

Warm-up: Forward contracts

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Forward
contract price
determination

The no-arbitrage principle

A simple version of the Cost-of-Carry model

Cash and Carry arbitrage when the forward contract is overpriced

Reverse cash and carry arbitrage when the forward contract is underpriced

a. Forward
contract
value

At initiation

During the life

At expiration

60. Forward Markets And Contracts

b. Price and
Value of
Forward on
EQUITY

With discrete dividends

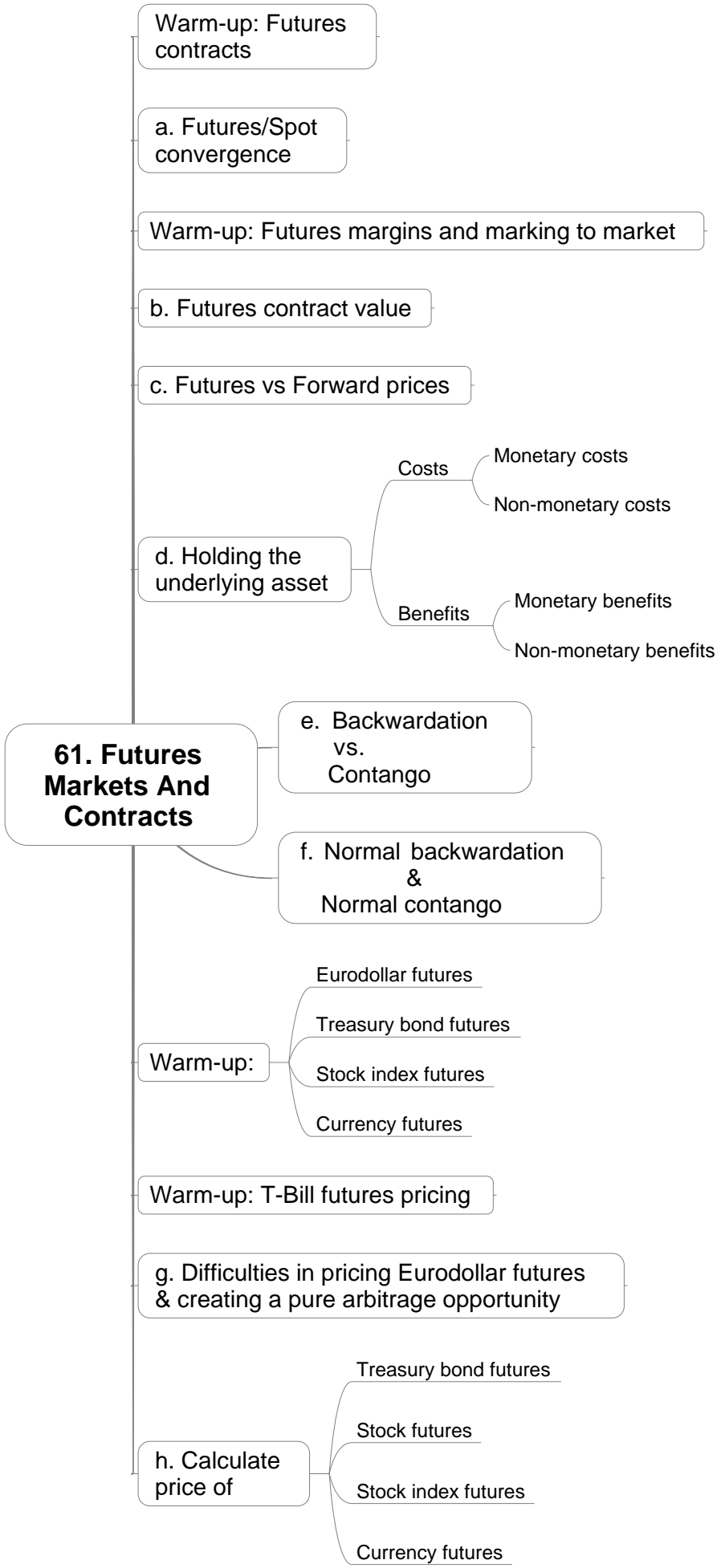
With continuous dividends

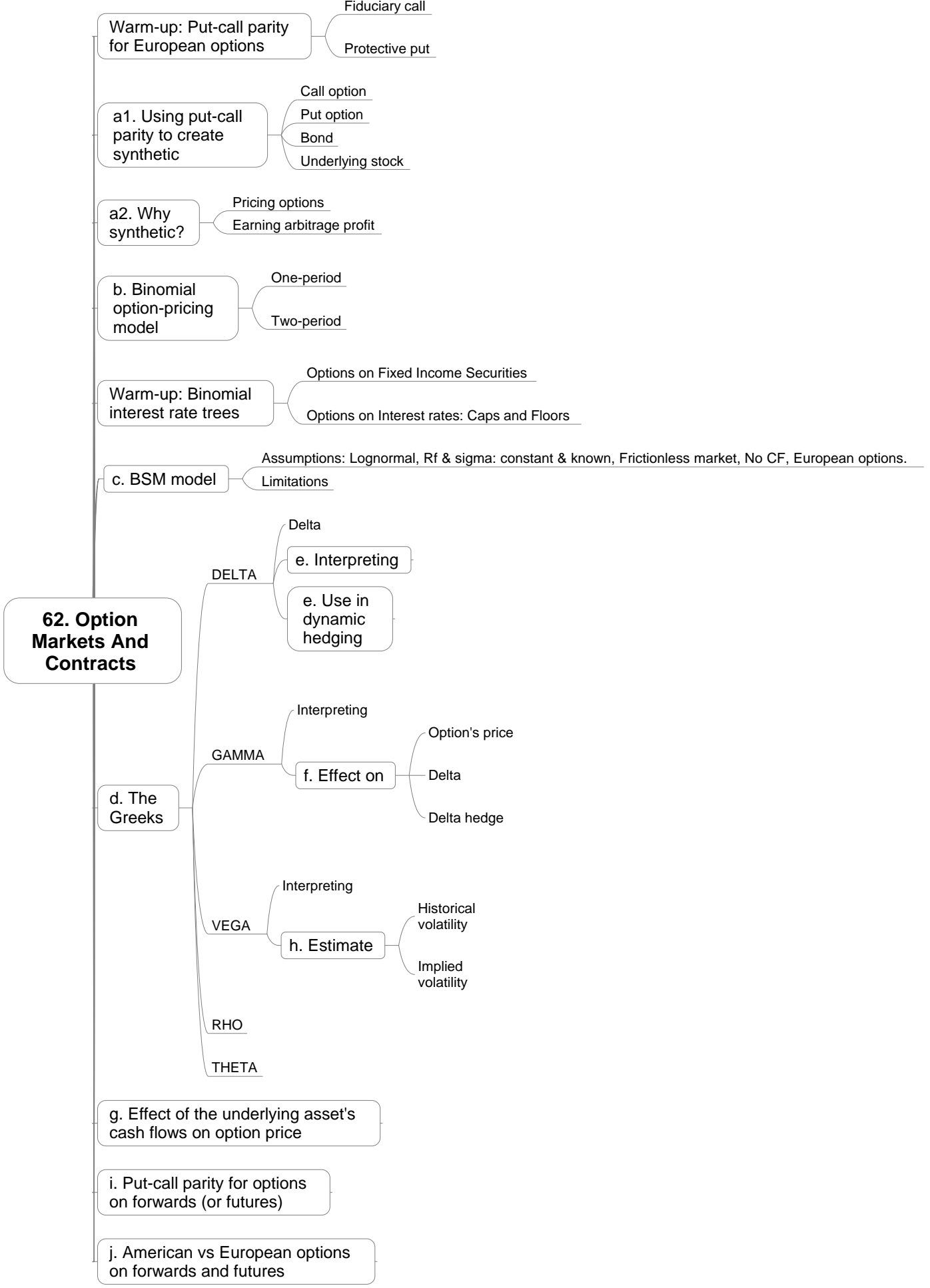
c1. Price & Value of
Forward on FIXED INCOME

c2. Price & Value of FRA

c3. Price & Value of
Forward on
CURRENCY

d. Credit risk





Warm-up: Put-call parity for European options

- Fiduciary call
- Protective put

a1. Using put-call parity to create synthetic

- Call option
- Put option
- Bond
- Underlying stock

a2. Why synthetic?

- Pricing options
- Earning arbitrage profit

b. Binomial option-pricing model

- One-period
- Two-period

Warm-up: Binomial interest rate trees

- Options on Fixed Income Securities
- Options on Interest rates: Caps and Floors

c. BSM model

- Assumptions: Lognormal, R_f & σ : constant & known, Frictionless market, No CF, European options.
- Limitations

62. Option Markets And Contracts

d. The Greeks

- DELTA
 - Delta
 - e. Interpreting
 - e. Use in dynamic hedging
- GAMMA
 - Interpreting
 - f. Effect on
 - Option's price
 - Delta
 - Delta hedge
- VEGA
 - Interpreting
 - h. Estimate
 - Historical volatility
 - Implied volatility
- RHO
- THETA

g. Effect of the underlying asset's cash flows on option price

i. Put-call parity for options on forwards (or futures)

j. American vs European options on forwards and futures

