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Corporate Finance

Course Introduction

Jessica Wachter, Professor of Financial Management, Professor of Finance

Corporate Finance

- Topics Covered
  - Net Present Value Rule
  - Present Value Decisions
  - Valuation of Bonds and Stocks
  - Internal Rate of Return

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Present Value Concepts

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$$1 = V = 100 + 100(.10)$$

$$= 110$$

$$FV = 100(1+r)$$

$$100 = PV(1+r)$$

$$PV = \frac{100}{1+r}$$

$r = 10\%$ $\quad PV = 90.91$

$C = cF \text{ in } 1 \text{ year}$

$$PV = \frac{C}{1+r}$$

$$r \geq 0 \Rightarrow PV \text{ of } c \leq C$$

Suppose ~~r + 8%~~

Deposit $100

Next yr $92

$r > 0$

payoff

$$NPV = C_0 + \frac{C_1}{1+r}$$

↑

negative of the cost

Cost = 0.5M

Next yr = 0.54M

Payoff

$$NPV = -0.5 + \frac{0.54}{1+r}$$

r = 5% NPV = 0.0143M

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NPV Rule

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NPV rule

Accept projects if NPV > 0

Reject projects if NPV < 0

Result: NPV rule maximizes the value of the corp.

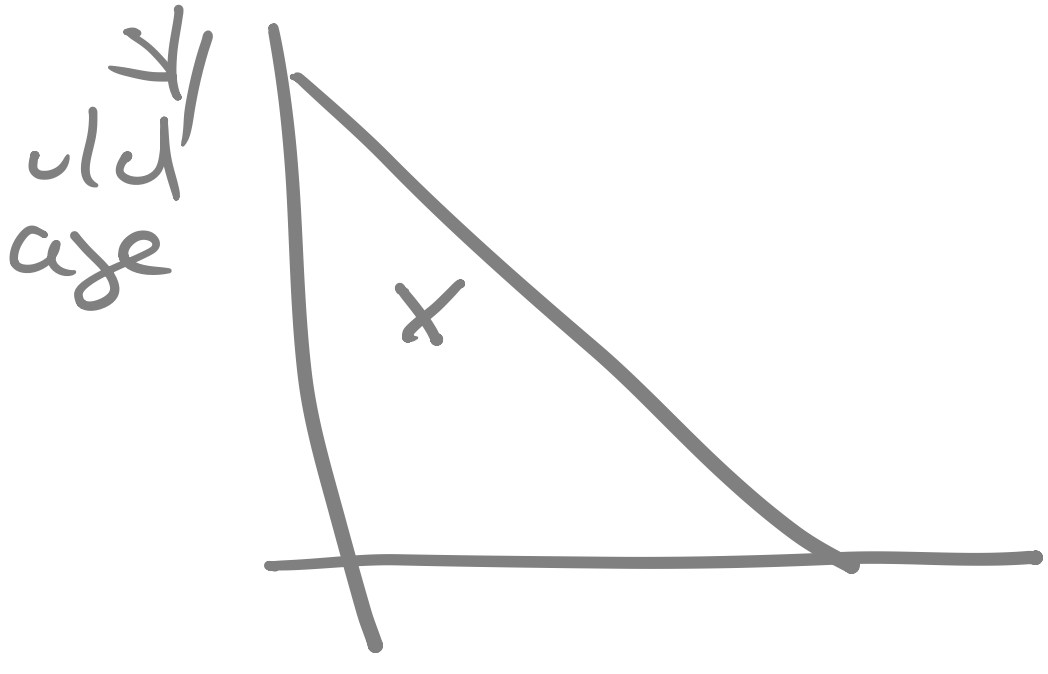
Suzy: 1M

bank account r=20%

Consume 1M now

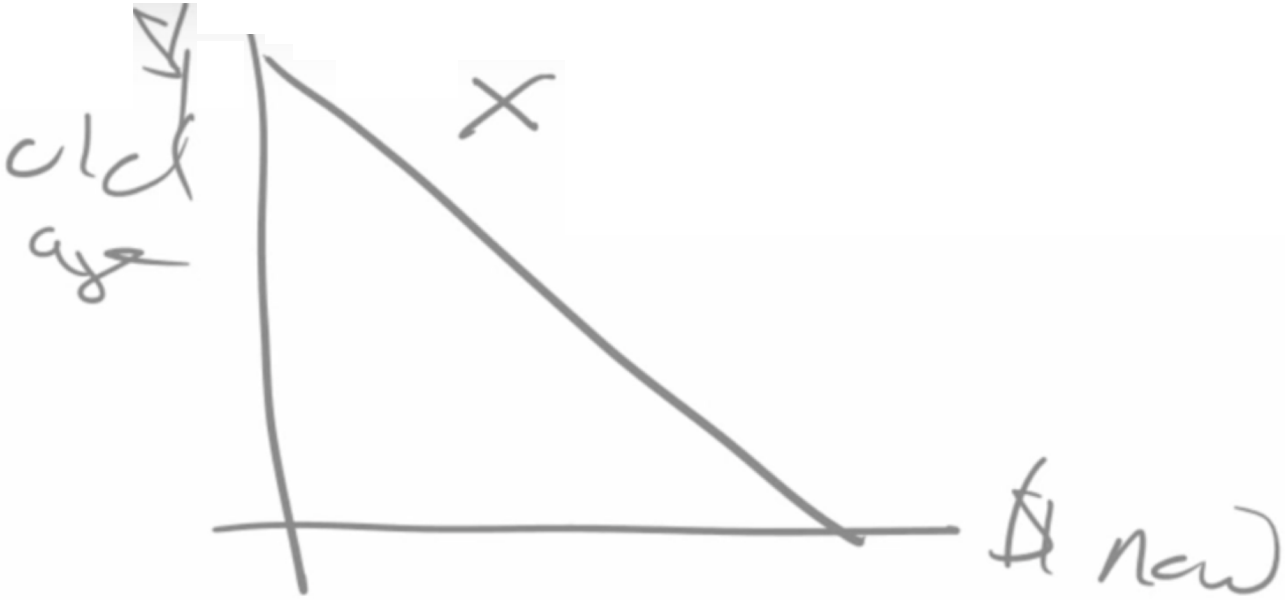
<u>or</u>

1.2M in old age



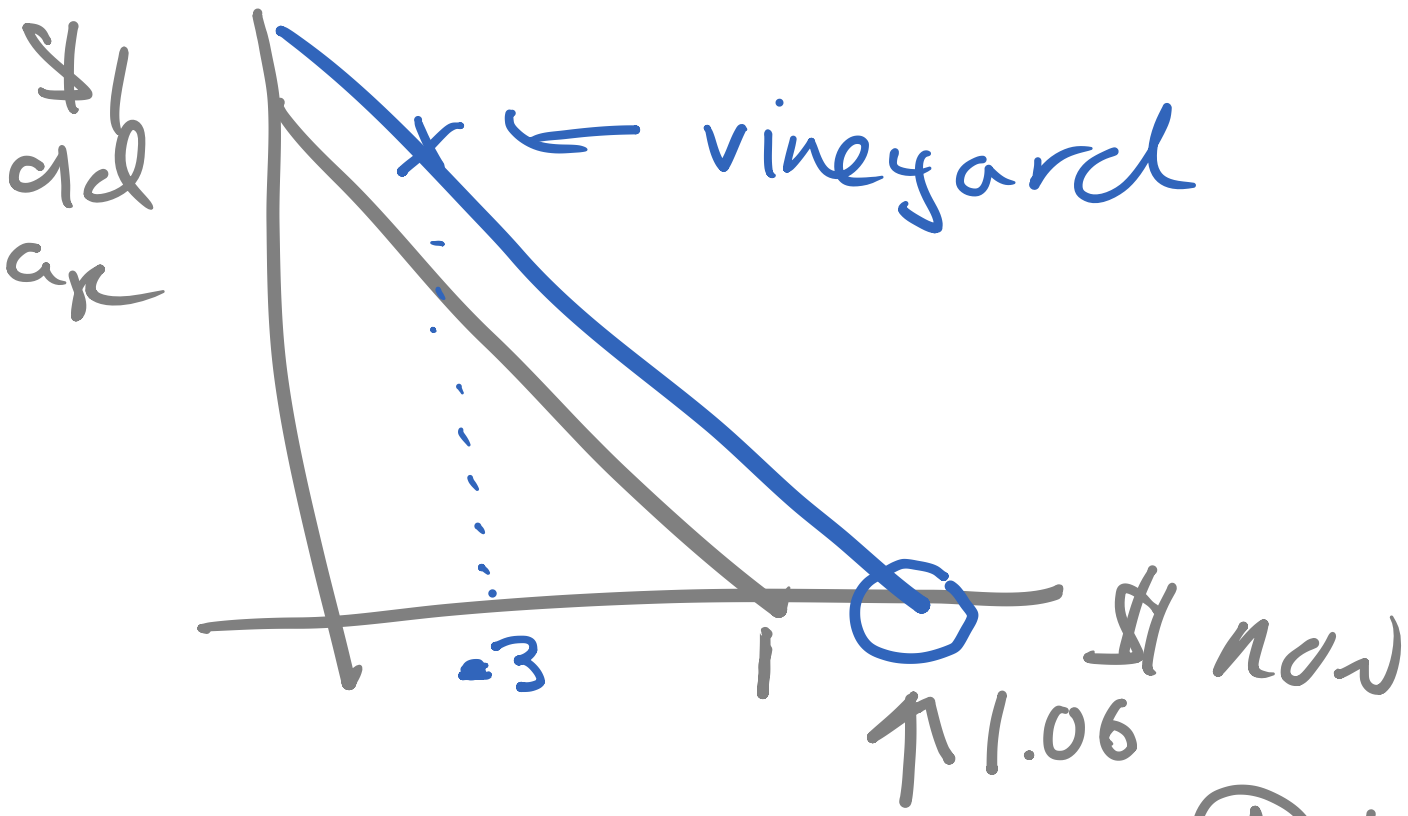
Slope = 1+r
= 1.2

Restaurant: cost = ?
Payoff = .8
.84



Vineyard: Cost: ?

Payoff = .91 > .84



$$.3 + \frac{.91}{1+r} = 1.06$$

$r_{20} \approx$

NPV rule

Accept if NPV > 0

$$C_0 + \frac{C_1}{1+r} > 0$$

$$C_1 > -C_0(1+r)$$

Restaurant

.8 ~~>~~ .7 (ltr)

NPV < 0 ⇒ Reject

Vineyard .91 > .7 (ltr)

NPV > 0 ⇒ Accept

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Separation Theorem

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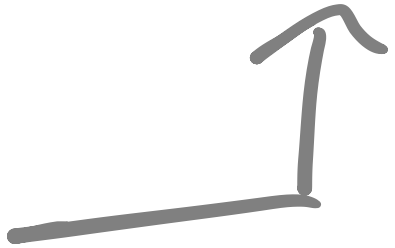
Separation Thm

When to consume

What projects to choose?

NPV rule



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