

## BANKING/ FINANCE

# Harvard Academics Reveal Blueprint for Bailing to Avoid Stock Crashes



SHUTTERSTOCK

Harvard researchers found that tools exist for bailing from the rallies most likely to end violently.

by Lu Wang

Good news for everyone waiting for a bubble to burst. Predicting sectorwide crashes in the equity market isn't impossible.

That's the conclusion of Harvard University researchers who studied boom-and-bust cycles in publicly traded U.S. industries since 1926. In a new paper, Robin Greenwood, Andrei Shleifer and Yang You found that while not every violent advance in shares ends in horror, those that do share common traits. Among them: rising volatility and greater share issuance.

As is often the case with academic inquiries into financial assets, the study is a rebuttal to the efficient markets hypothesis, whose Nobel Prize-winning inventor Eugene Fama questioned whether anyone could identify bubbles that ended up wiping out returns.

While the Harvard authors found that much of Fama's view is correct, especially that sharp run-ups in shares aren't by themselves progenitors of market meltdowns, they say tools exist for bailing from the rallies most likely to end violently. Keeping out of crashes can add 10 percentage points to an investor's long-term return, they said.

"When investors look at a very large price run-up in an industry and they are concerned if there is a potential bubble, they should look at some of the other non-price features and behavior as a guide to what might happen," Greenwood said by phone. "People who have studied bubbles have been solely focused on the price action. We wanted to have a serious attempt to bring in some other information."

Fama didn't reply to an email and phone call seeking comments.

Alas, for investors looking for guidance on whether to sell now, the paper holds few clues. The reason is simple: nothing going on in the market today would've qualified for investigation under the authors' base case for bubbles. Maybe it will one day, but the academic bar for studying excesses in the stock market is high, and even industries that seem to be overheating in the Trump bump have a ways to go before entering the history books.

## DEFINING BUBBLE

Greenwood and his colleagues defined a bubble as when share prices at least doubled within two years and found that among industries that rallied so much, returns were generally no better or worse than average afterward.

Two things explain this. Surging stocks often keep surging, and when they do crash, they sometimes don't fall enough to wipe out previous gains.

At the same time, if you can sidestep a crash, you should. And a methodology for doing so forms the meat of the study. The authors found that roughly half the rallies they examined ended in routs of 40 percent or more, the avoidance of which would obviously have been good. They posited various telltale signs of when you're in the midst of that kind of run-up, with time to get out and avoid the carnage. They are:

- Increases in price volatility. Specifically, industries that end up crashing exhibit big increases in volatility compared with other industries, while the ones that avoid crashes, don't.
- Increases in share issuance.
- The relative performance of new versus old firms.
- Acceleration, or a steepening in the slope of the rally.

"It is still the case that we cannot call the peak of the bubble, and some of the portfolios we examine keep going up," they wrote. "Nonetheless, investment strategies that condition on high past returns in combination with these characteristics exceed the returns to a passive buy-and-hold all industries strategy by 10 percentage points or more on a two-year or longer basis."

The analysis comes with caveats. One, only 40 times in 90 years did industries rise this fast, a fact that might limit statistical significance. Another is that the inquiry centered on industries that had already reached the 100 percent threshold, it was clear in hindsight that a major rally had occurred. In real time, while an investor might sense a bubble is happening, the study's findings wouldn't be strictly applicable until it got to 100 percent.

Notably, it found that not all red-hot markets are the same, and the odds of a bad outcome do seem to be a function of the velocity of the rally. Among the 40 bubble episodes, odds of a crash rose to 80 percent when share prices surged 150 percent. That compares with 53 percent when prices double and a random probability of 14 percent.

While the researchers focused their study on industries, they found there is "substantial" correlation between crashes in sectors of the market and broader underperformance. For instance, the bubbles in coal and steel stocks blew up during the 2007-09 bear market.

Lu Wang reports for Bloomberg News.



## CITY OF DORAL NOTICE OF PUBLIC HEARING

All residents, property owners and other interested parties are hereby notified of a **Council Meeting** on **Wednesday, March 22, 2017, beginning at 6:00 PM.** At the **City of Doral, Government Center, Council Chambers** located at **8401 NW 53rd Terrace, Doral, Florida, 33166** to consider the following final plat application:

### RESOLUTION No. 17-

**A RESOLUTION OF THE MAYOR AND THE CITY COUNCIL OF THE CITY OF DORAL, FLORIDA, APPROVING THE FINAL PLAT FOR LANDMARK AT DORAL SOUTH, LOCATED ON THE EAST SIDE OF NW 107 AVENUE BETWEEN NW 58 STREET AND NW 62 STREET, CITY OF DORAL, FLORIDA; PROVIDING FOR RECORDATION; AND PROVIDING FOR AN EFFECTIVE DATE**

**HEARING NO.:** 17-03-DOR-03

**APPLICANT:** Ford, Armenteros & Fernandez, Inc. on behalf of EHO Congress Doral Retail, LLC and the Landmark at Doral Community Development District.

**PROJECT NAME:** Landmark at Doral South

**LOCATION:** The subject property is located on the east side of NW 107 Avenue between NW 58 Street and NW 62 Street, City of Doral, Florida.

**SIZE OF PROPERTY:** 25.24 ± acres

**PRESENT ZONING:** Traditional Neighborhood District (TND)

**REQUEST:** Ford, Armenteros & Fernandez, Inc. on behalf of EHO Congress Doral Retail, LLC and the Landmark at Doral Community Development District are requesting approval of the Final Plat for Landmark at Doral South.

**LEGAL DESCRIPTION:** The West 739.33 feet of Tracts 41, 42, 43 and 44, of FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION NO. 1, in Section 17, Township 53 South, Range 40 East, according to the Plat thereof, as recorded in Plat Book 2, Page 17, of the Public Records of Miami-Dade County, Florida.

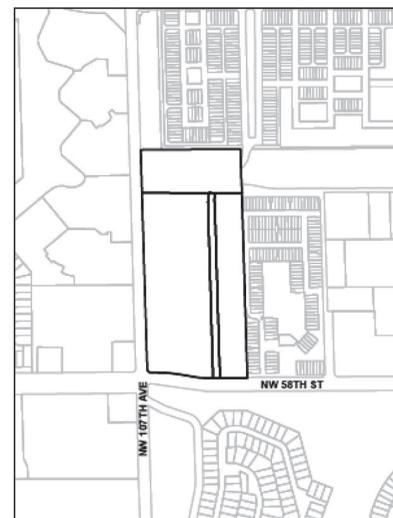
TOGETHER WITH:

The West 739.33 feet of Tract 45, lying South of a line parallel with and 25.00 feet South of the North line of said Tract 45, of FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION NO. 1, according the Plat thereof, as recorded in Plat Book 2, Page 17, of the Public Records of Miami-Dade County, Florida.

LESS FROM ALL THE ABOVE;

All Road Right-of-Ways of record, and LESS that portion of Tracts 41, 42, 43, 44 and 45 deeded to Miami-Dade County by Special Warranty Deed recorded August 23, 1996 in Official Records Book 17746, Page 2223, of the Public Records of Miami-Dade County, Florida.

### Location Map



Information relating to the subject application is on file and may be examined in the City of Doral, Planning and Zoning Department located at **8401 NW 53rd Terrace, Doral, FL. 33166.** All persons are invited to appear at this meeting or be represented by an agent, or to express their views in writing addressed to the City Clerk, **8401 NW 53rd Terrace, Doral, FL. 33166.** Maps and other data pertaining to these applications are available for public inspection during normal business hours in City Hall. Any persons wishing to speak at a public hearing should register with the City Clerk prior to that item being heard. Inquiries regarding the item may be directed to the Planning and Zoning Department at 305-59-DORAL.

Pursuant to Section 286.0105, Florida Statutes if a person decides to appeal any decisions made by the City Council with respect to any matter considered at such meeting or hearing, they will need a record of the proceedings and, for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. This notice does not constitute consent by the City for introduction or admission of otherwise inadmissible or irrelevant evidence, nor does it authorize challenges or appeals not otherwise allowed by law. In accordance with the Americans with Disabilities Act, all persons who are disabled and who need special accommodations to participate in this meeting because of that disability should contact the Planning and Zoning Department at 305-59-DORAL no later than three (3) business days prior to the proceeding.

NOTE: If you are not able to communicate, or are not comfortable expressing yourself, in the English language, it is your responsibility to bring with you an English-speaking interpreter when conducting business at the City of Doral during the zoning application process up to, and including, appearance at a hearing. This person may be a friend, relative or someone else. A minor cannot serve as a valid interpreter. The City of Doral DOES NOT provide translation services during the zoning application process or during any quasi-judicial proceeding.

NOTA: Si usted no está en capacidad de comunicarse, o no se siente cómodo al expresarse en inglés, es de su responsabilidad traer un intérprete del idioma inglés cuando trate asuntos públicos o de negocios con la Ciudad de Doral durante el proceso de solicitudes de zonificación, incluyendo su comparecencia a una audiencia. Esta persona puede ser un amigo, familiar o alguien que le haga la traducción durante su comparecencia a la audiencia. Un menor de edad no puede ser intérprete. La Ciudad de Doral NO suministra servicio de traducción durante ningún procedimiento o durante el proceso de solicitudes de zonificación.

Connie Diaz, CMC  
City Clerk  
City of Doral  
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