How Much to Save Tests

# 1970 > 1975; S&P 500; withdraw: 30,000; initial: 500,000

Start of 1970: $500,000

During 1970:

Starting Balance: $500,000

Inflation: %5.57

Market Change: %4.01

Interest Adjusted Withdrawal: $30,000 \* (100 + 5.57) / 100 = $31,671.00

Balance after withdrawal: $500,000 – $31,671.00= $468,329.00

Balance after market change: $468,329 \* (100 + 4.01) / 100 = $487,109

Actual Balance: $487,109

Inflation Adjusted Balance: $487,978 / (100 + 5.57) \* 100 = $**461,409**

During 1971:

Starting Balance: $487,109

Inflation: %3.27

Market Change: %14.31

Interest Adjusted Withdrawal: $31,671.00 \* (100 + 3.27) / 100 = $32,706.64

Balance after withdrawal: $487,109– $32,706.64 = $454,402.36

Balance after market change: $454,402.36 \* (100 + 14.31) / 100 = $519,427.34

Actual Balance: $519,427

Inflation Adjusted Balance: $519,427.34 / (100 + 3.27) \* 100 = $**502,980**

During 1972:

Starting Balance: $519,427

Inflation: %3.41

Market Change: %18.98

Interest Adjusted Withdrawal: $32,706.64 \* (100 + 3.41) / 100 = $33,821.94

Balance after withdrawal: $519,427 – $33,821.94 = $485,605.06

Balance after market change: $485,605.06 \* (100 + 18.98) / 100 = $577,772.90

Actual Balance: $577,773

Inflation Adjusted Balance: $577,772.90 / (100 + 3.41) \* 100 = $**558,721**

During 1973:

Starting Balance: $577,773

Inflation: %8.71

Market Change: %-14.66

Interest Adjusted Withdrawal: $33,821.94 \* (100 + 8.71) / 100 = $36,767.83

Balance after withdrawal: $577,773 - $36,767.83 = $541,005.17

Balance after market change: $541,005.17 \* (100 + -14.66) / 100 = $461,693.81

Actual Balance: $461,694

Inflation Adjusted Balance: $461,693.81 / (100 + 8.71) \* 100 = $**424,702**

During 1974:

Starting Balance: $461,694

Inflation: %12.34

Market Change: %-26.47

Interest Adjusted Withdrawal: $36,767.83 \* (100 + 12.34) / 100 = $41,304.98

Balance after withdrawal: $461,694 - $41,304.98 = $420,389.02

Balance after market change: $420,389.02 \* (100 + -26.47) / 100 = $309,112.05

Actual Balance: $309,112

Inflation Adjusted Balance: $309,112.05 / (100 + 12.34) \* 100 = $**275,158**

During 1975:

Starting Balance: $309,112

Inflation: %6.94

Market Change: %37.20

Interest Adjusted Withdrawal: $41,304.98 \* (100 + 6.94) / 100 = $44,171.55

Balance after withdrawal: $309,112 - $44,171.55 = $264,940.45

Balance after market change: $264,940.45\* (100 + 37.20) / 100 = $363,498.30

Actual Balance: $363,498.30

Inflation Adjusted Balance: $363,498.30 / (100 + 6.94) \* 100 = $**339,909**

# 2015 > 1955; S&P 500; withdraw: 100; initial: 1000

Start of 2015: $1000

During 2015:

Starting Balance: $1000

Inflation: %0.72

Market Change: %1.38

Interest Adjusted Withdrawal: $100 \* (100 + 0.72) / 100 = $100.72

Balance after withdrawal: $1,000 – $100.72 = $899.28

Balance after market change: $899.28 \* (100 + 1.38) / 100 = $911.69

Actual Balance: $911.69

Inflation Adjusted Balance: $911.69 / (100 + 0.72) \* 100 = $**905**

During 2016:

Starting Balance: $911.69

Inflation: %2.07

Market Change: %11.96

Interest Adjusted Withdrawal: $100.72 \* (100 + 2.07) / 100 = $102.80

Balance after withdrawal: $911.69 – $102.80 = $808.89

Balance after market change: $808.89 \* (100 + 11.96) / 100 = $905.63

Actual Balance: $905.63

Inflation Adjusted Balance: $905.63 / (100 + 2.07) \* 100 = $**887**

During 2017:

Starting Balance: $905.63

Inflation: %2.11

Market Change: %21.83

Interest Adjusted Withdrawal: $102.80 \* (100 + 2.11) / 100 = $104.97

Balance after withdrawal: $905.63 – $104.97 = $800.66

Balance after market change: $800.66 \* (100 + 21.83) / 100 = $975.44

Actual Balance: $975.44

Inflation Adjusted Balance: $975.44 / (100 + 2.11) \* 100 = $**955**

RESETS BACK TO START OF DATA (1950)

During 1950:

Starting Balance: $975.44

Inflation: %5.93

Market Change: %31.71

Interest Adjusted Withdrawal: $104.97 \* (100 + 5.93) / 100 = $111.19

Balance after withdrawal: $975.44 – $111.19 = $864.25

Balance after market change: $864.25 \* (100 + 31.71) / 100 = $1,138.30

Actual Balance: $1,138.30

Inflation Adjusted Balance: $1,138.30 / (100 + 5.93) \* 100 = $**1075**

During 1951:

Starting Balance: $1138.30

Inflation: %6

Market Change: %24.02

Interest Adjusted Withdrawal: $111.19 \* (100 + 6) / 100 = $117.86

Balance after withdrawal: $1138.30 – $117.86 = $1020.44

Balance after market change: $1020.44 \* (100 + 24.02) / 100 = $1265.55

Actual Balance: $1265.55

Inflation Adjusted Balance: $1265.55 / (100 + 6) \* 100 = $**1194**

During 1952:

Starting Balance: $1265.55

Inflation: %0.75

Market Change: %18.37

Interest Adjusted Withdrawal: $117.86 \* (100 + 0.75) / 100 = $118.74

Balance after withdrawal: $1265.55 – $118.74 = $1146.81

Balance after market change: $1146.81 \* (100 + 18.37) / 100 = $1357.48

Actual Balance: $1357.48

Inflation Adjusted Balance: $1357.48 / (100 + 0.75) \* 100 = $**1347**