

## **A Conceptual Framework of Value Systems**

Bryce Petofi Towne

Yiwu Industrial and Commerical College

Visiting Researcher

brycepetofitowne@gmail.com

### **Abstract**

In an era marked by intricate global financial interdependencies, traditional economic paradigms underpinning value dynamics are under scrutiny. This paper introduces the "Value Systems" theoretical framework, offering a holistic perspective on the multifaceted mechanisms of value creation, perception, and transmission in modern financial markets. Grounded in both historical and contemporary analyses, the framework categorizes market participants into distinct types, from active proponents to intermediaries, elucidating their roles in shaping value dynamics. Real-world examples, ranging from the 2008 financial crisis to niche fandom economies, serve as illustrative touchpoints, highlighting the framework's applicability and implications. While primarily conceptual, this nascent framework underscores the need for a more comprehensive understanding of value in the face of evolving global financial challenges.

*Keywords:* Value Systems, Financial Interdependencies, Market Participants, Value Dynamics, Economic Paradigms.

### **A Conceptual Framework of Value Systems**

The modern era, with its intricate web of global financial interdependencies, has necessitated a reevaluation of traditional economic theories. The fundamental tenets that once underpinned our understanding of value have been both challenged and expanded in light of recent financial crises and the rise of novel economic phenomena (Tudose, Rusu, & Avasilcai, 2022). As we grapple with this evolving landscape, it becomes imperative to move beyond linear, one-dimensional frameworks and embrace a more holistic, adaptable approach. It's within this context that the "Value Systems" theoretical framework emerges as a timely and innovative lens, offering a multi-dimensional perspective on the fluid, multifaceted dynamics of value creation, perception, and transmission.

However, it's not just the dynamism of these systems that demands our attention; it's their very nature and structure. These systems can be vast, spanning global economies, or intimate, confined to niche sectors. This adaptability in scale, far from being a mere characteristic, underscores the universality and applicability of the Value Systems. Whether we're dissecting the macroeconomic forces at play in global markets or analyzing the value dynamics within a specific industry, this framework provides a consistent and comprehensive tool.

Furthermore, as we delve deeper into the intricacies of these systems, another pivotal aspect comes to the fore: the concept of multiple identities. Traditional economic models often pigeonhole actors into static roles, simplifying their motivations and behaviors. However, in the real world, these roles are seldom singular or static. Economic actors, whether they be individuals, institutions, or even nation-states, often juggle multiple identities, each influencing and being influenced by various Value Systems. Recognizing this complexity is not just essential for accuracy; it's foundational for understanding the nuanced interplay of forces within and across these systems.

This paper, therefore, ventures into this uncharted territory, elucidating the principles of the Value Systems framework, exploring its various dimensions, and analyzing its implications for modern financial markets. Through case studies and theoretical discussions, the author aims to shed light on the multifarious nature of value, the roles and behaviors of participants within these systems, and the broader economic ramifications of their interactions.

### **Literature Review**

The evolution of economic theories regarding value perception, creation, and transmission has been the subject of scholarly investigation for centuries. The contemporary landscape of global financial markets, replete with its intricate interdependencies and unique economic phenomena, has necessitated a reevaluation of conventional economic paradigms.

#### **Traditional Value Theories**

Historically, the concept of value in economic theories has been closely tied to tangible metrics, often represented by market prices and determined by demand-supply dynamics. Smith (1776) in his seminal work, "An Inquiry into the Nature and Causes of the Wealth of Nations," posited that the value of any commodity or service is determined by the labor required for its production. This labor theory of value was further developed by Ricardo (1821) and later became a central tenet of Marxian economics (Marx, 1972).

However, as economies evolved and became more complex, so did the theories of value. The marginalist revolution of the late 19th century, led by figures such as Jevons (1879) and Menger (1871), shifted the focus from labor to utility. They argued that value is determined by the marginal utility of a commodity to its user.

#### **The Modern Value Systems**

The 20th and 21st centuries witnessed an exponential increase in financial innovations and the complexity of global markets. This led to a realization that value is not merely a

function of labor or utility but is influenced by a multitude of factors, including psychological, sociocultural, and institutional dynamics. Kahneman and Tversky (2013) introduced the concept of prospect theory, suggesting that people's perceptions of value are influenced by cognitive biases and heuristics. This work was groundbreaking in bridging the gap between psychology and economics, providing insights into the non-linear and often irrational ways in which individuals perceive value.

In the realm of finance, Shiller (1981) explored the role of psychology in the valuation of financial assets, suggesting that asset prices often deviate from their fundamental values due to psychological factors. This was further built upon by the emerging field of behavioral finance, which integrates psychological insights into financial theories to explain anomalies in asset prices (Barberis & Thaler, 2003).

### **Value in a Globalized World**

As economies became more interconnected, the importance of understanding value systems that span across global markets became evident. Obstfeld and Rogoff (1996) highlighted the role of global capital flows in influencing asset values in different countries. They argued that in an era of financial globalization, understanding the dynamics of international capital flows is crucial in understanding value creation and transmission across countries.

Furthermore, Giddens (2007) in his work on globalization highlighted the importance of understanding the interplay of local and global forces in shaping value systems. He argued that in a globalized world, local events can have global repercussions and vice versa.

### **The Role of Intermediaries**

The importance of intermediaries in transmitting value across markets has been a subject of significant interest. Allen and Gale (2004) explored how financial intermediaries play a role in risk sharing and value transmission across markets. They emphasized the role

of banks and other financial institutions in facilitating the flow of capital and value across different sectors and regions.

In the context of the 2008 financial crisis, Brunnermeier (2009) highlighted the role of "financial plumbing" and the interconnectedness of global financial institutions in transmitting shocks across markets. He argued that the intricate web of financial interdependencies played a significant role in amplifying the effects of the crisis.

The exploration of value and its dynamics in economic theories has evolved significantly over the centuries. From labor-based theories to utility-focused approaches and now to a more holistic understanding that encompasses psychological, sociocultural, and institutional factors, the concept of value remains central to economic thought. In the contemporary era of financial globalization and interdependencies, understanding the dynamics of value systems across markets is crucial for both academics and practitioners.

### **Overview of the 'Value Systems' Theoretical Framework**

In the intricate domain of economic theory, the concept of "value" has long been a subject of debate and interpretation. As highlighted by Alava (2019), economic value cannot be solely defined without acknowledging the user as its source. Traditional models have frequently equated value with tangible metrics, often represented by market prices and determined by demand-supply dynamics. However, such a view seems increasingly incongruent with the intricacies of contemporary financial systems. The era of globalization and pronounced financial interconnectivity necessitates a broader conceptualization of value that transcends mere numerical shifts and delves into shifts in price cognition and overall value understanding. It is in this context that we introduce the "Value Systems" theoretical framework, a paradigm enabling a deeper comprehension of the layered, dynamic processes of value creation, perception, and transmission.

### **Defining "Value Systems"**

Central to the "Value Systems" framework is the assertion that value is neither static nor absolute. It represents a dynamic entity, continually evolving under the influence of diverse economic, sociocultural, and psychological factors. Within this paradigm, a "Value System" is visualized as a well-defined ecosystem wherein the processes of value perception, acceptance, and transmission transpire. This ecosystem comprises a variety of actors/participants, with each contributing distinctively, either by shaping, validating, or contesting the prevailing value discourse.

Attributes integral to "Value Systems" are:

### ***Openness/Closedness***

This facet evaluates how the value perceived within a system extends beyond its boundaries. It scrutinizes the alignment or divergence of value perceptions between active participants (engaged in economic transactions) and passive observers.

### ***Scale***

Instead of indicating size, scale delves into the richness and intricacy of participants within the value ecosystem. A system with a larger scale suggests a diversified array of actors.

### ***Interconnectedness (Linkages)***

This characteristic emphasizes the crucial function of certain actors, identified as Value Intermediaries. These intermediaries play a cardinal role in value flows across disparate systems.

### **Introducing the Roles of Participants - Type A through E**

Within a Value System, the range and diversity of roles are instrumental to its operation and comprehension. Importantly, a single participant may adopt multiple roles either within a specific value system or across different systems, highlighting the dynamic and complex nature of their identities. These roles can evolve or interchange over time. For

instance, a fervent fan might redirect both their financial and emotional allegiance from one idol to another, whereas an individual who was previously unengaged might cultivate a preference and commence active financial support for the an idol.

***Type A (Value Proponents & Active Participants)***

These are the cornerstone actors within the system, directly engaging in economic transactions based on a deep-rooted belief in the perceived value. Their actions and sentiments often set the tone for the prevailing value narrative.

***Type B (Value Skeptics & Active Participants)***

While these actors actively participate in economic transactions, they harbor reservations about the prevailing value. Their engagement is often driven by extrinsic motives, such as short-term profit, rather than an inherent belief in the value.

***Type C (Value Proponents & Passive Observers)***

This group, while not directly involved in transactions, resonates with and endorses the prevailing value narrative. Their sheer numbers and passive endorsement can significantly bolster the system's value resilience.

***Type D (Value Skeptics & Passive Observers)***

Conversely, Type D participants, together with their passive stance, cast skepticism on the prevailing value, potentially dampening its widespread acceptance.

***Type E (Value Intermediaries)***

As the linchpins of interconnectedness, these actors wield the power to transmit value across systems. Their endorsements or rejections can cascade through the financial ecosystem, amplifying or attenuating value dynamics in interconnected systems.

In essence, the "Value Systems" framework offers an expansive conceptual exploration of the nuanced value dynamics operational both within and across financial ecosystems. Recognizing the multifarious essence of value and the heterogeneous roles of

system participants, this paradigm signifies a path towards a richer, more intricate comprehension of the dynamics governing financial markets.

### **Implications of Openness and Closedness**

Within the ambit of the "Value Systems" framework, the dichotomy of openness versus closedness is not a mere theoretical proposition. It carries practical economic ramifications. These ramifications, frequently manifested in market dynamics, investment behaviors, and broader financial stability, are intricately tied to the perceptions and actions of Types C and D participants.

### **The Dynamics of Types C and D: Indicators of Openness and Closedness**

While Types C and D may ostensibly appear passive, they are pivotal in gauging the extent of a system's openness or closedness.

#### ***Type C (Value Proponents & Passive Observers)***

Their endorsement of the prevailing value narrative, despite not being actively engaged in economic transactions, accentuates a system's resonance beyond its immediate confines. An abundance of Type C observers suggests a system leaning towards openness, where the perceived value garners widespread acknowledgment even among non-active market participants.

#### ***Type D (Value Skeptics & Passive Observers)***

Conversely, a pronounced presence of Type D observers indicates a tilt towards a more closed system. Their latent skepticism could potentially attenuate broader acceptance of the system's value, rendering it susceptible to volatility and transitory shifts.

### **Empirical Examination: Antique Markets and Fandom Economies**

To substantiate our understanding, we delve into the following paradigms:

***Antique Markets: A Relatively Open, Small Scale and Interconnected Value System***

Characterized by its relative openness, the Antique Markets see a broad acceptance of its inherent value, even among those not actively transacting (see Figure 2). The very nature of antiques – artifacts steeped in history and culture – engenders a widespread reverence, making Type C participants ubiquitous. While transactions may be limited to a niche audience, the value perception finds resonance in a broader spectrum, from casual onlookers to academic historians. The presence of Type E intermediaries, like banks, further accentuates its interconnectivity with other value systems by recognizing the antiques as collaterals, underscoring the broader economic implications of its value dynamics.

***Fandom Economies: A Typical Closed and Small Scale Value System***

In stark contrast, Fandom Economies are much more insular (see Figure 1). While a celebrity's memorabilia might fetch exorbitant prices among ardent fans (Type A participants), its value might be met with skepticism or indifference by the broader populace (Type D). The ephemeral nature of celebrity popularity and the potential for rapid shifts in public sentiment make these economies more closed. The value collapse in such systems, though dramatic, often remains contained without broader economic ramifications, given the lack of significant Type E intermediaries.

In essence, the degree of openness or closedness within a "Value System" has far-reaching economic consequences, impacting market resilience, shaping investor behaviors, and influencing financial interconnectivity. A granular examination of the nuances associated with Types C and D participants affords invaluable insights into these dynamics, providing a bedrock for informed economic prognostications and strategies.

**The Pertinence of Scale within Value Systems**

The scale, which does not represent volume, is a pivotal facet within the "Value Systems" framework. It transcends the quantitative and delves deep into the qualitative

aspects, shaping the contours of financial market stability and systemic risk. The magnitude of a value system, gauged through the diversity and interactions of Types A and B participants, has overarching implications for market behaviors, vulnerability to shocks, and resilience in the face of external pressures.

### **Scale's Influence on Financial Market Stability and Risk**

The scale of a value system is intrinsically linked to its vulnerability and responsiveness to market perturbations.

#### ***Diversified Scale***

A value system with a diversified scale, marked by a plethora of varied Type A and B participants, often showcases enhanced resilience. Such systems, by virtue of their heterogeneity, are less susceptible to monolithic shocks. Diverse participation ensures that while certain segments might face downturns, others can potentially counterbalance, thereby mitigating systemic risk (Moslehpour et al., 2022).

#### ***Concentrated Scale***

Conversely, value systems dominated by a homogenous set of participants are more prone to systemic risks. In such systems, a singular external event can have a cascading effect, amplifying shocks and potentially leading to market collapses.

### **Gauging Scale through the Diversity of Types A and B**

Types A and B, the active proponents and skeptics respectively, serve as the linchpins in determining the scale of a value system.

#### ***Type A (Value Proponents & Active Participants)***

Their active endorsement and participation not only bolster the value within the system but also bring in varied perspectives. A diverse set of Type A participants, from retail investors to institutional players, signifies a robust and extensive value system. Their

interactions, collaborations, and even conflicts enrich the system's dynamics, making it multifaceted.

### ***Type B (Value Skeptics & Active Participants)***

Their presence, while often being neglected, is indispensable for a value system. Type B participants ensures the successful transactions of value within the system. Their active participation, driven by economic interests rather than genuine appreciation of the value itself, makes the whole system functional.

The scale, as conceptualized within the "Value Systems" framework, is a potent determinant of market dynamics. By meticulously analyzing the diversity and interactions of Types A and B participants, we can anticipate market trajectories, discern vulnerabilities, and strategize for enhanced financial stability.

### **Interconnectedness: The Conduit for Value Transition**

Interconnectedness, a core concept within the "Value Systems" framework, delineates how value recognition, transfer, and even amplification transpire across diverse financial systems. Central to this concept is the role of Type E participants, termed "Value Intermediaries." These intermediaries play an instrumental role in transmitting value perceptions across systems, and their actions can have profound implications on financial stability and risk dynamics.

### **Elucidating the Criticality and Function of Type E**

#### ***Bridging Value Systems***

Type E participants function as the vital links that bridge disparate value systems. By recognizing the value of specific assets or facilitating their liquidity, these intermediaries can send ripples across financial ecosystems, either reinforcing or undermining value perceptions (Heijmans & Wendt, 2010).

### ***Risk Propagation and Mitigation***

The inter-system activities orchestrated by Type E participants can either propel risks or act as buffers. Their decisions, steered by market perceptions, regulatory landscapes, and unforeseen external events, dictate the direction and intensity of value transitions (Alonso & Stupariu, 2019).

### **Empirical Analysis**

#### ***The 2008 Financial Crisis***

A pivotal event in contemporary financial history, the 2008 Financial Crisis offers an illustrative case of interconnectedness and the role of Type E participants. The securitization of subprime mortgages, a quintessential activity of Type E intermediaries, transmuted localized lending practices into globally traded assets. As these securities, anchored on the perceived value of American real estate, turned into conduits of risk, localized housing market vulnerabilities radiated out to global financial domains. Major banks and financial institutions, epitomizing Type E participants, were deeply entrenched in this crisis. Their expansive inter-system engagements, both in assets and liabilities, led to a cascade effect, converting a housing market downturn into a full-blown global financial meltdown (Poledna et al., 2020).

#### ***The Chinese K12 Education Sector***

In contrast to the 2008 crisis, the downturn in the Chinese K12 Education Sector underscores a scenario with limited interconnectedness due to the absence of significant Type E actors. Despite the sector experiencing challenges, its ramifications did not cascade into broader financial markets. The inherent nature of education services, which are hard to commodify and use as collateral, meant that value from this sector couldn't easily flow to other systems. Thus, even though the sector faced setbacks, the lack of Type E intermediaries

ensured that the repercussions remained largely localized, preventing a broader financial upheaval.

Overall, the concept of interconnectedness within the "Value Systems" framework serves as a beacon to understand the flow and dynamics of value across financial landscapes. By examining the roles and actions of Type E participants, we gain a refined perspective on potential vulnerabilities and strategies to enhance financial market resilience (Giudici et al., 2020).

### **Interpreting the Financial Crisis Through the Lens of Value Systems**

The 2008 financial crisis, when viewed through the "Value Systems" framework, can be attributed to the collapse of the real estate market's value system. This particular value system is distinguished by its openness, vast scale, and pronounced interconnectedness (see Figure 3), which arise from:

- The widespread recognition of real estate value by a significant number of Type C participants.
- The involvement of a diverse array of Type A and D participants, encompassing developers, investors, banks, construction firms, interior decorators, and suppliers of building materials.
- The universal acknowledgment of real estate value by numerous Type E participants, facilitating its flow across various value systems.

In contrast, the devaluation of cryptocurrencies, the obliteration of the entire Chinese K12 education sector due to governmental bans, and the severe impact on the travel industry during the pandemic did not culminate in a financial crisis comparable to 2008. Despite the staggering figures associated with the real estate market's value evaporation, the values linked to cryptocurrencies, K12 education, and the tourism sector were relatively modest. Yet, a systemic financial crisis did not ensue.

From the perspective of the "Value Systems" framework:

- Cryptocurrencies are part of a closed, relatively small-scale value system with minimal interconnectedness. This is attributed to the limited acceptance of Cryptocurrencies for purchasing goods, compounded by legal challenges and pronounced price volatility.
- The Chinese K12 education sector represents an open, medium-scale value system with low interconnectedness. Although educational services are highly valued in China, they cannot be commodified or exchanged for value via Type E.
- The tourism sector, being relatively open and small-scale, also exhibits low interconnectedness. Similar to educational services, tourism services cannot be exchanged for value through Type E.

Interconnectedness stands out as a crucial metric. Value systems with high interconnectedness can directly transmit value shifts to other systems when they experience value collapse, potentially triggering systemic financial risks. Conversely, systems with low interconnectedness act as barriers, preventing the direct transmission of value to other systems during value collapse.

Undoubtedly, scholars may contend that the magnitude of value depletion from the American Real Estate Market, Chinese K12 Education Sector, Cryptocurrencies, and the Global Tourism Sector varies considerably. The diminution in the aforementioned Real Estate Market is notably substantial. However, the economic value vested in China's K12 education sector is also quite substantial, and several nations, including Thailand and New Zealand, have economies heavily reliant on tourism. Yet, as of 2023, these sectors have not precipitated a global financial crisis. Therefore, the magnitude of value should not be considered as the sole determinant of financial crisis.

Moreover, since roles within value systems often overlap with multiple value systems, indirect transmission to other value systems remains a possibility. Yet, based on this study, interconnectedness emerges as a more pivotal evaluative metric.

This paper offers a foundational theoretical framework. Comprehensive research is imperative to delve into the specific roles of Types A through E and the intricacies of value systems, especially considering the multifaceted nature of real-world scenarios.

### **Financial Risk Preventions within the Value Systems Framework**

In an increasingly globalized financial landscape, the need for innovative frameworks to interpret and anticipate value dynamics has never been greater. The “Value Systems” theoretical framework emerges as a versatile tool, providing a comprehensive perspective on value creation, perception, and transmission. Central to this model is the notion of interconnectedness and its subsequent implications for financial market stability. Using this framework as our guide, we delineate strategies to assess and mitigate financial risks rooted in value perceptions (Heijmans & Wendt, 2020).

### **Establishing a Feasible Value System Identification Method**

The initial step in risk assessment is the clear delineation of extant value systems.

This involves:

- Categorizing dominant market actors into Types A through E, based on their influence and roles within the system.
- Evaluating the system's openness or closedness, determined by how value perceptions of active participants align with those outside the system.
- Assessing the system's scale by examining the diversity and complexity of participants.
- Examining the system's interconnectedness, determined by the number of Type E intermediaries.

### **Instituting an Anomalous Value Detection System**

To identify potential anomalies and deviations, continuous monitoring of value perceptions is essential. This involves:

- Regularly surveying value perceptions among Types A, B, C, and D participants.
- Aligning these perceptions with market data and feedback mechanisms.

The catastrophic 2008 Financial Crisis, ignited by the housing market value system's implosion, serves as a stark reminder of unchecked value perceptions' ramifications (Bernanke, 2009). The housing market, notable for its openness, vast scale, and significant interconnectedness, had its values deeply ingrained across a wide array of actors, from developers and investors to banks and construction entities. These values, accepted by numerous Type C participants, were channeled into other systems via Type E intermediaries.

In contrast, the disruptions in cryptocurrency, China's K12 tutoring sector following government interventions, and the pandemic-hit travel industry did not culminate in a systemic financial crisis. Although the value evaporation in the housing market far surpassed these sectors, interconnectedness emerged as the distinguishing factor. Cryptocurrencies, with their relatively closed, smaller scale, and limited interconnectedness, didn't disseminate their value fluctuations extensively. Likewise, the K12 tutoring and travel sectors, despite their openness, ranked low in interconnectedness.

Such differential impacts highlight interconnectedness as a critical determinant. Systems with high interconnectedness might transmit value collapses more broadly, potentially triggering systemic financial risks. Conversely, low interconnectedness tends to limit repercussions to the originating system. Nonetheless, given the complex interplay of value systems, even indirect value transmissions are possible, emphasizing the importance of scrutinizing interconnectedness.

### **Prioritizing Interconnectedness**

To preemptively curb the spread of value collapses, managing interconnectedness becomes essential. This entails:

- Keeping a close watch on Type E intermediaries, the mainstays of interconnectedness.
- Evaluating the possible cascading effects of their endorsements or skepticism on interlinked systems.

While the “Value Systems” framework offers a novel lens, its real-world application demands further exploration, especially concerning the roles of Types A through E and the intrinsic nature of value systems. The multifaceted dynamics of real-world finance underscore the importance of continued empirical research (Cerqueti et al., 2022).

## A Mathematical Framework for Evaluating ‘Value Systems’

### A Mathematical Framework for Evaluating "Value Systems"

#### 1. Preliminaries and Notations

- $C_{AB}(t)$ : Confidence index for Types A and B at time  $t$ .
- $O_{CD}(t)$ : Openness/Closeness index for Types C and D at time  $t$ .
- $S(t)$ : Scale metric at time  $t$ .
- $L_E(t)$ : Linkage or interconnectedness metric at time  $t$ .
- $N_{AB}(t)$ : Total number of Types A and B surveyed up to time  $t$ .
- $N_{CD}(t)$ : Total number of Types C and D surveyed up to time  $t$ .
- $\text{Conf}_{AB}(t)$ : Cumulative confidence ratings from A and B up to time  $t$ .
- $\text{Open}_{CD}(t)$ : Cumulative openness ratings from C and D up to time  $t$ .

#### 2. Survey-based Indices

- **Participant Confidence Dynamics:**

$$C_{AB}(t) = \frac{\text{Conf}_{AB}(t)}{N_{AB}(t)}$$

- **Openness/Closeness Dynamics:**

$$O_{CD}(t) = \frac{\text{Open}_{CD}(t)}{N_{CD}(t)}$$

#### 3. Scale and Linkage Dynamics

- **Scale Dynamics:**

$$S(t) = \alpha(t) \times D_{AB}(t) + \beta(t) \times N_{AB}(t)$$

Where  $D_{AB}(t)$  represents the diversity of Types A and B at time  $t$ .

- **Linkage Dynamics:**

$$L_E(t) = \gamma \times \frac{\text{Interc}_E(t)}{N_{VS}(t)}$$

Where  $\text{Interc}_E(t)$  denotes cumulative interconnections up to time  $t$ , and  $N_{VS}(t)$  is the total number of value systems.

#### 4. Unified Value System Descriptor

$$VS(t) = [C_{AB}(t), O_{CD}(t), S(t), L_E(t)]$$

## Method

### Conceptual Exploration

The foundational premise of this research is built upon the theoretical framework of Value Systems. By dissecting the role of each participant type (Type A through Type E), the author aims to unearth the underlying mechanisms that drive value perceptions within financial markets. This conceptual exploration facilitates an understanding of the micro-

dynamics at play, which serves as a bedrock for the subsequent empirical and mathematical analyses.

### **Interdisciplinary Insight**

The author's approach is not confined to the traditional boundaries of economic thought. By integrating sociological, psychological, and cultural dimensions, a holistic examination of how value is perceived, constructed, and transmitted is provided. Such an interdisciplinary perspective enriches the understanding and presents a nuanced picture of the intricacies of financial markets.

### **Mathematical Modelling**

Building on the conceptual foundation, mathematical models are employed to quantitatively describe the nature of Value Systems. This approach has been developed mainly by ChatGPT to compensate for the author's constraints in math.

### **Crisis Prevention Implications**

By analyzing the interplay of openness/closedness, scale, and linkage, the models present invaluable insights for regulators and policymakers. Anomalies in these parameters could serve as early warning indicators of potential financial crises, enabling proactive measures.

### **Limitations and Future Directions**

The present manuscript offers an embryonic, conceptual framework for understanding the intricacies of "Value Systems." While this initial foray provides a foundational understanding, several limitations and avenues for future research are evident:

#### **Theoretical Maturity**

The proposed framework, in its current iteration, remains largely conceptual. Future explorations must consider a more intricate incorporation of real-world factors to enhance

both applicability and precision. The importance of developing new organizational and economic mechanisms in the face of global challenges is paramount.

### **Framework Evolution**

As our comprehension of Value Systems deepens, there's potential for the theoretical underpinnings to evolve. This nascent framework would benefit from collaborative refinement by the academic community, policymakers, and stakeholders to unearth additional participants and operational mechanisms.

### **Simplification of Illustrations**

The examples provided, while elucidative, are arguably reductive. They do not encompass the complex interplay of factors such as market dynamics, regulatory influences, and financial market fluctuations. Nevertheless, they serve as clarifying touchpoints, offering heuristic value and pragmatic reference. Incorporating real-world data can provide more concrete insights into financial risk early warning systems<sup>2</sup>.

### **Mathematical Foundation**

Absent from this manuscript is a rigorous mathematical underpinning, a result of the author's non-mathematical background (very limited knowledge on math). This framework, therefore, presents an opportunity—and a clarion call—for subsequent research to infuse mathematical rigor, thereby offering both theoretical robustness and directional precision.

### **Empirical Constraints**

The reliance solely on case studies, devoid of empirical data, might be seen as a limitation. Empirical validation through comprehensive datasets would be instrumental in substantiating and fine-tuning the proposed framework.

### **Expanding Participant Roles**

There's an inherent need to delve deeper into the theoretical nuances. Beyond the participant types discussed, other roles, such as Regulators, await exploration, offering potential for richer insights.

### **Quantitative Challenges**

The tasks of mathematical modeling, quantification, and standardization remain formidable challenges and are bequeathed to future researchers and the broader academic community for resolution and enhancement.

### **Value Subjectivity**

One of the foundational challenges lies in the inherent subjectivity of value, rendering quantification and monitoring elusive. This model warrants further academic refinement to circumvent oversimplification and standardization pitfalls.

while the "Value Systems" framework offers a novel academic lens, its applicability, and utility will be contingent on rigorous exploration, validation, and refinement. The academic community is thus poised at the cusp of a compelling journey of discovery, one that promises richer insights into the dynamics governing financial markets.

## **Discussion**

As the global financial landscape continues to evolve, marked by increasing complexity and interconnectedness, the traditional frameworks and paradigms underpinning our understanding of value dynamics have been tested and challenged. This manuscript's introduction of the "Value Systems" theoretical framework represents a timely and innovative response, offering a fresh, multidimensional perspective on value creation, perception, and transmission.

At the heart of this framework is the recognition that value is neither static nor absolute. It is a dynamic entity, shaped and reshaped by an intricate web of economic, sociocultural, and psychological forces. By delineating distinct participant types, from active

proponents to value intermediaries, the "Value Systems" framework provides a nuanced understanding of the myriad actors and forces at play within the vast theater of financial markets.

The real-world examples provided, from the 2008 financial crisis to the nuances of fad economies, serve as illustrative touchpoints, highlighting the potential implications and applications of this framework. While the primary emphasis of our exploration remains conceptual, these examples underscore the practical ramifications of our theoretical constructs.

However, as with any nascent theoretical framework, the "Value Systems" paradigm is not without its challenges and limitations. Future research endeavors should aim to integrate empirical data more extensively, validating and refining the framework's key tenets. Additionally, as the financial landscape continues to evolve, the framework itself should remain adaptable, responsive to the ever-changing dynamics of the global economy.

In summation, the "Value Systems" framework offers not just a novel academic lens but a potent tool for policymakers, regulators, and stakeholders. As we navigate the intricate pathways of the modern financial world, such frameworks provide the compasses and maps we need, guiding us towards a deeper understanding and more informed decision-making. We are optimistic that this initial exploration will inspire further research, discussion, and refinement, advancing our collective understanding of value dynamics in the 21st century.

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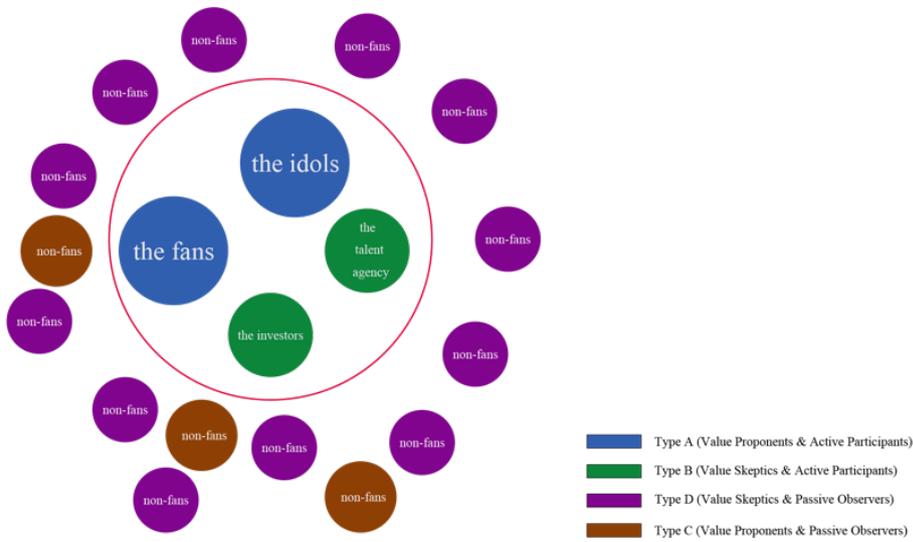
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**Figure 1**

*Fandom Economy: A Typical Closed and Small Scale Value System*

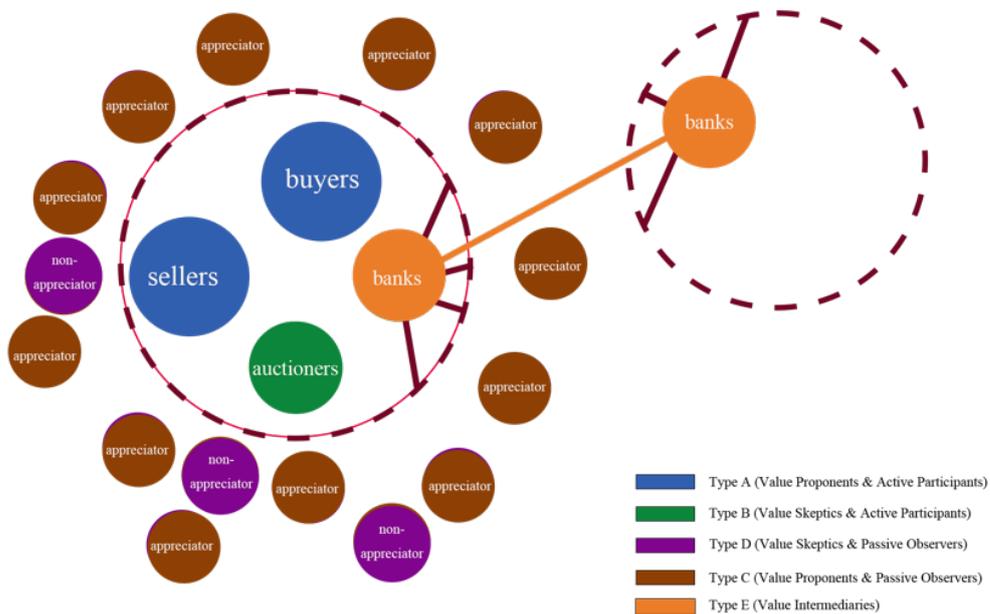
**Fandom Economy : A Typical Closed and Small Scale Value System**



**Figure 2**

*Antique Markets: A Relatively Open, Small Scale and Interconnected Value System*

**Antique Markets : A Relatively Open, Small Scale and Interconnected Value System**



**Figure 3**

*Real Estate Markets : An Open, Large Scale and Highly Interconnected Value System*

**Real Estate Markets : An Open, Large Scale and Highly Interconnected Value System**

