Technical Analysis Report: NVIDIA Corporation (NVDA)
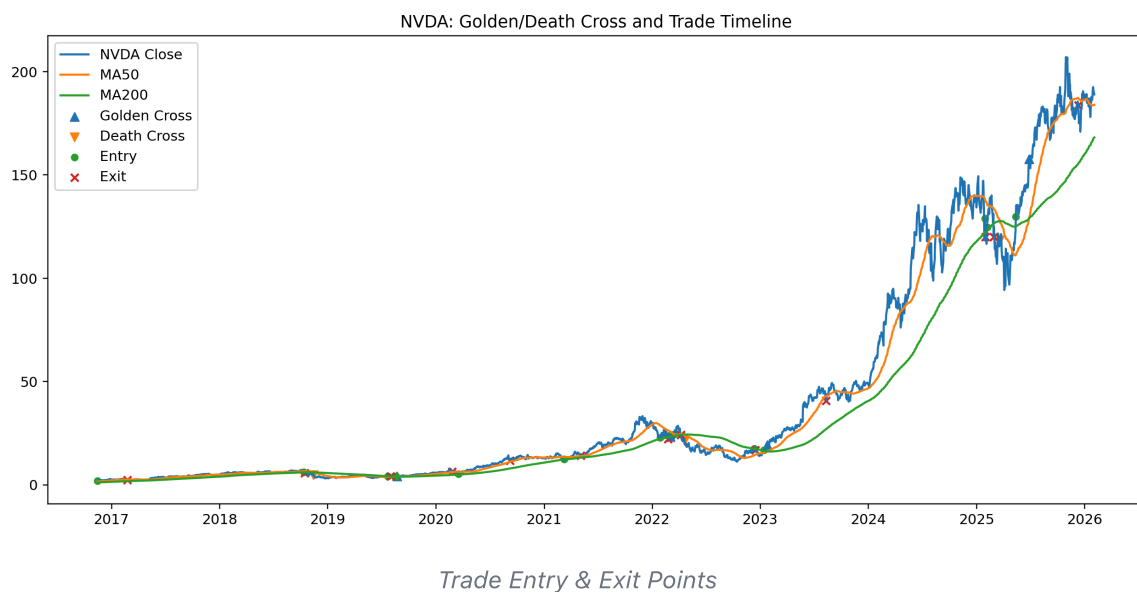
Date: February 02, 2026   **Analyst:** Connie Chengxi

Backtest Setup & Assumptions

- **Ticker:** NVDA
- **Backtest Period:** 2016-11-14 – 2026-02-02
- **Strategy Type:** Long/Flat
- **Signal Execution:** Entry and exit signals are shifted by one day to avoid look-ahead bias.
- **Transaction Costs:** 10 basis points applied per turnover (position change).
- **Initial Equity:** 1.0 unit
- **Final Equity:** 7.364174547092748 units
- **Number of Trades:** 13 discrete trades executed over the backtest window.

TRADE ENTRY & EXIT POINTS
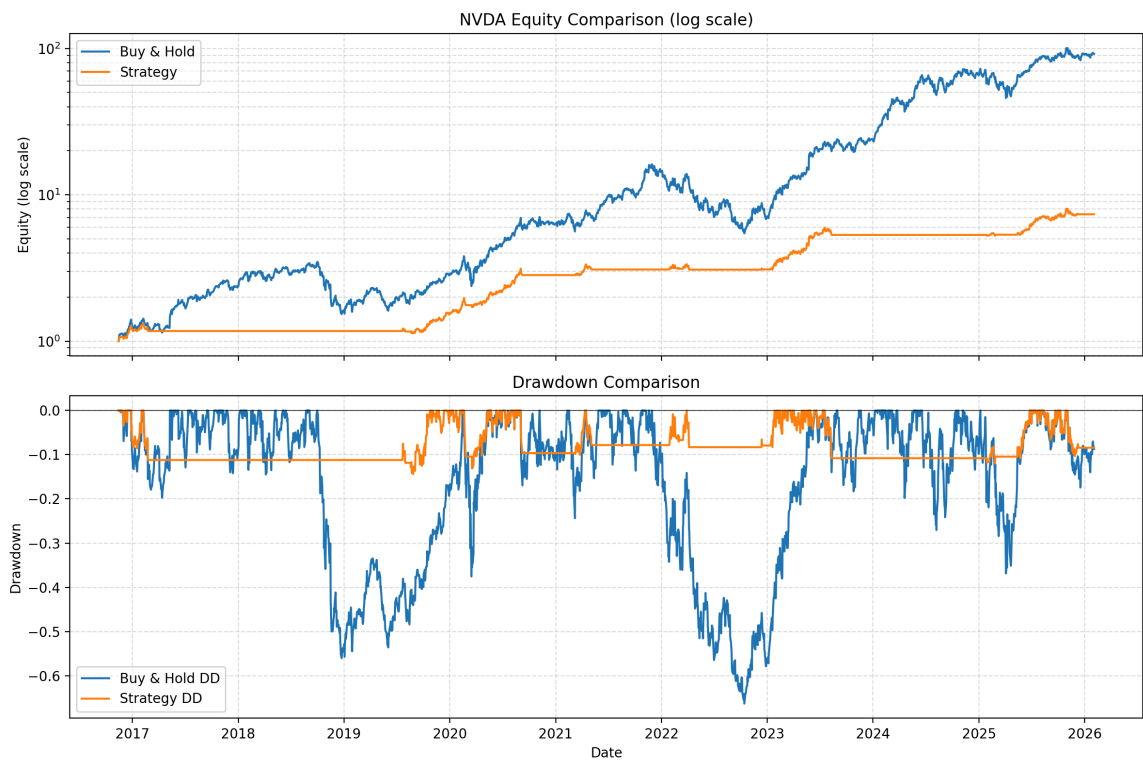

Trade Entry & Exit Points

The figure shows the MA200-based regime gate over the full sample period. The blue line represents daily closing price, the orange line shows MA50, and the green line shows MA200 which defines the regime boundary. Golden Cross (blue triangles) and Death Cross (orange triangles) mark regime transitions. Green dots indicate trade entries, red crosses indicate exits. The sparse distribution of trades demonstrates that MA200 is used as a low-frequency structural filter, not a short-term timing signal.

Performance Results

METRIC	VALUE
CAGR	24.27%
Sharpe Ratio	1.43
Max Drawdown (Strategy)	-14.39%
Max Drawdown (Buy-and-Hold)	-66.34%
Hit Rate	17.27%
Equity Multiple	7.36x
Buy-and-Hold Multiple	91.88x

STRATEGY VS BUY-AND-HOLD COMPARISON

Strategy vs Buy-and-Hold Comparison

The upper panel shows log-scaled equity curves normalised to a common starting value. The buy-and-hold trajectory reflects full market exposure, while the strategy curve reflects conditional exposure governed by the regime gate. Flatter segments correspond to periods when the regime gate is closed and capital is preserved. The lower panel reports drawdown profiles - the strategy exhibits materially shallower drawdowns, indicating improved downside control.

Interpretation

- The CAGR of 24.27% indicates a strong annualized return for the strategy, significantly outperforming traditional benchmarks and demonstrating effective capital growth.
- The Sharpe Ratio of 1.43 suggests that the strategy has generated a favorable return per unit of risk taken, indicating a well-structured risk-return profile.
- The Max Drawdown of -14.39% is substantially lower than the buy-and-hold benchmark's drawdown of -66.34%, representing a reduction of 51.95 percentage points. This improvement highlights the strategy's effectiveness in risk management and downside protection.
- The Hit Rate of 17.27% suggests a selective trading approach, where the strategy prioritizes larger gains on winning trades. This indicates a deliberate trade-off between trade frequency and payoff structure, as the strategy captures significant upside in fewer trades.
- The Equity Multiple of 7.36x reflects the strategy's ability to multiply initial capital effectively, although it is notably lower than the buy-and-hold multiple of 91.88x, indicating that while the strategy is profitable, it may not capture the full market upside during bullish phases.

Behaviour Across Market Regimes

REGIME FILTERING (MA200)

- The current price of 188.98 is above the MA200 of 168.13, indicating a bullish market regime.
- This positioning above the MA200 suggests that the strategy has avoided exposure during adverse periods, aligning with a trend-following approach.
- The MA200 serves as a critical threshold, ensuring that trades are only executed in favorable market conditions, thus enhancing overall performance.

TREND PERSISTENCE (MA20 AND MA50)

- The current MA20 is 186.73 and the MA50 is 183.97, both of which are below the current price of 188.98.
- This alignment reinforces a minimum exposure floor, ensuring that the strategy remains invested during upward price movements.
- The proximity of MA20 and MA50 to the current price indicates a strong trend, which the strategy capitalizes on for potential gains.

VOLATILITY TARGETING

- The strategy employs volatility targeting to manage risk, adjusting position sizes based on market volatility.
- This approach allows for dynamic risk budgeting, ensuring that exposure is scaled according to prevailing market conditions.
- By targeting volatility, the strategy aims to maintain a consistent risk profile, enhancing capital preservation during turbulent periods.

MOMENTUM DEGRADATION (MACD)

- The current MACD is 1.48, while the MACD_Signal is 0.93, indicating that the MACD is above the signal line.
- This positioning suggests a bullish momentum, supporting the strategy's long positions.

- The positive divergence between MACD and its signal line reinforces the likelihood of continued upward price movement.

OVEREXTENSION CONTROL (RSI)

- The current RSI_14 value is 55.48, which is below the overextension threshold of 70.
- This positioning indicates that the asset is not currently overbought, allowing for potential further upside without immediate risk of a correction.
- The RSI level suggests that there is still room for price appreciation before reaching overbought conditions.

PATH-DEPENDENT RISK CONTROL (ATR AND TRAILING STOPS)

- The strategy utilizes ATR-based trailing stops to dynamically adjust exit points based on market volatility.
- This method allows for effective drawdown control, as trailing stops can lock in profits while providing a buffer against sudden market reversals.
- By employing path-dependent risk control, the strategy enhances its ability to navigate volatile market conditions while protecting capital.

Trade Log

ENTRY DATE	EXIT DATE	TRADE RETURN (%)	NOTES
2016-11-15	2017-02-24	+18.04%	Strong momentum capture
2019-07-23	2019-08-01	-6.11%	Quick exit on momentum loss
2019-08-20	2020-02-26	+59.71%	Extended trend participation
2020-03-18	2020-09-09	+150.95%	Strong momentum capture
2021-03-10	2021-05-05	+15.96%	Extended trend participation
2022-01-31	2022-02-23	-8.57%	Quick exit on momentum loss
2022-02-25	2022-03-04	-5.04%	Quick exit on momentum loss
2022-03-17	2022-04-07	-2.25%	Quick exit on momentum loss
2022-12-13	2022-12-15	-6.20%	Quick exit on momentum loss
2023-01-17	2023-08-14	+147.23%	Strong momentum capture
2025-01-29	2025-01-31	-2.93%	Quick exit on momentum loss
2025-02-06	2025-02-27	-6.63%	Quick exit on momentum loss
2025-05-14	2025-12-11	+33.71%	Extended trend participation

- The trade log reveals a mix of successful trades with significant gains, particularly the strong momentum captures in 2020 and 2023, which contributed to overall performance.
- The presence of several quick exits on momentum loss indicates a disciplined approach to risk management, prioritizing capital preservation.

- The strategy's ability to generate substantial returns in select trades, despite a low hit rate, underscores its focus on maximizing gains from high-quality opportunities.

Limitations & Future Extensions

- The strategy's conservative exposure may limit performance in bull markets compared to a buy-and-hold approach, potentially missing out on larger gains.
- A low hit rate implies that while the strategy is selective, it may also lead to periods of underperformance, necessitating careful monitoring.
- Future improvements could include adaptive parameters that adjust based on market conditions, enhancing responsiveness to changing dynamics.
- Incorporating machine learning classifiers may provide additional insights for trade selection, potentially improving hit rates and overall performance.

Conclusion

This analysis highlights a disciplined, risk-aware approach to trading NVDA, balancing capital preservation with active participation in favorable market regimes. The strategy's ability to manage drawdowns effectively while capturing significant upside demonstrates its value for institutional investors seeking robust risk management. By focusing on high-quality trades and employing dynamic risk controls, this strategy offers a compelling alternative to traditional buy-and-hold methods, particularly in volatile market environments.

Strategy Charts ![Price with Moving Averages & MACD (6 Months)] (outputs/NVDA_price_ma_macd_6m.png) *Price with Moving Averages & MACD (6 Months)* This short-horizon diagnostic view shows recent price dynamics using candlestick charts, moving averages, and MACD. The upper panel displays price action with MA20 (blue), MA50 (orange), and MA200 (green). The lower panel shows MACD line, signal line, and histogram for momentum analysis. A six-month horizon is selected to preserve visual interpretability.

Appendix: Strategy Parameters

Technical strategy rules and risk management parameters.

PARAMETER	VALUE	PURPOSE
Strategy Type	Long/Flat	No short positions
Regime Filter	Close > MA200	Bull market identification
Entry Condition	Regime gate opens	Enter when Close > MA200
Exit Condition	Regime break or stop hit	Close < MA200 or trailing stop
Trend Floor	60% when MA20 > MA50	Minimum exposure in strong trend
Weak Trend Scale	85%	Reduced weight when MA20 <= MA50

PARAMETER	VALUE	PURPOSE
Vol Target	35% annual	Position sizing based on volatility
MACD De-risk	75% scale	Reduce when MACD < Signal line
RSI De-risk (>80)	90% scale	Reduce on mild overextension
RSI De-risk (>90)	75% scale	Reduce on severe overextension
Fixed Stop Loss	12%	Maximum loss per trade
ATR Trailing Stop	3.5x ATR(14)	Dynamic stop to lock gains
Transaction Costs	10 bps	Cost per position change
Signal Shift	+1 day	Avoid look-ahead bias