

Wall Street's Turtle Traders



Image source: DALL-E

Introduction

For as long as markets have been open, traders have been exploring different techniques to earn quick profits on the financial markets. Among the various strategies pursued is the "Turtle Trading" system. Developed in the early 1980s by commodity traders Richard Dennis and William Eckhardt, this system was at the heart of an experiment to determine whether anyone could be trained to become a successful trader. They formed a group nicknamed the "Turtles", who generated over \$175 million in combined profits over five years, proving the effectiveness of this method.

This article provides an overview of the "Turtle Trading" programme, illustrating its origin, principles, and current relevance.

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Origin

The Turtle Trading experiment was born of a disagreement: Richard Dennis, a renowned commodities trader, was convinced that anyone could be taught how to trade on the futures market, while William Eckhardt considered trading skills to be innate. So, the bet was on.

To settle the bet, Dennis set up an experiment in which 14 novices with no particular previous trading skills were trained over a two-week period. These apprentices, nicknamed the "Turtles", symbolised the efficiency he wanted to replicate. He purposely selected a cross-section of society, including a teacher, a cook, an accountant and a few women, going against the prevailing norms of the Chicago floor of the 1980s. This diversity was critical to the success of the experiment.

Starting capital was then allocated to invest in over 24 financial instruments, including bonds of various maturities, commodities such as coffee, cocoa, sugar, cotton, gold, silver, crude oil, and heating oil, as well as futures contracts on the S&P 500 index and currencies such as the British pound, Swiss franc, Deutschemark, French franc, and Japanese yen. There was also a precise set of trading rules to follow. This experiment not only ended up proving Dennis's theory but also anticipated behavioural finance principles, which would later be highlighted by Daniel Kahneman's Nobel Prize-winning work.

Richard J. Dennis
of C & D Commodities

is accepting applications for position of
Commodity Futures Trader
to expand his established group of traders.

Mr. Dennis and his associates will train a small group of applicants in his proprietary trading concepts. Successful candidates will then trade solely for Mr. Dennis; they will not be allowed to trade futures for themselves or others. Traders will be paid a percentage of their trading profits, and will be allowed a small draw.

Prior experience in trading will be considered, but is not necessary. Applicants should send a brief resume with one sentence giving their reasons for applying to:

C & D Commodities
141 W. Jackson, Suite 2313
Chicago, IL 60604
Attn: Dale Dellutri

Applications must be received by October 1, 1984.
No telephone calls will be accepted.

Source: The original advertisement for the Turtle experiment from [trendfollowing](#)

The basics of Turtle Trading

The Turtle Trading principles are not very different from fundamental trading strategies: "Don't let emotions fluctuate with your capital," "Stay consistent," and "Focus on the process, not just the results." Beyond the simplicity of these guidelines, Dennis and Eckhardt have introduced specific trading principles to be applied, aiming for what they refer to as an optimal trade.

1. Trend following

Trend following lies at the core of the Turtle Trading system and consists of identifying a market trend and following it to secure profits, regardless of whether it is heading upwards or downwards.

Trend followers operate on a simple but powerful rule: they enter the market when a trend is established and exit when it reverses, minimising impulsive decisions to focus strictly on price trends. This strategy acknowledges that while predictions for each trade are not always correct, adherence to this disciplined approach guarantees long-term profitability. An example of trend following involves buying a stock when its weekly close exceeds the 50-day moving average, and holding the position until the price falls below the same average. This flexible method allows traders to adjust their strategy at different time intervals, from monthly to daily charts, and to vary length of moving averages for more frequent trading.



2. Position Sizing

Position sizing is based on market volatility, determined by a unit called "N", which stands for the volatility measured by the Average True Range (ATR) over the last 20 days. The strategy advocates risking a modest fraction of equity (between 1 and 2%) on each transaction to manage and minimise risk effectively.

At the heart of this method is the "2% risk rule", which caps the risk on each trade at 2% of the trader's total capital. Thus, on a \$100,000 account, the maximum authorised risk per transaction is limited to \$2,000. By respecting this rule, a trader can withstand a series of losses (up to 100 consecutive loss-making trades) without depleting his capital, enabling him to keep his position open.

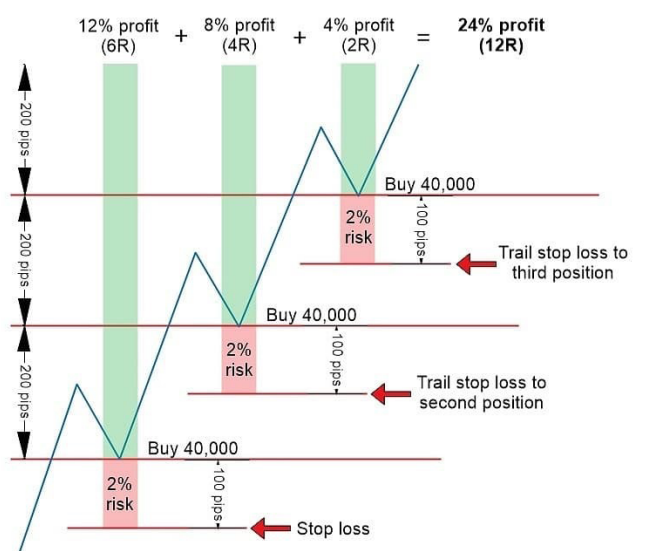
3. Adjusting position size

To manage risk, the Turtles adjust the size of their positions downwards after significant losses. The rule is as follows: if an account suffers a drawdown of more than 10%, positions are adjusted as if the drawdown was 20%, exponentially reducing positions in the event of a downward trend. This means that turtles prioritise loss mitigation over loss recovery.

If an account falls by 10%, for example from \$100,000 to \$90,000, traders proceed as if the account only had \$80,000. Therefore, instead of risking 2% of \$90,000 (\$1,800), a trader would risk 2% of \$80,000 (\$1,600). This conservative strategy serves to control losses during adverse periods and keeps traders disciplined and focused on long-term goals.

4. Pyramiding

Pyramiding is a technique used to leverage positive momentum from successful trades by incrementally increasing the positions as the market moves favourably. Once an initial position is established, additional investments are made with each favourable price increase, allocating more capital to winning trends and reducing exposure to underperformers.



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Source: DailyPriceAction

5. Risk management

Turtle Trading incorporates an ATR-based stop-loss mechanism to limit potential losses to a maximum of 2% of capital per transaction. As winning positions are increased, stop-loss levels are adjusted accordingly to ensure that losses do not exceed this predefined threshold.

Stop-loss levels also vary according to the ATR. This means that in periods of low volatility, indicated by smaller candlesticks and lower ATR, stop-losses are tighter. Conversely, in high-volatility scenarios, with larger candlesticks and higher ATR, stop-losses are wider.

6. Entry criteria

Turtle Trading's entry criteria are based on the use of two distinct breakout systems. The S1 system is designed to enter trades based on a 20-day breakout, responding to short-term market movements. The S2 system is based on a 50-day breakout, targeting longer-term trends, and offering a broader perspective on market direction.

This two-system approach allows the Turtles to align their trades with primary and secondary market trends, capitalising on momentum. Unlike some strategies that wait until the close of a trading day to confirm a position, Turtles initiate trades at the breakpoint, aiming for timeliness in capturing trend movements.

The system uses Donchian channels to define trading levels, marking the highest and lowest prices over a number of days to establish potential entry points. A break above the high threshold suggests a favourable long position, while a break below indicates a short position.

7. Exit criteria

Exit criteria are defined by shorter timeframes. S1 exits are made on a 10-day breakout, contrary to the 20-day entry rule, while the S2 system uses a 20-day breakout for exits, consistent with the 50-day entry. The basic idea is to follow a trend until it is no longer valid. The core idea is to stay within the trend until it no longer holds.

Outcome of the Turtle experiment

The Turtle Trading experiment, proved its effectiveness when the novices they mentored achieved an average annual rate of return of 80%, making over \$175 million in combined profits in just five years, proving that they could indeed learn to trade successfully.


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Winning Commodity Traders May Be Made, Not Born

By Stanley W. Angrist

Can the skills of successful commodity trading be learned? Or are they innate, some sort of sixth sense a lucky few are born with? Richard Dennis, the legendary Chicago commodity trader, who turned a grubstake of \$400 into an estimated \$200 million or so in 18 years, has no doubt. Following an experiment with a group of would-be traders recruited from around the country, he's convinced the secrets of commodity trading can be learned.

Over the past 4 1/2 years, a group of 14 commodity traders he taught earned an average annual compound rate of return of 80%. In contrast, about 70% of all non-professional commodity traders lose money on a yearly basis. "Trading was even more teachable than I imagined," he says. "In a strange sort of way,



A Turtle Race Worth Watching
Performance of 14 commodity-trading advisers taught by Richard Dennis

	AVERAGE ANNUAL COMPOUND RETURN	FIRST HALF 1989 RETURN	ANNUAL RETURNS (Range: 85-86) ¹	QUARTERLY RETURNS (Range: 85-89) ¹
Stig Ostgaard	124.1%	0.4%	87.8 to 296.7%	49.0 to 317.5%
Elizabeth Cheval	114.1	41.1	51.6 to 178.0	-27.1 to 203.3
Michael Cavallo	107.7	16.1	33.6 to 307.4	-54.7 to 195.5
Chesapeake ²	94.4	6.4	45.7 to 147.7	-13.1 to 160.1
Paul Rabar	89.1	20.0	78.1 to 125.9	-24.8 to 189.6
Philip Lu	88.9	36.0	36.3 to 132.3	-9.2 to 148.2
Craig Soderquist	82.4	21.3	58.9 to 135.9	-20.0 to 155.8
James DiMarla	70.9	0.8	17.3 to 154.9	-20.2 to 192.3
Brian Proctor	64.5	-13.2	-20.1 to 151.9	-41.6 to 155.8
Howard Seldier	64.2	23.0	15.8 to 123.6	-16.6 to 90.3
Tom Shanks	63.7	18.8	-29.1 to 195.1	-37.8 to 183.1
Jeff Gordon	41.8	16.4	3.2 to 111.1	-5.6 to 83.9
Michael Carr	38.9	13.7	-18.1 to 88.0	-31.7 to 112.4

By Comparison

Barclay CIA Index ³	25.10%	10.90%	4.3 to 55.4%	-12.10% to 32.4%
S&P 500 Index ⁴	19.20%	16.50%	5.10% to 31.6%	-22.50% to 21.3%

1) Returns overstated performance because traders paid small or no commissions and no management fees through first quarter of 1988. However, they received no interest credit on trading capital.
2) Chesapeake Capital Corp. is jointly owned by R. Jerry Parker and Russell J. Sands.
3) The performance of more than 110 commodity-trading advisers who have been trading more than four years
4) Total return, including dividends. Source: Barclay Trading Group Ltd.

Source: Pedma

However, the strategy is not without its challenges. Drawdowns, or declines in account value, are major risks, because of the high number of false breaks characteristic of trend following. Practitioners anticipate a success rate of 40-50% at most.

More recent valuations show that Turtle Trading's performance has been mitigated, with studies indicating a decline in performance since 2007 compared to earlier periods. This might be attributable, at least partly, to the quantitative easing post-2008.

As for Dennis, he can be seen as the other side of the coin: between 1987 and 1988, after five years of turtle experiment, he lost over half his fortune. Whether Dennis strictly followed his own rules remains an open question. Following this setback, Dennis ceased his trading activities. Today, he is better known for initiating the Turtle Trading experiment than for his trading exploits.

Conclusion

Despite the mixed outcomes and the eventual retirement of Dennis, the Turtle Trading strategy, characterised by buying on breakouts and exiting when trends begin to consolidate or reverse system, remains an important and widely studied method. It requires adherence to the principle of trading both uptrends and downtrends with an appropriate time frame for entry and a shorter one for exit to capture gains efficiently.

The Turtle Trading's experiment has proven that, with the right training and mindset, anyone can earn profits on the financial markets. The fundamental principles - trade with an edge, manage risk, stay consistent and keep it simple - remain timeless pillars within the trading community.

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