Market Mirroring Strategy

Software Architecture Specification 2019-01-31

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Possible Events

- OrderPlacement
- OrderCancelled
- OrderDone
- OrderFill
- QuoteBook

Source Market

- OrderPlacement
- OrderCancelled
- OrderDone
- OrderFill
- QuoteBook

Destination Market

- OrderPlacement
- OrderCancelled
- OrderDone
- OrderFill
- QuoteBook

Source Market

- OrderPlacement
- OrderCancelled
- OrderDone
- OrderFill
- QuoteBook

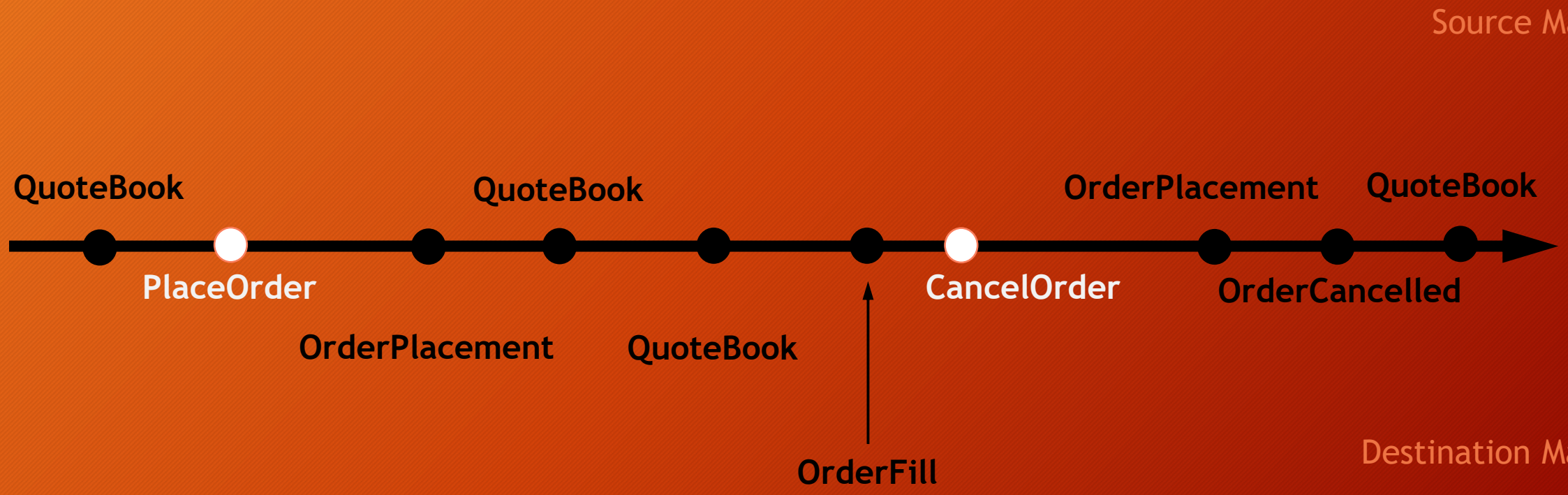
- PlaceOrder
- CancelOrder

Destination Market

- OrderPlacement
- OrderCancelled
- OrderDone
- OrderFill
- QuoteBook

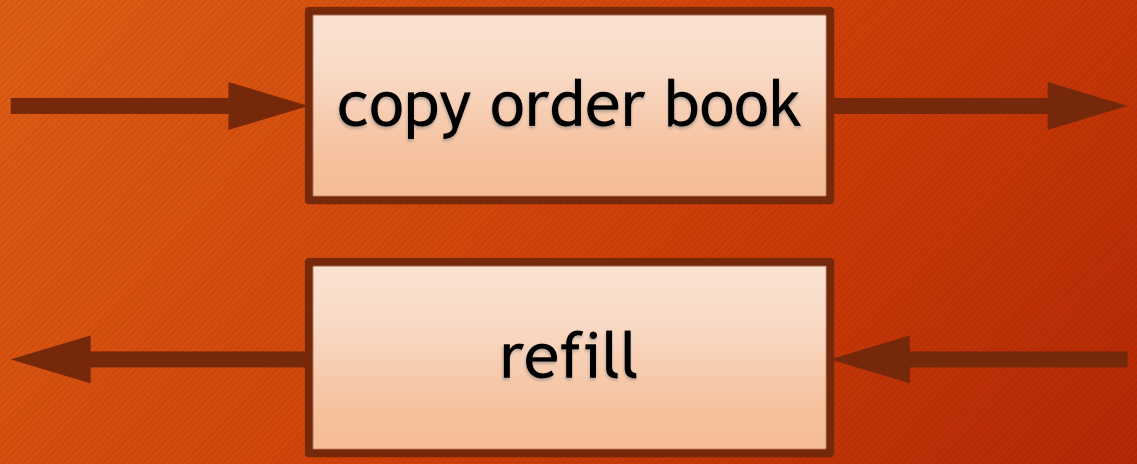
- PlaceOrder
- CancelOrder

Event Timeline



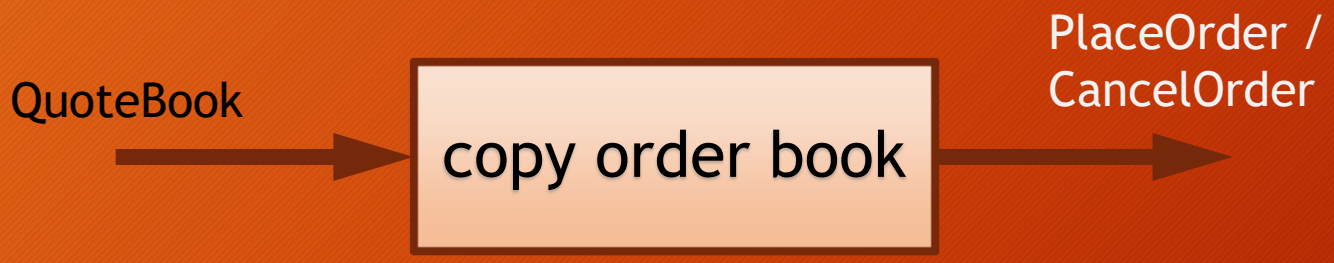
Mirroring Strategy

Source Market



Destination Market

Source Market

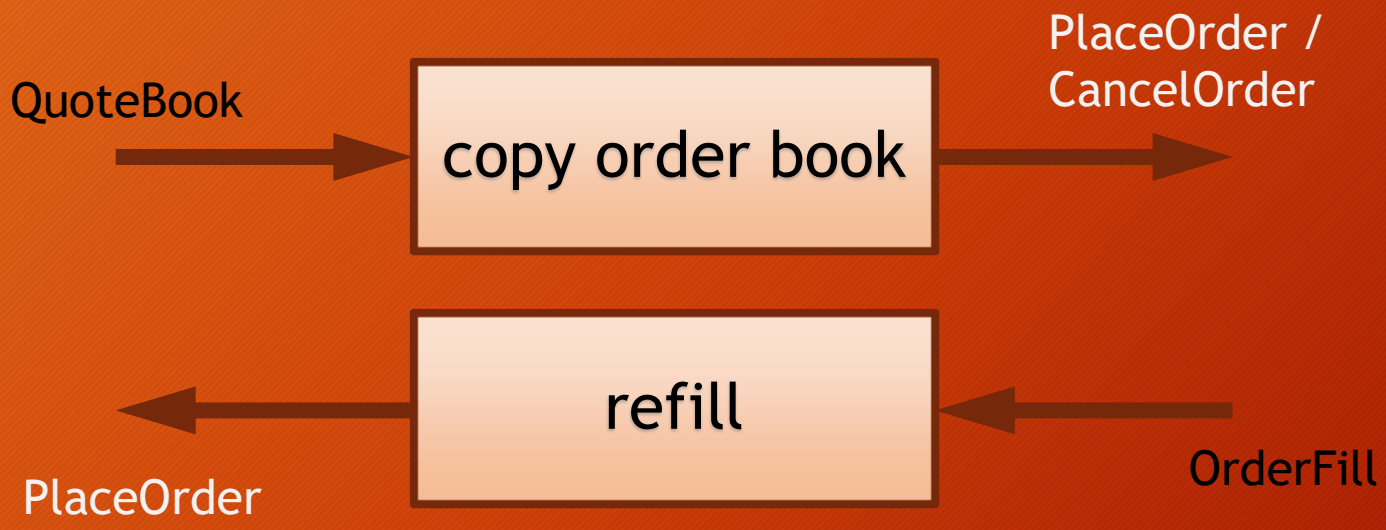


Destination Market

Source Market

Destination Market

Source Market



Destination Market

Source Market

Destination Market

What if this happens?...

Source Market

QuoteBook

Destination Market

What if this happens?...

Source Market

Destination Market

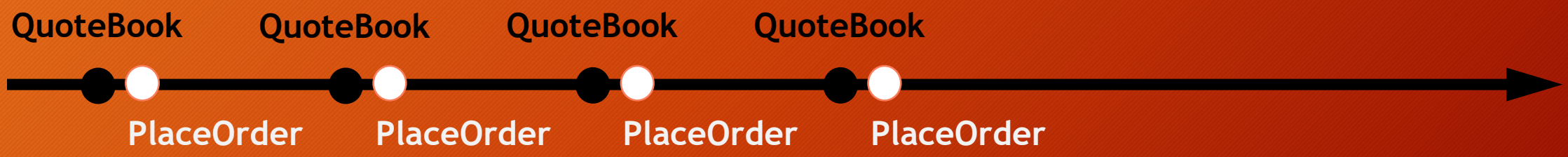
What if this happens?...

Source Market

Destination Market

What if this happens?...

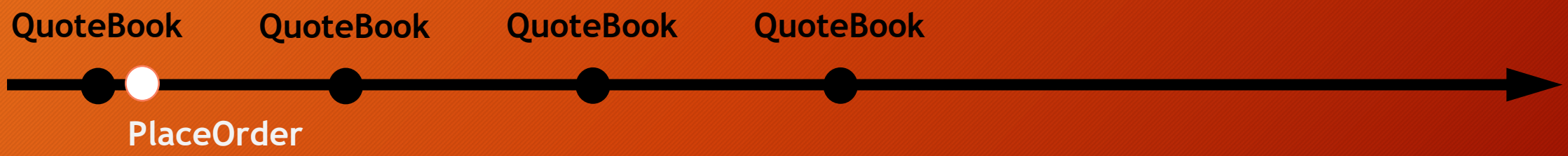
Source Market



Destination Market

What we want

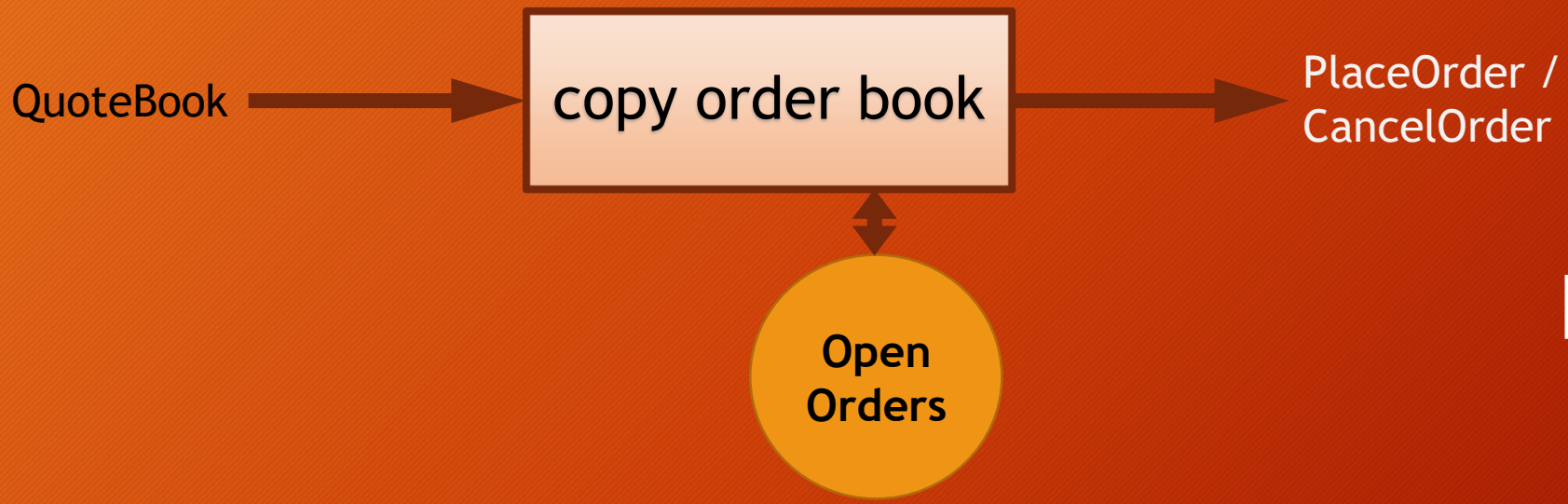
Source Market



Destination Market

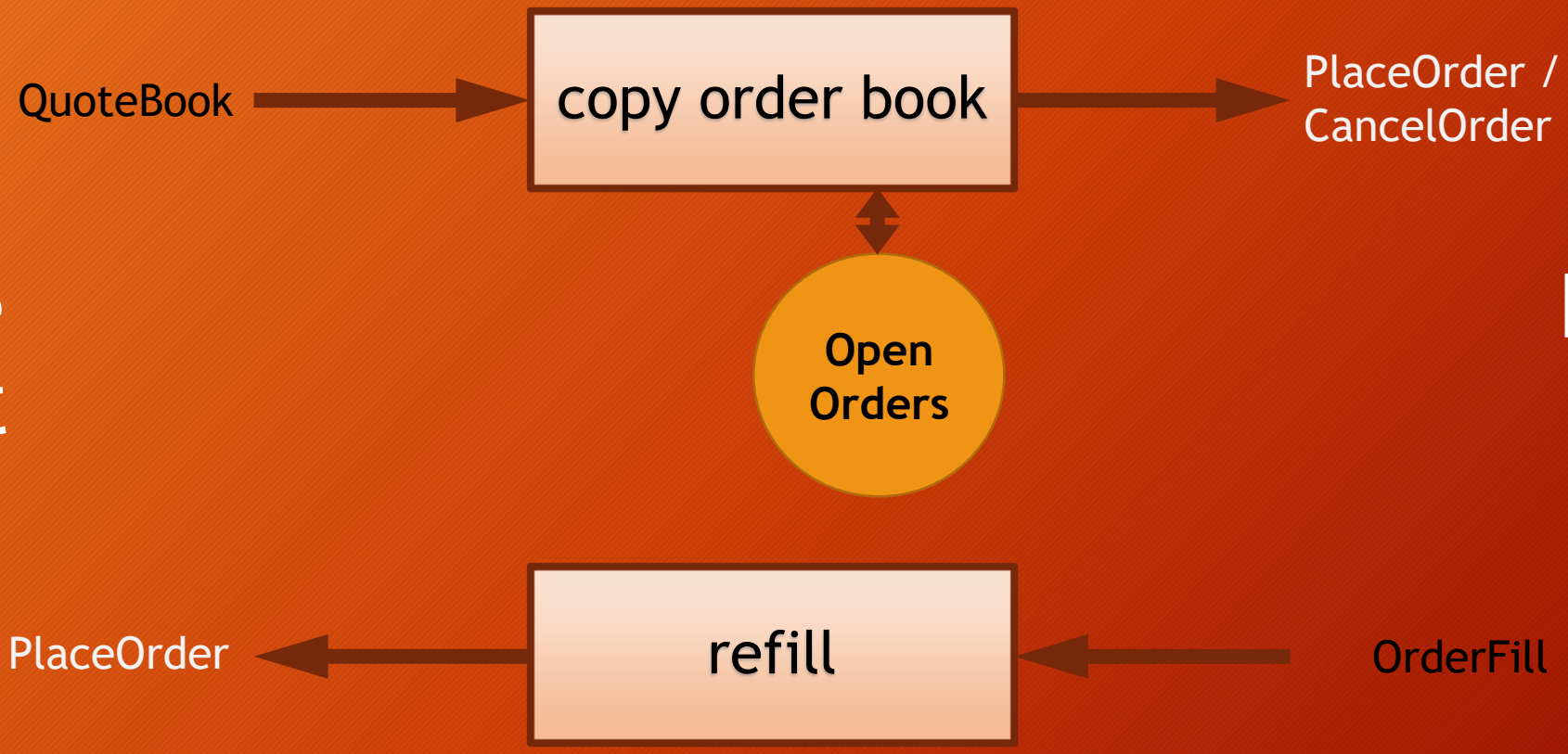
Source Market

Destination Market



Source Market

Destination Market



Source Market

Destination Market

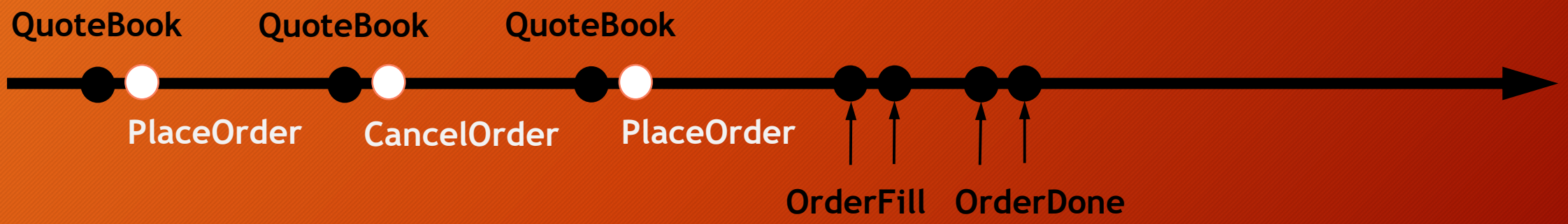
What if this happens?...

Source Market

Destination Market

What if this happens?...

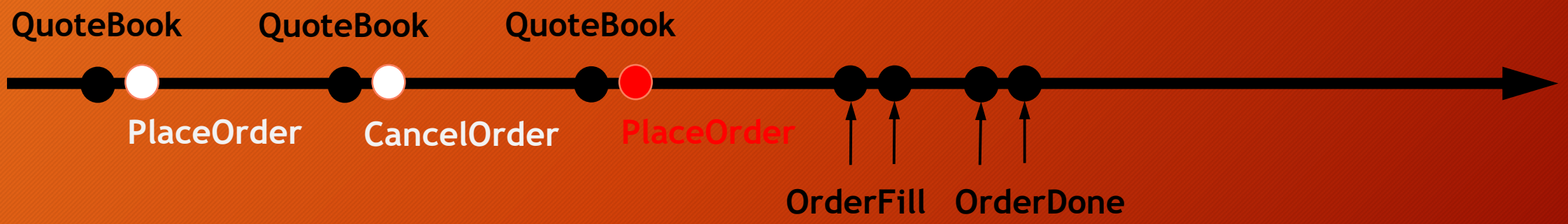
Source Market



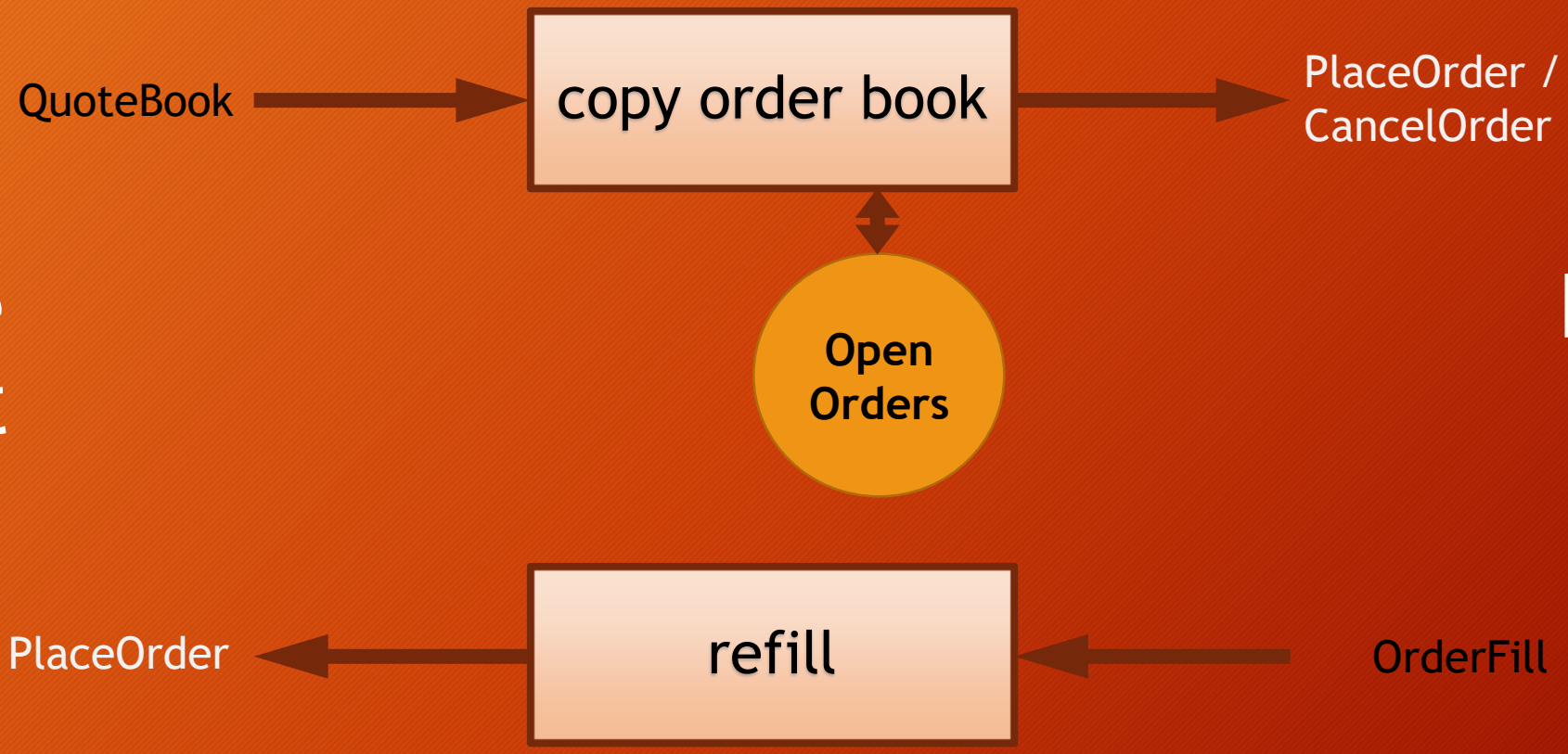
Destination Market

We must wait

Source Market



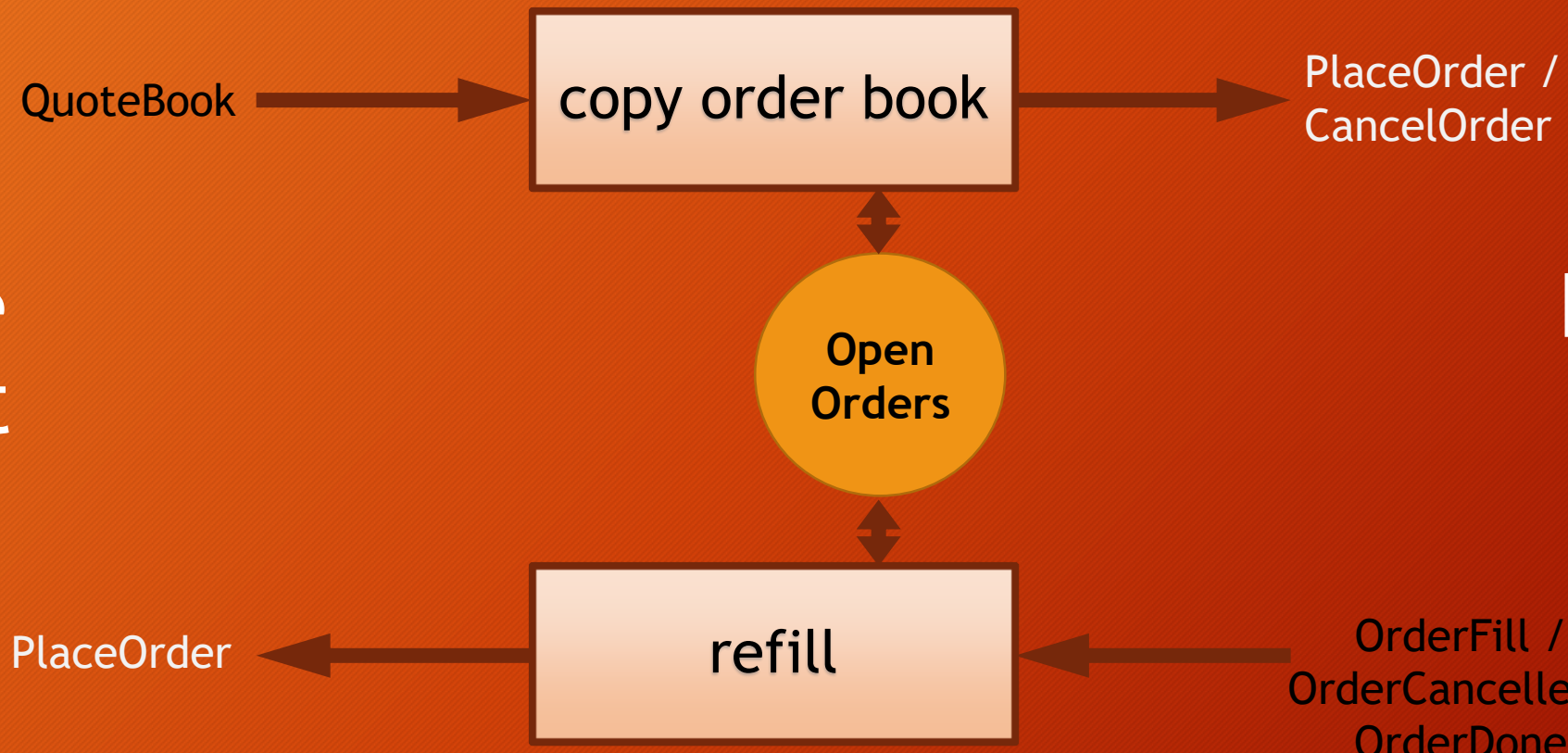
Destination Market



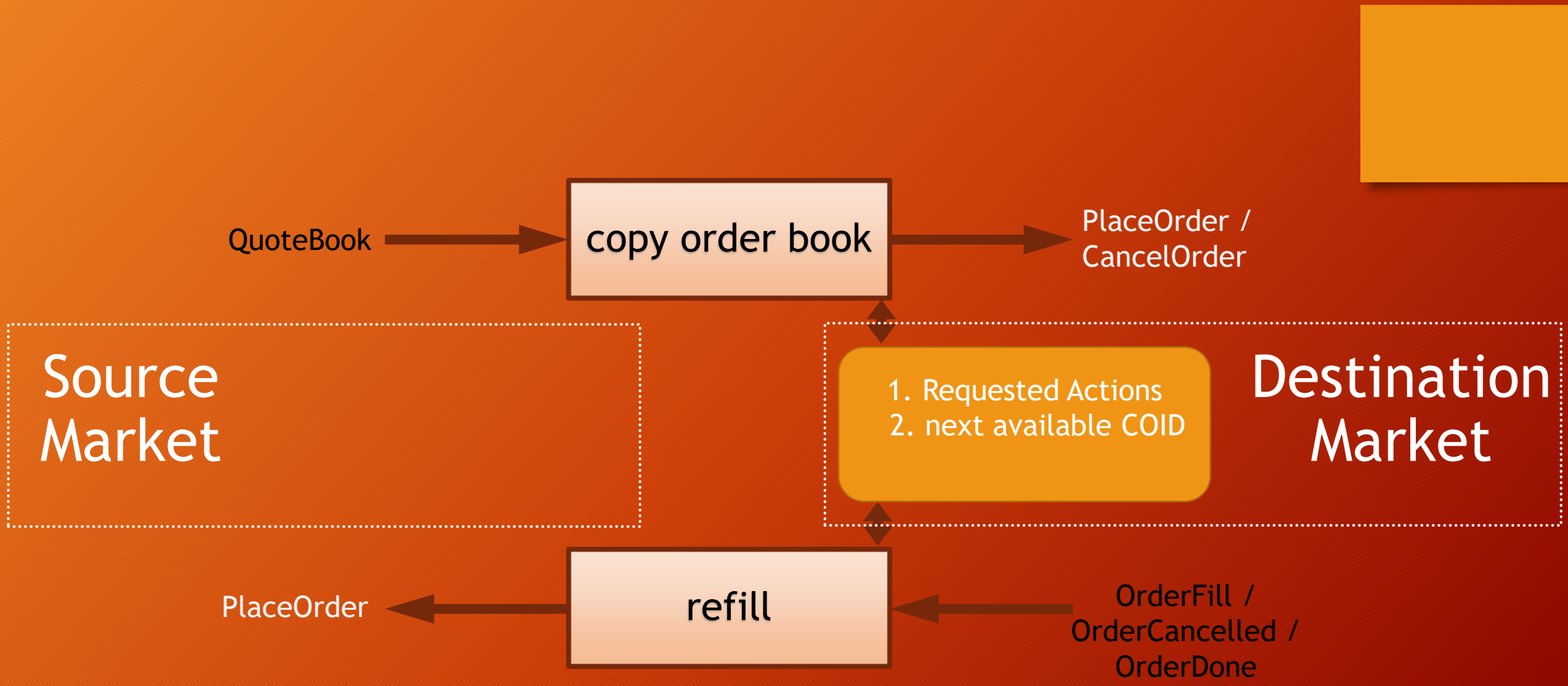
Source Market

Destination Market

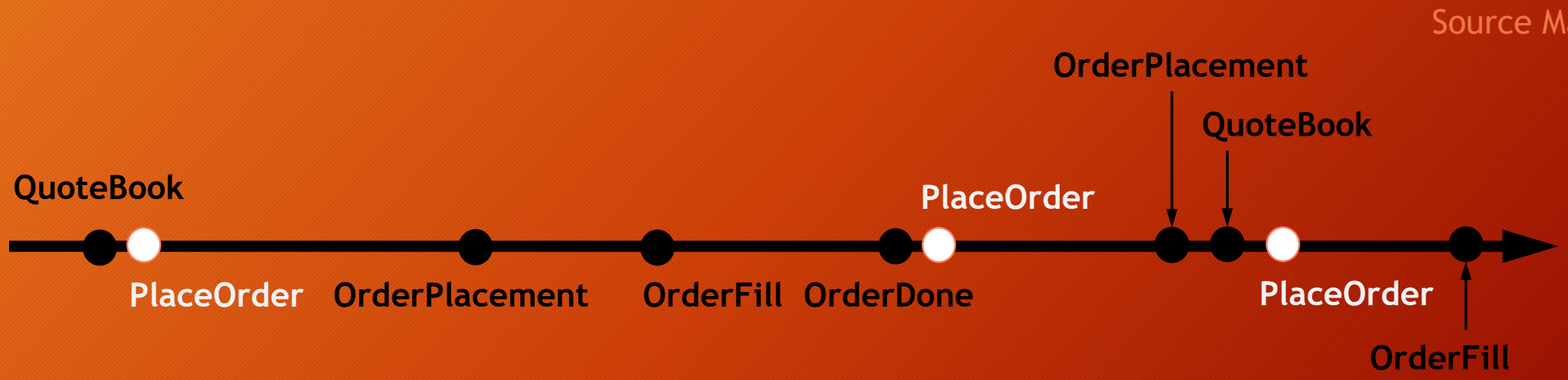
Source Market



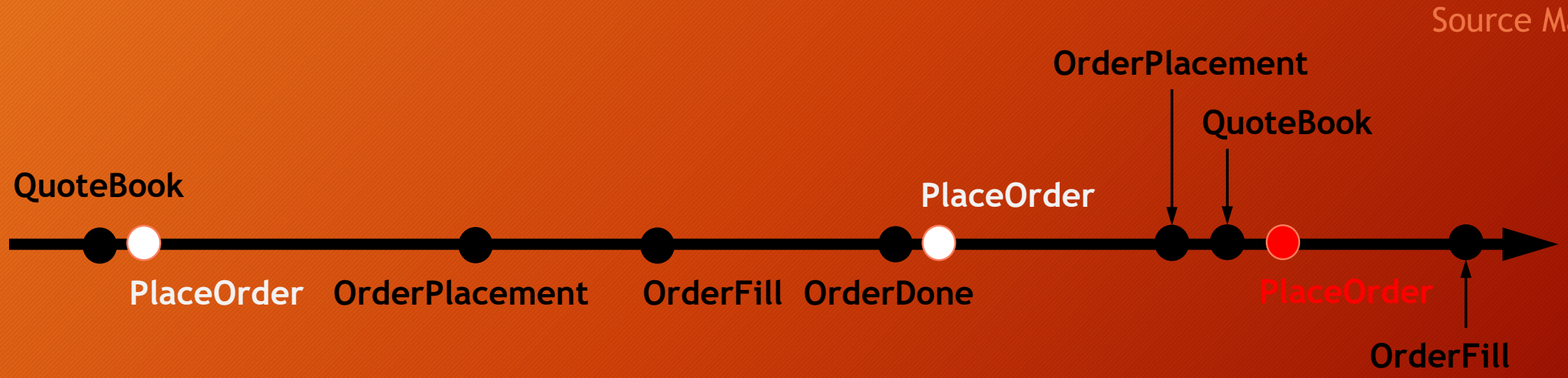
Destination Market

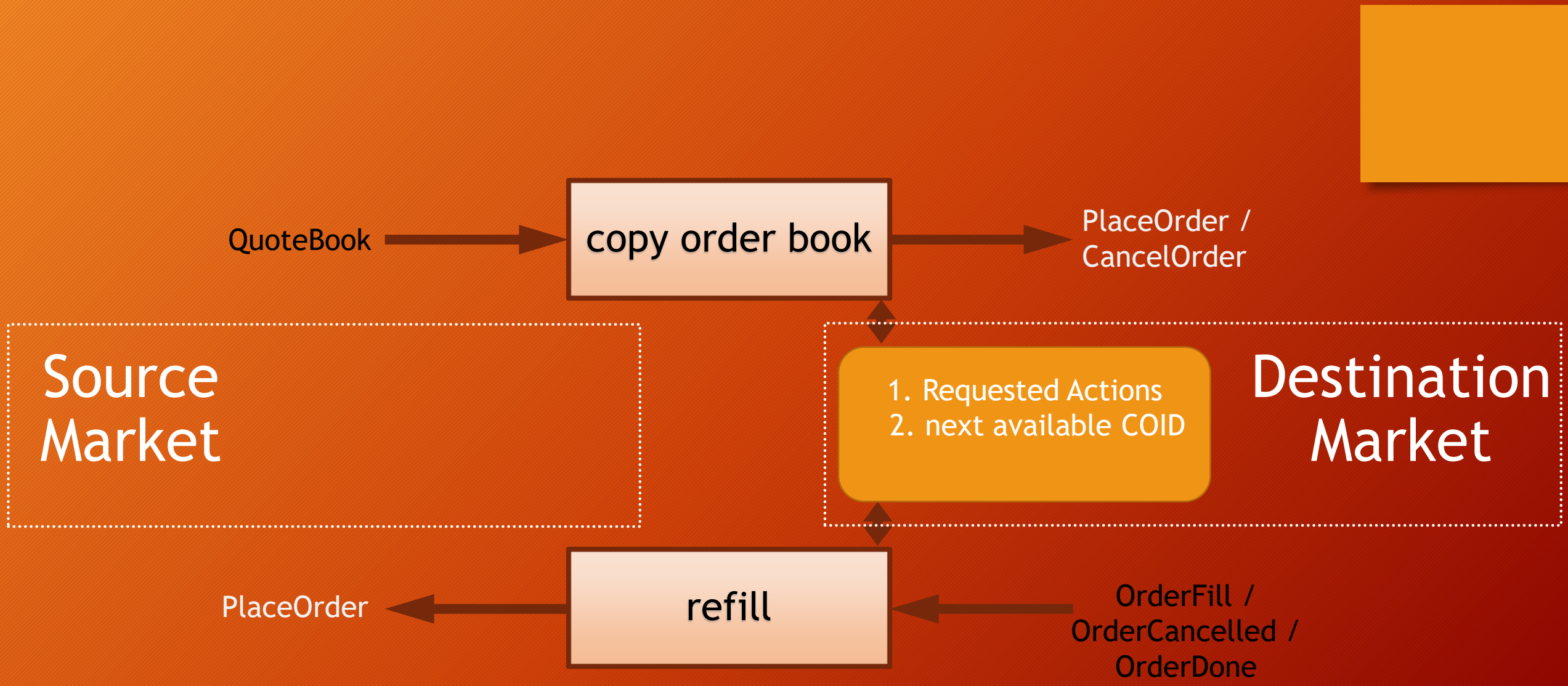

QuoteBook
copy order book
PlaceOrder /
CancelOrder
Source
Market
1. Requested Actions
2. next available COID
Destination
Market
PlaceOrder
refill
OrderFill /
OrderCancelled /
OrderDone

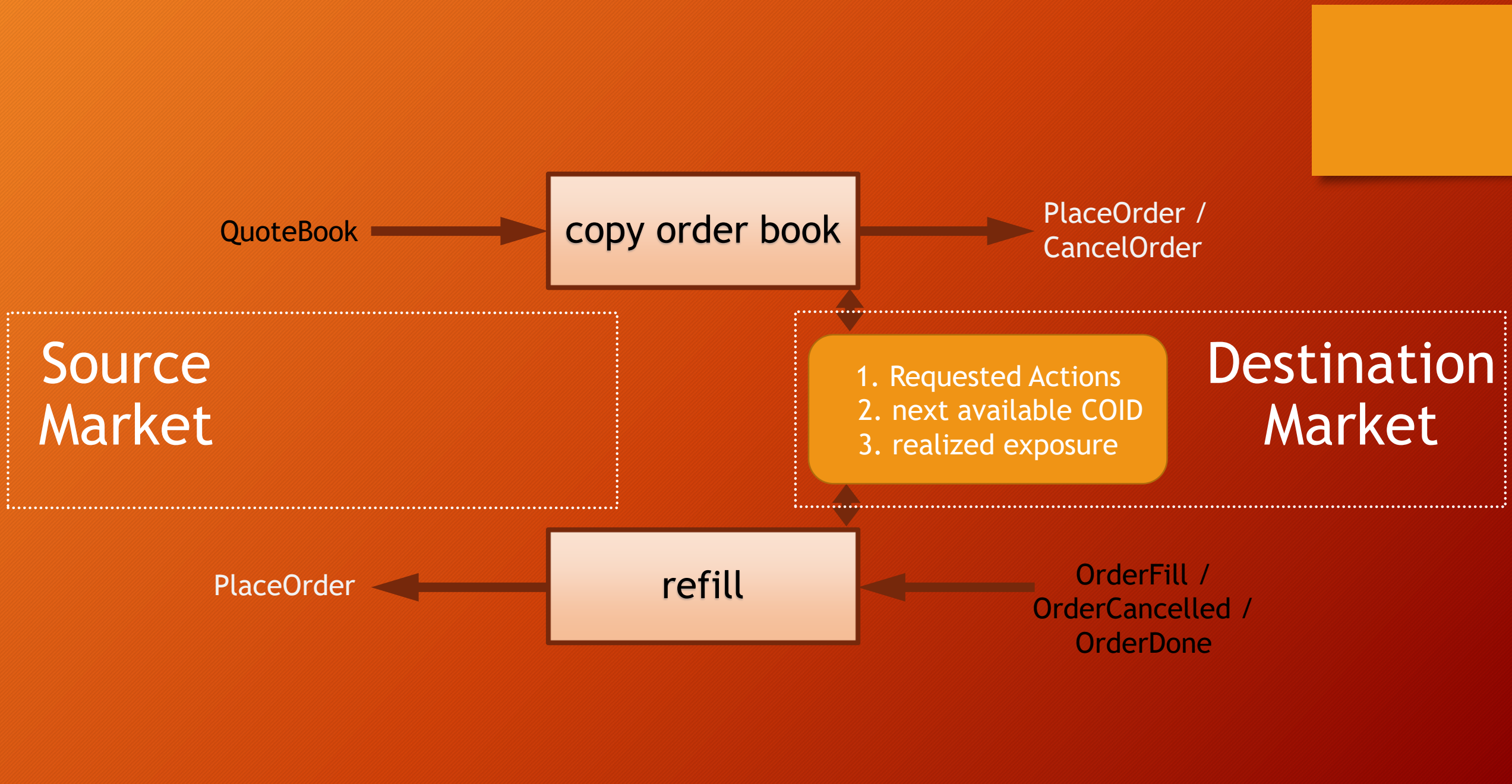
What if this happens?...

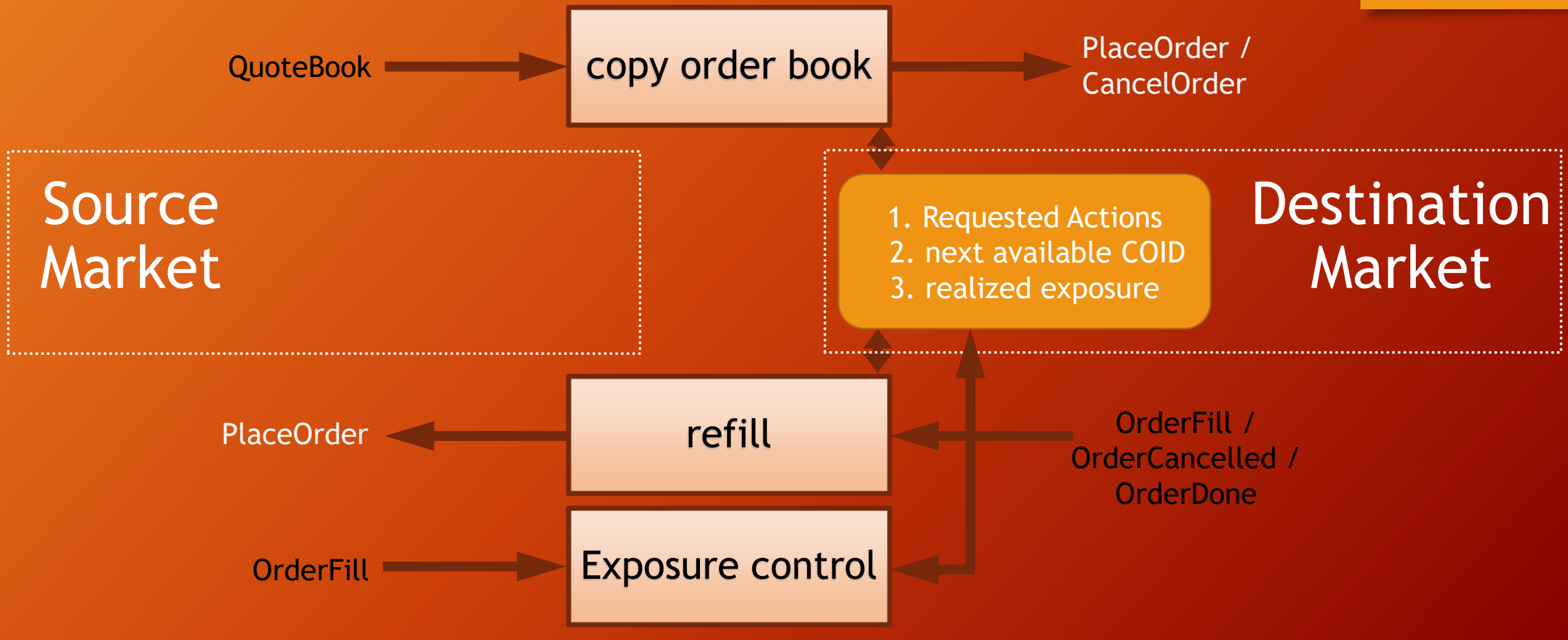


We must wait


Source Market
OrderPlacement
QuoteBook
QuoteBook
PlaceOrder
PlaceOrder
OrderPlacement
OrderFill
OrderDone
PlaceOrder
OrderFill
Destination Market

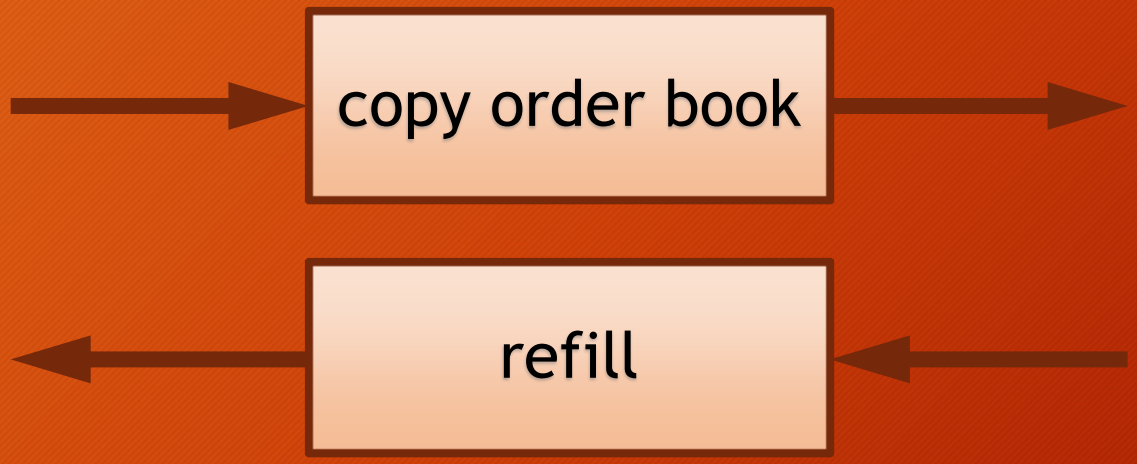

QuoteBook
copy order book
PlaceOrder /
CancelOrder
Source
Market
1. Requested Actions
2. next available COID
Destination
Market
PlaceOrder
refill
OrderFill /
OrderCancelled /
OrderDone


QuoteBook
copy order book
PlaceOrder /
CancelOrder
Source
Market
1. Requested Actions
2. next available COID
3. realized exposure
Destination
Market
PlaceOrder
refill
OrderFill /
OrderCancelled /
OrderDone


QuoteBook
copy order book
PlaceOrder /
CancelOrder
Source
Market
1. Requested Actions
2. next available COID
3. realized exposure
Destination
Market
PlaceOrder
refill
OrderFill /
OrderCancelled /
OrderDone
OrderFill
Exposure control

Specifying parameters

Source Market



Destination Market

Specifying parameters

Source Market

Destination Market

Given:

- QuoteBook

Set Target:

- (side, price, volume)

Specifying parameters

Source Market

Destination Market

Given:

- QuoteBook

Set Target:

- (side, price, volume)

Will be limited by maximum exposure

Still to be improved

- Cancelling all orders to decrease open volume
- Filtering order book
- Failure treatment
- …