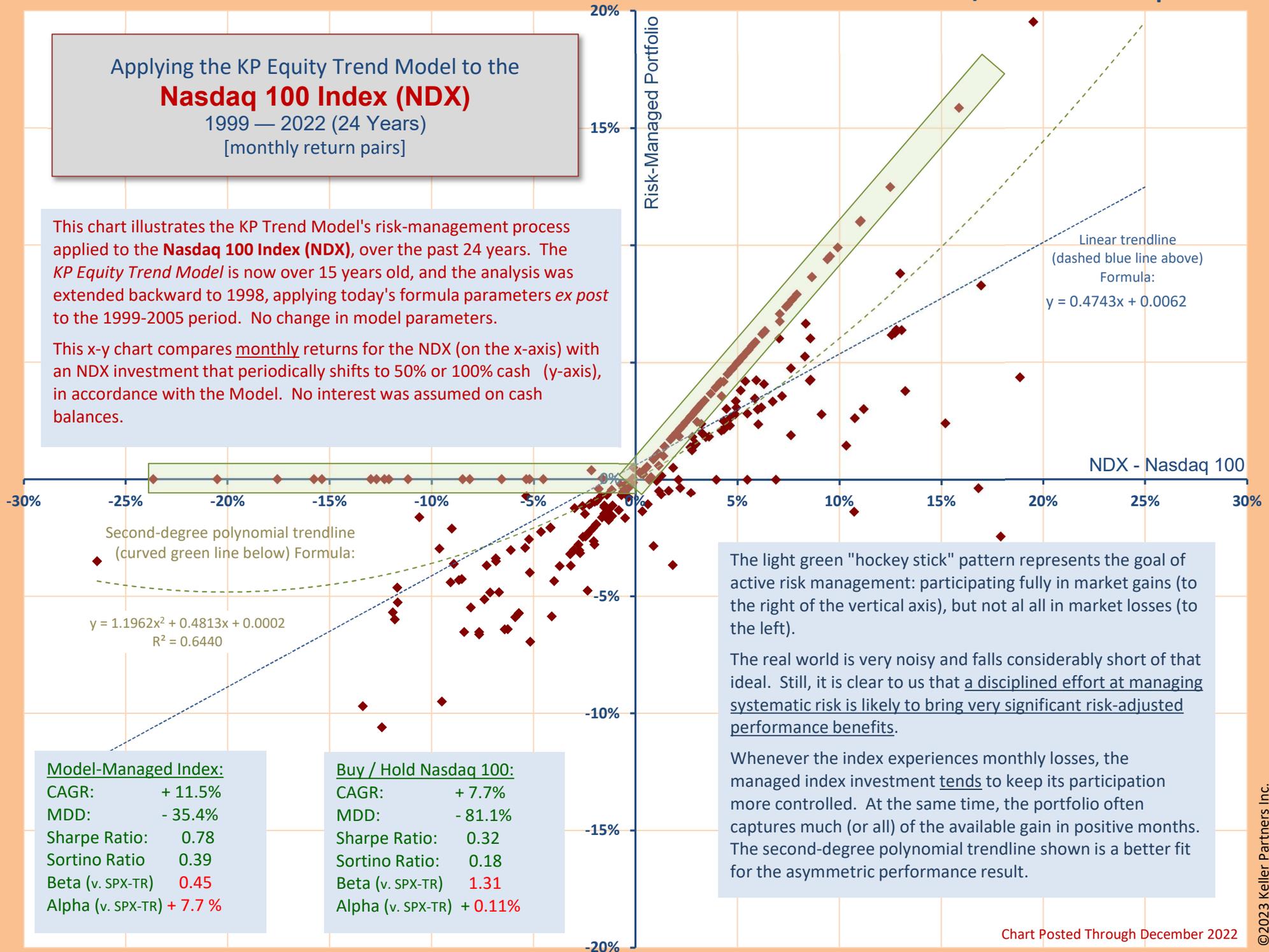


## Applying the KP Equity Trend Model to the Nasdaq 100 Index (NDX)

1999 — 2022 (24 Years)  
[monthly return pairs]

This chart illustrates the KP Trend Model's risk-management process applied to the **Nasdaq 100 Index (NDX)**, over the past 24 years. The *KP Equity Trend Model* is now over 15 years old, and the analysis was extended backward to 1998, applying today's formula parameters *ex post* to the 1999-2005 period. No change in model parameters.

This x-y chart compares monthly returns for the NDX (on the x-axis) with an NDX investment that periodically shifts to 50% or 100% cash (y-axis), in accordance with the Model. No interest was assumed on cash balances.



The light green "hockey stick" pattern represents the goal of active risk management: participating fully in market gains (to the right of the vertical axis), but not all in market losses (to the left).

The real world is very noisy and falls considerably short of that ideal. Still, it is clear to us that a disciplined effort at managing systematic risk is likely to bring very significant risk-adjusted performance benefits.

Whenever the index experiences monthly losses, the managed index investment tends to keep its participation more controlled. At the same time, the portfolio often captures much (or all) of the available gain in positive months. The second-degree polynomial trendline shown is a better fit for the asymmetric performance result.

### Model-Managed Index:

CAGR: + 11.5%  
MDD: - 35.4%  
Sharpe Ratio: 0.78  
Sortino Ratio: 0.39  
Beta (v. SPX-TR): 0.45  
Alpha (v. SPX-TR): + 7.7 %

### Buy / Hold Nasdaq 100:

CAGR: + 7.7%  
MDD: - 81.1%  
Sharpe Ratio: 0.32  
Sortino Ratio: 0.18  
Beta (v. SPX-TR): 1.31  
Alpha (v. SPX-TR): + 0.11%