

Developing a narrative perspective of asset bubbles¹

ABSTRACT: *Asset bubbles are both widely studied and commonly occurring market events, yet they remain a poorly understood phenomenon from both a theoretical and practical standpoint. We argue that prior research has failed to put forward a robust theory or framework of asset bubbles due in part to the oversight of a central aspect of all bubble episodes, that being the role of narratives. In response to this oversight, we develop an alternative, narrative perspective of asset bubbles, a perspective that we believe offers a rather comprehensive account of these events that should help to not only synthesize much of current literature but also inspire a range of future studies.*

“Asset bubbles,” also commonly referred to as “speculative bubbles,” are defined as existing “when the market price of an asset exceeds its price determined by fundamental factors by a significant amount for a prolonged period” (Evanoff, Kaufman, & Malliaris, 2012, p. 1). While most asset bubbles do not result in widespread financial panic, many of them do result in the misallocation of resources and budgetary problems for governments (Akerlof & Shiller, 2009, Ch. 10). However, when the bursting of an asset bubble results in financial calamity, such as a banking crisis, the consequences are much worse. The chain of events that typically ensues is that falling real estate or stock prices cause overleveraged sellers to default, which immediately damages the balance sheets and lending ability of most financial institutions, leading to the failure of several banks. As businesses are unable to secure new loans and lose confidence in the economy, investment dries up, which results in lower wages and the loss of jobs. As these affected workers have less money to spend, consumption also dries up, which in turn affects businesses, and a vicious cycle develops. Eventually, the government and other institutions, such as a central bank, are left with no choice but to intervene to prop up failing banks and restore confidence in the economy—an intervention that usually results in huge costs to taxpayers and even larger government deficits.

Explanations from mainstream economics

In economics, the most pervasive “theory” invoked to understand the behavior of asset prices is one of market fundamentalism². Market fundamentalism rests on the foundation of the efficient market hypothesis, which asserts that market participants make rational decisions based on an asset’s fundamental value and thus asset prices always reflect their true value. Therefore, from a pure market fundamentalism standpoint, large fluctuations in asset prices are simply a reflection of significant changes in information about fundamentals. Proponents of this view argue that what appears to be a bubble is simply the observation of an asset’s value being affected by large scale, exogenous “information shocks,” such as the introduction of new government regulations or a new, perhaps poorly understood, technology (for more on this viewpoint, see Fama, 1965; Garber, 2000).

¹ This is a shortened version of the essay, for presentation at the 2014 ANZAM Conference. For the full-length version, please contact the author directly.

² Market fundamentalism is not a theory in the sense of a unified, distinct explanation of one phenomenon but is rather a set of interrelated ideas and assumptions about how markets work.

Aside from this strict adherence to market fundamentalism, economists propose that bubbles can exist under the assumptions of efficient markets from four causes. First, markets may be constrained by frictions, such as short-sale restrictions (Miller, 1977; Scheinkman & Xiong, 2003) or capital constraints (Shleifer & Vishney, 1997) that prevent the market mechanism from working effectively. Second, rational speculators may drive a bubble's growth based on the expectations of selling the overvalued asset later at a higher price (DeLong, Shleifer, Summers, & Waldmann, 1990; Flood & Hodrick, 1990). This explanation implies that speculators know the bubble will eventually burst but usually have sufficient influence on the market to time its collapse (Griffin, Harris, Shu, & Topaloglu, 2011). A third explanation argues that bubbles can emerge when investors systematically misvalue the fundamentals of an asset, which is referred to as an "intrinsic bubble" (Froot & Obstfeld, 1991). A final explanation is that bubbles can occur under conditions of uncertainty when investors erroneously take external factors into account that have no impact on an asset's fundamental value, which is known as an "extrinsic bubble" or "sunspots" (Azariades, 1998).

While a market fundamentalist view may be sufficient in describing and predicting a great deal of market behavior, including some instances of smaller, isolated bubbles, such a view of asset bubbles has come under intense scrutiny in recent years as asset prices have become increasingly volatile and bubbles have become increasingly international and destructive in their effects. In fact, numerous studies of the past twenty years have shown that pure fundamentals and rationality do not drive financial decision-making and asset pricing, particularly during historic cases of large-scale bubbles (e.g., Akerlof & Shiller, 2009; Avery & Zemsky, 1998; Canterbury, 1999; Chancellor, 2000; Dale, Johnson, & Tang, 2005; Griffin et al., 2011; Kindleberger & Aliber, 2011; Lux, 1995; Perkins & Perkins, 1999; Scheinkman & Xiong, 2003; Shiller, 2005). In response to these observations, one area that is increasingly garnering attention is research on the role that irrational behavior plays in financial decision-making, research that falls under the broad fields of behavioral economics, behavioral finance, and economic psychology.

Explanations from behavioral economics, behavioral finance, and economic psychology

The fields of behavioral economics, behavioral finance, and economic psychology are primarily concerned with the role of human psychology and social behavior in influencing financial decision-making. Within these fields, several scholars have investigated how irrational behavior can lead to the buying and selling patterns witnessed during bubble events. In their seminal book on financial crises, Kindleberger and Aliber (2011, Ch. 3) document numerous historical examples of irrational purchases, lending, and speculation, emphasizing the influence of "group think" or "herd behavior" during bubble episodes. The authors quote Chuck Prince, chair of Citigroup in 2008, when he defended his company's actions during the subprime mortgage bubble with, "You have to keep dancing as long as the music is playing" (p. 43). Observations of herd behavior in financial decision-making have also

been documented in numerous experiments (e.g., Hommes, Sonnemans, Tuinstra, & van de Velden, 2008; Hüsler, Sornette, & Hommes, 2013; Schoenberg & Haruvy, 2012). For instance, Schoenberg and Haruvy (2012) found that traders are heavily influenced by their perceived performance relative to other traders, particularly when given information about high-performing peers.

Scholars in these fields have also pointed to clear evidence of irrational “escalation of commitment” in financial markets (Staw, 1976), referring to situations in which financial decision makers choose to “throw good money after bad” (De Bondt & Thaler, 1995, p. 402) by continuing to invest in unprofitable ventures. Explanations for this phenomenon include the theory that decision makers, due to the emotional cost or humiliation of admitting failure, tend to have “confirmatory bias” and constantly look for evidence that supports their ideas (Rabin & Schrag, 1999). Many scholars also argue that financial decision makers consistently demonstrate acts of hubris and overconfidence, particularly in areas where they have self-declared expertise (Heath & Tversky, 1991). Hyman Minsky (1986, 1992) argued that capitalist societies tend to develop states of collective overconfidence, which he referred to as states of euphoria. Minsky hypothesized that overconfidence is likely to arise during long periods of stability, periods that encourage more risk-taking and innovation and eventually lead the economy into an increasingly vulnerable situation.

In general, insights from these fields are generated through an individualistic, reductionist view of market behavior, with many of the empirical findings resulting from highly controlled experiments that exclude exogenous influences such as institutional constraints, historical trends, and broader social changes. In the context of large-scale bubble episodes and their resulting financial crises, however, such a reductionist view is highly problematic, as these events have repeatedly proven to be highly complex phenomena that are deeply rooted in the prevailing political, social, and cultural ethos of their times. As an illustration, Galbraith (1954), in his seminal work on the 1929 stock market crash, notes “The striking thing about the stock market speculation of 1929 was not the massiveness of the participation. Rather, it was the way it became *central to the culture*” (p. 103, emphasis added). As a result, researchers from the fields of sociology and organizational studies are starting to address the need for more socially situated explanations of asset bubbles.

Explanations from sociology and organizational studies

A large percentage of studies in these fields see institutional and regulatory failures as the primary culprits in the recent housing bubble and financial crisis. Abolafia (2010a) is one of the strongest critics of contemporary institutions for their role in recent crises. He argues that the institutions of professional economics, the Federal Reserve, and political discourse all reinforce a market ideology based on market fundamentalism, an ideology he sees as poorly suited to prescribe a remedy for large-scale asset bubbles. Other scholars have also stressed the role of regulatory failure in the recent crisis

(e.g., Campbell, 2010; Hirsch & Morris, 2010). For example, Campbell (2010) blames a rash of neoliberal policies that started in the 1970s for the run-up in housing prices. He cites the 1970 repeal of a rule that prevented investment banks from going public on the New York Stock Exchange (NYSE) and the Commodity Futures Modernization Act (CFMA) of 2000 as two examples of policies that encouraged a large and unregulated shadow banking sector to take on risks that posed a threat to the entire economy.

Palmer and Maher (2010) claim that the recent crisis was largely the result of complex and tightly coupled technology in the mortgage industry, as seen through the complexity of new financial instruments such as mortgage-backed securities (MBS). Following Perrow's (1999) normal accident theory, Palmer and Maher argue that the mortgage industry's technology was highly prone to failure and offered no time or means for a response. In contrast, other scholars have placed the blame almost entirely on the culture of the times, including Perrow himself (2010), who argues that the crisis was the result of greedy politicians, regulators, and executives who knew the dangers of their actions. Stein (2011) contends that Western countries have developed a "manic culture" over the past twenty years, as witnessed by their consistent denial of large-scale threats, attitude of omnipotence over proper economic development, compelling need to be seen as superior to other states, and aggressive reaction to actors and systems that warn of impending crises. Consequently, he sees the culture of today's capitalist societies as directly responsible for the credit crisis.

The state of research on asset bubbles

Taking into consideration insights from both within and outside the fields of economics, extant research on asset bubbles has generated a number of insights on these events. However, while all of these developments are useful in understanding why bubbles exist, most of the findings from these fields remain highly fragmented, with no clear, comprehensive framework for understanding asset bubbles in their entirety. Even more problematic, extant research on asset bubbles has yet to answer even some of the most basic questions concerning these events. For example, current research offers no answer as to why some assets develop bubbles while others do not, or, just as important, why we are some unable to "pop" or "deflate" a bubble before it grows large enough to result in widespread turmoil. Making these theoretical holes even gloomier, the studies reviewed in this paper seem to indicate that market speculation is here to stay.

We argue that existing research remains highly fragmented and fails to answer critical questions regarding these events due in part to the oversight of a central aspect of all asset bubbles, that being the role of narratives. While the role of narratives is often overlooked in theoretical explanations of asset bubbles, their importance in these events has been identified and suggested numerous times, often in the observation that news, stories, or rhetoric is central to the emergence and growth of a

bubble. For example, Shiller (2005, p. 85) notes that “the history of speculative bubbles begins roughly with the advent of newspapers.” In his book with Akerlof (2009), they devote an entire chapter (Chapter 5) to the observation that stories are influential in financial markets, but the authors stop short of any theoretical development. In addition, numerous studies have looked into the effect that the news media has on financial decision-making, with several studies concluding that media bias plays an influential role in a bubble’s growth and bursting (e.g., Bhattacharya, Galpin, Ray, & Yu, 2009; Hartz & Steger, 2010). Thus, given the important yet overlooked role of narratives in asset bubbles, we propose a perspective that focuses on the central role that narratives play in these events. In the next section, we elaborate on the defining features of this perspective.

DEVELOPING AN ALTERNATIVE, NARRATIVE PERSPECTIVE

A narrative perspective of asset bubbles gives prominence to the role that narratives play in the emergence, development, and growth of asset bubbles. Here, a narrative is defined as a cohesive story or account of events, experiences, or phenomena, whether true or fictitious³. Narratives can thus be differentiated from facts, statistics, or predictions, which can often be debated according to their accuracy, dimensions, or relevance to a situation, whereas a narrative is merely one person’s or group’s version of events and hence is much more difficult to debate in any scientific manner. However, narratives, particularly those of an economic or business nature, frequently include facts and statistics as support for or key components of the main plot or essence of the narrative. A narrative is simply what is needed to make sense of the large, frequently overbearing, amount of information related to any given situation.

While mainstream economic models assume that market actors possess extremely high computational capabilities and an unlimited timeframe in which to make those computations (Conlisk, 1996), empirical studies and everyday observations of real-life financial decision-making suggest that assumption is highly problematic, if not downright false. In reality, financial decision makers are subject to the same computational errors as everyone else, are only able to gather and read a small fraction of the available information on any given matter, and are frequently required to make decisions in very short timeframes. This is particularly true of today’s computer-based trading environments; as noted by Oberlechner and Hocking (2004, p. 421), “New trading and information technologies, market participants observed, are demanding faster decisions and leave less time for mindful thinking and processing of information.” The limited information processing capabilities of

³ In this document, the terms “narrative” and “story” will be used interchangeably, which is common practice in narrative research (see, e.g., Fenton and Langley, 2011; Hartz and Steger, 2010; Moen, 2006). Also, similar to Boje (1995), we are using a rather loose definition that does not require narratives to have beginnings, middles, endings, or well-defined structural properties such as a fixed set of characters, which is common in narrative semiotics (e.g., Hartz and Steger, 2010) and narrative methodological approaches (e.g., Pentland, 1999).

humans is a well-studied phenomenon and has given rise to volumes of literature on concepts such as bounded rationality (Simon, 1986) and decision heuristics (Kahneman & Tversky, 1974). Research on decision heuristics, which are useful shortcuts and simple rules of thumb used in making decisions, has found that financial decision makers are particularly prone to giving too much attention to information that is vivid, salient, and unambiguous (Stracca, 2004). Such research helps to explain why narratives, which by their very nature are vivid, salient, and unambiguous, play an influential role in financial markets.

Although narratives have yet to receive much attention in relation to speculative bubbles, they have been studied rather thoroughly in regards to their influence on organizational life. Boje (1991, p. 106) refers to storytelling as “the preferred sense-making currency,” with numerous studies supporting the hypothesis that narratives are the primary tool used to make sense of the behavior of others and ambiguous organizational situations (e.g., Brown, 2004, 2005; Weick, 1995; Zellermayer, 1997). For example, Abolafia (2010b) demonstrates how narratives are used by the Federal Reserve to make sense of complex economic conditions. In his study, in response to a situation in which money supply growth did not respond as expected to interest rate cuts, policy makers created a version of events that explained the phenomenon as a slower-than-expected response to rate cuts and adjusted their policy options accordingly. Thus, narratives can be seen as not just *explaining* one’s environment but also as playing a major role in *shaping* one’s environment. In this manner, narratives become a pervasive, often taken-for-granted aspect of social life. As stated by Moen (2006, p. 56), “Not only are we continually producing narratives to order and structure our life experiences, we are also constantly being bombarded with narratives from the social world we live in.” Some scholars even go as far as to propose that narratives are the basic organizing principle of all human cognition (Boland & Tenkasi, 1995) and communication (Fisher, 1985, 1989). In support of this view, Kindleberger and Aliber (2011, Ch. 5) summarize findings from the field of social psychology that suggest that the human mind is essentially built to think in terms of narratives, while Taleb (2007) argues that our predilection for compact stories over raw truths leads to a “narrative fallacy” that causes us to think the world is less random than it really is.

The institutionalization of a bubble narrative

A narrative perspective of asset bubbles understands bubbles as emerging through the creation of a bubble narrative, as developing through the formation of a collective bubble narrative, and as growing through the institutionalization of that narrative. Below, we discuss each of these three stages and provide examples to illustrate.

The first stage of a bubble can be understood as an innocuous state of competing narratives. In this stage, an asset is subject to numerous narrative interpretations, each with its own unique account

of various facts, figures, events, and so on. Just as an organization can be understood as a multiplicity of different stories (Boje, 1995; Cooren, 1999), many assets are associated with such a wealth of information and variance of opinion that there can seem to be almost as many narratives as there are investors. Thus, while some investors may view the asset as capable of providing steady returns, an equally large number of investors may view the same asset as risky with little potential for large-scale growth. Such a state is likely for assets that have yet to receive much attention in the media or elsewhere, such as stocks in young, relatively unknown companies. In this stage, for there to be any chance of a bubble eventually growing, one of the narratives to emerge must be one that leads investors to expect significant capital gains, which will be referred to as a *bubble narrative*. For example, a narrative may emerge that sees housing in downtown Los Angeles as a great investment due to factors such as increased migration, a boom in the entertainment industry, and the likelihood of strict government controls of nearby land development. At this stage, however, large rises in LA home prices are unlikely as a large number of potential investors still view LA housing as risky, destined to drop in value, or only likely to provide incremental returns through rent.

The second stage of a bubble can be understood as a slightly more dangerous stage in which one of the narratives concerning an individual asset becomes widely shared amongst a significantly large group of investors. In this stage, potentially due to the overall connectedness of a community (Boyce, 1995) along with the aesthetic appeal of the narrative (Taylor, Fisher, & Dufresne, 2002), one of the narratives becomes dominant while others are marginalized (Boje, 1995). As such, a large percentage of investors will view the asset in a similar manner and fluctuations in the asset's price in response to various events or news will become more predictable. For instance, a stock may be referred to as a "blue chip stock" by a large group of investors, meaning they expect steady, reliable returns due to the company's experience, size, and reputation. As a result, individual news items about the company can now be easily interpreted against the backdrop of a blue chip narrative. Of course, what is dangerous about this stage is the possibility of a bubble narrative becoming shared by a large group of investors, which will be referred to as a *collective bubble narrative*. When this happens, an asset's price is very likely to rise beyond previous expectations due to the large number of investors who act upon the belief that the asset will generate significant capital gains.

Returning the LA example, at this stage a large group of property developers may start to enthusiastically bid up prices of land sales in the area, all with the same prediction that home prices will rise substantially in five years' time when construction is complete. However, at this stage, while downtown LA may undergo a small or brief real estate bubble, a large-scale nationwide housing bubble is unlikely to develop. This is because 1) a significant number of investors still do not share the same bubble narrative and instead retain their competing narratives, thus keeping price gains somewhat muted, even in LA; 2) the narrative still needs to be translated to contexts outside of LA, which may not be experiencing commercial booms or subject to strict land controls; 3) the narrative is

still open to critique in light of any new information; and 4) the narrative is still confined to a professional community of investors, limiting its spread.

The final, most dangerous, stage of an asset bubble is one in which a collective narrative becomes institutionalized (Berger & Luckmann, 1966; Scott, 1995). Institutionalization can be described as a process by which “structures, policies, and practices acquire social legitimacy and ultimately become taken-for-granted as normatively appropriate in a population” (Zajac & Westphal, 2004, p. 433). In other words, institutionalized practices are those that are deeply embedded in our society, practices that move from “This is *one way* of doing something” to “This is how we *always* do something”, “This is how something *should* be done”, or “This is how something *must* be done.” Relevant to this perspective, a narrative becomes institutionalized when it moves from an interpretation of an asset to the context of an asset. For example, stocks listed on the Dow Jones are not interpreted as blue-chip stocks—they *are* blue-chip stocks. While the debate of how blue-chip stocks in general are going to perform this year is still open for debate, the categorization of stocks on the Dow Jones as blue-chip stocks is essentially closed for debate. Therefore, when a stock is listed on the Dow Jones, it immediately becomes easier to interpret, analyze, communicate, and sell—especially to non-professional investors. One can easily translate these implications to the situation in which a collective bubble narrative becomes institutionalized, referred to here as an *institutionalized bubble narrative*. When a bubble narrative becomes institutionalized, the belief that a certain asset will achieve significant capital gains becomes broadly accepted as socially legitimate and normatively appropriate. During such a process, the narrative is likely to undergo what Earl, Peng, and Potts (2007) refer to as decision-rule cascades, meaning the rule or reason for making a decision becomes increasingly simplified as it spreads throughout society, losing the details and qualifications once regarded as central to the rule.

Returning one last time to the LA housing example, at this stage the narrative that “Home prices will go up in LA due to reasons a, b, and c” becomes “Home prices (in general) always go up”, “Home prices should go up” (meaning it is good for the economy and home owners), and/or “Home prices must go up” (meaning the government should intervene if prices drop, for a drop in home prices will severely damage economic activity). When such a transition happens, one can easily see how 1) competing narratives about homes as an investment will quickly and easily be dismantled; 2) the narrative need not be translated (in any great detail) to other contexts; 3) the narrative is no longer open to critique, for the logical reasoning behind it has disappeared; and 4) in its simplified form, the narrative can easily spread to the non-professional investment community. In such a context, a rapid, nationwide rise in home prices becomes a very real possibility.

When looking back on various large-scale bubbles of the past 400 years, it is a relatively easy task to identify the existence of collective narratives and their eventual institutionalization. For instance, in

the 1990s, the narrative of an “Asian economic miracle” was collectively shared amongst the investment community. This narrative was then given social legitimacy and subsequently became a taken-for-granted aspect of investment in Southeast Asia, as witnessed in publications by both the IMF and World Bank that adopted this narrative and referred to the economies of Hong Kong, Singapore, South Korea, and Taiwan as the “Four Asian Tigers” (Page, 1994; Sarel, 1996). In the recent housing bubble, a collective narrative formed around the theme that homes were “*investments* that never lost value” (Davis, 2010, p. 75, emphasis in original). Such a view then became an assumption that was deeply embedded in the financial community. For example, the value at risk (VaR) measurement, which was the most widely used model for valuating risk at investment banks at the time, was based on the assumption that home prices could never fall by a significant amount nationwide (Campbell, 2010). When this assumption proved to be false, all VaR measurements instantaneously became worthless.

While a narrative perspective is not a theory in the sense that it argues that narratives are the sole or most important cause of all asset bubbles, such a perspective does offer a rather comprehensive understanding of the emergence, development, and growth of asset bubbles. In addition, a narrative perspective can help to piece together and make sense of much of the existing literature on market speculation. For one, a narrative perspective does not stand in contradiction to findings from various fields that have identified a litany of factors responsible for the current and recent crises, such as low interest rates (Issing, 2009), fraud (Akerlof & Shiller, 2009), deregulation (Jain, 2009), financial innovation (Morgan, 2010), cultural shifts (Hirsch & Morris, 2010), and agency issues (Friedman, 2011). A narrative perspective simply views these factors as *bubble amplifiers*, or factors that play a large role in determining the ultimate scale, scope, and speed of any given bubble. Without any such factors present, a bubble’s rise and fall is likely to be relatively benign and unable to result in any widespread damage. Second, a narrative perspective does not contradict observations of “group think” or “herd behavior” from the behavioral sciences. Instead, a narrative perspective suggests that it is the development of a commonly shared, and increasingly simplified, narrative that makes group think and herd behavior so widespread in financial markets. With most investors falling back on the narrative to guide their decisions and other, perhaps more sophisticated, investors “buy[ing] in anticipation of further buying by uninformed investors” (DeLong et al., 1990, p. 380), it is easy to understand how herd behavior could become so pervasive in the first place.

Given its ability to develop a rather comprehensive understanding of asset bubbles, the narrative perspective outlined above should serve as useful sensitizing framework for future research on these events. Of important note is that the three stages identified above should not be seen as a linear, deterministic process of asset bubbles being constantly produced. Instead, the processes by which bubble narratives emerge, develop, and grow are undoubtedly much more nuanced.

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7. International Management

Interactive Session

Developing a narrative perspective of asset bubbles

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