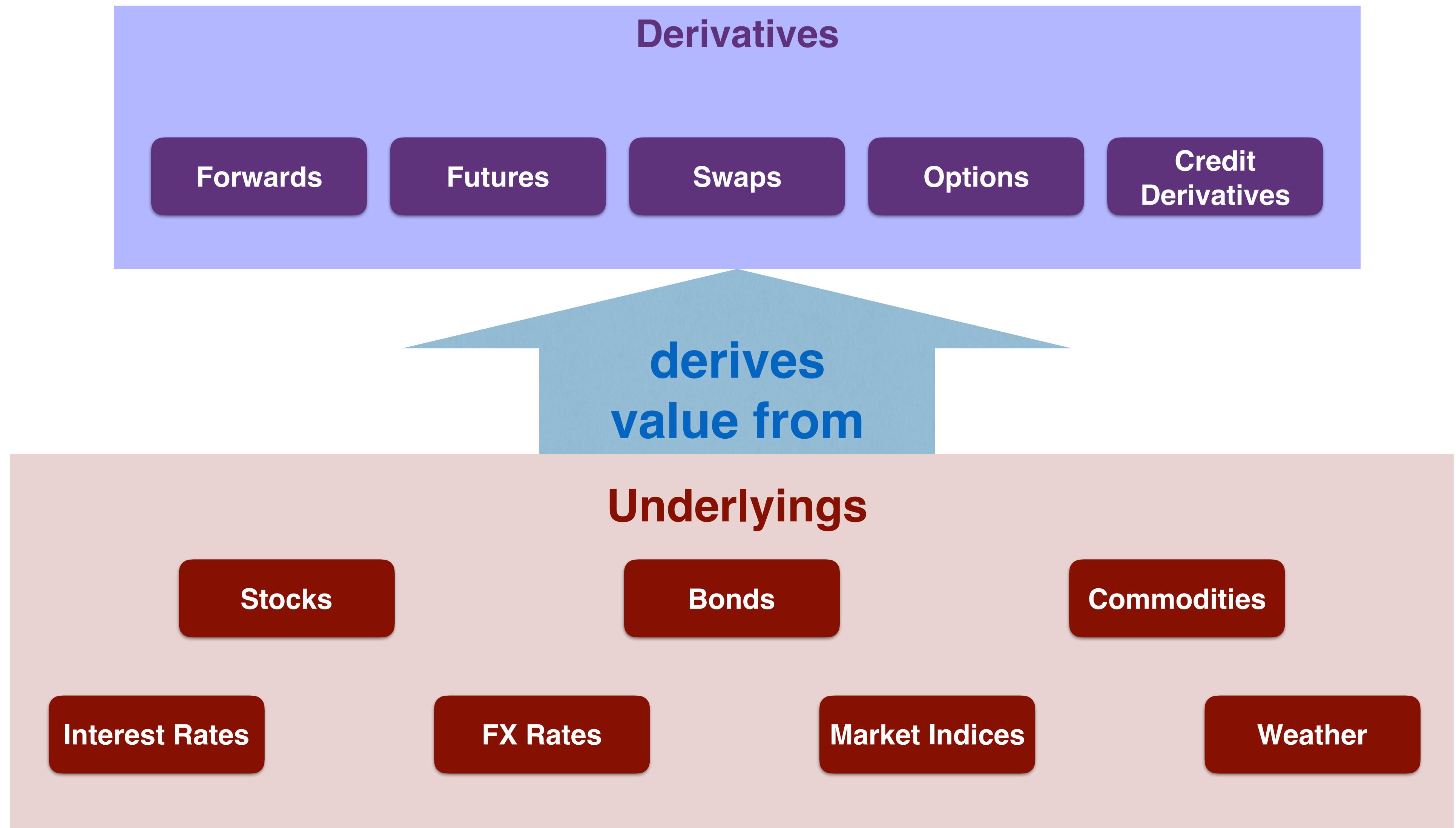
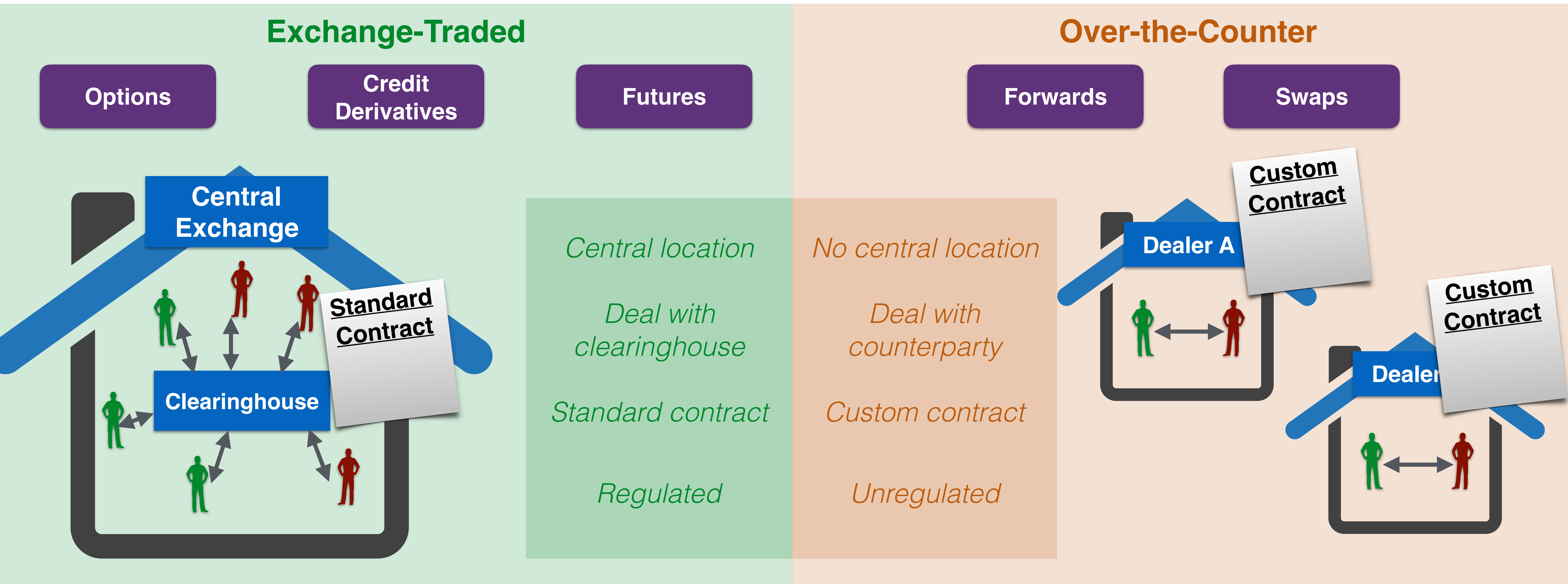




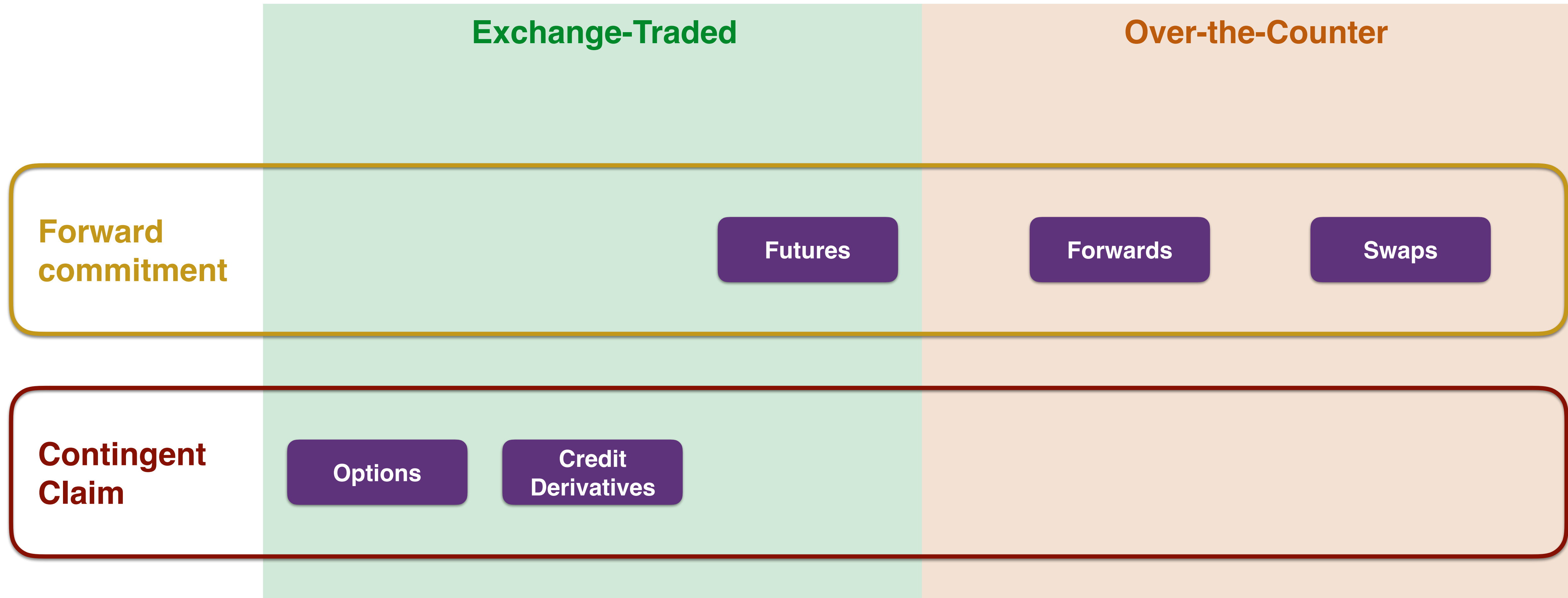
Derivative Markets and Instruments

1. Definition
2. Derivative Markets
3. Types of Derivatives





Nature of Contract



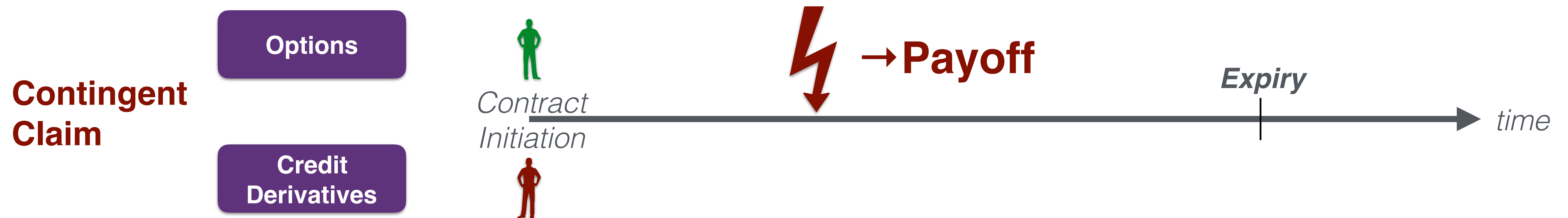
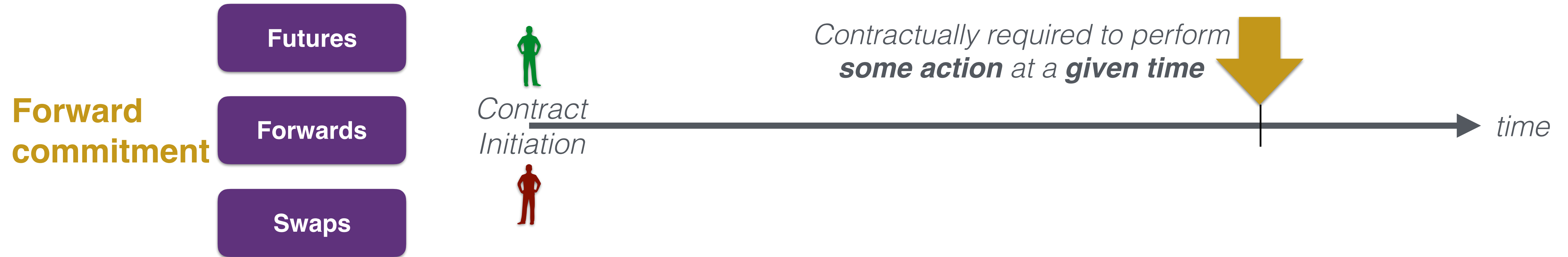
Derivative Markets and Instruments

1. Definition

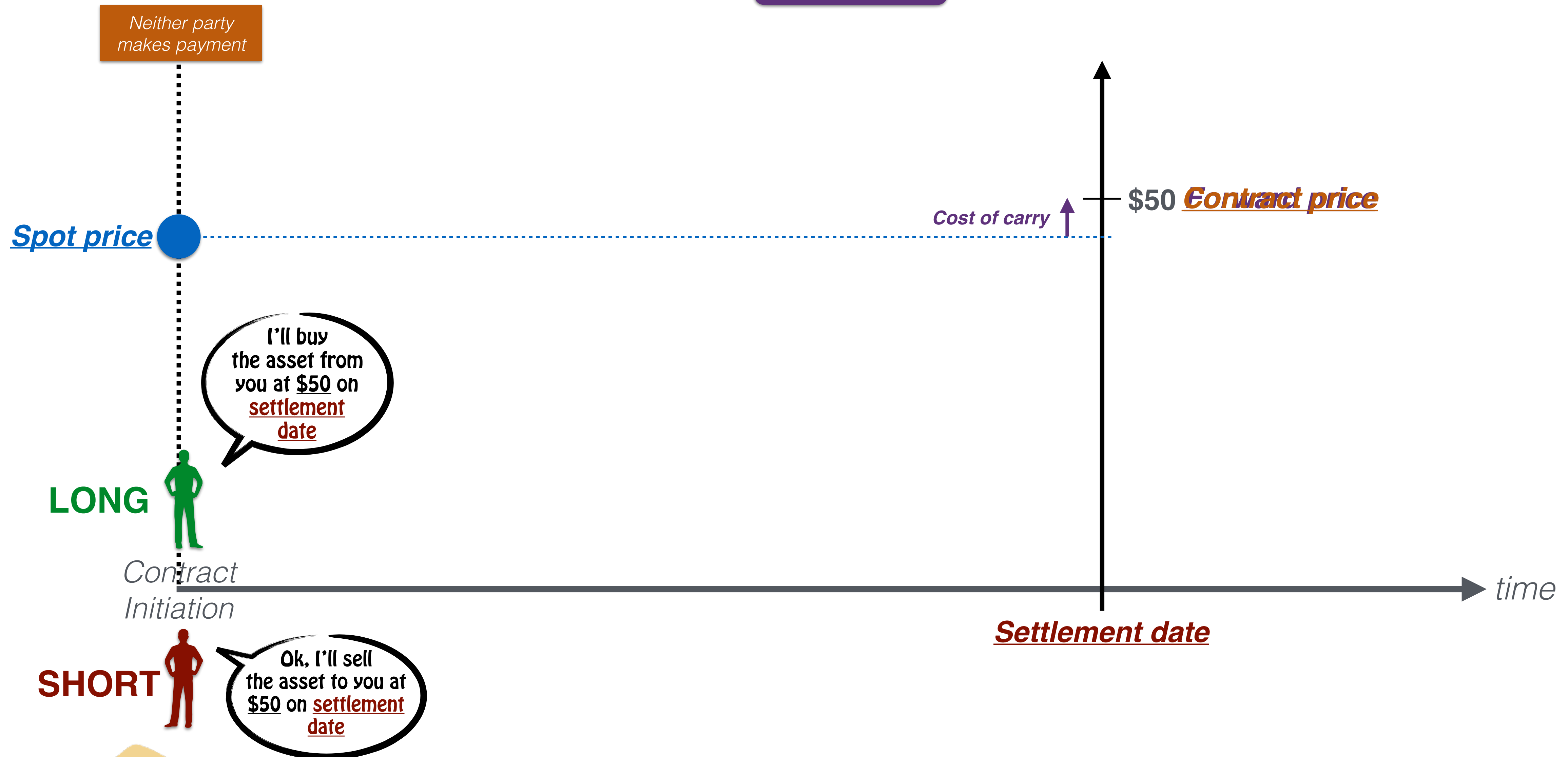
2. Derivative Markets

3. Types of Derivatives

Nature of Contract



Forwards



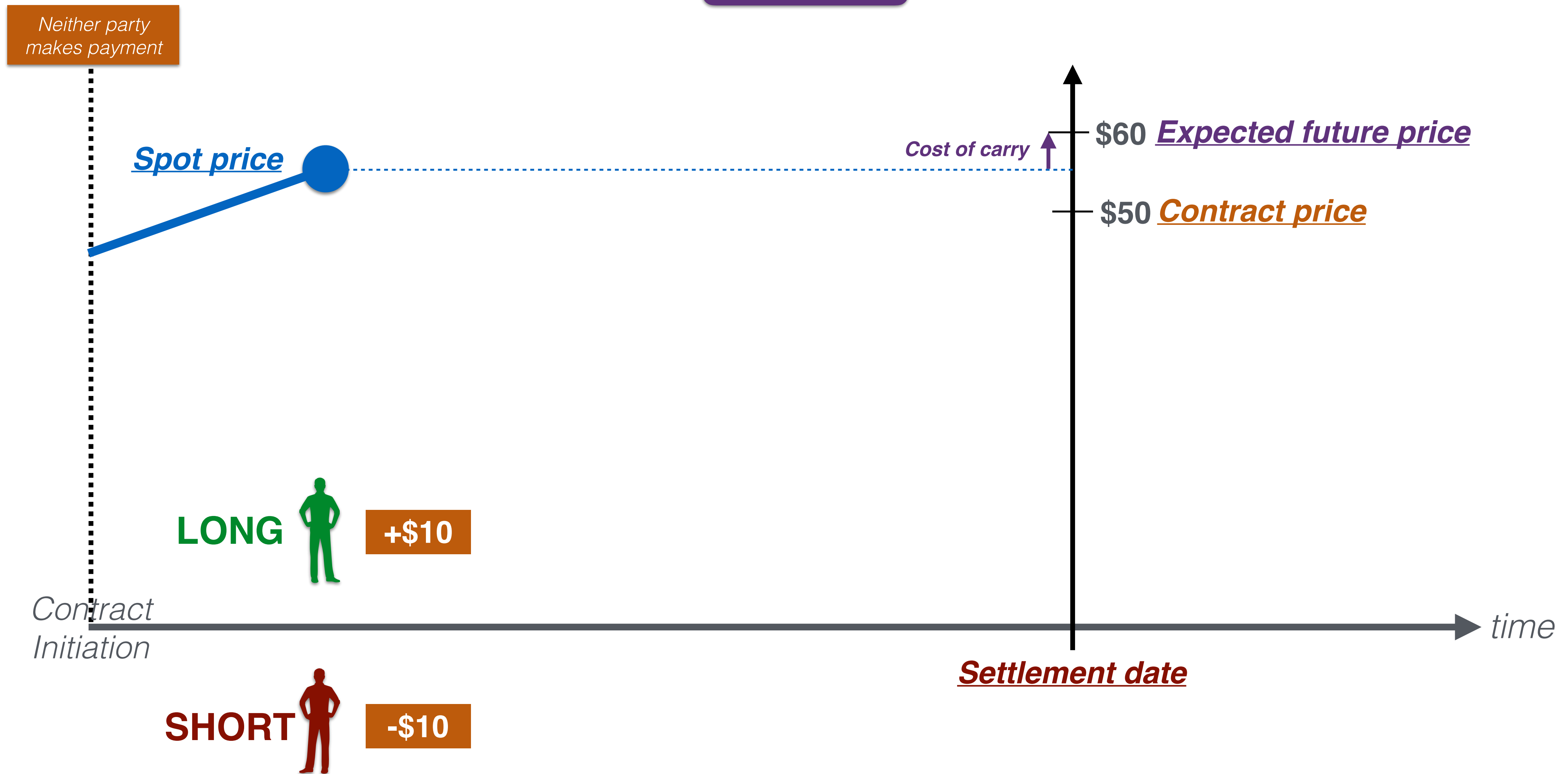
Derivative Markets and Instruments

1. Definition

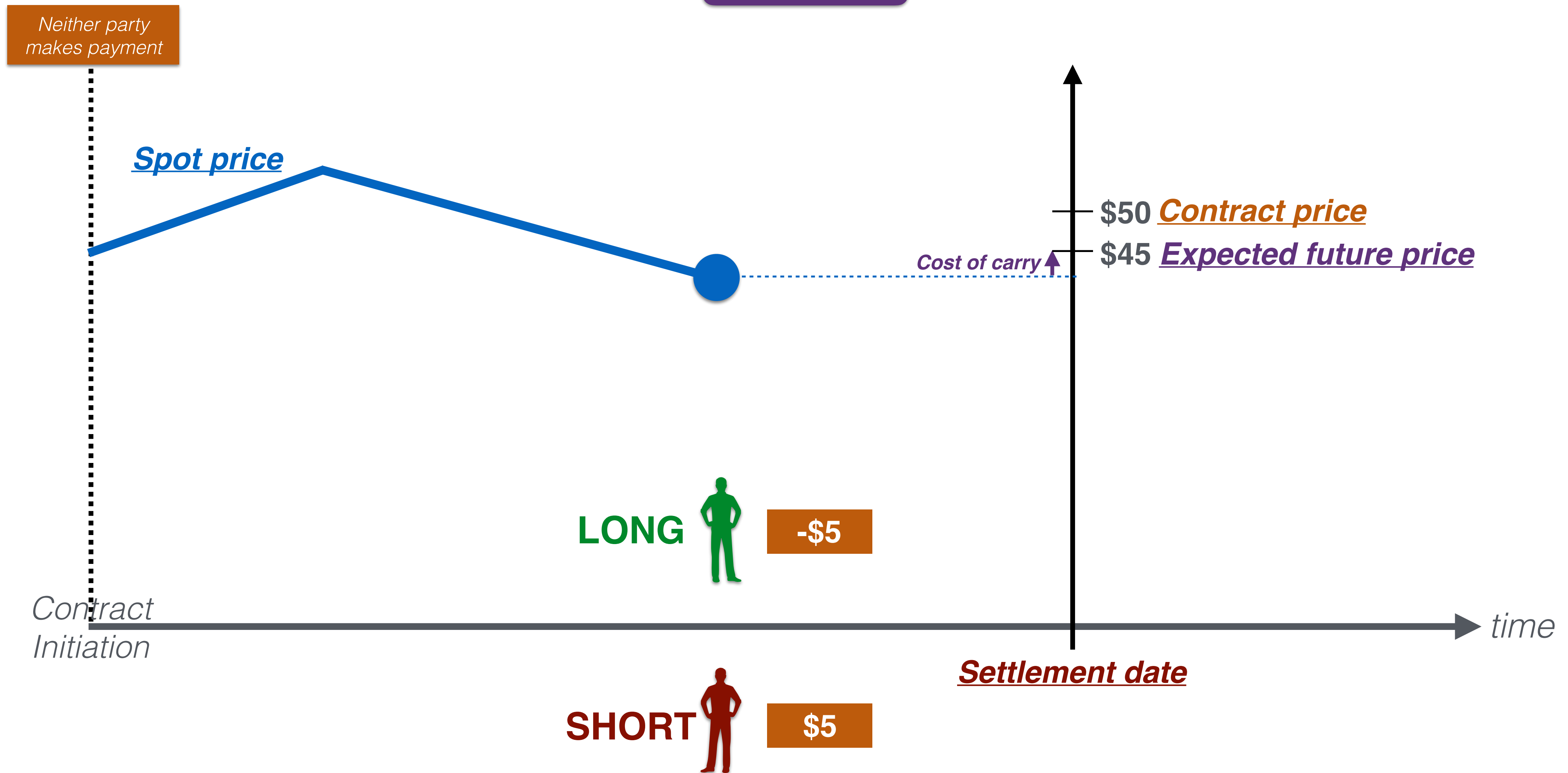
2. Derivative Markets

3. Types of Derivatives

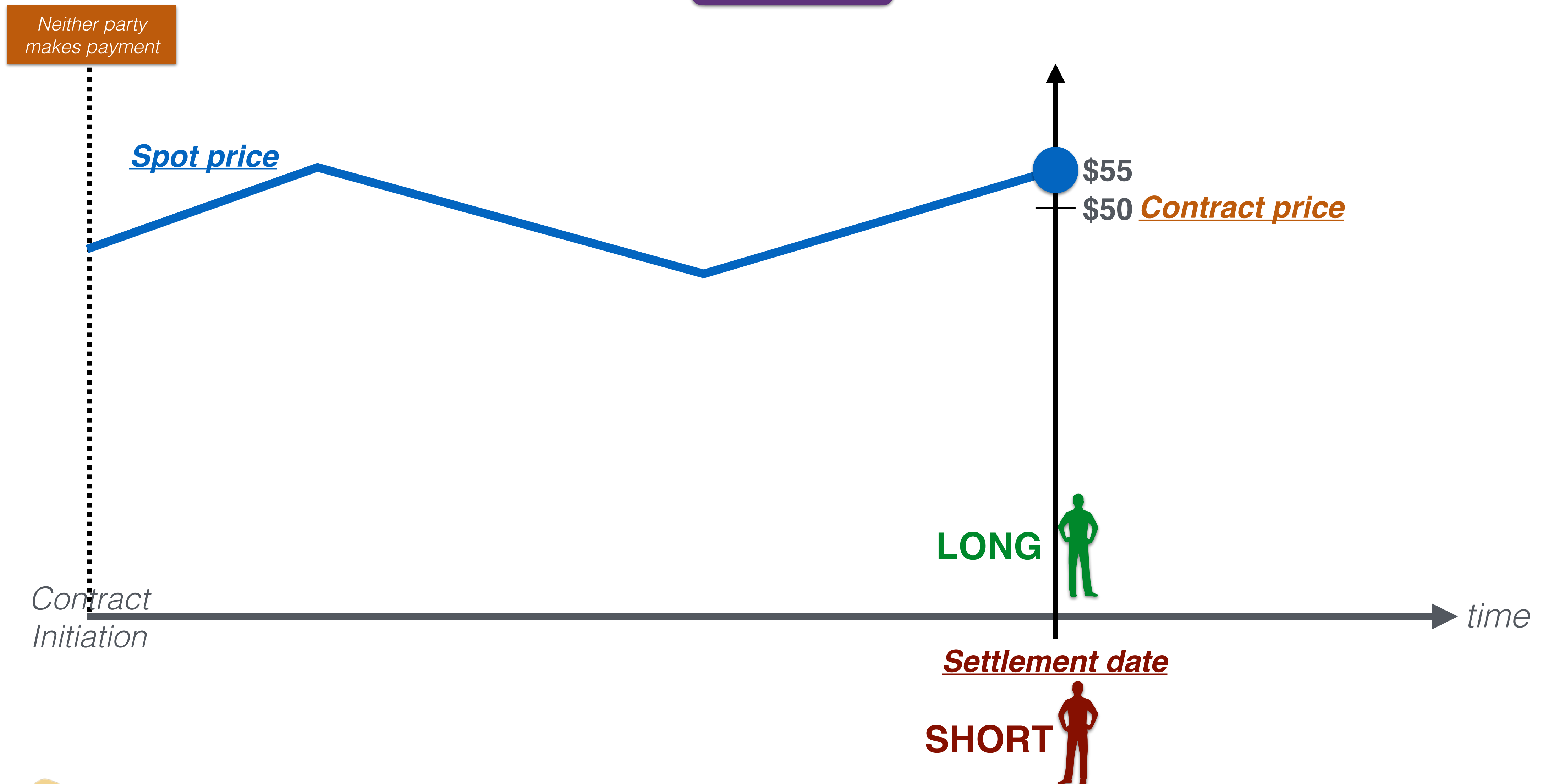
Forwards



Forwards



Forwards

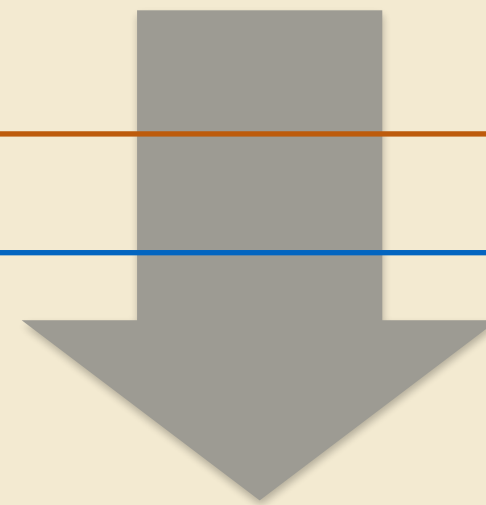


Forwards

Settlement date

Cash Settled Contract

*Contracts for differences
Non-deliverable forwards*



LONG



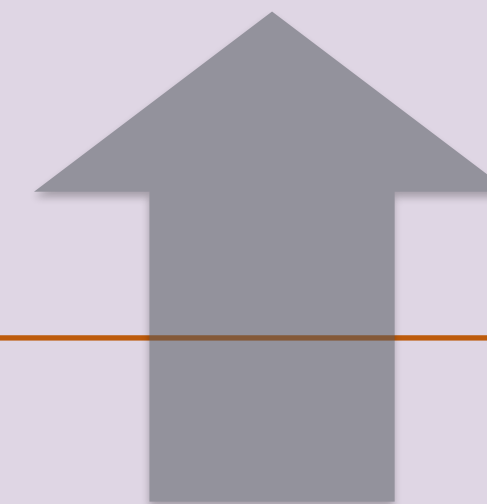
SHORT



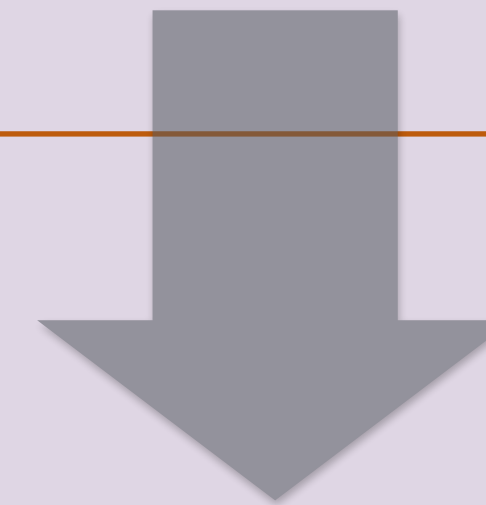
↕ \$5

\$45

Physical
asset



Deliverable Forward



\$50

If **Spot** < **Contract** price
LONG pays **SHORT** the
difference

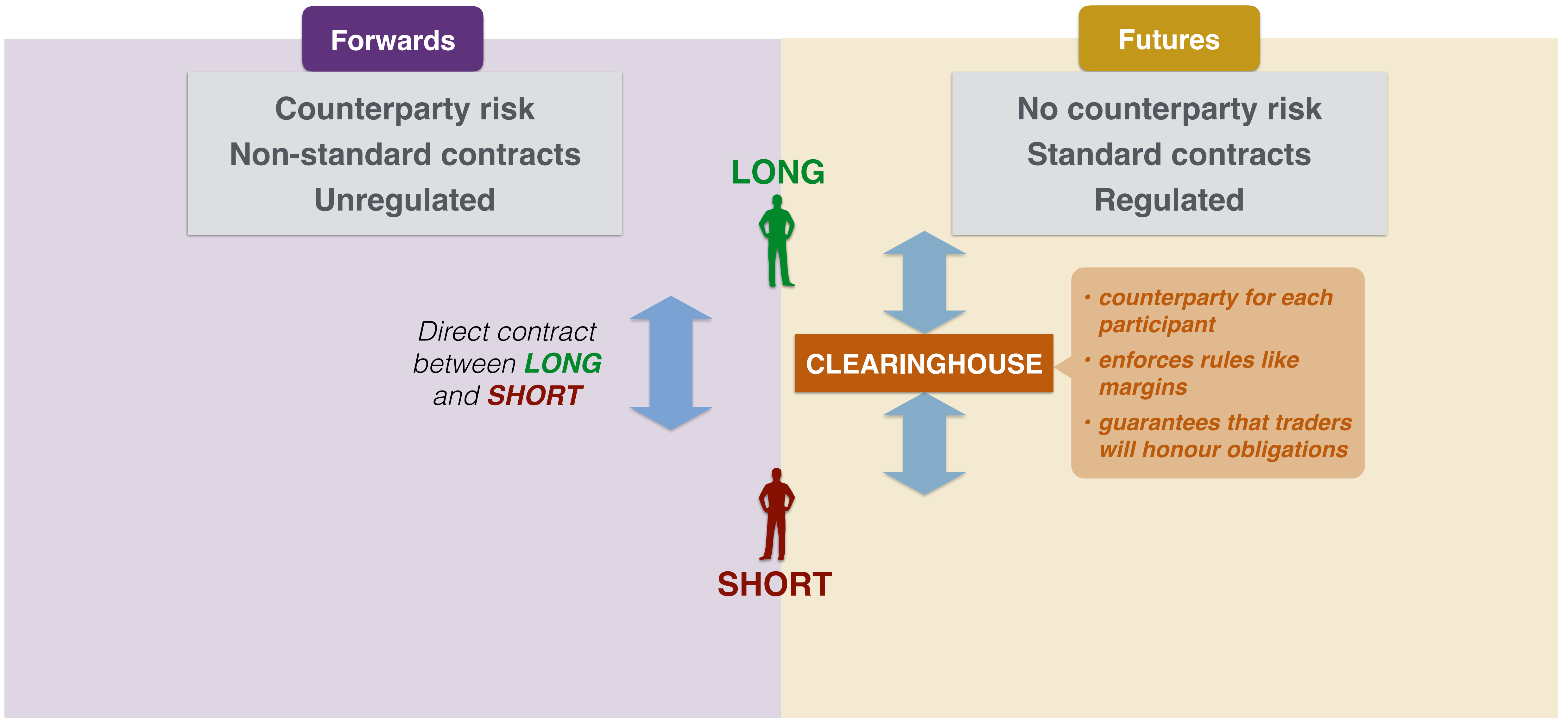


Derivative Markets and Instruments

1. Definition

2. Derivative Markets

3. Types of Derivatives



Forwards

Counterparty risk
Non-standard contracts
Unregulated



Hedgers

*e.g. transport company enter
into forward contracts*

Futures

No counterparty risk
Standard contracts
Regulated

Open interest

Settlement price

Margin



Hedgers

*e.g. transport company
buy oil futures*



Speculators

Futures

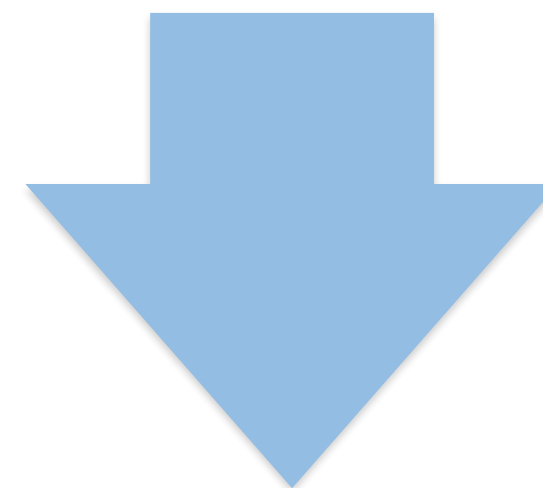
Open interest

total number of outstanding contracts that are held by market participants at the end of the day

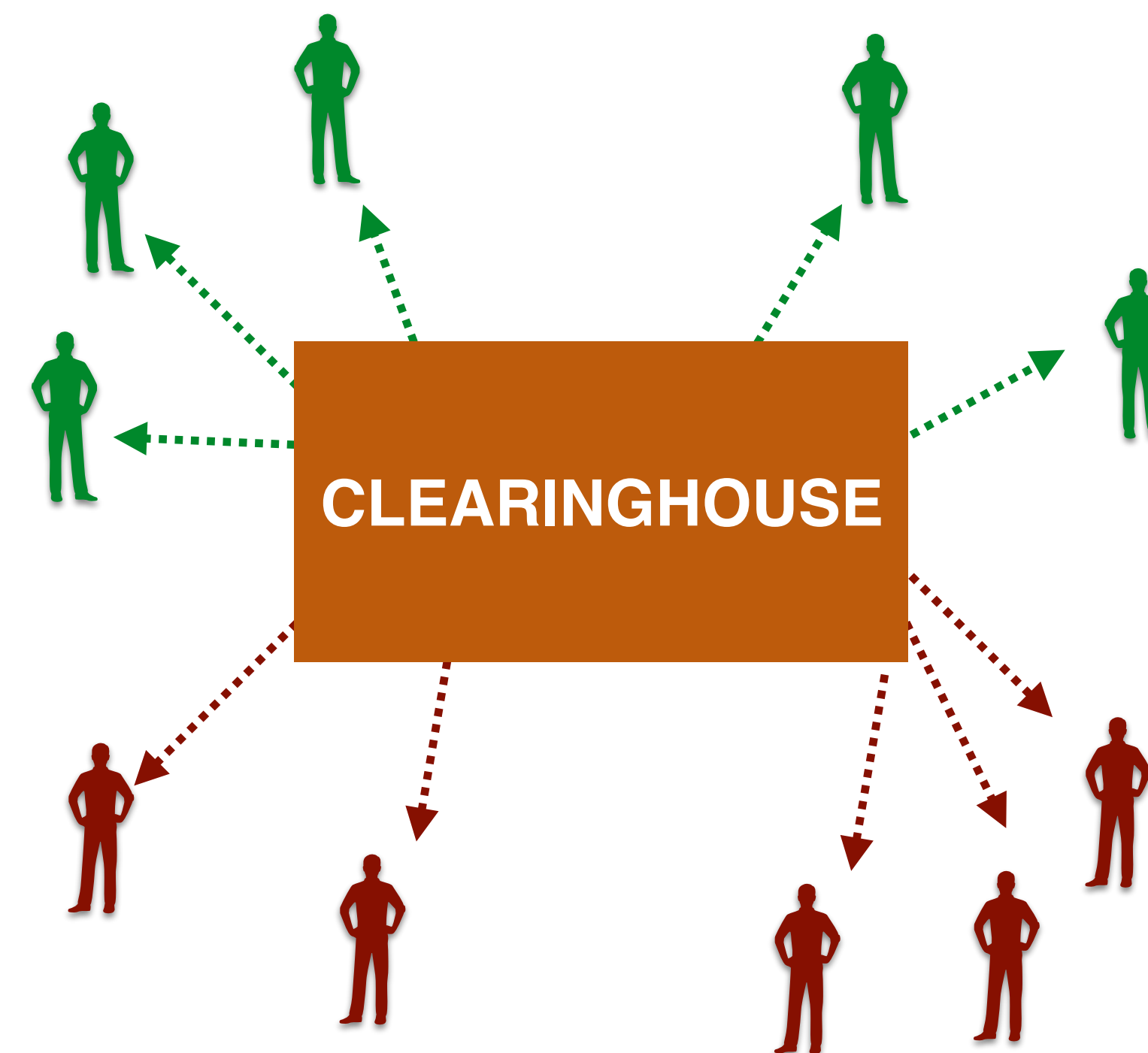
Settlement price

Margin

Open
interest



*Measures flow of money
into the futures market*



*Looks like a
bearish signal!*



Speculator

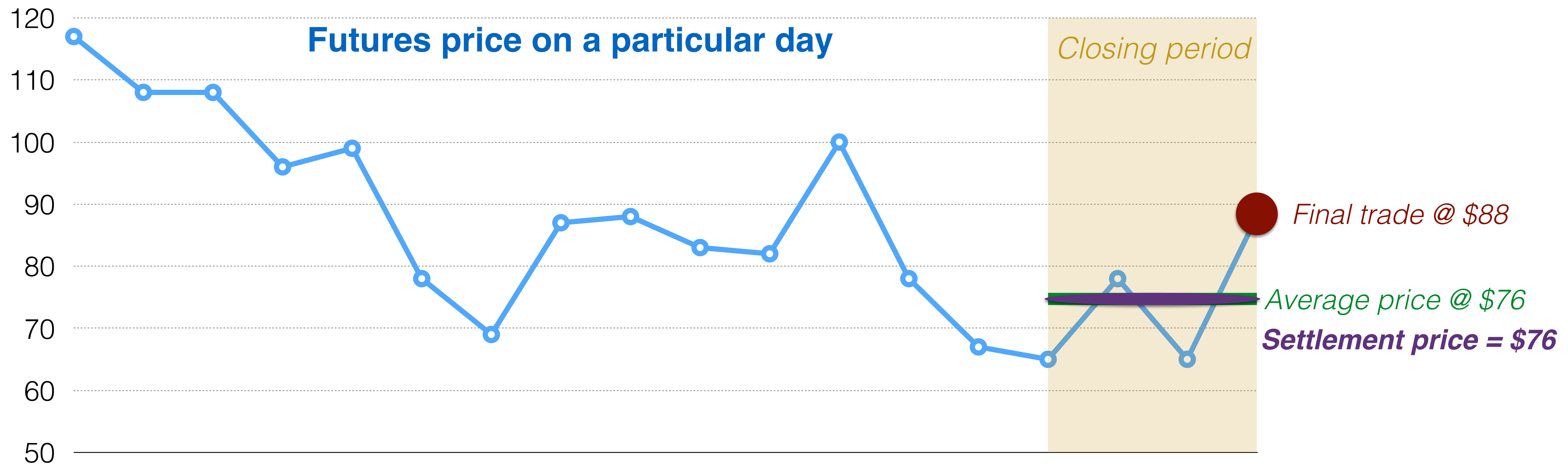
Futures

Open interest

Settlement price

Margin

*average of the prices of the trades
during the closing period*



Derivative Markets and Instruments

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Futures

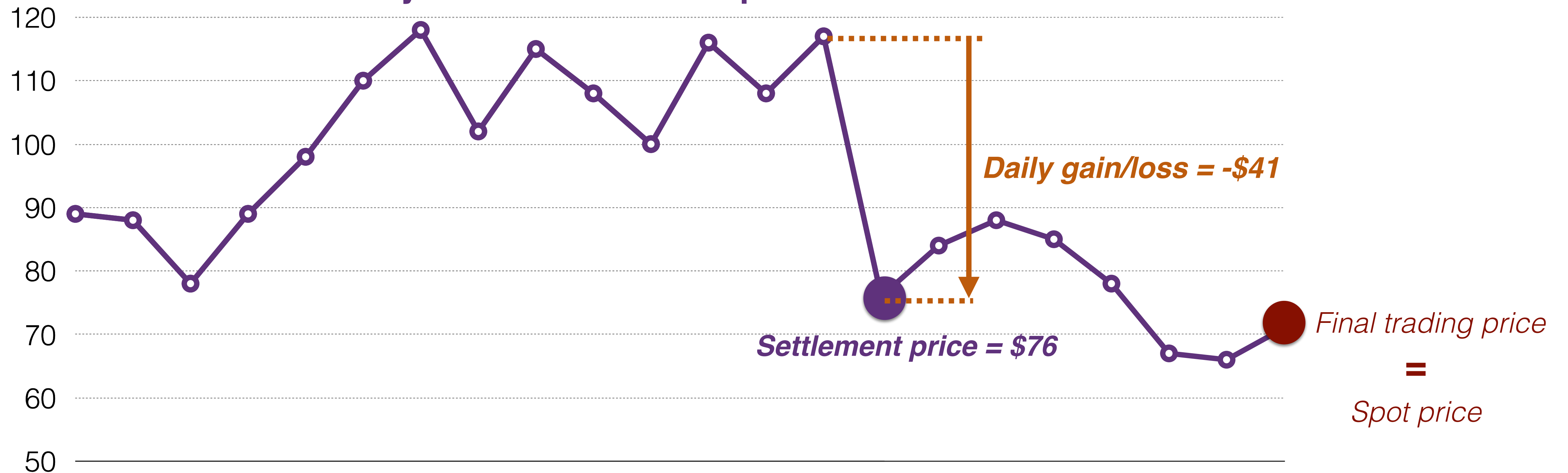
Open interest

Settlement price

Margin

*average of the prices of the trades
during the closing period*

Daily futures settlement price



Futures

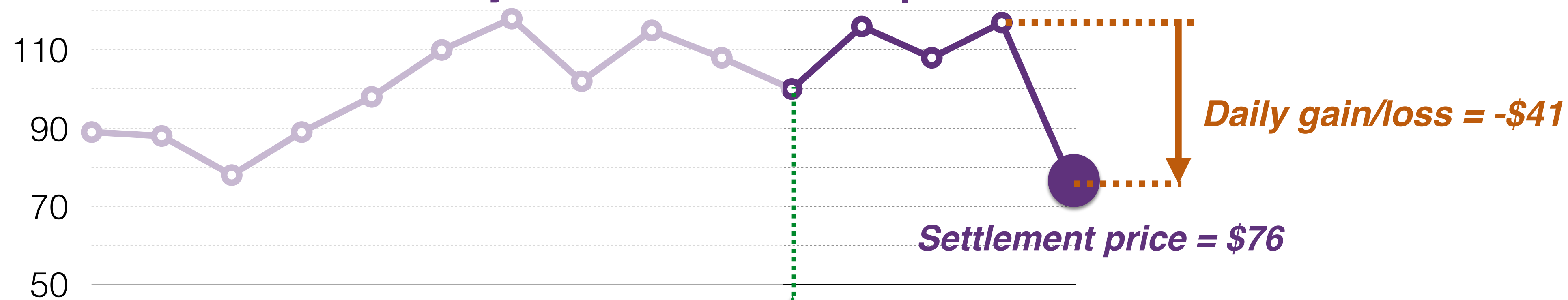
Open interest

Settlement price

Margin

*requiring both long and short to
place an initial deposit*

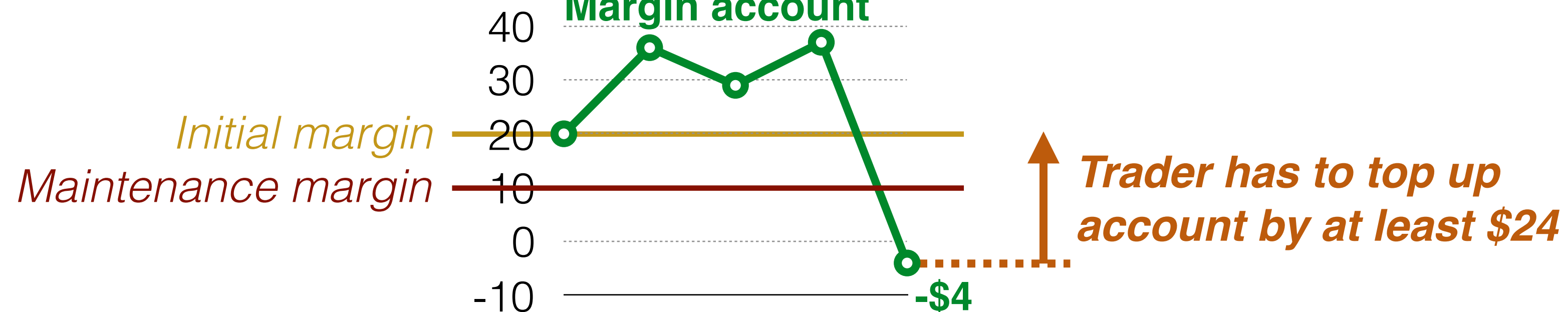
Daily futures settlement price



Settlement price = \$76

LONG @ \$100

Margin account



**Trader has to top up
account by at least \$24**

*(Note to bring level back
to initial margin, not
maintenance margin)*



Derivative Markets and Instruments

1. Definition

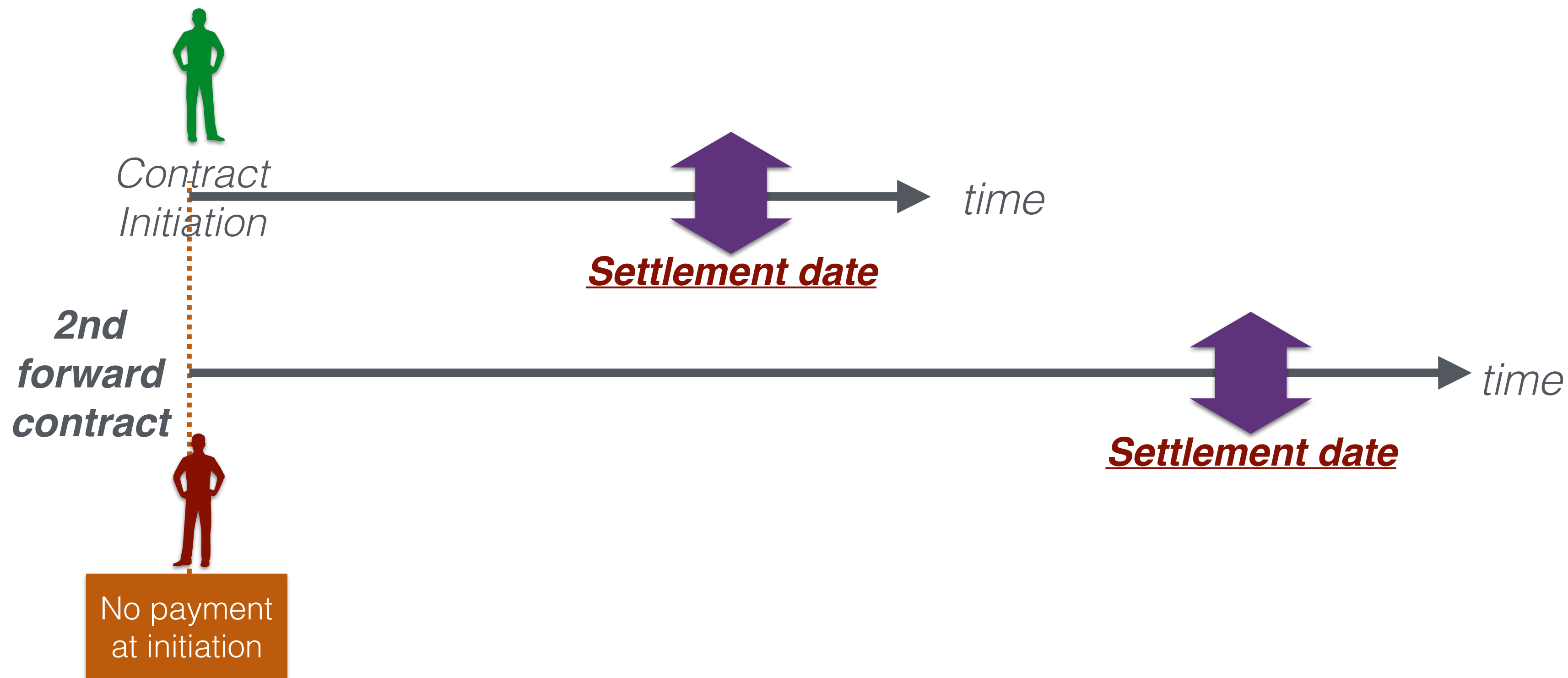
2. Derivative Markets

3. Types of Derivatives

Forwards

Swaps

Non-standard contracts
Unregulated
Counterparty risk



Derivative Markets and Instruments

1. Definition

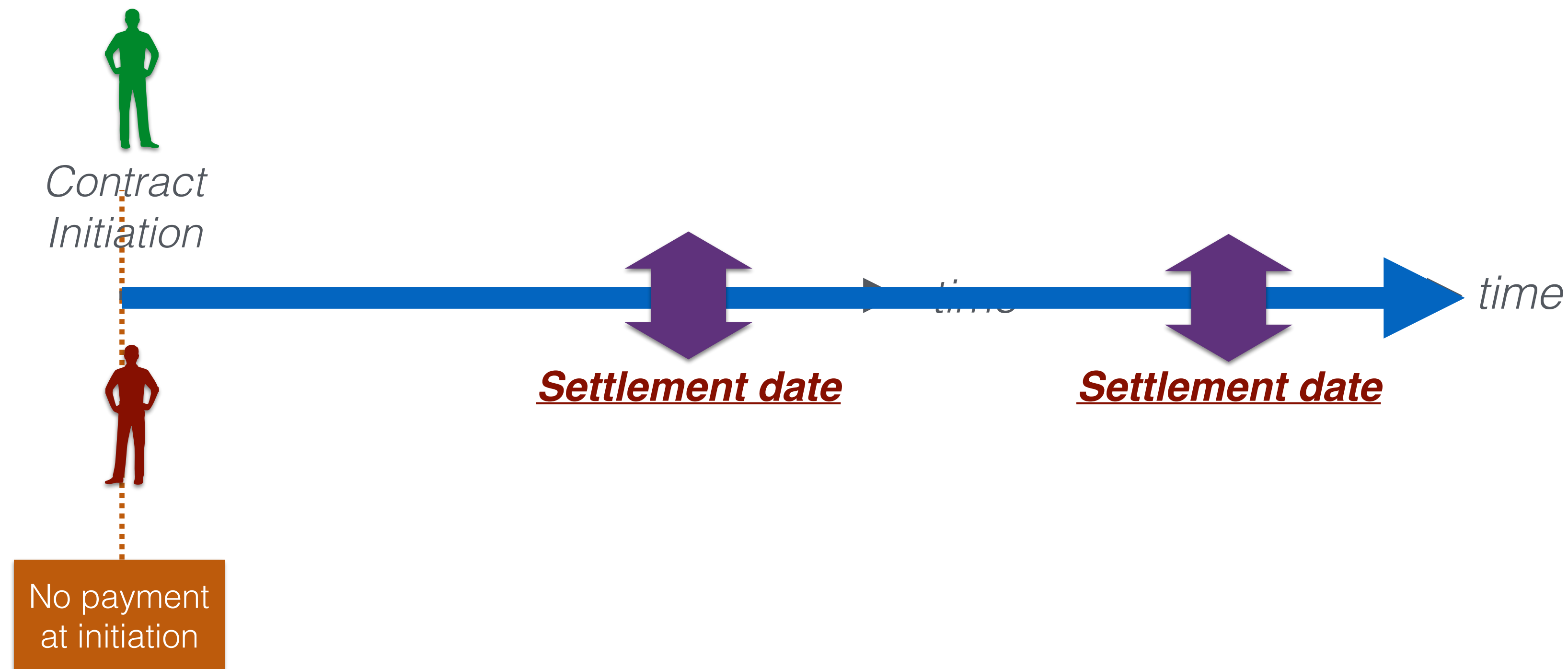
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Derivative Markets and Instruments

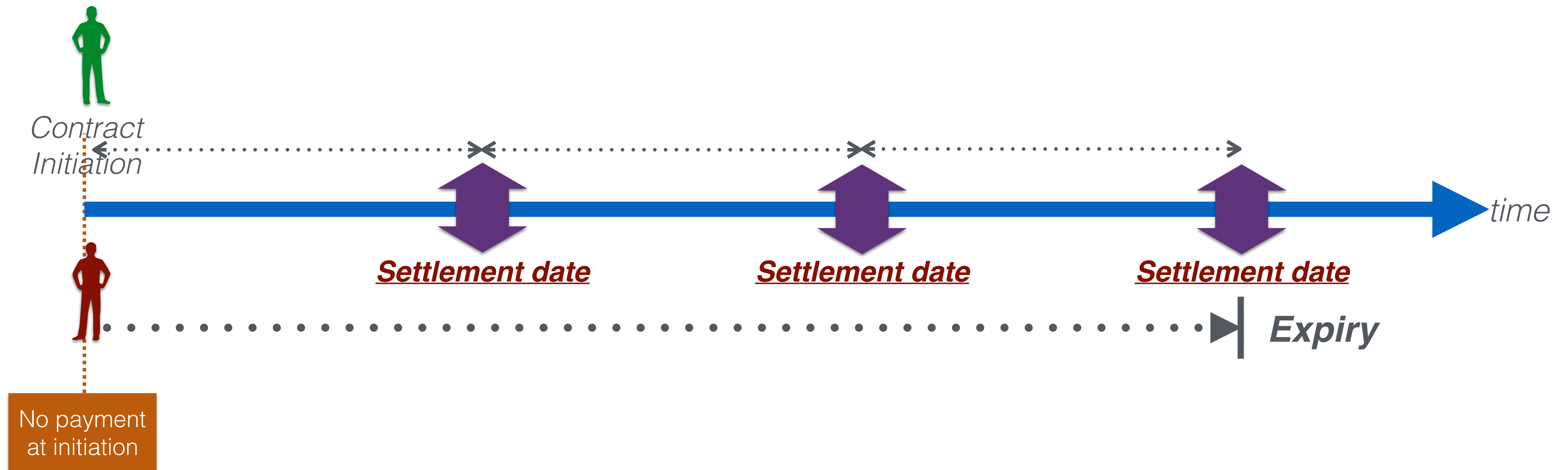
1. Definition

2. Derivative Markets

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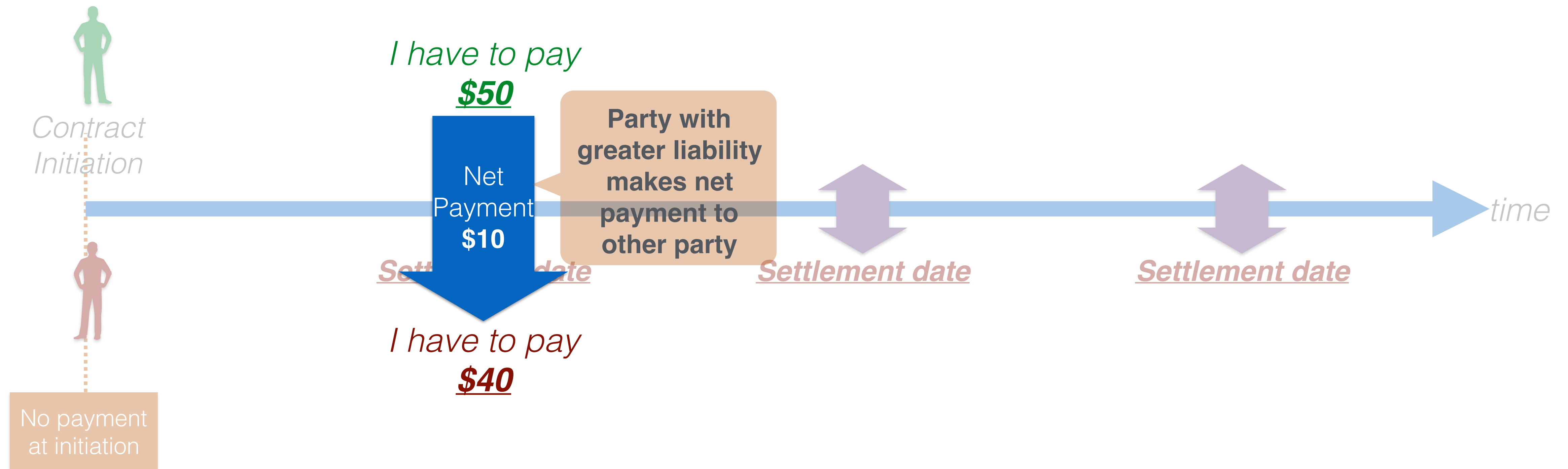
Swaps

*exchange a series of payments
on **periodic** settlement dates
over a **certain period***



Swaps

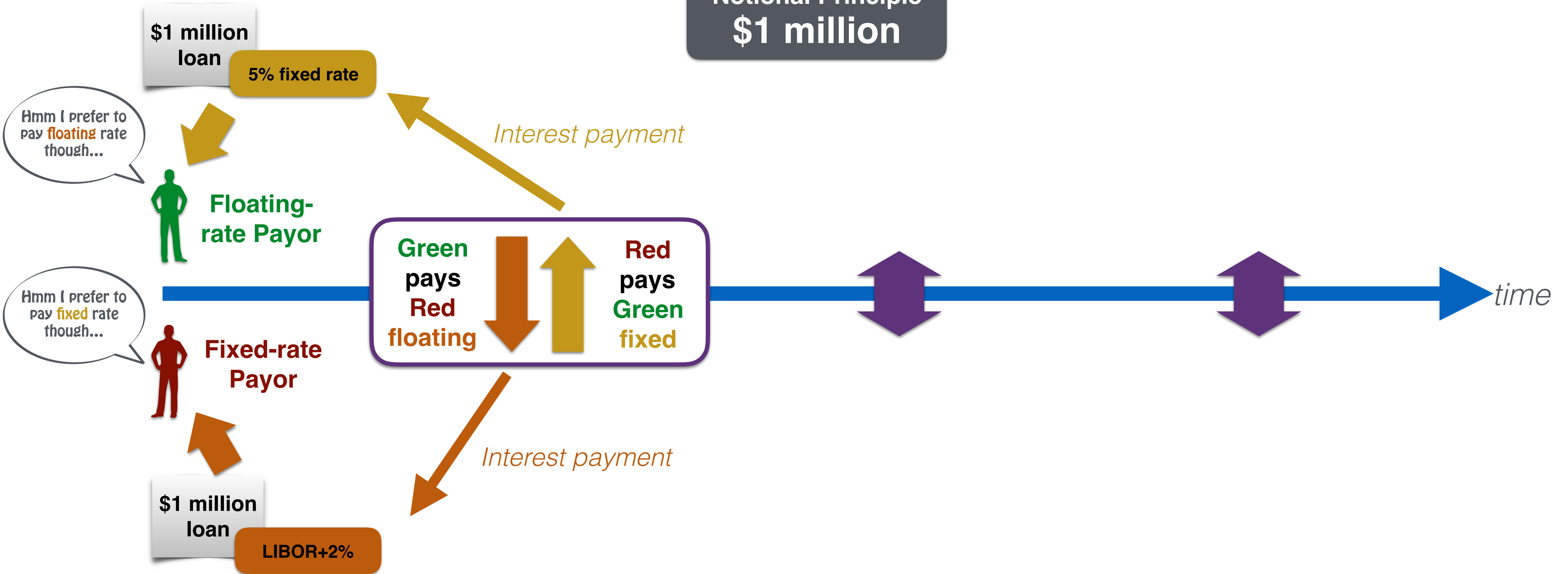
exchange a series of payments
on **periodic** settlement dates
over a **certain period**



Swaps

Plain Vanilla Interest Rate Swap

Notional Principle
\$1 million



Types of Derivatives

Forward commitment

Futures

Forwards

Swaps



LONG

Contract
Initiation



SHORT

Required to BUY at
a given PRICE

Required to SELL at
a given PRICE

time

Contingent Claim

Options

Credit
Derivatives



LONG

Contract
Initiation



SHORT

Has **RIGHT TO BUY**
at a given PRICE,
but not obligated to

Required to SELL at a
given PRICE, if LONG
exercises right to buy

time

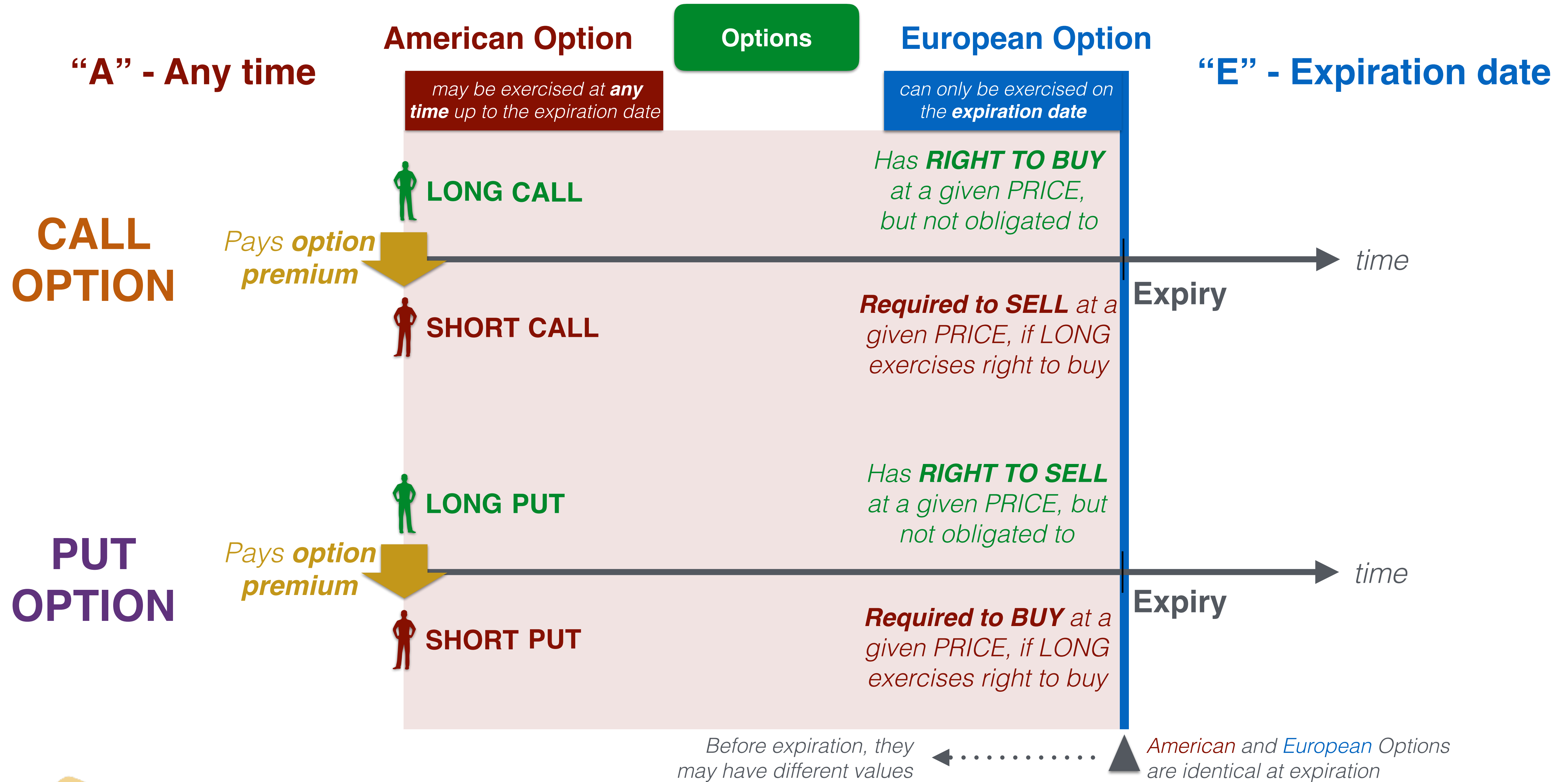


Derivative Markets and Instruments

1. Definition

2. Derivative Markets

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Derivative Markets and Instruments

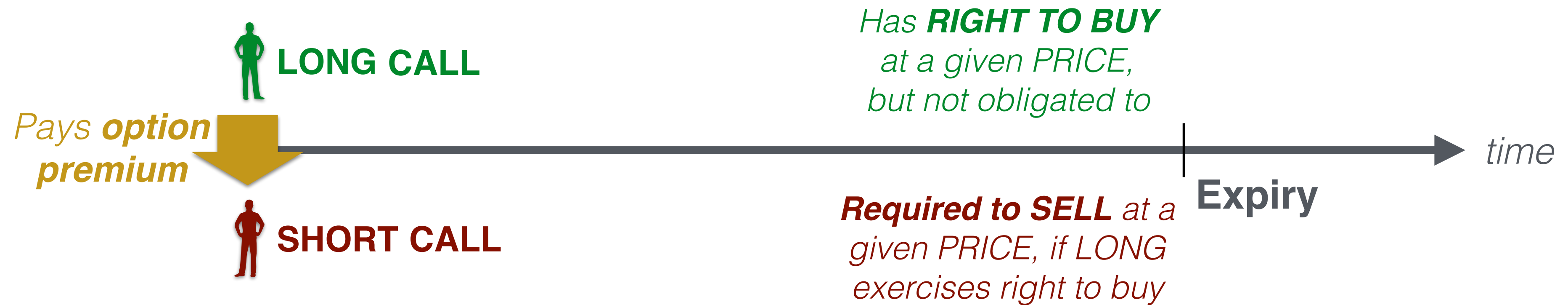
1. Definition

2. Derivative Markets

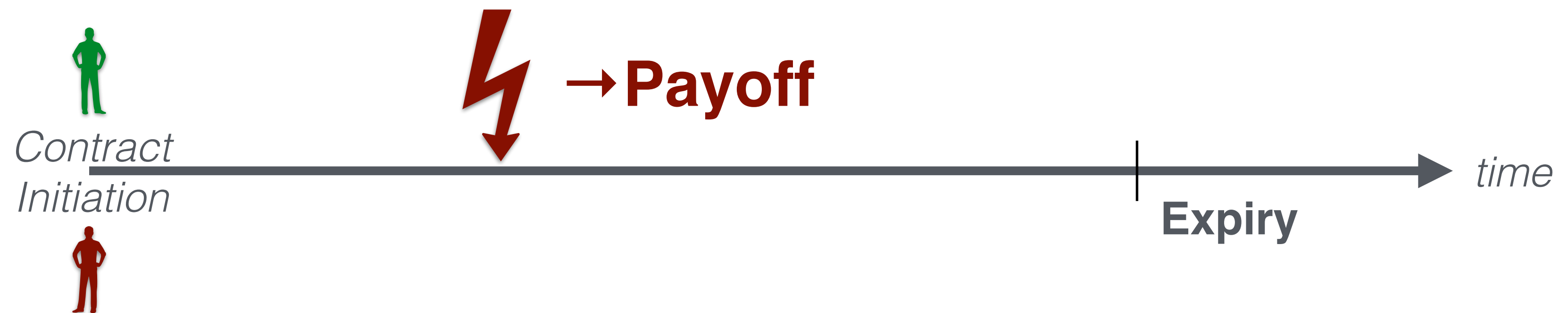
3. Types of Derivatives

Options

CALL OPTION



Contingent Claim



Options

When $\text{Market price} > \text{Spot price}$

Profit to long
 $= \text{Market price} - \text{Spot price}$

Contingent Claim



Contract Initiation

→ Payoff

Expiry

time

downgrade / default by
named borrower

payout that
compensates the owner

Credit
Derivatives



Derivative Markets and Instruments

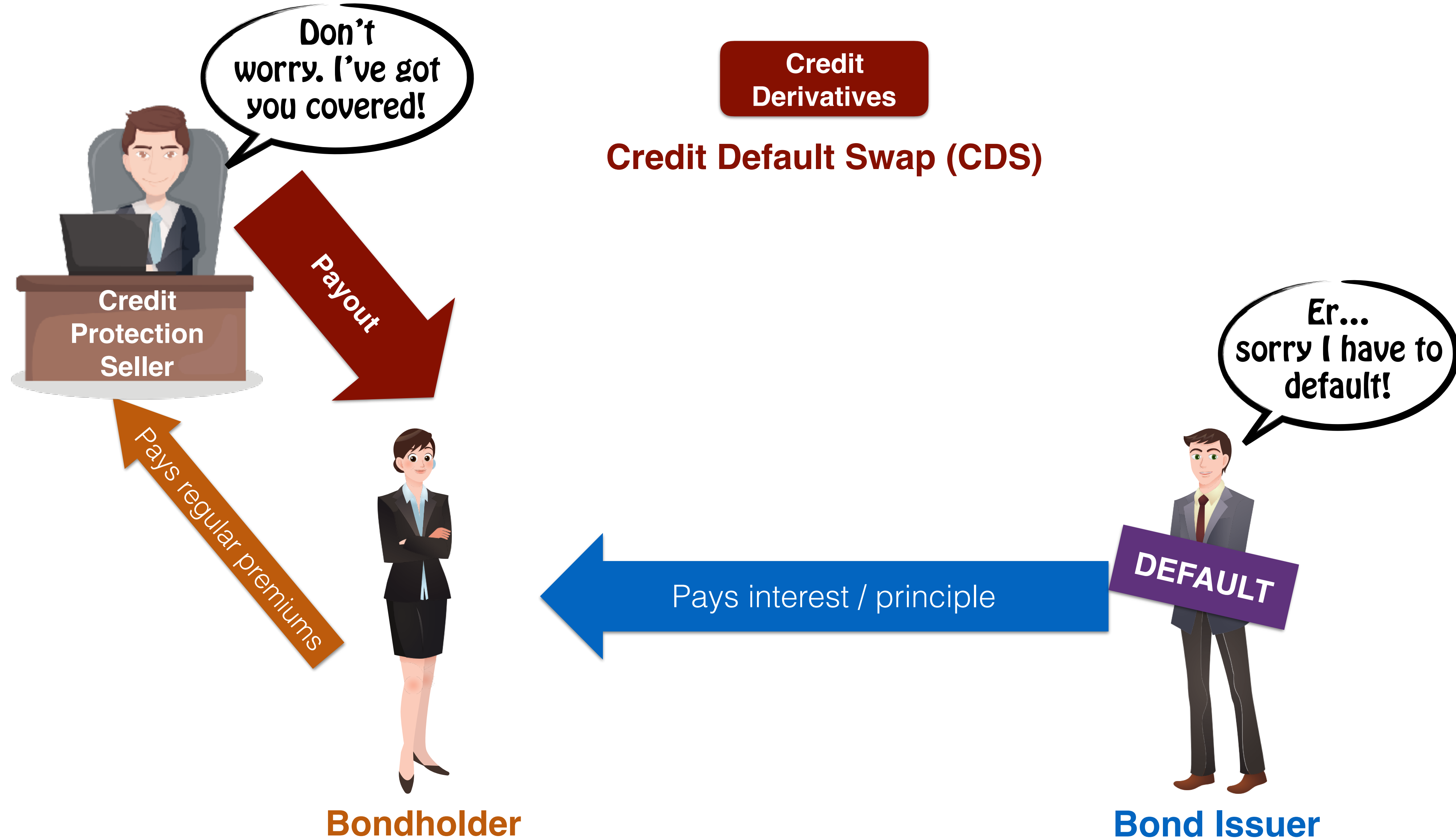
1. Definition

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Credit
Derivatives

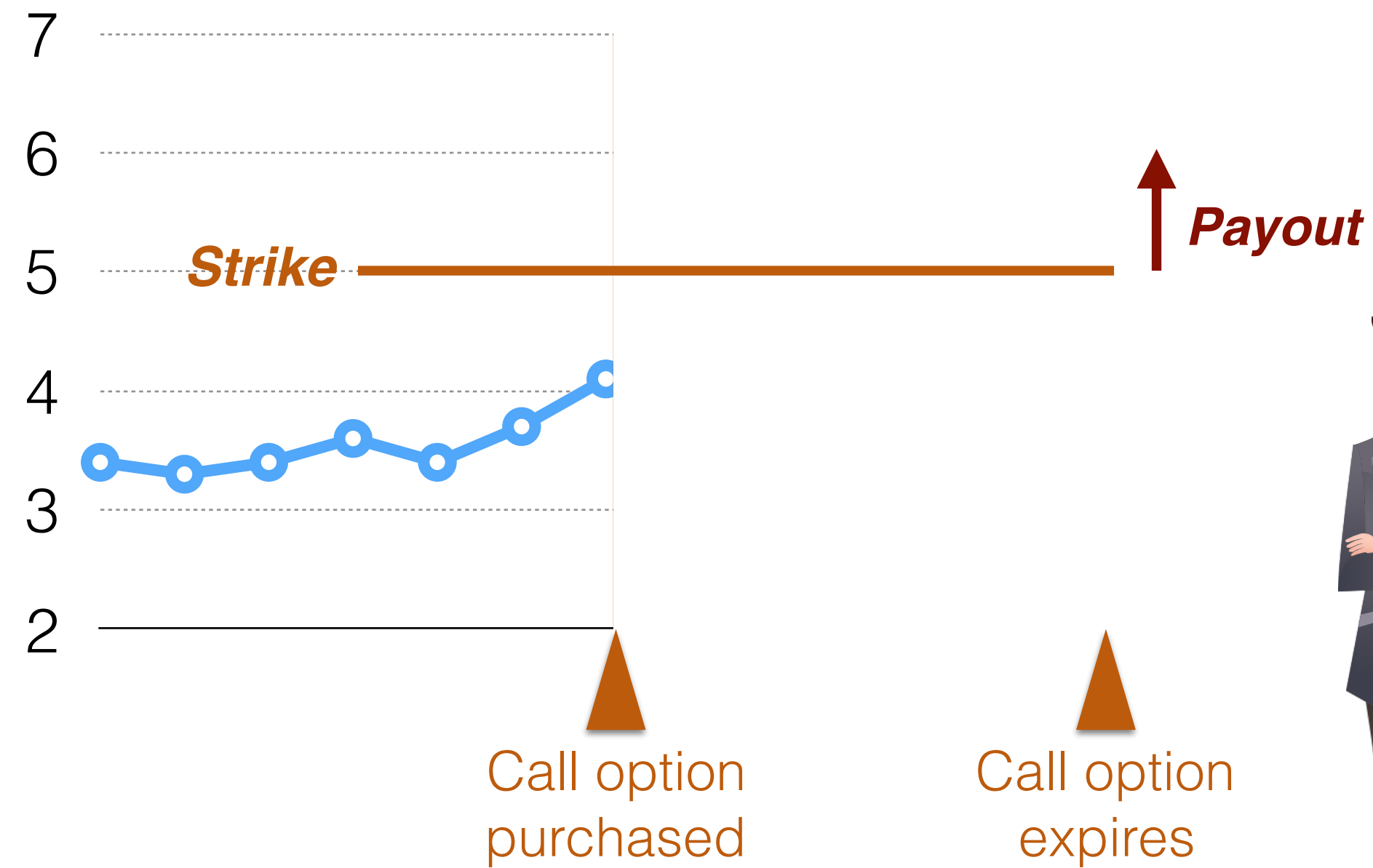
Credit Default Swap (CDS)



Credit Derivatives

Credit Spread Option

$$\text{Credit spread (\%)} = \text{Bond yield} - \text{benchmark rate}$$



Pays premium to buy option

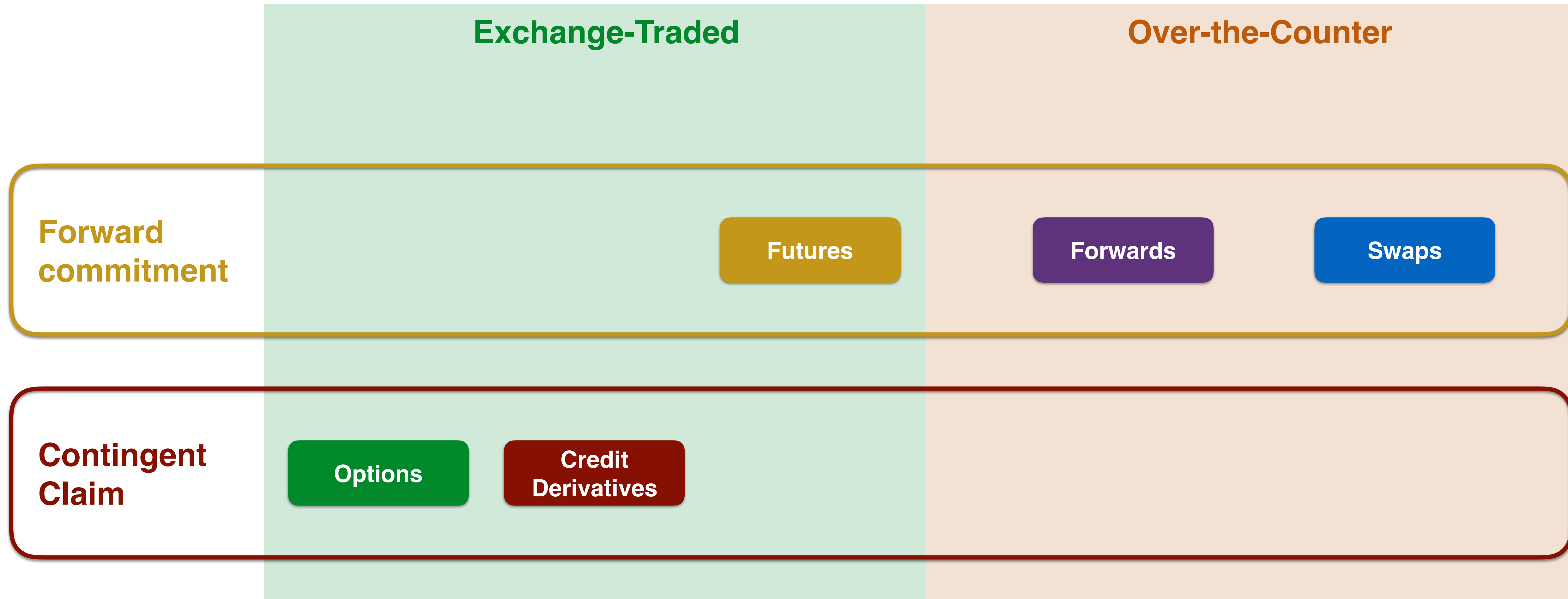


Bondholder



Bond Issuer

Types of Derivatives



Derivative Markets and Instruments

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