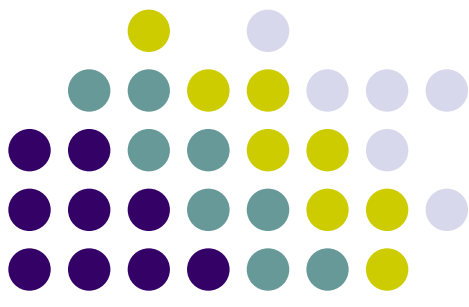


Aristotle as Investor

Happiness and Prudence





Stock Market Investing

- Common stocks, mutual funds, index funds, index exchange-traded funds and index derivatives.
- Active investing. Not passive investing, i.e., an index of the total stock market.
- Asset allocation among asset classes. Stock classes are based on factors of return.
- The Three-Factor stock-portfolio pricing model of expected total return.



Three-Factor Return Model

- Quantitative model based on statistics.
- Single-equation model of expected *Return*:
 - 1.** *Market factor*: All stock equities or a proxy.
 - 2.** *Size factor*: Market capitalization of equity.
 - 3.** *Value factor*: Book to market equity ratio.



Three-Factor Model

- Stock portfolio pricing — not individual stock pricing.
- Subdivide the total stock market portfolio into sub-portfolios or stock index funds.
- The criteria for dividing or partitioning the total capital market are the three factors — market, size and value.



DFA Three-Factor Model

- Dimensional Fund Advisors calls the three factors the dimensions of expected return.
- Geometric three-dimensional version:

Dimension

Factor

X-dimension (horizontal)

Value

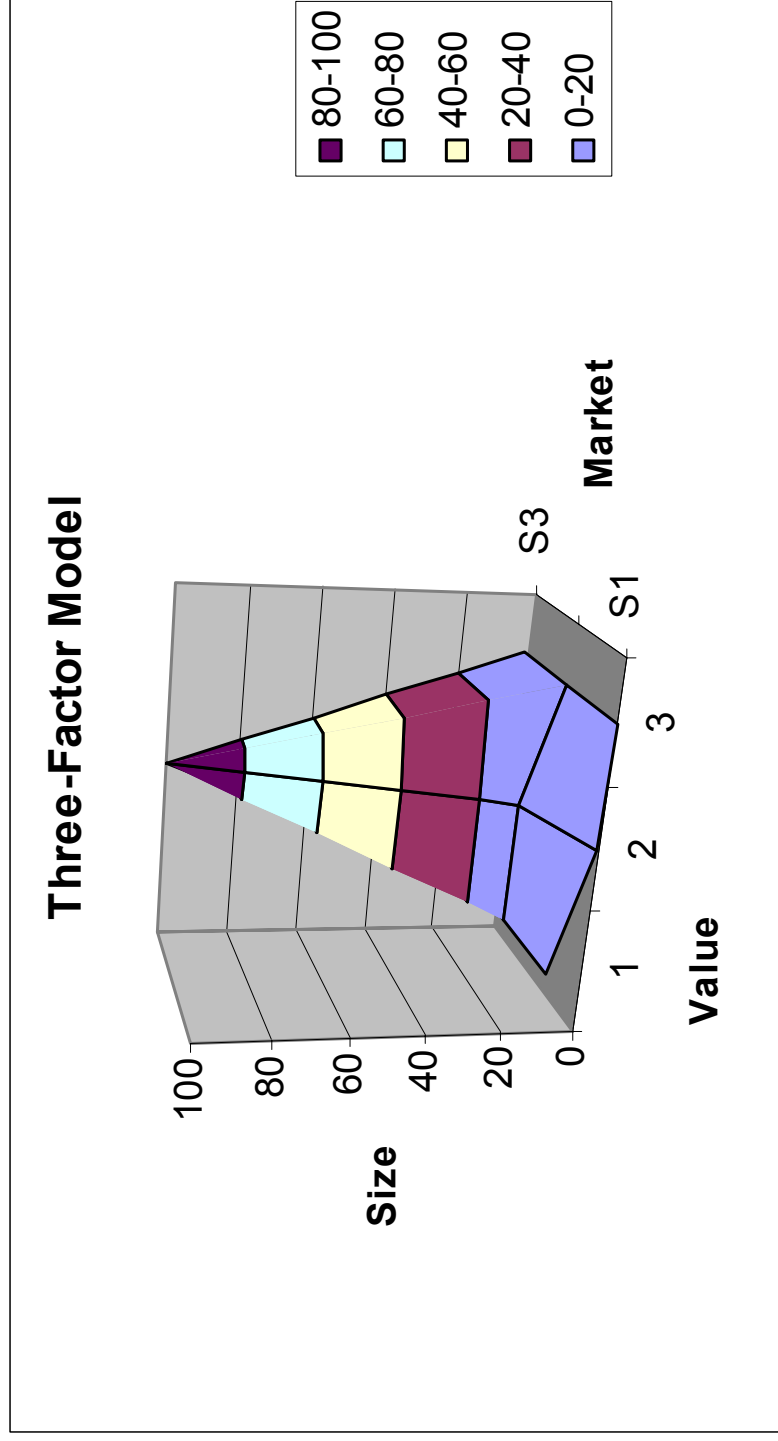
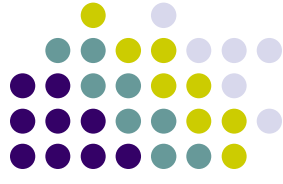
Y-dimension (vertical)

Size

Z-dimension (depth)

Market

Geometric 3-D Version





Size and Value Dimensions

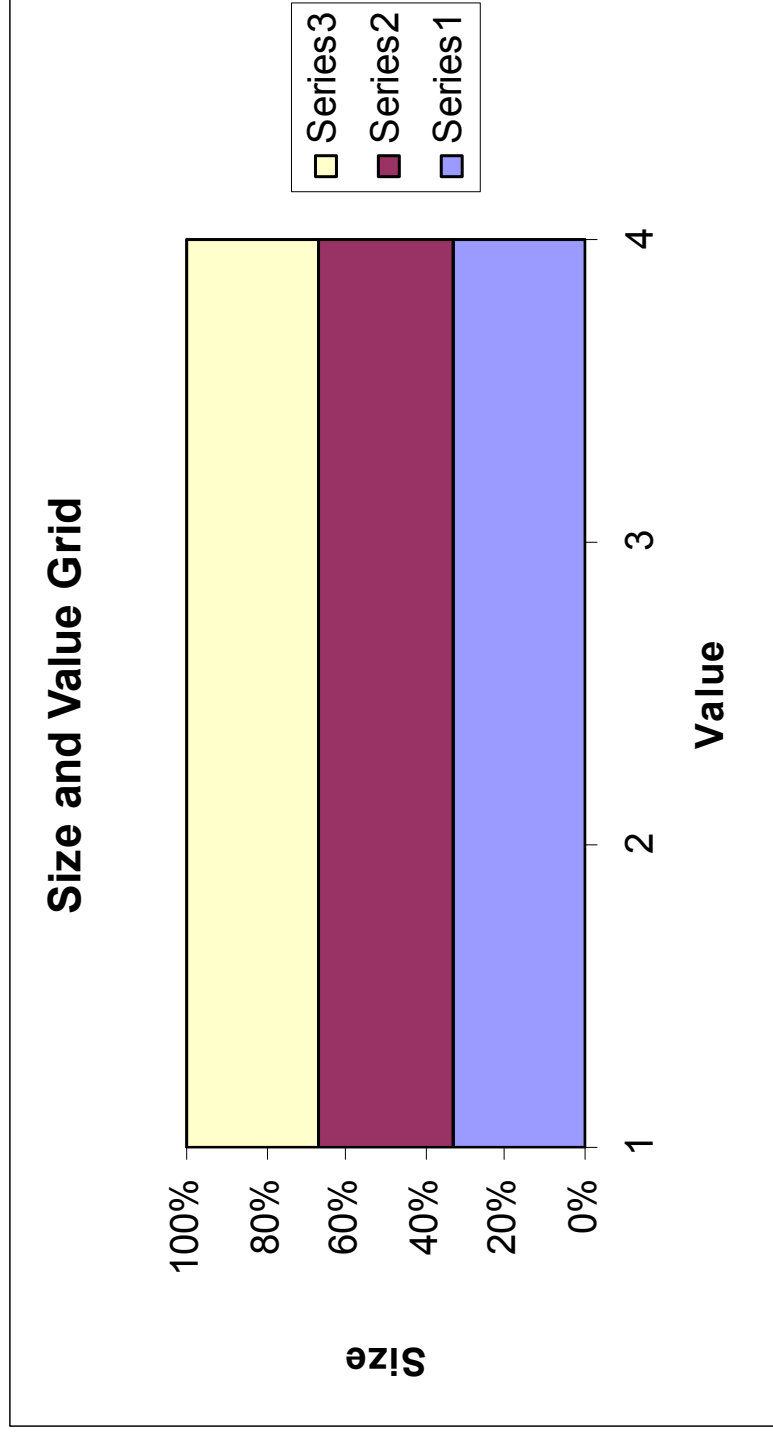
- Geometric two-dimensional version:
- **X-dimension:**
Value, as measured by Book Equity to Market Equity ratio (a price ratio).
- **Y-dimension:**
Firm Size, as measured by Market Equity.



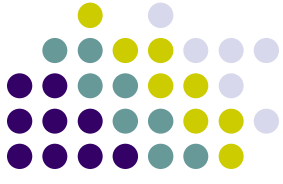
Geometric 2-D Version

- An example is the Morningstar Style Box.
- **X**-dimension is **Style** (Value, Blend, Growth):
 - Relative Book Equity to Market Equity ratio, and Relative Price to Earnings ratio. Both are price ratios.
- **Y**-dimension is **Market Capitalization** (Small-Cap, Medium-Cap, Large-Cap):
 - Firm Size (a/k/a Market Equity).

Geometric 2-D Grid



Market Cap and Style Box



	Value	Blend	Growth
Large	Large Cap Value	Large Cap Blend	Large Cap Growth
Middle	Mid Cap Value	Mid Cap Blend	Mid Cap Growth
Small	Small Cap Value	Small Cap Blend	Small Cap Growth

Market Capitalization:
Small-Cap, Middle-Cap
and Large-Cap

Style:
Value-Style, Blend-Style
and Growth Style



Size and Value Factors

- Return on the left-hand side of the model equation, and Size and Value on the right-hand side of the model equation, all include both Price and Shares as components.
- Therefore, Size and Value factors are vicious circular reasoning in a model of Return.
- Size and Value are neither logically valid nor scientifically valid. They are fatal fallacies.



Circular Reasoning

- Vicious circular reasoning is an inference drawn from a premise that includes the conclusion, and used to prove the conclusion.
- Inference is the deriving of a conclusion in logic by either induction or deduction.
- Vicious circular reasoning is a fallacy of reasoning. It is fatal and has no counter-example. It ends a logical argument.



Compound Growth

- A \$10,000 investment earning **11%** per year for 25 years grows to \$135,855.
- A \$10,000 investment earning **10%** per year for 25 years grows to \$108,347.
- A difference of **1%** (100 basis points), due to excess fees, grows \$27,508 less.
- A larger investment grows proportionately, e.g., due to the same **1%** excess fees, \$100,000 grows \$275,080 less.



Conclusion

- Partitioning the total stock market into size groups (small-cap and large-cap) or style groups (value and growth) to form index funds can not scientifically add value.
- Size and style index funds have added costs and excess fees that can not scientifically be compensated by higher expected returns.
- Premium investment fees can not be offset by fallacious premium expected returns.



Happiness and Prudence

- “Happiness” Aristotle calls *eudaimonia*, more than a low-grade contentment.
- “Practical wisdom” Aristotle calls *phronésis*, as opposed to *sophía*, the word for “wisdom” .
- This translated into Latin as *prudentia*, and from there into English as “prudence” .



The Prudent Person

Now it is held to be the mark of a prudent man
[*phrónimos*] to be able to deliberate well
about what is good and advantageous for
himself, not in some one department, for
instance what is good for his health or
strength, but what is advantageous as a
means to the good life in general. ~ ~ Aristotle



The Art of Worldly Wisdom

Aphorism 51: *Know how to choose.*

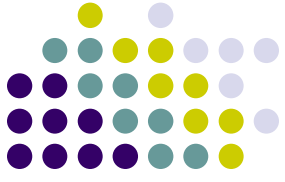
Two talents are involved: choosing, and choosing the best. There are many people with a fertile, subtle intelligence, rigorous judgment, both diligent and well informed, who are lost when they have to choose. Knowing how to choose is one of heaven's greatest gifts.

~~ B. Gracián (1601-1658)



Question

- Would a prudent person knowingly choose fatal fallacies, either in the stock market or in a retirement-savings plan, as a way to happiness?
- What would Aristotle choose as the best?



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Table of Contents

1. Title
2. Stock Market Investing
3. Three-Factor Return Model
4. Three-Factor Model
5. DFA Three-Factor Model
6. Geometric 3-D Version
7. Size & Value Dimensions
8. Geometric 2-D Version
9. Geometric 2-D Grid
10. Size & Value Factors
11. Circular Reasoning
12. Market Cap and Style Box
13. Compound Growth
14. Conclusion
15. Happiness and Prudence
16. The Prudent Person
17. The Art of Worldly Wisdom
18. Question
19. Contact Information
20. Table of Contents