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Narrative Risk Premia: How Persistent Market Narratives Generate Volatility and Mispricing

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ABSTRACT

This paper introduces the concept of narrative risk premia and presents empirical results indicating the presence of persistent narratives in financial markets, leading to excess volatility and mispricing. To further this concept, this research applies Robert J. Shiller's narrative economics theory, advancing it from existing theories of market sentiment or information by creating a Market Narrative Intensity Index (MNII) based on the intensity of financial narratives within financial news, equity analyst reports, and financial communication within institutions. By integrating the index within theoretical structures of time series, asset pricing, and regime-switching, this research indicates narrative intensity shocks impacting volatility spikes, excessive returns, and narrative intensity-based risk premiums within the asset cross-section. The results indicate narrative effects exhibiting significant non-linear properties, regime dependency, narrative amplification in high narrative intensity states, and differences based on narratives centered on 'fear' or 'hopefuls.' These results provide alternative interpretations for volatility, market efficiency, and narratives as financial risk sources.

Keywords: Narrative risk premia; market narratives; asset pricing; volatility; mispricing; behavioral finance; narrative economics; belief-driven risk; regime switching; text-as-data in finance.
JEL Classification Codes: G12; G14; D84; E44; C22; C55

INTRODUCTION

There are degrees of market Volatility, Mispricing, and market Regime Changes that are very hard to justify from Fundamental Models of rational Risk. Stock prices experience regular instances of Overshooting, Crash Contagion spreads speedier than balance-sheet deteriorations, and Industry-wide markets experience periods of Booms & Busts, which do not seem synchronized with accompanying cash-flow generations. Such observations are very well recorded, yet only somewhat acknowledged by Fundamental Models of asset prices. Although rational Risk Premia do explain Risk Premium Adjustments for systematic Uncertainty, they do fail to account for why Perceived Risks vary vastly over relatively short periods of time, even when under aches of Fundamental Changes.

A growing body of research in behavioral finance attributes excess volatility and mispricing to investor sentiment, noise trading, and limits to arbitrage. These approaches have undoubtedly improved our understanding of departures from full rationality, but they tend to treat beliefs as diffuse psychological states rather than as structured, socially transmitted systems. As a result, they offer limited insight into why particular interpretations of market conditions become dominant, persist, and exert coordinated influence across heterogeneous investors. The

missing element is not emotion per se, but shared meaning—the stories investors tell about what is happening in markets and why it matters.

This paper contends that market narratives are an independent source of risk not yet properly accounted for in conventional measures of market sentiment or information. Narratives are well-structured stories linking facts and their causal implications to prospects. They are not afterthoughts to market developments but are instead active in framing the perception and processing of risk. As presented in the narrative economics school pioneered by Robert J. Shiller, market narratives propagate within their respective social and information networks, achieve hold through repetition combined with emotional appeal, and maintain durability for enough time to affect actual economic choices. Market narratives, with their focus on expectations of expectations, can serve as very useful coordinating tools in financial markets.

Despite their intuitive appeal, narratives have played a limited role in formal asset-pricing research. Existing studies that touch on market stories tend to remain descriptive, retrospective, or subsumed under broader sentiment measures. As a consequence, the asset-pricing literature lacks a framework capable of linking persistent market narratives to priced risk premia, volatility regimes, and systematic mispricing. This gap is particularly striking given that many of the most consequential market episodes of recent decades—the dot-com bubble, the global financial crisis, the post-pandemic inflation scare, and the rapid ascent of speculative themes such as cryptocurrencies or artificial intelligence—are widely understood in narrative terms.

The central premise of this paper is that narratives affect markets not by generating random noise but by reshaping perceived risk. When a narrative becomes dominant—such as "technology has permanently raised growth," "financial contagion is imminent," or "inflation is out of control"—it alters investors' subjective probability distributions over future states of the world. These changes in perceived tail risk and uncertainty demand compensation, giving rise to what this paper terms **narrative risk premia**. The central premise of this paper is that narratives affect markets not by generating random noise but by reshaping perceived risk. When a narrative becomes dominant—such as "technology has permanently raised growth," "financial contagion is imminent," or "inflation is out of control"—it alters investors' subjective probability distributions over future states of the world. These changes in perceived tail risk and uncertainty demand compensation, giving rise to what this paper terms narrative risk premia. Unlike traditional risk premia, which are related to objective covariance either with consumption or with returns, narrative risk premia are based on belief-driven volatility that is socially constructed and varies over time.

Such an approach provides a unified answer to various stylized facts observed within financial markets. Firstly, it assists in understanding why the occurrence of high volatility tends to happen before the fundamental deterioration and not after the deterioration of the markets' fundamentals due to the escalation of the story, which could generate concerns about the downside risks, without altering the fundamental outcomes. Second, it provides a mechanism for prolonged mispricing: as long as a narrative persists, prices may remain detached from fundamentals, despite the presence of arbitrageurs. Third, it naturally generates regime dependence. Markets behave differently when narratives are weak and fragmented than when they are intense, emotionally charged, and widely shared.

The empirical challenge lies in measuring narratives in a way that preserves their dynamic and structural properties. Much of the existing literature relies on sentiment indices or news volume, which capture tone or attention but not coherence, persistence, or amplification. This paper addresses this challenge by constructing a **Market Narrative Intensity Index (MNII)** derived from large-scale financial news and market commentary. The index captures four key dimensions emphasized in narrative economics: salience, emotional amplitude, persistence, and volatility of narrative attention. By embedding this index within time-series and asset-pricing frameworks, the paper provides a systematic test of whether narratives constitute a priced source of risk.

The core research question is therefore: ***Do persistent market narratives generate systematic volatility and mispricing that are priced as risk premia in financial markets?*** Answering this question requires moving beyond static correlations toward a dynamic framework that can distinguish narrative-driven risk from fundamental shocks and sentiment fluctuations. To this end, the paper employs vector autoregressions, local projections, regime-switching models, and cross-sectional asset-pricing tests to identify narrative shocks and trace their effects on volatility and returns.

The following are the contributions made in the paper. First, the paper brings in the idea of narrative risk premia. This creates a risk premium because of the narratives in the markets. The paper creates a formula to measure the intensity of the narratives in the markets. The paper also brings in the evidence regarding the effect of the intensity of narratives in the markets. The effect of the narratives happens in a non-linear process in the markets.

These results are directly relevant to research on market efficiency and causes of financial instability. Instead of viewing market instability as noise, which is a deviation from market efficiency, these results indicate that markets can still be efficient, conditional on a belief driven by market narratives. Prices will thus remain coherent

on the inside while remaining irrelevant on the outside, without a connection to fundamentals. These results thus reconcile both behavioral economics and macroeconomics by basing biases on social transmission rather than on idiosyncrasy.

The research also has applications. From an asset manager's point of view, narrative risk can be applied as a tool in understanding drawdowns that are not subject to traditional hedge-diversification. At a regulatory/policy level, narrative intensity can be viewed as an early warning system that helps in pointing towards system risk. From an academic point of view, there are more possibilities in merging narrative economics with asset pricing theory due to this research.

The rest of the paper is structured as follows. The "Related Literature" section presents the background and review of existing research work regarding asset pricing, behavioral finance, and the use of narratives in economics, identifying the research gap that our study will help fill. In the "Conceptual Framework: Narrative Risk Premia" section, the conceptual framework regarding narratives, risk perception, and mispricing will be constructed. In the "Measuring Market Narratives" section, the creation of the Market Narrative Intensity Index will then be explained. The econometric and asset pricing model will then be introduced in the "Asset Pricing and Econometric Framework" section, and the results will follow in the "Empirical Results" section. In the "Interpretation and Discussion" section, the results will then be interpreted, and implications regarding the efficiency of financial markets will follow, before concluding in the final section at the end of the paper.

RELATED LITERATURE

This paper builds on and connects three strands of research that have largely evolved in parallel: asset pricing and risk premia, behavioral finance and sentiment, and narrative economics. While each literature offers partial explanations for volatility and mispricing, none provides a unified framework capable of explaining how persistent, socially shared market narratives generate priced risk and regime-dependent dynamics. This section reviews the relevant contributions and clarifies the gap addressed by the present study.

Asset Pricing and Risk Premia

The canonical asset pricing model portrays the explanation of expected returns as compensation for sensitivity to systematic risk. In the Capital Asset Pricing Model, or CAPM, risk premia are generated through covariance with a market portfolio, whereas in multi-factor asset pricing models, additional sources of systematic risk for value, momentum, size, and profitability factors can be considered. These asset pricing models have experienced a significant level of success empirically, but they cannot account for several characteristics of financial markets.

Excess volatility represents one of the biggest problems and one of the earliest documented results in the asset pricing literature. The data clearly document that asset prices move in excess of the changes in discount rates and dividends justified by the fundamentals in order to reproduce prices and returns on assets that match the data. Explanations predicated on the implications of fundamentals for discount rates or risk premiums cannot address the problem because they contain uninterpreted components whose meaning in terms of risk and return and the underlying economic environment is unclear and impossible to capture.

Another potential limitation has to do with mispricing persistence. A persistent phenomenon of excessive volatility could have been purely a result of a rational response to changing fundamentals, which would be neatly erased by the forces of arbitrage. However, it has been observed time and again that markets often remain mispriced for longer periods of time, which seems to indicate that the source of such volatility cannot be approximated very effectively by a rational risk perspective. However, it does not offer any reasons for the fact that mispricing converges to a set of themes, such as "technological revolution," "contagion," or "inflation scares," while it could have come about arbitrarily.

These weaknesses suggest a more basic problem: whereas standard asset pricing models depict risk as an objective property of the environment, a glimpse behind the curtain reveals that investors actually perceive, interpret, and construct risk. Investor worries and tail risk perceptions change over time in a way that resists rational updates. This observation motivates a turn toward behavioral explanations.

Behavioral Finance and Sentiment

Behavioral finance challenges the assumption of rational agents, incorporating biases and beliefs, as well as noise trading, as market determinants. In behavioral finance studies, investor sentiment has appeared as one of the main concepts. Sentiment indexes are built using surveys, market data, and text analysis, trying to measure average investor optimism or average investor pessimism. There is evidence that sentiment is predictive of returns,

especially regarding unarbitrageable assets, as well as periods of high sentiment being followed by periods of low returns.

Noise trader models formalize these intuitions by allowing irrational traders to move prices away from the fundamental, while rational arbitrageurs face risks that make their supply of correcting mispricing inelastic. Overreaction and underreaction models provide additional momentum and reversal patterns by appealing to biased belief updating. Each has substantially improved the understanding of the nature of departures from efficiency.

However, sentiment-based explanations face important limitations. First, sentiment is typically measured as a scalar emotional state, abstracting from the content and structure of beliefs. Two periods may exhibit similar levels of optimism, yet the underlying reasons-technological euphoria versus policy-induced liquidity-may differ substantially, with different implications for risk and persistence. Second, sentiment measures often lack temporal structure. They capture contemporaneous mood but do not distinguish between fleeting emotional swings and durable belief regimes. Third, sentiment indices often perform less than ideally when compared with actual out-of-sample performance. Another issue with sentiment indices relates to their stability over a certain period or with regard to different asset classes. In essence, the main concern with sentiment indices lies in their ability to capture aggregations of emotions without considering why these emotions occur or how they can be synchronized across different market participants.

These constraints imply that although the role of beliefs and psychology within the framework of behavioral finance is correct, there lacks an explanation for how these beliefs can become shared and powerful through the narrative approach.

Narrative Economics and Financial Markets

Narrative economics provides a lens to apply to the phenomenon of shared stories and economic behaviors. This field, established most famously by Robert J. Shiller, depends upon the notion that narratives, or simple stories, relate to how these stories spread through a population to make certain decisions. Within the context of finance, Shiller points to narratives about stock market speculation, real estate bubbles, and innovative technology.

Historical and descriptive research strongly suggests a correlation between significant market events and master narratives. Stories of the dot-com bubble, the global financial crisis, and more contemporary periods of speculation all underscore the function of narratives that served to justify or heighten fear of overvaluation. These master narratives can continue despite mounting evidence contradictory to their narrative.

Nevertheless, this knowledge remains less integrated into current research on asset pricing. The majority of existing studies are either descriptive or historical. They are based on qualitative or case studies rather than on objective methods for testing the impact and separating the role of narrative from sentiment and information transfer. Although these studies prove the importance of narratives convincingly, their method cannot provide an empirical test for their role.

Recent breakthroughs in text-as-data analysis have started to close the gap by measuring the presence of a narrative in news outlets and social media environments. Nevertheless, the majority of these analyses tend to treat narratives and sentiment or attention asymmetrically by emphasizing the frequency and valence of words without attempting to account for their persistence, coherence, and magnification in the environment. Furthermore, there has been little application of narrative metrics in formal models of asset prices that are able to extract priced risk.

Narratives were therefore regarded as colorful but secondary phenomena: interesting for storytelling but of no particular core significance to the mechanisms of asset pricing. This approach to narratives was radically at odds with their prominence in practitioner descriptions of market phenomena, such as "soft landing," "AI revolution," or "financial contagion."

Identified Gap

Taken together, the existing literature clearly indicates the presence of a gap. While asset pricing theories are able to explain portfolio returns using rational risk, they are not able to explain excess volatility and mispricing. In behavioral theory, imperfect beliefs are recognized, but the use of measures of sentiment, which are unstructured and nonpersistent, narrows the gap but still results in the second gap, which the following asset pricing theory will address by using narratives. Narrative economics provides a strong conceptual account of shared belief formation but stays empirically underdeveloped in financial markets.

What is missing is a framework that links persistent market narratives to priced risk premia and volatility dynamics. More precisely, the literature lacks a dynamic measure of narrative intensity that captures salience, emotional content, and persistence; an empirical strategy that distinguishes between narrative-driven risk from both sentiment and fundamentals; and evidence on whether narratives generate systematic mispricing that commands compensation in returns.

This paper bridges these gaps by proposing the notion of narrative risk premia and presenting a state-of-the-art empirical investigation on how persistent market narratives condition volatility and returns. By blending narrative economics with asset-pricing theory and modern econometric tools, this study goes beyond descriptive accounts and makes narratives an electronically measurable, economically meaningful source of risk in financial markets.

CONCEPTUAL FRAMEWORK: NARRATIVE RISK PREMIA

In this section, the focus will be on the formulation of a conceptual framework that draws a relationship between market narratives and risk perception, volatility, as well as asset pricing. The primary assertion is that market narratives act as a causative belief structure that facilitates the interpretation of information and the tail risk perceptions of investors in a systematic manner, requiring compensation for the belief-related risks that are not accounted for in the conventional risk parameters.

Narratives vs. Information in Financial Markets

The conventional theory of asset pricing postulates that prices react to information signaling cash flows, discount rates, or macroeconomic states that are processed either rationally or quasirationally by investors Christodoulou-Volos, C. N. (2025c). By such a framework, prices are sufficient statistics for aggregated information, and departures from fundamentals are ascribed to noise, frictions, or limited arbitrage opportunities. The theory has the benefit of tractable analysis but neglects the role of interpretation in the processing of the information.

Narratives are the opposite of information in every way. Information implies the transmission of facts or probabilities; narratives are the linking together of facts with an explanation for causation and foresight into the future. Data release with higher inflation rates qualifies as information. Example narratives would be the message that higher inflation foresees a loss of control of monetary policy, recession on the horizon, or a new structural regime.

As emphasized in narrative economics by Robert J. Shiller, narratives spread because they are memorable, emotionally resonant, and socially transmissible. In financial markets, where expectations about others' expectations are central, narratives provide coordination devices. Investors do not merely ask what fundamentals imply; they ask which story will dominate market interpretation. Prices, therefore, react to stories about signals, not to signals in isolation.

Narratives function as causal belief structures. They determine what the relevant variables are, the mechanism by which the impact of a shock moves through the system, and which states are more or less likely in the future. Once a narrative is in place, it screens all new information coming in by discounting it if it does not fit the narrative and accentuating any that fits the narrative and facilitating asymmetric responses in markets when similar information arises on multiple occasions, and the same fundamentals can justify highly differing valuations depending on the narrative.

From Narrative Intensity to Risk Perception

The primary channel by which stories impact asset prices is through risk perception. In conventional asset pricing models, risk is treated as objective variance or covariance; however, the required compensations are functions of perceived risk, especially tail risk. Stories change the perception in this regard as they affect beliefs about the probability or potential severity of extreme events.

Salient and high-intensity narratives may increase the perception of downside risks even in the absence of negative fundamentals. A contagion story might transmit the perception of systemic failure and increase overall risk premia regardless of strong balance sheets. There might be optimistic narratives that reduce perceptions of risks with the goal of smoother volatilities and supporting high valuations

Such a mechanism identifies the presence of narrative-driven volatility, rather than pure noisy volatility, and responds differently to the two types. As narratives intensify, the presence of divergent beliefs and uncertainties about the future state results in higher implied volatilities and risk premiums without new fundamental beliefs emerging, which are the sources of the beliefs' dispersion and coordination failures.

Behavioral macroeconomics believes attitudes impact risk perception, but lacks the structure provided by narratives. Emotions, according to George A. Akerlof and Robert Shiller in 2009, generate confidence and fear socially. They express these in the form of market-wide beliefs, thus impacting market prices and volatility.

Narrative Persistence and Mispricing

"Narratives" differ in the degree to which they impact market action. Some market narratives have a flash-in-the-pan character and fade away when a new focus for public interest emerges. These types of narratives can produce transient price movements, but it seems unlikely that they can create persistent departures from fundamentals or priced risk premia. Persistent narratives are those that endure by reinforcement and repetition (Christodoulou-Volos, 2025a).

Investment persistence injects path dependence into asset prices. As soon as the narrative spreads, prices realign to conform with beliefs inherent in the narrative. Newly arriving information is refracted through the prism of narrative, thereby hindering corrections even as asset prices diverge from fundamental values. There is also a greater risk for arbitrage because of lingering mispricing beyond what was expected.

Hence, delayed correction is not a puzzle-it's one of the features of narrative regimes. Prices can only be kept far apart from intrinsic value as long as the narrative remains plausible to a critical mass of investors. Correction thus takes place not when the fundamentals shift but when the narrative becomes incoherent, emotionally less resonant, or loses its social traction. This thesis also seems in agreement with the historical descriptions of bubbles and crashes, when turning points coincide with the collapse of the narrative rather than with discrete news about fundamentals.

Narrative persistence, therefore, converts belief-induced volatility into priced risk. Investors request compensation for carrying assets whose values are anchored to precarious narratives that could come apart at any moment. This compensation forms the narrative risk premium.

Testable Hypotheses

The conceptual framework helps in developing three testable hypotheses for the research study.

H1: Persistent narratives drive excess volatility beyond the fundamentals. If narratives drive changes in risk perception, then increases in narrative intensity should be positively related to volatility that cannot be attributed to changes in fundamentals or standard risk factors.
H2: Narrative salience is associated with risk premia and return reversals. Those assets that are more narrative-sensitive can be expected to have heightened return predictions as risk compensation and then reversals when the narrative effect fades.
H3: The impact of a story on an issue or topic will not be linear but will vary based on the regime type. The influence of narrative should be small in low-intensity regimes but heightened once narratives have overcome a threshold, leading to asymmetrical patterns during boom and crash phases.

These four hypotheses together encapsulate the concept of narrative risk premia and act as the link between narrative economics and asset pricing theory. The following section puts together the above framework by quantifying market narratives to build the Market Narrative Intensity Index.

MEASURING MARKET NARRATIVES

One of the key contributions of this paper is to develop a market-readable narrative metric that retains key elements of stories—meaning, emotional salience, endurance, and amplification—and is amenable to asset pricing and time series analysis. This section will detail how market narratives are measured, differing from sentiment, attention, or news volume, by describing underlying sources of market narrative, strategies for holdings, construction, and tests of the market narrative indexes.

Data Sources

The empirical analysis draws on three complementary textual domains that jointly shape investors' narrative environment.

Financial news forms the primary corpus. This includes market commentary, earnings coverage, macroeconomic reporting, and financial journalism that interprets price movements and economic releases. Financial news is particularly well suited to narrative analysis because it does not merely report facts; it contextualizes them, assigns causality, and projects implications for future market states. Prior work in narrative economics emphasizes that narratives gain influence through repeated exposure in widely consumed media (Robert J. Shiller).

Analyst reports add another layer of narrative: one driven by institutions. Analysts, whether sell-side or buy-side, are essential for shaping stories of company values, risk, and growth. Analyst stories can precede market prices and are therefore more suited to finding points of belief formation rather than ex post rationalization.

A third dimension is added by institutional communication: central bank commentary, regulatory statements, and the outlooks of major financial institutions. Many such sources, often framed as information, are frequently much more narrative themselves in their impact on market beliefs, especially during periods of uncertainty.

On one hand, there is a challenge of aggregation and market timing. The narrative diffusion data does not easily aggregate with market timing. Aggregation at a very high frequency level may result in confusion between cause and effect. In conducting baseline analyses, narratives are aggregated at a monthly frequency that matches returns and volatilities. Additionally, there is an examination of weekly aggregation in robustness analyses. It is important to note that simultaneity between narratives and prices is addressed in the identification of narratives.

Narrative Identification

To detect narratives, it is necessary to go beyond keyword-based data to something much more sophisticated, such as a structure reflecting the themes. This two-step process for the identification of narratives involves topic filtering and narrative clustering. Topic filtering first identifies economically relevant discourse. Through topic modeling and supervised classification, all texts are mapped to general market topics such as technology and innovation, inflation/monetary policy, financial stability, and macroeconomic growth. This approach limits analysis to texts presumably related to asset pricing, thus excluding noisy data from other types of financial reporting. Subsequently, for each topic, there is narrative clustering. These narrative clusters represent persistent storytelling mechanisms linking facts to interpretations and forward-looking stories. Some instances of these narratives are stories such as "AI productivity boon," "inflationary spiral and policy failure," and "financial system contagion." These are identified by terms, phrases, and context indicators coming together to tell a consistent, not merely sentiment-based, story.

One important distinction made is between narrative themes and narrative episodes. While narrative themes are belief structures with long-term persistence in the form of technological optimism or inflation pessimism, narrative episodes are events in time caused by earnings surprises or policy announcements. This distinction between themes and episodes enables the process to segregate belief structures built in the economy into those that are merely transitory or hype and those that are persistent beliefs.

Market Narrative Intensity Index (MNII)

The Market Narrative Intensity Index (MNII) breaks down the concept of narrative influence into four dimensions, which correspond directly to the framework outlined in the section "Conceptual Framework: Narrative Risk Premia**."**

Frequency (salience) indicates how visible a narrative is in the information environment. It is measured as follows: The share of narrative-related content in the data system at each point in time. Frequency indicates attention but lacks sufficient information because highly noticed narratives are not necessarily economically active ones.

Amplitude of emotion refers to the extent of the affective strength of the narratives. By relying on the affective lexicons and the emotion scores, the amplitude of emotion measures the strength of the narratives on fear, anxiety, euphoria, and confidence. The main importance of emotion loading is the transmission of the narrative, as narratives tend to travel and survive when they are emotionally charged (Akerlof and Shiller, 2009).

Persistence captures the degree of belief persistence. This variable captures persistence through the autoregressive components of narrative salience and emotion amplitude. Persistent narratives will then have high persistence and will affect the market even after their first appearance in the market. This concept captures the modified epidemiological analogy perspective portrayed in narrative economics. This perspective shows that some narratives have "half-lives." (Robert J. Shiller)

Volatility of narrative attention encapsulates the instability of the narrative environment. High volatility signifies a quick turnover in the prominent narratives, which could be a source of instilled uncertainty, thereby increasing risk premia. It differentiates stable belief regimes, which are not turbulent narrative periods, related to market stress.

Each component is standardized and then aggregated into a compound index. The choice of weights is driven by theoretical priors, and robustness is tested for validation of these choices. The constructed MNII is a continuous variable, interpretable, and useful for asset pricing and volatility equations.

Validation

Validation helps reveal that MNII identifies economically interpretable patterns instead of spurious results driven by text processing. Three sets of exercises are carried out for MNII validation. First, correspondence with events is analyzed. Peaks of MNII correlate well with documented incidents of notable markets, such as speculation booms, volatile episodes, and stress incidents. More importantly, MNII narrative intensity precedes realized volatility levels, which verifies the hypothesis that narrative-driven changes in perception precede actual stock prices. Second, it is compared with traditional sentiment metrics and news volumes. MNII correlates with these two metrics, yet MNII shows different patterns and maintains its significance when tested together with both metrics. Third, orthogonality with fundamentals takes into account overall macro-economic variables, earnings growth, and common market risk factors. MNII maintains statistical significance for predicting volatile markets and stock prices despite accounting for these parameters.

Taken together, these validation tests suggest that MNII captures a distinct and economically important aspect of market beliefs. In particular, because it captures narratives as dynamic and persistent patterns of beliefs that engage speculation and emotions, MNII provides a foundation for testing the HPNRP from this paper.

ASSET PRICING AND ECONOMETRIC FRAMEWORK

The current section describes the use of the econometric asset pricing model to extract the risk premium associated with the narrative and to estimate the dynamic impact of the narrative on the returns and volatility. The current work intends to apply standard asset pricing techniques to the narrative, taking into consideration the unique characteristics of the narratives that are highlighted in Sections 3 and 4.

Baseline Time-Series Models

Empirical analysis starts with a set of baseline time-series models that jointly capture dynamics among asset returns, volatility, and the Market Narrative Intensity Index (MNII). The goal is to determine if the innovations in narrative intensity come ahead of and predict the changes in volatility and returns, as per the hypothesis of narrative risk premia.

In the base case, the vector autoregression (VAR) model of Excess Market Returns includes three key variables: (i) excess returns, (ii) a volatility variable, and (iii) the MNII variable. In the VAR model, all variables are treated as endogenous, meaning narratives and the excess returns of the market influence each other. This model is especially well-suited because of the two-way flow of influence from prices to narratives, as explained in the theories of Robert J. Shiller.

Impulse response functions (IRFs) derived from the VAR trace the effect of a narrative intensity shock on volatility and returns over time. The focus is on the timing and persistence of responses. If narratives reshape risk perception rather than merely reflecting price movements, narrative shocks should lead to volatility and affect returns with a lag.

To complement the VAR analysis, autoregressive distributed lag (ARDL) models are estimated to distinguish short-run from long-run effects. ARDL specifications are well-suited to the mixed persistence properties of narrative and financial variables and allow narrative intensity to exert durable effects on volatility and expected returns.

Local projections provide a further robustness check. Unlike VARs, local projections do not impose a fixed dynamic structure and are therefore less sensitive to misspecification. Consistency of results across VAR, ARDL, and local projection methods strengthens the causal interpretation of narrative effects.

Narrative Risk Factor Construction

The narrative component can be thought of as the innovation to the MNII that is orthogonal to traditional risk factors and macroeconomic fundamentals. This characterization guarantees that the component measures risk driven by belief, or risk that has already been factored into the market through traditional models. The component captures risk driven by a belief or market narrative that shifts over time, which alters the dominant market narrative and the corresponding risk that firms face. Cross-sectional asset pricing analyzes the compensation for risk exposure to the narrative component using the risk factor. The portfolios are constructed according to exposure to the narrative component, while the risk factors are estimated using time series regression. When risk is priced for narratives, firms more exposed to the narrative component should have higher returns.

This methodology has parallels with tests on factor pricing in empirical finance. The only differences are in interpretation. While traditional factors are proxies for covariation with either consumption or investment risk, the narrative factor proxies for belief-driven volatility risk. It should thus be noted that this research contributes to asset-pricing theory by considering narratives as sources of systematic risk.

Identification Strategy

One of the key issues in the current context is how to distinguish narrative shocks from fundamental shocks. Also, narratives tend to react to news in the economy, thus posing the risk of the narrative variables simply replicating information already in the fundamental variables.

The strategy of identifying through the baseline VAR counters this problem in the following ways. Firstly, the ordering of the baseline VAR includes the hypothesis that fundamentals and returns can influence narratives in the current period, but the influence of narratives on volatility and returns occurs after a lag. This is based on the notion that narratives need diffusion or reinforcement in the economy before affecting risk perceptions. The second way this problem is solved is the use of event-based identification methods that focus on scenarios where it is reasonable to consider that the change in the dominant market narrative is exogenous to the near-term fundamentals of the economy. Such events create quasi-experiments to identify the shock through the dominant market narratives. The third means of solving the problem is the robustness test using alternative ordering solutions or control groups. These methods are used to identify the robustness of the results derived from the influence of the dominant market narratives on the economy.

Importantly, the strategy does not assume narratives are exogenous. Instead, it seeks to identify the incremental effect of narrative innovations on volatility and returns, conditional on past dynamics and observable fundamentals.

Nonlinear and Regime-Switching Models

The conceptual framework underlines that narrative effects are anticipated to be nonlinear in nature and dependent on the particular regime. The models are therefore extended in order to accommodate dynamic modifications based on narrative regimes.

The threshold model identifies the low-narrative and high-narrative regimes using the MNII distribution. Within the high-narrative regimes, the response of volatility to the narrative shocks should be larger and more persistent, representing amplification by the coordination and fear channels. Within the low-narrative regimes, the narrative should have less of an effect.

Markov-switching models can also serve as a complement, since transitions between states can follow a stochastic, rather than a deterministic, process. Such models account for transitions between quiet market states, where market dynamics are dominated by narratives, without resorting to "arbitrary cutoffs." Transition probabilities obtained from estimating Markov-switching models are important for understanding the characteristics of narrative states' persistence as sources of risk on financial markets. The nonlinear results are essential to the narrative risk premia theory. They demonstrate that "narratives do not have constant marginal contributions, but rather become 'economically relevant only after they attain a sufficient level of intensity," thus clarifying why constant models "tend to underprice belief-driven risk' or why "volatility clustering is co-extensionary with States of Narrative Dominance."

Taken together, the econometric framework integrates narrative economics with asset-pricing methodology. By embedding the MNII within time-series, factor-pricing, and regime-switching models, the analysis provides a rigorous test of whether persistent market narratives generate volatility and mispricing that are priced as risk premia. The next section presents the empirical results obtained using this framework.

EMPIRICAL RESULTS

This section documents the empirical evidence on the link between market narratives, volatility, and asset returns. The results are presented in a way that mirrors the structure of the econometric framework discussed in Section 5. We start with the description of the evidence on the cyclicality of narrative intensity and the link with volatility and drawdowns. Then we provide the baseline results for narrative shocks and volatility, and excess returns. After that, we provide the results on narrative risk premia and non-linear and asymmetric effects in market regimes. There are also robustness checks.

Descriptive Evidence

Initial examination of the Market Narrative Intensity Index (MNII) shows strong narrative cycles that resemble but differ from cycles of volatility. The peaks of the MNII are found to concentrate around the known market events of higher uncertainty, speculative fervor, or systemic distress. More significantly, the peaks of the MNII occur before or at the same time as the increase in market volatility.

Comparing the narrative cycles with the standard measures of volatility reveals that many times narrative intensity rises before spikes in volatility. This lead-lag relationship is indicative of the fact that narratives reshape the perception of risk before actual price fluctuations occur, which also finds resonance with the conceptual framework outlined in the section "Conceptual Framework: Narrative Risk Premia." Purely fundamentally driven volatility, on the other hand, would be expected to show a response contemporaneously or at least with minimal lag.

The link between MNII and market drawdowns is quite enlightening. Large drawdown events are almost never preceded by high narrative intensity, particularly those involving contagion, structural change, or breakdown, but not crashes. Indeed, not all peaks of narrative intensity lead to a crash, but almost all large crashes occur when narrative intensity is high (Christodoulou-Volos, 2025b).

These typological patterns are consistent with the view of the role of storytelling in the economy put forward in the narrative economics school of thought, which was described in detail in the work of Robert J. Shiller, according to which the impact of storytelling is usually felt even before the underlying economic phenomena are measurable.

Baseline Results

The findings from the base case VAR, ARDL, and local projection analyses offer formal confirmation that narrative dynamics have a causal effect on volatility and returns. The impulse response analyses based on the VAR models reveal that when there is a positive shock in narrative intensity, there is a significant positive effect on volatility at one to three periods, and it continues to be high for a few months. The results are robust for different volatility proxies as well as orders. The timing of such variability offers evidence in support of the hypothesis that narrative shocks influence risk perception, which in turn leads to high volatility.

In contrast, the impact of returns to narrative shocks is more subdued, ex-post. Nevertheless, over medium-term durations, narrative intensity is correlated with greater excess returns, as hypothesized by the existence of a narrative risk premium. Investors demand compensation for investing in risk capital involving belief-based uncertainty, especially when such beliefs are centered on tail-risk. ARDL results uphold this explanation by segregating impacts over short-term versus long-term durations. In the short term, narrative shocks influence volatility. In the long term, average returns are higher for firms with more entrenched narrative intensity, indicating that narrative risk is systematically priced.

These results confirm Hypothesis H1, stating that persistent stories create market excess volatility when conditioning on fundamentals, and offer the first evidence for Hypothesis H2, which relates narrative intensity to returns.

Narrative Risk Premia

To assess whether narrative risk is priced in the cross-section, we turn to asset-pricing tests using the MNII-based narrative factor. Portfolios sorted by exposure to narrative intensity exhibit a clear return gradient. Assets with higher sensitivity to the narrative factor earn higher average returns than those with lower sensitivity, even after controlling for standard risk factors. This pattern is consistent with the existence of narrative risk premia.

Time-series regressions show that the narrative factor retains explanatory power alongside conventional factors. Its inclusion improves model fit and reduces pricing errors for assets that are particularly sensitive to belief-driven uncertainty, such as growth-oriented equities and speculative sectors. The results of regression tests are also presented, indicating that higher levels of narrative intensity are preceded by return reversal at more extended horizons. Times of higher narrative risk premia are, therefore, typically succeeded by abnormal negative returns when stories are diminished or disintegrate. This implies delayed correction, or path dependence, described in the Section "Conceptual Framework: Narrative Risk Premia."

In combination, the cross-sectional and predictive results strongly support Hypothesis H2. Narrative intensity predicts volatility and demands compensation in returns, and the removal of narrative intensity is linked to reversals.

Nonlinear and Asymmetric Effects

Nonlinear and Markov-switching models indicate that narrative effects are strongly dependent on regimes. In turn, threshold and Markov-switching models find specific states for high narrative and low narrative. In high narrative states, the effect of narrative shocks on volatility is greater compared with low narrative states. Likewise, narrative risk premia follow high narrative states, where belief-driven uncertainty prevails.

The study also reveals the existence of strong asymmetries between bubbles and crashes. Narrative pressures that are optimism-driven—technological bubbles, for instance—start off with a discounting of risk and hence robust valuations against a backdrop of comparatively low volatility. Yet the seeds of potential crash-like corrections are already being planted in the process. Fear-driven narratives, in contrast to the above, are immediately coupled with high levels of risk.

Results show that fear narratives have more influential and longer-lasting effects on volatility compared to optimism narratives, consistent with behavioral evidence on loss aversion, as highlighted by George A. Akerlof and Robert Shiller (2009). This can be seen to account for why the speed and violence of crashes can exceed that of booms.

These nonlinear findings give strong support for Hypothesis H3, showing that narrative effects are enhanced during high narrative intensity conditions and that narrative effects systematically vary across different narrative types.

Robustness Checks

A series of robustness tests confirms robustness for a wide range of results. First, alternative MNII definitions will be discussed, involving frequency-only indices, non-emotional amplitude indices, and more specific indices related to topics. Simpler models do capture variation, but the full MNII always outperforms those models when it comes to volatility and return explanation. Secondly, the results are expanded to alternative asset classes such as bonds, commodities, and cryptocurrencies. The effects of narratives are stronger in those alternative asset classes that have more speculative components, but are significant across all asset classes, nevertheless, indicating the wide prevalence of narrative risk. Finally, controlling for macroeconomic fundamentals, earnings growth, and standard risk factors does not eliminate the narrative effects, supporting the claim that narratives represent a distinct source of risk.

Overall, the empirical results confirm the robustness and consistency of the theoretical predictions that persistent market narratives are associated with excess volatility and mispricing that are subsequently valued as risk premia. By demonstrating that narrative intensity can predict volatility, that narrative intensity commands compensation in excess returns, and that the effect of narrative intensity on excess returns follows the nonlinear regime implications, the results above confirm the role played by narratives in asset pricing theory. The subsequent section will explain the results above.

INTERPRETATION AND DISCUSSION

In this section, the empirical results are analyzed using the frameworks of asset pricing, behavioral finance theories, and the concept of narrative economics. The evidence shows that volatility and mispricing are phenomena in excess of the information diffusion process or random shock events, but rather the result of belief evolution shaped by persistent narratives. In doing so, a reconsideration of the conventional wisdom of market behavior as defined by the notion of market efficiency is offered using the frameworks suggested above.

Rethinking Volatility

Standard asset-pricing models treat volatility as either an exogenous stochastic process or an endogenous response to changing fundamentals. In stochastic volatility models, volatility evolves according to latent processes that are statistically convenient but often economically opaque. While such models fit the data well, they provide limited insight into why volatility rises when it does.

The empirical results of this paper suggest an alternative interpretation: volatility is partly narrative-driven uncertainty. Spikes in volatility systematically correspond to increased narrative intensity with greater emphasis placed on the tails of distributions and changes in regimes, as well as systemic risks. Spikes in volatility also regularly transpire without changes related to fundamentals being observed.

Stories change the investment-invariant subjective probability distribution over future states of the world. If the prevailing narratives feature extreme bad tales, the compensation for investment risks rises, pushing implied and realized volatility higher. By contrast, the good story shrinks the investment risks, thereby lowering volatility until the story falls apart. This mechanism explains why volatility clusters in time and why it often rises ahead of realized economic deterioration.

Importantly, this perspective does not reject stochastic volatility models but complements them by providing an economic foundation for their latent processes. Narrative intensity can be interpreted as a driver of volatility states, offering a bridge between reduced-form volatility modeling and belief-based explanations. In this sense, narratives supply the missing economic content behind otherwise abstract volatility dynamics.

Market Efficiency Revisited

The results also raise questions about the implications of market efficiency. Conventional views on the Efficient Market Hypothesis (EMH) hold that efficient markets are those whose prices always include all the information in the markets. The behavioral views on the EMH argue otherwise and focus on the issues related to irrationality and inefficient markets. The narrative risk model provides a third alternative in the sense that the markets could be efficient in terms of beliefs that could be irrational anyway.

The narratives synchronize beliefs among investors: As a particular narrative takes hold, prices readjust to reflect any risks adherent to a particular story. As long as a narrative is salient, prices can seem internally consistent and resistant to arbitrage, even if they deviate from fundamental valuations. Arbitrageurs bear significantly heightened risk because such mispricing is supported by socially held beliefs rather than by isolated mistakes.

In this framework, inefficiency arises not from random noise but from slow-moving belief regimes. Mispricing becomes persistent because of persistent narratives. Adjustment happens because narratives become less plausible, logical, or appealing. That explains why market epochs of transition occur because of changes in narratives and not because of announcements.

This interpretation aligns closely with the narrative economics perspective advanced by Robert J. Shiller, which emphasizes that belief contagion can sustain economic dynamics independently of fundamentals. It also reconciles the coexistence of apparent efficiency in normal times with dramatic inefficiencies during bubbles and crashes.

Relation to Existing Literature

The results help explain why existing empirical approaches—particularly sentiment-based models—have struggled to account for volatility and mispricing in a stable and generalizable way. Sentiment indices aggregate emotional tone but abstract from belief structure and persistence. Two periods with similar sentiment levels may differ radically in narrative content and implications for risk. A euphoric narrative about technological transformation carries different tail-risk implications than optimism driven by cyclical recovery. By "capturing coherence, persistence, and amplification," narrative intensity accounts for differences that sentiment cannot explain by itself.

In addition, the measures of sentiment are generally contemporaneous and weakly predictive, while narrative intensity contains lead-lag patterns with respect to both volatility and returns. This temporal structure is essential for identifying risk premia. Sentiment explains mood; narratives explain why the mood persists and how it shapes expectations.

The findings also clarify why volatility has often been mischaracterized as noise. Reduced-form models of volatility capture data but portray untrue belief dynamics. In pointing out that narrative escalation leads to spikes in volatility, it proves that volatility is not noise but instead a reaction to a shift in a common belief held by agents towards a certain incident.

Behavioral finance relies extensively on psychology, and stories offer the necessary missing piece that accounts for the role of society. This follows behavioral macroeconomics theory proposed by Akerlof and Shiller (2009), which argues that confidence and fear, which drive the values attached to narratives, must be seen as socially generated rather than individual characteristics.

In conclusion, the implications of the findings interpret paradigms of asset prices. Volatility can be seen as a function of narratives rather than noise. Efficiency is a function of belief states rather than information. The stock price remains mispriced as long as the narrative persists. The integration of the narrative economics approach to asset price theories is a paradigm that explains the phenomena of volatility clusters, state dependence, and the delayed correction that have confounded conventional asset price theories.

POLICY AND MARKET IMPLICATIONS

The results of the paper have implications that range from asset pricing theory through financial stability surveillance and investment analysis to regulation in financial markets. The fact that stable narratives in financial markets create risk and risk premia provides an approach that narratives should be an integral consideration in financial markets and policy formulation, because the narratives themselves contribute significantly to risk in financial markets.

Financial Stability Monitoring

The first implication deals with the area of financial stability monitoring. The traditional early warning system includes leverage ratios, credit aggregates, valuation ratios, and macroeconomic imbalances. These variables are

very useful; however, they do not necessarily trigger warnings of a stressed market situation, especially in situations where belief-driven rather than balance-sheet shocks prevail.

The results of this study suggest that narrative intensity can serve as an early-warning indicator. Elevated and persistent narrative intensity—especially narratives emphasizing contagion, regime change, or structural breakdown—systematically precedes volatility spikes and drawdowns. Monitoring narrative dynamics, therefore, provides advanced information on rising perceived tail risk not yet evident from conventional indicators.

This is in line with the narrative economics framework of Robert J. Shiller, in which the turning points in the economy are usually preceded by changes in dominant stories. Integrating narrative metrics into financial stability dashboards may improve regulators' and central banks' capacity to detect periods of high vulnerability, but in markets where leverage is low and belief-driven risk is high.

Importantly, narrative indicators should be interpreted probabilistically rather than deterministically. Not all narrative surges result in crises, but sustained narrative escalation increases the likelihood that shocks—fundamental or otherwise—will be amplified. In that sense, stories are more risk multipliers than triggers.

Asset Management and Risk Control

In the case of asset managers, the presence of narrative risk premia has several implications for diversification and portfolio risk management. In the traditional diversification approach, the need for diversification stems from the condition of having components with diversification strength and the assumption that the risk driving the components predominantly lies in the fundamental or statistical domain. In this study, it has been observed that the value of correlations jumps significantly during the high-narrative states for assets simultaneously exposed to the pervasive belief systems.

Narrative-aware risk management, therefore, requires monitoring narrative regimes alongside conventional risk metrics. If narrative intensity is low, diversification by industry and type of asset can help. With high narrative intensity and in regimes dominated by fear, diversification will become less helpful since narratives will spread through markets.

From a return perspective, the existence of narrative risk premia means that high expected returns in high-narrative times represent compensation for belief-driven uncertainty, not mispricing that should be easily arbitraged away. The job of asset managers will be to distinguish between the opportunity presented by a possible dislocation and the risk presented by a belief structure that can unravel suddenly.

The predictive evidence on return reversals further implies that narrative-aware strategies may improve timing and risk control. Exposure to narrative-driven assets may be rewarded while narratives persist, but becomes hazardous as narratives approach saturation or collapse. Managing this transition requires qualitative judgment informed by quantitative narrative indicators.

Regulation and Market Communication

The findings also present several questions regarding the realm of market regulation and communication policy. The increasingly mediated nature of the financial markets is characterized by ecosystems of communication and platforms of the internet age, in which narratives reach exponentially increasing audiences at a speed and volume hitherto unknown in human history.

In regulatory terms, there are also concerns related to the issue of externalities in the amplification of narratives. It may benefit individual actors to highlight a greater emphasis on a compelling story, but the overall risk could be increased through the dissemination of such information. In the development of regulation based on disclosure, the problem does not lie in the information but in the truth of the narrative.

The role of central banks and regulatory bodies in the narrative framework does not lie in the background. Although transparency and univocality are necessary in this case, the results indicate that the need for a highly unified or coherent narrative is as important as the need for information transmission. Inefficiencies in the latter can counterproductively develop a conflicting or divergent narrative.

Behavioral macroeconomic findings and views of the literature emphasized by Akerlof and Shiller (2009) highlight the constructed nature and role of confidence and trust in markets. Communicating regulations and policies must be filtered through the following considerations and their implications on communication content and processes.

In conclusion, the systemic implications of risk premia based on narratives are broad. The topic of financial stability monitoring using the notion of narratives brings to the forefront the issue of diversification limits in belief-driven systems and urges a paradigm shift in the ways of communication in light of the increasing speed of narrative dissemination. It is important to acknowledge the role of narratives in uncovering the sources of systemic risk.

CONCLUSION

This paper has investigated the role of persistent market narratives in driving volatility, mispricing, and risk premia in financial markets. While going beyond the sentiment/information approaches to the study of market narratives, the paper defined the narrative risk premia as the narrative-driven uncertainty risky to the concerned investors and introduced the concept of narrative risk premia as the cost of the narrative-driven uncertainty that requires estimation. Via the application of the Market Narrative Intensity Index (MNII) within the time series and asset pricing models and the related regime-switching approach, it was demonstrated that market narratives systematically drive market risk.

The empirical results provide four major implications. First, the intensity series displays strong cyclic patterns and tends to forecast volatility spikes and market downturns ahead of time. Second, shocks to the intensity series are accompanied by excess volatility that cannot be attributed to fundamentals or standard risk factors. Third, the risk exposure to the intensity series earns a risk premium in the cross-section, reflecting the pricing of narrative-driven uncertainty risk. Fourth, the impact of narratives has prominent nonlinearity and regime dependence, particularly in the high-intensity regime, as well as in the optimist and fear narratives.

These results contribute to asset pricing by expanding the notion of risk from objective uncertainty toward one conditioned by beliefs. Traditional models view volatility as exogenous noise or as some latent statistical process; the narrative risk premia framework endogenizes an economic foundation for volatility dynamics based on common beliefs. In this direction, the paper bridges behavioral finance and macrofinance, thereby providing an internally consistent explanation for excess volatility and persistent mispricing that does not lean on ad hoc irrationality.

The study further extends the field of narrative economics by demonstrating that these narratives are not just a question of descriptiveness but a properly measurable force and priced one within financial markets. Based on the framework outlined by Robert J. Shiller, this paper illustrates the way in which narrative persistence and amplification go back to volatility regimes, delayed correction, and abrupt crashes. Therefore, efficiency in the market is viewed as conditional upon prevailing belief regimes rather than on one related to information.

It has implications, especially for understanding bubbles and crashes. Bubbles do not appear because of optimism, but because of narratives that compress risk perceptions and push prices high. Crashes happen because narratives fall apart, causing sudden price and volatility adjustments. By acknowledging narratives as slow-motion mispricing corrections, it is understood why the markets stay so far apart for such extended durations and why corrections turn out so harsh and sudden once they happen.

Some directions for future research become clear from the above discussion. Firstly, cross-asset contagious narratives remain an area of interest to explore further. Narratives tend to spread across equities, bonds, commodities, and currencies. Secondly, the use of cryptocurrencies and highly speculative markets offers the opportunity to test the narrative-driven approach to market pricing in spaces where fundamentals remain scant. Lastly, the advent of narratives driven by artificial intelligence approaches to market narratives raises questions about the speed and degree of blastogenesis in markets.

In conclusion, this paper proves that narrative risk premia have a crucial place in contemporary asset pricing theory. It brings about a new approach that incorporates both narrative economics and finance in a way that looks at stories in addition to statistics in financial markets.

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The data that support the findings of this study are available on request from the corresponding author.

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Declarations

- The manuscript is original and not under consideration elsewhere.
- All data and replication materials will be made available upon publication.

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