



Contents lists available at ScienceDirect

Journal of Financial Economics

journal homepage: www.elsevier.com/locate/jfecAdvisors and asset prices: A model of the origins of bubbles[☆]Harrison Hong, José Scheinkman, Wei Xiong^{*}

Department of Economics, Princeton University, 26 Prospect Avenue, Princeton, NJ 08540-5296, USA

ARTICLE INFO

Article history:

Received 8 February 2007

Received in revised form

13 June 2007

Accepted 5 September 2007

Available online 15 May 2008

JEL classification:

G10

G20

Keywords:

Analyst forecast

New technology bubble

Reputation concern

Heterogeneous beliefs

ABSTRACT

We develop a model of asset price bubbles based on the communication process between advisors and investors. Advisors are well-intentioned and want to maximize the welfare of their advisees (like a parent treats a child). But only some advisors understand the new technology (the tech-savvies); others do not and can only make a downward-biased recommendation (the old-fogies). While smart investors recognize the heterogeneity in advisors, naive ones mistakenly take whatever is said at face value. Tech-savvies inflate their forecasts to signal that they are not old-fogies, since more accurate information about their type improves the welfare of investors in the future. A bubble arises for a wide range of parameters, and its size is maximized when there is a mix of smart and naive investors in the economy. Our model suggests an alternative source for stock over-valuation in addition to investor overreaction to news and sell-side bias.

© 2008 Elsevier B.V. All rights reserved.

To be against what is new is not to be modern. Not to be modern is to write yourself out of the scene. Not to be in the scene is to be nowhere. Tom Wolfe (1999), *The Painted Word*.

1. Introduction

What are the origins of speculative asset price bubbles? This question remains unanswered despite a large and growing literature on speculative trading and

asset price bubbles in economics. Motivated in part by the behavior of Internet stocks during the late 1990s, a surge in new research has arrived at two conclusions. The first is that differences of opinion among investors and short sales constraints are sufficient to generate a price bubble.¹ The second is that once a bubble begins, it is difficult for smart money to eliminate the mispricing (i.e., there are limits of arbitrage).² All these studies take as given that investors disagree about asset values. But where does this divergence of opinion come from?

In this paper, we develop a model of the origins of bubbles. Two sets of stylized facts motivate our analysis.

[☆] We are grateful to an anonymous referee for many insightful comments. We thank Kerry Back, Henry Cao, John Eatwell, Simon Gervais, Ming Huang, Robert Jarrow, Maureen O'Hara, Jacob Sagi, Robert Shiller, Sheridan Titman, Pietro Veronesi, and seminar participants at the Bank of England, Cornell University, St. Louis Federal Reserve Bank, 2006 American Finance Association Annual Meeting in Philadelphia, 12th Mitsui Life Symposium at University of Michigan, Cambridge-Princeton Conference on Finance, CEPR/Pompeu Fabra Bubble Conference, Duke-UNC Asset Pricing Conference, Financial Intermediation Research Society Conference in Shanghai and NBER Behavioral Finance Conference for helpful comments. This material is based upon work supported by the National Science Foundation under Award Numbers SES0350770 and SES0718407.

^{*} Corresponding author.

E-mail address: wxiong@princeton.edu (W. Xiong).

¹ See, e.g., Miller (1977), Harrison and Kreps (1978), Chen, Hong, and Stein (2002), and Scheinkman and Xiong (2003). Extensive empirical work confirming this premise includes Diether, Malloy, and Scherbina (2002), Lamont and Thaler (2003), and Ofek and Richardson (2003). This literature stands in contrast to the rational bubble literature (see, e.g., Blanchard and Watson, 1982) in which these two ingredients are not crucial in an infinite horizon setting. However, Allen, Morris, and Postlewaite (1993) show that these two ingredients emerge as relevant again to generate a rational bubble in a finite horizon setting.

² See, e.g., Shleifer and Vishny (1997) and Abreu and Brunnermeier (2003).

The first is that asset price bubbles tend to occur during periods of excitement about new technologies.³ In the U.S., speculative episodes have coincided with the following major technological breakthroughs: (1) railroads, (2) electricity, (3) automobiles, (4) radio, (5) micro-electronics, (6) personal computers, (7) biotechnology, and most recently (8) the Internet.⁴ The second is that in the aftermath of the Internet bubble, the media and regulators placed much of the blame on biased advisors for manipulating the expectations of naive investors. While not directly related to the Internet experience, indirect evidence from academic research in support of this view held by the media and regulators include: (1) analyst incentives to generate biased, optimistic forecasts; (2) naive individual investors who do not recognize that these biased recommendations are motivated by incentives to sell stocks; and (3) analysts' optimistic forecasts have an impact on prices.⁵

We focus on the role of advisors and their communication process with investors in generating divergence of opinion and asset price bubbles. Building on the existing literature, we assume that there are two types of investors, smart and naive, who are short sales constrained. While smart investors recognize the heterogeneity in advisors, naive ones take whatever recommendations they receive at face value. Importantly, all advisors are well-intentioned in that they care about the welfare of their advisees and want to honestly disclose their signals to investors. We also assume that at times of technological innovation, only some advisors understand the new technology (the tech-savvies); others do not and can only make a downward-biased recommendation (the old-fogies). We also consider an alternative assumption in which the old-fogies are replaced by dreamers who only issue upward-biased recommendations. The divergence of opinion and price bias results do not depend on this assumption but the old-fogey assumption is more theoretically interesting and there is evidence that it is relevant at a minimum for the recent Internet experience.⁶

³ See, e.g., Malkiel (2003), Nairn (2002) and Shiller (2000).

⁴ See DeMarzo, Kaniel, and Kremer (2008) and Pastor and Veronesi (2006) for rational explanations of high stock prices for new technologies.

⁵ See, e.g., Lin and McNichols (1998) and Hong and Kubik (2003) for evidence on analyst incentives, Malmendier and Shantikumar (2007) for evidence on investor reaction to recommendations, and Michaely and Womack (1999) for evidence on price impact.

⁶ Throughout *The Painted Word*, from which our epigraph is drawn, Tom Wolfe describes the loss of credibility suffered by art critics who were perceived as not "getting" the new pop art movement of the late 1950s. There is ample anecdotal evidence suggesting that advisors during the dot-com bubble faced similar concerns. For instance, Stanley Druckenmiller, a self-confessed old economy dinosaur and value investor, reversed course during the Internet boom period and declared that he understood the Internet after a meeting with guru Andrew Grove (see Pacelle, 2000). Famous examples of old-fogies include Jonathan Cohen, a sell-side analyst covering Internet stocks for Merrill Lynch who was fired for his skeptical reports about the Internet. In contrast, Mary Meeker, a vocal proponent of the Internet revolution, not only prospered during the Internet era but continues to be an influential voice in technology even after the bursting of the bubble. Finally, there is also evidence that young mutual fund managers were more aggressively

A key contribution of our model is that it serves as a warning that even if a stock appears overvalued, it may not be due to investors overreacting to news nor to sell-side bias. We are not disclaiming the role of sell-side bias in the dot-com bubble—only that such bias is not needed to generate asset price bubbles. Indeed, it is not clear that such bias can explain bubbles that have occurred during earlier periods. We observe that during the dot-com period, even so-called objective research firms with no investment banking business, such as Sanford and Bernstein, issued recommendations every bit as optimistic as investment banks (see, e.g., Cowen, Groysberg, and Healy, 2003).⁷ This suggests that there must exist other causes of upward biased forecasts by advisors aside from the sell-side incentives of analysts. Moreover, we think of our model as applying more broadly to other advisors such as buy-side analysts who are likely to be a more important part of the market. In short, our paper is an exploration of an alternative and potentially more theoretically interesting mechanism for generating divergence of opinion as opposed to simply assuming investors overreact to news or are overly exuberant.

More specifically, we consider an economy with a single asset, which we call the new technology stock. There are three dates, 0, 1, and 2. At date 0, advisors are randomly matched with investors (the advisees). Advisors also observe the terminal payoff (which is realized at date 2) and can send signals about this payoff to their advisees at date 0. A tech-savvy can send whatever signal he wants, while an old-fogey, who does not understand the new technology, is limited to a downward-biased signal. The investor type is unknown to the advisor, and the advisor type is unknown to the investor. The advisor–investor relationship is similar to that of a parent and teenaged child, in which the smart teenager is not sure whether dad is cool, and the cool dad tries to impress his teenaged child because he wants his child to heed his advice in the future.

At date 1, these advisors are randomly matched with a new set of investors. These investors can invest in a separate risky project requiring an initial fixed cost. Advisors again receive information about this risky project, which pays off at date 2. Once again, a tech-savvy can send whatever signal he wants, while an old-fogey is restricted to a downward-biased signal. Each investor has access to the track record of his advisor, namely the signal (or recommendation) that was sent by the latter at date 0. A smart investor can use this information to update his belief about his advisor's type.

To put this simple model into some context, think of the advisor at date 0 as a sell-side analyst covering technology stocks, but (counterfactually) with only good intentions. Date 1 represents the future career

(footnote continued)

holding technology stocks during the dot-com bubble as compared to their older counterparts (see, e.g., Greenwood and Nagel, 2006).

⁷ Moreover, Groysberg, Healy, Chapman, and Gui (2005) find that buy-side analysts (those working at mutual funds without brokerage or investment banking relationships) issue even more optimistic forecasts than their sell-side counterparts.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات