

How Long will a Portfolio Last?

#3. TRUE HYBRID. Sell only bonds for spending if stocks decline by 10% real return or more in a year. Use the resulting, greater mix of stocks as your design mix in the future.

Conclusion: 23 years of full withdrawals for spending.

Inputs
 Intial portfolio value 1,000
 Constant dollar (C\$) withdrawal for spending 44 "4.40% withdrawal rate"
 Initial Stock Mix 80%
 Total investing cost 0.10%

Spending Year	Withdrawal for spending in the next year	Portfolio at start of year after withdrawal	Portfolio Composition at start of year			Portfolio Value at end of year, net of investing cost			Percent decline from prior year initial value	Real Return*		
			Stocks	Bonds	Stock Mix	Stocks	Bonds	Total		Year	Stocks	Bonds
1	44.0	956.0	764.8	191.2	80%	658.8	174.8	833.6	-16.6%	1969	-13.8%	-8.5%
2	44.0	789.6	658.8	130.8	83%	648.0	141.8	789.8	-5.3%	1970	-1.6%	8.5%
3	44.0	745.8	622.2	123.5	83%	687.4	132.5	819.9	3.8%	1971	10.6%	7.4%
4	44.0	775.9	647.4	128.5	83%	744.2	130.9	875.1	6.7%	1972	15.1%	1.9%
5	44.0	831.1	693.5	137.7	83%	543.2	128.6	671.8	-23.2%	1973	-21.6%	-6.5%
6	44.0	627.8	543.2	84.6	87%	355.7	79.1	434.8	-35.3%	1974	-34.5%	-6.4%
7	44.0	390.8	355.7	35.1	91%	455.6	35.6	491.2	13.0%	1975	28.2%	1.4%
8	44.0	447.2	407.0	40.2	91%	480.7	44.0	524.7	6.8%	1976	18.2%	9.5%
9	44.0	480.7	437.5	43.2	91%	380.1	40.6	420.7	-19.8%	1977	-13.0%	-6.0%
10	44.0	376.7	376.7	0.0	100%	367.8	0.0	367.8	-12.6%	1978	-2.3%	-7.2%
11	44.0	323.8	323.8	0.0	100%	338.6	0.0	338.6	-7.9%	1979	4.7%	-10.5%
12	44.0	294.6	294.6	0.0	100%	347.0	0.0	347.0	2.5%	1980	17.9%	-11.0%
13	44.0	303.0	303.0	0.0	100%	264.2	0.0	264.2	-23.9%	1981	-12.7%	-3.0%
14	44.0	220.2	220.2	0.0	100%	257.4	0.0	257.4	-2.6%	1982	17.0%	-5.4%
15	44.0	213.4	213.4	0.0	100%	251.7	0.0	251.7	-2.2%	1983	18.1%	0.2%
16	44.0	207.7	207.7	0.0	100%	212.1	0.0	212.1	-15.7%	1984	2.2%	10.4%
17	44.0	168.1	168.1	0.0	100%	213.2	0.0	213.2	0.5%	1985	26.9%	21.1%
18	44.0	169.2	169.2	0.0	100%	198.3	0.0	198.3	-7.0%	1986	17.3%	18.5%
19	44.0	154.3	154.3	0.0	100%	155.4	0.0	155.4	-21.6%	1987	0.8%	-4.1%
20	44.0	111.4	111.4	0.0	100%	124.3	0.0	124.3	-20.0%	1988	11.7%	3.3%
21	44.0	80.3	80.3	0.0	100%	100.9	0.0	100.9	-18.8%	1989	25.8%	10.6%
22	44.0	56.9	56.9	0.0	100%	51.9	0.0	51.9	-48.5%	1990	-8.7%	1.7%
23	44.0	7.9	7.9	0.0	100%	10.0	0.0	NOT ENUF	#VALUE!	1991	26.6%	13.9%
										1992	4.6%	4.6%
										1993	7.1%	11.7%

Downward spiral to depletion.

\$51.9 at the end of year 22 allows for a full withdrawal for spending in year 23. Not enough at the end of year 23 for a full withdrawal for the

* Data Source: Stocks, Bonds, Bills and Inflation. Ibbotson, et al. I used returns for Large Company stocks – the S&P 500 – and the average of Long-term and Intermediate-term Government Bonds.