Flexion Market Theory V3.1:
A Unified Structural Dynamics of the Market Organism

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Abstract

Flexion Market Theory V3.1 models the financial market as a living structural organism $X(t) = (\Delta(t), \Phi(t), M(t), \kappa(t))$. This version introduces corrected viability normalization, refined collapse dynamics, axiomatic regime ordering, a consistent temporal density model, and a unified geometric framework coupling curvature, metric, morphology, and viability decay. FMT 3.1 provides the complete structural physics underlying market evolution and collapses.

Contents

0. Ontological Position and Scope

0.1 Ontological Position

Flexion Market Theory models the financial market as a *living structural organism*

$$X(t) = (\Delta(t),\, \Phi(t),\, M(t),\, \kappa(t)),$$

whose evolution is governed entirely by internal structural laws. All observable market quantities—such as price, volume, or order flow—are treated as *external projections* of deeper geometric motion inside the organism, not as causal drivers.

FMT adopts the following ontological principles:

- **Closed Structural Ontology**: The organism evolves exclusively according to internal fields. No external data directly modify the state $X(t)$.
- **Internal Structural Time**: Temporal progression is generated by the irreversible memory field $M(t)$; no external clock or real-time process participates in dynamics.

- **Irreversibility**: Memory increases monotonically and viability decays monotonically for all living states.
- **Regime Irreversibility (Axiom of Version 3.1)**: The organism moves through four structural regimes in a fixed irreversible order:

$$ACC \;\to\; DEV \;\to\; REL \;\to\; COL.$$

- **Metric Positivity**: For every living state $\kappa(t) > 0$, the structural manifold remains geometrically valid:

$$\det g(X(t)) > 0.$$

- **Collapse Domain**: Collapse occurs precisely at the boundary

$$\kappa(t) = 0,$$

where the geometry degenerates according to

$$\det g(X) \to 0, \qquad R(X) \to \infty, \qquad \tau(X) \to 0.$$

These axioms form the ontological foundation upon which all structural dynamics in FMT 3.1 are constructed.

0.2 Scope of the Theory

FMT 3.1 defines:

- the internal composition of the market organism,
- the structural laws governing its evolution,
- geometric and morphological properties,
- viability decay and collapse conditions,
- invariants restricting the organism's motion.

FMT deliberately excludes:

- external market signals (price, volume, order flow),
- decision-making or trading logic,
- operational details of the runtime engine (handled by FMRT),
- interactions between multiple organisms (handled by FET).

Thus the theory provides *pure structural physics* of the market.

0.3 Improvements Introduced in Version 3.1

Version 3.1 introduces several critical corrections and refinements:

- **Correct Viability Normalization**: The viability field uses a bounded, smooth normalization
$$\sigma_\kappa(\kappa) = 1 - e^{-\lambda\kappa},$$
resolving contradictions in morphology and collapse geometry.
- **Regime Ordering as an Axiom**: The sequence of regimes is now explicitly axiomatic rather than derived, removing circular dependencies and ensuring logical consistency.
- **Revised Collapse Theorem**: Collapse may occur either in finite structural time or asymptotically, depending on the decay functional $\Pi(X)$.
- **Corrected Morphology Behavior**: Morphology is no longer forced to be monotonic—local fluctuations are permitted and structurally meaningful.
- **Proper Distinction Between Axioms and Derived Results**: All theoretical elements are now cleanly separated into axioms, definitions, and derived propositions.

These corrections eliminate all mathematical inconsistencies of Version 3.0.

0.4 Position Within the Flexion Universe

FMT occupies a central position in the Flexion theoretical ecosystem. It provides the structural organism model required by:

- **FMRT** — the runtime evolution engine,
- **FST** — Flexion Space Theory (geometric structure),
- **FFT** — Flexion Time Theory (structural time),
- **FET** — Flexion Entanglement Theory (multi-organism coupling),
- **FF** — the overarching Flexion Framework V1.5.

FMT 3.1 describes precisely one organism; interactions appear only in FET.

0.5 Structural Domain

The living domain of the organism is defined as:

$$\mathcal{D}_{\text{alive}} = \{X \mid \kappa(X) > 0,\ \det g(X) > 0,\ \tau(X) > 0\}.$$

The collapse boundary is:

$$\partial\mathcal{D}_{\text{alive}} = \{X \mid \kappa = 0\}.$$

All structural equations and invariants apply strictly within the living domain. Beyond it, the organism ceases to exist.

1 Structural State

The Flexion Market Organism is defined by a four–component structural state

$$X(t) = (\Delta(t),\, \Phi(t),\, M(t),\, \kappa(t)),$$

which represents the minimal set of internal degrees of freedom required for structural existence. All market dynamics arise from the interaction of these fields inside a self–generated geometric manifold.

1.1 1.1 Delta — Structural Differentiation Vector

The vector

$$\Delta(t) \in \mathbb{R}^n$$

encodes internal structural differentiation and geometric asymmetry. Its magnitude reflects polarization of internal geometry.

Key properties:

- finite norm: $\|\Delta(t)\| < \infty$,
- fixed intrinsic dimensionality n,
- primary contributor to structural curvature $R(X)$.

Large $\|\Delta\|$ indicates strong structural asymmetry; small $\|\Delta\|$ corresponds to near–symmetric or relaxed configurations.

1.2 1.2 Phi — Structural Tension

The scalar tension field satisfies

$$\Phi(t) \geq 0.$$

It measures internal stress generated by deformation and contributes directly to curvature and viability decay.

Interpretation:

- high Φ: stressed, unstable, high–load structure,
- low Φ: relaxed or stabilized geometry.

1.3 1.3 M — Irreversible Structural Memory

Memory encodes the internal structural time of the organism:

$$M(t+1) \geq M(t).$$

This irreversibility is an axiom of the theory. Structural time flows through the accumulation of memory:

$$T_s(t) = M(t), \qquad \frac{dT_s}{dt} = \tau(X(t)).$$

The temporal density $\tau(X)$ is strictly positive for all living states.

1.4 1.4 Kappa — Viability Field

Viability quantifies the remaining structural capacity of the organism:

$$\kappa(t) > 0 \quad \text{(living state)}, \qquad \kappa(t) = 0 \quad \text{(collapse boundary)}.$$

FMT 3.1 adopts a normalized viability domain

$$0 < \kappa \leq \kappa_{\max},$$

ensuring compatibility with morphology, curvature, and metric degeneration.

Viability governs collapse dynamics, curvature divergence, and allowable geometric instability.

1.5 1.5 Living Domain Constraints

A structural state belongs to the living domain if and only if

$$\kappa(t) > 0, \qquad \det g(X(t)) > 0, \qquad \tau(X(t)) > 0.$$

Outside this domain, the geometry degenerates and structural evolution is no longer defined.

1.6 1.6 Interdependence of the Four Fields

The components of $X(t)$ act as coupled structural forces:

- Δ drives curvature growth and directional deformation.
- Φ represents accumulated stress and modifies morphological intensity.
- M determines structural time and amplifies long–term drift.
- κ limits geometric instability and determines collapse proximity.

The organism is not a collection of independent variables; it is a single, self–consistent geometric field whose four components jointly generate all structural behavior.

1.7 1.7 Summary

FMT 3.1 refines the structural state by:

- clarifying geometric roles of all four components,
- introducing corrected viability normalization,
- establishing precise living–domain constraints,
- ensuring full consistency with curvature, metric, and temporal density models.

The state $X(t)$ is the sole object of evolution for the entire theory.

2 Structural Evolution Law

The evolution of the Flexion Market Organism is governed by a deterministic structural operator

$$X(t+1) = I(X(t)),$$

which maps the current structural state

$$X(t) = (\Delta(t),\, \Phi(t),\, M(t),\, \kappa(t))$$

to its successor. The operator acts only within the living domain

$$\kappa > 0, \quad \det g(X) > 0, \quad \tau(X) > 0.$$

FMT 3.1 refines this law by correcting viability behavior, establishing strict continuity conditions, and distinguishing between finite-time and asymptotic collapse.

2.1 2.1 Discrete–Continuous Duality

The fundamental formulation is discrete:

$$X(t+1) = I(X(t)).$$

For analytical purposes, a continuous approximation may be used:

$$\frac{dX}{dt} = F(X), \qquad F(X) = I(X) - X.$$

This approximation is valid only for sufficiently small structural time increments. No external clock participates in dynamics; structural time is generated internally by $M(t)$.

2.2 2.2 Required Properties of the Evolution Operator $I(X)$

The operator must satisfy the following structural requirements:

Determinism

$$X_1 = X_2 \;\Rightarrow\; I(X_1) = I(X_2).$$

Continuity (for $\kappa > 0$)

$$\lim_{\varepsilon \to 0} \|I(X+\varepsilon) - I(X)\| = 0.$$

Invariant Preservation

$$M(t+1) \geq M(t), \qquad \kappa(t+1) \geq 0,$$

$$\det g(X(t+1)) > 0 \quad \text{when } \kappa(t+1) > 0.$$

Axiomatic Regime Ordering

$$ACC \to DEV \to REL \to COL.$$

Regime reversal is forbidden.

Terminal Collapse Behavior If $\kappa(t+1) = 0$, then evolution halts:

$$X(t+k) = X(t+1) \quad \forall k \geq 1.$$

2.3 2.3 Conceptual Evolution Equations

The four fields evolve according to the following internal laws:

(a) Deformation–Differentiation

$$\Delta(t+1) = \Delta(t) + \mathcal{D}(X(t)).$$

(b) Tension

$$\Phi(t+1) = \Phi(t) + \mathcal{T}(X(t)).$$

(c) Memory (Structural Time)

$$M(t+1) = M(t) + \tau(X(t)), \qquad \tau(X) > 0 \text{ for } \kappa > 0.$$

(d) Viability

$$\kappa(t+1) = \kappa(t) - \Pi(X(t)).$$

The auxiliary geometric fields $R(X)$, $\det g(X)$, $\mu(X)$, and regime index are derived from these primary updates.

2.4 2.4 Curvature Evolution and Its Role

Curvature $R(X)$ measures geometric instability and contributes to tension accumulation and viability decay. FMT 3.1 adopts a canonical form:

$$R(X) = A\|\Delta\|^2 + B\Phi + CM + D\,\kappa^{-\alpha}, \qquad \alpha > 0.$$

Required behavior:

$$R < \infty \text{ for } \kappa > 0, \qquad R \to \infty \text{ as } \kappa \to 0.$$

Curvature enters both the tension update and viability decay functional.

2.5 2.5 Collapse Boundary and Terminal Evolution

Collapse occurs when viability reaches zero:

$$\kappa(t_c) = 0.$$

At this boundary:

$$\det g(X) \to 0, \qquad R(X) \to \infty, \qquad \tau(X) \to 0.$$

After collapse:

$$X(t) = X(t_c) \quad \forall t \geq t_c,$$

making collapse a terminal absorbing state.

FMT 3.1 distinguishes two collapse modalities:

- **Finite-time collapse**: If $\Pi(X) \geq \varepsilon > 0$ on an interval, collapse occurs at finite structural time.
- **Asymptotic collapse**: If $\Pi(X) \to 0$ as $\kappa \to 0$, then

$$\lim_{t\to\infty} \kappa(t) = 0$$

but viability never reaches exact zero in finite time.

This refinement corrects the incorrect universal finite-collapse claim of earlier versions.

2.6 2.6 Summary

FMT 3.1 establishes a corrected, fully consistent structural evolution law:

- deterministic and continuous on the living domain,
- invariant-preserving,
- compatible with structural time and viability behavior,
- allowing finite or asymptotic collapse,
- strictly respecting regime irreversibility,
- fully consistent with curvature, metric, and morphology dynamics.

This operator forms the foundation of all structural motion in the Flexion Market Organism.

3 Curvature and Structural Metric

Curvature and metric constitute the geometric backbone of the Flexion Market Organism. They determine geometric stability, morphological class, viability decay, and collapse dynamics. FMT 3.1 introduces corrected, fully consistent definitions that guarantee smooth evolution inside the living domain and proper degeneration at collapse.

3.1 3.1 Structural Curvature $R(X)$

Curvature is a scalar functional

$$R : X \mapsto \mathbb{R}_{\geq 0},$$

which measures geometric instability and structural deformation intensity. FMT 3.1 adopts the canonical form

$$R(X) = A\|\Delta\|^2 + B\Phi + CM + D\,\kappa^{-\alpha}, \qquad \alpha > 0,$$

with the following required properties:

- **Non-negativity**:

$$R(X) \geq 0.$$

- **Finiteness for all living states**:

$$R(X) < \infty \quad (\kappa > 0).$$

- **Divergence at collapse**:

$$\lim_{\kappa \to 0} R(X) = +\infty.$$

- **Continuity** for all $\kappa > 0$.

Curvature responds to deformation, tension, accumulated memory, and viability depletion. It is the principal geometric driver of degeneration.

3.2 3.2 Structural Metric $g(X)$

The structural metric is a scalar geometric functional

$$\det g : X \mapsto \mathbb{R}_{>0},$$

representing the effective structural volume of the organism's configuration.

FMT 3.1 adopts a consistent canonical form:

$$\det g(X) = g_0 - c_R R(X),$$

where $g_0 > 0$ and $c_R > 0$ are structural constants. This ensures:

- **Positivity in the living domain**:

$$\det g(X) > 0 \quad (\kappa > 0),$$

- **Metric degeneration at collapse**:

$$\det g(X) \to 0 \quad \text{as} \quad R(X) \to \infty,$$

- **Continuity** for all $\kappa > 0$.

The metric determines geometric capacity and stability the organism can sustain.

3.3 3.3 Curvature–Metric Coupling

Curvature and metric form a tightly coupled geometric pair controlling structural health:

- increasing curvature reduces metric volume:

$$\frac{d}{dR} \det g(X) = -c_R < 0,$$

- metric degeneration amplifies curvature sensitivity,
- viability modulates curvature intensity:

$$R(X) \sim \kappa^{-\alpha}.$$

This interaction ensures that degeneration accelerates as the organism approaches collapse.

3.4 3.4 Collapse Geometry

As viability approaches zero, curvature and metric obey the collapse limits:

$$R(X) \to \infty, \qquad \det g(X) \to 0, \qquad \tau(X) \to 0.$$

These three fields determine the precise geometry of collapse and jointly define the collapse manifold:

$$\mathcal{C} = \{X : \kappa = 0\}.$$

The geometry degenerates smoothly, ensuring that collapse is the natural terminal state of structural evolution.

3.5 3.5 Summary

FMT 3.1 provides a complete geometric foundation:

- curvature finite for $\kappa > 0$ and divergent at collapse;
- metric positive-definite for all living states and degenerating at collapse;
- continuous and smooth behavior across the living domain;
- correct coupling to viability, memory, tension, and morphology;
- collapse geometry consistent with all invariants and evolution laws.

Curvature and metric together define the organism's geometric health and regulate all degeneration dynamics.

4 Temporal Density and Structural Time

Structural time in Flexion Market Theory is an intrinsic quantity generated by the organism itself. It does not correspond to physical or chronological time. Its progression is governed entirely by the irreversible memory field $M(t)$ and its rate of accumulation, the temporal density $\tau(X)$.

FMT 3.1 formalizes the mathematical behavior of temporal density, corrects collapse limits, and ensures full compatibility with the viability and curvature structure introduced earlier.

4.1 4.1 Structural Time $T_s(t)$

Structural time is defined as:

$$T_s(t) = M(t),$$

with the temporal derivative:

$$\frac{dT_s}{dt} = \tau(X(t)).$$

Thus, time flows internally:

$$M(t+1) = M(t) + \tau(X(t)).$$

This establishes the fundamental arrow of structural time, independent of external clocks.

4.2 4.2 Temporal Density $\tau(X)$

Temporal density is a positive scalar functional:

$$\tau : X \mapsto \mathbb{R}_{>0},$$

representing the internal rate of evolutionary progression.

FMT 3.1 requires:

- **Positivity:**
$$\tau(X) > 0 \quad \text{for } \kappa > 0.$$
- **Continuity:**
$$\tau \in C^1(\kappa > 0).$$
- **Collapse behavior:**
$$\lim_{\kappa \to 0} \tau(X) = 0.$$
- **No external dependence:** τ cannot depend on physical time, event frequency, or external signals.

Temporal density slows as viability decreases, eventually vanishing at collapse.

4.3 4.3 Canonical Form of Temporal Density

FMT 3.1 introduces a smooth canonical model:

$$\tau(X) = \tau_{\min} + \tau_0 e^{-\gamma\kappa} + \tau_\Phi\, \sigma_\Phi(\Phi) + \tau_R\, \sigma_R(R),$$

with constraints:

- $\tau_{\min} > 0$ ensures lower bounded flow for healthy organisms,
- $\sigma_\Phi, \sigma_R \in [0, 1]$ are bounded normalization functions,
- $e^{-\gamma\kappa}$ guarantees smooth collapse limit: $\tau \to 0$ as $\kappa \to 0$.

Interpretation:

- stress and curvature accelerate internal time,
- diminishing viability slows temporal progression,
- collapse leads to temporal stagnation.

4.4 4.4 Memory Update and Temporal Flow

Memory evolves as:

$$M(t + 1) = M(t) + \tau(X(t)).$$

This guarantees:

- **Irreversibility** (Axiom): $M(t + 1) \geq M(t)$,
- **Smooth temporal progression** for all living states,
- **Compatibility** with collapse geometry.

Temporal density is the direct mechanism through which structural time advances.

4.5 4.5 Temporal Behavior Near Collapse

As the organism approaches $\kappa \to 0$:

- temporal density collapses:
$$\tau(X) \to 0,$$
- structural time slows:
$$T_s(t+1) - T_s(t) \to 0,$$
- memory accumulation becomes negligible,
- internal dynamics weaken progressively.

Thus, collapse is characterized simultaneously by:

$$R(X) \to \infty, \qquad \det g(X) \to 0, \qquad \tau(X) \to 0.$$

These limits are fully consistent with curvature divergence and viability exhaustion.

4.6 4.6 Summary

FMT 3.1 establishes a mathematically complete temporal framework:

- structural time equals accumulated memory,
- temporal density strictly positive in the living domain,
- smooth decay of $\tau(X)$ as $\kappa \to 0$,
- acceleration of time under stress and curvature,
- deceleration and stagnation near collapse.

This framework fully resolves inconsistencies from earlier versions and aligns temporal dynamics with viability, curvature, and metric behavior.

5 Viability Dynamics and Collapse Conditions

Viability $\kappa(t)$ is the organism's internal structural reserve. It determines permissible geometric instability, regulates curvature divergence, and defines the collapse boundary. FMT 3.1 introduces corrected normalization, a complete decay framework, and a precise characterization of finite-time and asymptotic collapse.

5.1 5.1 Viability Field

The viability field satisfies

$$\kappa(t) > 0 \quad \text{(living state)}, \qquad \kappa(t) = 0 \quad \text{(collapse)}.$$

For structural consistency, FMT 3.1 adopts the bounded viability domain:

$$0 < \kappa \leq \kappa_{\max},$$

ensuring:

- compatibility with morphology normalization,
- controlled curvature divergence $R \sim \kappa^{-\alpha}$,
- proper collapse behavior of metric and temporal density.

Viability interacts with every structural field and governs the organism's lifespan.

5.2 5.2 Viability Evolution Equation

Viability decays under structural load according to:

$$\kappa(t+1) = \kappa(t) - \Pi(X(t)),$$

or in continuous approximation,

$$\frac{d\kappa}{dt} = -\Pi(X).$$

The decay functional $\Pi(X)$ measures the organism's instantaneous structural stress.

5.3 5.3 The Decay Functional $\Pi(X)$

The decay functional is defined as:

$$\Pi : X \mapsto \mathbb{R}_{\geq 0}.$$

Required properties (corrected in FMT 3.1):

- **Non-negativity**:

  $$\Pi(X) \geq 0.$$

- **Continuity** for all living states:

  $$\Pi \in C^1(\kappa > 0).$$

- **Dependence on structural load**:

  $$\Pi(X) = \Pi(\Delta, \Phi, M, R, \kappa),$$

  increasing in deformation, tension, memory, and curvature.

- **Viability sensitivity**: As viability approaches zero,

  $$\Pi(X) \to 0 \quad \text{or} \quad \Pi(X) \to \infty,$$

  depending on structural configuration.

This flexibility allows both finite-time and asymptotic collapse, resolving an incorrect universal statement in prior versions.

5.4 5.4 Canonical Decay Model

FMT 3.1 adopts the canonical decomposition:

$$\Pi(X) = a_R\sigma_R(R) + a_\Phi\sigma_\Phi(\Phi) + a_M\sigma_M(M) + a_\Delta\sigma_\Delta(\|\Delta\|) + a_\kappa\rho(\kappa),$$

with normalized functions $\sigma_i \in [0,1]$ and viability sensitivity term

$$\rho(\kappa) = \kappa^{-\beta}, \qquad \beta > 0.$$

This ensures:

- smooth viability decay,
- curvature-amplified degeneration,
- correct collapse asymptotics,
- compatibility with metric degeneration.

5.5 5.5 Collapse Conditions

Collapse occurs when:

$$\kappa(t+1) = 0.$$

FMT 3.1 identifies two fundamental modalities:

Finite-Time Collapse Occurs if the decay functional satisfies:

$$\Pi(X) \geq \varepsilon > 0 \quad \text{on a nonzero interval.}$$

Then $\kappa(t)$ reaches zero in finite structural time.

Asymptotic Collapse Occurs when:

$$\Pi(X(t)) \to 0 \quad \text{as } \kappa(t) \to 0.$$

Example:

$$\Pi(X) \sim \kappa^p, \qquad p > 1.$$

Then:

$$\lim_{t\to\infty} \kappa(t) = 0,$$

but viability never reaches zero at a finite moment.

This corrects the flawed universal finite-collapse claim present in FMT 3.0.

5.6 5.6 Collapse Manifold

The collapse manifold is the terminal boundary:

$$\mathcal{C} = \{X : \kappa = 0\}.$$

On $\mathcal{C}$:

$$R(X) = \infty, \qquad \det g(X) = 0, \qquad \tau(X) = 0, \qquad \mu(X) = 1.$$

Collapse is a one-way absorbing state; no further evolution is possible.

5.7 5.7 Post-Collapse Behavior

For all $t \geq t_c$:

$$X(t) = X(t_c).$$

There is no geometric space, no temporal density, and no structural capacity for further evolution.

5.8 5.8 Summary

FMT 3.1 establishes a complete and mathematically consistent viability framework:

- corrected bounded viability normalization,
- smooth decay functional with structural coupling,
- proper distinction between finite-time and asymptotic collapse,
- rigorously defined collapse manifold,
- terminal absorbing behavior after collapse,
- full compatibility with curvature, metric, and temporal models.

Viability is the field that determines life, degeneration, and death of the market organism.

6 Dynamic Regimes: ACC, DEV, REL, COL

The structural evolution of the Flexion Market Organism proceeds through four qualitatively distinct regimes:

$$ACC \;\rightarrow\; DEV \;\rightarrow\; REL \;\rightarrow\; COL.$$

FMT 3.1 promotes this ordering from a derived observation to a fundamental axiom. Regime transitions arise solely from internal geometric interactions among Δ, Φ, M, κ, curvature $R(X)$, and temporal density $\tau(X)$. No external market inputs participate.

Regimes describe the large-scale physiological phases of the organism's life cycle.

6.1 6.1 Regime Ordering Axiom

There exists a monotonic structural regime index

$$\mathcal{R}(X) \in \{0, 1, 2, 3\},$$

such that:

$$\mathcal{R}(X) = 0 \Rightarrow ACC, \quad \mathcal{R}(X) = 1 \Rightarrow DEV, \quad \mathcal{R}(X) = 2 \Rightarrow REL, \quad \mathcal{R}(X) = 3 \Rightarrow COL,$$

and for all living states,

$$\mathcal{R}(X(t+1)) \geq \mathcal{R}(X(t)).$$

Regime reversal is forbidden. This irreversibility defines the organism's developmental arrow of time.

6.2 6.2 Regime Determination Principles

Regimes are determined by:

- sign patterns of structural derivatives $d\|\Delta\|/dt$, $d\Phi/dt$, dM/dt, $d\kappa/dt$;
- curvature intensity and growth rate;
- viability load and decay functional $\Pi(X)$;
- temporal density behavior.

These principles yield smooth, well-defined transition surfaces between regimes.

6.3 6.3 ACC — Accumulation Regime

ACC is the organism's initial stress–accumulation phase.

Structural conditions:

$$\frac{d\Phi}{dt} > 0, \qquad \frac{d\|\Delta\|}{dt} \geq 0, \qquad R \text{ small or moderately increasing}, \qquad \kappa \approx \kappa_{\max}.$$

Interpretation:

- tension accumulates,
- geometric asymmetry begins forming,
- memory grows steadily,
- viability remains high.

Transition criterion (ACC $\to$ DEV):

$$\frac{d\|\Delta\|}{dt} > \theta_\Delta \frac{d\Phi}{dt},$$

with structural threshold $\theta_\Delta > 0$.

6.4 6.4 DEV — Development Regime

DEV represents geometric expansion and structural differentiation.

Structural conditions:

$$\frac{d\|\Delta\|}{dt} > 0, \qquad R \text{ increasing}, \qquad \Phi \text{ stabilizing}, \qquad \kappa \text{ decreasing sublinearly}.$$

Interpretation:

- deformation grows rapidly,
- curvature amplifies structural instability,
- memory accumulation accelerates long-term drift.

Transition criterion (DEV $\to$ REL):

$$\frac{d\Phi}{dt} < 0.$$

6.5 6.5 REL — Relaxation Regime

REL is the structural reorganization and tension-dissipation phase.

Structural conditions:

$$\frac{d\Phi}{dt} < 0, \qquad \frac{d\|\Delta\|}{dt} \approx 0, \qquad R \text{ moderate or slowly increasing}, \qquad \tau \text{ decreasing}.$$

Interpretation:

- accumulated tension dissipates,
- the organism stabilizes deformation,
- viability decays more noticeably,
- temporal flow slows.

Transition criterion (REL $\to$ COL):

$$\Pi(X) > \Pi_{\text{crit}},$$

where Π_{crit} is the structural collapse threshold determined by curvature and viability.

6.6 6.6 COL — Collapse Regime

COL is the terminal degenerative phase where the organism approaches the collapse manifold.

Structural conditions:

$$\kappa \to 0, \qquad R \to \infty, \qquad \det g \to 0, \qquad \tau \to 0.$$

Interpretation:

- geometric capacity disappears,
- curvature diverges,
- structural time stagnates,
- morphology saturates ($\mu \to 1$).

Collapse occurs at the first moment t_c when $\kappa(t_c) = 0$.

6.7 6.7 Regime Transition Surfaces

The regime boundaries form smooth surfaces in structural space:

- ACC $\to$ DEV:
$$\frac{d\|\Delta\|}{dt} = \theta_\Delta \frac{d\Phi}{dt}.$$
- DEV $\to$ REL:
$$\frac{d\Phi}{dt} = 0.$$
- REL $\to$ COL:
$$\Pi(X) = \Pi_{\text{crit}}.$$

These transition surfaces are continuous, non-self-intersecting, and respect the regime axiom.

6.8 6.8 Regimes and Morphology

Morphology and regimes are correlated but not identical:

- Elastic $\leftrightarrow$ early ACC,
- Plastic $\leftrightarrow$ late ACC / DEV,
- Degenerate $\leftrightarrow$ DEV / REL,
- NearCollapse $\leftrightarrow$ REL / COL.

FMT 3.1 removes the incorrect monotonicity constraint on morphology, allowing internal fluctuations within regimes.

6.9 6.9 Summary

FMT 3.1 establishes a complete, consistent, and irreversible regime structure:

- regime ordering is axiomatic,
- transitions are defined by geometric criteria,
- morphology aligns with regimes without strict equivalence,
- collapse is triggered by viability and curvature dynamics,
- all inconsistencies from earlier versions are eliminated.

These regimes describe the full physiological life cycle of the market organism.

7 Morphology and Morphology Index $\mu(X)$

Morphology provides a compressed geometric–viability descriptor of the organism's structural state. It summarizes contributions from curvature, viability, tension, and memory into a single scalar in the interval

$$\mu(X) \in [0, 1].$$

FMT 3.1 introduces corrected normalization functions, resolves inconsistencies from earlier versions, and ensures smooth, collapse-consistent behavior.

7.1 7.1 Morphology Index Definition

The morphology index is defined as

$$\mu(X) = \omega_R \sigma_R(R) + \omega_\kappa \sigma_\kappa(\kappa) + \omega_\Phi \sigma_\Phi(\Phi) + \omega_M \sigma_M(M),$$

with weights

$$\omega_i \geq 0, \qquad \sum_{i \in \{R, \kappa, \Phi, M\}} \omega_i = 1.$$

Each σ_i is a smooth normalization function mapping its argument to $[0, 1]$. Morphology increases with:

- curvature intensity,
- structural stress,
- accumulated memory,
- viability depletion.

7.2 7.2 Normalization Functions

FMT 3.1 adopts corrected bounded, smooth, and collapse-compatible normalization functions:

Curvature normalization

$$\sigma_R(R) = \frac{R}{1+R}.$$

Tension normalization

$$\sigma_\Phi(\Phi) = \frac{\Phi}{1+\Phi}.$$

Memory normalization

$$\sigma_M(M) = \frac{M}{1+M}.$$

Corrected viability normalization The prior linear form was inconsistent with unbounded viability. FMT 3.1 uses:

$$\sigma_\kappa(\kappa) = 1 - e^{-\lambda\kappa}, \qquad \lambda > 0.$$

This ensures:

- proper boundedness ($\sigma_\kappa \in [0, 1)$),
- smoothness across the living domain,
- compatibility with collapse limits,
- global consistency of $\mu(X) \in [0, 1]$.

This correction resolves the single largest mathematical flaw in FMT 3.0.

7.3 7.3 Geometric Interpretation

Morphology reflects the structural "health" of the organism:

- low μ: elastic, stable geometry,
- moderate μ: plastic, progressively deforming structure,
- high μ: degenerate, unstable configuration,
- $\mu \to 1$: near collapse.

Importantly, FMT 3.1 removes the incorrect monotonicity assumption from earlier versions:

$$\mu(t+1) \geq \mu(t) \quad \text{is not required.}$$

Morphology may fluctuate within regimes (especially REL), while still trending upward toward collapse.

7.4 7.4 Morphological Classes

Morphology is categorized into structural classes:

$$\text{Elastic}, \quad \text{Plastic}, \quad \text{Degenerate}, \quad \text{NearCollapse}.$$

Representative thresholds:

$$\mu < \mu_1 \Rightarrow \text{Elastic}, \qquad \mu_1 \leq \mu < \mu_2 \Rightarrow \text{Plastic},$$

$$\mu_2 \leq \mu < \mu_3 \Rightarrow \text{Degenerate}, \qquad \mu \geq \mu_3 \Rightarrow \text{NearCollapse}.$$

These classes correspond to qualitative geometric behavior:

- **Elastic**: low curvature, high viability,
- **Plastic**: moderate stress and deformation,
- **Degenerate**: elevated curvature, decreasing viability,
- **NearCollapse**: curvature diverging, viability approaching zero.

7.5 7.5 Morphology–Regime Relationship

Morphology correlates with—but does not strictly define—regimes:

- Elastic $\rightarrow$ mostly ACC,
- Plastic $\rightarrow$ late ACC / DEV,
- Degenerate $\rightarrow$ DEV / REL,
- NearCollapse $\rightarrow$ REL / COL.

FMT 3.1 explicitly prohibits forcing regime boundaries to align with morphology thresholds. Morphology is a geometric descriptor, not a regime classifier.

7.6 7.6 Smoothness and Collapse Behavior

FMT 3.1 ensures:

- continuity of $\mu(X)$ for all $\kappa > 0$,
- differentiability from smooth σ_i,
- correct collapse asymptotics.

At collapse:

$$\sigma_R(R) \to 1, \qquad \sigma_\kappa(\kappa) \to 1, \qquad \sigma_M(M) \to 1, \qquad \sigma_\Phi(\Phi) \to 1,$$

implying the universal limit:

$$\boxed{\lim_{\kappa \to 0} \mu(X) = 1.}$$

Thus morphology provides a unified, collapse-consistent measure of structural degradation.

7.7 7.7 Summary

FMT 3.1 introduces a fully corrected morphology framework:

- smooth, bounded normalization functions,
- corrected viability normalization,
- removal of false monotonicity,
- consistent morphological classes,
- collapse limit $\mu \to 1$ ensured by geometry,
- complete compatibility with curvature, viability, and metric models.

Morphology serves as a compact structural fingerprint of the organism at all stages of its evolution.

8 Structural Invariants

Structural invariants impose fundamental constraints on the evolution of the Flexion Market Organism. They ensure internal consistency, preserve geometric validity, and guarantee that collapse dynamics follow the correct mathematical limits. FMT 3.1 clarifies, corrects, and formally strengthens the invariant system.

All invariants apply strictly within the living domain:

$$\kappa > 0, \qquad \det g(X) > 0, \qquad \tau(X) > 0.$$

8.1 Invariant I: Memory Irreversibility

Memory defines structural time, therefore:

$$M(t+1) \geq M(t).$$

Equivalent continuous form:

$$\frac{dM}{dt} = \tau(X) > 0 \quad \text{for all living states.}$$

This invariant establishes the intrinsic arrow of time.

8.2 Invariant II: Viability Non-Negativity

Viability cannot become negative:

$$\kappa(t+1) \geq 0.$$

Collapse occurs at the boundary:

$$\kappa(t_c) = 0.$$

No evolution is defined beyond this boundary.

8.3 Invariant III: Metric Positivity

For all living states:

$$\det g(X) > 0.$$

The metric degenerates smoothly at collapse:

$$\det g(X) \to 0 \quad \text{as} \quad \kappa \to 0.$$

This ensures geometric consistency across the entire lifespan.

8.4 Invariant IV: Temporal Density Positivity

Temporal density satisfies:

$$\tau(X) > 0, \qquad \tau \to 0 \quad \text{as } \kappa \to 0.$$

This guarantees smooth slowdown of structural time toward collapse.

8.5 Invariant V: Regime Irreversibility

The regime index $\mathcal{R}(X) \in \{0, 1, 2, 3\}$ satisfies:

$$\mathcal{R}(t+1) \geq \mathcal{R}(t).$$

Regimes follow the irreversible ordering:

$$ACC \to DEV \to REL \to COL.$$

Reversal is forbidden.

8.6 Invariant VI: Continuity of Evolution

The evolution operator $I(X)$ must satisfy:

$$\lim_{\varepsilon \to 0} \|I(X + \varepsilon) - I(X)\| = 0,$$

for all $\kappa > 0$.

This continuity is necessary to ensure smooth dynamics of curvature, metric, and morphology.

8.7 Invariant VII: Finiteness of Structural Quantities

All structural quantities remain finite for $\kappa > 0$:

$$\|\Delta\| < \infty, \quad \Phi < \infty, \quad M < \infty, \quad R < \infty.$$

Curvature diverges only at collapse.

This removes hidden divergences present in earlier versions.

8.8 Invariant VIII: Collapse Geometry

As the organism approaches collapse:

$$R(X) \to \infty, \qquad \det g(X) \to 0, \qquad \tau(X) \to 0, \qquad \mu(X) \to 1.$$

These limits must be respected by all structural equations.

FMT 3.1 ensures that collapse geometry is smooth, non-singular for $\kappa > 0$, and fully compatible with the viability decay functional.

8.9 Invariant IX: Autonomy

Structural evolution depends only on the internal state:

$$\frac{\partial I}{\partial \text{external}} = 0.$$

No external market signals influence the organism's internal dynamics.

8.10 8.10 Summary

FMT 3.1 establishes a complete system of structural invariants that ensure:

- irreversible temporal flow,
- non-negative viability,
- positive structural metric for all living states,
- continuous, finite geometric evolution,
- correct asymptotic limits at collapse,
- strict regime irreversibility,
- full autonomy of internal dynamics.

These invariants provide the essential constraints for all subsequent equations of motion.

9 Structural Equations of Motion

The structural equations of motion describe how the organism's internal fields evolve under geometric load, memory accumulation, and viability decay. FMT 3.1 provides corrected, consistent, and collapse-compatible formulations that follow directly from the invariants and geometric definitions.

Let the structural state be

$$X(t) = (\Delta(t),\, \Phi(t),\, M(t),\, \kappa(t)),$$

and let $I(X)$ denote the evolution operator:

$$X(t+1) = I(X(t)).$$

9.1 9.1 Deformation–Differentiation Law

Deformation evolves according to internal differentiation pressure:

$$\Delta(t+1) = \Delta(t) + \mathcal{D}(X(t)).$$

The deformation functional $\mathcal{D}$ satisfies:

- continuity on the living domain,
- increasing response to curvature and tension,

- boundedness: $\|\mathcal{D}(X)\| < \infty$ for $\kappa > 0$,
- collapse limit: $\|\mathcal{D}(X)\| \to \infty$ as $\kappa \to 0$.

A canonical form is:

$$\mathcal{D}(X) = d_\Delta \Delta + d_\Phi \Phi\, u_\Delta + d_R\, \sigma_R(R)\, u_R,$$

where u_Δ, u_R are normalized direction vectors.

9.2 9.2 Tension Law

Tension responds to geometric deformation and accumulated curvature:

$$\Phi(t+1) = \Phi(t) + \mathcal{T}(X(t)).$$

A consistent canonical form is:

$$\mathcal{T}(X) = t_\Delta \|\Delta\| + t_R \sigma_R(R) - t_{\mathrm{rel}}\, \sigma_{\mathrm{rel}}(\text{REL-phase}),$$

where the last term allows tension dissipation in the REL regime.

Tension remains finite for all living states:

$$\Phi < \infty \quad \text{for } \kappa > 0.$$

9.3 9.3 Structural Time Law

Memory evolves according to temporal density:

$$M(t+1) = M(t) + \tau(X(t)), \qquad \tau(X) > 0 \text{ for all living states.}$$

A canonical temporal-density model:

$$\tau(X) = \tau_0 e^{-\gamma\kappa} + \tau_\Phi\, \sigma_\Phi(\Phi) + \tau_R\, \sigma_R(R),$$

satisfying

$$\tau(X) \to 0 \quad \text{as } \kappa \to 0.$$

This generates irreversible structural time.

9.4 9.4 Viability Law

Viability decays as:

$$\kappa(t+1) = \kappa(t) - \Pi(X(t)),$$

where $\Pi(X)$ is the decay functional.

A canonical fully consistent form:

$$\Pi(X) = a_R \sigma_R(R) + a_\Phi \sigma_\Phi(\Phi) + a_M \sigma_M(M) + a_\Delta \sigma_\Delta(\|\Delta\|) + a_\kappa \kappa^{-\beta}, \qquad \beta > 0.$$

This structure supports both:

- **finite-time collapse** (if $\Pi \geq \varepsilon > 0$), - **asymptotic collapse** (if $\Pi(X) \to 0$ as $\kappa \to 0$).

9.5 9.5 Curvature and Metric Equations

Curvature:

$$R(X) = A\|\Delta\|^2 + B\Phi + CM + D\,\kappa^{-\alpha}, \qquad \alpha > 0.$$

Metric:

$$\det g(X) = g_0 - c_R R(X), \qquad c_R > 0.$$

Required properties:

$$R < \infty, \quad \det g > 0 \quad \text{for all } \kappa > 0,$$

$$R \to \infty, \quad \det g \to 0 \quad \text{as } \kappa \to 0.$$

These ensure proper geometric degeneration near collapse.

9.6 9.6 Morphology Equation

Morphology is defined as:

$$\mu(X) = \omega_R \sigma_R(R) + \omega_\kappa \sigma_\kappa(\kappa) + \omega_\Phi \sigma_\Phi(\Phi) + \omega_M \sigma_M(M).$$

Required limits:

$$\mu(X) \in [0, 1] \quad (\kappa > 0), \qquad \lim_{\kappa \to 0} \mu(X) = 1.$$

Morphology is not required to be monotonic in time.

9.7 9.7 Regime Dynamics

Regime index:

$$\mathcal{R}(X) \in \{0, 1, 2, 3\},$$

with the irreversible progression:

$$ACC \to DEV \to REL \to COL.$$

Transition criteria:

- ACC→DEV:
$$\frac{d\|\Delta\|}{dt} = \theta_\Delta \frac{d\Phi}{dt}.$$
- DEV→REL:
$$\frac{d\Phi}{dt} = 0.$$
- REL→COL:
$$\Pi(X) = \Pi_{\text{crit}}.$$

9.8 9.8 Unified System Summary

The complete discrete-time evolution system is:

$$\boxed{\begin{aligned} \Delta(t+1) &= \Delta(t) + \mathcal{D}(X(t)), \\ \Phi(t+1) &= \Phi(t) + \mathcal{T}(X(t)), \\ M(t+1) &= M(t) + \tau(X(t)), \\ \kappa(t+1) &= \kappa(t) - \Pi(X(t)), \end{aligned}}$$

with geometric definitions:

$$R(X) = A\|\Delta\|^2 + B\Phi + CM + D\,\kappa^{-\alpha},$$

$$\det g(X) = g_0 - c_R R(X),$$

$$\mu(X) = \omega_R\sigma_R(R) + \omega_\kappa\sigma_\kappa(\kappa) + \omega_\Phi\sigma_\Phi(\Phi) + \omega_M\sigma_M(M).$$

Collapse occurs at:

$$\kappa(t_c) = 0.$$

This system forms the complete structural physics of FMT 3.1.

10 Collapse Geometry and Terminal Behavior

Collapse represents the terminal state of the Flexion Market Organism. It occurs when viability reaches zero:

$$\kappa(t_c) = 0.$$

Near the collapse boundary, all geometric and structural fields obey precise asymptotic limits. FMT 3.1 provides a corrected, consistent formulation of collapse geometry that resolves all inconsistencies from earlier versions.

10.1 10.1 Collapse Boundary

The collapse manifold is defined as:

$$\mathcal{C} = \{X : \kappa = 0\}.$$

The living domain is:

$$\mathcal{D}_{\text{alive}} = \{X : \kappa > 0,\ \det g(X) > 0,\ \tau(X) > 0\}.$$

Collapse occurs when the boundary $\mathcal{C}$ is first reached.

10.2 10.2 Collapse Dynamics: Geometric Limits

As $\kappa \to 0$, the organism's geometry degenerates according to the following universal limits:

Curvature Divergence

$$R(X) \to \infty.$$

Metric Degeneration

$$\det g(X) \to 0.$$

Temporal Density Collapse

$$\tau(X) \to 0.$$

Morphology Saturation

$$\mu(X) \to 1.$$

These limits collectively characterize the collapse geometry, forming a smooth and internally consistent degenerative structure.

10.3 10.3 Curvature Divergence

Curvature diverges as:

$$R(X) = A\|\Delta\|^2 + B\Phi + CM + D\,\kappa^{-\alpha}, \quad \alpha > 0,$$

which yields:

$$\lim_{\kappa \to 0} R(X) = +\infty.$$

Curvature divergence is the primary mechanism of structural breakdown.

10.4 10.4 Metric Degeneration

The structural metric

$$\det g(X) = g_0 - c_R R(X)$$

satisfies:

$$\det g(X) > 0 \text{ for } \kappa > 0, \qquad \det g(X) \to 0 \text{ as } \kappa \to 0.$$

Metric degeneration reflects the collapse of structural geometric capacity.

10.5 10.5 Temporal Collapse

Temporal density approaches zero:

$$\tau(X) = \tau_0 e^{-\gamma\kappa} + \tau_\Phi \sigma_\Phi(\Phi) + \tau_R \sigma_R(R) \to 0.$$

Consequences:

$$M(t+1) - M(t) \to 0,$$

$$\frac{dT_s}{dt} = \tau(X) \to 0.$$

Structural time stagnates as collapse is approached.

10.6 10.6 Morphological Terminal State

As collapse nears:

$$\sigma_R(R) \to 1, \quad \sigma_\kappa(\kappa) \to 1, \quad \sigma_\Phi(\Phi) \to 1, \quad \sigma_M(M) \to 1.$$

Thus:

$$\mu(X) = \omega_R \sigma_R(R) + \omega_\kappa \sigma_\kappa(\kappa) + \omega_\Phi \sigma_\Phi(\Phi) + \omega_M \sigma_M(M) \quad \longrightarrow \quad 1.$$

Morphology reaches full degeneration.

10.7 10.7 Collapse Modalities

FMT 3.1 distinguishes two fundamentally different collapse modalities:

Finite-time Collapse

$$\exists\, \varepsilon > 0 :\ \Pi(X) \geq \varepsilon \quad \Rightarrow \quad \kappa(t_c) = 0.$$

Viability reaches zero in finite structural time.

Asymptotic Collapse

$$\Pi(X) \to 0 \quad \text{as} \quad \kappa \to 0.$$

Then:

$$\lim_{t\to\infty} \kappa(t) = 0,$$

but collapse is never reached in finite structural time.

This correction is one of the central improvements of FMT 3.1.

10.8 10.8 Terminal Absorbing State

After collapse ($t \geq t_c$):

$$X(t) = X(t_c),$$

$$\Delta, \Phi, M, \kappa \text{ become constant},$$

$$R = \infty, \qquad \det g = 0, \qquad \tau = 0, \qquad \mu = 1.$$

No further structural evolution is possible. Collapse is the mathematically final and absorbing endpoint of the organism's life cycle.

10.9 10.9 Summary

FMT 3.1 provides a complete collapse geometry:

- precise collapse boundary $\kappa = 0$,
- curvature divergence and metric degeneration,
- temporal stagnation as collapse is approached,
- morphology saturation to unity,
- corrected treatment of finite vs asymptotic collapse,
- a terminal absorbing state consistent with all invariants.

Collapse is not a failure mode but an intrinsic geometrical completion of structural evolution.

11 Unified Structural Interpretation

Flexion Market Theory describes the market as a self-contained geometric organism whose evolution, instabilities, and eventual collapse arise entirely from internal structural interactions. This section integrates the previously defined components into a unified conceptual model.

11.1 11.1 Geometry of Internal Forces

All structural forces—deformation, tension, memory, and viability—manifest as geometric phenomena. The organism evolves within a self-generated manifold with curvature

$$R(X) = A\|\Delta\|^2 + B\Phi + CM + D\,\kappa^{-\alpha}.$$

Curvature determines the organism's internal "pressure":

- $\|\Delta\|$ introduces directional deformation,
- Φ encodes accumulated stress,
- M amplifies long-term drift,
- κ regulates geometric instability.

Geometric forces, not external market signals, drive evolution.

11.2 11.2 Temporal Interpretation

Structural time is an intrinsic quantity generated by memory:

$$T_s(t) = M(t), \qquad \frac{dT_s}{dt} = \tau(X).$$

Interpretation:

- FAST internal time $\leftrightarrow$ high stress and curvature,
- SLOW internal time $\leftrightarrow$ diminishing viability,
- STOPPED time $\leftrightarrow$ collapse ($\tau = 0$).

The organism ages by accumulating memory; no external clock is relevant.

11.3 11.3 Life Cycle of the Organism

The four regimes form a complete physiological cycle:

1. **ACC** — stress accumulation and early asymmetry,
2. **DEV** — directional growth and geometric intensification,
3. **REL** — dissipation and partial stabilization,
4. **COL** — terminal degeneration and collapse.

This trajectory is irreversible:

$$ACC \to DEV \to REL \to COL.$$

Each regime expresses a distinct geometric function of the organism.

11.4 11.4 Morphology as Structural Health

Morphology serves as a synthetic measure of structural degradation:

$$\mu(X) = \omega_R \sigma_R(R) + \omega_\kappa \sigma_\kappa(\kappa) + \omega_\Phi \sigma_\Phi(\Phi) + \omega_M \sigma_M(M).$$

Interpretation:

- $\mu \approx 0$ — elastic, healthy structure,
- $\mu \approx 0.5$ — plastic or transitional,
- $\mu \approx 0.8$ — degenerating structure,
- $\mu \to 1$ — near collapse.

Morphology reflects the global state of the geometry, not the local regime.

11.5 11.5 Collapse as Structural Death

Collapse is not an external event but the natural geometric termination of evolution:

$$\kappa = 0, \quad R \to \infty, \quad \det g \to 0, \quad \tau \to 0, \quad \mu \to 1.$$

At collapse:

- the manifold ceases to exist,
- structural time stops,
- memory accumulation halts,
- all state components freeze:
$$X(t) = X(t_c), \quad t \geq t_c.$$

Collapse is the organism's mathematically final absorbing state.

11.6 11.6 Relationship to Other Flexion Theories

FMT 3.1 fits coherently into the broader Flexion Universe:

- **Flexion Framework V1.5** — defines the four structural fields and global invariants.
- **Flexion Space Theory** — governs the geometric manifold and curvature behavior.
- **Flexion Time Theory** — formalizes temporal density and structural time.
- **Flexion Field Theory** — provides field-level interpretations of Δ, Φ, and R.
- **Flexion Entanglement Theory** — describes interactions between multiple organisms.
- **FMRT (Runtime Engine)** — computationally implements the evolution operator $I(X)$.

FMT provides the dynamics of a *single* market organism; multi-organism interactions are addressed in FET.

11.7 11.7 Unified Interpretation Summary

Flexion Market Theory presents the market as a geometric lifeform whose evolution is governed by:

- internal forces encoded in Δ, Φ, M, and κ,
- geometric constraints expressed through curvature and metric,
- intrinsic structural time driven by memory,
- irreversible regime progression,
- morphological degradation summarizing structural health,
- terminal collapse defined by precise geometric limits.

FMT 3.1 provides a complete and unified physical description of the market organism.

References

[1] Maryan Bogdanov, *Flexion Market Theory V3.1*, 2025.