Quantum Mechanics

$|\psi\rangle$

State Space Geometry

- Unitary Evolution
- $\|\psi(t)\|^2 = 1$
- Probability Conservation
- Phase Coherence

Mathematical Structure

$$\tilde{\mathbf{z}}_t = \mathbf{U}_\theta \mathbf{z}_t$$

$$\mathbf{U}_\theta^\top \mathbf{U}_\theta = \mathbf{I}$$

Unitary Transformation

Norm Preservation

$\|\tilde{\mathbf{z}}\|_2 = \|\mathbf{z}\|_2$

Phase Coherence

$\angle(\tilde{\mathbf{z}}_i, \tilde{\mathbf{z}}_j) = \angle(\mathbf{z}_i, \mathbf{z}_j)$

Local Interactions

k-qubit subspaces

Macroeconomic Dynamics

Economic Structure

Bounded Variability
GDP growth $\in [-10\%, +10\%]$
Inflation targeting
NAIRU constraints

Conservation Laws
$Y = C + I + G + (X-M)$
Shock propagation
Accounting identities

Cyclical Coherence
Okun's law phase
Phillips curve lag
Business cycle topology