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May Market Perspective: Booms, Bubbles, and Busts

In 1554, famous Reformation theologian Martin Luther said the following about German mining shares, called *kuxe*:

"Ich will kein kuks haben! Es ist spiegelt, und es will nicht wudeln [gedeihen] dasselbige gelt."

"I will have nothing to do with kuxen. They are play money and will not generate hard cash."

The *kuxe* market predated formal stock exchanges, but evidence points to heavy trading volume along with the presence of shares bought on credit, active stockbrokers, option-like contracts, and at least one dedicated trading company. Prices could rise dramatically — there is evidence of one *kuxe* increasing 40-fold within the span of one week — and fall just as abruptly, as unsuccessful mines frequently saw shares decline to zero within the span of a year. Although many of the specific details have been lost, financial historians point to the *kuxe* experience as the first recorded market bubble.

Famed hedge fund investor George Soros has a different perspective than Martin Luther. In 2009 he said, "When I see a bubble forming I rush in to buy, adding fuel to the fire. This is not irrational." Soros caveats his perspective by also saying that, of course, "you have to get out in time." Perhaps easier said than done, but he's on to something. It's easy to mistake a boom for a bubble and forego substantial returns.

Bubble Investing

In a paper titled "Bubble Investing: Learning From History," William Goetzman, a finance professor at Yale University School of Management, makes an important and fundamental point about stock market booms and busts: "bubbles are booms that went bad, but not all booms are bubbles." Using stock market data for a wide range of countries between 1900-2014, he found that following a stock market boom (defined as an increase of 100% in a one-to-three-year period), markets declined back to their original level only about 10% of the time. In fact, he found that prices were more likely to double again after a 100% gain than to fall back to their original level.

We updated and replicated Goetzman's analysis for the US equity market over the last four decades. Following a rally of equal or greater magnitude to the current one, the US equity

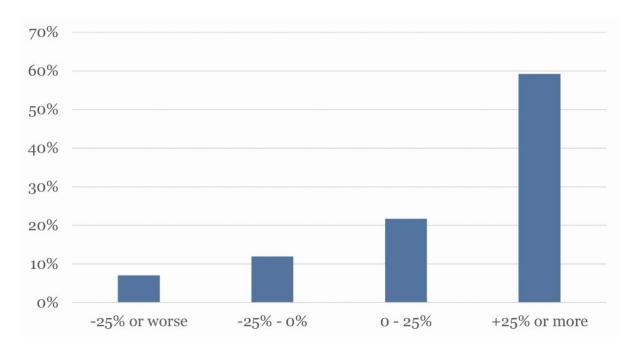


market has been positive over the next three years 80% of the time with an average total return of 30% (Fig. 1). US equities have appreciated 50% or more within the next three years over half the time. Eventual corrections into bear market territory have occurred less often — only about a third of the time — and those are rarely the 30-50% losses that loom so large in our psyche.

These results should not lull us into complacency. Even if bubbles loom larger in our imaginations than in practice, the magnitude of impact matters more than the probability of occurrence. During the inflationary 1970s, Australia, the UK, and Norway experienced losses of 65-75% and took over a decade to recover. Thirty years ago, Japan experienced a stock market decline of 75% and their market remains below 1990 levels today. Taiwan and Korea saw declines of more than 85% during the Asian Financial Crisis. They too have yet to fully recover. Americans are acutely familiar with lost decade that followed the dot-com bubble and the severe losses of the financial crisis. Bubbles might be rare, but busts are extremely damaging.

- [1] http://www.cgeh.nl/sites/default/files/Jenks%29The first bubble.PDF
- [2] https://www.youtube.com/watch?v=DFyfYBcbbac
- [3] https://www.nber.org/system/files/working_papers/w21693/w21693.pdf

Fig. 1: US equities have historically done well after significant rallies Three-year performance following 100% or larger gain



Source: Bloomberg, Mill Creek



Current Markets: Boom or Bubble?

Viewed though Goetzman's lens, there are certainly some parts of today's equity market — particularly in the US — that meet the "boom" criteria. The small cap technology sector and small cap equity index have returned 180% and 136%, respectively, since March 2020. The broad US market is up 100% over the same period. Other geographic regions haven't quite reached the "100% return within three years" hurdle, but many have the potential to get there within short order.

0% 20% 40% 60% 80% 100% 120% **United States** Brazil China Japan Canada Eurozone Australia Mexico Switzerland United Kingdom

Fig. 2: The US leads the global equity market recovery

Source: Bloomberg, Mill Creek

Hong Kong

While Goetzman's work makes it clear that we should usually give equity booms the benefit of the doubt, there are some signs that can help identify bubbles in the making. Economist Robert Shiller, famous for identifying the dot-com and housing bubbles (as well as a few false positives along the way), has developed a checklist of bubble symptoms:

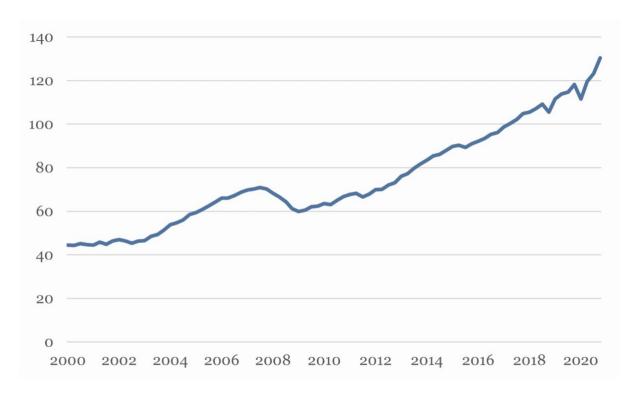
- 1. Sharp increases in the price of an asset like real estate or dot-com shares
- 2. Great public excitement about said increases
- 3. An accompanying media frenzy
- 4. Stories of people earning a lot of money, causing envy among people who aren't
- 5. Growing interest in the asset class among the general public
- 6. "New era" theories to justify unprecedented price increases
- 7. A decline in lending standards



Most of these symptoms apply almost perfectly to parts of the market, like meme stocks, cryptocurrencies, and SPACs. Excitement? Check. Media frenzy? Check. Envy? Check. Growing interest? Check. New era theories? Check. Decline in lending standard? Check. If Shiller's list is correct, we are currently experiencing a few isolated bubbles of the purest kind.

On the other hand, it's hard to make the same case for broad-based US or global equities. We have experienced a sharp increase in share prices, but none of the other bubble symptoms. It's more likely that equities have rebounded for the obvious reasons: strong corporate earnings, accelerating household net worth (Fig. 3), pent-up consumer demand, a healing labor market, and sharply rising consumer confidence (Fig. 4), all set against a backdrop of supportive monetary and fiscal policy.

Fig. 3: Aggregate household net worth has reached record highs



Source: Bloomberg, Mill Creek



140
130
120
110
100
90
80
Apr-18
Oct-18
Apr-19
Oct-19
Apr-20
Oct-20
Apr-21

Fig. 4: Consumer confidence recovered sharply in March and April

Source: Bloomberg, Mill Creek

We're certainly in a boom. That much is clear. It is our conclusion that the boom has not become a bubble for the US and global equity markets, except in certain isolated and highly speculative areas. Even so, three facts remain. First, equity markets don't go up in a straight line forever. We shouldn't be surprised, or overreact, if markets sell off 10% or more at some point this year. Such volatility is completely normal for equities but can feel jarring after a large rally. Second, global equity diversification provides the best defense against significant and sustained drawdowns in any one market. Too much concentration, whether it be sector or geographic, can put portfolios at risk when booms occasionally go bad. Finally, not all booms become busts. As Goetzman says: "The most important thing a financial historian can tell investors about bubbles is that they are rare... Placing a large weight on avoiding a bubble, or misunderstanding the frequency of a crash following a boom, is dangerous for the long-term investor."



Benchmark Performance

Benchmark Performance by Asset Class										
Benchmark Returns	One Week	Year to Date	1 Year	3 Years	5 Years	10 Years				
Global Equities	-0.2%	9.1%	45.7%	13.3%	13.9%	9.2%				
US Equities	-0.1%	11.8%	50.9%	18.9%	17.7%	14.1%				
International Equities	-0.8%	6.6%	39.9%	6.3%	8.9%	5.2%				
Emerging Market Equities	-0.4%	4.8%	48.7%	7.5%	12.5%	3.7%				
US Taxable Bond Market	-0.2%	-2.6%	-0.3%	5.2%	3.2%	3.4%				
US Municipal Bond Market	-0.1%	0.2%	5.4%	4.2%	2.6%	3.1%				
Hedge Fund Index	0.5%	3.1%	14.9%	4.0%	4.2%	1.5%				
Diversified Commodities	2.2%	15.8%	48.5%	1.6%	2.3%	-5.7%				
Gold	-0.5%	-6.8%	4.9%	10.4%	6.5%	1.4%				

Key Rates (as of stated date)	5/3/21	1/1/21	5/3/20	5/3/18	5/3/16	5/3/11
US 10-Year Treasury	1.6%	0.9%	0.6%	2.9%	1.8%	3.2%
Barclays Aggregate Bond Index	1.5%	1.1%	1.3%	3.3%	2.2%	2.9%
BBarc Muni 1-10Yr Blend (1-12) Index	0.6%	0.6%	1.7%	2.4%	1.3%	2.3%

Source: Bloomberg, Mill Creek. Returns for periods greater than one year are annualized. Benchmark rates are yield-to-worst.

This week's contributor: Michael Crook, CAIA.

Indices Used: U.S. Large Cap equities: Russell 1000 Index, U.S. Small Cap Equities: Russell 2000 Index, International Developed Equities: MSCI EAFE Index, Emerging Market Equities: MSCI Emerging Markets Index, U.S. Bonds: Barclays Aggregate Bond Index, U.S. 10 Year Treasury Note: Bloomberg 10 Yr. Treasury Note, Municipal Bonds: Barclays Intermediate Municipal Bond Total Return Index, High Yield Bonds: Barclays U.S. High Yield Total Return Index, Oil: Bloomberg WTI Crude Sub-Index Total Return Index, Gold: Bloomberg Gold Sub-Index Total Return Index

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