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Is there a bubble in the art market?

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ABSTRACT

The record-breaking prices observed in the art market over the last 5 years raise the question of whether it is an ongoing boom or whether we are experiencing a speculative bubble. Given the difficulty to determine the fundamental value of artworks, we apply a right-tailed unit root test with forward recursive regressions (SADF test) to detect explosive behaviors directly in the time series of six different art market segments for the period from 1970 to 2014. We identify two historical speculative bubbles and find an explosive movement in today's “Impressionist and Modern”, “Post-war and Contemporary”, “American”, and “Old Masters” fine art market segments.

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1. Introduction

Is there a bubble in the art market? This question was raised on November 15, 2013, by CNN journalist Ben Rooney (2013), after a record-setting week for the art market that broke the highest price ever paid at that time for an auctioned painting (Francis Bacon's 1969 “Three Studies of Lucian Freud” fetched $142.4 million on November 12, 2013, at the auction house at Christie's in New York), set the highest price for a living artist ($58.4 million for Jeff Koon's 1994 “Balloon Dog (Orange)”—auctioned the same night at Christie's), and provided Christie's with the largest sale to date in the art market (more than $691 million). Earlier that year, hedge fund manager Steven Cohen had purchased in a private deal Pablo Picasso's 1932 “Le Rêve” for about $155 million, a price only topped by one of the five versions of Paul Cezanne's 1892–93 “The Card Players,” which was privately acquired by the State of Qatar in May of 2011 for a reported price of more than $250 million. New York Times journalist Conrad de Aenlle (2014) recently argued that “[…] wealthy investors have bid up prices of works by a handful of Contemporary artists so high that it's turning the heads of collectors of more modest means.” He continues by speculating that “[…] such a concentration of interest and money in one segment of a market leads to instability down the road […],” and “[…] authorities on art investment worry that the budding romance could end quickly and badly.”

However, it is important to understand that such a strong rise in prices of artworks does not necessarily mean that there is an actual speculative bubble in the art market. Bubbles are generally defined as high-volume trading of a given category of assets at prices that are far above their intrinsic values (King et al., 1993). Given this definition, one can isolate the following constraints to

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the detection of bubbles: (i) high volumes must be traded, and (ii) prices must be above their fundamental values. When it comes to the art market, those constraints raise two questions. First, does the recent dramatic increase in art prices concern the entire art market? Or is it a “top one percent” phenomenon that benefits only a few “brand-name” artists? The second and most puzzling issue is the determination of the intrinsic value of an artwork. If we cannot determine the fundamental value, it is impossible to detect a speculative bubble.

Stein (1977) notes that artworks are actually both consumable goods and financial assets. Their market has existed for over five centuries when collectors, in the 16th century, had started acquiring works of art for esthetic reasons, social status, and also as a mean of investment. However, despite their existence of over 500 years, the art market still remains somehow opaque. In comparison with financial assets, art appears to be an unattractive investment. Investing in art is associated with high levels of risk caused by incorrect attribution, fakes, forgery, theft, and physical damage. Furthermore, it is related to high expenditures like transaction-, auction-, insurance-, maintenance- and restoration-costs. In addition, it is a heterogeneous and illiquid good, which is sold on a highly subjective, segmented and almost monopolistic market that pays no dividends. Financial assets, on the other hand, are (more) homogeneous and are characterized by being sold on numerous, more diverse and highly liquid markets. Besides, they can be selected through a relatively small number of objective criteria, have lower transaction costs and do usually pay out dividends. Furthermore, the value of artworks depends on a set of numerous variables, which are sometimes difficult to apprehend such as individual tastes, fashion effects (Chanel 1995), and the actual location of the sale.

In spite of all those specificities, economists like William Baumol (1986) started considering art as a financial asset as early as in the 1960s, and the interest for art as a financial asset has kept on growing along the growth of the art market itself. Beyond scholars and economists such as the recent papers by Korteweg et al. (2015), Penasse and Renneboog (2014), and Renneboog and Spaenjers (2013), analyzing the risk and return characteristics of art as an alternative asset class, the art market has attracted large financial institutions (e.g. UBS, Credit Suisse, Deutsche Bank, BNP Paribas, Société Générale) in the sense of providing art advisory services to their wealthiest clients (Kräussl and Wiehenkamp, 2012).

As of 2012, the auction market for art represents a total of $12.3 billion worldwide (Artprice, 2013). In a broader perspective, McAndrew (2008) estimates the global art market (auction and private deals) to be over $3 trillion with a $50 billion annual turnover. Artprice (2013) reports that in 2013, 80% of the transactions on the global auction market involved artworks priced at or under $5000. Only 1% of all auctioned paintings over the period 1970–2013 had fetched prices higher than $1 million. Therefore, the high-end, record-level pieces discussed in the media represent only a tiny part of the global market. Taking into consideration these global art market numbers and the first question raised, we run tests on six different art market segments, namely “Impressionist and Modern”, “Post-war and Contemporary”, “American”, “Latin American”, “19th Century European”, and “Old Masters, thereby grasping the whole spectrum of the international art market.

Answering the second question is not that straightforward but key. Even though Frey and Pommerenhe (1989), Gérard-Varet (1995), and Chanel et al. (1996) list a few variables that are supposed to explain the formation of artwork prices (e.g., production cost, size and type of work, buyer income, measure of esthetic quality, measures of artists' attributes, etc.), determining the fundamental value of an artwork is almost an impossible feat in itself. Under rational expectations, the fundamental value of an asset equals its discounted expected stream of cash flows (present value theory). It is relatively easy to obtain the expected cash flow earned by owning a share of stock (dividend) or a piece of real estate (rent). The ownership of an artwork, on the other hand, provides no claim for monetary return but some kind of convenience yield, which is also described as a “dividend of enjoyment” by Campbell (2008) and as “esthetic pleasure” by Gérard-Varet (1995). Thus, reasons closely dependent on the motivations and characteristics of the owner make it impossible to clearly quantify the return on art. To overcome this “fundamental value” issue, we use a new and direct method of bubble detection developed by Phillips et al. (2011). This approach is based on a right-tailed ADF (augmented Dickey–Fuller) test, which can detect explosive behaviors directly in time series.

Our empirical findings suggest that there is strong evidence of a speculative bubble — in the mania phase of its formation, which started in late 2010 in the “Old Masters” art market segment, in late 2011 — in both the “Post-war and Contemporary” and “American” art market segments, and more recently in the “Impressionist and Modern” art market segment. We observe that those markets, except the “Impressionist and Modern” art market segment, were already in the stage of a speculative movement around 2003–2008, which started earlier in the “Old Masters” art market segment (2003) and later in the other two markets (around 2006). The absence of such phenomena in the other segments of our study makes those markets the most likely to develop bubble-type behaviors. The finding of the well-known bubble of 1990, which was observed in all market segments, shows how reliable the methodology is and, therefore, gives further robustness to the results.

The remaining part of the paper is structured as follows: Section 2 motivates the theory behind the bubble detection and reviews the different testing methods. Section 3 presents the data and the corresponding art market indices. Section 4 discusses our empirical findings, and Section 5 concludes.

2. Framework

The detection of bubbles has captured the attention of financial economists at least over the last four decades. From the seminal work of Kindleberger and Aliber (2005) to the recent modeling approach of Phillips et al. (2011), numerous statistical tests have been developed to identify the presence of bubbles in time series. The basis for all approaches on the matter relies on the definition that a bubble consists of a sharp rise in a given asset price, i.e., above a level sustainable by some fundamental values,

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