HMM Regime Report — SPY

Regime Distribution

Generated: 2026-01-28 18:59

Data period: 2024-01-29 → 2026-01-27

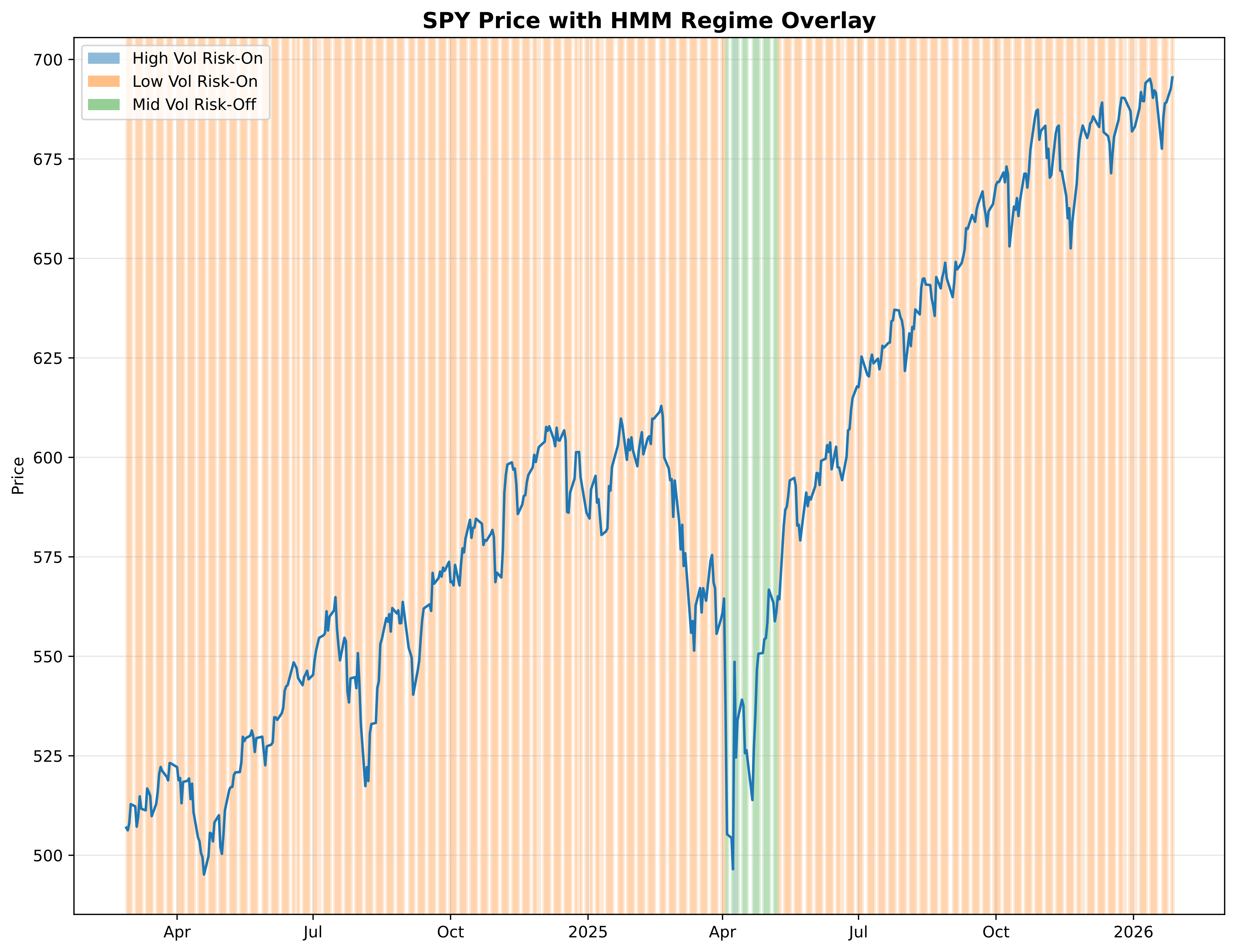
Regime	Days	Pct
High Vol Risk-On	1	0.2%
Low Vol Risk-On	457	95.0%
Mid Vol Risk-Off	23	4.8%

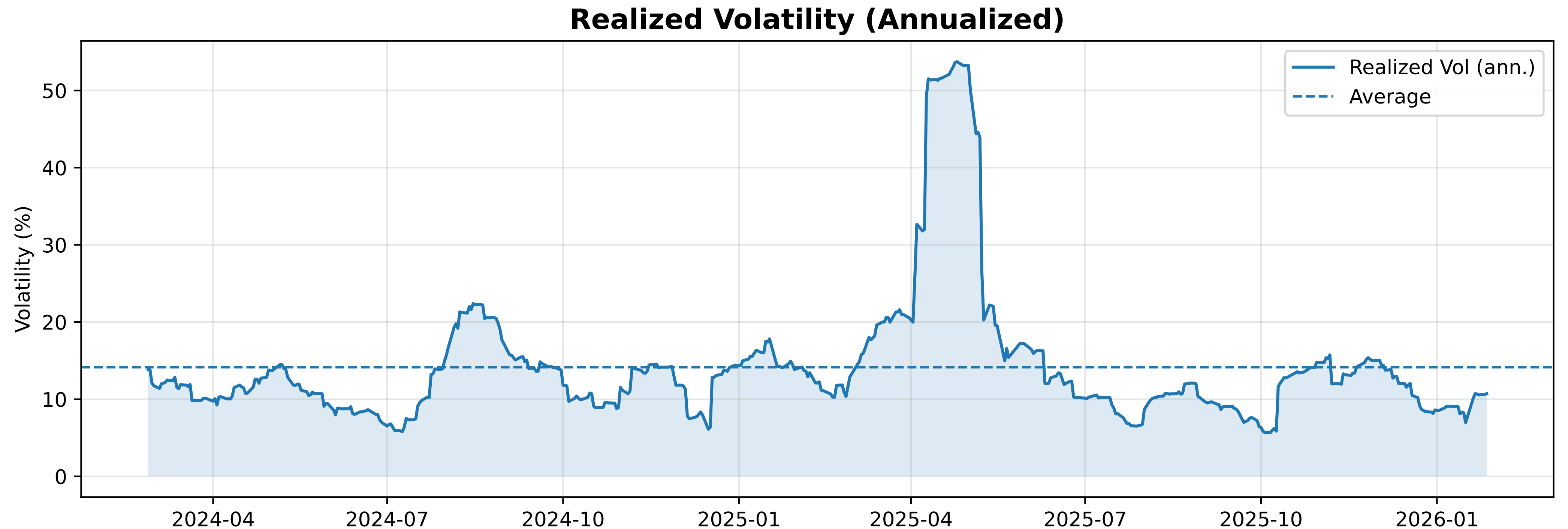
Mean Features by Hidden State

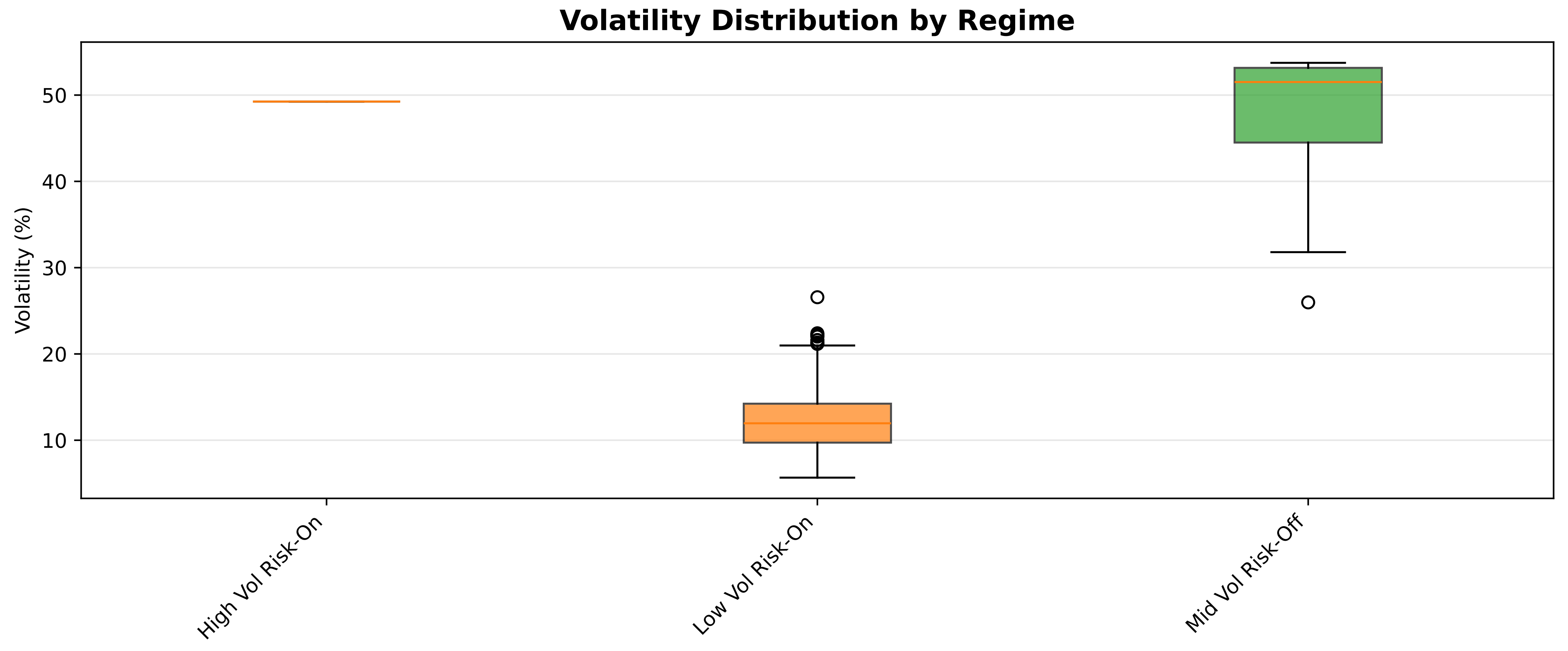
	label	ret_ann_%	vol_%
0	Mid Vol Risk-Off	-115.98	47.5
1	Low Vol Risk-On	10.03	16.8
2	Low Vol Risk-On	21.3	10.46
3	High Vol Risk-On	2516.54	49.25

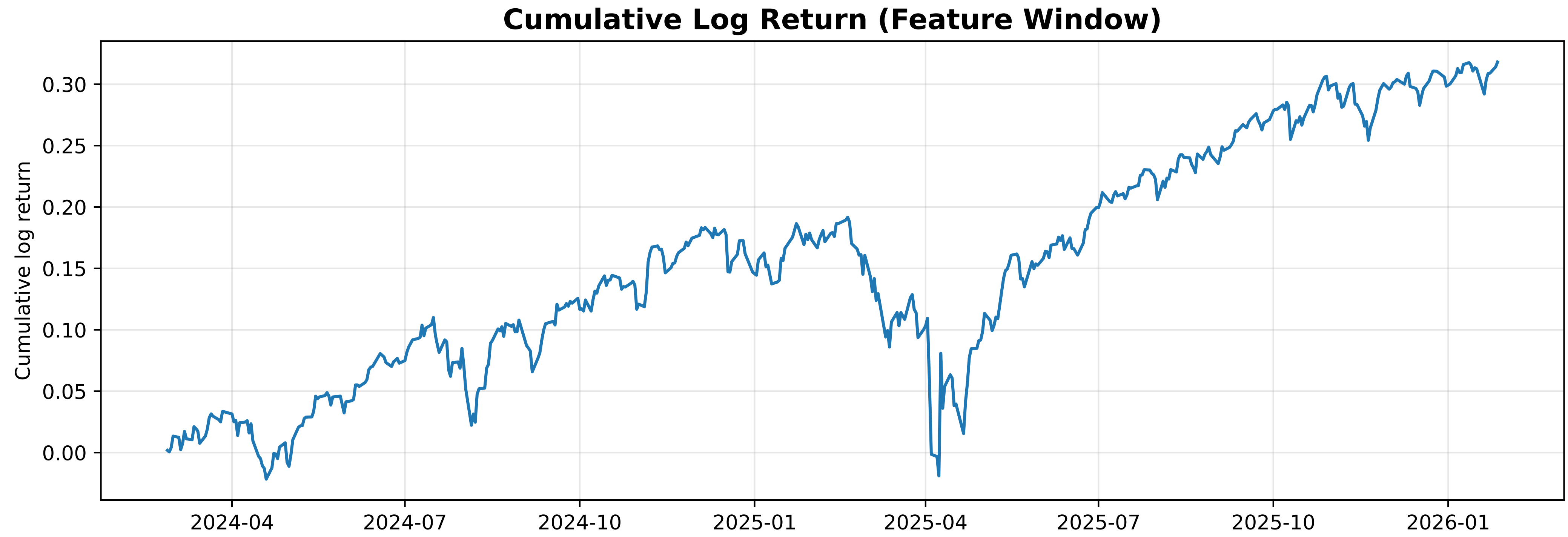
Next-regime probabilities (from transition matrix):

- Low Vol Risk-On: 0.984
- Mid Vol Risk-Off: 0.000
- High Vol Risk-On: 0.000

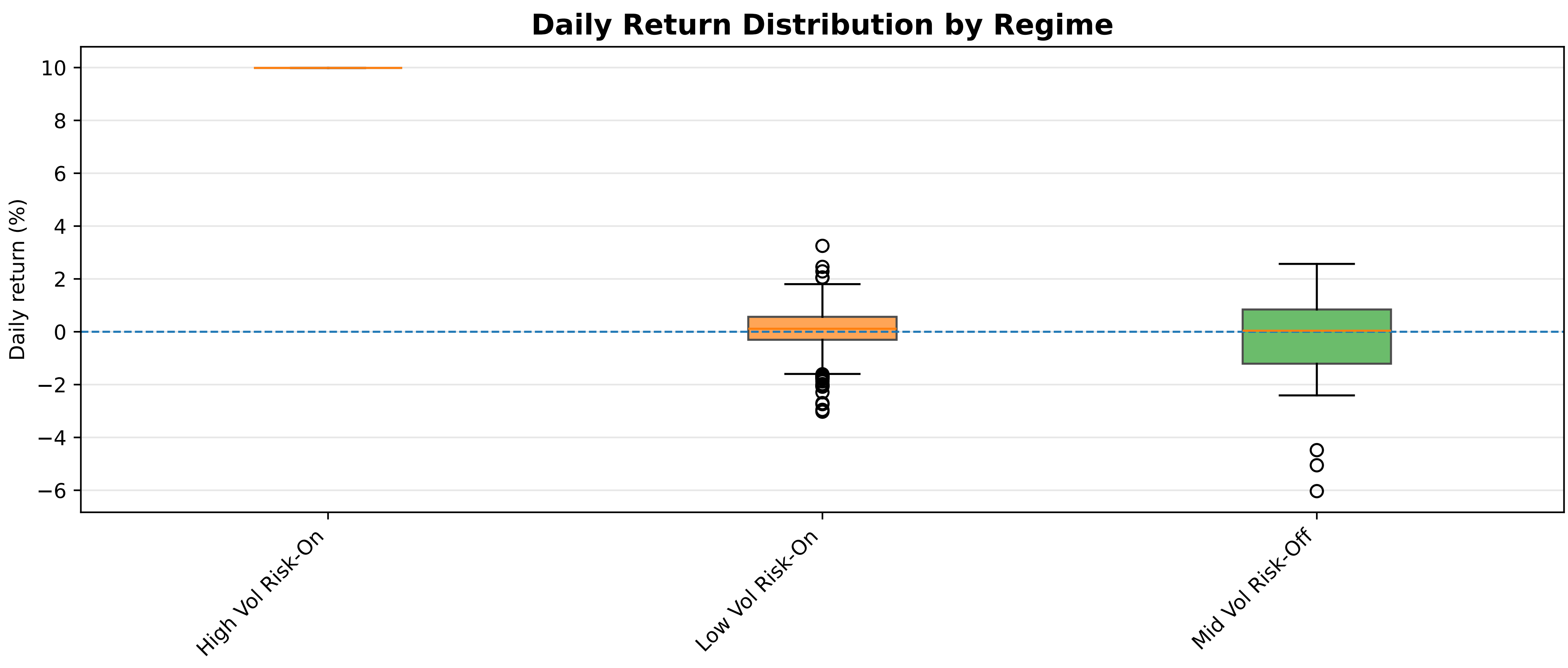

SPY Price with HMM Regime Overlay
High Vol Risk-On
Low Vol Risk-On
Mid Vol Risk-Off
Price
700
675
650
625
600
575
550
525
500
Apr
Jul
Oct
2025
Apr
Jul
Oct
2026


Realized Volatility (Annualized)
Realized Vol (ann.)
Average
Volatility (%)
0
10
20
30
40
50
2024-04
2024-07
2024-10
2025-01
2025-04
2025-07
2025-10
2026-01

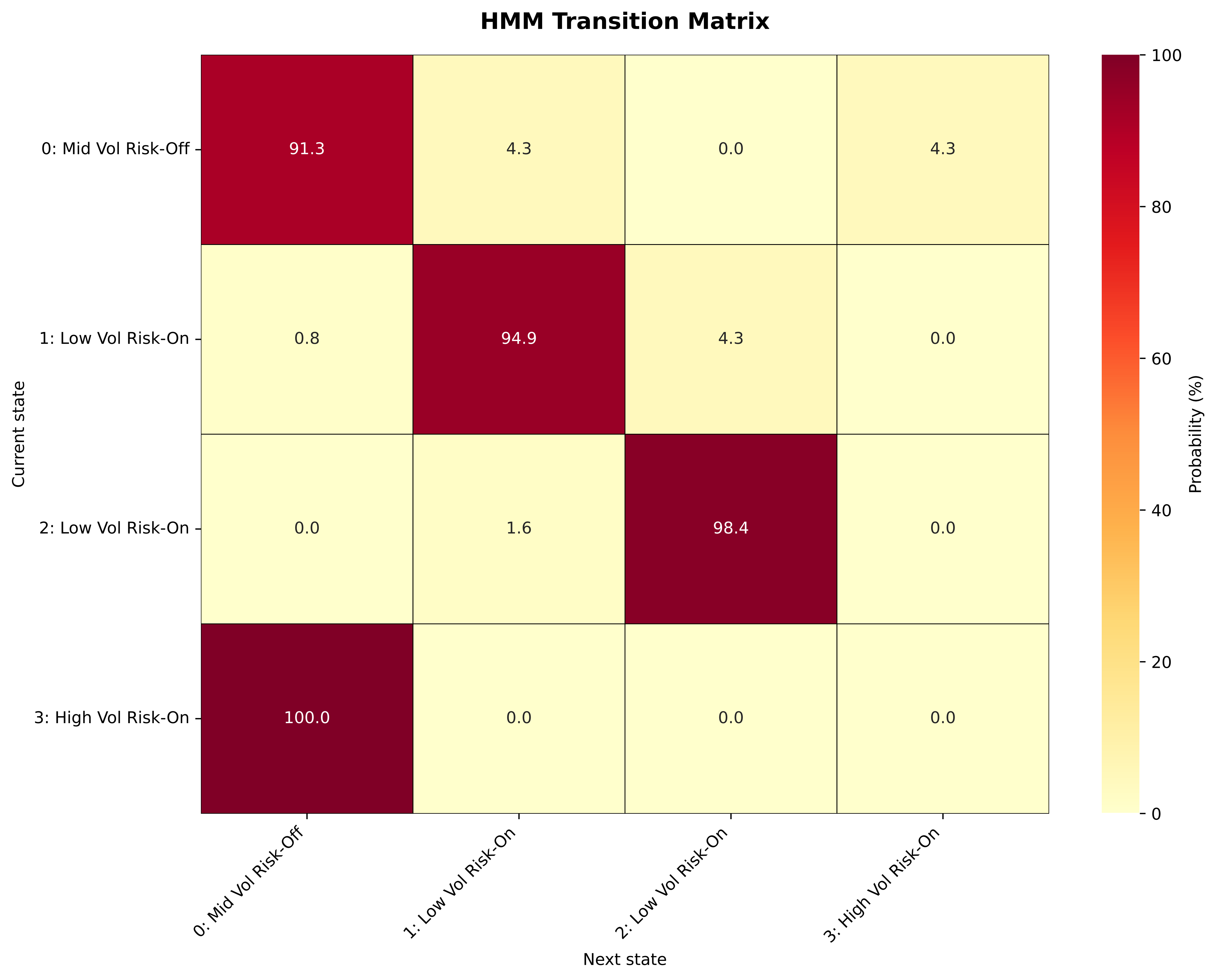

Volatility Distribution by Regime
Volatility (%)
10
20
30
40
50
High Vol Risk-On
Low Vol Risk-On
Mid Vol Risk-Off



Cumulative Log Return (Feature Window)
Cumulative log return
0.30
0.25
0.20
0.15
0.10
0.05
0.00
2024-04
2024-07
2024-10
2025-01
2025-04
2025-07
2025-10
2026-01



Daily Return Distribution by Regime
Daily return (%)
10
8
6
4
2
0
−2
−4
−6
High Vol Risk-On
Low Vol Risk-On
Mid Vol Risk-Off


HMM Transition Matrix
0: Mid Vol Risk-Off
1: Low Vol Risk-On
2: Low Vol Risk-On
3: High Vol Risk-On
91.3
4.3
0.0
4.3
0.8
94.9
4.3
0.0
0.0
1.6
98.4
0.0
100.0
0.0
0.0
0.0
Current state
Next state
Probability (%)
0
20
40
60
80
100