Markets, Trade, and Tau-Resonance Networks

How Exchange Creates Tau-Flow Coherence Across Addresses

Author: Stephen Daubney · The Daubney Foundation · thedaubneyfoundation@gmail.com · 2026 · P-MKT-1 to P-MKT-6

Abstract

Markets are the primary mechanism by which human societies coordinate the exchange of directed Tau-flow. The Force of Time (FOT) analyses markets as Tau-resonance networks: systems in which Tau-flow signals (prices) propagate between Tau-addresses, enabling coordination without central direction. This paper derives the FOT account of market efficiency, trade, monopoly, financial markets, and the limits of market coordination.

P-MKT-1 · Markets as Tau-Resonance Networks

A market is a set of Tau-addresses exchanging Tau-flow signals (prices) and directing Tau-flow (goods, services, labour) in response. FOT analyses market efficiency as the quality of Tau-signal propagation.

P-MKT-1	A market is Tau-efficient when: (1) price signals accurately reflect the Tau-flow cost of production and exchange; (2) signals propagate rapidly between all Tau-addresses in the network; (3) no Tau-address can distort signals without incurring Tau-flow costs. Market failure is corrupted Tau-signal propagation.

The efficient market hypothesis of standard finance is a special case of Tau-signal propagation in information markets. FOT predicts that markets will be efficient when Tau-signals flow freely and inefficient when information asymmetries, monopoly power, or externalities corrupt the signals.

P-MKT-2 · Trade as Tau-Flow Complementarity

Why does trade benefit both parties? Ricardo's comparative advantage gives a mathematical answer. FOT gives a physical one: trade allows each Tau-address to direct its Tau-flow to the domain where it is most productive.

P-MKT-2	Trade is the exchange of specialised Tau-flow between addresses with different Tau-flow strengths. When address A directs Tau-flow where it is most productive and exchanges output with address B directing Tau-flow where it is most productive, total Tau-throughput exceeds what either could achieve alone. Comparative advantage is Tau-flow complementarity.

Protectionism forces Tau-addresses to direct Tau-flow into domains where they are comparatively weak — reducing total Tau-throughput. FOT does not prohibit protectionism (there may be strategic Tau-flow reasons for it) but identifies its Tau-cost clearly.

P-MKT-3 · Monopoly as Tau-Signal Corruption

Monopoly gives a single Tau-address control over Tau-signal propagation in a domain. FOT identifies monopoly power as signal corruption rather than mere market power.

P-MKT-3	A monopolist can set prices above Tau-flow costs — extracting Tau-flow tokens from other addresses without corresponding Tau-flow transfer. This is Tau-signal corruption: prices no longer reflect genuine Tau-flow costs, so other addresses cannot navigate the Tau-economy accurately. Monopoly is an epistemic harm as well as an economic one.

Natural monopolies (utilities, networks) arise where the Tau-flow cost of infrastructure means only one network is sustainable. FOT predicts that such monopolies require either public ownership or Tau-signal regulation (price controls) to prevent systematic Tau-flow extraction from all other addresses in the network.

P-MKT-4 · Financial Markets and Tau-Flow Futures

Financial markets trade claims on future Tau-flow — equities, bonds, derivatives. FOT analyses financial market stability through the lens of Tau-flow claim validity.

P-MKT-4	A financial instrument is Tau-valid when the future Tau-flow it claims has a reasonable probability of materialising. Speculative bubbles are concentrations of Tau-claims on future Tau-flow that cannot realistically materialise. A bubble collapses when the Tau-claim is repriced to its realistic Tau-flow basis — conservation reasserts itself.

The 2008 financial crisis was a Tau-conservation event: mortgage-backed securities were claims on future Tau-flow from borrowers who could not realistically generate it. The collapse was the market repricing those claims to their actual Tau-flow basis. Bailouts transferred the Tau-gap from private to public Tau-addresses.

P-MKT-5 · Externalities as Unpriced Tau-Flow

An externality occurs when a transaction imposes Tau-flow costs or benefits on Tau-addresses not party to the exchange. Environmental pollution is the paradigm case.

P-MKT-5	Negative externalities are unpriced Tau-flow transfers: the polluter directs Tau-flow costs (health impacts, ecological damage) onto third-party Tau-addresses without payment. The market price is artificially low because it excludes the full Tau-flow cost. Carbon pricing is Tau-cost internalisation: it restores the Tau-signal accuracy of prices.

FOT provides a physical basis for Pigouvian taxation (taxes equal to external Tau-flow cost). The optimal carbon price is the one that makes fossil fuel prices accurately signal the full Tau-flow cost including climate damage. Markets will then direct Tau-flow to lower-cost alternatives automatically.

P-MKT-6 · The Limits of Market Coordination

Markets are powerful Tau-resonance networks but they have structural limits. FOT identifies which goods and domains markets coordinate well and which they cannot.

P-MKT-6	Markets coordinate Tau-flow well when: goods are excludable (Tau-flow tokens can gate access), rivalrous (consumption by one address reduces availability to others), and externality-free. Markets fail to coordinate Tau-flow for public goods (non-excludable, non-rivalrous), merit goods (where Tau-signal access is unequal), and common-pool resources (where individual Tau-flow extraction depletes shared Tau-capacity).

Healthcare, education, and ecological commons are domains where market Tau-signals systematically fail to reflect full Tau-flow costs and benefits. FOT does not prescribe non-market alternatives — it identifies where markets fail and where supplementary Tau-flow coordination mechanisms are physically necessary.