

Your Winning Retirement Plan

Henry K. Hebel

Chapter 3: Investments

Chapter Summary

This chapter is used to introduce the reader to many basic investment and planning concepts. It identifies the various types of investments (ie stocks, bonds, etc) the various types of accounts (ie vehicles) created for holding these investments and finally introduces the concept of **Asset Allocation**, a process of distributing your investments across various risk level investments to minimize risk and maximize gains. The importance of placing investments in the appropriate vehicles to minimize tax implications is also discussed. Finally some thoughts on the appropriate approach to creating a plan and implementing it based on the level of involvement you desire are discussed.

References and Resources

- ArtCentrics: [Chapter 3 Spreadsheets](#)
 - Investment Comparison
 - Figure 3.1 – Balance And Allocations
- Financial Planning Association: [FPA PlannerSearch](#)
- ArtCentrics: [Review of Annuities](#)
- ArtCentrics: [Review of Vehicles for Retirement](#)
- Investopedia: [Roth IRA](#)
- Schwab: [Roth IRA Conversion Calculator](#)

Chapter 3 Spreadsheets

- Figure 3.7 – Current Allocations
- Investment Comparison
- Figure 3.11 – Balance And Allocations

Terms and Concepts

Annuity – Contract offered by an insurance company in which you make a lump-sum payment or a series of payments and in return receive a regular disbursement immediately or at some point in the future.

Bonds – A bond is a fixed-income instrument that represents a loan made by an investor to a borrower (typically corporate or governmental).

Deferred Annuities – A contract that promises to make payments at a later date for money provided to the insurance company now.

Equities – Investments that represent ownership such as Stocks or having equity in your house.

Exchange Traded Funds (ETFs) – Similar to mutual funds but are associated with an index, and can be traded any time in the day where Mutual funds trade only after the market closes.

Immediate Annuity – The investor relinquish all control of a sum of money for fixed periodic payments for either a fixed period of time or for life.

Index Annuity – A deferred annuity where payout is linked to the performance of an Index during the accumulation phase (ie S&P 500, etc.). Generally there are low/no fees for these contracts. Usually a certain percentage on a yearly

Your Winning Retirement Plan

Henry K. Hebel

basis can be withdrawn without penalties, and then at the end of the contract term the principle plus any earnings can be withdrawn by the investor. These investments may be the best of the various flavors of annuities available.

Index funds – A mutual fund that purchases stocks or bonds in the same proportion as a particular index (ie S&P 500 Wilshire 2000, etc) and tend to have much lower fees associated with them than standard mutual funds.

Investment Vehicles – Objects/accounts into which you put investments. One of the defining factors that distinguish different vehicles is the tax laws/treatments that the vehicles are subject to. IRAs, 401(k)s Taxable Accounts are all different investment vehicles capable of holding investments as determined by the investor.

Lenders – Individuals or organizations that loan money to organizations or individuals in exchange for interest payments and return of principle after a period of time.

Money Markets – Mutual funds that invest in very short term securities, often bonds with three-month maturities and as a result are very secure, yet pay considerably higher interest than most bank accounts.

Mutual Funds – An entity that owns stocks, bonds, real estate or other investments, and allows investors to purchase shares of the fund. Some mutual funds specialize in a specific group of securities.

Owners – Individuals or organizations that have ownership of a property, stock, or other tangible object.

Securities – Represents various investment vehicles including Stocks, bonds, CDs, Mortgages, annuities, mutual funds etc.

Stocks – A security that represents the ownership of a fraction of a corporation. This entitles the owner of the stock to a proportion of the corporation's assets and profits equal to how much stock they own. Units of stock are called "shares."

Systematic Risk – The risk everyone assumes when investing in a market, it is the overall aggregate risk that comes from things like natural disasters, wars, pandemics, and other events that cannot be planned for or avoided.

Tax-Exempt Security Trusts – A Groups municipal bonds that gradually mature. They pay out both principal and interest with each payment.

Unsystematic Risk – The risk that is unique to a specific company or industry. This risk can be litigated by appropriate diversification.

Variable Annuity – Essentially an investment vehicle that acts like a collection of mutual funds; These are not fixed income investments until annuitization. These vehicles are notorious for their high commissions and ongoing fees. You should probably avoid these at all cost.

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Henry K. Hebel

Owners and Lenders

Roles can be assigned to a person based on how they decide to invest capital in a particular situation. Using a Rental property as an example; The person who purchases the property by getting a loan from a bank is an **Owner**, they have taken on a lot of risk in owning the property since there are many factors that determine if they get the rent for the month. The bank on the other hand is a **Lender** in that it has provided the capital to the rental owner to purchase the house and is only concerned with the owner making their monthly payment. If for some reason the owner is not able to make payments, the bank is has the recourse of repossessing the property, eventually getting the money back they loaned.

Owners generally take more risk than Lenders, and will generally have more opportunity for profits as a result. At this point a general rule is pointed out that **the riskier, more volatile an investment is, the greater potential for loss or gain for that investment**. This is a key investment concept one must consider when deciding where to invest your funds.

Stocks and Bonds – Persons investing in Bonds, are **Loaners** while those investing in Stocks are **Owners**. Of course you will likely play both rolls; owning both Stocks and Bonds in your portfolio. A Stock represents a partial ownership of a company and carries corresponding risk associated with the performance of the company and market conditions. A Bond is a loan to an organization that will receive interest over the life of the loan and at the end of the loan period the principle will also have been returned to the lender.

It should be pointed out here that within both Stocks and Bonds there are varying degrees of risk available. For example you could purchase a super safe 1 year T-Bill from the US government and get a corresponding very low interest payment (ie less than 0.2% of interest as of 2021-11-29) or invest in a super risky corporate junk bond and get 20% interest with a very high probability that the corporation defaults on the loan and you loose part or all your investment.

With Stocks, the more volatile the stock price is over time is generally correlated with risk and associated potential gain or loss of your initial investment.

Fixed Income Investments – Bonds, Certificates of Deposits (CDs) and other investments that pay fixed interest rates.

Annuities – There are insurance products and there are many types and flavors of annuities. Some core elements they all have in common are they guarantee you will not loose our investment in exchange for turning over your money to the company for a period of time. Beyond that annuities can vary greatly from product to product. A few types of annuities along with a very brief descript is:

- **Immediate Annuity** – The investor relinquish all control of a sum of money for fixed periodic payments for either a fixed period or for life. A fixed pension from an employer is essentially an Annuity.
- **Deferred Annuities** – A contract that promises to make payments at a later date for money provided to the insurance company now.
- **Variable Annuity** – Essentially an investment vehicle that acts like a collection of mutual funds, These are not fixed income investments until annuitization. **These vehicles are notorious for their high commissions and ongoing fees. You should probably avoid these at all cost.**
- **Index Annuity** – A deferred annuity where payout is linked to the performance of an Index during the accumulation phase (ie S&P 500, etc.). Generally there are low/no fees for these contracts. Usually a certain percentage on a yearly basis can be withdrawn without penalties, and then at the end of the contract term the principle plus any earnings can be withdrawn by the investor. **These investments may be the best of the various flavors of annuities available.**

More information on annuities can be found at the ArtCentrics website, look for the [Annuities discussion 2021-04-25](#).

Your Winning Retirement Plan

Henry K. Hebeler

Equities – Investments that represent ownership such as Stocks or having equity in your house.

Securities – Represents various investment vehicles including Stocks, bonds, CDs, Mortgages, annuities, mutual funds etc.

Mutual Funds – An entity that owns stocks, bonds, real estate or other investments, and allows investors to purchase shares of the fund. Some mutual funds specialize in a specific group of securities. **Index funds** purchase stocks or bonds in the same proportion as a particular index (ie S&P 500 Wilshire 2000, etc) and tend to have much lower fees associated with them. It is noted that mutual funds held in non-tax differed accounts are not only subject to triggering a taxable event when the mutual fund is sold, actions taken within the mutual fund itself (ie selling stocks etc.) can trigger a taxable event for you.

Money Markets – Mutual funds that invest in very short term securities, often bonds with three-month maturities and as a result are very secure, yet pay considerably higher interest than most bank accounts, and as a result may be a better place to hold cash.

Investments That Are Like Mutual Funds – **Tax-Exempt Security Trusts** are groups of municipal bonds that gradually mature. They pay out both principal and interest with each payment. **Exchange Traded Funds (ETFs)** are very similar to mutual funds but are associated with an index and can be traded any time in the day where Mutual funds trade only after the market closes. ETFs have a tax advantage because, unlike mutual funds they generally have less taxable events since holdings within the fund only change when necessary to ensure the fund mirrors the index it is tracking.

Higher Growth Rates Mean Higher Risk – As stated earlier more potential for returns and losses are associated with the level of risk in an investment. One method of lowering risk without decreasing returns is through **Diversification**, a risk management strategy that mixes a wide variety of investments within a portfolio to contain a mix of distinct asset types and investment vehicles in an attempt at limiting exposure to any single asset. This is the idea of eliminating **Unsystematic Risk** from ones portfolio so that only **Systematic Risk** remains. The rationale behind this technique is that a portfolio constructed of different kinds of assets will, on average, yield higher long-term returns and lower the risk of any individual holding or security. Diversification can be applied across asset classes, or within a given asset class, for example owning an S&P Index fund removes the **Unsystematic Risk** of owning a single company stock.

Generally the ratio of high risk (Stocks) to low risk (Fixed Income) investments changes in relation to the age of the investor since a younger individual has a longer time horizon to recover from market drops. As one ages their overall portfolio should become more conservative, and correspondingly have lower, steadier returns.

Finally, when accessing risk one must perform a gut check to determine how much volatility they can handle. One must be able to sleep at night during turbulent times, and not be tempted to sell in a panic during market downturns.

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Henry K. Hebel

Where Do I Start? – Many people are overwhelmed with the idea of managing their retirement plan on their own. There are many wealth management companies that are happy to help. Most charge a 1-2% annual fee. Remember over time these fees along with other hidden charges can severely damage your investment portfolio. If, after completing this book you still would like professional help, consider hiring a fee only [Certified Financial Planner \(CFP\)](#) that is a fiduciary (legally bound to work in your best interest). It is the goal of this book to provide you the knowledge you need to manage your own retirement. [Betterment](#) seems to have a good approach also.

Doing it Yourself – Below are some very high level key steps that need to be taken when doing this on your own:

- **Allocate Your Investments** – Determine what percentage of your portfolio to have in the various asset classes; Stocks, Bonds and other fixed income investments, real estate, and money markets
- **Investment Vehicles** – Determine the ratio of deferred tax investments, taxable investments and tax-exempt investments in your portfolio.
- **Particular Investments** – Determine the individual investments for your portfolio.

All of these steps will be covered in this book.

[Betterment](#) – Robo Adviser, an interesting option. fees range from 0.25% – 0.40% annual.

Asset Allocation

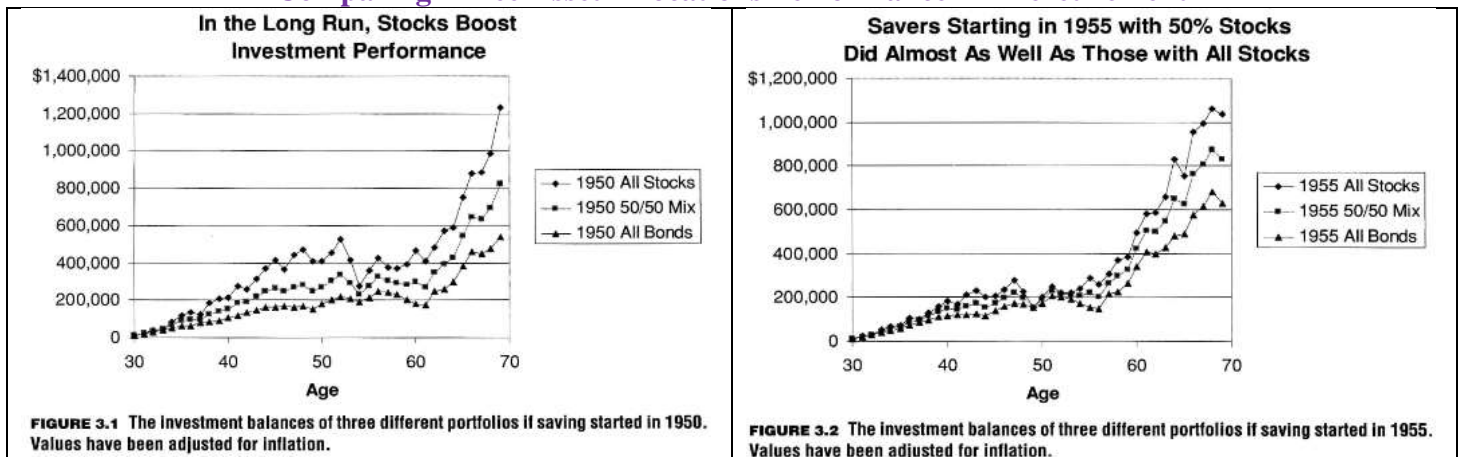
Asset allocation is one of the first decisions to make for your investment plan. The ratio of Equities (Stocks, etc) to Fixed Income (Bonds, etc) investments will be pivotal in the accumulation of wealth over time. In addition to showing how different portfolios with three different ratios (100% Equities, 50/50, 100% Bonds) perform in wealth accumulation in preretirement, an example of the same ratios is shown as funds are spent down in postretirement is provided.

Preretirement Scenario Conditions

- Begin Savings at age 30
- Saving \$10,000/year, and increased each year to match inflation
- Cost: 1.5% for stocks and 1.0% for bonds
- All savings placed in a 401(k) so there is no taxes on earning (until they are withdrawn)
- Three separate Asset Allocation scenarios:
 - 100% Large company stocks
 - 100% Long term corporate bonds
 - 50% Stocks & 50% Bonds with rebalance every year to maintain 50/50 ratio

Figure 3.1 and Figure 3.2

Comparing Three Asset Allocations Performance In Preretirement



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Henry K. Hebel

Method	Starting in 1950 (Good Times) Observations after 40 years	Starting in 1960 (Bad Times) Observations
100% Stocks	<ul style="list-style-type: none"> • \$1,240,000 accumulated • \$540,000 to \$280,000 drop in value • 48% loss at age 52 - 55 	<ul style="list-style-type: none"> • \$1,040,000 accumulated • \$280,000 to \$140,000 drop in value • 50% loss at age 52 – 55 • 20% difference in final value between two scenarios (good times vs bad times)
50/50	<ul style="list-style-type: none"> • \$830,000 accumulated • \$332,000 to \$272,000 drop in value • 18% loss at age 52 - 55 	<ul style="list-style-type: none"> • \$840,000 accumulated • \$220,000 to \$140,000 drop in value • 36% loss at age 52 – 55 • 1% difference in final value between two scenarios (good times vs bad times)
100% Bonds	<ul style="list-style-type: none"> • \$540,000 accumulated • \$220,000 to \$190,000 • 14% loss at age 52 - 55 	<ul style="list-style-type: none"> • \$620,000 accumulated • \$190,000 to \$180,000 • 5% loss at age 52 – 55 • 14% difference in final value between two scenarios (good times vs bad times)

Additional Observation: Both 100% stocks and 100% Bonds behave more variation in the final portfolio value than the 50/50% mixture. This is interesting in that one would assume that the 100% bond fund would be less volatile, but remember the bond yields and prices will fluctuate with inflation and market conditions. The 50/50 mix seems to stabilize results because as a general rule, the bond and stock markets tend to have inverse performance.

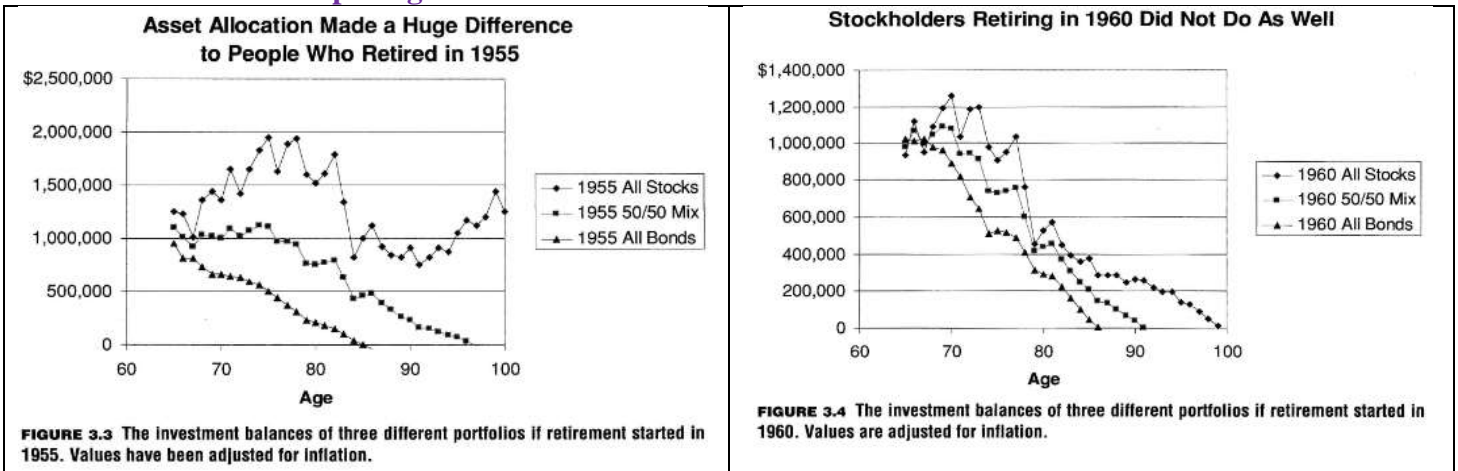
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Postretirement Scenario Conditions

- IRA Account
- Retire at age 65
- \$1,000,000 in savings
- Withdraw \$35,000 + 15% taxes each year plus adjustments for inflation.
- Cost: 1.5% for stocks and 1.0% for bonds
- Three separate Asset Allocation scenarios:
 - 100% Large company stocks
 - 100% Long term corporate bonds
 - 50% Stocks & 50% Bonds with rebalance every year to maintain 50/50 ratio

Figure 3.3 and Figure 3.4
Comparing Three Asset Allocations Performance In Postretirement



Method	Starting in 1955 (Good Times) Observations	Starting in 1960 (Bad Times) Observations
100% Stocks	<ul style="list-style-type: none"> • Never runs out of money • More than ½ money loss at 83 years old 	<ul style="list-style-type: none"> • Out of funds at 99 • 14+ year difference between two scenarios
50/50	<ul style="list-style-type: none"> • Out of funds at 97 	<ul style="list-style-type: none"> • Out of funds at 91 • 6 year difference between two scenarios
100% Bonds	<ul style="list-style-type: none"> • Out of funds at 85 yrs 	<ul style="list-style-type: none"> • Out of funds at 87 • 2 year difference between two scenarios

For the 100% stock mix, we see a 14 year difference between the Good Times and Bad Times scenarios. High volatility is probably the last thing you want in retirement. The 100% bond mixture behaves as expected and is consistent between the two scenarios with 2 years difference.

The 50/50 percent mix performance between the Good Times and Bad Times is, as expected, close to midway between the 100% Stocks and Bonds allotment. What we can take away from this is that there is a trade off between volatility and of performance and stability of investment, so the question you need to ask is what the appropriate allotment for you?

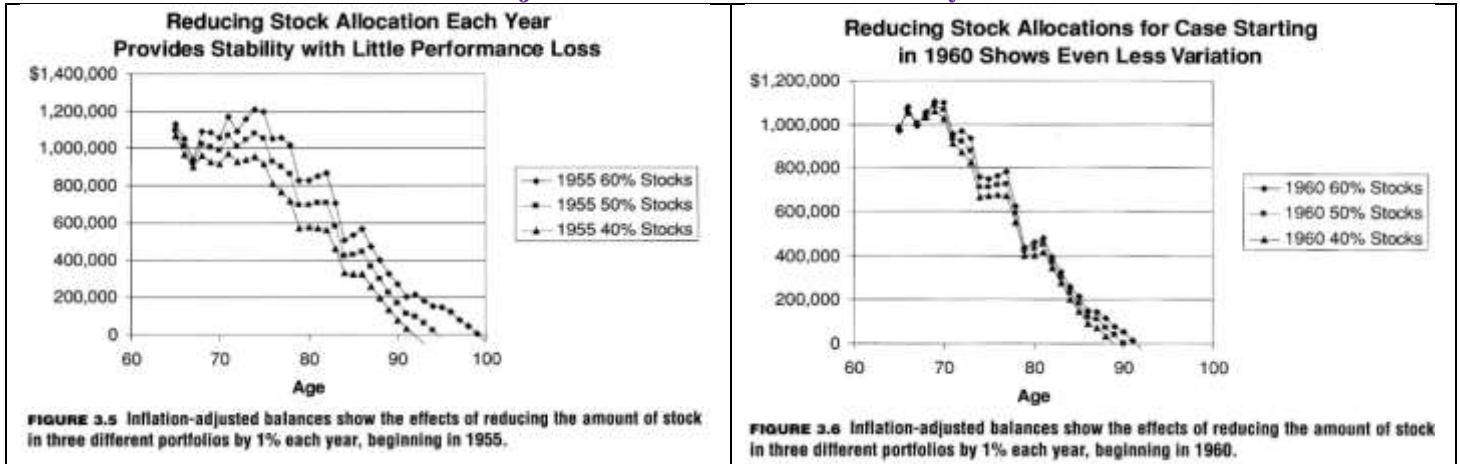
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Henry K. Hebel

Hedging Your Bets – We can conclude that a combination between Stocks and Bonds can provide both a measure of stability and performance to a portfolio. The technique of decreasing the percentage of stock holdings by 1% and increasing bond holding by 1% a year can help optimize the trade off between volatility and performance with the additional benefit of providing quite consistent final results. This is one of the key features of the Autopilot method.

Figure 3.5 and Figure 3.6

Periodic Stock Allocation Adjustments Can Reduce Volatility and Stabilize Performance



Some Practical Considerations in Investment Allocation – Before adjusting your asset allocation consider these things:

- **Employer Dependence** - Make sure you are not too dependent on your employers success. Owning company stock, Stock Options, Pension Plans, deferred compensation, etc. all depend on the viability of your company and as a result represent Unsystematic Risk consider minimizing this risk when possible.
- **Debt Review** – Reducing high-interest loans and credit card debt can be more important than a better allocation of your investments. Review and reevaluate your debt.
- **Exact precision is not needed** – Maintaining your allocation to within 5% of your targeted amount is sufficient. An annual review and update should be all you need to ensure you are on target.

Your Winning Retirement Plan

Henry K. Hebeler

Allocating Your Investments – Use the worksheet([Spreadsheet](#)) below to calculate your current Asset Allocation. What is the appropriate Allocation for you? Hebeler recommends using the formula:

$$\text{Percent Equities} = 110 - \text{Your Age}$$

For couples, you may want to consider using the age of the younger person.

Figure 3.7

Your Current Investment Allocations (Figure 3.7)

Line	Item	Current Value	Totals	Comments
Equities				
1				
2				
3				
4				
5				
6				
7				
8				
9	Total Equities	\$0	\$0	
Cash				
10				
11				
12				
13	Total Cash	\$0	\$0	
Fixed Income				
14				
15				
16				
17				
18				
19	Total Fixed Income	\$0	\$0	
20	Total Investments		\$0	

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Henry K. Hebel

Be Sensitive to Risk – When determining the exact allocation of assets that best works for you. You need to consider your tolerance for large market swings. Ask yourself how you can handle 10%, 20%, 30% or more drops in the market and make appropriate changes to you allocation accordingly.

Since 1926 large company stocks on average dropped:

- 1 in 5 years a 10% loss
- 1 in 10 years a 20% loss
- 1 in 20 years a 30% loss

Remember, the percentage of holdings NOT in equities should dampen the swings of the market, although it is not uncommon for other investments to dip when market conditions go south. So a portfolio with a 50/50 percent mix may only decrease in overall value by 20% if the market (equities) takes a 35% dive. Determine the value that works for you and adjust the 110 number up or down to accommodate your comfort level.

Need for Cash – Funds for large expenditures for items like a new car, house remodel, etc that may occur in the near future (ie 5 years or less) should reside in a cash equivalent location such as a money market fund. This will ensure you don't have to sell stock to raise capital when the market is in a slump.

What about the Equity in Your Home? – Generally you should not include the equity in your house in your asset allocation. Simply because you will always need a place to live. Exceptions to this rule may be if you plan on selling your house and renting (remember to increase your living expenses to include rent) or for a reverse mortgage where you typically may include about 40% of the value of your house. Downsizing is another possible exception, but downsizing may not provide as much funds as you may initially think, remember there are house selling fees, closing cost, purchasing, moving cost etc. So if you downsize only include the remaining equity after all of these expenses are subtracted.

Allocation Control – Keeping your asset allocation within 5% of your targeted value should be sufficient. Check your allocation once or twice a year, you will find that adjustments will probably only need to be performed once every year or two. When you first perform the analysis, there may be large adjustments required, you don't have to make all adjustments at the same time but can spread this out over a number of months. Also remember possible tax consequence of making adjustments. For Tax-deferred accounts such as IRAs, Roths, 401(k) there is not tax impact, so they should be adjusted first.

Subdividing Your Allocations – Equities, Fixed Income and Cash are Classes of Investments. [These can be further divided](#) in many different ways with varying granularity. The author recommends keeping this simple and supplies his subdivisions.

Class	Sub Divisions	Comments
Equities	<ul style="list-style-type: none">• Large Company Stocks• Small company Stocks• Growth Company Stocks• Real Estate	
Fixed Income	<ul style="list-style-type: none">• Intermediate-term municipal bonds• Money Markets & CDs• Bond Funds• Government Bonds	
Cash	<ul style="list-style-type: none">• Checking and Savings	

Ideally we would like to identify an investment option to counter when stocks drop. This has proven elusive, in that usually when undergoes major corrections other investment classes tend to perform poorly also, although not as much.

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Henry K. Hebel

Hedging against inflation is also difficult. Social Security, Pensions/annuities with Cost of Living Adjustment, real estate and even Real Estate Investment Trust (REITS) can help mitigate the ravages of inflation to a limited extent. **Other sectors that may stand up under inflation include Commodities and Energy. Finally Series I (inflation-adjusted U.S. savings bonds) are linked to inflation and are another option.**

Modern Theories on Allocation – The author questions the benefit from a fine-grained approach for asset allocation.

Note For Highly Taxed People – Investments in tax deferred accounts such as IRAs 401(k)s SEPs etc may not be worth as much as taxable accounts because withdraws from these accounts are taxed at your ordinary tax rate as opposed to the long-term capital gains tax rate for holdings in a taxable account. One way to increase the accuracy of your calculations is to decrease the value of the deferred accounts by your tax rate (if you are highly taxed, this doesn't really do any good for folks who are not in a high tax bracket).

Summing Up Allocations – Here is a summary of steps to take for a good allocation:

- **Take Assessment** - Complete Figure 3.7 to determine your current assets and allocations.
- **Tackle Debt** – Identify any debt that needs to be paid off or refinanced and execute the plan.
- **Settle on your Allocation Ratio** – Determine the percent of Equities vs Fixed income that is appropriate for you.
- **5 year cash** – Determine how much cash you will need for the next five years and ensure they are in highly liquid assets that you can easily access such as money market accounts, checking, savings, etc.
- **Subdivide Equities** – Determine the appropriate mix of stocks and real estate for your portfolio. Sub-divide stocks into what ever sub-division you are comfortable with to ensure a diverse portfolio.
- **Minimalize Unsystematic Risk** – Try to ensure the success of your retirement plan is not too dependent upon any one company or industry.
- **Identify Changes** – Compare your current asset allocation with your target allocation. Determine what actions need to be taken to reach your target allocation.
- **Select a Vehicle** – Determine the appropriate vehicle to reach your target allocation. Details on vehicles is provided in the next section.
- **Sanity Check** – Review your goals and execution plan with a professional then execute it, this can take up to one year to complete.

Vehicles

Note: This group had an earlier meeting on Review of Vehicles for Retirement. The meeting minutes and recording can be downloaded from the ArtCentrics website [here](#).

Investment Vehicles are objects/accounts into which you put investments. One of the defining factors that distinguish different vehicles is the tax laws/treatments that the vehicles are subject to. IRAs, 401(k)s Taxable Accounts are all different investment vehicles capable of holding investments as determined by the investor..

Vehicles with Tax Deductions – These vehicles include plans such as 401(k), IRA, 403(b), Keogh and other government approved plans. Generally contributions to these funds can be deducted from your income when made and growth in these funds are not taxed until you make a withdraw. When funds are withdrawn from these accounts, they increase your taxable ordinary income. These funds have other restrictions related to the account owners age including penalties for withdrawing money to early, or not withdrawing enough money each year (RMDs) after reaching a certain age.

Employer-Sponsored Tax-Deferred Vehicles – These are deferred compensation plans that are supplemental benefits for highly compensated employees.

Your Winning Retirement Plan

Henry K. Hebeler

Nondeductible IRA Vehicles – Generally same restrictions as and IRA, but contributions to these accounts are not tax deductible. When withdrawing from these accounts you pay taxes only on the growth you earned from them over the years. These are popular vehicles for a [Backdoor Roth](#) for higher income persons who may no longer qualify for Roth accounts. This technique may shortly [come to an end](#).

Roth IRA Vehicles – Contributions to these accounts are not tax deductible, but all earnings and gains in these accounts grow tax free, so withdraws from these accounts have no impact on your taxable income. Used properly, these can be extremely powerful vehicles and play a key role in tax litigation in retirement. Online tools such as [Schwab's Roth IRA Conversion Calculator](#) can help you determine if a conversion makes financial sense.

Variable Annuities – These are insurance products that guarantee your principle and have various mutual fund investment options. Generally there are age restrictions associated with pulling money from these accounts. When the investor is ready to initiate withdraws from these they must convert the account to an annuity. These vehicles are notorious for high fees and commissions and are generally a very poor deal for the investor.

Index Annuities – Another insurance product that preserve the principal investment generally have a 7-10 year withdraw restriction in withdraws. Gain on these accounts are linked to an index (many indexes are available) and are generally capped at a certain percentage gain, or percentage participation to the linked index. More information on these and other annuities can be found [here](#).

Charitable Vehicles – [Charitable Trust](#) allow you to donate either cash or appreciated securities, get a tax deduction, and subsequently direct the trust to invest the money in some of their funds. You no longer can use the money for your own income, but you can, at any time, direct the trust to mail checks to legitimate charities of your choice. Other similar vehicles include the [Charitable Lead Trust](#) (returns principle) and [Charitable Remainder Trust](#) (provide you income)

Your Own Accounts – Ordinary investment accounts are not linked to any particular special tax treatment. A sale of assets in these accounts will generally trigger a taxable event. Long Term Gains (assets held for more than one year) are taxed differently than Short Term Gains (assets held for less than one year). Almost any investment can be placed in these accounts... Stocks, Bonds, Mutual Funds, etc. provided the company hosting the account supports the investment.