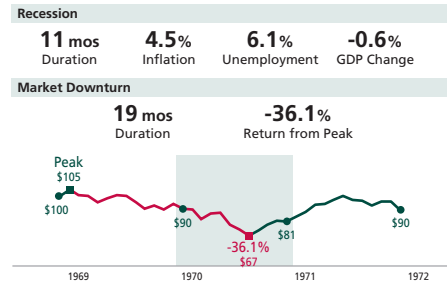


Recession	Recession Indicators						S&P 500 Downturn Price changes only (excluding dividends)				S&P 500 Recovery After Recessions Price changes only (excluding dividends)			
	Start Date	End Date	Duration (Months)	Inflation	Max Unemploy	Change in GDP	Peak Date	Trough Date	Duration (Months)	Peak to Trough	Before	After		
	3 Months	1 Year	3 Years	5 Years										
1 1969-1970	Dec 1969	Nov 1970	11	4.5%	6.1%	-0.6%	11/29/68	5/26/70	19	▼-36.1%	7.0%	7.8%	10.0%	4.6%
2 Oil Crisis	Nov 1973	Mar 1975	16	14.4%	9.0%	-3.2%	1/11/73	10/3/74	21	▼-48.2%	21.6%	23.3%	7.0%	22.5%
3 1980	Jan 1980	Jul 1980	6	6.3%	7.8%	-2.2%	2/13/80	3/27/80	2	▼-17.1%	14.5%	7.6%	33.6%	56.9%
4 1981-1982	Jul 1981	Nov 1982	16	7.2%	10.8%	-2.7%	11/28/80	8/12/82	14	▼-27.1%	15.9%	20.1%	45.9%	66.2%
5 Gulf War	Jul 1990	Mar 1991	8	3.4%	7.8%	-1.4%	7/16/90	10/11/90	5	▼-19.9%	13.6%	7.6%	18.8%	72.0%
6 Tech Boom and Bust	Mar 2001	Nov 2001	8	0.9%	6.3%	-0.3%	9/1/00	10/31/01	13	▼-30.3%	0.5%	-17.8%	3.0%	22.9%
7 Global Financial Crisis	Dec 2007	Jun 2009	18	1.8%	10.0%	-5.1%	10/9/07	3/9/09	16	▼-56.8%	15.2%	12.1%	48.2%	113.2%
8 Covid-19	Feb 2020	Apr 2020	2	-0.2%	14.7%	-19.2%	2/19/20	3/23/20	2	▼-33.9%	-9.7%	43.6%	-	-
Average			10.6	4.8%	9.1%	-2.2%*			11.5	▼-33.7%	9.8%	13.0%	23.8%	51.2%

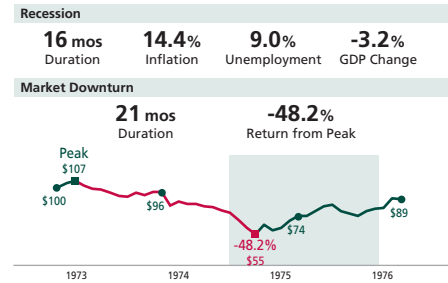
1 1969 – 1970

High inflation and a big jump in unemployment punctuated the 11-month recession that began in December 1969. A volatile stock market eventually lost 36.1% over 19 months.



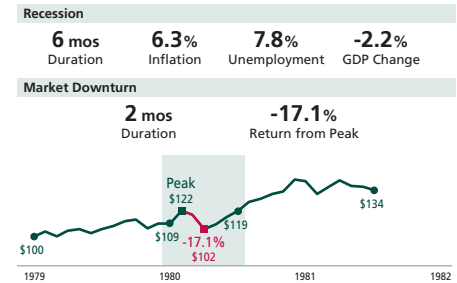
2 Oil Crisis

Inflation hit double digits during the 1973-1975 recession. The stock market lost nearly half its value in the first 11 months of the 16-month economic downturn.



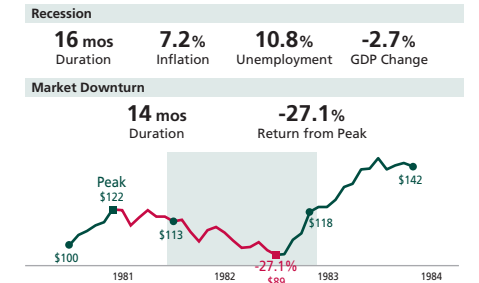
3 1980

A 17.1% stock market decline occurred early in 1980's 6-month recession, during which unemployment hit 7.6%. But the market finished the year with an impressive gain of 38.2%.



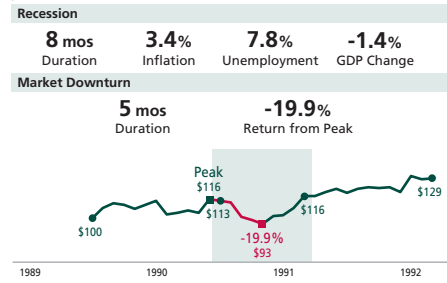
4 1981-1982

Historically high interest rates preceded a harsh recession that dragged on for 16 months and saw unemployment peak at 10.4%. The market slid 27.1% before beginning a long rally.



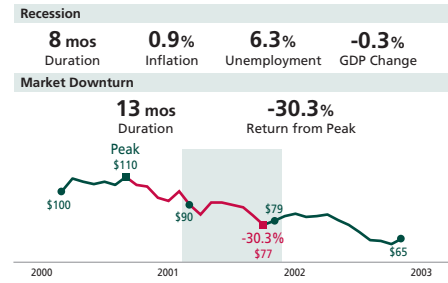
5 Gulf War

Stocks reacted negatively to the onset of the Gulf War in August 1990, dropping 19.9% over 5 months as the price of oil doubled. Stocks then began a 9-year bull market that peaked in the dot-com era.



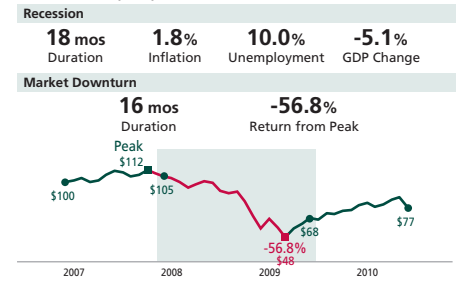
6 Tech Boom and Bust

Many investors may not realize that the stock market had started a deep decline before the relatively mild recession in March 2001, which followed the tech boom.



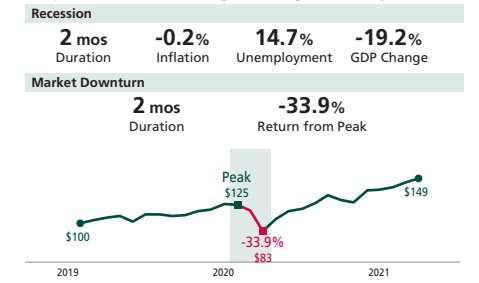
7 Global Financial Crisis

During the Global Financial Crisis, the S&P 500 dropped 57% over the course of an 18-month recession that saw unemployment hit 9.4%. Then, after falling for 16 months, the market started a nearly 11-year bull run.



8 Covid-19

The shortest recession in the past 100 years—and the deepest decline in GDP (-19.2%) since World War II—occurred in early 2020. The S&P 500 dropped 34% in 33 days before making a sharp rebound and recording a 16.3% gain for the year.



Sources: Recession dates, duration, change in GDP and unemployment: Wikipedia. Inflation: St. Louis Federal Reserve. Recession commentary: "Market Returns Through a Century of Recessions," Dimensional Fund Advisors. S&P 500 prices: Yahoo. All return percentages are price only (excluding dividends); recession charts are indexed to \$100 based on ±12 months before and after recession.

*Average GDP decline excludes Covid outlier of -19.2%.