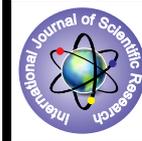


Topic: The Great Recession: Reasons and Indicators



Finance

KEYWORDS : Recession, GDP, Yield Curve, Leading, Indicators, Recovery

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ABSTRACT

As an economy starts showing some signs of the recovery from the deep and long recession it are logical to ask some important questions: Why this recession happened? How this recession affected the economy? What methods have been used by the Government to fight the recession? What can be said about possible scenarios of the future economic development? This paper provides some answers to above mentioned questions.

The American economy is considered as the 'mother' economy of all other nations. Any fall in the parent economy affects the income and growth of the dependent economies. The global economy is facing a downturn since last few months that has given birth to a number of consequences that can be tagged as the 'Indicators of Recession' in a particular economy Identifying the beginning of a recession is a very simple thing The only indicators needed are the decrease of bank deposits from sellers of consumer goods and consumer services.

INTRODUCTION

a recession is a business cycle contraction, a general slowdown in economic activity Macroeconomic indicators such as GDP, employment, investment spending, capacity utilization, household income, business profits, and inflation fall, while bankruptcies and the unemployment rate rise.

Recessions generally occur when there is a widespread drop in spending, often following an adverse supply shock or the bursting of an economic bubble. Governments usually respond to recessions by adopting expansionary macroeconomic policies, such as increasing money supply, increasing government spending and decreasing taxation.

In the United States, the Business Cycle Dating Committee of the National Bureau of Economic Research (NBER) is generally seen as the authority for dating US recessions. The NBER defines an economic recession as: «a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.” [5] Almost universally, academics, economists, policy makers, and businesses defer to the determination by the NBER for the precise dating of a recession's onset and end.

What creates a recession?

Every recession starts with a drop in consumption of goods and services. There are two kinds of consumption. There is private individual consumption of products and services and there is government consumption of goods and services. If the combined consumption of the private sector and government sector of the economy declines by, for example 20%, then the average receipts of businesses, that supply the goods and services, will decline by 20%. Many businesses whose net profit is less than 20% of gross receipts will not be able to stay in business if they cannot reduce their cost and overhead enough to hang on. The many businesses that must close their doors will create a lot of unemployment and the remaining businesses that have to reduce their overhead and costs will also let a lot of employees go. Unemployed people will have less money to spend on consumer goods and services and that will mean an additional drop in income for all businesses and more businesses will close and downsize which in turn will mean more unemployment. This whole process creates a spiraling down economy of successive rounds of increasing unemployment and ever less consumer spending. Government tax collections will drop very sharply

How does a Recession start?

With just limited research it can be quickly established that a recession **always** starts with a drop in consumer spending or government spending or a combination thereof. A drop in spending will **always** result in an increase in unemployment. Why? Because a drop in spending, of say 30%, will result in an average drop of 30% in monthly sales for businesses that sell

to consumers and/or to governments. It will reduce manufacturing orders by 30%. Many businesses and manufacturers that suddenly get 30% less income will start losing money. Some businesses will not survive a 30% drop in income and will go out of business resulting in unemployment for their employees. Many of the remaining businesses will have to reduce employment in an effort to lower their overhead.

Unemployed people get less or no income and receive less income and that results in even less consumer spending. Alternating rounds of less consumer spending and rounds of higher unemployment will establish a downward spiraling economy that gradually goes deeper into recession. In that downward spiraling of the economy there are a lot of personal and family lives that are destroyed by losing all their assets in personal bankruptcies and home foreclosures. Funeral directors report an increase in their business through a percentage increase in suicides, for which the do-nothing bumbling Congress and White House should be held accountable for.

Millions/billions of economic infrastructure is destroyed when all the business equipment is auctioned off at 35% of replacement cost. For example a restaurant that closes will lose all its kitchen equipment that gets auctioned off at maybe 35% of its original cost. Closing factories lose all their manufacturing machinery and production infrastructure that gets also auctioned at maybe 35 cents on the dollar.

Through the recession, the over 30,000 (thirty thousand) taxing agencies in the United States (Federal, State, County, City etc.) all receive less revenue and that creates budget deficits at all levels of government and in turn persuades and often forces these governments to implement austerity measures that sharply reduce government spending and create unemployment for government workers and for employees of government contractors whose government contracts get cancelled. Unfortunately, the majority of taxpayers, and their government representatives in the various legislatures, applauds and supports the austerity measures that governments get forced into by the declining tax revenues. We all hate large government and love it when government gets reduced in size and scope. But the problem is that reducing government spending during a recession will push the economy even deeper into recession because it will increase unemployment of government employees and of employees that work for government contractors and it results in additionally lower consumer spending. That will lower the tax base for governments even more.

Economic Indicators of Recession

Recession in an economy, in general terms is described as a situation when an economy features slow economic activities, faces decline or no income situations. During this period the economy also suffers a steep fall in GDP growth rate, which tends to worsen situation further..

The outcome of recession is unquestionably disastrous for the economy and comprises of the following three major indicators.

1. LEADING INDICATORS
2. GDP INDICATOR
3. YIELD CURVE

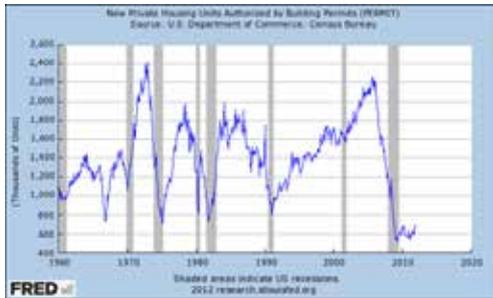
I) Leading Indicators say:

A recession in economic terms isn't synonymous with a period of hard times. Rather, it is a contraction in the economy. Following are the key factors leading the economy towards recession:

1. Reduction in the consumer expenditure

The first and the foremost effect of Recession is that, it influences the spending habits of customers and prompts them to save more for the approaching period of depression. This in turn affects the business and production activities of the market and drags the income generating sector in trouble. Following graphs depict the effect of reduction in consumer expenditure mainly on housing and automobile industry.

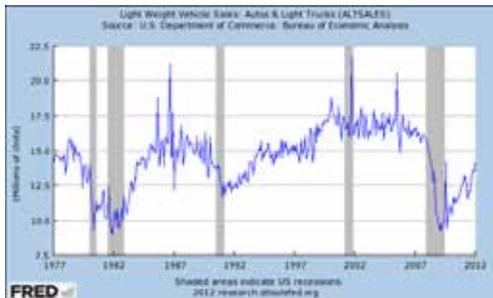
Take housing. Here is a graph of housing permits, an acknowledged long leading indicator, for the last half a century:



Not once during that time has housing failed to turn down in advance of a recession. The weakest decline was from 1.742 million units annualized in December 1998 to 1.542 million annualized in July 2000, a decline of 200,000. The closest comparison in our situation is the decline of 154,000 from June 2010's 688,000 annualized permits to February 2011's 534,000. Since then permits have risen back to 682,000 in January of this year.

There is simply no post-WW2 for a recession happening without housing construction declining first. The only possible precedent is the slight increase in houses built in 1938 vs. 1937, but the statistics are only annual so we have no way of knowing what kind of quarterly or monthly declines may have occurred.

Records of vehicles sold have not been published on that long a basis, but the records we do have suggest that vehicle sales too have almost always declined in advance of a recession:

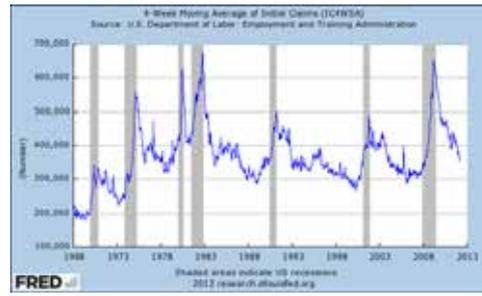


The only exception here is the Volcker induced recession due to the Fed hiking interest rates to 20% to break an inflationary cycle.

2. Mounting Unemployment

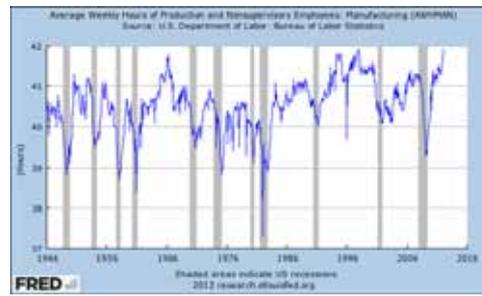
The consequences generated by the first indicator, opened ways for the second to penetrate and grow during the recession period. The economy lands into a situation where the existing jobs will face a steep decline leave alone the generation of fresh job opportunities.

Another statistic getting a lot of attention recently is initial jobless claims. These have continued to fall to new lows:



Never since these statistics began to be kept almost 50 years ago has a recession occurred without initial claims turning up first. The minimum period of time from the bottom to the onset of recession was 2 1/2 months.

Average hours worked in manufacturing has long been considered a leading indicator as well, and these records are available since WW2.

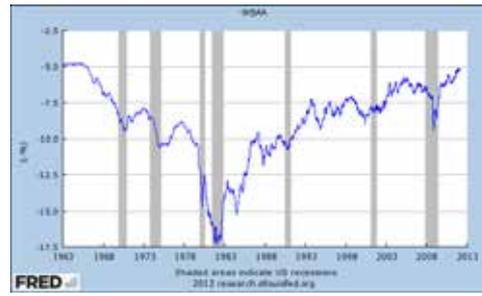


Again, there has only been one exception, in this case 2007 right before the "Great Recession."

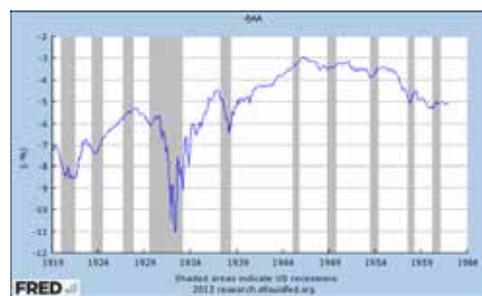
3. Fall in investment and interest rates

The chain is carried on and third indicator signals of a fall in the interest rate in future that leads to the drawing back of money invested by many investors who could might feel insecure for their investments and can fear of the approaching market situation. This situation is shown through the changes in bond price.

Since WW2 there has never been a recession without bond prices declining (i.e., bond yields increasing). Here is a graph showing inverted yields of BAA corporate bonds (i.e., prices):

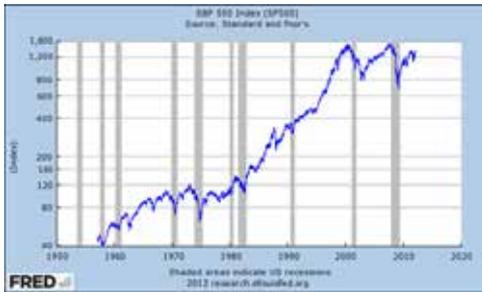


While the above are weekly, monthly BAA bond prices go all the way back to 1919. Here is the graph of monthly prices from then until the 1960's:



Only twice did BAA bond prices not decrease before the onset of

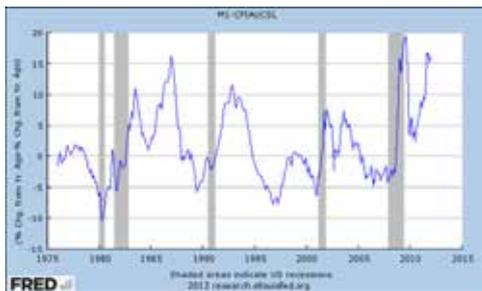
recession: in 1927 and in the 1945 demobilization. Stock prices are also at least a short leading indicator. While famously stocks continued to rise for three months after the economic downturn began in 1929, in our era their record continues to be good if not perfect:



Stocks only failed to turn down in advance of the 1980 and 1990 geopolitical oil shocks..

4. Inflation:

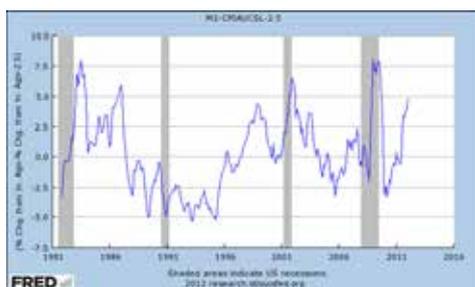
Inflation is always the most predictable and inevitable consequence of all the recession forces in an economy. It brings along high prices, less purchasing power, slow income growth and unemployment in a bunch. Real money supply is also generally thought to be a long leading indicator. Again, since modern records have been published, at no time has a recession occurred without Real M1 turning negative first:



During the deflationary 1920's and Great Depression era, negative real money supply was at very least coincident with the onset of recession. There are two leading indicators that might support the case for an imminent contraction. Non-defense durable goods orders ex-transportation show clear signs of rolling over:



Further, if one believes that Real M2 can signal a recession even after more than a year of improvement, then the precedent of 2007 exists, although just like the 1920s and 1930s, its turning negative was coincident with the onset of the December 2007 "Great Recession."



The increase in oil prices now, and the relative weakness of wages, are not unprecedented. Yet several of the above leading indicators admit of no exceptions; others only one or two. For a recession to have already started, or even to start now or in a month or two, would represent an unprecedented constellation of exceptions to a host of indicators that typically lead directional changes in output, sales, and jobs by several months to over a year. This is why I am proverbially scratching my head at ECRI's certitude that a recession will begin by the end of June, and their defense of that call by use of a lagging construction of coincident indicators.

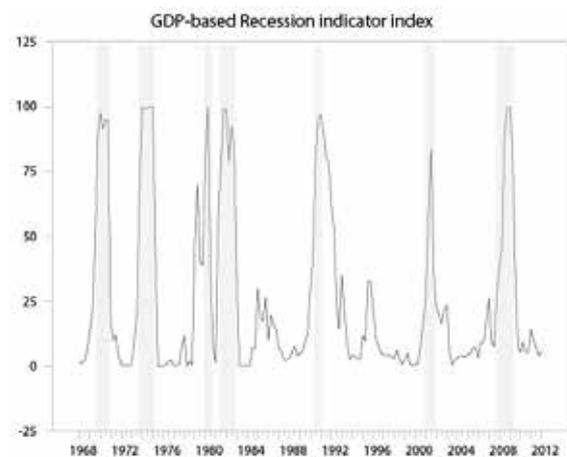
II) GDP INDICATOR:

The GDP-based recession indicator index is a pattern-recognition algorithm that assigns dates to when recessions begin and end. It is based on the observed dynamics of U.S. real GDP growth. To make a reliable inference, it is necessary to wait one quarter for data to be revised. With the 2012:Q2 advance GDP numbers released by the Bureau of Economic Analysis on July 27, 2012, we can calculate a value of the recession indicator index describing economic conditions for the first quarter of 2012. To maximize usefulness as a real-time indicator, the index is not subsequently revised. The index ranges from 0 to 100, with a value above 50 indicating the data are more consistent with a recession than expansion.

While U.S. real GDP growth has been sluggish, it has grown consistently each quarter since 2009:Q3, bringing the most recent value for the index to a very modest 5.7 percent. Although the economic numbers have been disappointing in many respects, the fact that real GDP has continued to grow means that the U.S. economy would not be characterized as currently being in a recession.

Based on the procedure described in a paper by Marcelle Chauvet and James Hamilton (from Nonlinear Time Series Analysis of Business Cycles, 2006, edited by Costas Milas, Philip Rothman, and Dick van Dijk), the most recent recession was determined to have begun in 2007:Q4 and ended in 2009:Q2. These start and end dates for the recession are the same as were announced separately by the Business Cycle Dating Committee of the National Bureau of Research (NBER), though the NBER did not issue the end-date declaration until September 2010.

If there is a subsequent downturn in GDP growth, this approach would characterize it as the beginning of a new recession. The algorithm would declare that a new recession has begun if the index goes back above 67 percent.



The plotted value for each date is based solely on information as it would have been publicly available and reported as of one quarter after the indicated date, with 2012:Q1 the last date shown on the graph. Shaded regions represent dates of NBER recessions, which were not used in any way in constructing the index, and which were sometimes not reported until two years after the date.

III) YIELD CURVE:

The yield curve—specifically, the spread between the interest rates on the ten-year Treasury note and the three-month Treasury bill—is a valuable forecasting tool. It is simple to use and significantly outperforms other financial and macroeconomic indicators in predicting recessions two to six quarters ahead

Why Consider the Yield Curve?

The steepness of the yield curve should be an excellent indicator of a possible future recession for several reasons. Current monetary policy has a significant influence on the yield curve spread and hence on real activity over the next several quarters.

Estimating the Probability of Recession

To assess how well each indicator variable predicts recessions, we use the so-called probit model, which, in our application, directly relates the probability of being in a recession to a specific explanatory variable such as the yield curve spread.

Using the Yield Curve Spread
Four Quarters Ahead
Recession Probability Value of Spread
(Percent) (Percentage Points)

5	1	21
10		0.76
15		0.46
20		0.22
25		0.02
30		-0.17
40		-0.50
50		-0.82
60		-1.13
70		-1.46
80		-1.85
90		-2.40

Note: The yield curve spread is defined as the spread between the interest rates on the ten-year Treasury note and the three-month

For example, one of the most successful models in our study estimates the probability of recession four quarters in the future as a function of the current value of the yield curve spread between the ten-year Treasury note and the three-month Treasury bill. The results of the model, based on data from the first quarter of 1960 to the first quarter of 1995, are presented in a table showing the values of the yield curve spread that correspond to estimated probabilities of a recession four quarters in the future. As the table indicates, the estimated probability of a recession four quarters ahead estimated from this model is 10

percent when the spread averages 0.76 percentage points over the quarter, 50 percent when the spread averages -0.82 percentage points, and 90 percent when the spread averages -2.40 percentage points. The usefulness of the model can be illustrated through the following examples. Consider that in the third quarter of 1994, the spread averaged 2.74 percentage points. The corresponding predicted probability of recession in the third quarter of 1995 was only 0.2 percent, and indeed, a recession did not materialize. In contrast, the yield curve spread averaged -2.18 percentage points in the first quarter of 1981, implying a probability of recession of 86.5 percent four quarters later. As predicted, the first quarter of 1982 was in fact designated a recession quarter by the National Bureau of Economic Research.

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CONCLUSION:

What will guarantee end of recession? It is guaranteed that a recession will **always** end with an increase in consumer spending. Governments could help by increasing their spending as well. But they are gutless by not wanting to do deficit spending and increasing government debt in the process. An increase in consumer and/or government spending will **always** result in higher employment, because the increase in consumer purchases will increase income for all businesses that sell consumer products and consumer services. Those businesses will need more workers and will hire back employees resulting in more employment. Profits of those businesses will rise again very quickly and that will encourage other people to go back into business and hire employees. That increase in employment will give more people wages that can be spent on more consumer purchases which in turn will result in more employment. This sets in motion an upward spiral of alternating rounds of more employment and increases in consumer spending and that will end the recession very quickly.

Governments at all levels of jurisdiction will get more tax revenue when more people are employed and consumer spending is rising and businesses make profits. That means that governments come quickly out of their budget crises and they can now fund more infrastructure projects and give more work to government contractors. That in turn will again lower unemployment and it will increase consumer spending some more. Getting out of a recession will be almost equally as fast as getting into a recession if the right stimulus methods are implemented.

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