UNLV CENTER FOR BUSINESS & ECONOMIC RESEARCH
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Is the U.S. Economy in Recession?

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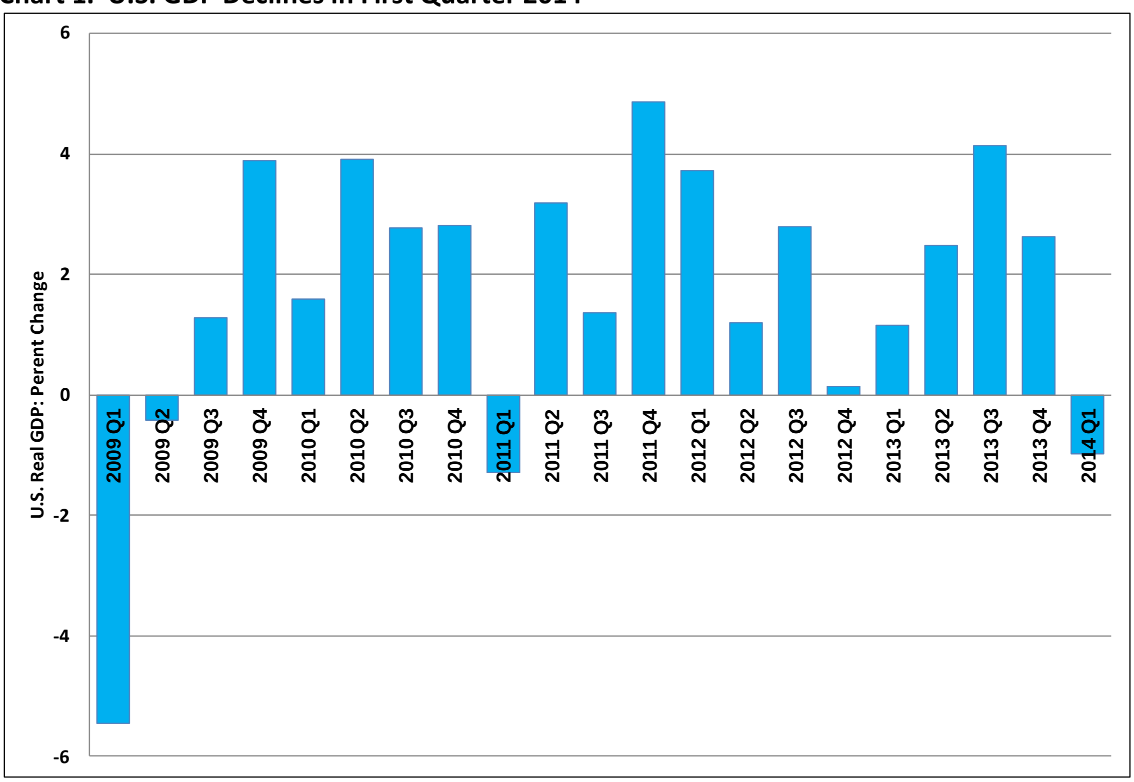
Revised data issued by the U.S. Bureau of Economic Analysis show that U.S. real Gross Domestic Product (GDP) declined at a 1.0 percent annual rate in first quarter 2014 (Chart 1). The decline raises the question of whether the United States may have entered a recession.[1] We find the composition of the decline suggests the likelihood that the first quarter downturn represents a confluence of short-lived phenomena, rather than the beginning of a new recession. In addition, our examination of six indicators of recession—slow GDP growth, the stock market, the unemployment rate, world oil price shocks, the yield curve and the index of U.S. leading economic indicators—finds that none of the indicators is signaling an imminent recession.

Chart 1. U.S. GDP Declines in First Quarter 2014



Source: U.S. Bureau of Economic Analysis

[1] Informally, a recession is said to occur when real GDP experiences two consecutive quarters of decline. Officially, U.S. recessions are dated by the Business Cycle Dating Committee of the National Bureau of Economic Research. The committee considers a wide range of economic data and issues their findings well after the fact.

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Composition of the Decline in Real GDP

The composition of the decline in real GDP suggests relatively short-lived phenomena are at work. As shown in Table 1, consumer spending made a fairly strong positive contribution to GDP growth. Business fixed investment, residential investment, government purchases, net exports and inventory investment all made negative contributions. The decline in business fixed investment and residential investment has been attributed to severe winter weather. The reduction in inventory investment was an expected drawdown in inventories following the strong buildup in inventories during 2013. Government purchases were reduced by lower state and local government spending. The large decline in net exports offsets the large gain seen in fourth quarter 2013.

Table 1. Contributions to the Growth of U.S. Real GDP

	2012	2013	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1
Real GDP (percent change annual rate)	2.8	1.9	1.1	2.5	4.1	2.6	-1.0
Contributions to Real GDP Growth							
Final Domestic Sales	2.49	1.60	0.49	2.13	2.33	1.65	1.58
Personal Consumption	1.52	1.37	1.54	1.24	1.36	2.22	2.09
Business Fixed Investment	0.85	0.33	-0.57	0.56	0.58	0.68	-0.20
Residential Investment	0.32	0.33	0.34	0.40	0.31	-0.26	-0.16
Government Purchases	-0.20	-0.43	-0.82	-0.07	0.08	-0.99	-0.15
Net Exports	0.10	0.12	-0.28	-0.07	0.14	0.99	-0.95
Exports	0.48	0.36	-0.18	1.04	0.52	1.23	-0.83
Imports	-0.38	-0.24	-0.10	-1.10	-0.39	-0.24	-0.12
Inventory Investment	0.20	0.16	0.93	0.41	1.67	-0.02	-1.62

Note: Data are reported at seasonally adjusted annual rates.
Source: U.S. Bureau of Economic Analysis

Indicators of Recession

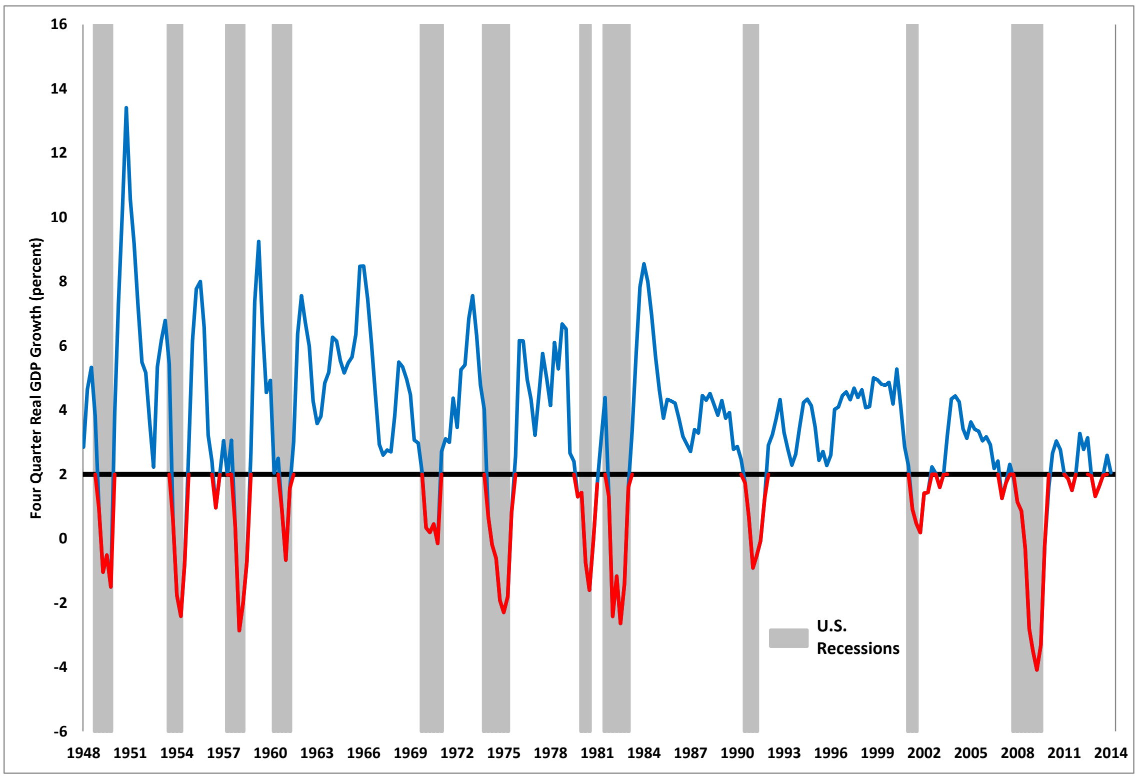
We also consider six indicators of an impending U.S. recession—slow GDP growth, the stock market, the unemployment rate, world oil price shocks, the yield curve and the Index of U.S. Leading Economic Indicators. Historically, the first three of the indicators provide unreliable or late warnings. Historically, the last three of the indicators provide reliable and timely warnings of recessions.

Slow GDP Growth

Does slowing economic growth itself indicate the economy is stalling and headed toward another recession? All 11 U.S. recessions since World War II came when the four-quarter growth rate of real GDP fell below 2 percent (shown as red in Chart 2). For the four quarters ending in first quarter 2014, the four-quarter growth rate of real GDP was 2.0 percent—just at the threshold where a recession would be indicated.

The indicator has an unreliable history in predicting recessions. For nine of the post-WWII recessions, the four-quarter average growth rate provided no advance warning. For only two of the 11 post-World War II recessions did the indicator precede onset of the recession. Worse, the series also provided five false warnings that recession was imminent including most recently in 2013.

Chart 2. GDP Growth

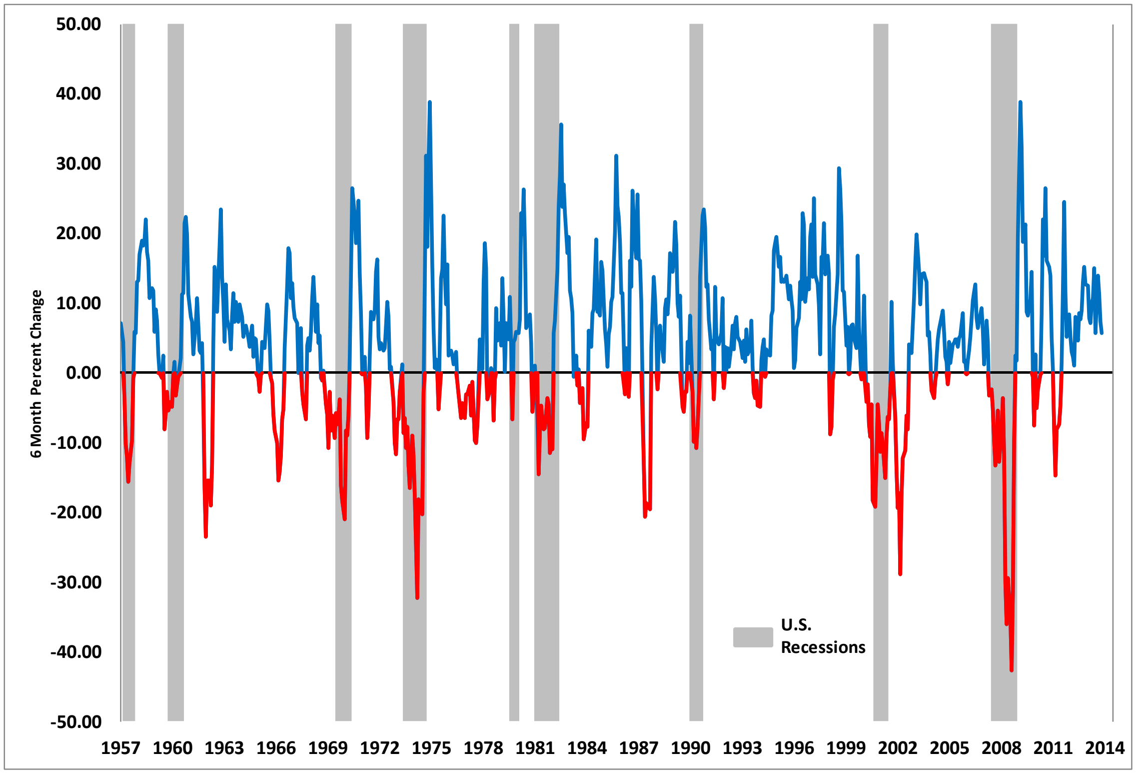


Sources: U.S. Bureau of Economic Analysis; National Bureau of Economic Research; Center for Business and Economic Research, UNLV

Stock Market

Recognizing that the stock market reflects expectations about future profitability, the stock market would seem to provide information about the state of the economy. Downturns in six-month changes of the S&P 500 Index have preceded six of the last eight recessions and accompanied the other two (shown as red in Chart 3). The index also has produced many false alarms, indicating a possible downturn when none follows. Currently, the stock market is not signaling a recession. If it were, we would have plenty of reason to disregard the warning.

Chart 3. S&P 500

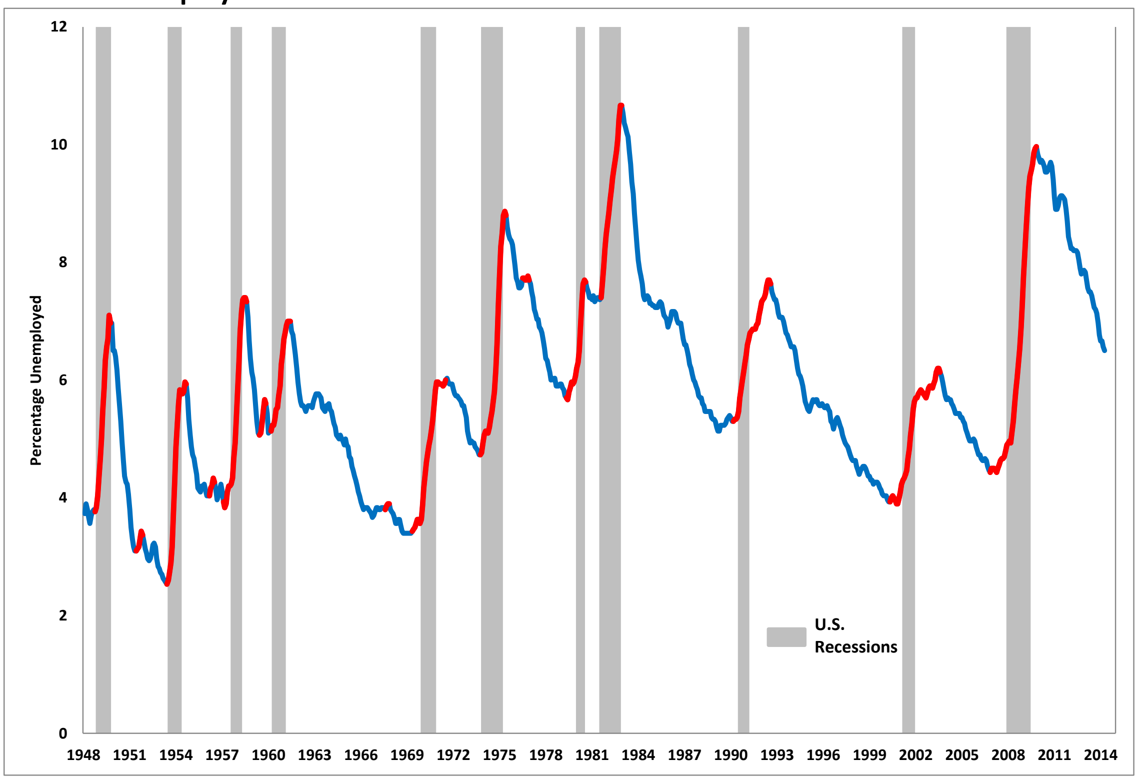


Sources: Standard and Poor's; National Bureau of Economic Research; Center for Business and Economic Research, UNLV

Unemployment Rate

During every recession, the unemployment rate rises rapidly. Less than half the time, however, has an increasing unemployment rate preceded a recession. The unemployment rate increased quickly (0.33 percentage points higher than the most recent low) during six of the last 11 recessions, but only five times prior to a recession (shown as red in Chart 4). The measure also provided five false warnings. Fortunately, the unemployment rate has been falling—indicating that no recession is imminent.

Chart 4. Unemployment Rate

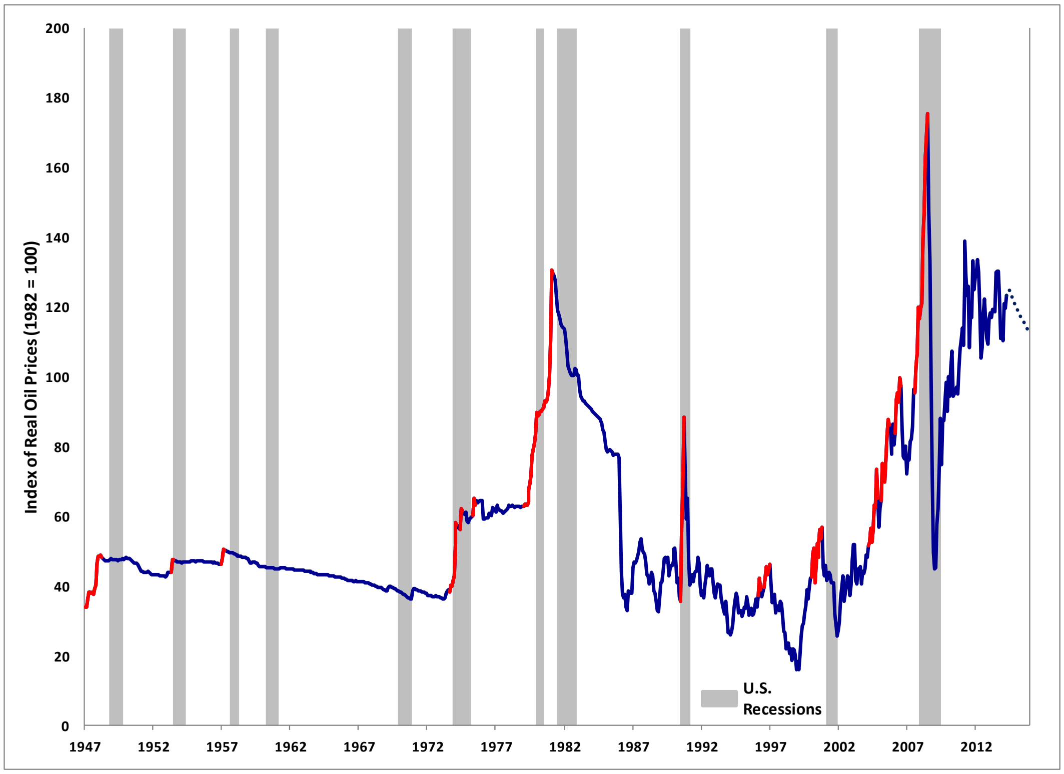


Sources: U.S. Bureau of Labor Statistics; National Bureau of Economic Research; Center for Business and Economic Research, UNLV

World Oil Price Shocks

Sharply rising oil prices (which take oil prices higher than they have been the previous three years) preceded all but two of the U.S. recessions since World War II (shown as red in Chart 5).[2] The exceptions are the 1960 and 1970 recessions. The indicator provided four false signals—in 1975, in the mid-1990s and two from 2002 to 2005. Most economists attribute the 2008-2009 recession to a financial market meltdown rather than the 2007-2008 oil-price spike. Although oil prices remain fairly strong, the indicator currently shows no recession.

Chart 5. World Oil Prices and U.S. Recessions



Sources: Bureau of Labor Statistics; National Bureau of Economic Research; New York Mercantile Exchange; Center for Business and Economic Research, UNLV

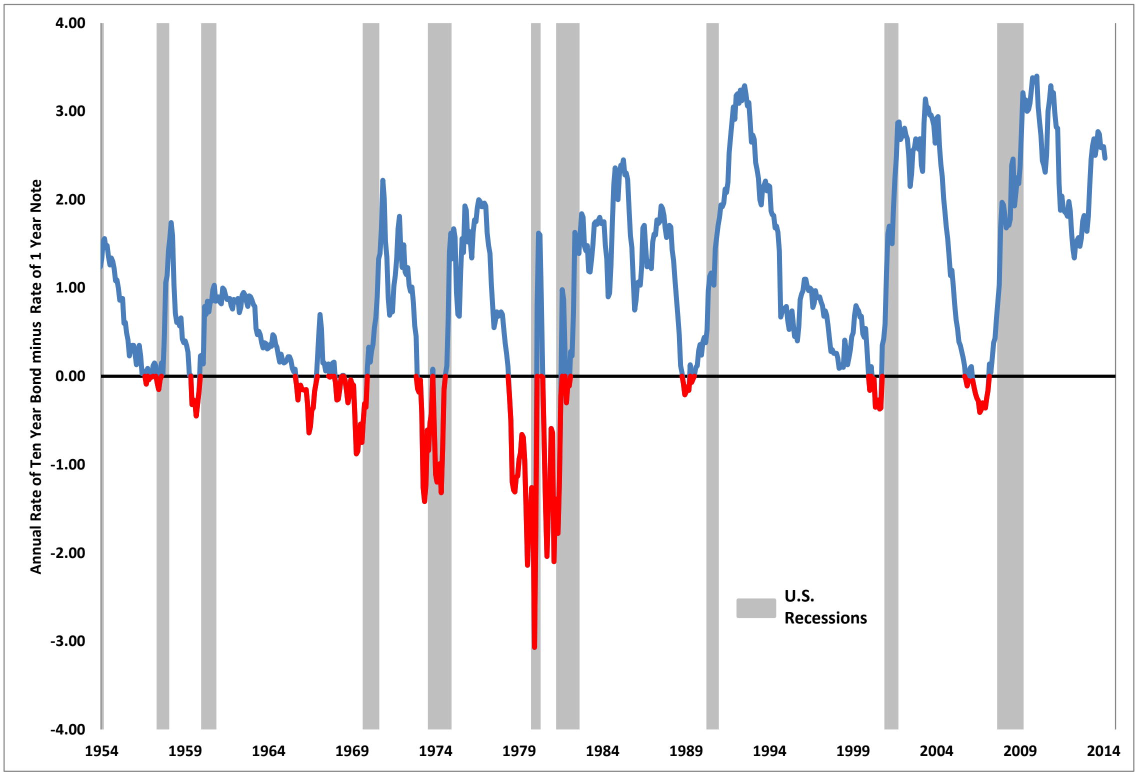
[2] Economic analysis shows that nine of the 11 post-WWII recessions have occurred when real oil prices are higher than they have been in the past three years—as highlighted in red on Chart 5. As the figure shows, sharp gains in real oil prices also have provided four false indications of recession since WWII.

Inverted Yield Curve

One of the most reliable indicators of impending U.S. recessions is inversion of the yield curve on U.S. Treasury securities. The yield curve is calculated by subtracting the interest rate on the one-year Treasury note from the interest rate on the 10-year Treasury bond. The explanation for the predictive power of an inverted yield curve is that long-term interest rates represent a combination of today's short-term rates and expectations of future short-term rates. If long-term rates are lower than short-term rates, the market expects interest rates to fall. Because short-term interest rates are procyclical, market expectations of falling rates are indicative of weakening economic activity.

An inverted yield curve has provided advance warning for all of the last nine U.S. recessions (shown as red in Chart 6). It provided a false alarm only in the mid-1960s. Currently, the yield curve does not suggest a recession is coming, but there is a possibility that the current U.S. monetary policy is distorting the measure by holding short-term rates artificially low and preventing the yield curve from inverting.

Chart 6. Yield Curve

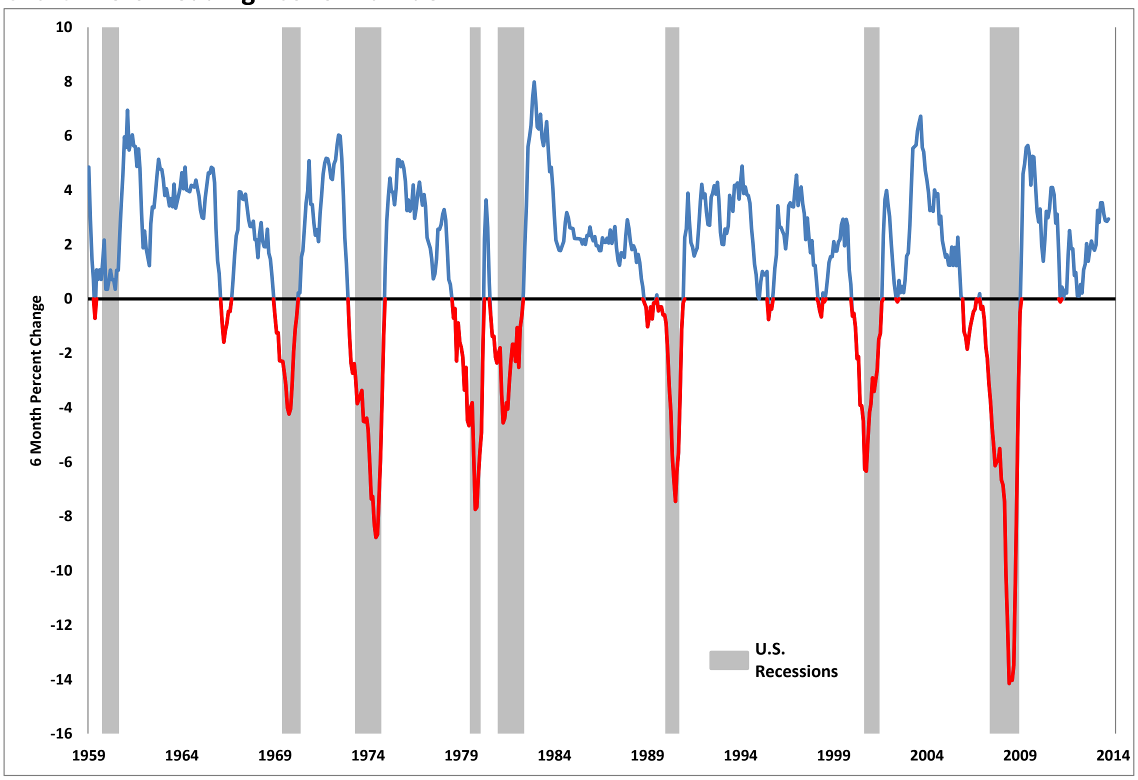


Sources: Board of Governors of the Federal Reserve System; National Bureau of Economic Research; Center for Business and Economic Research, UNLV

Index of U.S. Leading Economic Indicators

Since 1959, the Index of U.S. Leading Economic Indicators (published by the Conference Board) has been an invaluable tool for predicting U.S. economic activity. The index declined sharply prior to all eight of the recessions since its creation (shown as red in Chart 7). The index also turned down five times without a subsequent recession, but only one was a major decline, and four were relatively minor. Currently, the six-month percentage change in the index is positive, suggesting that the economy will expand in the near future rather than head toward another recession.

Chart 7. U.S. Leading Economic Index



Sources: The Conference Board; National Bureau of Economic Research; Center for Business and Economic Research, UNLV

No Indicator Shows That Recession Is Imminent

Because real GDP declined in first quarter, we examine whether the decline is an indication of a recession. We find the composition of the downturn suggests the confluence of a number of short-lived phenomena, rather than the first quarter of a recession.

We also examine six indicators that are used to foretell an impending U.S. recession. Historically, three of the indicators provide unreliable or late warnings. Historically, three of the indicators provide reliable and timely warnings of recessions. *Most importantly, none of the indicators is currently signaling a recession* (Table 2).

Table 2. Current Status of U.S. Recession Indicators

Indicator	Current Status	Reliability	Evaluation
Slow GDP Growth	No recession	Generates false warnings; provides late warnings	Disregard
Stock Market	No recession	Unreliable	Disregard
Unemployment Rate	No recession	Unreliable	Disregard
World Oil Price Shocks	No recession	Missed only 2 of 11 recessions; generated several false warnings	No recession
Inverted Yield Curve	No recession	Preceded 9 of last 9 recessions; generated a false warning	No recession
Index of U.S. Leading Economic Indicators	No recession	Preceded 8 of last 8 recessions; generated several false warnings	No recession

Source: Center for Business and Economic Research, UNLV

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