The MATH of RETIREMENT

Average Return vs. Consistency of Return

Hans
$1,000,000

Year	Withdrawal	Return	End Value
1	$50,000.00	-13%	$826,500.00
2	$50,000.00	-20%	$661,200.00
3	$50,000.00	5%	$694,260.00
4	$50,000.00	-7%	$599,161.80
5	$50,000.00	20%	$658,994.16
6	$50,000.00	25%	$761,242.70
7	$50,000.00	-25%	$533,432.03
8	$50,000.00	45%	$700,976.44
9	$50,000.00	30%	$846,269.37
10	$50,000.00	20%	$908,060.56

Return Average: 8%, Std Dev: 23

Franz
$1,000,000

Year	Withdrawal	Return	End Value
1	$50,000.00	6%	$1,007,000.00
2	$50,000.00	8%	$1,087,560.00
3	$50,000.00	7%	$1,163,689.20
4	$50,000.00	11%	$1,236,195.01
5	$50,000.00	-4%	$1,138,747.21
6	$50,000.00	6%	$1,154,072.04
7	$50,000.00	12%	$1,236,560.69
8	$50,000.00	-2%	$1,162,829.48
9	$50,000.00	10%	$1,224,112.42
10	$50,000.00	6%	$1,244,559.17

Return Average: 6%, Std Dev: 5

WHAT IS RISK?

Average Return (mean): 8%, Standard Deviation: 10

What does this mean?

68% of the time: You will have a one year return between -2% and 18%.
95% of the time: You will have a one year return between -12% and 28%.
99% of the time: You will have a one year return between -22% and 38%.