BASIC PRINCIPLES OF FINANCIAL VALUATION DISCOUNTING

Human Nature and the Time Value of Money

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TIME VALUE OF MONEY

Would you rather have $100 today
or $100 5 years from now?

TODAY

or

IN 5 YEARS

Why?

1. Invest now
2. More expensive 5 years from now
3. Uncertainty

TIME VALUE OF MONEY: OPPORTUNITY COST

All choices have an opportunity cost.

\$ Today	=	Bonds Stocks Real Estate Pay Bills Pay Down Credit Card Go Out to Dinner
\$ in 5 years	=	Giving up something else

In economics, we call that Opportunity Cost, and every choice involves a cost.

TIME VALUE OF MONEY: INFLATION

Over time, prices tend to rise.

become less valuable over time

If you want to give me money in the future, there has to be a little extra to account for the fact that the money will not buy as much in the future.

TIME VALUE OF MONEY: RISK

- No one knows what will happen tomorrow!
- If you want me to be patient with my money, it puts me at risk. What if things change between now and then?

Greater Risk → Less Comfort Being Patient → More Compensation

- At some point, I'm probably not willing to wait under any circumstances!

TIME VALUE OF MONEY

At some point,

you are willing to be patient!

What is that patience worth?

What you charge to be patient = Interest Rate

INTEREST RATE

What if I offered you…

$101
IN 5 YEARS

or

$110
IN 5 YEARS

or

$200
IN 5 YEARS

- At some point, you will accept.
- At this point, we have put a price on time.

That price is the Interest Rate, and it incorporates opportunity costs, inflation expectations, and risk.

CHANGES IN INTEREST RATE

In the real world,
what makes interest rates change?

▸ Changes in opportunity costs	better economic growth
▸ Changes in inflation expectations	govt prints more money
▸ Changes in risk	wars, disasters, etc…

All of these things are constantly changing the supply and demand for capital in a way that makes interest rates change on a daily basis.

INTEREST RATES IN THE ECONOMY

Interest Rate

- The most important price in the economy
- The price of time
- The basis for all other prices