

2017 Personal Finance Case Study

March 28, 2017

*Your team focuses on providing clients with comprehensive financial planning and serves the clients in a fiduciary capacity. Jasmin and Chris Smith (and their two sons Aiden and Jalen) were referred to your firm by a current client who praised your ability to consider all available information and provide families with a number of options so that they may best meet their goals*

*In your first meeting with the Smiths you learn the facts below and complete parts of the attached balance sheet and budget. Use all of the information provided to assist the Smith family in reaching their financial goals and improving their financial well-being.*

**Financial Goals**

First, Chris and Jasmin Smith have three primary goals for which they would like your assistance researching, analyzing, and building some strategies to achieve. Ordered from most important to least:

1. Manage their cash flow and debt level
2. Provide at least some financial assistance to both children for their education
3. Fund or at least maintain their retirement accounts while also taking on the added expense of the two children in college.

Second, after determining the amount of money they can anticipate from their parents, Aiden and Jalen want to know their best options for obtaining a college degree or other meaningful credential with any outstanding debt at a manageable level. They would also like some understanding of what they will have to do to pay off the debt.

**Personal Information**

Jasmin and Chris Smith were both students at Virginia Tech when they met and were married shortly after graduation. Now age 47 and 45, respectively, they live in Portsmouth, Virginia and have two sons, Aiden and Jalen. Aiden, 19, is a sophomore at UVA pursuing a double major in economics and philosophy with the intention of continuing into law school. Jalen, 16, is a sophomore in high school who had expected a basketball scholarship to his dream school, Duke, in the next few years.

The Smith family had previously established a life in McLean, Virginia but when the housing crisis hit in 2008 they realized that the northern Virginia lifestyle was no longer an option for them. Deciding that the best option was to move to a more affordable part of the state, they were forced to do a short sale on their house since they owed the bank more than what it was worth. At that time, with the children only 8 and 10, Jasmin and Chris wanted to move closer to Jasmin’s parents who could help with child care. They decided on Portsmouth. As they began the housing search they realized that their savings had been depleted so much due to the short-sale and moving expenses that they could not afford a down payment on a new house and were forced to rent instead for $1,500/month.

As far as their careers, Jasmin could only secure part-time work as a Registered Nurse at MaryView Hospital making $30,000/year. She is hoping to go back to school to earn her Certified Registered Nurse Anesthetist (CRNA) credential, for which the average salary is about $135,000. Chris, who was extremely successful as a mechanical engineer in DC, was forced to take a pay cut due to their relocation since the only job available within his company was at a lower management level. He is currently making $90,000 annually, and fortunately he was able to remain with his employer’s 401k retirement plan at the new location. He is currently putting $6,000 a year into his retirement plan, and his employer is matching his contribution to a 3% maximum, in this case $2,700. The employer also offers health insurance; Chris chose a comprehensive health plan to cover him and his family. The employer also pays for a group term-life policy.

Life had been going along well, despite being unable to save enough for a down payment on a new home. But now, the Smiths have to face a few more difficult decisions. Jalen who was naturally talented in basketball has torn his ACL for a second time and is realizing that his scholarship dreams are over. Several years earlier, the grandparents had set up a 529 plan for Jalen’s older brother Aiden, who was able to receive a partial academic scholarship, but now they will have to determine a way to share that money between the two children. Aiden, although doing well in school, has gotten himself into some trouble as well. Upon receiving his first credit card, for which his father, Chris, was a co-signor, he rapidly accumulated over $5,000 in debt in the past year and is facing the consequences of not being able to meet even the minimum monthly payment. Now, he and his roommates are looking for housing for next year but are having trouble because of Aiden’s bad credit score. Chris and Jasmine have been giving theirs boys a monthly allowance to assist with their expenses: $225 a month for Aiden and $100 per month for Jalen.

**Economic Assumptions**

The economy has been steadily recovering ever so slowly since the financial crisis in 2008. Some studies show that Americans are just now in 2016 getting back to where they were. Inflation has been low at about 2% and is expected to stay at that rate for the foreseeable future.

**Retirement Investments**

Chris and Jasmin plan on retiring at 65 and 67, respectively. Chris and Jasmin were previously invested moderately aggressively at Fidelity. However, they have decided to reduce their risk exposure and are now invested much more moderately. You forecast that they will make a return of 5% with the portfolio changes made.

* MaryView 401(k): $7,700 (vested balance of $5,900)
* Northstar 401(k): $387,000 (100% vested)
* Roth IRA (converted from traditional in 2010): $55,000 (conversion basis is $32,000)
* Traditional IRA: $38,000

**Financial/Investable Assets**

* Bank of America checking account: $7,600
* Bank of America savings account: $15,000
* Fidelity brokerage account (Chris): $17,000
* Fidelity brokerage account (Jasmine): $31,000

**Use/Personal Assets**

* 2008 Ford Edge: $4,000
* 2009 Honda Civic: $13,000
* 2010 Mercedes S550: $23,000

Jasmin drives the Honda Civic that was purchased in 2012 for $22,500. They made a $5,000 down payment and financed the rest for 6 years at 3% APR. Chris drives the 2010 Mercedes S-550. Jasmin and Chris also purchased Aiden a used Ford Edge a few years ago.

**Liabilities**

* 2009 Honda Civic:
  + They know they have exactly 24 payments remaining, but could not find the loan balance or current payment amount.
* Bank of America Visa:
  + $7,750 balance with a $250 minimum monthly payment – they try to pay at least $350 per month, but with helping out Aiden with his credit card debt it is getting harder to pay extra.
* Parent Plus Education Loan:
  + $6,200 taken out one year ago at 6.84% APR to help Aiden with tuition. They do not know the current balance and there is no current payment as the loan payment is in deferment as long as Aiden is in school.

**Life Insurance**

Chris’s employer offers a group term-life insurance policy with a death benefit double his salary. Chris also pays $35 per month for an individual 15-year, term-life insurance policy with a $300,000 death benefit which he bought when he was 40 years old.

**Health Insurance**

Chris’s employer offers a variety of health insurance plans. Currently Chris has chosen a family plan that covers both children until they turn 26. The total monthly premium is $880. The employer pays $300 per month and Chris has the other $580 withheld on a pre-tax basis from his semi-monthly paycheck.

**Auto Insurance**

Chris and Jasmin have an auto insurance policy for their three cars that cover all four drivers. They pay $287 monthly for all 3 cars.

* Coverage – “Split-limit” 100k/300k/100k (The same limits apply for “uninsured” motorist)
* Collision and Comprehensive with deductibles of $750

**Renters Insurance**

Since they do not currently own a home and are renting an apartment, the Smiths are paying $30 a month for coverage.

**Education Planning**

Jasmin’s parents funded a Virginia *inVEST* 529 account for Aiden in 2011 with $39,000. This amount was equal to three years of the annual funding limit of $13,000 and since her father had just turned 70 her parents could receive a VA state tax deduction for the amount of the contribution. That account has done very well and even after a withdrawal last year for some of Aiden’s expenses the account is worth $52,000.

Aiden has a partial (1/2) scholarship for his college tuition which covers half of his tuition for four years as long as he retains a 3.5 grade point average. No funds have been specifically saved for Jalen to go to college and an athletic scholarship is no longer a possibility. Also, Jalen is considering either starting out at a community college or a local four-year university instead of going away to school as living at home would reduce his anticipated education expenses, combined with the fact that he does not yet know what he wants to study.

Local community college: $176.60 per credit hour

The approximate annual tuition for in-state students at some selected universities in Virginia is:

* George Mason (GMU) is $11,300
* James Madison (JMU) is $10,390
* Old Dominion (ODU) is $10,000 (based on 30 credits)
* University of Virginia (UVA) is $15,700
* University of Virginia at Wise (UVaWise) is $9,539
* Virginia Commonwealth (VCU) is $13,130
* University of Mary Washington (UMW) is $11,570
* Virginia Tech (VT) is $12,800
* Lynchburg College (LC) is $35,650
* University of Richmond (UR) is 49,420

These amounts do not reflect any grants or scholarships available from the university/college or the Commonwealth of Virginia.

Stafford Subsidized Loan: 3.76% APR

Stafford Unsubsidized Loan: 3.76% APR

Direct PLUS Loan: 6.31% APR

**OVERALL RESPONSE TO THE SMITHS**

1. What would you advise Chris and Jasmin Smith to do to meet their goals?
2. If you find that all of their goals together are unattainable, what recommendations or alternatives would you suggest?
3. Once you have determined a specific amount that each child can expect to get from their parents to support their higher education, using the facts as presented, provide a plan for Aiden and one for Jalen that allows them to obtain a college degree or other meaningful credential, but keeps their outstanding debt at a manageable level. What advice do you have for each of them regarding actions they should or could take in response to the anticipated debt based on your plan?

**Cash Flow and Debt Planning**

Once a planner gets to know their client and has agreed to work together, the next step in the planning process is to analyze the clients’ current situation. To that end, fill-in the missing information in their income statement and balance sheet to determine the Smith’s available discretionary cash flow (unallocated income) and their net worth (how much their assets are worth after deducting any liabilities).

* Step one: Transfer all asset and liability information from the case to the balance sheet.
* Step two: Transfer all income and expense information to the income statement. Take care to notice that much of the data they provided was monthly but your statement records annual amounts
* Step three: Calculate the missing auto loan payment and remaining balance with a calculator or using the online auto loan calculator at <http://www.dinkytown.net/java/AutoLoan.html>.

**QUANTITATIVE QUESTIONS**

The Smiths also have a few specific questions they want you to answer. They are:

1. While the Smith’s are not responsible for a payment on the Parent Plus loan until after Aiden finishes his schooling they would still like to know what the monthly payment would be on the loan. They want to assume that payments will begin in exactly three years. By that time the balance will have increased because of the interest charges that were not paid. They would repay the loan on a monthly basis over 10 years. Go to <http://www.dinkytown.net/java/FinCalc3.html> to use the *Basic Financial Calculator.*

* Step one: Calculate the balance owed (future value = FV) in three years.
* Step two: Calculate the monthly payment (PMT)

2. The Smith’s really want Jalen and Aiden to have every opportunity to succeed in college without an insurmountable debt burden upon graduation. As before, they have a large amount of retirement assets but only $48,000 in non-retirement investment accounts. They want to know if they can withdraw from Chris’ traditional IRA, Jasmin’s Roth IRA, or either of their 401(k) plans. If they can, what are the rules and limits?

3. While the Smiths want to assist with college expenses, they also want Aiden and Jalen to have partial financial responsibility. Therefore Aiden (and eventually Jalen) is going to have to apply for Stafford Student Loans. Aiden has found that there are two types; what is the difference between a Stafford Unsubsidized Loan and Subsidized Loan? What is the maximum annual loan amount for each program? Does it differ by year in school?

4. Aiden wants to know the answers to the following questions if he was to take out Stafford loans for $5,500 for his junior year of school.

1. How much would he owe in total when he graduates exactly two years later?
2. What would be his monthly loan payment assuming he repaid his loan over ten years?
3. How much interest would he pay in total (for the next two years and the final ten years)?

He would like to know the previous answers for both potential situations, he qualifies for subsidized loans and if he doesn’t.

5. What is the biggest potential problem for gifting money to Jalen, or making contributions to a 529 Plan for which he is a beneficiary?

*Case study provided by students Chris Duke, Mark Falamoun, Nina Lindsay, Corey Miller, and Brian Palucci, members of the Financial Planning Association (FPA) student chapter at Virginia Tech, under the guidance of Professor Derek Klock and Dr. Ruth Lytton.*

SUPPLEMENTAL QUESTIONS THAT CAN BE CONSIDERED. These are not a required part of the Governor’s Challenge, but questions you may want students to address. Teachers can request responses to these and the foregoing questions, with an email to [shfinley@vcu.edu](mailto:shfinley@vcu.edu) after April 27, 2017

1. Jasmin and Chris want to look at opportunities for eventually buying another home – at least a small one for the two of them after Jalen moves out. They have done a good job of saving for retirement, but only have $48,000 in their investment accounts and hope to provide some of that for the kids’ educations. How much (as a percentage) does a bank typically want a purchaser to have for a down payment? What alternatives would they have for taking money from their retirement accounts to use as a down payment on the new home? If so what are the pros and cons of each option.

2. Given the Smith’s current retirement savings, they are wondering how much, if any, they could withdraw from their retirement accounts and still have enough saved for at least a modest lifestyle in retirement. They would like you to base your calculations on them retiring in 22 years and living for 20 years in retirement. Further assume that their account could return 7.5% annually before retirement and 5.5% annually after. Lastly they want to live on the equivalent of $85,000 today but assuming a permanent 2.5% annual inflation rate. Use the *Basic Financial Calculator* found here <http://www.dinkytown.net/java/FinCalc3.html> to perform all of the necessary calculations.

* Step one: Calculate the future value of the $85,000 current spending need assuming that 2.5% inflation.
* Step two: Calculate the total expected future cost of retirement. (Remember this is an annuity so the answer from step one is the payment in this step.) You will need to use a 3.0% inflation-adjusted rate of return for “i%” in this step.
* Step three: Calculate the present equivalent value of this need today.
* Step four: Compare this amount to the total value of the Smith’s retirement accounts.