



## How Negative Is Negative Real GDP Growth?

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In June 2014, the U.S. economy likely entered its sixth year of economic expansion. Yet, the economy unexpectedly contracted in the first quarter by a rather large amount: -2.9 percent at an annual rate. Is this a harbinger of things to come? Perhaps another recession? Most forecasters think not. Rather, the unexpectedly large decline in real gross domestic product (GDP) in the first quarter of 2014 was chalked up to temporary factors, such as adverse weather and an inventory correction. In fact, much of the recent data points to a rebound in economic activity in the second quarter: The consensus of professional forecasters is that the U.S. economy will continue to post solid growth over the second half of 2014 and into 2015.

Still, an unexpected decline in real GDP growth, particularly during a historically weak expansion, is troublesome.

Just how rare are these gaps in growth during business expansions? It turns out there have been several economic expansions in the postwar period when real GDP has declined. Have these declines provided any clues about the economy's underlying health?

The table shows there were 10 quarters when real GDP growth was negative during periods classified as an economic expansion.<sup>1</sup> Because a rough rule of thumb is that two consecutive quarters of negative growth constitute a recession, the third column of the table also includes real GDP growth in the following quarter. The fourth column notes whether the following quarter was deemed to be the onset of a recession, as defined by the National Bureau of Economic Research (NBER) Business Cycle Dating Committee. The fifth and sixth columns show the changes in

### Non-Recession Quarters of Negative Real GDP Growth

*Post-WW II Period*

	(1)	(2)	(3)	(4)	(5)	(6)
Number	Date of negative quarter (time T)	Real GDP growth	Real GDP growth, T+1	Recession quarter at T+1?	Change in real federal funds rate over prior 4 quarters	Change in real 10-year Treasury rate over prior 4 quarters
1	1947:Q2	-0.45	-0.41	NO	N/A	N/A
2	1947:Q3	-0.41	6.45	NO	N/A	N/A
3	1956:Q1	-1.53	3.34	NO	0.20	-0.73
4	1956:Q3	-0.33	6.71	NO	-0.57	-1.44
5	1957:Q2	-0.88	3.95	YES	-1.53	-1.48
6	1959:Q3	-0.77	1.58	NO	3.75	2.94
7	1973:Q3	-2.16	3.78	YES	1.88	-0.97
8	1981:Q2	-2.89	4.67	YES	2.35	1.80
9	2011:Q1	-1.29	3.19	NO	-0.03	-0.69
10	2014:Q1	-2.93	3.30	?	0.60	1.72
	Average	-1.36	3.66		0.83	0.14
	Maximum (per column)	-0.33	6.71		3.75	2.94
	Minimum (per column)	-2.93	-0.41		-1.53	-1.48

NOTE: Growth for 2014:Q2 is the Blue Chip Consensus estimate from July 10, 2014. All values are reported as percentages.

the real federal funds rate and the real 10-year Treasury yield, respectively, over the previous four quarters: Positive values suggest a tightening in monetary policy over the past year.

Negative real GDP growth during expansions is rare, occurring a little less than 5 percent of the time (10 of 268 quarters). Eight of the 10 quarters occurred before the period known as the Great Moderation (pre-1983). Moreover, three of the 10 quarters occurred during the 1954-57 expansion. The average decline in real GDP in the 10 quarters was 1.4 percent. The largest decline, -2.9 percent, is the latest occurrence (2014:Q1), followed closely by the decline in the second quarter of 1981. The smallest decline was -0.3 percent (1956:Q3).

**Most forecasters think the surprise first-quarter contraction is not a harbinger of another recession, but history suggests caution.**

Two additional findings: First, excluding the 1947 episode (two consecutive quarters of negative real GDP growth), all of the negative quarters were followed by exceptionally strong real GDP growth one quarter later. The average growth of real GDP following a negative quarter was 3.7 percent. Second, in three of the nine negative quarters, the following quarter (shown in column 3) was deemed to be the first quarter of a recession. In two of these episodes (1973 and 1981), the real federal funds rate was increasing prior to the quarter of negative growth. Before the 2007-09 recession, the 1973-75 and 1981-82 recessions were the deepest and longest in the postwar period.

In the most recent episode (2014:Q1), the real federal funds rate—though negative—has increased modestly (0.6 percent) because of a slight decline in inflation over the four quarters ending in the fourth quarter of 2013 (from 1.7 percent to 1 percent). However, with inflation beginning to edge higher, the real federal funds rate still remains negative. The real long-term bond yield has increased by even more: 1.7 percent.

In conclusion, the *projected* snapback in real GDP growth following the unexpectedly large decline in the first quarter of 2014 is consistent with past episodes. Although history suggests there is a one-third chance that the second quarter of 2014 will eventually be determined to be the onset of a recession, a key determinant—tighter monetary policy—is not a significant factor in this current episode. That said, like nearly all recessions, the next recession will catch nearly all forecasters, economists, and policymakers by surprise. ■

#### NOTE

<sup>1</sup> The U.S. economy has been in an expansion phase of the business cycle for 216 of the 268 quarters from 1947:Q2 to 2014:Q1.