

Time Exit Constraint Analysis

Impact of Removing the 9:44 AM Hard Exit

Executive Summary

Finding: Removing the 9:44 AM time exit constraint **more than doubles** the strategy's profitability.

- **With 9:44 Exit:** +4,418 pts (1000 trades)
- **Without Time Exit:** +9,478 pts (993 trades)
- **Improvement:** +5,060 pts (+114%)

Year-by-Year Comparison (2016-2025)

Year	9:44 Exit PnL	No Time Exit PnL	Improvement	Win Rate Change
2025	+1,085 pts	+1,215 pts	+130 pts (+12%)	36% → 24%
2024	+157 pts	+364 pts	+207 pts (+132%)	28% → 16%
2023	+390 pts	+982 pts	+592 pts (+152%)	38% → 24%
2022	+639 pts	+2,429 pts	+1,790 pts (+280%)	38% → 28%
2021	+874 pts	+2,066 pts	+1,192 pts (+136%)	43% → 32%
2020	+750 pts	+1,447 pts	+697 pts (+93%)	44% → 31%
2019	+90 pts	+165 pts	+75 pts (+83%)	33% → 17%
2018	-22 pts	+139 pts	+161 pts (FLIP!)	30% → 20%
2017	+91 pts	+55 pts	-36 pts (-40%)	37% → 19%
2016	+364 pts	+616 pts	+252 pts (+69%)	37% → 28%

Key Observations

1. Trade Duration Increases Significantly

- **9:44 Exit:** Avg ~8-9 minutes
- **No Time Exit:** Avg ~30-75 minutes (varies by year/volatility)
- **2020 Example:** Avg 74 minutes (over 1 hour per trade)

2. Win Rate DECREASES

- **Paradox:** More profit, but lower win rate
- **Explanation:** Trades that would have been "saved" by the 9:44 exit (small losses avoided) now run longer and hit full stop losses
- **BUT:** The winners run MUCH further, more than compensating

3. 2018 Flips from Loss to Profit

The only losing year (+139 pts vs -22 pts) becomes profitable when given time.

4. High Volatility Years Benefit Most

- **2022 (Bear Market):** +280% improvement
 - **2021 (Liquidity):** +136% improvement
 - **2020 (COVID):** +93% improvement
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Trade-offs

Aspect	9:44 Exit	No Time Exit
Total PnL	+4,418 pts	+9,478 pts ✓
Win Rate	~37%	~23%
Avg Duration	8-9 min	30-75 min
Intraday Focus	✓ Clean	Holds positions
Psychological	Easier (quick)	Harder (patience)
Overnight Risk	None ✓	None (closes 4PM)
Monitoring	15 min window	All day

Recommendation

For Maximum Profitability: Remove the 9:44 exit.

However, consider:

1. **Lifestyle:** Can you monitor trades until 4 PM?
2. **Psychology:** Can you handle a 23% win rate (lose 3 out of 4)?
3. **Capital Efficiency:** Longer trades = capital tied up longer

Hybrid Approach:

- Use **No Time Exit** on high-conviction days (tight ranges 0.10-0.18%)
 - Use **9:44 Exit** on marginal setups (0.20-0.25% ranges)
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Analysis Date: December 14, 2025