

## ECONOMY

# On the Road to Recovery, Soft Patches Turn Up Often

By Richard G. Anderson and Yang Liu

During mid-2009, the U.S. economy exited the economic contraction that began year-end 2007 and entered into an economic recovery phase.<sup>1</sup> Approximately two-and-a-half years later, both real GDP and consumer expenditures surpassed their prerecession peaks, although industrial production remained weak and the unemployment rate exceeded 8.5 percent.<sup>2</sup>

During the recovery, as in many previous recoveries, analysts spoke of “soft spots” or “soft patches,” that is, periods when slower growth raised concern that economic activity might turn downward before reaching its previous peak, a so-called double-dip recession. The terms “soft spot” and “soft patch” are found in Federal Reserve publications as early as the Board of Governors’ *Annual Report* for 1948 and, more recently, in publications as varied as the Board of Governors’ semiannual *Monetary Policy Report to the Congress*, speeches by Federal Reserve officials and transcripts of Federal Open Market Committee meetings. The terms also frequently appear in the popular press. Unfortunately, despite widespread usage, there is no accepted definition of a soft patch.

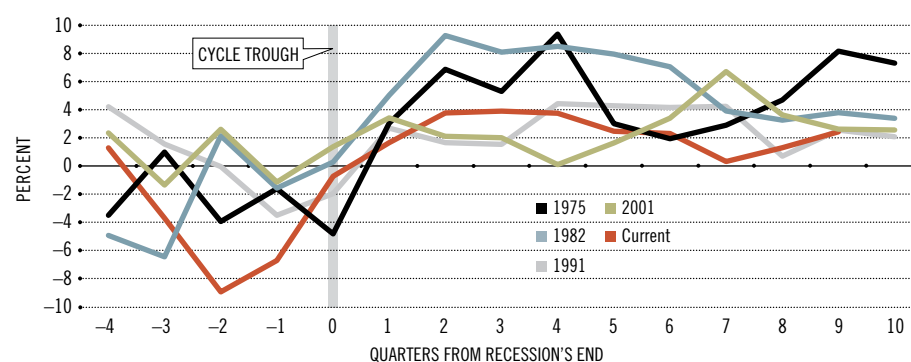
## A Look at Five Business Cycles

Rebounds in economic activity, when measured by growth of real GDP, are seldom smooth; temporary slowdowns are commonplace. These slowdowns, or soft patches, do not reliably foreshadow peaks in economic activity: During the past 60 years, there have been far more soft patches than business cycle peaks. Yet, fear is not baseless: All business cycle peaks since 1950 have been preceded by soft patches.

The paces of recovery following five recent business cycle troughs are shown in the

FIGURE 1

Period-to-Period Real GDP Growth



SOURCES: Bureau of Economic Analysis and authors' calculation.

TABLE 1

NBER Business Cycles since 1950

Business Cycle Expansion Dates	Length (quarters)
1950 Q1 – 1953 Q2	14
1954 Q3 – 1957 Q3	13
1958 Q3 – 1960 Q2	8
1961 Q2 – 1969 Q4	35
1971 Q1 – 1973 Q4	12
1975 Q2 – 1980 Q1	20
1980 Q4 – 1981 Q3	4
1983 Q1 – 1990 Q3	31
1991 Q2 – 2001 Q1	40
2002 Q1 – 2007 Q4	24
2009 Q3 –	NA

SOURCE: National Bureau of Economic Research.

figure. It shows the quarterly (that is, quarter-to-quarter) growth rate of real GDP, which is choppy in both business cycle expansions and contractions. Recoveries following cycle troughs in 1975, 1982 and 2007 (the current

recovery) displayed initial strong growth, followed by slowing after five quarters. Recoveries following troughs in 1991 and 2001 were shallow, and subsequent recoveries were milder. During the first three years of the five recoveries, temporary slowdowns lasting two consecutive quarters occurred 22 times and slowdowns of three consecutive quarters happened 17 times. None of these slowdowns foreshadowed a business cycle peak in the near term (although, of course, peaks eventually *did* occur).

Absent a widely accepted definition of a soft patch, we examined two possibilities:

(1) A soft patch occurs when the GDP growth rate during the current quarter and the immediately prior quarter (that is, the two most recent quarters) is less than during the quarter that preceded these two quarters (a two-quarter soft patch); and

(2) A soft patch occurs when the GDP growth rate during the current quarter and the two immediately prior quarters is less than during the quarter that preceded these three quarters (a three-quarter soft patch).

TABLE 2

**Soft Patches and Business Cycle Peaks**

Criterion	(1) Number of soft patches	(2) Business cycle peaks that occurred in final quarter of soft patch	(3) Business cycle peaks that occurred in the first quarter following a soft patch	(4) Business cycle peaks that occurred in the second quarter following a soft patch	(5) Business cycle peaks that occurred in the third quarter following a soft patch
<b>Two-quarter soft patch:</b> Growth in current and preceding quarter less than growth two quarters ago during an economic expansion	69	1953 Q2 1973 Q4 1980 Q1 1981 Q3 1990 Q3 2007 Q4	1957 Q3 1969 Q4 1973 Q4 2001 Q1	1960 Q2	1953 Q2 1980 Q1
<b>Three-quarter soft patch:</b> Growth in current and two preceding quarters less than growth three quarters ago during an economic expansion	52	1957 Q3 1969 Q4 1973 Q4 2001 Q1	1960 Q2	1980 Q1	1969 Q4 1990 Q3

NOTE: Calculations are based on economic expansions defined in Table 1 and quarterly growth rates of real GDP as published November 2011. Dates shown are business cycle peaks. Because the criteria for two- and three-quarter soft patches overlap, some peaks are preceded by both two- and three-quarter soft patches.


SOURCES: Bureau of Economic Analysis, National Bureau of Economic Research and authors' calculation.

We examined the 11 business cycle expansions that have occurred since 1950. (Dates of the expansions are shown in Table 1.) The 10 expansions prior to the current expansion averaged 20.1 quarters in duration; the briefest was four quarters, and the longest lasted 40 quarters.

Table 2 summarizes the analysis. Since 1950, during National Bureau of Economic Research (NBER) business cycle expansions, there have been 69 and 52 instances, respectively, of two- and three-quarter slowdowns (column 1). The frequency of soft patches overpredicts the frequency of business cycle peaks—there have been only 10 business cycle peaks.<sup>3</sup> Yet, since 1950, every business cycle peak has been closely preceded by a soft patch. With respect to two-quarter soft patches, six business cycle peaks occurred during the final quarter of two-quarter soft patches (column 2, first row), and four occurred during the following quarter (column 3, first row); note that the 1973:Q4 peak was preceded uniquely by both two- and three-quarter soft patches. With respect to three-quarter soft patches, four peaks occurred during the final quarter of a three-quarter soft patch (column 2, second row), and one occurred immediately

after a three-quarter soft patch (column 3, second row). On average, two- and three-quarter soft patches have preceded the last 10 business cycle peaks by 12.5 and 12.7 quarters, respectively.

**Nothing Hard and Fast about Soft Patches**

In brief, we find that soft patches—that is, slowdowns of real GDP growth lasting two or three quarters—are commonplace during economic expansions. Such slowdowns, however, are not reliable predictors of subsequent business cycle peaks (the start of recessions) despite approximately half of peak quarters being immediately preceded by a soft patch. Soft patches are far more numerous than cycle peaks, and the timing between soft patches and cycle peaks is imprecise. Fluctuations in GDP growth are common during economic recoveries, and soft spots do not necessarily foreshadow further slowing. 

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## ENDNOTES

<sup>1</sup> Most economic analysts accept the monthly and quarterly business cycle peak and trough dates determined by the National Bureau of Economic Research's Business Cycle Dating Committee. The time interval from a peak to a trough typically is referred to as a recession or contraction, and the period from a trough to a peak as an expansion or recovery. See [www.nber.org/cycles/main.html](http://www.nber.org/cycles/main.html)

<sup>2</sup> According to data as of mid-December 2011, during 2011:Q3, real GDP regained (and slightly exceeded) its 2007:Q4 cycle peak, and during November 2010, real consumer expenditure regained its December 2007 peak. Yet, industrial production and nonfarm private employment during November 2011 were 5.9 percent and 5.1 percent, respectively, below their December 2007 levels.

<sup>3</sup> Data revisions also erase soft patches. In July 1996 congressional testimony, Fed Chairman Alan Greenspan discussed 1995's soft patch. At that time, estimated GDP growth rates for 1995:Q1 to 1996:Q1 were 0.2, 0.1, 0.9, 0.1 and 0.5 percent, respectively. Current revised rates for the same period are 0.2, 0.2, 0.8, 0.7 and 0.7 percent. This article is based on published revised real GDP data as of mid-November 2011. An analysis of all soft patches based on the vintage data available at each historical date would be valuable but is beyond the scope of this analysis.

## REFERENCES

- Board of Governors of the Federal Reserve System. *Annual Report* (for 1948). June 1949. See [http://fraser.stlouisfed.org/publications/arfr/issue/4992/download/82678/arfr\\_1948.pdf](http://fraser.stlouisfed.org/publications/arfr/issue/4992/download/82678/arfr_1948.pdf)
- Board of Governors of the Federal Reserve System. *Monetary Policy Report to the Congress*. July 13, 2011. See [www.federalreserve.gov/monetarypolicy/files/20110713\\_mprfullreport.pdf](http://www.federalreserve.gov/monetarypolicy/files/20110713_mprfullreport.pdf)
- Federal Open Market Committee. Minutes of the meeting of May 3, 2005. See [www.federalreserve.gov/monetarypolicy/files/FOMC20050503meeting.pdf](http://www.federalreserve.gov/monetarypolicy/files/FOMC20050503meeting.pdf)
- Greenspan, Alan. Testimony before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, in conjunction with the *Monetary Policy Report to the Congress*. July 18, 1996. See [www.federalreserve.gov/boarddocs/hh/1996/july/testimony.htm](http://www.federalreserve.gov/boarddocs/hh/1996/july/testimony.htm)
- Greenspan, Alan. Testimony before the Committee on Financial Services, U.S. House of Representatives, in conjunction with the *Monetary Policy Report to the Congress*. July 20, 2005. See [www.federalreserve.gov/boarddocs/hh/2005/july/testimony.htm](http://www.federalreserve.gov/boarddocs/hh/2005/july/testimony.htm)