

**GOVERNOR'S CHALLENGE**  
in **Economics** and  
**Personal Finance**

### **2013 Personal Finance Case Study**

*Your team focuses on providing comprehensive financial planning for your clients. Mr. and Ms. Chang heard about your services from a neighbor, who stated that you are great at helping families think through various options so that they can develop a plan that will help them reach their goals and make intelligent financial choices along the way.*

*When you first met with the Changs, you learned the facts described below and were provided with both the attached balance sheet and budget. Use this information to help the Chang family improve their financial condition and reach their financial goals.*

#### PERSONAL INFORMATION:

Daniel and Cindy Chang live in Richmond, VA. They have two children: a son, Li (age 17), who is a high school junior and a daughter, Mai (age 10), who is a fourth grader at the neighborhood elementary school. Daniel (age 40) received his B.S. in Civil Engineering from Virginia Tech and currently works for the City of Richmond. Cindy (age 40) received a B.S. in Commerce from University of Virginia and now runs a small online retail business out of their home which has proven to be very successful.

Cindy's mother, June, is living in Charlottesville, but she may be unable to live on her own within the next year. Cindy needs your help in assessing whether her mother should move in to their Richmond home or seek residence at an assisted living facility. June has requested that Daniel and Cindy try to help her find a local retirement community where she could live with people her own age. She is not opposed to moving in with the Changs in their Richmond home but is attracted to the independence provided by a retirement community. She can help fund the cost of care through the sale of her home and current social security income, but needs help finding some quotes for different levels of care.

The Chang family has **provided you with a current balance sheet and an estimated budget of their living expenses for the year 2013**. These statements will show you the Chang family's current financial situation and how the Changs manage their personal finances. Using the information on the balance sheet, you will need to calculate the annual and monthly mortgage payments as well as car payments to determine the total living expenses and available cash remaining in the budget.

Additionally, Daniel and Cindy provided us with their answers to the behavioral finance questionnaire. From the questionnaire it was determined that Daniel was the spender of the family and enjoyed buying new and sometimes expensive things while Cindy was much more frugal about purchases. In the section about risk tolerance, Daniel stated that he previously had a small brokerage account and that he enjoyed playing the market. Cindy was much more

nervous about the financial markets and shared her worries about the risk of investing in the stock market and abroad.

At a minimum your written plan should address the following goals:

- The main strengths and weaknesses of the Chang family’s current financial condition.
- Your recommendations for improving upon their current financial situation.
- Discuss the resolution of any conflicts between the clients’ goals and needs, and the ability to satisfy them due to financial or other constraints.
- Identify the extent to which you would advise them to use other professionals to implement any recommendations.

OBJECTIVES (in priority):

1. Complete college funding for both Li and Mai (tuition and living expenses).
2. Retire at Daniel and Cindy’s age 67 with 60% pre-retirement income.
3. Evaluate the moving options for Cindy’s mom, June.
4. Recommend any end of life documents they need to have.
5. Restructure and reduce debt to the greatest extent possible.

ECONOMIC, TAX, AND INVESTMENT ASSUMPTIONS

The inflation rate is currently 3%. Recently, Congress passed a resolution to the fiscal cliff making many of the Bush era tax cuts permanent which will affect their taxes for years to come, including a 2% increase in the payroll tax. The numbers provided by the Chang family were adjusted for the changes in 2013. You should consider these tax adjustments in your analysis of this case.

INVESTMENT ASSUMPTIONS:

Listed below are assumptions of future expected returns and standard deviations (a standard measure of risk or how far a return will deviate from its expected average). This table is given to help you provide high-level guidance over how the Changs might consider reallocating or diversifying their retirement assets based on their risk tolerances.

<b>Asset Class</b>	<b>Average Annual Return</b>	<b>Standard Deviation</b>
Large Cap Stocks	11%	20%
Mid-Cap and Small-Cap Stocks	12%	24%
International Equities	13%	27%
Emerging Market Equities	14%	30%
International Bonds	7%	9%
Long-Term Bonds – Domestic	5%	8%
Long-Term Treasuries	3.1%	2.2%
Short-Term Treasuries	1.9%	0.8%
Money Market Funds	0.5%	0.2%

## EDUCATION

Daniel and Cindy want to provide financial support (tuition and fees, books, room and board) for each of their children to a four-year university. They have completed their funding of a Virginia529 prePAID account for Li. They still need to determine how much Li will need while living at school and how to pay for those living expenses. They would also like to understand better what the Virginia529 prePAID covers and what would happen if Li decided to attend college outside Virginia.

Mai's college education is currently unfunded. They have not started saving and would like your help in determining which education investment product they should use and how much they will need to invest per month.

## CURRENT INSURANCE COVERAGE

### **Health**

- Insured Persons are Daniel and Cindy Chang and all dependent children
- Major Medical Limit is unlimited
- Co-Insurance is 80/20
- Deductible is \$750 per person per year with a maximum of \$1,500 per year
- Stop-Loss is 20% of the first \$8,000 per person per year with a maximum of \$3,000 per year

### **Life**

- Cindy has a \$300,000 whole life insurance policy
- Cindy's mother is the beneficiary on her life insurance policy
- Daniel has a group life insurance policy equal to two times his gross salary
- Cindy is listed as the beneficiary on his life insurance policy.

### **Homeowner's**

- Standard HO-3 Policy
- Dwelling Amount of \$350,000
- \$262,500 Replacement Cost Coverage
- Liability Coverage is \$150,000
- Annual Premium is \$1,000

### **Auto**

- No-Fault (Two Vehicles)
- Split Limits: 50/100/25
- Collision Deductible is \$500
- Comprehensive (other-than-collision) Deductible is \$500
- Annual Premium is \$3,000

### **Disability**

- Currently neither Daniel nor Cindy have any disability insurance coverage

## RETIREMENT

Daniel and Cindy would like to retire at age 67. They would like to ensure they have enough money in their retirement accounts to allow them the equivalent of 60% of their preretirement income. They are assuming they will be retired for a total of 25 years.

The City of Richmond is currently matching one half of all employee contributions up to 6% of Daniel's salary in his 401(k). They are unsure if they are meeting the employer match provided by Daniel's 401(k), and if they are maximizing their contributions to Daniel's Traditional IRA as well as Cindy's SIMPLE IRA.

## ESTATE PLANNING

Cindy's father recently passed away and they are expecting to receive \$50,000 cash inheritance this upcoming year (not currently reflected in their financial statements). His death motivated the Changs to start thinking about their future estate plans. They would like you to instruct them on any estate documents they will need to prepare for any life-ending related decisions and to ensure their assets go to protect their children after their passing.

*Case study provided by students Matt Romeo and Samantha Pickering, members of the Student Financial Planning Association at Virginia Tech, under the guidance of Dr. Hyrum Smith and Dr. Alex White.*

**If your team is one of the top scoring teams in the online Personal Finance Division of the Governor's Challenge and invited to participate in the statewide Championship on April 17, 2013, below are some additional directions.**

- By **Monday, April 15, 2013 at NOON**, provide a written report in any format you believe appropriate that sets forth your recommendations and includes any assumptions and calculations you believe would be helpful for the Chang family/judges. The report cover should include the names of your financial planning team and your sponsoring teacher, school and school division. E-mail the report to Sarah Hopkins Finley at [shfinley@vcu.edu](mailto:shfinley@vcu.edu). If you do not receive an e-mail acknowledging receipt within 30 minutes, please call Page Ritter to confirm receipt of the report (804-828-1628.) **MAXIMUM page limit: the report with recommendations may not exceed 10 pages, not including the cover page. An appendix may also be added with any supporting documentation and calculations deemed appropriate.**
- Visit [www.vcee.org](http://www.vcee.org) for additional details regarding the Championship Challenge on April 17, 2013. (Look under Governor's Challenge under Programs/Awards.)

**Judging at the Governor's Challenge will be as follows:**

**Written Project Evaluation**

- Methodology - 20 points
  - Appropriate methods (10)
  - Creativity (5)
  - Citations/References as appropriate (5)
- Accuracy of Calculations - 25 points
  - Clearly stated assumptions (5)
  - Correctness of calculations (20)
- Recommendations – 40 points
  - Clearly stated recommendations (10)
  - “5 Ws” Who, What, When, Where and Why (10)
  - Realistic nature of recommendations (10)
  - Recommendations help client work towards stated goals (10)
- Professionalism – 15 points
  - Organized (5)
  - Formatting/Appearance (5)
  - Appropriate tone of project – relates to client, grammar (5)

**Oral Presentation at the Challenge**

- Clarity of Presentation and Content – 50 points
  - Introduction of team members (5)
  - Clearly state the specifics problem/goal addressed (10)
  - Appropriate use of visuals/presentation aids (10)
  - Appropriate methodology/tools (10)
  - Clear-recommendations (with “5 Ws”) (10)
  - Realistic nature of recommendations (5)
- Involvement of all members – 20 points
  - Oral presentations (10)
  - Answering questions (10)
- Professionalism – 30 points
  - Organized presentation (10)
  - Appearance & demeanor of team (10)
  - Creativity (10)

February 8, 2013