

Sector	Shock Date	Max Drawdown (%)	Recovery Time (months)
Technology	1999-02-05 00:00:00	-12.8	2.0
Technology	1999-04-14 00:00:00	-11.84	2.2
Technology	1999-07-20 00:00:00	-12.15	3.7
Technology	2000-01-04 00:00:00	-11.72	1.2
Technology	2000-03-15 00:00:00	-5.39	0.1
Technology	2000-03-29 00:00:00	-82.05	206.0
Technology	2017-07-03 00:00:00	-5.02	0.5
Technology	2018-02-05 00:00:00	-10.38	0.7
Technology	2018-03-22 00:00:00	-9.43	2.4
Technology	2018-10-10 00:00:00	-23.78	5.8
Technology	2019-05-13 00:00:00	-10.46	1.3
Technology	2019-08-05 00:00:00	-8.46	2.7
Technology	2020-02-24 00:00:00	-31.15	3.5
Technology	2020-06-11 00:00:00	-5.73	0.4
Technology	2020-09-03 00:00:00	-12.69	3.2
Technology	2021-02-25 00:00:00	-9.21	1.4
Technology	2021-05-10 00:00:00	-8.45	1.4
Technology	2021-09-28 00:00:00	-7.13	1.0
Technology	2021-12-20 00:00:00	-5.14	0.2
Technology	2022-01-06 00:00:00	-33.56	17.5
Technology	2023-08-04 00:00:00	-10.94	3.4
Healthcare	1999-04-16 00:00:00	-7.93	0.2
Healthcare	1999-05-18 00:00:00	-15.53	7.3
Healthcare	2000-01-05 00:00:00	-5.01	0.2
Healthcare	2000-01-24 00:00:00	-33.27	65.7
Healthcare	2005-10-11 00:00:00	-7.78	2.4
Healthcare	2006-04-10 00:00:00	-9.85	4.7
Healthcare	2007-03-05 00:00:00	-5.13	1.3
Healthcare	2007-07-26 00:00:00	-8.21	4.2
Healthcare	2008-01-04 00:00:00	-39.17	40.3
Healthcare	2011-07-27 00:00:00	-17.33	5.8
Healthcare	2012-06-01 00:00:00	-5.91	0.6
Healthcare	2012-11-08 00:00:00	-6.53	2.1
Healthcare	2013-06-20 00:00:00	-5.2	0.7
Healthcare	2014-04-10 00:00:00	-7.01	1.8
Healthcare	2014-10-13 00:00:00	-7.75	0.5

Healthcare	2014-12-16 00:00:00	-5.18	0.8
Healthcare	2015-08-21 00:00:00	-17.09	18.6
Healthcare	2018-02-02 00:00:00	-12.79	6.5
Healthcare	2018-10-11 00:00:00	-8.71	1.7
Healthcare	2018-12-07 00:00:00	-15.44	10.9
Healthcare	2020-01-31 00:00:00	-28.4	5.5
Healthcare	2020-09-08 00:00:00	-6.99	1.1
Healthcare	2020-10-28 00:00:00	-6.82	0.2
Healthcare	2021-03-03 00:00:00	-6.5	1.4
Healthcare	2021-09-28 00:00:00	-8.09	2.6
Healthcare	2022-01-07 00:00:00	-10.56	3.0
Financials	1999-01-13 00:00:00	-10.78	1.7
Financials	1999-03-23 00:00:00	-5.26	0.5
Financials	1999-05-20 00:00:00	-26.5	12.6
Financials	2000-06-09 00:00:00	-11.53	1.9
Financials	2000-09-18 00:00:00	-14.07	3.3
Financials	2001-01-09 00:00:00	-36.64	36.7
Financials	2004-03-24 00:00:00	-10.2	8.4
Financials	2005-03-21 00:00:00	-9.13	3.8
Financials	2005-10-12 00:00:00	-5.25	0.5
Financials	2006-05-18 00:00:00	-7.76	3.9
Financials	2007-02-27 00:00:00	-8.32	2.4
Financials	2007-06-26 00:00:00	-82.69	122.1
Financials	2017-09-07 00:00:00	-5.95	0.4
Financials	2018-02-05 00:00:00	-24.66	21.2
Financials	2020-02-25 00:00:00	-42.86	10.5
Financials	2021-01-26 00:00:00	-7.98	0.6
Financials	2021-06-17 00:00:00	-8.42	1.8
Financials	2021-09-20 00:00:00	-6.01	0.6
Financials	2021-11-30 00:00:00	-7.58	1.2
Utilities	1999-02-04 00:00:00	-12.01	4.3
Utilities	1999-08-30 00:00:00	-23.98	12.5
Utilities	2000-09-20 00:00:00	-5.28	0.3
Utilities	2000-12-19 00:00:00	-52.27	50.6
Utilities	2005-10-06 00:00:00	-11.86	9.5
Utilities	2007-03-05 00:00:00	-5.1	0.5
Utilities	2007-06-06 00:00:00	-11.72	4.9
Utilities	2008-01-17 00:00:00	-46.48	53.7

Utilities	2012-09-12 00:00:00	-9.94	5.6
Utilities	2013-05-23 00:00:00	-12.04	8.9
Utilities	2014-07-30 00:00:00	-9.24	2.8
Utilities	2015-02-06 00:00:00	-15.69	13.2
Utilities	2016-04-21 00:00:00	-5.78	1.4
Utilities	2016-08-15 00:00:00	-12.43	7.3
Utilities	2017-12-19 00:00:00	-15.59	10.3
Utilities	2018-12-24 00:00:00	-8.66	2.0
Utilities	2019-11-11 00:00:00	-5.48	1.3
Utilities	2020-02-26 00:00:00	-36.07	17.5
Utilities	2021-09-17 00:00:00	-8.6	2.9
Utilities	2022-01-25 00:00:00	-9.15	1.4
Utilities	2022-04-26 00:00:00	-15.71	3.6
Energy	1999-01-14 00:00:00	-11.6	1.8
Energy	1999-05-18 00:00:00	-6.58	0.9
Energy	1999-06-25 00:00:00	-6.26	0.6
Energy	1999-07-26 00:00:00	-5.33	0.5
Energy	1999-08-30 00:00:00	-5.0	0.3
Energy	1999-09-21 00:00:00	-17.02	6.5
Energy	2000-04-17 00:00:00	-6.71	0.6
Energy	2000-06-05 00:00:00	-11.63	2.4
Energy	2000-09-21 00:00:00	-7.35	0.7
Energy	2000-10-18 00:00:00	-11.98	4.7
Energy	2001-03-14 00:00:00	-14.14	2.2
Energy	2001-06-07 00:00:00	-41.53	37.8
Energy	2004-08-06 00:00:00	-6.71	0.9
Energy	2004-10-19 00:00:00	-5.54	1.1
Energy	2004-12-02 00:00:00	-7.66	1.9
Energy	2005-03-10 00:00:00	-13.72	3.3
Energy	2005-08-17 00:00:00	-5.75	0.5
Energy	2005-10-04 00:00:00	-16.45	3.4
Energy	2006-02-07 00:00:00	-11.8	2.3
Energy	2006-04-27 00:00:00	-15.99	7.2
Energy	2007-01-03 00:00:00	-12.19	3.1
Energy	2007-07-26 00:00:00	-12.44	1.8
Energy	2007-10-22 00:00:00	-9.47	2.0
Energy	2008-01-08 00:00:00	-16.88	3.3
Energy	2008-05-01 00:00:00	-5.46	0.2

Energy	2008-05-27 00:00:00	-57.36	60.6
Energy	2013-06-20 00:00:00	-7.09	1.0
Energy	2014-01-27 00:00:00	-7.48	2.0
Energy	2014-08-01 00:00:00	-71.26	92.4
Energy	2022-03-15 00:00:00	-7.8	0.3
Energy	2022-04-22 00:00:00	-9.06	0.4
Energy	2022-05-09 00:00:00	-8.27	0.3
Energy	2022-06-13 00:00:00	-26.04	4.7
Energy	2022-11-28 00:00:00	-17.34	9.5
Consumer Discretionary	1999-03-23 00:00:00	-6.15	0.5
Consumer Discretionary	1999-05-06 00:00:00	-16.14	7.9
Consumer Discretionary	2000-01-04 00:00:00	-22.13	3.3
Consumer Discretionary	2000-04-14 00:00:00	-31.54	23.3
Consumer Discretionary	2002-04-02 00:00:00	-31.53	19.5
Consumer Discretionary	2004-03-11 00:00:00	-5.69	0.8
Consumer Discretionary	2004-05-07 00:00:00	-10.8	5.8
Consumer Discretionary	2005-01-24 00:00:00	-12.72	20.3
Consumer Discretionary	2007-02-27 00:00:00	-7.24	3.1
Consumer Discretionary	2007-07-26 00:00:00	-59.05	42.7
Consumer Discretionary	2011-03-16 00:00:00	-6.12	1.2
Consumer Discretionary	2011-06-06 00:00:00	-7.51	0.8
Consumer Discretionary	2011-08-01 00:00:00	-18.41	5.7
Consumer Discretionary	2012-05-14 00:00:00	-9.58	3.8
Consumer Discretionary	2012-11-14 00:00:00	-5.76	1.1
Consumer Discretionary	2013-06-24 00:00:00	-5.12	0.4
Consumer Discretionary	2013-08-27 00:00:00	-5.39	0.7
Consumer Discretionary	2014-01-27 00:00:00	-8.47	1.1
Consumer Discretionary	2014-03-27 00:00:00	-7.49	3.2
Consumer Discretionary	2014-10-09 00:00:00	-8.49	1.2
Consumer Discretionary	2015-01-15 00:00:00	-5.52	0.7
Consumer Discretionary	2015-08-21 00:00:00	-11.45	2.2
Consumer Discretionary	2015-12-18 00:00:00	-15.85	6.9
Consumer Discretionary	2016-11-01 00:00:00	-6.25	0.7
Consumer Discretionary	2018-02-05 00:00:00	-9.43	4.0
Consumer Discretionary	2018-10-10 00:00:00	-21.37	5.9
Consumer Discretionary	2019-05-13 00:00:00	-8.83	1.7
Consumer Discretionary	2019-08-02 00:00:00	-7.95	4.6
Consumer Discretionary	2020-02-25 00:00:00	-33.91	3.5

Consumer Discretionary	2020-06-11 00:00:00	-6.91	1.0
Consumer Discretionary	2020-09-08 00:00:00	-7.77	1.1
Consumer Discretionary	2020-10-28 00:00:00	-8.02	0.6
Consumer Discretionary	2021-01-29 00:00:00	-5.11	0.2
Consumer Discretionary	2021-02-25 00:00:00	-10.03	1.3
Consumer Discretionary	2021-05-12 00:00:00	-7.35	1.7
Consumer Staples	1999-01-14 00:00:00	-7.79	2.0
Consumer Staples	1999-04-06 00:00:00	-31.92	19.5
Consumer Staples	2001-01-03 00:00:00	-35.89	70.7
Consumer Staples	2007-07-31 00:00:00	-5.56	1.9
Consumer Staples	2008-01-15 00:00:00	-9.0	8.0
Consumer Staples	2008-09-23 00:00:00	-32.39	18.0
Consumer Staples	2010-05-20 00:00:00	-8.88	4.1
Consumer Staples	2011-08-02 00:00:00	-11.94	4.2
Consumer Staples	2012-11-08 00:00:00	-6.35	2.3
Consumer Staples	2013-06-05 00:00:00	-7.03	4.6
Consumer Staples	2014-01-31 00:00:00	-7.26	2.0
Consumer Staples	2014-07-31 00:00:00	-5.02	1.2
Consumer Staples	2015-08-21 00:00:00	-10.07	2.1
Consumer Staples	2015-11-12 00:00:00	-5.88	1.1
Consumer Staples	2016-01-15 00:00:00	-5.8	1.3
Consumer Staples	2016-09-09 00:00:00	-9.24	5.5
Consumer Staples	2017-07-11 00:00:00	-7.02	4.9
Consumer Staples	2018-02-05 00:00:00	-16.1	14.5
Consumer Staples	2020-02-27 00:00:00	-24.51	5.6
Consumer Staples	2020-09-21 00:00:00	-6.31	0.7
Consumer Staples	2020-10-28 00:00:00	-6.38	0.5
Consumer Staples	2021-01-29 00:00:00	-6.34	1.8
Consumer Staples	2021-09-30 00:00:00	-5.13	1.2
Consumer Staples	2022-02-24 00:00:00	-7.96	1.4
Industrials	1999-01-14 00:00:00	-6.81	1.8
Industrials	1999-05-25 00:00:00	-7.48	3.1
Industrials	1999-09-24 00:00:00	-15.95	6.7
Industrials	2000-04-14 00:00:00	-7.97	0.4
Industrials	2000-05-22 00:00:00	-11.41	2.7
Industrials	2000-09-18 00:00:00	-9.81	2.6
Industrials	2000-12-14 00:00:00	-43.52	48.3
Industrials	2005-01-21 00:00:00	-5.86	1.5

Industrials	2005-04-14 00:00:00	-7.71	7.3
Industrials	2006-05-23 00:00:00	-12.44	6.1
Industrials	2007-03-02 00:00:00	-5.62	1.6
Industrials	2007-07-27 00:00:00	-9.4	2.2
Industrials	2007-11-07 00:00:00	-62.26	42.3
Industrials	2011-05-24 00:00:00	-25.84	9.9
Industrials	2012-04-10 00:00:00	-12.16	8.1
Industrials	2013-06-24 00:00:00	-5.77	0.6
Industrials	2014-02-03 00:00:00	-6.93	1.0
Industrials	2014-07-31 00:00:00	-10.05	3.1
Industrials	2015-01-06 00:00:00	-5.43	1.4
Industrials	2015-06-29 00:00:00	-15.7	10.1
Industrials	2016-06-27 00:00:00	-6.57	0.4
Industrials	2018-02-05 00:00:00	-11.3	7.6
Industrials	2018-10-10 00:00:00	-24.11	9.6
Industrials	2019-08-05 00:00:00	-7.54	1.2
Industrials	2019-10-02 00:00:00	-6.16	0.9
Industrials	2020-02-25 00:00:00	-42.33	8.6
Industrials	2021-01-27 00:00:00	-6.3	0.8
Industrials	2021-06-18 00:00:00	-5.61	1.8
Industrials	2021-09-20 00:00:00	-6.99	1.5
Industrials	2021-11-30 00:00:00	-7.23	1.2
Industrials	2022-01-21 00:00:00	-21.64	17.0
Industrials	2023-09-13 00:00:00	-12.57	3.0
Materials	1999-01-14 00:00:00	-10.16	3.0
Materials	1999-05-18 00:00:00	-37.56	55.3
Materials	2004-01-23 00:00:00	-7.45	1.3
Materials	2004-03-10 00:00:00	-12.19	5.9
Materials	2004-10-13 00:00:00	-6.92	0.7
Materials	2005-01-24 00:00:00	-5.95	0.7
Materials	2005-03-23 00:00:00	-16.84	9.6
Materials	2006-05-17 00:00:00	-15.48	6.3
Materials	2007-03-02 00:00:00	-7.17	1.3
Materials	2007-07-26 00:00:00	-15.78	2.5
Materials	2007-11-09 00:00:00	-15.0	5.3
Materials	2008-05-01 00:00:00	-5.28	0.4
Materials	2008-05-27 00:00:00	-59.82	60.2
Materials	2013-06-20 00:00:00	-6.87	1.4

Materials	2014-01-24 00:00:00	-6.95	0.9
Materials	2014-10-07 00:00:00	-10.99	4.3
Materials	2015-03-17 00:00:00	-26.89	21.0
Materials	2018-02-02 00:00:00	-37.27	29.9
Materials	2020-09-21 00:00:00	-7.64	1.5
Materials	2021-01-26 00:00:00	-8.83	1.4
Materials	2021-06-16 00:00:00	-10.13	4.8
Materials	2021-11-30 00:00:00	-7.0	0.9
Materials	2022-01-21 00:00:00	-11.96	3.0
Real Estate	2015-11-09 00:00:00	-6.1	1.7
Real Estate	2016-01-13 00:00:00	-13.42	2.1
Real Estate	2016-05-18 00:00:00	-5.79	1.4
Real Estate	2016-09-09 00:00:00	-14.64	14.1
Real Estate	2018-01-10 00:00:00	-12.34	5.9
Real Estate	2018-10-03 00:00:00	-8.32	1.9
Real Estate	2018-12-17 00:00:00	-12.53	1.5
Real Estate	2019-11-05 00:00:00	-6.74	2.6
Real Estate	2020-02-27 00:00:00	-38.82	13.4
Real Estate	2021-09-24 00:00:00	-8.27	1.3