Spread Capture: Mid-price vs Weighted-mid-price

In [22]:

```julia
include("backtest_spread_capture.jl")
plotly()
```

Out[22]:

```
Plots.PlotlyBackend()
```

In [7]:

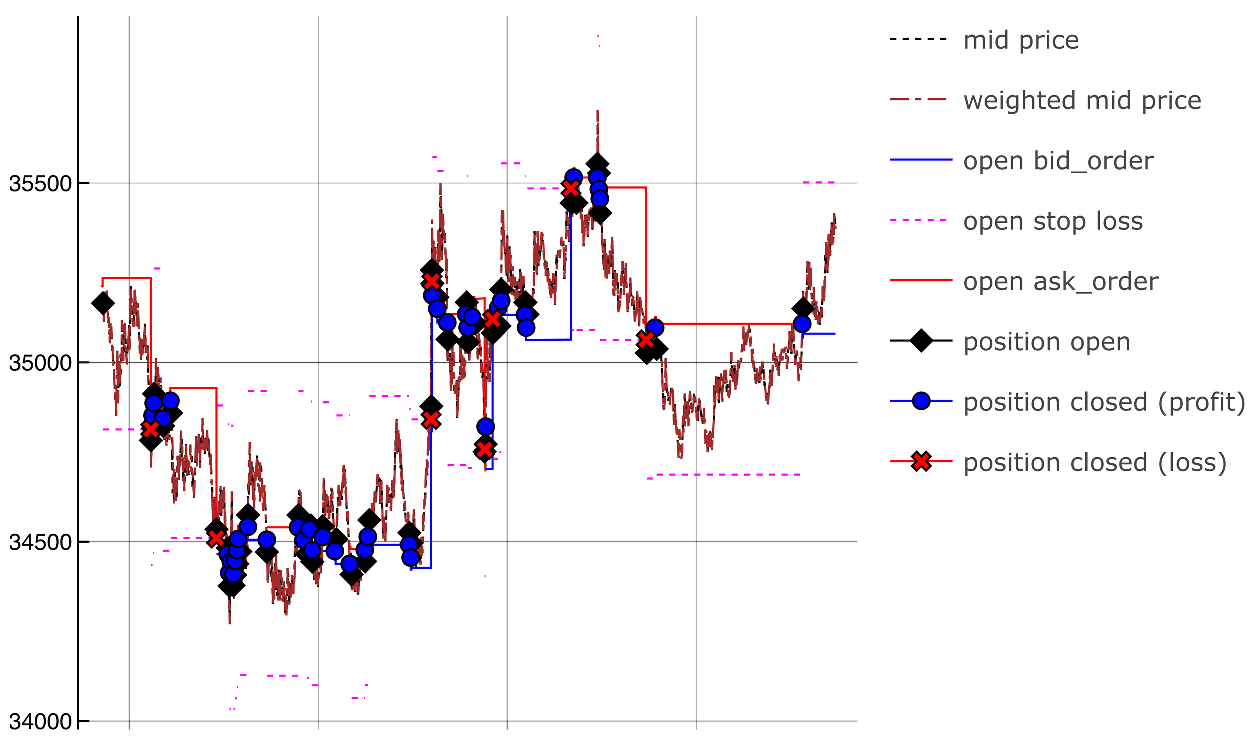
```julia
df, n_profit, n_loss = run_backtest("btctrades.csv", "btcbbo.csv", :mid,
    bid_spread = 0.1, ask_spread = 0.1, stop_loss = 1.0, order_refresh_time=30);
```

```
Using MID price
Start Time 2022-01-22T16:42:07.350,  End Time 2022-01-23T00:28:30.230
Bid spread: 0.1, Ask spread: 0.1, Stop loss: 1.0, Order refresh time: 30
Spreads captured 41 times
Failed to capture spread 8 times
```

In [8]:

```julia
plot_result(df)
```

Out[8]:



In [9]:

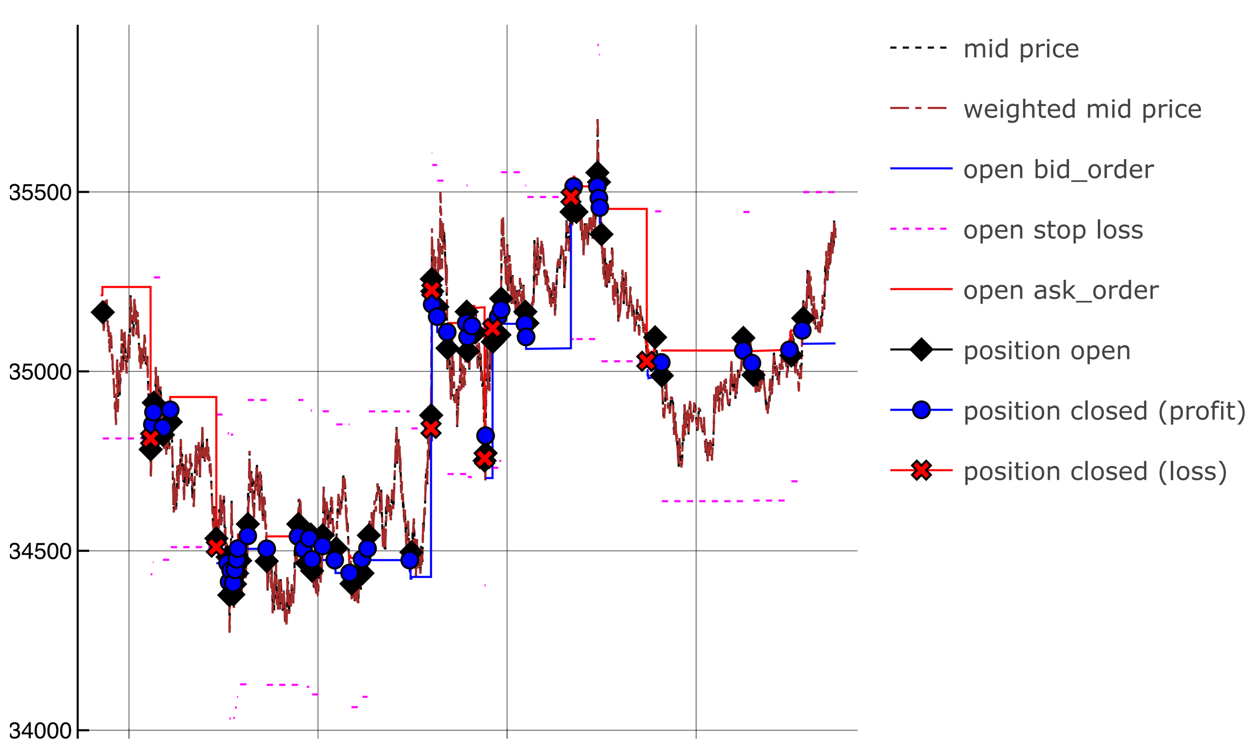
```julia
df, n_profit, n_loss = run_backtest("btctrades.csv", "btcbbo.csv", :weightedmid,
    bid_spread = 0.1, ask_spread = 0.1, stop_loss = 1.0, order_refresh_time=30);
```

```
using WEIGHTED MID price
Start Time 2022-01-22T16:42:07.350,  End Time 2022-01-23T00:28:30.230
Bid spread: 0.1, Ask spread: 0.1, Stop loss: 1.0, Order refresh time: 30
Spreads captured 43 times
Failed to capture spread 8 times
```

In [10]:

```julia
plot_result(df)
```

Out[10]:



In [11]:

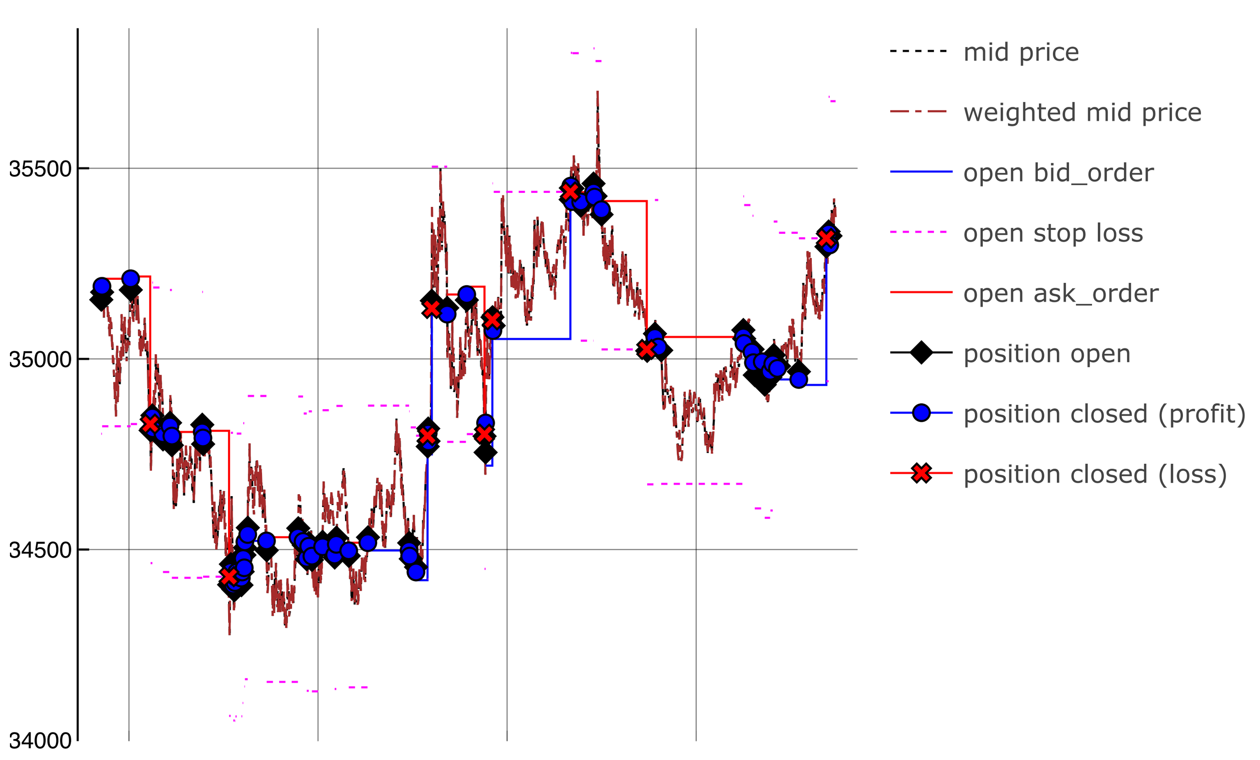
```julia
df, n_profit, n_loss = run_backtest("btctrades.csv", "btcbbo.csv", :mid,
    bid_spread = 0.05, ask_spread = 0.05, stop_loss = 1.0, order_refresh_time=10);
```

```
Using MID price
Start Time 2022-01-22T16:42:07.350,  End Time 2022-01-23T00:28:30.230
Bid spread: 0.05, Ask spread: 0.05, Stop loss: 1.0, Order refresh time: 10
Spreads captured 61 times
Failed to capture spread 9 times
```

In [12]:

```julia
plot_result(df)
```

Out[12]:



In [13]:

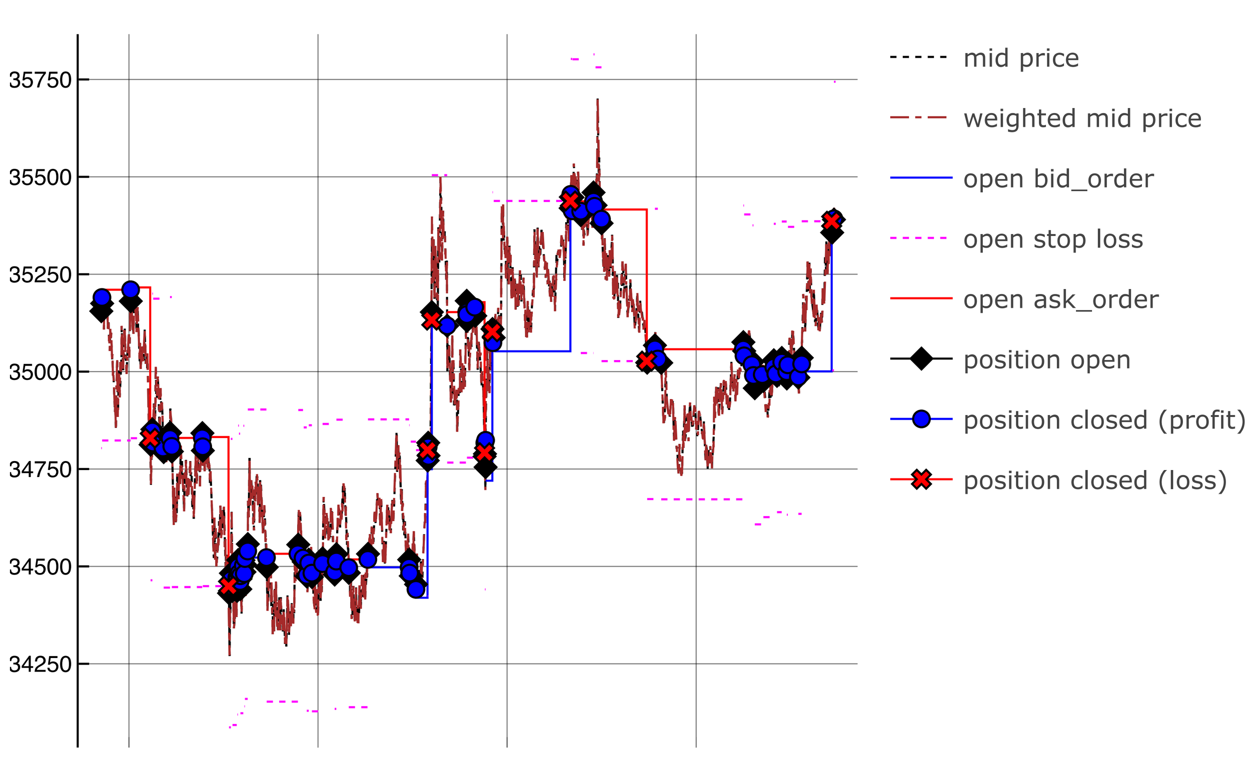
```julia
df, n_profit, n_loss = run_backtest("btctrades.csv", "btcbbo.csv", :weightedmid,
    bid_spread = 0.05, ask_spread = 0.05, stop_loss = 1.0, order_refresh_time=10);
```

```
using WEIGHTED MID price
Start Time 2022-01-22T16:42:07.350,  End Time 2022-01-23T00:28:30.230
Bid spread: 0.05, Ask spread: 0.05, Stop loss: 1.0, Order refresh time: 10
Spreads captured 66 times
Failed to capture spread 9 times
```

In [23]:

```julia
plot_result(df)
```

Out[23]:



In [ ]: