Module 2

Alternative Approaches to Valuation and Investment

Issues with WACC
(To WACC or not to WACC..?)

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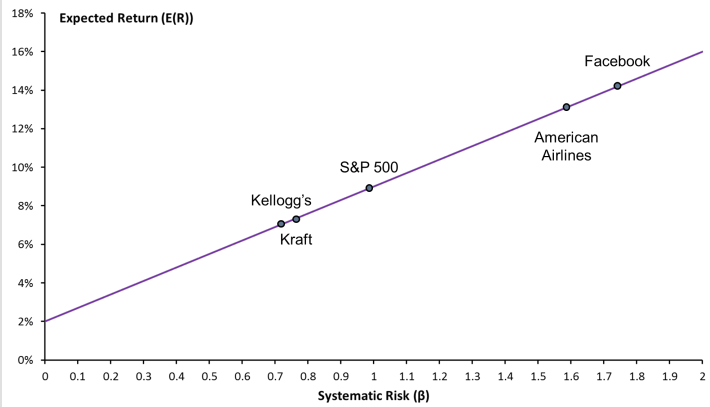
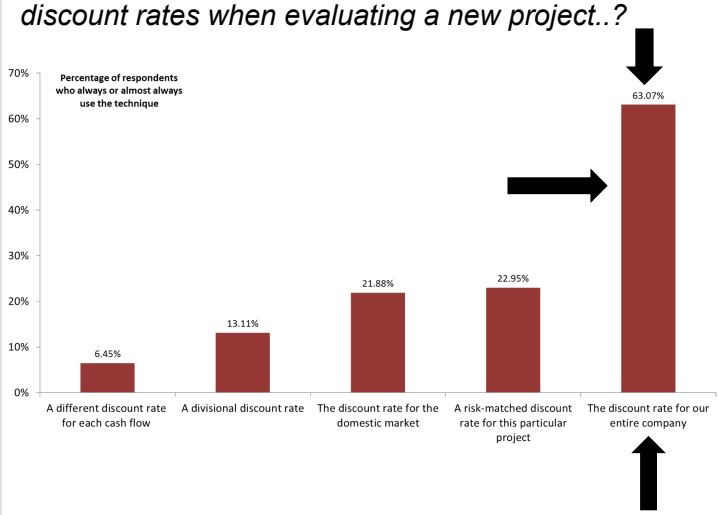
Recap…



…but…

Recap…

How frequently would your company use the following discount rates when evaluating a new project..?



Why this might be an issue: Illustration

Let's assume that you are the CEO of a large **conglomerate** listed company.

Each year you hold a budgetary retreat where each of your division heads argue for funding for their own projects.

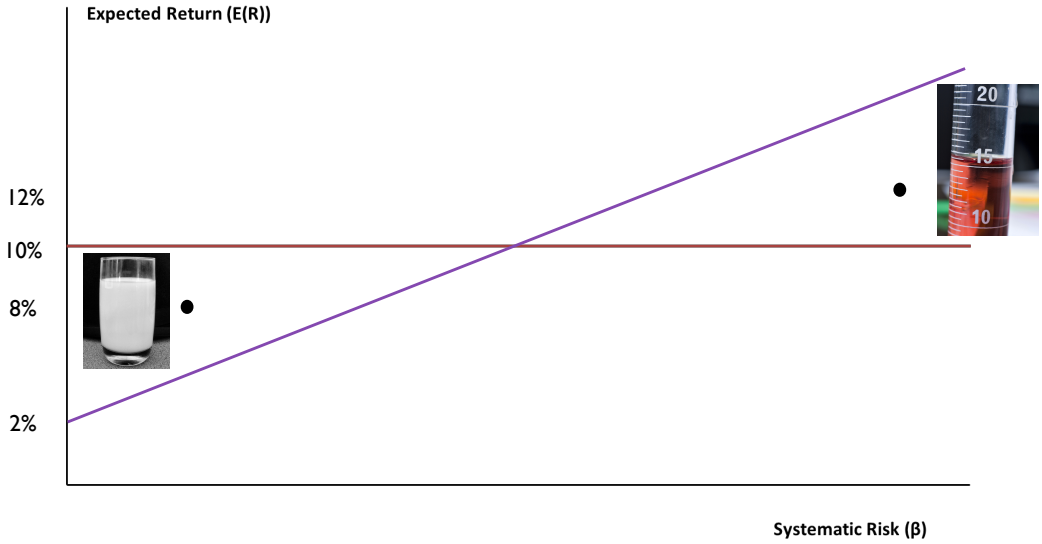
Illustration continued

- The head of your dairy operations puts up a very impassioned case for their project which has an internal rate of return of 8% per annum.

- Your head of biotech research also puts up a proposal (and impressive demonstration) with an expected return of 12% per annum.

If the firm's WACC is 10% - which of the two projects are likely to be accepted?

Illustration continued



Net result

If a conglomerate firm continues to use a single WACC as the benchmark rate to assess all projects, then their will be a tendency:

1. The systematic risk of the company will increase as low-risk projects are rejected in favor of high-risk projects
2. The value of the firm will decline as higher risk negative NPV projects are mistakenly accepted.

Is there any evidence that this actually happens?

Evidence

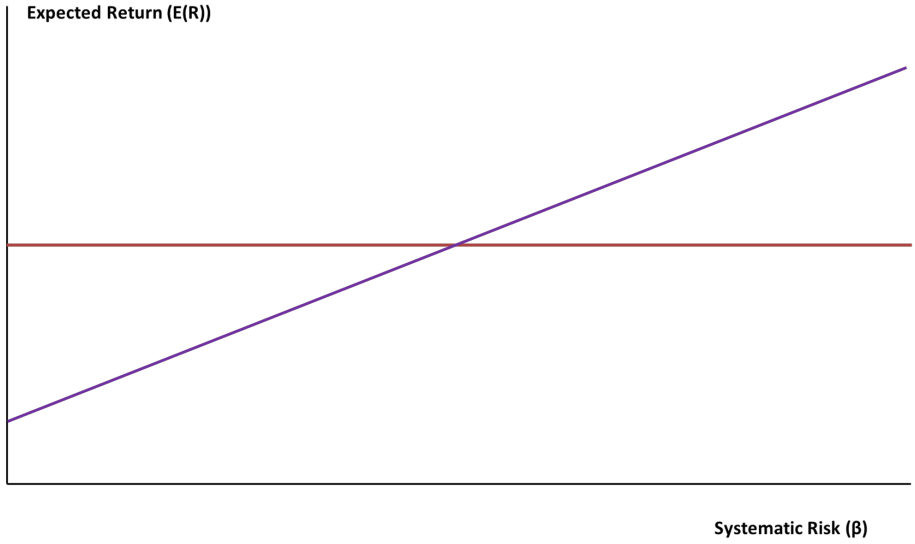
Philipp Kruger, Augustin Landier and David Thesmar published an article in the Journal of Finance in 2015 looking at this issue.

Examined investment levels for different divisions in conglomerate firms.

They measured the industry beta for each division and compared that with the beta for the firm's *core* division (i.e. it's largest division by sales – hence its most representative business unit).

Their key result was that investment levels were positively related to the difference in division and core beta.

What about non-conglomerate firms?

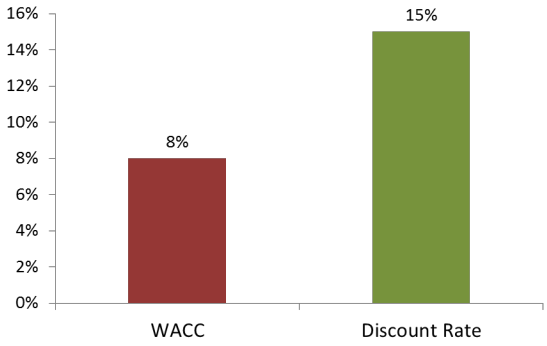


But there is even further evidence…

Ravi Jagannathan, David Matsa, Iwan Meier and Vefa Tarhan conducted a survey of 4,600 CFOs of US listed firms.

They asked what discount rate the firm used as a hurdle rate in the last two years.

They then compared that with their own estimation of the firm's WACC.



… why would firms use excessively high discount rates..?

A whole lot of potential reasons:

1. Due to financial constraints
2. Natural conservatism of managers
3. In recognition of the value of flexibility and the "stickiness" of investment decisions.

Real Options Analysis – the study of the value of managerial flexibility!

Summary

The uncritical use of the WACC as a hurdle rate by a conglomerate firm may result in:

- Increase in the riskiness of the firm's cash flows
- Decrease in the value of the firm.

There is some evidence to suggest that this is a "real" problem for conglomerate firms – but it is unlikely to be an issue for more focused firms.

There is also some evidence that although firms might use a single discount rate to assess new projects – that single rate tends to be significantly higher than the company's WACC.

Module Summary

1. Foundations of the WACC
2. WACC and Debt
3. WACC and Equity
4. Issues with WACC

Source list

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Expected return/systematic risk graph © The University of Melbourne. Created by Sean Pinder using data downloaded from Yahoo Finance in June 2015 at https://au.finance.yahoo.com.

Slides 3:
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Source list

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Slide 9:
Expected return/Systemic risk graph. © The University of Melbourne. Created by Sean Pinder.

Slide 10:
Graph © The University of Melbourne. Created by Sean Pinder using data from Jagannathan, R., Matsa, D. A., Meier, I., & Tarhan, V. (2014). Why do firms use high discount rates? Available at SSRN 2412250.