Market Values, Cycles & Bubbles

Barry Ritholtz
Ritholtz Wealth Management

Markus Brunnermeier
- Tax deductible donations

- Ramanan Laxminarayan
  - Center For Disease Dynamics, Economics & Policy (CDDEP.org)
  - Princeton colleague
  - Webinar speaker on Covid
Frothy markets

- New Jersey Deli Valued at $105 Million
  - Bloomberg: Sales in 2020 $14,000
- SPACS
  - Record IPO levels despite Covid crisis
Bubble Theories

- Bubble = value comes from retrading
  - (partially) dynamically complete incomplete markets
    - Incomplete markets: Bewley (1979), Brunnermeier-Sannikov (AER2016)
    - Modern Asset Pricing: $P_t = E[PV(cash\ flow)] + E[PV(service\ flow)]$
- OLG: Samuelson, Tirole (1985) (long-horizons)
- Heterogeneous beliefs + short-sale constraint
  - Intuition: Greater fool theory (I dump on fool you if x, you dump on fool me if y.)

- Exploding/extrapolative bubbles
  - Noise trading risk: DSSW
Policy choices:

- **Tobin tax**
  - Lower frequency or re-trading – resell option of bubbles
  - For stocks (but not for US Treasuries)

- **Ease shorting** – Current challenges for shorting are
  - Shorting is costly: fee to borrow stock
  - Shorting is risky: lender can recall stock → short-squeeze
    - Meme investing→ correlated trades → easier short-squeezes

- **Ease short coordination?** → attack stocks
  - Side effect: Predatory shorting (Brunnermeier Oehmke)
Barry Ritholtz’s Poll Questions

1. Today's market valuations are:
   a. The most expensive we have seen in a long while!
   b. Pricey, but tolerable
   c. TINA, Federal Reserve made Valuations no longer matter
   d. Its complicated

2. The current bull market:
   a. Is 12 years old, and very late in the cycle;
   b. Is looking past the pandemic and forward to the recovery;
   c. 2020 crash and recovery reset the clock, its barely a year old
   d. Who cares about the age of a bull market?

3. How Bubblicious is the market today?
   a. Congratulations! Its a Bubble!
   b. Pockets of froth + speculation,
   c. Nothing to worry about! Its all good!
   d. No one can identify a bubble in real time.
Market Values, Cycles and Bubbles
Today’s Discussion

1. Bull & Bear Markets?  
   *(What is a market cycle, anyway?)*

2. How Much Do Valuations Matter Anymore?  
   *(How do you measure value?)*

3. Is this a Bubble?  
   *(And how can you tell?)*
Bull & Bear
Market Cycles
Bull Market Cycles

Survey question: *The Current Bull Market is:*

a) 12 years old, and very late in the cycle;
b) Looking past the pandemic + forward to the recovery;
c) Reset by the 2020 crash/recovery, its barely a year old;
d) Who cares about the age of a bull market?
What is a Bull/Bear Market?
What is a Bear Market?
What is a Bull Market?
Bear Markets Begin Above Prior Bear Markets
Bear Markets Begin Above Prior Bear Markets

20 Years of Ups and Downs
S&P 500 Index

Source: Bloomberg
Bull Market 4 Traits
What is a Secular Bull (Bear) Market?

4 characteristics:

1. Broad economic expansion, rising corporate revenues + profits;
2. Rising stock prices making new all-time highs;
3. Improving investor sentiment manifest in the willingness to pay more for each dollar of earnings;
4. Lasting over a substantial length of time – years and decades
What’s the Dominant Narrative?
What is a Bull/Bear Market?

100 Years of Secular Markets, P/E Expansion & Contraction

Secular stock market cycles are driven by trends in the price/earnings ratio (P/E)

Secular bull markets start after the trough of below-average P/Es

Secular bears start after the peak of above-average P/Es

Despite market declines in the 2000s, P/Es remain above average and trending lower – the potential sign of a current secular bear market

RITHOLTZ
wealth management

e: Ritholtz.com, Crestmont Research
The Current Bull Market is:

a) 12 years old, and very late in the cycle; 
*Bull markets begin when they make new highs after a long, broad trading range (2013 not 2009)*

b) Looking past the pandemic + forward to the recovery; 
*Markets are always forward looking – what does this tell you?*

c) Reset by the 2020 crash/recovery, its barely a year old; 
*Data suggests slight outperformance following 30% drop*

d) Who cares about the age of a bull market? 
*There is no evidence the age of a market is what ends them*
Valuations:

Are you looking at them the wrong way?
Market Valuations

Survey question 2

2. *Today’s Market Valuations Are:*

a) The most expensive we have seen in a long while
b) Pricey, but tolerable
c) TINA, Fed made Valuations no longer matter
d) Its complicated
Why Markets Don’t Care If the Economy Stinks

2020 Advantage Lockdown Stocks

- Internet Content & Information
- Software - Infrastructure
- Consumer Electronics
- Internet Retail
Market Cap % of S&P500, by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>YTD Performance</th>
<th>% of S&amp;P 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Stores</td>
<td>-56.17%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Airlines</td>
<td>-52.31%</td>
<td>0.19%</td>
</tr>
<tr>
<td>Oil &amp; Gas Equipment &amp; Services</td>
<td>-48.54%</td>
<td>0.21%</td>
</tr>
<tr>
<td>Travel Services</td>
<td>-48.13%</td>
<td>0.37%</td>
</tr>
<tr>
<td>REIT - Hotel &amp; Motel</td>
<td>-41.29%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Resorts &amp; Casinos</td>
<td>-41.10%</td>
<td>0.17%</td>
</tr>
<tr>
<td>REIT - Retail</td>
<td>-41.03%</td>
<td>0.19%</td>
</tr>
<tr>
<td>Oil &amp; Gas E&amp;P</td>
<td>-40.35%</td>
<td>0.55%</td>
</tr>
<tr>
<td>Apparel Manufacturing</td>
<td>-40.19%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Oil &amp; Gas Refining &amp; Marketing</td>
<td>-40.02%</td>
<td>0.27%</td>
</tr>
<tr>
<td>Banks - Diversified</td>
<td>-36.48%</td>
<td>2.43%</td>
</tr>
<tr>
<td>Food Distribution</td>
<td>-36.03%</td>
<td>0.09%</td>
</tr>
<tr>
<td>Oil &amp; Gas Midstream</td>
<td>-34.77%</td>
<td>0.23%</td>
</tr>
<tr>
<td>REIT - Healthcare Facilities</td>
<td>-34.60%</td>
<td>0.17%</td>
</tr>
<tr>
<td>Lodging</td>
<td>-34.18%</td>
<td>0.17%</td>
</tr>
<tr>
<td>Beverages - Brewers</td>
<td>-33.49%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Banks - Regional</td>
<td>-32.92%</td>
<td>0.89%</td>
</tr>
<tr>
<td>Insurance - Life</td>
<td>-31.75%</td>
<td>0.35%</td>
</tr>
<tr>
<td>Pharmaceutical Retailers</td>
<td>-31.46%</td>
<td>0.12%</td>
</tr>
<tr>
<td>Oil &amp; Gas Integrated</td>
<td>-30.09%</td>
<td>1.18%</td>
</tr>
</tbody>
</table>
## Context Matters

<table>
<thead>
<tr>
<th>Inflation</th>
<th>vs</th>
<th>Deflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodity prices over last year...</td>
<td></td>
<td>Commodity prices over last 10 years...</td>
</tr>
<tr>
<td>Lumber: +265%</td>
<td></td>
<td>Coffee: -55%</td>
</tr>
<tr>
<td>WTI Crude: +210%</td>
<td></td>
<td>Cotton: -54%</td>
</tr>
<tr>
<td>Gasoline: +182%</td>
<td></td>
<td>Brent Crude -47%</td>
</tr>
<tr>
<td>Brent Crude +163%</td>
<td></td>
<td>WTI Crude: -45%</td>
</tr>
<tr>
<td>Heating Oil: +107%</td>
<td></td>
<td>Heating Oil: -43%</td>
</tr>
<tr>
<td>Corn: +84%</td>
<td></td>
<td>Silver: -42%</td>
</tr>
<tr>
<td>Copper: +83%</td>
<td></td>
<td>Gasoline: -40%</td>
</tr>
<tr>
<td>Soybeans: +72%</td>
<td></td>
<td>Natural Gas: -38%</td>
</tr>
<tr>
<td>Silver: +65%</td>
<td></td>
<td>Sugar: -34%</td>
</tr>
<tr>
<td>Sugar: +59%</td>
<td></td>
<td>Corn: -17%</td>
</tr>
<tr>
<td>Cotton: +54%</td>
<td></td>
<td>Wheat: -16%</td>
</tr>
<tr>
<td>Platinum: +52%</td>
<td></td>
<td>Copper: -2%</td>
</tr>
<tr>
<td>Natural Gas: +43%</td>
<td></td>
<td>Soybeans: +9%</td>
</tr>
<tr>
<td>Palladium: +32%</td>
<td></td>
<td>Gold: +19%</td>
</tr>
<tr>
<td>Wheat: +19%</td>
<td></td>
<td>Platinum: +40</td>
</tr>
<tr>
<td>Coffee: +13%</td>
<td></td>
<td>Palladium: +278%</td>
</tr>
<tr>
<td>Gold: +3%</td>
<td></td>
<td>Lumber: +397%</td>
</tr>
</tbody>
</table>
Everything is Working

S&P 500

(Percent of stocks above 200-day moving average)

Data Source: Stockcharts.com
$100 Million Dollar Pastrami!

Markets

David Einhorn Sees Broken Markets in a New Jersey Deli Valued at $105 Million

By Brandon Kochkodin
April 15, 2021, 5:53 PM EDT

- Hedge fund titan says ‘there is no cop on the beat’ in markets
- Company’s CEO is also the local high school’s wrestling coach

Einhorn Sees Broken Markets in N.J. Deli’s $105 Million Valuation
Say Cheese!

Grilled Cheese and $100 Million of Irrational Exuberance

Grilled Cheese Truck market valuation may be a sign of excess in financial markets.

By Barry Ritholtz
February 5, 2015, 8:49 AM EST

I’ll have mine with some net income. Photographer: David Livingston/Getty Images
Today’s Market Valuations Are

a) The most expensive we have seen in a long while
   True, but only if you use single variable analysis

b) Pricey, but tolerable
   Assuming you have a long-term holding period and are prepared
   to lower your return expectations

c) TINAL: Fed made Valuations no longer matter
   That’s too 1999 for me

d) Its complicated
   In finance this is almost always a winning answer
Bubbles:
How can you tell? What do you do?
Survey question: How Bubblicious is the market today?

a) Congratulations! Its a Bubble!
b) Pockets of froth + speculation,
c) Nothing to worry about — its all good!
d) No one can identify a bubble in real time.
Most Volatile Year Ever

S&P 500
(30-Day Standard Deviation)
12 Month Returns?

S&P 500 Level % Change

Mar 24 2021, 12:54PM EDT. Powered by YCharts
It Gets Harder From Here

S&P 500
1-Year Change

Source: YCharts
Expected Returns
Growth and Value

1-Year Returns

Source: Ritholtz Wealth Management, Data via Ycharts (S&P 500)
Housing Shortage

Tight home sales inventory
Number of US single-family homes available for sale, (1000s, NSA)

@lenkiefer Source: National Association of Realtors, dotted line at February 2021
Not a Bubble
Mortgage Originations by Credit Score*

Source: New York Fed Consumer Credit Panel/Equifax
* Credit Score is Equifax Riskscore 3.0
How to Spot a Bubble in Real Time

Notice the Difference?
1995-2000: S&P 500 returns: annual, 25%; five years, 211%. Nasdaq 100 returns: annual, 60%; five years, 946%

Source: Bloomberg
How to Spot a Bubble in Real Time

1. Standard Deviations of Valuation
2. Significantly elevated returns
3. Excess leverage
4. New financial products
5. Expansion of Credit
6. Trading Volumes Spike
7. Perverse Incentives
8. Tortured rationalizations
9. Unintended Consequences
10. Employment trends
How Bubblicious is the market today?

a) Congratulations! Its a Bubble!
   *Hard to see elements of a bubble*

b) Pockets of froth + speculation
   *Yes, but there always are*

c) Nothing to worry about — its all good!
   *Always a wrong answer*

d) No one can identify a bubble in real time.
   *Indentifying and acting on are two very different things*

Source: NYFed
One Final Thought

20-year annualized returns by asset class (1999 – 2019)

- REITs: 11.6%
- High Yield: 7.9%
- Small Cap: 7.6%
- EM Equity: 7.0%
- S&P 500: 6.1%
- 60/40: 5.6%
- 40/60: 5.4%
- Bonds: 5.0%
- DM Equity: 3.8%
- Homes: 3.4%
- Average Investor: 2.5%
- Inflation: 2.2%
- Cash: 1.7%
- Commodity: 1.0%
Barry L. Ritholtz

Chairman, Chief Investment Officer,
Ritholtz Wealth Management
24 West 40th Street, 15th floor
New York, NY 10018
212-625-1200

britholtz3@bloomberg.net