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Enlightened Stock Trading

Systematic Risk Management For Technical Traders

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MY GOAL:

To show you how to stay in the game and keep trading…

NO MATTER WHAT HAPPENS!

During this webinar we will…

- Identify the categories and specific sources of risk
- Document the levers you can use to manage that risk
- Show you how to craft pragmatic risk management plans using more levers to smooth returns and safeguard your investments
- Illustrate a pragmatic approach to managing potential pitfalls and optimizing profits in your trading journey

Step 1: Define Your Objectives

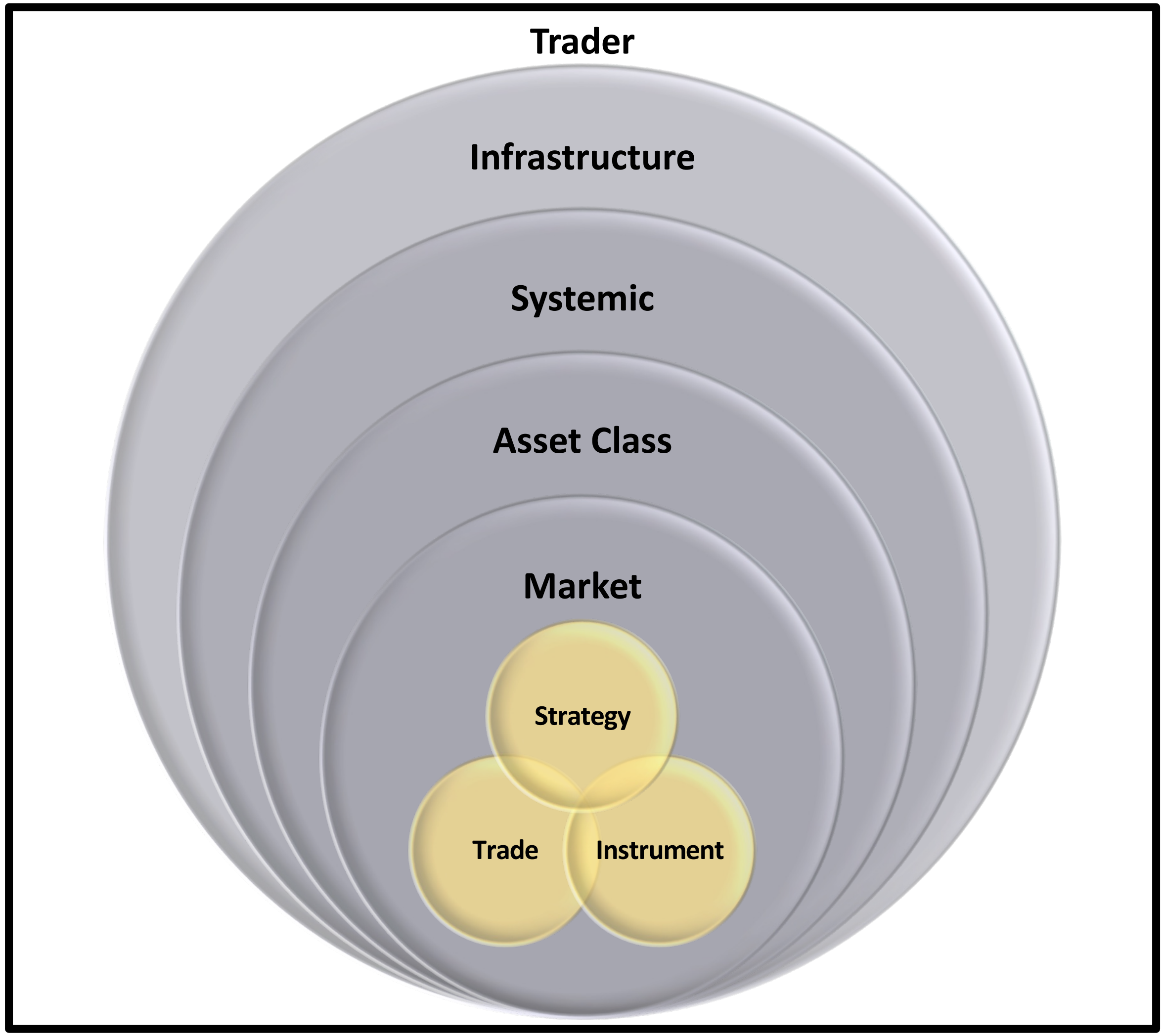
1. What level of Drawdown are you willing to tolerate?
2. What probability of an X% drawdown are you willing to accept?
3. What is the worst-case catastrophic loss you are willing to tolerate?

Example Risk Management Objectives

For Example… I am willing to accept:

- A maximum drawdown of 30% for any single trading system in my portfolio
- Less than a 5% probability of a 20% drawdown across my portfolio of systems
- A worst-case catastrophic risk of 50% should an extreme event occur (e.g. world war) and I want

Step 2: Understand the categories of risk…



… and where these risks can come from so you don't get caught by surprise

	Trade	Instrument	Strategy	Market	Asset Class	Systemic	Infrastructure	Trader
Example Risks	• Entry timing risk • Exit timing • Execution risk (fills) • Liquidity risk • Availability of instruments for shorting • Human error / mistakes	• Takeovers tie up capital in poor risk /return trades • Stocks delisting • Instrument availability • Splits and dividends messing with the price and signals of the instrument. • Regulator excludes instrument from trading (trading halt)	• Strategy out of sync with the market • Strategy not actually profitable or stable • Stop loss too tight / inappropriate • Strategy breakage	• Market behavioural shifts • Political / war / interest rate policy / QE • Structural shift in market function – e.g. HFT • Sector shifts • Market noise / volatility • Shift in industry / regulation	• Risk off environment • Stock market crash / panic	• Exchange failure • Market closure • Terrorist attack on wall st • Currency failure • Country default	• Cost of trading infrastructure • Reliability of data source • Account security • Computer breakdown • Internet interruption • Natural disaster • Power failure • Computer virus / malware • Theft • Remote access scams	• Fat finger errors • Not following the rules (either with or without awareness) • Understanding the detail • Emotional state

Step 3. Add a dose of pragmatism

But what can really happen in our accounts?

A dose of pragmatism

- What can really happen in our accounts?
  - Profit
  - Smaller than optimal profit
  - Missed profitable trade
  - Small loss
  - Large loss
  - String of small losses
  - String of large losses
  - Catastrophic loss

The Pragmatic Approach:

Focus on and manage what could happen to our accounts rather than worrying about all that might happen in the financial world!

Step 4: Identify your available Risk Management levers

- Asset Class Diversification
  - Stocks / Crypto / Bonds / Commodities / Options / Forex
- System Portfolio Mix
  - Strategy / timeframe / direction diversification of systems rules
  - Parameter set diversification
- Geographic Diversification
  - US / ASX / TSX / HK etc
- Universe traded
  - Whole market
  - Index constituents
  - Sectors
- Entry / Exit style
  - Next bar on open
  - Limit
  - Close
- Stops:
  - Stop loss
  - Time stop (if the trade not working)
  - Profit target
  - Market Panic Exit
  - System Stop Loss
  - Portfolio stop
- Counterparty Exposure
  - Limit Exchange Balance
  - Limit Broker Balance
- Instrument Behavior
  - Liquidity Requirement
  - Volatility
  - Other behavior (e.g. Gaps)
- Position size model
  - Risk per trade / position size
  - Position size limit
  - Total system risk
- Limit Trade Numbers
  - Max open trades
  - Number of new trades per day
- Capital allocation
  - % per strategy
  - % long / short
  - % per market
  - % per asset class
  - Leverage level
- Infrastructure:
  - Redundancy
  - Backup
  - Reporting & Monitoring
- Operational:
  - Instructions for trusted person in case of ill health / injury
  - Written trading plan in case of stress / overwhelm / uncertainty

Risk Management Levers

- Asset Class Diversification
  - Stocks / Crypto / Bonds / Commodities / Options / Forex
- System Portfolio Mix
  - Strategy / timeframe / direction diversification of systems rules
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- Counterparty Exposure
  - Limit Exchange Balance
  - Limit Broker Balance

- Instrument Behavior
  - Liquidity Requirement
  - Volatility
  - Other behavior (e.g. Gaps)
- Position size model
  - Risk per trade / position size

We don't need to use <u>ALL</u> these levers. But these are tools in our risk management toolbox to help us meet our objectives.

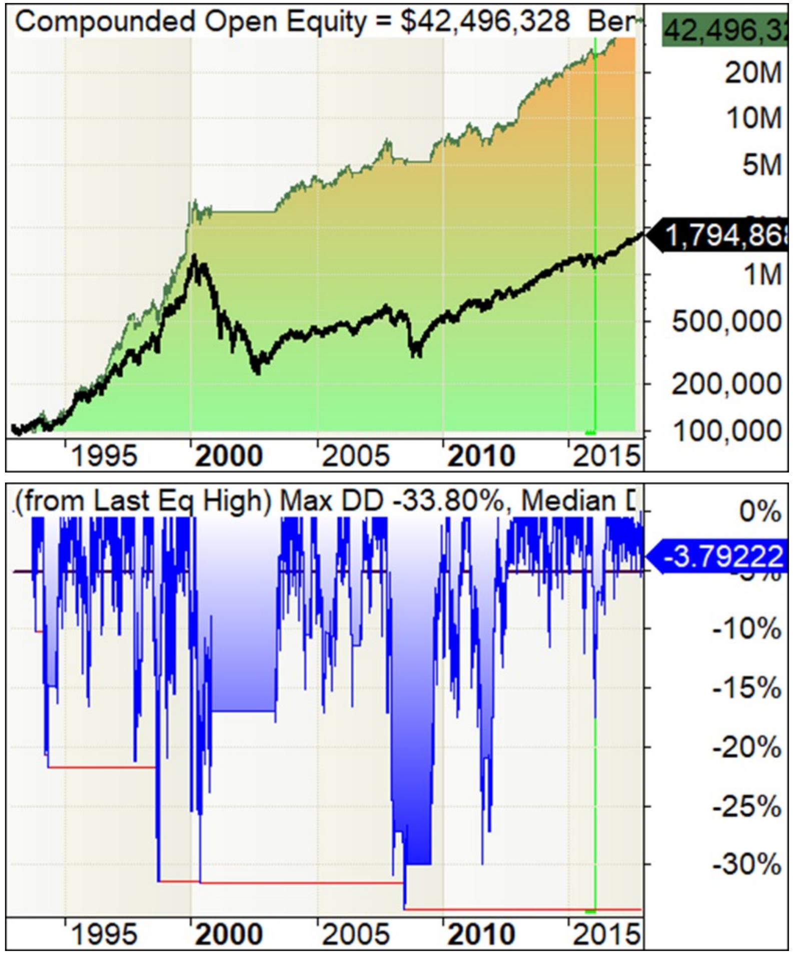
- Infrastructure:
  - Redundancy
  - Backup
  - Reporting & Monitoring
- Operational:
  - Instructions for trusted person in case of ill health / injury
  - Written trading plan in case of stress / overwhelm / uncertainty

Step 5: Rank your areas of concern… Then determine which levers to pull

	Risk Category							
	Trade	Instrument	Strategy	Market	Asset Class	Systemic	Infrastructure	Trader
Rank these risk categories from your highest to lowest concern								
Asset Class Diversification								
Stocks / Crypto / Bonds / Commodities / Options / Forex				✅	✅	✅		
System Portfolio Mix								
Strategy / timeframe / direction diversification of systems rules			✅					
Parameter set diversification			✅					
Geographic Diversification								
US / ASX / TSX / HK etc				✅				
Universe traded								
Whole market		✅						
Index constituents		✅						
Sectors		✅						
Entry / Exit style								
Next bar on open			✅					
Limit			✅					
Close			✅					
Stops / Filters / Exits:								
Stop loss		✅	✅					
Time stop (if the trade not working)		✅	✅					
Profit target		✅	✅					
Market Panic Exit		✅	✅					
System Stop Loss		✅	✅					
Portfolio stop		✅	✅					
Counterparty Exposure								
Exchange Balance						✅		
Broker Balance						✅		
Instrument Behavior								
Liquidity Requirement		✅	✅					
Volatility		✅	✅					
Other behavior (e.g. Gaps)		✅	✅					
Position size model								
Risk per trade / position size	✅	✅	✅					
Position size limit	✅	✅	✅					
Total system risk	✅	✅	✅					
Limit Trade Numbers								
Max open trades			✅					
Number of new trades per day			✅					
Capital allocation								
% per strategy			✅					
% long / short			✅			✅		
% per market				✅				
% per asset class					✅			
Leverage level			✅	✅	✅	✅		
Infrastructure:								
Redundancy							✅	
Backup							✅	
Reporting & Monitoring							✅	
Operational:								
Instructions for trusted person in case of ill health / injury								✅
Written trading plan in case of stress / overwhelm / uncertainty								✅

Step 6: Think beyond the Backtest

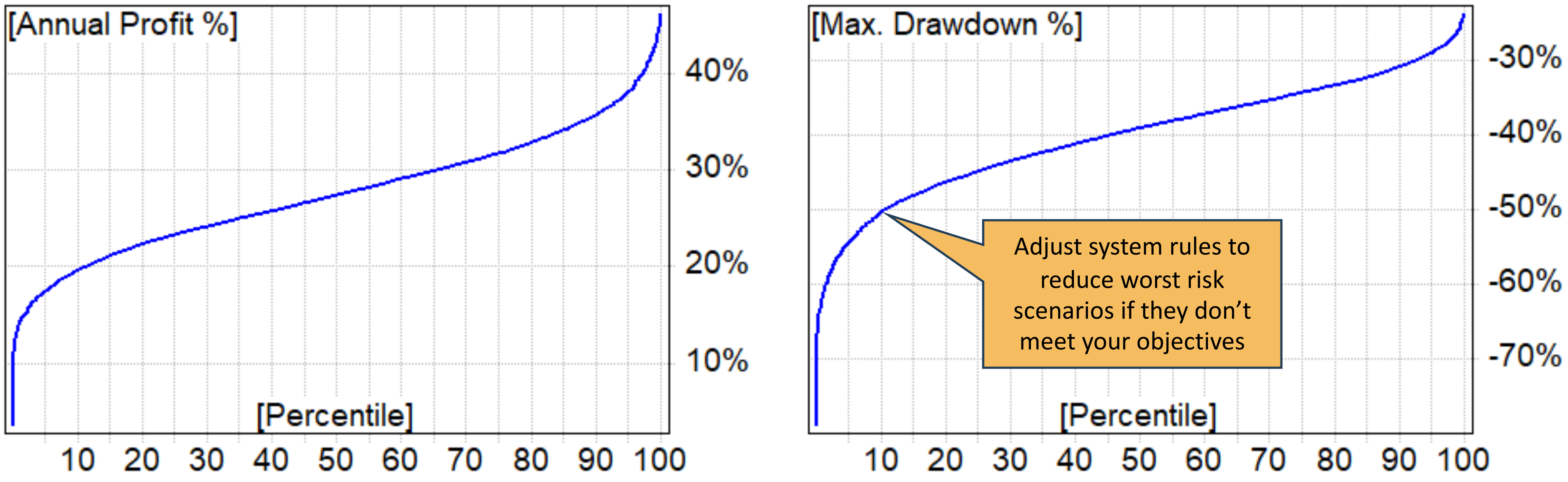
Initial capital	100000.00
Ending capital	42496328.03
Net Profit	42396328.03
Net Profit %	42396.33%
Exposure %	76.82%
Net Risk Adjusted Return %	55188.49%
Annual Return %	27.39%
Risk Adjusted Return %	35.65%
Transaction costs	2745870.77
All trades	573
Avg. Profit/Loss	73990.10
Avg. Profit/Loss %	12.91%
Avg. Bars Held	76.31
Winners	345 (60.21 %)
Total Profit	59608625.33
Avg. Profit	172778.62
Avg. Profit %	27.79%
Avg. Bars Held	93.35
Max. Consecutive	11
Largest win	4846860.34
# bars in largest win	233
Losers	228 (39.79 %)
Total Loss	-17212297.30
Avg. Loss	-75492.53
Avg. Loss %	-9.60%
Avg. Bars Held	50.53
Max. Consecutive	6
Largest loss	-638389.04
# bars in largest loss	41
Max. trade drawdown	-1826949.70
Max. trade % drawdown	-68.53
Max. system drawdown	-4938725.95
Max. system % drawdown	-33.80%
Recovery Factor	8.58
CAR/MaxDD	0.81



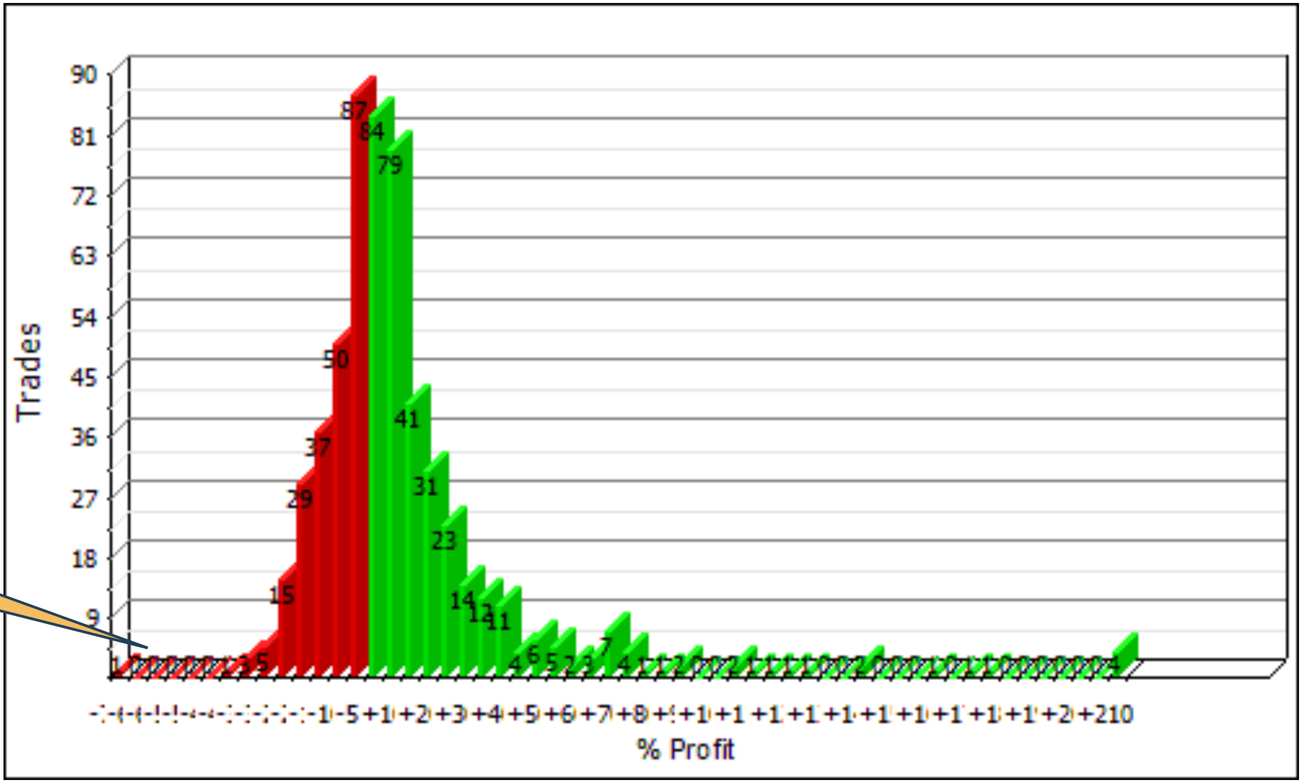
What the backtest doesn't show:

1. Alternate timing risk (backtest only shows one historical sequence)… what about multiple market wide negative events in series
2. Bad trades that happened to be skipped due to capital constraints or trade rank

Use Monte Carlo (equity curve reshuffle) to assess risk & return under alternative sequences



Use an "All Trades Backtest" to see the real distribution of possible trade outcomes



Take note of any extreme negative outliers and position size / leverage accordingly

Finally perform a mental scenario analysis to ensure your risk management plan protects you

- What will happen if geopolitical tensions lead to sudden restrictions on international financial transactions?
- What will happen if I get sick / injured and can't check my trades?
- What will happen if regulatory changes unexpectedly affecting sector-specific stock performance?
- What will happen if Natural disasters impacting global supply chains and thus, sector valuations?
- What will happen if abrupt shifts in consumer behavior due to unforeseen socio-cultural events?

- What will happen to my portfolio if the market drops 20% overnight?
- What will happen if trading in one market is suspended due to war or some other event?
- What will happen if there is a sudden and unexpected shock?
- What will happen if a rapid emergence of disruptive technologies, renders established industries obsolete?
- What will happen if one of my strategy edges stops working?

The MOST important lesson for traders…

Profit > Survival → Blowup

Survival > Profit → Long Term Wealth

Final thought: Blowing up your account costs you your most valuable asset – TIME FOR COMPOUNDING!

ASSUMPTIONS

Starting Capital:	$10,000
Annual Savings:	$1,000
Annual Return:	15%

Blowup means 100% loss of capital