

PFPL570—Portfolio Management for Personal Financial Planners, Case Study: Smiths

You will be using and referring to this case study in your weekly Assignments.

Case Study: John & Susan Smith

Adapted and modified from CFA Examination Level III

You are a portfolio manager in the Trust Department of BigBanc. You have been asked to review the investment portfolios of prospective clients, John and Susan Smith, who are retiring at the end of this month. To assist you, the Smiths have provided the following background information. They have also completed the bank's risk tolerance questionnaire.

Family

We live alone. Our only daughter and granddaughter are financially secure and independent. However, we would like to leave a bequest to our granddaughter for the benefit of her and subsequent generations.

Health

We are both 65 years of age and in good health. Our medical costs are covered by Medicare health insurance via a Medicare advantage plan which includes coverage for drug costs.

Employment

Prior to retirement at age 65, John was a full-time senior executive of a private company, and his net after-tax salary had been sufficient to pay all our fixed and variable expenses. Susan is a full-time homemaker.

Housing

Our house needs major renovation. The work will be completed within the next six months, at an estimated cost of \$200,000. The current value of our house is \$750,000, and it is fully paid.

Expenses

Our annual after-tax living costs, after John's retirement, are expected to be \$150,000 (including the cost of Medicare premiums); we expect these costs to rise with inflation, at 3% annually. To account for inflation, we would like our family portfolio to grow by the inflation rate, plus the total return required to meet our cash flow shortfall in the first year, and plus the 1% cushion noted in the Financial Goals section.

Income

John expects a fixed annual pension payment of \$75,000 (after taxes), which will continue for both our lifetimes. We also expect cash flow from the Gift Fund (Structured as a Charitable Annuity Trust with annuity payments taxed to us) and the Smith Family Portfolio (described below). We would like to postpone taking Social Security until age 70.

Financial Goals

Our primary objective is to maintain our financial security and support our current lifestyle, adjusted for inflation. In addition to the supplemental cash flow required from our Smith Family Portfolio, we would like a contingency cushion of an additional 1% real growth in our family portfolio. We recently gifted \$1 million to our local college (the Gift Fund). We completed the \$1 million gift to the college by creating a Gift Fund this year (Charitable Remainder Annuity Trust). A secondary objective is to leave a bequest to

our grandchild from the Smith Family Portfolio. Preserving as much of the remaining assets as is possible from the Smith Family Portfolio for our granddaughter is important to us.

Taxes

Our earned income, retirement income, interest and other ordinary income is taxed at an average rate of 25%. Dividends and capital gains are taxed at 15%.

General Comments

We need someone like you to develop a comprehensive plan for us to follow as well as continuously monitor and advise on our investment portfolio. Until now, we have invested only in companies with which we are familiar, have invested primarily in dividend paying stocks, and have not been willing to sell a security for less than we paid for it; we realize that we may have to change our approach when we hire a professional investment manager, especially given that we have read that our joint life expectancy is likely more than 30 years and that future returns may be lower than past returns in both U.S. bonds and stocks.

Liquid Assets

We use these accounts for day-to-day living expenses. We also consider these accounts to be our emergency fund. We do not want to include these assets in the portfolio you are developing for us. Currently we have the following account balances:

- Savings: \$48,000.
- Checking: \$26,000.

Investment Assets

We have the following investment accounts from which we will receive cash flow:

- The Gift Fund (\$1 million) represents our gift to the college. During our remaining lifetimes, we will receive a fixed annual payment of \$40,000 (taxable as ordinary income) from the Gift Fund. Except for the annual payments to us, the Gift Fund is managed solely for the benefit of the college—we may not make any other withdrawals of either income or principal. Upon our deaths, all assets remaining in the Gift Fund will be transferred into the college's endowment.
- The Smith Family Portfolio
 1. Investment Portfolio of \$1.2 million represents the remainder of our lifetime savings that is not being held in retirement accounts. We do not expect to add any additional amounts to that portfolio in the future. The portfolio is invested entirely in what we consider safe securities.
 2. \$230,000 in John's 401(k), invested entirely in a stable value fund though John can largely invest in mutual funds in his 401(k), and is seeking guidance on which investment(s) he should consider (Exhibit 2).
 3. \$86,000 in Susan's IRA, invested entirely in the Vanguard PrimeCap Fund, which Susan wants to keep.

Liabilities

None. We just finished paying off our home mortgage, and we pay credit card balances each month as they come due.

Exhibit 1: Smith Family Portfolio (Not including the Gift Fund assets)

Smith Family Portfolio (Investment Portfolio, John's 401(k), and Susan's IRA): \$1,516,000

	Symbol	Yield	Cost Basis	Current FMV	Est. Income
Cash 7.5%					
Schwab Value Advantage MMF		0.10%		\$ 113,000	\$ 115
Stable Value 15.2%					
Stable Value Fund - John's 401(k)		0.25%		\$ 230,000	\$ 575
Individual Stocks 17.2%					
Financial Services 3%					
Wells Fargo Bank	WFC	2.80%	\$ 25,000	\$ 21,000	\$ 588
Citigroup	C	0.40%	\$ 32,000	\$ 24,000	\$ 96
Energy 6.3%					
Exxon Mobil	XOM	3.80%	\$ 32,000	\$ 35,000	\$ 1,330
Kinder Morgan	KMI	13.50%	\$ 123,000	\$ 60,000	\$ 8,100
Utilities 2.6%					
Duke Energy	DUK	4.75%	\$ 35,000	\$ 39,000	\$ 1,853
Consumer Retail 5.3%					
YUM Brands	YUM	1.65%	\$ 27,000	\$ 46,000	\$ 759
Starbucks	SBUX	1.35%	\$ 17,000	\$ 35,000	\$ 473
Stock Funds 8.6%					
Vanguard PrimeCap-Susan's IRA	VPMCX	1.00%		\$ 86,000	\$ 860
S&P Low Volatility	SPLV	2.32%	\$ 40,000	\$ 44,000	\$ 1,021
Real Estate 4.4%					
iShares Residential Plus	REZ	3.20%	\$ 48,500	\$ 67,000	\$ 2,144
Alternatives 1.9%					
ProShares Ultra Short Gold	GLL		\$ 31,500	\$ 29,000	
Individual Bonds 28.4%					
US 1 Year Treasury Bill		4.49%	\$ 196,996	\$ 200,000	\$ 8,980
US 10 Year Treasury Note		3.60%	\$ 228,691	\$ 230,000	\$ 8,280
Bond Funds 17.6%					
Fidelity New Markets Income	FNMIX	5.10%	\$ 43,000	\$ 66,000	\$ 3,366
PIMCO ETF 15+ YR US TIPS	LTPZ	0.70%	\$ 110,000	\$ 114,000	\$ 798
Vanguard Total Bond Index	VBMFX	2.40%	\$ 52,000	\$ 77,000	\$ 1,848
TOTALS				\$ 1,516,000	\$ 41,186

An Excel file of this portfolio is also provided.

Exhibit 2: The Investment Options for John's 401(k)

John Smith's 401(k) Options

Asset Category	Investment
Stable Value	Putnam Stable Value Fund
Bond	Western Asset Core Plus Bond I (WACPX) PIMCO Income Institutional (PIMIX)
Lifestyle/Pre-mix	American Century One Choice 2040 Institutional (ARDSX)
Large U.S. Equity	RidgeWorth Large Cap Stk Fund (STCAX) JP Morgan Equity Income Select (HLIEX) JP Morgan Equity Income R5 (OIERX)
Bond Index	BlackRock US Total Bond Index Fund (WFBIX)
Mid Cap Growth	Goldman Sachs Growth Opp IR (GGOTX) Eaton Vance Atlanta Capital SM (EISMX)
Small Cap Growth	Invesco Small Cap Growth Y (GTSYX)
Small Cap Blend	JP Morgan Small Cap Core Select (VSSCX)
Foreign Large Value	Oakmark International Value Fund (OAKIX)
Foreign Large Growth	American Funds Europac Gr R5 (RERFX)
Diversified Emerging	Oppenheimer Developing Mkts Y (ODVYX)
Specialty—Real Estate	Cohen & Steers Realty Shares Fund (CSRSX)

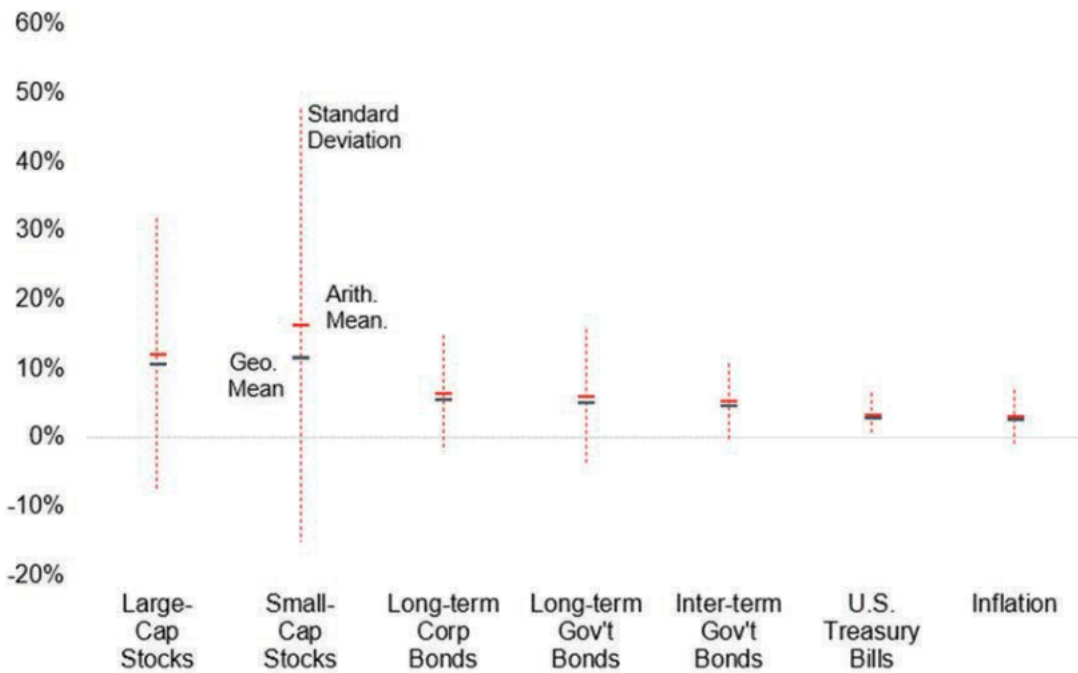
Exhibit 3: BigBanc Risk Tolerance Questionnaire For John and Susan Smith (Their answers in red)

Investing always involves risk. So does not investing – if you fail to invest for the future, you are subject to inflation risk. The risk is that your accumulated savings will not be sufficient to meet your desired level of spending. Risk and return are also related. The higher the risk in an investment (say stocks, for example), the higher its return is expected to be over time (to compensate you for that risk). Risk is mainly subjective – what level of risk in your investment portfolio would cause you to not sleep at night/worry about retirement? We can assess your risk tolerance in a couple of ways. One would be your subjective assessment as to how you feel about risk relative to others your age.

1. **Do you feel that you are more or less comfortable with risk relative to others your age? We feel that our risk tolerance is similar to others at this early retirement stage**
2. **If you had to put a number on it from 0 to 100, where 50 is the average for someone your age, what would that number be? 50**

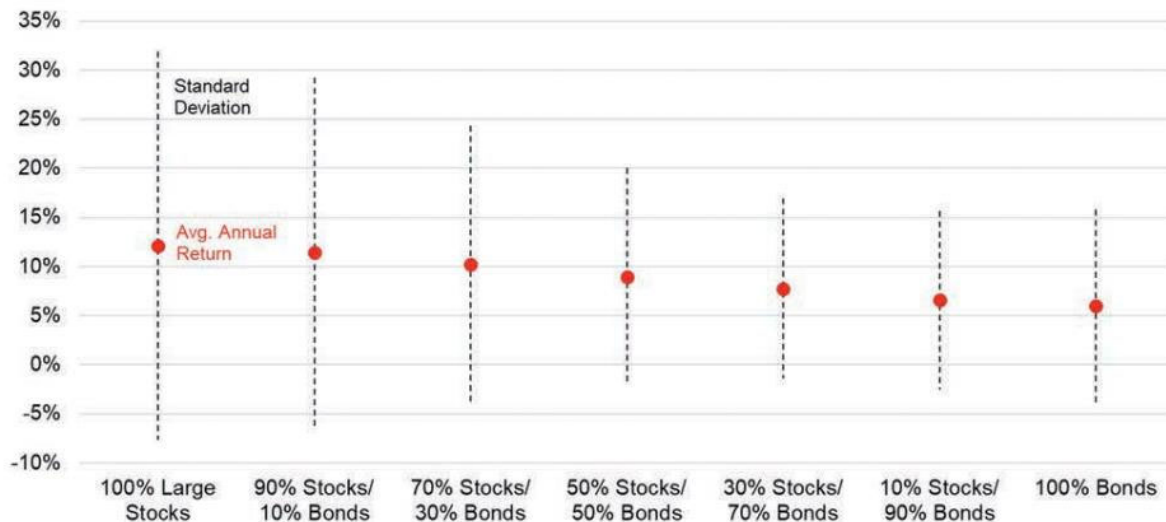
A more precise way of looking at it is how much return and risk are associated with typical investments over time. For example, the graphic below shows the average and range of returns from investing in stocks and bonds over the most extended period that suitable data is available.

Exhibit 2.4: Basic Series, Summary Statistics of Annual Total Returns (%) 1926–2020⁹⁴



Risk is shown by the height of the dotted lines. Note that on average, investing in a portfolio of large company stocks had an average return of about 10% per year during this almost 100-year period. The annual range of returns (risk) was from minus 10% to plus 30%. Small-company stocks had a higher average return but a much larger range from about minus 15% to almost plus 50%. Various types of bonds had lower average returns but relatively little annual variability. This gives you an idea of the risk on investing in different types of investments. However, we would never recommend investing in just one of these groups. Instead, you should have a diversified portfolio that includes stocks, bonds and other types of investments. Using the same types of data here are some typical portfolios with a mix of stocks and bonds:

Exhibit 2.8: Average Annual Return and Standard Deviation of Large-Cap Stock and Long-Term Government Bond Portfolios (1926–2020)



Note for example that a portfolio of 70% stocks and 30% bonds still had an average return of about 10% but a much smaller range of possible annual returns (minus 5% to plus 24%). 50% stocks and 50% bonds had a lower return and correspondingly lower risk. Please note that historically returns have been high in the last 10 years – above average. Given this situation and the current high valuation of the market, expectations for both stocks and bonds are lower going forward (for example I would expect stock returns in the range of 6-8% for the next decade).

- Given the graphic above what mix of stocks and bonds would you feel would enable you to feel secure about your future goals and be able to sleep at night? Feel free to chose from the graphic immediately above or something in between possibilities on the graphic. For example, 60% Stocks and 40% bonds. **We would be most secure somewhere in the middle three figures in this chart – somewhere between 30% and 70% stocks.**

Lastly, extreme situations have been know to occur such as 2008 when stocks, bonds and other investments all declined at once. Even a diversified portfolio dropped in value by about 25% during that year. Here is the range of outcomes for different allocations:

Allocation	Loss
20% Stocks/80% Bonds	-3%
30% Stocks/70% Bonds	-8%
40% Stocks/60% Bonds	-12%
50% Stocks/50% Bonds	-16%
60% Stocks/40% Bonds	-20%

70% Stocks/30% Bonds	-24%
80% Stocks/20% Bonds	-29%
90% Stocks/10% Bonds	-33%
100% Stocks/0% Bonds	-37%

4. What is the maximum loss in percentage terms you would feel comfortable with in any one year? This is the level at which you would be concerned but would not be inclined to make rash decisions (sell everything at the worst possible moment). **We would start to get concerned with losses of over 10% and would be extremely concerned with losses of 20% or more.**

