FMA Session 226
OVERVIEW & RESEARCH IDEAS SESSION

Teaching Corporate Finance Honestly

Why I Wrote a Free Corporate Finance Textbook

Ivo Welch, UCLA

Oct 2018

Friday, Oct 12, 3:45 – 5:15 pm.

- Part 1: Can another finance text book be better? How?
- Part 2: Can a free corporate finance textbook compete with $200 books?

Part 1: Can it be better?

- I wrote it out of frustration with existing textbooks.
- Method of Learning, not just Crammed Content.
- All concepts are in most/all textbooks, but they are often hidden and considered secondary in favor of fancy (and often wrong) theories and detail.
- Let me illustrate what I mean.

Method of Learning

- I am bad learning from Ted talks.

  Fun. But I think I have learned it, even when I really have not.
- I am bad learning just from text.

  Easy. But often unclear...and I fall asleep over length.
- I am bad learning from formulas.

  Precise. But hard and I often lack the intuition then.

- I learn best from numerical examples.

  and I want them to **start** simple and clear, not BS complicated.
- ...and from (then) working my own examples.

- And I want to teach students how to do/think, too.

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Basics

I need my teaching of finance to

- ...start with the fundamentals,
- ...not with high-brow CEO philosophy,
- ...not with wrong/wishful acdmc theories,
- ...and be conversational unpretentious.

And this makes it easier not just for MIT PhDs, but for community college students, too!

Examples Follow

Example of "Start with Basics"

- **What is a perfect market?**
- Why should students care?
- Isn't it better to delay "theory"?

- No! It’s more confusing when brought in later.
- Perfect Capital Market:
  - X-Costs
  - Taxes
  - Information (Agreement)
  - Lots of Competition

$\Rightarrow$ Law of One Price.

- No Perfect Market $\Rightarrow$ No (One) Value
  The value to you can be different from the value to me.
- Easy to explain “why” with “epic fails.”

- Most finance (tools) need perfect market.

Know thyself

- Know where thy tools apply.
- **Do no harm!**
- A little bit of knowledge can be a dangerous thing.
- Students (and we ourselves often) forget where we said they could use our tools.

If you do not cover this early and hammer it in:

- Students will forget the importance,
- and think **that** our theories are immaterial, inapplicable, inconsequential, insignificant, pointless, senseless, useless, inane, and beside the point;
- instead of **where** our theories really are so,
- ...and think you are a cloistered egghead who does not understand the real world.

switch

Some Specific Examples of Important Base Knowledge To Hammer

Edward I, Malleus Scotorum

- **BoA High-Yield Corp. Bonds: YTM $\approx$ 6.25%.**
- **Equivalent Treasury: YTM $\approx$ 3.0%.**
- **Why?**

- 8 of 10 students speculate about beta.
- Would have been better never to have taught!
- Students would have used their brains, and given the right reasons:
  - It's 95% credit spread and liquidity costs (and options).
  - The CAPM is totally irrelevant.

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Which is the better long-run investment?

	E(R)	sd(R)
Bond Fund	3%	3%
Stock Fund	6%	25%

- Approx formula for normal RV:

$$E(LR) = E(R) - var(R)/2$$

- Roughly speaking, both yield under 3%.
- Geo vs. Ari is fundamental to finance.
  Don't move on until students understand this inside out.

  Can matter greatly for x-sectional evaluating funds. Also, how to cheat with reporting.

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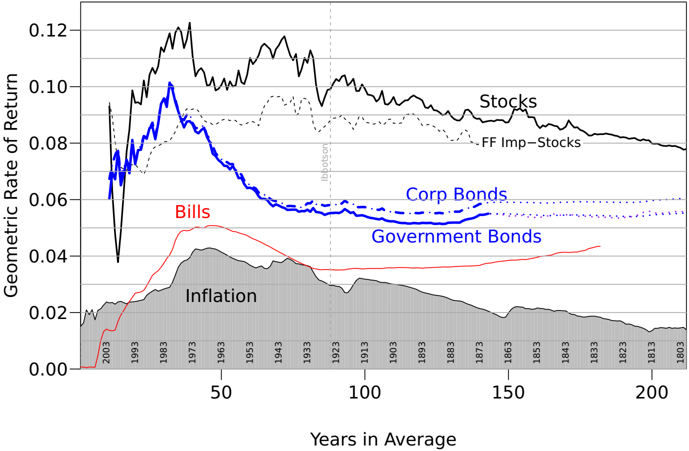
- **What was the historical equity premium?**
- And what is a term premium? In equities?
- **What will it be in the future?**
- And what is the right input into the CAPM formula? Is it Geo or Ari?

- What was the historical equity premium? What will it be in the future?



- Term premium ≈ risk premium. (Stocks are long-term. Projects?)

- **What is the equity premium forward-looking?**
- We are good at relative pricing. (PM Law of 1P)
- The more similar goods are, the better we are pricing one in terms of the other.
- We are bad at absolute pricing.
- The equity premium is a “standalone” good without close peers.
- Be honest. **Explain arguments.**
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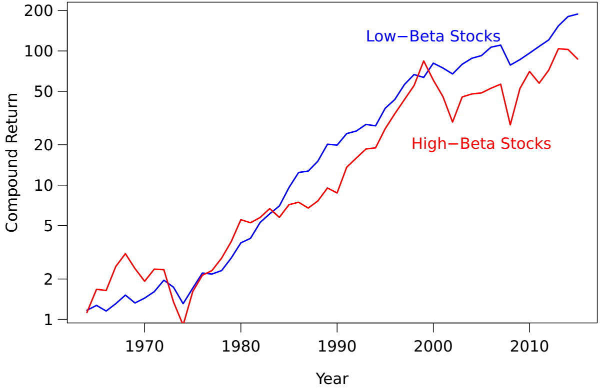
- The CAPM is not perfect, but it is a good approximation model for measuring firms' cost of capital.
- It's ballpark good
- ...even if other variables predict a little better.

- **The CAPM is not perfect, but...**
- Are you kidding?



(This is from French's data website.)

- It is not a matter of "a little lower precision."
- It is not a matter of correlated variables.

  (which would have been "yes, something else [e.g., size] may do a little better, but CAPM is on avg is ok, and beta is a good standin)."
- It is **not** ok. The CAPM is worse than nothing (risk-neutrality).
- But the CAPM must be taught, ...

But it must be taught honestly:

- The CAPM is worse than “evidence-free.”
- Ignorance is not bliss. It can be harmful.
- Taught because of beauty **and intuition**,
- because ignoramuses believe/give tests on it,
- because of Brealey, Ross, and Berk. $\leftarrow$ humor.

And

- Admit your ignorance. Understand **what** you need accurately (CF Uncertainty?)

- Absence of CAPM gives useful investment advice. Tilt diversified pfio towards low-beta stocks.

Important

- Are you even in a (near-)perfect market??
- Was the CAPM model even relevant to you?
- Are liquidity etc. costs not more important?
- 2 of 3 CAPM inputs are super-hard!!
  - If the project is new and has no return history, where would you even get a market-beta estimate from?
- Use more benchmarked rates of return / comps.
  - Why not other comparables and benchmarking?
  - Is your project infra-marginal, marginal, or extra-marginal?

- **Capital Structure is a first-order consideration.**
- **Managers set capital structure by carefully weighing costs and benefits.**

Yes and No

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Yes and No

Capstruct First-Order Consideration?

- For **large** publicly-traded non-financial services firms, capital structure is of secondary (but not tertiary) concern.
  - Whether D/E is 20% or 30% is unimportant.
  - Even our economic models say so.
  - Firm value is nearly flat in D/E.
- Capital structure matters when leverage is > 80%:
  - small entrepreneurial companies,
  - highly-levered real-estate
  - distressed firms,
  - financial institutions.

Do Managers Choose Capstruct?

- Most capstruct changes are due to fluctuations in market values. They are not ordained by managers.
- Nevertheless, even if not set deliberately, D/E has impact on agency, information, x-costs, etc.—all the things we teach.
- Great economics, useful for thinking and application in other contexts, too.
- PS: Do not forget about NFL (like A/P)!!

- **How do you calculate WACC? Why?**

- 80% of students get this wrong.
- Uhmmm...so did I in my first year of teaching.

  ...and I was afraid to ask and/or admit my ignorance, because many others knew this already, and I couldn't find a good source...

- They double-count the tax subsidy.
- WACC must be applied to an as-if-fully-unlevered-and-taxed cash flow.
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Accounting Cash Flows vs. Finance Cash Flows?

- Standalone economic explanation—not accounting rule based.
- Simple—explained with numerical example.
  - Cash-Flow-from-Operations Plus Cash-Flow-from-Investments Minus Interest
  - (Interest is a return of capital, not an expense.)

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Many Other Simple Insights

- Debt and Equity Payoff Diagrams.
- Where are risk-aversion and liquidity preferences? (Liquidity seems more important!)
- Sharpe Ratios can increase by throwing away $$$
- Managerial pay motivates hard work.
- Term Premiums vs. Risk Premiums
- TOC Ordering vs. Syllabus...random!

Book's View

- Teach basics first.
- Build up slowly and systematically.
- Make sure students know what they know.
- ...and know what they don't know.
- Be humble about what we know and do not know. There is still enough to teach.
- Teach how to confront new questions.

Part 2: Compete?

How can a free textbook compete?

Yes, it takes 5 years to write a good textbook.

What do Textbook Publishers Bring to the Party?

- Printing? No — outsourced.
- Editing? Sometimes. Outsourced. Costly.
- Reviewers? (It's us!)
- Sales Force?
  - (Cialdini: Not finance, but sales! Attractive.)

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Educated Guess on Economics

- Price: \$250/book. Plus Ancillaries.
- Authors: \$20/book
- Print Cost: \$30/book (in quantity).
- Bookstore \$20-\$40/book.
- Fixed Costs: \$100,000-\$400,000.

Sell $\approx$2,000 books to cover expenses. Often author's home consumption. Then \$100/book.

Monopolistic Comp: Pearson, McGraw-Hill, SW, Wiley, Cengage

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Pearson

- Pearson helped me get to my first edition.
- Without them, my book would not be as good today as it is, even though little remains from the first edition.
- Pearson is classy and good.
- I can highly recommend them for anyone who wants to write a textbook for $$.
- But I would not recommend anyone to write a textbook. It must be labor of love.

Why Not More Entry? Publishers

- **Much surplus goes to [few] publishers...who already have a book.**
- **Faculty decide but do not pay for the books. Students do!**
- **It is tough to get faculty to adopt new books.**

Why Not More Entry? Faculty

So what do faculty like?

- Existing Preps.
- Existing Preps^2.
- Textbook Choice Committees. Existing Preps^n.
- ABM, RWJ, BD are interchangeable.
- Safety in Numbers.
- Tie-Ins: Computer system, slides, etc.

Publishers know this! \$200 $\rightarrow$ \$300 $\rightarrow$ \$400

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What about Welch-Dude and Book?

- Author is slightly insane.
- Does not care primarily about money.
  - (but some financing from printed book sales)
- Cares primarily about how we teach finance, economics, and thinking.
- Cares primarily about more of **you** adopting it.

What about Welch-Dude and Book?

- Has web authoring skills, too.

  `http://syllabus.space/`

  Usable for other books, courses etc. (and GPL)
- Put together full complement of course materials.

  `http://book.ivo-welch.info/instructor`

How Can You Help?

- Care about your students, not just about your existing Preps. Switching is one-time cost!
- **Check it out** open-minded. I only beg you to evaluate/ consider, not to adopt it. Perhaps try a class and/or chapter.
- Write a (non-anonymous) review!
  Honest. Good *and* bad.
- Tell others!
- Write a chapter on a new subject
  (Law&Econ. Country-Specialized. Actuarial. Health-Finance. Etc.)
- Write and share (e)quizzes.