

Aurimax Investment Club | Jan 2, 2022

Asset Liability Management for Individual Investors

Zongwu Zhu,
PhD, CFA

The diagram consists of two overlapping circles. The left circle is blue with a yellow border and contains the text 'Zongwu Zhu, PhD, CFA'. The right circle is grey with an orange border and contains the text 'Senior Investment Professional, Nationwide Investments'. A yellow arrow points from the right side of the blue circle to the left side of the grey circle, indicating a relationship or flow of information between the two individuals.

Senior
Investment
Professional,
Nationwide
Investments

Executive Summary

Goal: to maximize utility/happiness subject to that assets are available when liabilities are due in the investment horizon, here assuming the whole lifetime

As time goes on, we normally accumulate a lot of assets but also have different kinds of liability to handle with

Higher return would be expected if we have the willingness and capability to take more risk

Risk management skills are very important to guild us to have a healthy, wealthy and happy life

Tax planning and tax free or deferred accounts are some useful approaches to protect our hard-earned money from Uncle Sam

Getting and maintaining a good credit score is crucial to our lives in this modern civilization

Equity = Assets - Liability

Assets: something a person owns, which will provide future benefit or income, such as the following:

- Financial assets: cash, bonds, stocks, mutual funds, ETFs, derivatives, etc.
- Real assets: commodities, real estate, land, precious metals, etc.
- Human asset which generates positive cash flow of salary or other income
- Others such as small business

Liability: something a person owes, which will be settled usually through the transfer of money/asset, such as the following:

- Groceries
- Loans such as house and cars
- Medical bills
- Legal expenses
- College tuition
- Insurance premiums
- Long term care
- Vacations and entertainment
- Unexpected losses such as car accidents

Risk vs Reward

- Major risk types:
 - Liquidity risk
 - Market risk
 - Concentration risk
 - Credit risk
 - Inflation risk
 - Longevity risk
 - Property and casualty risk
 - Unemployment risk
 - Health and death risk
 - Divorce risk
- Risk-return trade off: a higher reward would be expected if we take more risk
- What is your willingness and capability of taking more risk?

Risk Management

- Emergency fund to mitigate liquidity risk
- Asset diversification to reduce concentration risk and credit risk
- Time diversification to navigate the market risk and credit risk
- TIPS, real assets and stocks are good inflation protection investments

Risk Management (Cont'd)

- Insurances are important tools to handle rare but severe loss
 - Annuity for longevity risk
 - Home and auto insurance for property and casualty risk
 - Unemployment insurance for unemployment risk
 - Medical/dental/vision insurance and life insurance for health and death risk
 - Self insurance to handle all or part of unexpected loss
- Cash flow matching to safeguard the funding of liabilities when due
- Work-life balance, vacation and entertainment are good ways to maintain a happy wife/husband and so a happy life to reduce health risk and divorce risk

Tax Planning and Tax Free or Deferred Accounts

Tax planning strategies

- Tax loss harvesting
- Making donation of appreciated stocks to non-profit organization we care
- Long term vs short term capital gain
- Planning for realizing capital gain
- Timing repair/improving cost and using section 1031 of tax code in rental property
- Investing in tax-free municipal bonds for high tax bracket investors
- Avoiding tax heavy investment in taxable accounts
- Estate planning to keep your money in the family as much as possible
- Saving or deferring income to tax free or deferred accounts

Tax Planning and Tax Free or Deferred Accounts (Cont'd)

Tax free or deferred accounts

- Health saving account
- Health flexible spending account
- 401k or 403b retirement contribution plans
- Individual retirement accounts (IRA)
- 529 college savings plan
- Employer deferred compensation plan

Getting and Maintaining a Good Credit Score

- A good credit score is important for low loan rate, credit card, job application and renting a house
- Tips to maintain a good credit score
 - Pay all bills on time
 - Keep old credit cards open to maintain longer history
 - Keep balance low on credit card relatively to our credit line (30% or lower)
 - Keep an eye on free yearly credit reports from TransUnion, Experian and Equifax and dispute errors right away
 - Avoid applying for new credit card unless it's necessary
 - Make payments in full on your card when possible, and other wise pay at lease the minimum
 - Live within your means and don't exceed your limit
- Debt is not always bad. A good debt can help build wealth and increase credit score in the long term

Questions and Answers

Q&A



THANK YOU !

Disclaimer and Disclosure

- The opinion expressed in this presentation is my own and not necessarily those of Nationwide Investments
- This presentation is for your information only, not for any consulting purpose such as investment or tax
- YMYD (Your Money Your Decision) which means you are responsible for any loss if happened
- To date, I am not a member of Aurimax Investment Club

About Dr. Zongwu Zhu

Dr. Zhu is a Senior Investment Professional of the Nationwide Investments. Zongwu joined in Nationwide in 2016 and has been a key contributor to the asset liability management for the P&C and 401(h) portfolios, to the economic scenarios calibration, to the asset allocation modeling for IMG funds, to the benchmarks optimization of P&C, NF and Pension. Zongwu earned his bachelor's degree from Xiangtan University in Hunan, his master's degree from the Chinese Academy of Sciences, his Ph.D. In Applied Math from the University of Illinois at Chicago and holds the Chartered Financial Analyst (CFA) designation.

朱宗武博士简介：

全美保险公司(Nationwide) 资深投资经理。朱博士于 2006 年加入全美保险， 是该公司财险资产负债管理及 401 (h) 资产配置的主要管理人之一， 是全美保险公司经济预测， 资产配置模型， 财险保金， 公司上市基金及年金优化方面的主要贡献者。

宗武本科毕业于湖南湘潭大学， 中科院硕士研究生毕业（师从优化专家， 中科院院士袁亚湘）。后获取伊利诺斯大学（University of Illinois at Chicago）应用数学博士学位。朱博士是特许金融分析师（CFA）。