Midterm test results

Median: 60%

The same median for all 2 sections

- Your mark will be released on Tuesday, 9 March 2021 evening before 11:59 PM
- Your mark will be distributed on the Examsoft portal
  - https://wiki.nus.edu.sg/pages/viewpage.action?pageId=219418245
- Your mark will also be published on LumiNUS gradebook
  - Remember to click the VERIFY button after checking your mark
- If you have any questions, please email deserina@nus.edu.sg

  I may answer them all together by the next class (16 March)

Note on how to read the report from Examplify

- The question you answered correctly will be indicated by green color
- The question you answered incorrectly will be indicated by red color

CORRECT INCORRECT

- **>** indicates the correct answer, and NOT your answer

X A:
X B:
> C:
X D:
X E:

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Week 7 survey

Please fill-up the Week 7 survey on Luminus

Tools → Survey → FIN2704/X: Week 7 Survey

Information will be used to organize the module for the rest of the semester, including for the final exam

- This module follows the guidelines set by the Business School

Week 7 Zoom lecture

It is recorded and the video is posted on LumiNUS

Tools → Multimedia → Week 7 FIN2704/X Videos

FIN2704/X
Week 8

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NPV

- Do we accept a project when NPV = 0?
  - Cost = Benefit
  - You will be indifferent between taking the project or not
    - Either decision would be appropriate
- In this module and in many cases, we always use NPV to decide

NPV – comparing 2 projects
Example from Wk 8 slide 62

Period	Project A	Project B
0	-500	-400
1	325	325
2	325	200
IRR	19.43%	22.17%
NPV	64.05	60.74

Required return for both projects = 10%

Which project to take?

- You should accept both projects since they both have positive NPV, given the appropriate required rate of return
- If they are mutually exclusive, you choose the one with the higher NPV using the appropriate required rate of return
  - Project A in this case

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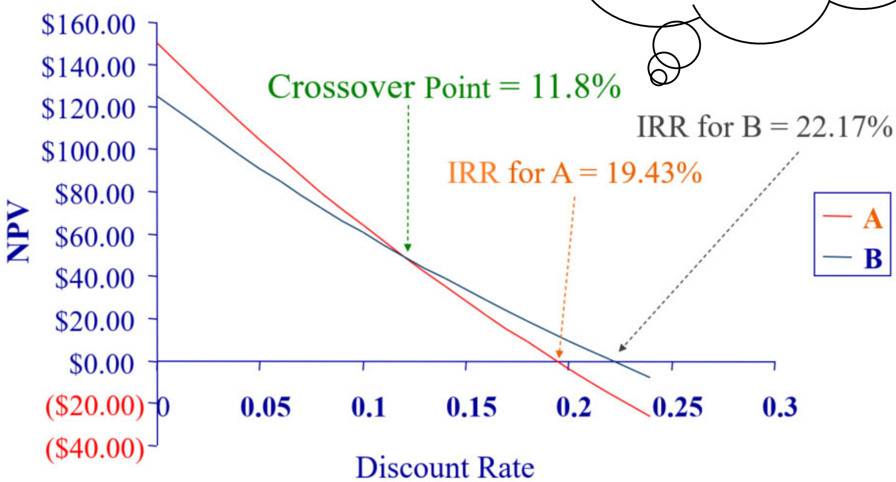
What happens to the NPV when we vary the discount rate?

From Wk 8 slide 63

How do you calculate the crossover point?



Period	Project A	Project B
0	-500	-400
1	325	325
2	325	200

IRR and MIRR

- IRR
  - Represents the hypothetical discount rate that would make the firm/project NPV = 0
  - Think of this as the expected rate of return of the project
    - Note: IRR is not the market discount rate, or the required return of the firm/project

- IRR vs. MIRR
  - IRR is still useful because IRR doesn’t require WACC assumption
    - IRR represents the "true" rate of return
    - MIRR requires WACC assumption and therefore, MIRR may not be the true rate of return of the project

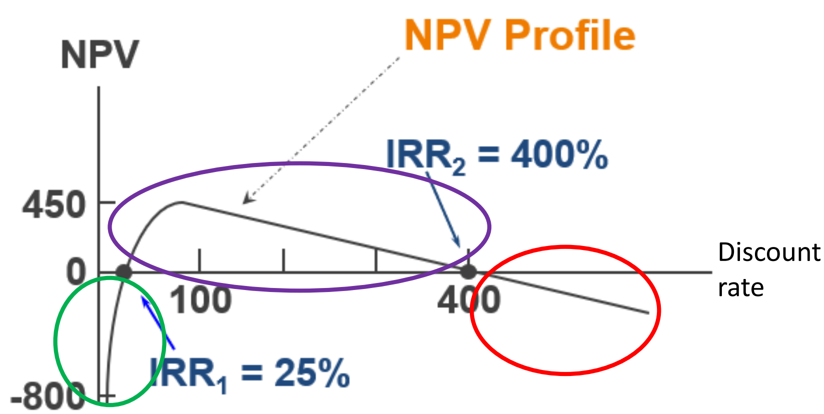
Multiple IRRs example
(Wk 8 slides 70-72)

Project P has the following cash flows:

0	1	2
10%		
-800	5,000	-5,000

Find Project P's NPV and IRR.

- NPV = -$386.78
- IRR = ?



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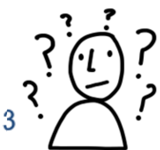
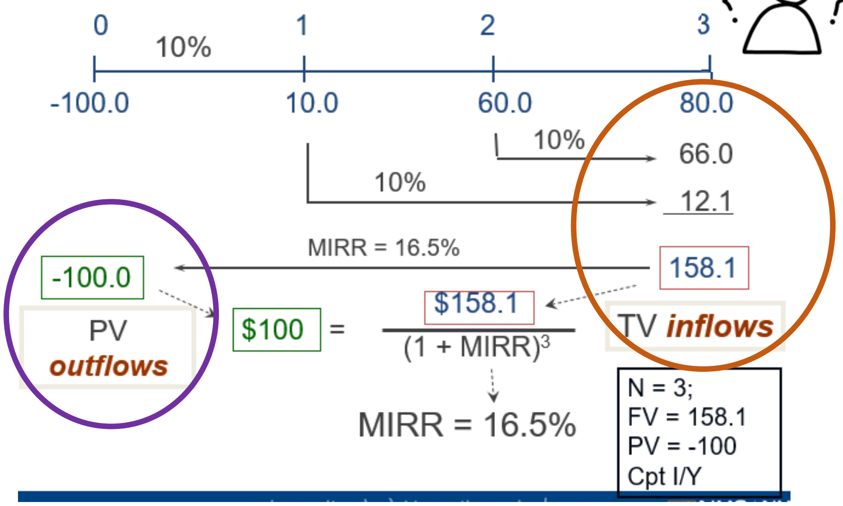
Calculating MIRR





WACC

- A firm's after-tax equity and debt financing costs
- Averaged using the market value weightage of their relative fraction in the total firm financing

Payback & Discounted payback

- Discounted payback would be better than simple payback period
  - Adjusting for time value and risk, by using the appropriate discount rate.
  - Sometimes you cannot find a discounted payback period ➔ the project NPV is negative

- Discounted payback has to be calculated using the method shown in the pre-recorded videos and the slides

Additional notes

- NVP or IRR/MIRR?
  - In this module and in many cases, we always use NPV to decide
  - However, IRR is useful because IRR is easier to communicate (and to understand for some)
  - You can think of IRR as the **expected** rate of return of the project
- Is there an aggregated method in capital budgeting?
  - Each method has its strengths and weaknesses
  - **Focus on NPV method**

Week 8
List of topics

Note:

You are responsible for all materials covered in the pre-recorded videos posted on LumiNUS, unless they are marked "not examinable". This list only serves to help you in your revisions.

Week 8 topics

Capital budgeting

- Net Present Value (NPV)

- Payback Period
- Discounted Payback Period

- Internal Rate of Return (IRR)
- Multiple IRR (MIRR)

- Average Accounting Return (AAR)

- Profitability Index