Portfolio Management

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Topics

- Growth Versus Income
- Building an Income Generating Portfolio
- Building a Growth Portfolio

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Growth Versus Income

Income Generating (cash flow from operations)
- Pension like
- Guaranteed periodic income
- Step up with inflation
- Low risk of loss

Growth (treasury, opportunistic use for capital expenditures)
- Must take on risk for higher return
- Outpace inflation
- Maximize return for given risk

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Income Model

Income Portfolio Asset Types

Requirement - contractually established periodic income.

- Fixed annuities
  - Pros - level income, high yield, not tied to market
  - Cons - no step up, not inflation protected
- Certificates of deposit
  - Pros - can be laddered
  - Cons - no inflation protection
- *Real estate rental income
  - Pros - good hedge against inflation
  - Cons - have to deal with tenants
- Municipal bonds
  - Pros - good for higher tax brackets, low default risk
  - Cons - limited to offering in State of residence
- Corporate bonds
  - Pros - potentially higher yields, can ladder to diversify risk
  - Cons - default risk
- Social Security
- Pension
- Reverse Mortgage
  - Alternative - arrangement with children to take out equity stake in home.

Fixed Annuities

- Sold by insurance companies
- Like a pension from an insurance company.

Age	Monthly Payout	Annual Payout	Annual Return (Female)	Annual Return (Male)
67	$ 657	$ 7,884	7.88%	8.50%
69	$ 688	$ 8,256	8.26%	8.96%
71	$ 725	$ 8,700	8.70%	9.52%
73	$ 769	$ 9,228	9.23%	10.15%
75	$ 821	$ 9,852	9.85%	10.88%
77	$ 881	$ 10,572	10.57%	11.74%
79	$ 952	$ 11,424	11.42%	12.71%
81	$ 1,036	$ 12,432	12.43%	13.80%

* http://immediateannuities.com

Bond Returns - Net of Taxes

Federal Tax Bracket	After-tax return from a municipal bond paying a tax-free yield of 5%	After-tax return from a bank paying 5% taxable	After-tax return from a corporate bond paying 7% taxable	Taxable equivalent return that would yield 5%
15.00%	5.00%	4.25%	5.95%	5.88%
25.00%	5.00%	3.75%	5.25%	6.67%
28.00%	5.00%	3.60%	5.04%	6.94%
33.00%	5.00%	3.35%	4.69%	7.46%
35.00%	5.00%	3.25%	4.55%	7.69%

* These yields do not consider State and Local taxation.

Income Generating Idea

form an investment group and create a diversified portfolio of select real estate properties in the area.

- Diversify - condos and houses.
- Buy from banks that are eager to deal.
- <u>Don't do marginal deals. Must be positive cash flow with margin of safety.</u>
- Build value through sweat equity.
- Hold.

Growth Portfolio Construction

- Requirements
- Capital Allocation Line
- Risk-Free Portfolio Construction
- Risky Portfolio Construction
- Portfolio Management
- Fees

Growth Portfolio Construction

Requirements

- Vehicle for potentially high expected returns.
- Inflation hedged.
- Protection from financial crisis.

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Capital Allocation Line

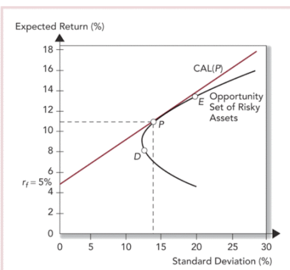

FIGURE 7.7 The opportunity set of the debt and equity funds with the optimal CAL and the optimal risky portfolio

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Risk-Free Portfolio Construction

Requirements

1. Default risk - ~ 0% chance, rating AAA
2. Return - at least equal to Treasuries

Ideas

1. Ladder a bond portfolio for a little higher return
2. Use municipal bonds if tax bracket is high enough
3. Maybe consider “FIXED” annuities.

Not Variable!

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Risk-Free Portfolio Construction

Goal of the Risk-Free Portfolio

1. Cave where investors flee for protection
2. Hedge against financial uncertainty
3. Maybe a hedge against inflation

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Risky Portfolio Construction

Core Asset Classes

- Equities
  - Need deep markets to provide liquidity & fair pricing.
- Real estate
  - Hybrid equity/bond.
  - Good hedge against inflation.
  - If equity real estate - subject to emotion driven markets.
  - If private real estate - can add sweat equity - not as liquid.
- Bonds
  - Treasuries - diversification, protection against financial crisis
  - Tips - government backed hedge against inflation - hooked to CPI

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Risky Portfolio Construction

Non-Core Asset Classes

- Investment Grade - Corporate Bonds
- High Yield - Corporates
- Tax Exempt Bonds
- Hedge Funds - Absolute Return
- Private Equity

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Risky Portfolio Construction

Which return components are most important?

Strategic Asset Allocation → 93.6%

Strategic Asset Allocation + Market Timing → 95.3%

Strategic Asset Allocation + Market Timing + Security Selection → 99.5%

•*Journal of Financial Analysis*, 1986, Brinson Hood & Beebower
•*Journal of Financial Analysis*, 1991, Ibbotson & Kaplan

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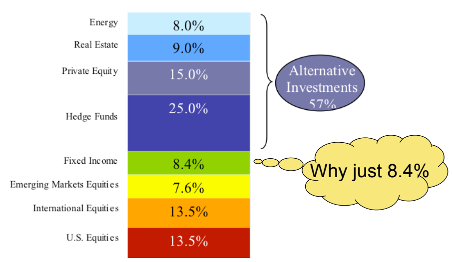
Asset Allocation

<u>Step 1.</u> Top Down Allocation Construction (<u>Most Important</u>)



Top endowments in the U.S. - Harvard, Yale

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Asset Allocation - Starting Point

David Swensen recommended allocation for individuals.

Domestic Equity	30%
Foreign Developed Equity	15%
Emerging Market Equity	5%
Real Estate	20%
Treasuries - Short	10%
Treasuries - Long	10%
TIPS	10%

Numerical diversification - get free lunch

Inflation hedged

Protection against financial crisis

Equity heavy for long term growth

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Personal Preferences

" Personal preferences play a critical subjective role in portfolio decision making. Unless an investor embraces wholeheartedly a particular portfolio structure, failure awaits. Lightly held positions invite casual reversal, exposing vacillating investors to the costly consequences of market whipsaw. By adopting asset-allocation targets that dovetail with personal risk tolerances, investors vastly increase the odds of investment success"

Swensen, Unconventional success, Chapter 3

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Benchmarks - The Starting Point

Market	Index	ETF
U.S. Equity	Wilshire 5000	VTI
	Russell 3000	IWV
	DJ U.S. Total Market	IYY
	S&P 500	IVV
Foreign Developed	MSCI EAFE	EFA
Foreign Emerging	MSCI EM	EEM
Real Estate	Wilshire REIT	RWR
	Cohen & Steers Realty Majors	ICF
U.S. Bonds	Lehman 1-3 yr Treasury	SHY
	Lehman 7-10 yr Treasury	IEF
	Lehman 20+ yr Treasury	TLT
TIPS	Lehman TIPS	TIP

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To Index or Not to Index?

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Risky Portfolio Construction - Step 2

Do we use ETFs?

- Focus is on tracking error and fees.
- Pro - no overlap in asset allocation.
- Pro - no style drift.
- Pro - tax efficient.
- Con - more volatile.
- Con - will never outperform base index.

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Risky Portfolio Construction - Step 2

Step 2. Bottom Up Analysis

Do we use mutual funds?

- Focus is on manager selection. 10 year track record, use alpha, volatility, Sharpe Ratio.
- Con - possible overlap in asset allocation.
- Con - style drift.
- Con - fees.
- Pro/Con - actively managed.

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Risky Portfolio Construction - Step 2

Idea

- Build an Excel model for your allocation.
- Use Morningstar X-Ray to back test your model.
- Input funds for core allocation and see how the portfolio would have performed over past 10 years.
- Look at portfolio cross-section.
- Then shift the allocation and retest.

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Risky Portfolio Construction - Step 2

Do we use individual securities?

- Focus is on securities analysis and maintaining asset allocation. Very challenging!
- Need - 30+ securities to diversify away idiosyncratic risk.
- Set position limits. (Demonstrate)
- Pro - no management fees.
- Pro - allocation very controllable.
- Con - idiosyncratic risk.
- Con - transaction fees.
- Con - a lot of work!

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Risky Portfolio Construction - Step 2

Active versus Passive Management

- Hybrid approach is probably best.
- Active requires more research.
- Passive has lower fees and guarantees market returns.

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Portfolio Management

- Monitor
- Sell Discipline
- Rebalance

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Monitoring

Mutual Funds

- Monitor funds for manager change.
- Re-run X-Ray to check for style drift.

ETFs

- Be on the look out for ETFs with lower fees e.g. Vanguard VWO versus Barclays EEM.

Stocks

- Monitor position limits and trim back to limit risk exposure.

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Sell Discipline

Individual securities

- Need to employ a sell discipline.
- If security price drops more than sector by a certain percentage then sell.
- Have a target price based on discounted cash flow model of future earnings and dividend payments.
- Sell when target price reached.
- Take some profit along the way and redeploy.

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Rebalance

Rebalancing occurs at multiple levels.

Top Allocation - Rebalance between risky portfolio and risk-free as you approach target age.

Risky Portfolio - Rebalance between asset classes to maintain proper diversification.

Intra Asset Class - Rebalance to limit exposure to individual positions.

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