

# Strategy 2: Smart Money Break of Structure (BOS) Strategy

## Complete Guide to Implementation, Configuration & Optimization

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## 1. Introduction to Break of Structure (BOS) Strategy

### What is Break of Structure?

Break of Structure (BOS) is a **Smart Money concept** that identifies when the market **violates** the previous swing high or swing low. Professional traders use this to identify potential trend reversals and breakout opportunities.

#### Key Concept:

- The market creates **swing highs** (peaks) and **swing lows** (troughs)
- When the price breaks ABOVE the previous swing high → **Bullish BOS signal**
- When the price breaks BELOW the previous swing low → **Bearish BOS signal**
- These breaks often precede strong directional moves

### Why BOS Works

Smart money traders use structure breaks because:

1. **Supply/Demand zones break** → Price acceleration likely
2. **Stop losses of previous traders trigger** → Liquidity flows
3. **Market structure confirms** → New direction is stronger
4. **Institutional positions activate** → Strong momentum follows

### The Psychology Behind BOS

When price breaks a previous swing:

- Traders holding losing positions get stopped out
- New trend followers enter in the direction of the break
- Stop hunts complete, and real moves begin
- Momentum builds as more participants join

## 2. How the Strategy Works

### Step-by-Step Execution Flow

#### Phase 1: Identify Market Structure

The strategy scans the market to find:

```
BULLISH STRUCTURE:  
Previous Swing Low (PSL)  
    ↓  
Current candles close BELOW PSL  
    ↓  
BOS SIGNAL: Price breaks below PSL  
    ↓  
SELL signal generated
```

```
BEARISH STRUCTURE:  
Previous Swing High (PSH)  
    ↓  
Current candles close ABOVE PSH  
    ↓  
BOS SIGNAL: Price breaks above PSH  
    ↓  
BUY signal generated
```

#### Phase 2: Detect the Breakout

The strategy constantly monitors:

- **Current bar's high** vs **Previous swing high**
- **Current bar's low** vs **Previous swing low**
- **Confirmation type** (Candle Close or Wicks)

#### Phase 3: Enter the Trade

When a BOS is confirmed:

- **Entry price** = Current market price
- **Stop loss** = Opposite side of structure
- **Take profit** = Fixed points from entry
- **Position size** = Your configured lot size

#### Phase 4: Manage the Trade

- **Trailing stop** = None (fixed TP in this version)
- **Position closed** = When TP hit or SL hit
- **Next signal** = After position closes

## Visual Example

```
BULLISH SCENARIO:
Price: 1.0950 (Swing High established)
  ↓
  1.0945
  1.0940
  1.0935 (Previous Swing High broken)
  ↓
BOS SIGNAL: BREAK BELOW = SELL
Entry: ~1.0935
Stop Loss: ~1.0950 (above the swing high)
Take Profit: ~1.0815 (110 points down)
```

```
BEARISH SCENARIO:
Price: 1.0850 (Swing Low established)
  ↓
  1.0855
  1.0860
  1.0865 (Previous Swing Low broken)
  ↓
BOS SIGNAL: BREAK ABOVE = BUY
Entry: ~1.0865
Stop Loss: ~1.0850 (below the swing low)
Take Profit: ~1.0975 (110 points up)
```

## 3. Technical Foundation

### How BOS Detection Works in Code

#### 3.1 Swing Identification

The strategy finds swings using the **Swing Size parameter**:

```
Swing Size = 14 bars

This means:
- A swing high = a bar that is HIGHER than 14 bars before AND 14 bars after it
- A swing low = a bar that is LOWER than 14 bars before AND 14 bars after it

Example with 14-bar swing:
Bar 1 ← 14 bars before
Bar 2
...
Bar 14
Bar 15 ← PIVOT (center bar)
        If HIGH(15) > HIGH(1-14) AND HIGH(15) > HIGH(16-29)
        Then Bar 15 = SWING HIGH
Bar 16
...
Bar 29 → 14 bars after
```

## 3.2 Breakout Confirmation Types

### Option A: Candle Close (Recommended)

Uses the CLOSING PRICE to confirm the break:

Previous Swing High = 1.0950  
Current candle close = 1.0955

Close > PSH → Confirmed BOS  
Entry trigger at close

### Option B: Wicks (More Aggressive)

Uses the HIGH/LOW (wicks) to confirm:

Previous Swing High = 1.0950  
Current candle high = 1.0955

High > PSH → Confirmed BOS  
Entry trigger at high  
Can catch moves earlier but more false signals

## 3.3 Signal Timing

The strategy triggers:

- **One signal per new bar only** (prevents duplicate entries)
- **On bar close** for "Candle Close" method
- **On bar update** for "Wicks" method
- **Position closed immediately** when target hit

## 4. Configuration Parameters Explained

### Input Parameters Section

```
input group "=====Strategy 2: Smart Money BOS Strategy====="
input bool UseBOSStrategy = true;
input int BOS_SwingSize = 14;
input string BOS_ConfirmationType = "Candle Close";
input double BOS_SL_Points = 200;
input double BOS_TP2_Points = 110;
```

### 4.1 Enable/Disable Switch

Parameter: UseBOSStrategy  
Type: Boolean (true/false)  
Default: true

Purpose:

- true = BOS strategy is ACTIVE
- false = BOS strategy is DISABLED

Use Case:

- Set to false if you want to test other strategies only

- Set to true to activate this strategy
- Can toggle during trading without restarting EA

### When to Use:

- ✓ Set to **true** if BOS is your main strategy
- ✓ Set to **false** to compare with other strategies
- ✓ Use for strategy comparison/optimization

## 4.2 Swing Size Parameter ★ MOST IMPORTANT

Parameter: BOS\_SwingSize  
Type: Integer (whole number)  
Default: 14  
Range: 1-50 (typically)

Purpose:  
Determines the LOOKBACK period for finding swing highs and lows

### Understanding Swing Size

SMALL SWING SIZE (Example: 5)

- Finds swings every 5-10 bars
- More frequent signals
- Catches smaller moves
- More false signals
- Suitable for: Scalping, fast timeframes
- Example: 1M, 5M charts

MEDIUM SWING SIZE (Example: 14)

- Finds swings every 14-28 bars
- Balanced signals
- Medium-sized moves
- Good risk/reward
- Suitable for: Swing trading, standard timeframes
- Example: 15M, 30M, 1H charts (RECOMMENDED)

LARGE SWING SIZE (Example: 30)

- Finds swings every 30-60 bars
- Fewer but stronger signals
- Only major moves trigger
- Better accuracy
- Fewer false signals
- Suitable for: Position trading, larger timeframes
- Example: 4H, Daily charts

### How to Choose Swing Size

#### Rule 1: Match Your Timeframe

1-minute chart → BOS\_SwingSize = 3-5  
5-minute chart → BOS\_SwingSize = 5-8  
15-minute chart → BOS\_SwingSize = 8-14  
1-hour chart → BOS\_SwingSize = 14-20  
4-hour chart → BOS\_SwingSize = 20-30  
Daily chart → BOS\_SwingSize = 30-50

## Rule 2: Consider Your Trading Style

```
Scalper (quick trades)? → Use 3-8
Day Trader (several trades/day)? → Use 8-14
Swing Trader (hold days)? → Use 14-25
Position Trader (hold weeks)? → Use 25-50
```

## Rule 3: Find the Sweet Spot

- Start with **14 for 4H charts** (default)
- Backtest with values: 10, 14, 18, 22, 26
- Pick the setting with best Win Rate + Profit Factor
- Avoid values with too many losing trades

## Impact of Different Values

```
Swing Size: 5
Signal Frequency: Very High (maybe 5-10 per day on 1H)
Accuracy: Lower (maybe 45-50% win rate)
Avg Win Size: Small
Best For: Scalpers
```

```
Swing Size: 14
Signal Frequency: Medium (maybe 2-4 per day on 1H)
Accuracy: Good (maybe 50-55% win rate)
Avg Win Size: Medium
Best For: Most traders (BALANCED)
```

```
Swing Size: 25
Signal Frequency: Low (maybe 1-2 per day on 1H)
Accuracy: High (maybe 55-60% win rate)
Avg Win Size: Large
Best For: Conservative traders
```

## 4.3 Confirmation Type Parameter

```
Parameter: BOS_ConfirmationType
Type: String
Default: "Candle Close"
Options: "Candle Close" or "Wicks"
```

```
Purpose:
Determines HOW the breakout is confirmed
```

### Option A: "Candle Close" (RECOMMENDED)

```
Uses: The CLOSING PRICE of the current candle
```

```
How it works:
```

1. Strategy identifies Previous Swing High/Low
2. On each new bar, checks: Is candle CLOSED above/below the swing?
3. If YES → Confirms BOS signal
4. Entry executed at close price

```
Advantages:
```

- ✓ More reliable (confirms real breakout)
- ✓ Fewer false signals

- ✓ Better risk/reward
- ✓ Recommended for most traders

Disadvantages:

- ✗ Enters AFTER the move (slower entry)
- ✗ Misses very early part of move
- ✗ Fewer total signals

Best For:

- Accurate entry wanted
- Lower false signal tolerance
- Swing traders
- Any timeframe

**Example:**

Bar 1-14: Establish swing high at 1.0950

Bar 15: Close at 1.0948 → No signal (below swing, but not confirmed)

Bar 16: Close at 1.0952 → SIGNAL! (close above swing high)

Entry: 1.0952 (at close price)

**Option B: "Wicks" (MORE AGGRESSIVE)**

Uses: The HIGH/LOW prices (wicks) of the current candle

How it works:

1. Strategy identifies Previous Swing High/Low
2. On each new bar update, checks: Did wick touch/break the swing?
3. If YES → Confirms BOS signal IMMEDIATELY
4. Entry executed at high/low price

Advantages:

- ✓ Earlier entry (catches move sooner)
- ✓ More signals overall
- ✓ Potentially larger profits
- ✓ Catches early momentum

Disadvantages:

- ✗ More false signals
- ✗ Can enter on wicks that retrace
- ✗ Higher risk of getting stopped out
- ✗ Worse win rate

Best For:

- Aggressive traders
- Want to catch moves early
- Can handle higher drawdown
- Scalpers

**Example:**

Bar 1-14: Establish swing high at 1.0950

Bar 15: Wick high touches 1.0952 → SIGNAL! (wick broke swing)

Entry: 1.0952 (at wick high)

(Even if bar closes at 1.0948, signal already triggered)

## Comparison Table

Aspect	Candle Close	Wicks
Reliability	High	Medium
False Signals	Low	High
Entry Speed	Slower	Faster
Win Rate	Higher	Lower
Avg Profit	Medium	Larger
Risk Level	Lower	Higher
Recommended	✓ YES	Use if experienced

**My Recommendation:** Start with **"Candle Close"** for better accuracy. Switch to **"Wicks"** only after mastering the strategy.

## 4.4 Stop Loss Parameter

Parameter: BOS\_SL\_Points  
Type: Double (decimal number)  
Default: 200  
Unit: POINTS (not pips)

Purpose:  
Sets the distance between entry and stop loss in POINTS

## Understanding Points

IMPORTANT DISTINCTION:

Point = The SMALLEST price movement unit for the symbol  
Pip = Usually 1/10th of a point (but depends on symbol)

For EURUSD (4 decimals):

- 1 point = 0.0001
- 1 pip = 0.00001
- 200 points = 0.0200 (2 pips in visual charts usually)

So if BOS\_SL\_Points = 200:

Entry: 1.0850

Stop Loss:  $1.0850 + 0.0200 = 1.0870$  (for sell)

Or:  $1.0850 - 0.0200 = 1.0830$  (for buy)

## How Stop Loss Works in BOS

BULLISH BOS (Break Above Swing Low):

Entry: 1.0850 (swing low broken)

SL = Entry + (200 points)

SL =  $1.0850 + 0.0200 = 1.0870$

Reasoning: If price goes back above swing = breakout failed

BEARISH BOS (Break Below Swing High):

Entry: 1.0950 (swing high broken)

SL = Entry - (200 points)



$SL = 1.0950 - 0.0200 = 1.0930$

Reasoning: If price goes back below swing = breakout failed

## Choosing SL Points - Risk Management

SMALL SL (Example: 100 points = 0.0100)

- Tighter stop loss
- Risk: Less money per trade
- Problem: Gets stopped out easily
- For: Scalpers, volatile symbols
- Recommended when: Account size small, risk averse

MEDIUM SL (Example: 200 points = 0.0200) ★

- Balanced approach
- Risk: Moderate money per trade
- Gives room for price action
- For: Swing traders
- Recommended for: Most traders (DEFAULT)

LARGE SL (Example: 500 points = 0.0500)

- Wider stop loss
- Risk: More money per trade
- Less likely to stop out on noise
- For: Position traders, low volatility pairs
- Problem: Larger losses if wrong

## How to Calculate Your SL

### Step 1: Determine your Risk per Trade

I want to risk: \$50 per trade

Account Balance: \$10,000

Risk %: 0.5% per trade

Formula:  $\text{Risk \$} / \text{Lot Size} / \text{Point Value} = \text{SL Points}$

Example:

$\$50 / 0.01 \text{ lot} / \$10 \text{ per point} = 500 \text{ points}$

(For EURUSD, different symbols have different point values)

### Step 2: Check Historical Volatility

Check last 20 bars average:

- High - Low typically = ?

If volatility is 150 points: Use SL = 150-200 points

If volatility is 300 points: Use SL = 250-350 points

If volatility is 500 points: Use SL = 400-600 points

Rule: SL should be LARGER than normal bar volatility

### Step 3: Backtest and Optimize

Test with: 150, 200, 250, 300, 400, 500 points

Measure:

- Win Rate (% of winning trades)
- Profit Factor (Gross Profit / Gross Loss)
- Drawdown (max consecutive losses)

Choose the value with:

- ✓ Best Win Rate + Profit Factor balance
- ✓ Acceptable drawdown (usually <3 consecutive losses)

## Impact on Trading

SL = 100 points:

- Win Rate: ~60% (tight exits)
- But: Gets stopped out on noise often
- Average Loss: Small
- Drawdown: Frequent small losses

SL = 200 points:

- Win Rate: ~50% (balanced)
- Average Loss: Medium
- Drawdown: Moderate (better)
- Profile: More realistic

SL = 500 points:

- Win Rate: ~45% (loose exits)
- Less stopped out, but wrong trades hurt more
- Average Loss: Large
- Drawdown: Bigger when it hits

## 4.5 Take Profit Parameter

Parameter: BOS\_TP2\_Points  
Type: Double (decimal number)  
Default: 110  
Unit: POINTS

Purpose:

Sets the distance between entry and take profit in POINTS

## Understanding Risk/Reward Ratio

This is the MOST IMPORTANT factor for profitability!

Formula: Win Rate × Avg Win = Loss Rate × Avg Loss

Example 1 (GOOD):

Win Rate: 50%

Avg Win: 110 points (TP)

Loss Rate: 50%

Avg Loss: 200 points (SL)

Expected:  $0.5 \times 110 = 0.5 \times 200$  ✓ BREAK EVEN

Example 2 (PROFITABLE):

Win Rate: 50%

Avg Win: 200 points (TP)

Loss Rate: 50%

Avg Loss: 100 points (SL)

Expected:  $0.5 \times 200 > 0.5 \times 100$  ✓ PROFITABLE!

Example 3 (UNPROFITABLE):

Win Rate: 50%

Avg Win: 100 points (TP)

Loss Rate: 50%

Avg Loss: 200 points (SL)  
Expected:  $0.5 \times 100 \text{ \&lt; } 0.5 \times 200 \text{ X LOSING}$

## Risk/Reward Relationship

Default Settings:  
- SL = 200 points  
- TP = 110 points  
- Ratio: 1 : 0.55 (TIGHT - needs high win rate)

What this means:  
You make 110 points on winners  
You lose 200 points on losers

To be profitable:  
 $110W = 200L$   
 $W = 200/110 = 1.82 \times L$

If you have 5 losses: need 9 wins minimum  
Win Rate needed:  $9/14 = 64\%$  to break even

This is DIFFICULT to achieve!

## Recommended TP Settings

CONSERVATIVE (TP  $\geq$  SL):  
- SL: 200 points  
- TP: 300 points  
- Ratio: 1 : 1.5 (you make more than you lose)  
- Win Rate needed: ~40% to profit  
- Best for: Beginners, lower experience

BALANCED (TP  $\approx$  SL/2):  
- SL: 200 points  
- TP: 100 points  
- Ratio: 1 : 0.5  
- Win Rate needed: ~67% to profit  
- Only works if: Very high accuracy

AGGRESSIVE (TP  $\leq$  SL):  
- SL: 200 points  
- TP: 50 points  
- Ratio: 1 : 0.25  
- Win Rate needed: 80%+  
- Only for: Expert scalpers

## How to Calculate Your TP

### Method 1: Based on Historical Volatility

Find AVERAGE move after BOS signal:

1. Backtest your settings
2. Measure: How many points does price move after BOS?
3. Average winning trade moves: 150 points
4. Average losing trade moves: 50 points backward

Set TP = 80-90% of average win move  
 $TP = 150 \times 0.85 = \sim 127$  points

## Method 2: Based on Risk/Reward Goal

```
I want: 1:1 risk/reward ratio

If SL = 200 points
Then: TP should be 200 points too

Risk: 200 points
Potential Reward: 200 points
Ratio: 1:1 (fair)
Win Rate needed: 50%
```

## Method 3: Backtest Multiple Values

```
Test: TP = 50, 75, 100, 125, 150, 200, 300 points

Measure for each:
- Total profit
- Win rate
- Profit factor (Gross profit / Gross loss)
- Max consecutive losses

Example Results:
TP=50: High wins, small profit → Skip
TP=100: Good wins, medium profit → Maybe
TP=150: Better profits, still ok wins → Better
TP=200: Best profit, lower wins → Test more

Pick the TP with BEST PROFIT + acceptable win rate
```

## Default Value Analysis

```
Default: BOS_TP2_Points = 110

This is TIGHT because:
- Takes profit quickly
- Preserves wins before reversal
- But: Leaves money on table

Better for 4H EURUSD might be:
- TP = 150-200 points (capture more move)
- Or adjust based on backtest

Action: TEST and FIND YOUR NUMBER!
```

## 5. Optimization Guidelines

### Step-by-Step Optimization Process

#### Phase 1: Baseline Test

```
Step 1: Use DEFAULT settings
- BOS_SwingSize: 14
- BOS_ConfirmationType: "Candle Close"
- BOS_SL_Points: 200
- BOS_TP2_Points: 110
```

Step 2: Backtest for 3-6 months  
- Record: Win Rate, Profit, Drawdown, Win/Loss ratio

Step 3: Note baseline performance  
- Example: 48% win, +2000 pips, -1500 drawdown

## Phase 2: Swing Size Optimization ★ PRIORITY #1

Test Values: 8, 10, 12, 14, 16, 18, 20, 22, 25, 30

For Each Value:

- Run backtest (3-6 months same period)
- Record: Win Rate, Total Profit, Drawdown
- Compare to baseline

Selection Criteria:

- ✓ Higher profit than baseline
- ✓ Higher win rate
- ✓ Lower max drawdown
- ✓ Reasonable trade frequency (not too many, not too few)

Example Results:

SwingSize=12: 52% win, +2500 pips, -1200 drawdown ★ WINNER  
SwingSize=14: 48% win, +2000 pips, -1500 drawdown (baseline)  
SwingSize=16: 45% win, +1500 pips, -1800 drawdown (worse)

## Phase 3: Confirmation Type Testing

Test Both Options:

1. "Candle Close" (current)
2. "Wicks" (alternative)

Same settings, same period:

"Candle Close": 52% win, +2500 pips, 24 trades  
"Wicks": 46% win, +2400 pips, 38 trades

Result: "Candle Close" better for this setup  
Use: "Candle Close"

## Phase 4: Stop Loss Optimization

Keep other settings from Phase 2:

- SwingSize: 12 (optimized value)
- ConfirmationType: "Candle Close"
- TP: 110 (unchanged for now)

Test SL Values: 100, 150, 200, 250, 300, 400, 500

For Each:

- Backtest 3 months
- Record: Win Rate, Profit, Profit Factor

Example Results:

SL=100: 55% win, +1800 pips (tight stops out easily)  
SL=150: 52% win, +2200 pips  
SL=200: 50% win, +2500 pips ★ BEST  
SL=250: 48% win, +2400 pips  
SL=300: 46% win, +2000 pips (loose, hits more)

Choose: SL = 200 (best overall)

## Phase 5: Take Profit Optimization

Keep optimized settings:

- SwingSize: 12
- ConfirmationType: "Candle Close"
- SL: 200

Test TP Values: 75, 100, 125, 150, 175, 200, 250

For Each:

- Backtest 3 months
- Record: Win Rate, Profit, Avg Win Size

Example Results:

TP=75: 60% win, +1500 pips (too tight)  
TP=100: 55% win, +2100 pips  
TP=125: 52% win, +2400 pips  
TP=150: 50% win, +2500 pips \* BEST PROFIT  
TP=175: 48% win, +2300 pips  
TP=200: 46% win, +2000 pips

Choose: TP = 150 (best profit + reasonable win rate)

## Phase 6: Final Validation

Optimized Settings Found:

- SwingSize: 12
- ConfirmationType: "Candle Close"
- SL: 200
- TP: 150

Final Backtest:

- Test on NEW data (different 3-6 months)
- Verify: Similar performance repeats
- Confirm: Not curve-fitted to old data

If Similar Results → CONFIDENCE: HIGH

If Worse Results → Settings are CURVE-FITTED (too optimized)

## Quick Reference: Optimization Checklist

- ☐ Phase 1: Record baseline with default settings
- ☐ Phase 2: Optimize SwingSize (TEST 8-30 range)
- ☐ Phase 3: Test ConfirmationType (Candle Close vs Wicks)
- ☐ Phase 4: Optimize SL (TEST 100-500 range)
- ☐ Phase 5: Optimize TP (TEST 50-300 range)
- ☐ Phase 6: Validate on new data
- ☐ Document: Best performing settings
- ☐ Trade: Start with optimized settings

## 6. Best Practices & Tips

### Dos ✓

- ✓ DO: Start with DEFAULT settings first  
Reason: Proven baseline, easier to improve
- ✓ DO: Optimize one parameter at a time  
Reason: Isolate impact of each change
- ✓ DO: Backtest each setting for 3-6 months minimum  
Reason: Need enough trades to see pattern
- ✓ DO: Record every test result  
Reason: See progress, track best settings
- ✓ DO: Validate on NEW data after optimization  
Reason: Prevent curve-fitting (over-optimization)
- ✓ DO: Use Candle Close confirmation initially  
Reason: Better accuracy for beginners
- ✓ DO: Monitor live trading first week  
Reason: EA behavior different on live vs backtest
- ✓ DO: Adjust SL based on your account size  
Reason: Risk management is personal

### Don'ts ✗

- ✗ DON'T: Change all parameters at once  
Why: Can't identify what helps/hurts
- ✗ DON'T: Over-optimize (too many settings tested)  
Why: Settings stop working on new data (curve-fitting)
- ✗ DON'T: Backtest for just 1-2 weeks  
Why: Not enough data for reliable conclusion
- ✗ DON'T: Use "Wicks" confirmation without experience  
Why: Too many false signals for beginners
- ✗ DON'T: Keep settings that worked on old data  
Why: Markets change, need regular re-optimization
- ✗ DON'T: Set TP much smaller than SL  
Why: Need high win rate to be profitable
- ✗ DON'T: Ignore drawdown and focus only on profit  
Why: Large drawdowns = account wiped risking
- ✗ DON'T: Use same settings on all timeframes  
Why: 1M needs different SwingSize than Daily

## Tips for Better Results

### Tip 1: Match Settings to Your Timeframe

Using 4H timeframe?

- Start BOS\_SwingSize = 18-22
- Start BOS\_TP2\_Points = 150-200

Using 1H timeframe?

- Start BOS\_SwingSize = 10-14
- Start BOS\_TP2\_Points = 100-150

Using Daily timeframe?

- Start BOS\_SwingSize = 25-35
- Start BOS\_TP2\_Points = 300-500

### Tip 2: Pair with Other Strategies

BOS works BEST when:

- Trend direction confirms with other strategy
- ADX > 25 (strong trend)
- Price near moving average (pullback trade)

Can combine with:

- ✓ SuperTrend Reversal (different direction signals)
- ✓ ATR filters (size of moves)
- ✓ Time filters (avoid certain hours)

### Tip 3: Adjust for Market Conditions

TRENDING MARKET (Strong direction):

- Increase SwingSize (20-30)
- Tighten TP (less room to move)
- Reason: Fewer but stronger signals

RANGING MARKET (Choppy, sideways):

- DISABLE BOS (doesn't work in ranges!)
- Or use very tight SwingSize (5-8)
- Many false breakouts otherwise

VOLATILE MARKET (Big moves):

- Increase SL (250-350)
- Don't get stopped out on noise
- Increase TP too (200-300)

CALM MARKET (Slow moves):

- Decrease SL (150-200)
- Tight stops work better
- Smaller TP too (75-125)

### Tip 4: Position Size Management

Default: Lots = 0.01

If account \$10,000 with 100:1 leverage:

- 0.01 lot = \$100 risk per trade (1% of account) ✓
- 0.1 lot = \$1000 risk per trade (10% of account) ✗ TOO MUCH
- 0.02 lot = \$200 risk per account (2% of account) ⚠ AGGRESSIVE



Rule: Position size should be based on:

- Account size
- Risk % per trade (usually 0.5-2%)
- Stop loss distance

Formula:  $\text{Position Size} = (\text{Account} \times \text{Risk\%}) / (\text{SL Points} \times \text{Point Value})$

## 7. Common Issues & Solutions

### Issue #1: Too Many False Signals

#### Symptoms:

- Entering many trades
- High loss rate (< 40% win rate)
- Frequent small losses

#### Causes:

- ✗ SwingSize too small (triggering on minor swings)
- ✗ ConfirmationType = "Wicks" (too aggressive)
- ✗ Trading in ranging/consolidation market

#### Solutions:

- ✓ INCREASE SwingSize (14 → 18 → 22)  
Effect: Finds bigger, more reliable swings  
Test: Backtest with +4 values
- ✓ SWITCH to "Candle Close"  
Effect: Filters out wick-only breakouts  
Result: Fewer but better trades
- ✓ ADD market condition filter  
Idea: Only trade when  $\text{ADX} \geq 25$  (trending)  
Effect: Avoid ranging market false signals
- ✓ INCREASE SL distance  
Effect: Don't get stopped out on noise  
Value: 200 → 250 → 300

#### Example Fix:

Before: SwingSize=10, TP=75, SL=100  
Result: 38% win rate, -500 pips

After: SwingSize=18, TP=150, SL=200  
Result: 52% win rate, +2500 pips ✓

## Issue #2: Missing Big Moves

### Symptoms:

- Signals trigger but price already moved significantly
- Getting poor entry prices
- Feels like "chasing" the market

### Causes:

```
✗ ConfirmationType = "Candle Close" (slower entry)
✗ SwingSize too large (misses smaller earlier swings)
✗ TP too tight (closes too early, misses continuation)
```

### Solutions:

```
✓ SWITCH to "Wicks" confirmation
  Effect: Enters earlier, catches more move
  Trade-off: More false signals

✓ DECREASE SwingSize (22 → 18 → 14)
  Effect: Earlier signals on developing structure
  Test: Gradually reduce and backtest

✓ INCREASE TP distance (100 → 150 → 200)
  Effect: Stays in winning trades longer
  Benefit: Captures more of the move
```

### Example Fix:

```
Before: SwingSize=22, TP=100
Result: Avg Win = 75 pips (missing move)

After: SwingSize=16, TP=150
Result: Avg Win = 180 pips ✓
```

## Issue #3: Getting Stopped Out on Noise

### Symptoms:

- Many trades hit SL but then go the intended direction
- Price touches SL, reverses, then moves
- Stopped out constantly

### Causes:

```
✗ SL too tight for market volatility
✗ Using "Wicks" in volatile market
✗ Trading during high volatility hours
```

### Solutions:

```
✓ INCREASE SL distance (200 → 250 → 300)
  Effect: Absorbs more price noise
  Test: Measure bar volatility first
```

- ✓ SWITCH to "Candle Close" confirmation  
Effect: Avoids wick-triggered false stops  
Benefit: More stable entries
- ✓ ADJUST for volatility  
High volatility (news): SL = 300-400  
Normal conditions: SL = 200  
Low volatility: SL = 100-150
- ✓ AVOID trading around economic news  
Reason: Spike moves stop you out unnaturally

#### Example Fix:

Before: SL=150 on volatile 4H  
Result: 60% stopped out before reversal

After: SL=250 on same pair  
Result: Only 35% stopped out ✓

### Issue #4: Negative Profit Factor

#### Symptoms:

- More losses than wins
- Negative overall P&L
- Strategy unprofitable

#### Causes:

- ✗ TP too small relative to SL
- ✗ SL hits more often than TP
- ✗ Trading in non-trending market

#### Solutions:

- ✓ Adjust Risk/Reward Ratio  
Current: SL=200, TP=100 (unfavorable)  
Fixed: SL=200, TP=200 (fair)  
Better: SL=100, TP=200 (favorable)
- ✓ INCREASE TP Points (100 → 150 → 200)  
Effect: Larger wins when right  
Math: 50% win at TP200 &gt; SL100
- ✓ DECREASE SL Points (200 → 150 → 100)  
Effect: Smaller losses  
Benefit: Better ratio achievable
- ✓ Filter low-probability trades  
Idea: Only trade strong trends  
Method: Add ADX filter &gt; 30

#### Example Fix:

Before: 50% win, TP=100, SL=200  
Result: 50×100 = 5000 wins vs 50×200 = 10000 losses  
Profit Factor: 0.5 (LOSING)

After: 50% win, TP=200, SL=100  
Result:  $50 \times 200 = 10000$  wins vs  $50 \times 100 = 5000$  losses  
Profit Factor: 2.0 (PROFITABLE) ✓

## Issue #5: Not Enough Signals

### Symptoms:

- Few trades per week
- Strategy doesn't generate signals
- Backtest shows sparse activity

### Causes:

- ✗ SwingSize too large (30+ on short timeframe)
- ✗ Severe filters (ADX requirement too high)
- ✗ Using long timeframe (Daily when should use 1H)

### Solutions:

- ✓ DECREASE SwingSize (25 → 20 → 15 → 10)  
Effect: More frequent swing detection  
Trade-off: More signals = test accuracy
- ✓ REDUCE filters  
Idea: Remove strict ADX requirement  
Effect: More trade opportunities
- ✓ USE shorter timeframe  
Instead of: Daily (maybe 2 signals/week)  
Try: 4H (maybe 8-10 signals/week)  
Or: 1H (maybe 15-20 signals/week)

### Example Fix:

Before: SwingSize=30 on 1H chart  
Result: 2 trades/week (too few to be profitable)

After: SwingSize=14 on 1H chart  
Result: 8 trades/week ✓ (good frequency)

## Quick Troubleshooting Table

Problem	Likely Cause	First Fix	Second Option
Too many false signals	SwingSize too small	Increase to +4	Switch to Candle Close
Missing big moves	Entry too late	Decrease SwingSize	Increase TP
Stopped out constantly	SL too tight	Increase SL +50	Measure volatility
Losses > Wins	Bad risk/reward	Adjust SL:TP ratio	Check TP distance
No signals	SwingSize too big	Decrease to -4	Use shorter timeframe

Problem	Likely Cause	First Fix	Second Option
Many loses	Wrong market type	Avoid ranging markets	Add trending filter

## Summary & Next Steps

### Key Takeaways

1. BOS = Break of Structure (swings breaking previous highs/lows)
2. Main Parameters:
  - SwingSize: Determines swing lookback (MOST IMPORTANT)
  - ConfirmationType: Entry method (Candle Close vs Wicks)
  - SL\_Points: Risk per trade (tied to account management)
  - TP\_Points: Profit target (affects risk/reward ratio)
3. Optimization: Test one parameter at a time on 3-6 month data
4. Settings differ by timeframe:
  - Shorter timeframe = Smaller SwingSize + Smaller TP
  - Longer timeframe = Larger SwingSize + Larger TP
5. Success = Find settings that give 50%+ win rate with profitable ratio

## Action Plan

### Week 1: Understand

- ☐ Read this guide completely
- ☐ Understand how BOS detection works
- ☐ Know what each parameter does

### Week 2: Baseline Test

- ☐ Use DEFAULT settings
- ☐ Backtest on your pair/timeframe
- ☐ Record performance metrics
- ☐ Note baseline numbers

### Week 3: Optimize

- ☐ Test SwingSize values (10 settings)
- ☐ Choose best from testing
- ☐ Record results
- ☐ Keep best performing setting

### Week 4: Refine

- ☐ Test SL and TP values
- ☐ Find best ratio
- ☐ Validate on new data
- ☐ Finalize settings

### Week 5+: Trade

- ☐ Deploy optimized settings
- ☐ Monitor for 1-2 weeks
- ☐ Adjust if needed
- ☐ Re-optimize monthly on new data

## Technical Reference

### MQL5 Implementation Details

The BOS strategy in the EA uses:

```
Function: DetectBOSSignal()
- Scans market for swing highs/lows
- Uses BOS_SwingSize parameter
- Returns: 1 (buy), -1 (sell), 0 (no signal)
- Called: On every new bar

Function: ExecuteBOSEntry(bool isBuy)
- Opens position at market price
- Sets SL = 200 points (configurable)
- Sets TP = 110 points (configurable)
- Uses Magic Number: 202020 (identifies BOS trades)

Position Closure:
- Automatic when TP hit (EA closes)
- Automatic when SL hit (MT5 closes)
- One position per strategy at a time
```

**Document Version:** 1.0

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**Strategy:** Smart Money Break of Structure (BOS)

**Timeframe:** 4H EURUSD (recommended)

**Pair:** EURUSD, GBPUSD, USDJPY (works well)