01	10.00 years	03/01 – 11/01	0.67 years
11/01 – 12/07	6.08 years	12/07 – 06/09	1.50 years
<b>Average</b>	7.91 years		0.95 years

Since 1945, we have completed 11 business expansions. We are currently experiencing the twelfth. The first eight expansions were significantly different from the next three. The most obvious difference was the length of the expansion (time between recessions). The last three business expansions lasted an average of 95 months, or 7.9 years. The previous eight expansions lasted an average of 44 months, or 3.7 years. Why did the last three expansions last more than twice as long as the average of the previous eight expansions?

### Where Are We?

Many believed business people had put practices into place which allowed businesses to “beat” the business cycle. Just-in-time inventory practices, an understanding of world-wide trade activities and “sophisticated” financial techniques led many to believe that the business cycle was becoming a thing of the past. Recessions, when they occurred, were going to be short, non-violent affairs. Additionally, some business pundits have speculated that U.S. businesspeople have “learned” how to manage their businesses to avoid the danger of economic contractions—in other words, we have learned by experiences. While this may be true in some cases, the emotions of fear and greed are so powerful as to overpower rational economic experience in many cases.

To be sure, inventory “adjustment” strategies acted as a modifier to business leverage. However, part of the reason inventory adjustment strategies have succeeded within the U.S. has been the “outsourcing” which has taken place in many business models—the need to carry significant levels of inventory has been shifted to companies overseas. As the industrial base within the U.S. has shifted towards foreign economies, the need to carry large raw material inventories has shifted to companies away from the U.S. Consequently, on a global scale, inventory adjustment risks have NOT necessarily been fully eradicated—rather they have been shifted from one geographic economy to another. On a world-wide scale, this issue hasn’t changed dramatically.

Another reason the business cycle became viewed as extended is attributable to the view that the U.S. economy has become much more “service”-based rather than industrially-based. Following is data regarding the growth rates of major economic segments—where has the growth in GDP originated? Service or Goods producing:

	<b>Total Growth Rate Real GDP 1988 – 2009</b>	<b>Annual Growth Rate</b>
All Segments of GDP	+66.7%	2.35%
Services Producing Segment	+65.9%	2.32%
Goods Producing Segment	+50.9%	1.89%
Government Segment	+112.6%	3.48%

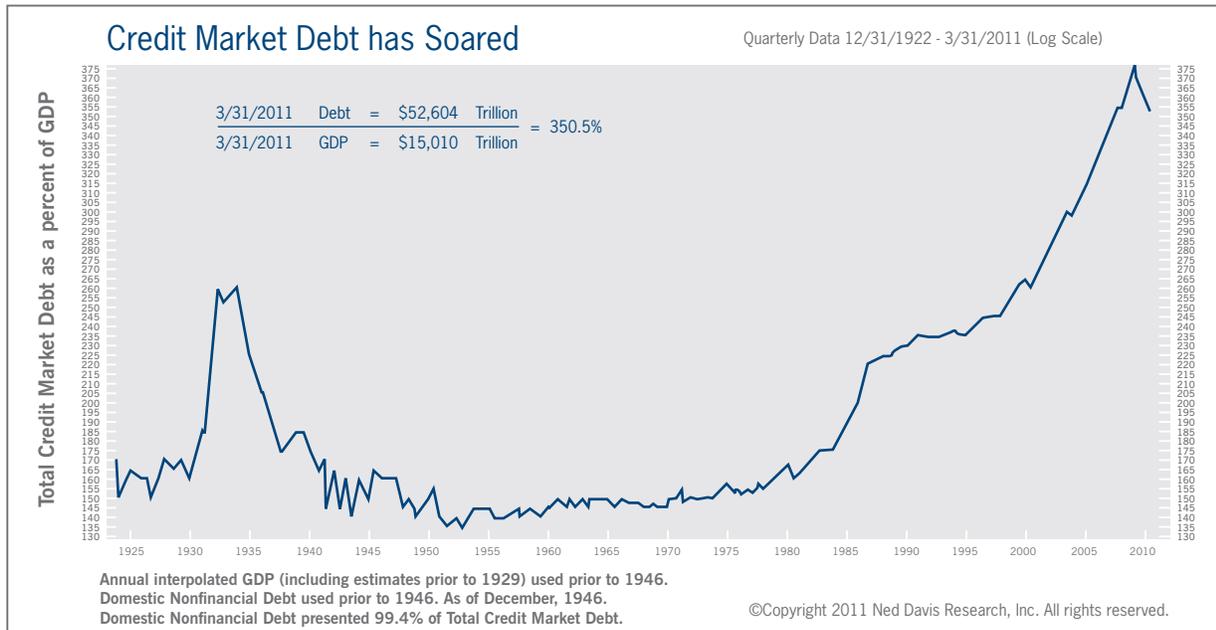
As can be seen from the previous table, Services have become more dominant in overall economic activity than the Goods Producing segment of the economy. But, contrary to popular opinion, on an annual basis, the growth in the services-based economy has been dramatically different. What is truly stunning is the longer-term data showing how much various segments of the government have become in growth as compared to the overall economy. So from this data, one can conclude that the difference in production growth of the industrial and service based economies may not explain significant variance in economic volatility. By the way, the source of this data is from the Bureau of Economic Analysis—the BEA.

**In summary, the view was fostered over the last couple of decades that, for various reasons, our economy had grown “beyond” the viciousness of the typical economic cycle which occurred during most of the 20th century. The inventory systems, the decision processes, the makeup of the economy itself had led us to the promised land that we had “overcome” the business cycle. The Great Recession of 2008-2009 put this fantasy to rest.**

### A Major Factor Behind the Extended Business Cycle

So, the business cycle is still in existence. Human emotion and overreaction has not been outlawed. This begs the question—if indeed the business cycle is still in existence, why did the period of expansion between recessions stretch from 3.7 years on average to 8.8 years? Let me introduce the concept of excessive debt to this question. Many of our regular readers know we have been addressing the debt question through our two serial pieces: “Long, Hard Slog” and “Black Swan Rising.”

In 1985, the level of public debt in relation to GDP (all forms of public debt) was 62%. For the previous 40-year period of time (from 1945 or the end of World War II) this relationship of leverage to national income was reasonably stable. It didn’t go up or down much following WWII. That is, until 1985 when the relationship of debt to GDP started moving upward, and has kept moving upward to present day as debt to GDP currently stands at 176%—almost triple what it was in 1985. We suggest that debt structure, the surge of national debt and spending led to the extension of the business cycle from 1985 to 2008. We believe



a significant portion of the amount of debt which was created from 1985 to 2007 was, in essence, consumed. People and the government borrowed vast sums of capital for consumption rather than investment purposes. Home loans, credit card balances and other forms of installment debt ballooned in value over this 20-year period of time. Consequently, we as a country “leveraged” our balance sheet and consumed much of this leverage, in essence, extending the business cycle by raising GDP growth on an unsustainable level.

Since 2008, our Debt-to-GDP ratio has been lowered from a high of 375% to the current read of 350%. Therefore, we are “deleveraging” our national balance sheet. This process will probably continue for some period of time. This is the crux of our “Long, Hard Slog” concept on which we have written since 2007.

**We are not of the opinion that the business cycle has been “outlawed;” rather the shorter business cycles which had become part of the national economic landscape were simply put on hold with very high levels of debt issuance and excessive consumption. The economy officially came out of recession in June of 2009. We just passed the two-year anniversary of the start of the economic expansion, and indeed, may be in the last half of the current weak expansion.**

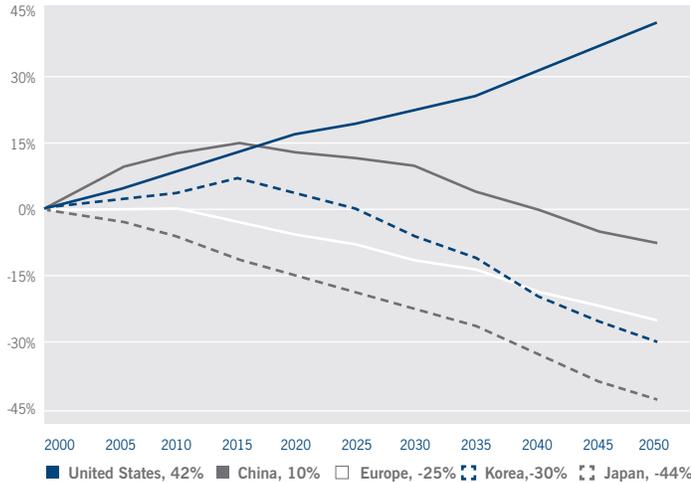
### Where Are We Going?

New debt issuance isn’t occurring within the private economy anywhere near as rapidly as has been the case for the last number of years (since 1985). Along with a lack of debt creation (once again, at the private – nongovernment – level) comes lack of business expansion and lack of employment opportunities. We believe that yes, indeed we are back in the old cycle. The major difference this time around may be centered on the average growth rate of the entire business cycle. We have long argued – through our thematic piece, “Long, Hard Slog” – that the average economic growth rate will not be the normal 3.3% growth we have seen in GDP expansion for decades. Rather with deleveraging occurring in the economy, and the business cycle returning to its normal “rhythm” of three to four years of expansion, that overall economic growth will be in the 2.5% to 3% range on average for the entire cycle.

In this environment, will corporate profits grow by 7% on average as has been the case for the last number of decades? We doubt it. Per the data mentioned above, nominal GDP growth rates, corporate profit growth rates (S&P 500) and corporate revenue growth rates have been highly correlated. Nominal GDP is comprised of three different variables: labor force growth, labor productivity and inflation. Data from the U.S. Census Bureau shows the projected labor force growth rate to be at 0.9% on average over the next 40-year period.

## Long-Term Demographic Challenge Outside the U.S.

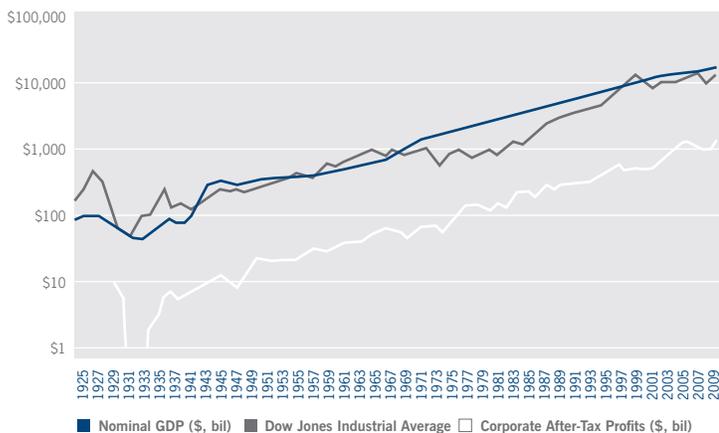
Labor Force Growth Rate  
Growth in age 15-64



Source: U.S. Census Bureau-International Database

Over the long term, productivity gains are expected to register in the 1.8% to 2% range. This seems to be the long-term norm for the U.S. economy. Historically, inflation has averaged 3% per year. Taking these three variables together gives us a long-term expected earnings growth rate of roughly 5.8% per year, versus the realized 7% per year historically. As a result, it is fair to say corporate profit growth rates should be slightly slower going forward than has been the case historically.

## Long-Run Stock Market Performance is Bounded by Economic Growth



Source: Bloomberg and Bureau of Economic Analysis Past performance is not indicative of future results. The Dow Jones Industrial Average is a price-weighted index of 30 blue chip stocks chosen by the editors of the Wall Street Journal. It is not possible to invest directly in an index.

As can be seen from the above mentioned data, it is hard to argue that cycle-long earnings will grow more than 6%, and once again, the business cycle may indeed be three to four years of economic expansion followed by recession. Due to the timing of the end of the last recession (June 2009), we believe we have entered the last half of the current economic expansion.

## Stock Market Valuation

From 1945 to 1985, the average P/E ratio the market supported was 13x (U.S. GAAP earnings). This was during the period when business cycles were much shorter than the previous 25-year period. Over this period, corporate earnings grew at about a 7% level. Accordingly, the “normalized” P/E to Growth rate ratio (PE/G) averaged 1.9. P/E ratios got as low as 8x (once again, U.S. GAAP earnings) and as high as 18x earnings in the go-go years of the mid-1960’s. So, the “low” PE/G ratio was at 1.14, and the high PE/G ratio was 2.57, once again, in an environment where corporate earnings growth on a secular basis was 7%.

Applying our secular, long-term earnings growth rate of 6% to the above data gives us a “high” valuation level of 15.4x earnings and a “low” valuation level of 6.8x earnings. Given our four-quarter forward view that S&P 500 earnings may rise to the \$100 range, the potential “low” level of equity valuation may be in the 673 range (at the market bottom in 2009, the S&P 500 traded at the 666 level). Consequently, we may have seen the secular “low” for stock prices during this business and market cycle. Additionally, the projected “high” justified valuation level, given the forward four-quarter outlook, would be 1526. This range is extremely broad and needs to be tempered with many issues. **Among which...**

### Interest Rates and Inflation Matter

Issues which influence interest rates over the short-term are very numerous. Long-term, it has been our experience that the variables which drive interest rates are rather limited—all being important. These variables include:

- Inflation
- Monetary policy
- Expected inflation
- Credit quality of borrower
- Marketability of credit

There have been many studies which show that P/E ratios (levels of valuation) display a negative correlation with interest rates and inflationary rates. The higher interest rates and inflationary rates (or expected inflation rates), the lower P/E ratios are going to be. This is due not only to the issue of competitive asset alternatives, but also to perceived and real risk levels. As inflation rises, the return needed to make a rational choice regarding investments rises and becomes less certain. The less certain the needed return on an investment, the larger the “cushion” needed for an investment to make sense. Therefore, as inflation and interest rates rise, P/E ratios tend to contract.

Additionally, the actual level of interest rates historically has a tendency to influence P/E ratios on an absolute basis. The “Federal Reserve Valuation Model,” which utilizes interest rates and justifies P/E ratios based on interest rates (the higher the interest rate, the lower the “justifiable” P/E ratio), seemed to work reasonably well for a long period. For example, from 1980 to 1999, the majority of the time the model made good valuation “calls.” When P/E ratios got too high in relation to interest rates, the model would register over-valuation. For example, this model correctly “called” the U.S. market as overvalued in 1987 and again in 1990 (both calls were particularly prescient). **However, the model failed to call the correction in both the 2001-2003 and 2008-2009 bear markets. So, the validity of this valuation model is in question.**

### Confidence, Economic Animal Spirits and Sentiment Matter

Consumer and business confidence and sentiment are of upmost importance regarding economics, the market and

especially, banking. Confidence in the nation’s leaders and business position is what allows people to take economic risks. It is what allows people the willingness to start businesses, make investments and lend capital. It is what drives people to take risks and purchase riskier assets.

Possibly the business where confidence matters most is banking. Think about it. A bank may have 10% of its balance sheet in owner’s equity (at least, a conservative bank will). That means a bank basically “borrows” 90% of the money which it lends to others. If the investment public loses confidence in a bank’s ability to stay out of trouble, they will want their deposits back. Taken to the ultimate extreme, when the public loses faith in a bank, a “run” may occur on a bank where the bank does not have the capital to pay back all those who deposited sums in the institution. In this case, a bank may be in jeopardy of going out of business, simply because the public has lost some degree of confidence in that bank’s ability to make good on paying money back to depositors—even if it can. The issue is one of confidence and sentiment.

**With all that said, an investor needs a lower level of valuation to make riskier investments if business confidence is low. If business confidence is high, valuations can be higher than normal and stay that way for some period of time.**

### At the End of the Day...Back to Valuation

We believe a strong case can be made that business confidence is reasonably low at this current stage. Additionally, we believe inflationary pressures are currently low, and will probably remain weak for some period of time going forward. Accordingly, we believe current confidence readings should skew valuation considerations to the downside, while the lack of inflationary pressure should, on balance, have the opposite effect.

**All of that said, we suggest a proper, “refined” valuation range because the U.S. equity (large capitalization) market is currently in the 14x to 11x earnings range. At 14x earnings, with all the factors which have been laid out, it is our view that equity valuation would start to appear “stretched.” At 11x earnings, given alternatives, stocks appear to be reasonably attractive.**

Where are we currently? The market is currently selling at 12.7x projected earnings. Earlier this year we thought the top of the market would be in the 1400 range. Early this year the S&P 500 traded at 1371, only 2% away from our expected high level for the year. We are now trading at 1278, down 6.7% from the recent high. We stand by our view, which we have held for some period of time that the U.S. market should show reasonable strength by the end of the year. Normally, we don't see a significant contraction in equity values without either the start of an economic contraction in view (six months or so) or the Federal Reserve engineering an economic slowdown. Neither occurrence is currently on our radar screen.

**However, our worries are building that the next “major” move in equity prices may indeed be negative. Coupled with an eventual economic and earnings contraction, we are forming the opinion that at some time over the next 12 months the U.S. equity market may experience a rather painful contraction, as market participants conclude an economic contraction may be in the cards.**

### Final Word

The purpose of this piece is to outline long-dated information pertaining to business cycles, and how capital markets tended to react during those different cycles. We have highlighted the business cycle differences in two major periods of time in our nation's history. Also, we have shown major tendencies of valuation disparity during those periods of time.

**We don't intend this piece to be used in a “micro” or “market timing” sense. Rather, it should be used as a thought-provoking piece which will help the business person and the investor to think through time horizon, risk assumptions and return expectations.**

We live in a changing world. A world where the competitive advantages of the U.S. are currently in question. We firmly believe many of the problems the capital markets are currently facing will dissipate as solutions to seemingly unsolvable problems appear.



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