Policy Brief

Dynamic Threshold Positioning in U.S.–China Competition:

A Phase-Resolved Assessment of Structural Resilience and LoCT Distance

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Key Judgments

- Threshold proximity rather than aggregate capability is the decisive variable in contemporary great-power competition.
- The United States exhibits higher volatility and a declining LoCT distance, driven by sustained multi-theater engagement and increasing alliance coordination costs.
- China maintains lower exposure and tighter internal control, resulting in greater short-term stability and a comparatively wider LoCT buffer.
- High-pressure operation (U.S.) and controlled, low-exposure management (China) constitute distinct strategic equilibria, each associated with different risk structures.
- Over time, latent stress accumulation within low-exposure systems may erode initial stability advantages, increasing the likelihood of delayed and nonlinear adjustment.

Executive Summary

This brief examines U.S.–China competition through the lens of dynamic threshold positioning, using an MCCM-based analytical framework. Rather than comparing aggregate power, it evaluates each system's distance to the loss-of-control threshold (LoCT) under sustained multi-domain pressure.

The analysis finds that the United States operates within a high-pressure, multi-theater configuration characterized by increasing systemic exposure and coupling, resulting in a progressive compression of LoCT distance. China, by contrast, maintains a lower-exposure, controlled configuration that preserves a more stable threshold buffer.

The central implication is that strategic outcomes depend less on relative strength than on relative proximity to systemic breakdown. In this context, the decisive variable is not which actor advances faster, but which system approaches the threshold first.

Policy Brief

Why This Matters

Traditional metrics, such as GDP, military expenditure, and technological output, are insufficient to capture systemic fragility under sustained pressure.

Contemporary competition increasingly unfolds across interdependent systems, including logistics, finance, alliances, information networks, and governance structures. In such environments, outcomes are shaped not only by the accumulation of resources, but by how systems absorb, transmit, and adapt to stress.

Under these conditions, the central question shifts from:

> *Who is stronger? *

to

> **Which system is closer to losing control? **

This reframing has direct implications for escalation risk, deterrence credibility, alliance management, and policy prioritization, placing threshold proximity rather than aggregate capability at the center of strategic evaluation.

1. Analytical Framework: Dynamic Threshold Positioning

This brief employs a conceptual Multi-Layer Coupled Complexity Model (MCCM) to evaluate systemic behavior in U.S.–China competition over time. Rather than focusing on aggregate measures of capability, the framework centers on a single analytical variable:

> **LoCT Distance (D_t)** — the relative buffer between a system's current state and its loss-of-control threshold.

LoCT distance is shaped by the interaction of three core dimensions. Systemic stress (S) captures the intensity of pressure across military, economic, and political domains. Transmission and coupling (T) describe the extent to which shocks propagate across interconnected systems. Adaptive capacity (A) reflects the ability of a system to absorb, redistribute, and mitigate those pressures.

Formally:

$$\boldsymbol{D_t \approx f(S, T, A, Structure)}$$

As stress intensifies and coupling increases, particularly in the absence of sufficient adaptive capacity, LoCT distance compresses. A declining D_t therefore indicates increasing proximity to instability, nonlinear disruption, or escalation cascades.

2. U.S. Trajectory: High-Pressure Systemic Operation

As shown in **Figure 1**, the United States operates within a high-pressure systemic equilibrium (HPSE) characterized by sustained engagement across multiple strategic theaters and domains. This configuration reflects not only simultaneous involvement in Europe, the Middle East, and the Indo-Pacific, but also increasing costs of alliance coordination under conditions of strategic dispersion.

These dynamics generate elevated systemic stress and intensify cross-domain transmission, as pressures originating in one domain or theater increasingly propagate into others. The result is a system that exhibits higher volatility and more pronounced oscillatory behavior, even as it remains operationally functional.

Within the MCCM framework, this corresponds to a gradual but persistent compression of LoCT distance. The U.S. system is not approaching failure in an immediate sense; rather, it is operating closer to the threshold under conditions of sustained, distributed pressure. This implies a reduced margin for absorbing additional shocks, particularly in the presence of strong coupling effects.

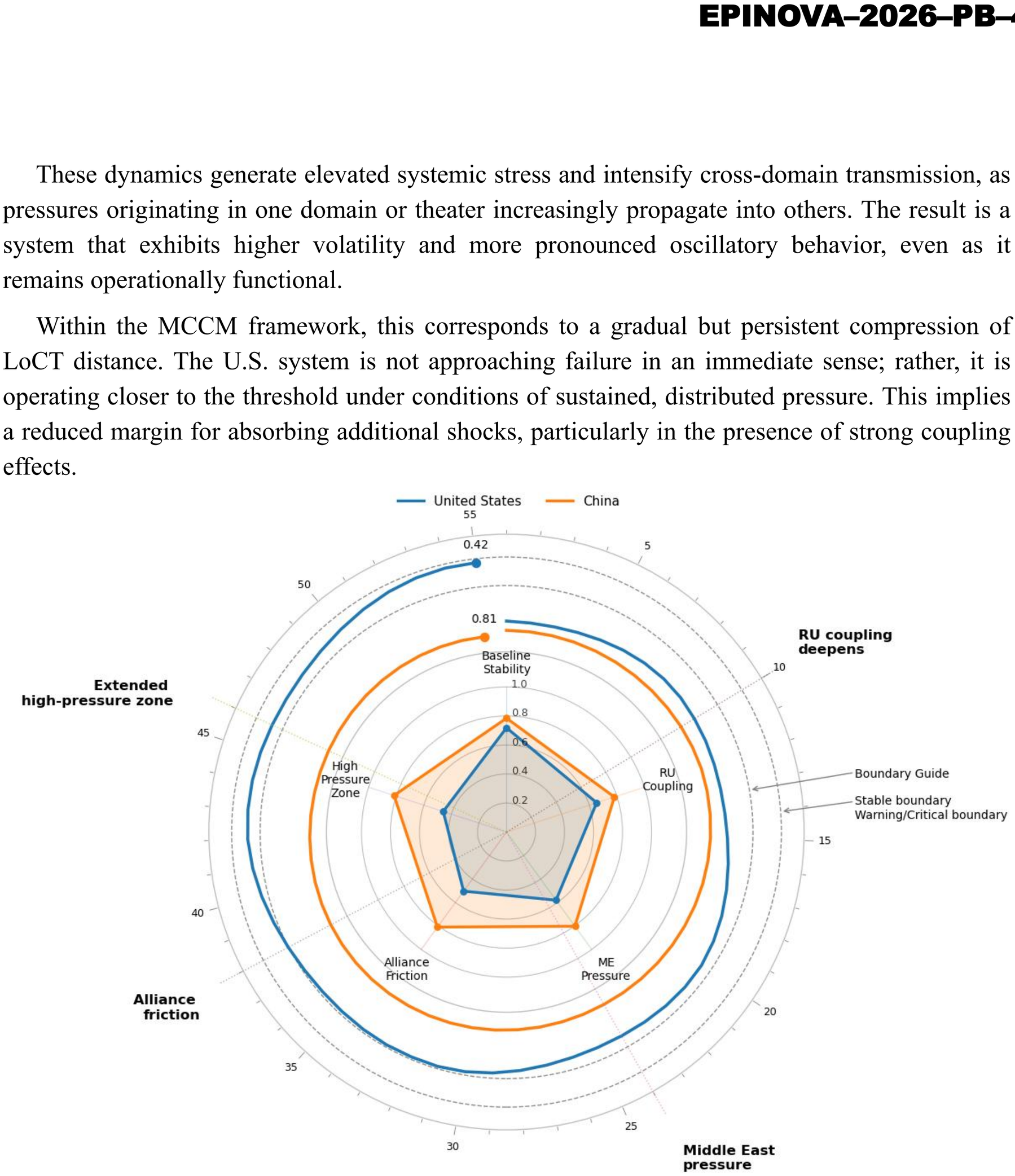

Figure 1. Dynamic LoCT Positioning in U.S.–China Competition

(54-Day Observation Window)

Caption: The central radar reports phase-averaged LoCT distance across five strategic stages, while the outer orbit tracks day-level trajectories. The U.S. trajectory reflects progressive threshold compression under sustained multi-theater pressure, whereas China maintains a comparatively stable LoCT distance consistent with a lower-exposure operating configuration.

Note: This figure is conceptual and analytical. It is derived from structured assumptions regarding systemic stress, coupling intensity, and adaptive behavior, and does not represent a direct empirical measurement series.

Source: Author's analysis based on the MCCM framework.

3. China Trajectory: Controlled Exposure Configuration

In contrast to the U.S. trajectory shown in **Figure 1**, China follows a controlled exposure configuration centered on internal stabilization. Rather than operating across multiple high-intensity theaters, it limits direct military involvement while prioritizing selective external engagement, particularly in economic and regional domains. This approach is reinforced by a comparatively high degree of internal coordination and policy control.

Within this configuration, systemic stress remains lower in the short term, and cross-domain transmission is more tightly contained. The result is relatively low volatility and a higher degree of operational stability, corresponding to a consistently larger LoCT distance.

However, this stability reflects not only reduced exposure but also the internalization of systemic pressures. Over time, stress may accumulate within tightly coupled domestic structures, potentially reducing adaptive flexibility and increasing the likelihood of delayed, nonlinear adjustment.

This configuration therefore represents not a risk-free equilibrium, but a distinct risk profile, characterized by lower short-term volatility and higher long-term accumulation risk.

4. The Strategic Trade-Off

As summarized in **Figure 2**, the two systems exhibit structurally distinct configurations of stress distribution and risk dynamics.

The U.S. system distributes stress across multiple domains and theaters, enabling flexibility and reach but generating continuous cross-domain transmission and gradual threshold compression. Its dominant risk pattern is volatility-driven, shaped by oscillation, coupling, and shock amplification.

China, by contrast, concentrates and internalizes stress within a more controlled configuration. While this produces short-term stability and a wider threshold buffer, it shifts risk toward accumulation-driven dynamics, in which pressures build and may manifest through delayed, nonlinear adjustment.

The competition is therefore fundamentally asymmetric—not in aggregate power, but in the structure of risk itself.

DIMENSION	UNITED STATES	CHINA
Operating Mode	High-pressure, outward-oriented Engaged across multiple theaters and domains with global reach and alliance commitments.	Controlled, low-exposure Limits direct involvement and manages external engagement selectively.
Stress Profile	Distributed across domains Stress is spread across military, economic, political, and alliance systems.	Concentrated and internalized Stress is absorbed within internal systems and tightly managed.
LoCT Behavior	Gradual compression over time LoCT distance narrows steadily as stress and coupling intensify.	Relative stability with wider buffer LoCT distance remains more stable with a larger buffer.
Risk Structure	Volatility-driven dynamics Higher volatility and oscillation increase the risk of shock amplification and threshold compression.	Accumulation-driven dynamics Risk builds gradually within the system and may emerge suddenly.

Figure 2. Structural Comparison of U.S.–China Systemic Regimes

Note: LoCT = loss-of-control threshold. The figure summarizes the contrasting systemic configurations described in Section 4.

Source: Author’s analysis based on the MCCM framework.

5. Implications for Policy

Effective strategy in U.S.–China competition depends less on maximizing expansion than on managing systemic risk under sustained pressure. Four implications follow.

- **Threshold management should take precedence over expansion.** Maintaining distance from critical thresholds is more consequential than extending operational reach.
- **Systemic coupling acts as a primary risk multiplier.** Managing cross-domain linkages is as important as mitigating individual sources of stress.
- **Stability should not be equated with safety.** Apparent stability may conceal latent vulnerabilities that emerge abruptly.
- **Time amplifies structural differences.** Extended competition magnifies divergence in resilience, adaptation, and risk accumulation.

Taken together, strategic success depends on the ability to manage proximity to critical thresholds over time, rather than on the pace of expansion.

6. Limitations

This analysis is subject to several limitations.

First, the framework is conceptual and model-based rather than empirically measured. Second, LoCT distance is a derived variable and not directly observable. Third, results are sensitive to assumptions regarding stress, coupling, and adaptive capacity.

Accordingly, the findings should be interpreted as structured analytical insight into systemic dynamics, rather than as a predictive model of specific outcomes.

Conclusion

U.S.–China competition is best understood not as a contest of aggregate capability, but as a dynamic positioning problem relative to systemic thresholds.

The United States operates under sustained, multi-domain pressure, resulting in a gradual compression of its threshold buffer. China, by contrast, maintains greater short-term stability through a lower-exposure configuration that preserves a wider LoCT distance. These trajectories reflect not differences in strength alone, but divergent approaches to managing systemic risk.

The central question is therefore not which system is more powerful, but:

Which system will approach the loss-of-control threshold first under sustained pressure?

In an era of interconnected and tightly coupled systems, resilience is no longer measured by the capacity to expand, but by the ability to maintain distance from critical thresholds as pressure accumulates over time.

This reframing shifts strategic evaluation from capability accumulation to threshold management under systemic pressure, redefining the basis of strategic competition in interconnected systems.