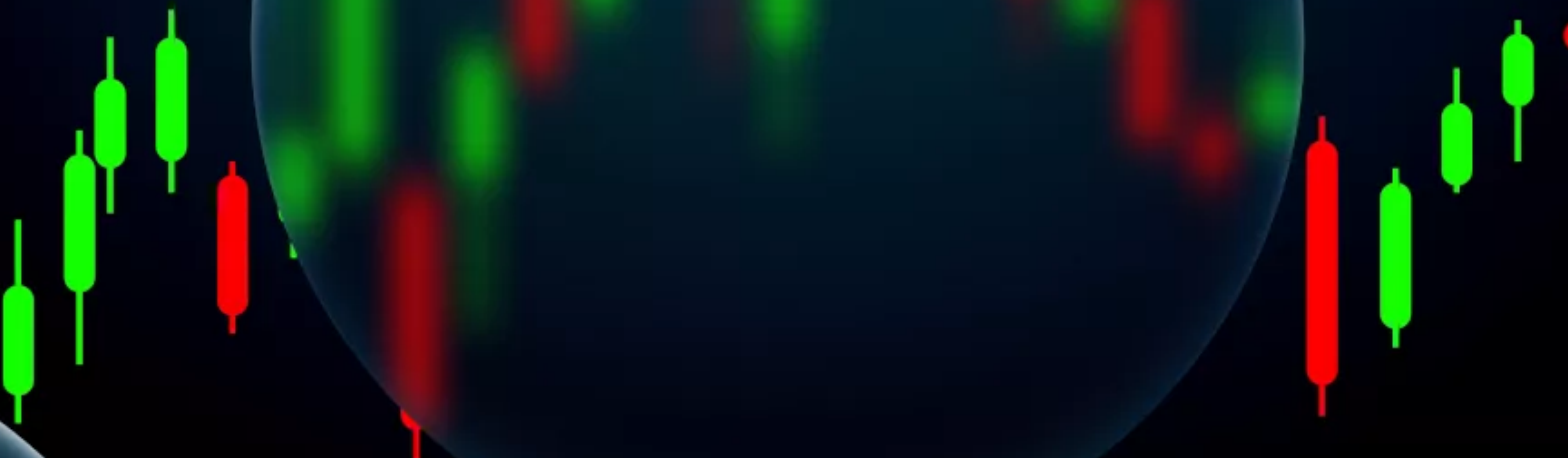
ASPECTS

Overvaluation, bubbles, corrections & crashes



NORTHPLAINS CAPITAL PARTNERS LLP

September 2023

Investments in public equity markets and other financial asset classes have grown in popularity in India. Participants in Indian markets include large institutions (e.g. pension funds), insurance funds, Foreign portfolio investors (FPI's), corporates, market makers and retail investors. Likely, investment objectives, timeframes, market expertise and risk tolerance of these investors vary significantly and their ongoing participation in markets influences market prices (short term volatility and longer term trends), liquidity and returns.

While returns from investments are a main requirement for most investors, from a risk management standpoint, a given investor faces the risks that his expectations of asset performance and prices may be different from the broader market and from what actually transpires over time. If these risks materialise to the downside, the investor is faced with the possibility of low returns and in worse outcomes, a loss of the principal amount invested.

In this regard, two occurrences that investors may want to safe guard against are market overvaluation and asset bubbles.

OVERVALUATION & CORRECTIONS

Overvaluation may be understood as a market phenomenon wherein market prices trend higher than reasonably assessed "intrinsic value". Intrinsic value[1] of a security or an asset is the fair market value of the security or asset, accounting for the cash flows that can be obtained over it's lifetime, discounted at a rate reflective of the risks to those cash flows. Essentially, when we hear someone say, security A is overvalued, or the market is overvalued, they are probably implying that in their assessment market prices for that security or the market are higher than what they assess as "intrinsic value".

[1] Intrinsic value, is a term widely employed by legendary American investor Warren Buffett in his writings and shareholder communications.

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Overvaluation may happen due to several reasons, important ones being, investor overoptimism regarding a given asset's prospects and prices, limited supply relative to market demand and dim prospects for returns from investing in other assets. The fact that an asset is currently overvalued, implies that future returns may be lower than expectations. Overvaluation may be security or sector specific, and can persist for varying, difficult to predict, timeframes before actions of market participants[2], and/or a resolution of underlying drivers enables a "market correction" returning prices to realistic levels.

BUBBLES & CRASHES

In the context of financial and asset markets, the term "Bubble", refers to prolonged dislocations in those markets driven by, one or more of, irrational investor sentiments, asset class dynamics, the broader economic climate and the workings of markets.

While overvaluation may be limited in scope, size and duration, "Bubbles" likely form due to large, overlapping and/or mutually reinforcing macro factors or group level behaviours and actions. The Minsky model[3], is a structural construct that can help in understanding bubble formation, propagation and its aftermath. It posits that "Bubbles", usually being with a "displacement" which can be understood as a significant exogenous shock to the macro economic system. The "displacement" and its causes may vary from one crises to another and may take the form of an initiation or end of a war, a significant innovation e.g. construction of railroads, adoption of Internet, a sizeable political or cultural event e.g. mass migration, or a large macroeconomic or financial event e.g. financial liberalisation or unanticipated change of monetary policy.

[2] Arbitrageurs, short sellers and market makers may have an important role in normalising prices.

[3] Hyman Philip Minsky was an American economist and professor. Minsky's model summarised in this section is as discussed in "Manias, Panics & Crashes, A History of Financial Crises, 8th edition by Robert Z. Aliber, Charles P. Kindleberger, Robert N. McCauley.

The “displacement” surfaces profit opportunities in some areas and may alter or negatively affect existing ways of living life or doing business. As investors, entrepreneurs, and speculators seek to profit from the new circumstances a “boom” is initiated. The early period of the boom is fed by expanding credit and money supply as banks and lenders turn on the liquidity and credit taps. As prices increase the “contagion” spreads drawing in more investors and possibly external funds. Positive feedback develops, new investments fuel further price increases, as supply is slow to, or cannot keep pace with increasing demand.

At this stage, a “Euphoria” develops and “Fear of missing out” or “Fear of falling behind” further augment investor and speculator interest with expectations of future price increases fuelling further demand and trading. Fence sitters join the bandwagon and a “Bubble” is said to have formed. Eventually prices reach unrealistically high levels, and as the Bubble metaphor implies, “surface tension” in the bubble, starts to get investors nervous. A change in sentiment towards the asset class may get precipitated by an event or news flow e.g. a fraud being discovered, a company going belly up et cetera. A small group, cashes out at the top of the market, prices stop increasing, and may even start to decrease. Soon enough, an even greater number of asset owners head for the exits in a rush to get out of the bubble asset and into cash or other assets. What ensues is a panic of sorts and is followed by the bubble “bursting” as prices fall rapidly, liquidity dries up, leaving many investors with sizeable losses, and quite possibly inflicting collateral damage on the broader economy and society.

Similar to the Minsky model, several other economists and analysts have studied bubbles in great detail and proposed frameworks elucidating bubble formation and the eventual crash. The framework by Robert Shiller[4], outlines 4 factors:

Precipitating Factors: External or underlying reasons that lead to the initiation of the bubble.

[4] Robert J. Shiller is an American economist, academic and author. Shiller’s model summarised above is from “Irrational Exuberance Revisited”, Member Readings, CFA Institute 2010.

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Amplification Mechanism:	Interactions between economic participants and the broader economic and cultural landscape that propels precipitating factors into irrational exuberance[5].
Cultural Factors:	Stories that influence people to understand the context and enable their actions.
Psychological Factors:	Psychology of market participants and the masses, and inherent biases and preferences.

Bubbles in economic and financial literature have involved varying asset markets and sometimes more than one asset market e.g. bubbles in stock markets, in real estate, and in commodities. Widely analysed episodes include the technology bubble of 2001, the financial crises of 2007, and if one were to go back in time, the bubble in cultivation and trading of Tulip flowers in 17th century Netherlands.

TULPENMAINE OR TULIPMANIA

Tulips are popular garden flowers grown all over the world for their ornamental beauty and splendid colours. The flower germinates from a "Bulb" that is planted 4-8 inches deep in moist soil. Tulips were the centrepiece in a historic episode of increasing prices and an ensuing crash in 17th century Netherlands, widely quoted and discussed as Tulipmania.

Per historical references, Tulips came to the Netherlands[6] from Southern Europe, Turkey and Persia in the 16th century, probably owing to their remarkable beauty, and were initially cultivated by select cultivators, referred to as "liefhebbers" (connoisseurs).

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[5] Irrational exuberance was a term famously coined by the then US Federal Reserve chairman, Dr. Alan Greenspan, in the context of rising technology stock prices in 1996.

[6] Sources: 1. Tulipmania, Money, Honour and Knowledge in the Dutch Golden Age. 2. www.wikipedia.com. 3. Others. Refer Appendix for details.

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National Tulip Day in Amsterdam, Netherlands. googleimages.com.

Liefhebbers pioneered cultivation in several urban centres of 16th century Netherlands, with a keen sense for aesthetics, natural beauty and cultivation technique. Over time as local cultivation progressed, liefhebbers interacted with one another sharing information about flower diversity, growth and built an expanding knowledge base and community appreciating and propagating the natural aesthete of the flower.

Netherlands during this time period, was a prosperous trading nation and was witnessing immigration from the south to the north of the country. As blooming Tulips gained increasing admiration in urban centres[7], they started to draw the attention of individuals who entirely or in part wanted to profit from the cultivation of and trade in Tulips, in addition to partaking of characteristics of social mobility and class that were now being associated with Tulip cultivation and ownership. Referred to as "bloemisten" (florists), this small group of geographically and/or professionally and/or culturally concentrated group of individuals and families[8] introduced commerce, business infrastructure[9] and profit making to Tulip trade and cultivation.

[7] Amsterdam, Harlem, Leiden, Middleburgh, Enkhuizen, Hoorn and others.

[8] "bloemisten" were often related to each other by family ties, could be living at close quarters to each other, may have immigrated to the urban centres, have similar religious affiliation, were usually well off and could be merchants, cultivators, regents or from other common professions. Source: Tulipmania: Money, Honour and Knowledge in the Dutch Golden Age.

[9] Refers to best practices associated with buying and selling contracts, information sharing, dispute resolution and other areas of business dealings.

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Tulips began to be admired for their natural beauty, variety and rarity and cultivated, traded and owned as prized possessions[10] by an increasing number of individuals and companies in the 1620's-early 1630's, including those from sections of the population that hitherto had not directly participated in Tulip cultivation or trading.

In the year 1635, prices of rare varieties of Tulips began to increase at a rapid pace and reached their zenith in February 1637 with some Tulips contracting for sale at prices as high as f 1000-f 5000+[11], when in normal times, common varieties of Tulips would sell for a few guilders or less. For context, at prices of f 1000 in those times, one could have bought 4651 pounds of figs, 3448 pounds of almonds or 5714 pounds of meat[12].

Semper Augustus: Rare Tulip bulbs, commanded amongst the highest prices at the peak of bubble in 1637. googleimages.com.

In parallel, escalating bulb prices and, societal context and objectives of an expanding set of market participants in Tulip trades, garnered increasing attention of the broader population, and in 1636 the "rederijkerskamer" (chamber of rhetorics & drama) began publicity campaigns in urban centres highlighting the follies and risks of trading in Tulips[13].

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[10] According to select historical references, Tulips began to be valued similar to expensive art and high value objects. They were also themselves subjects of popular art (stills and portraits).

[11] f: Dutch currency, Guilder.

[12] Source: Tulipmania, Money, Honour and Knowledge in the Dutch Golden Age by Anne Goldgar.

[13] "rederijkerskamer" refers to the chamber of rhetoric and poetics and dramatics society. Deploying pamphlets and other means, they highlighted the "foolishness" of trading in Tulips, and the risks and tradeoffs inherent. For a detailed study, refer to 1. Tulipmania, Money, Honour and Knowledge in the Dutch Golden Age by Anne Goldgar. 2. Irrational Exuberance Revisited by Robert Shiller, 2010 CFA Institute Member Readings.

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Evidently, price increases of this magnitude were not sustainable, nervous buyers were unwilling to bid prices even higher and as some sellers cashed out of "chain transactions" or individual transactions[14], price increases and even trading in Tulips came to a halt. Buyers expecting to profit from further price increases wanted to exit their contracts and the "Crash" became evident closer to bloom time in summer as prices had corrected significantly and several parties were stuck with large losses and contractual and legal issues.

While the crash impacted participants and those adjacent to the Tulip trade, there are somewhat differing accounts of the collateral damage from Tulipmania on the broader economy of the region. Some sources suggest that the impact was widespread and did substantial damage to the Dutch economy that took several years to recover from[15]. Others conclude that the direct economic impact was largely contained to a relatively small section of the population that participated in Tulip trades, and that Tulipmania, reflected on changing social and cultural dynamics of Dutch society including notions of trust, honour and value, right from its inception as a significant economic and social phenomenon to the eventual crash and its aftermath.

While Tulipmania and more recent events e.g. 2007 mortgage and subprime crises are widely studied as "bubbles", there are economists and analysts who dispute the existence of bubbles and contend that equity markets are inherently efficient, assimilating all publicly available information, and what seem to be "bubble like" prices during the build up and "corrected prices" after the crash can be mathematically justified by analysing forward looking expectations[16].

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[14] "chain transaction" refers to repeat sales of a given tulip bulb from one seller to the next without passing on possession of the actual bulb due to seasonal and cultivation constraints. In contrast, individual transaction would be from one seller to one buyer. In many cases, particularly when possession was not taken, payment was due in one or more installments - after taking possession and at significant other dates as mentioned in the contract.

[15] Source: Bursting the Bubble, Rationality in a Seemingly Irrational Market by David Derosa. CFA Institute Member Readings. 2021 CFA Institute Research Foundation.

[16] A detailed discussion is beyond the scope of our newsletter. Refer to Bursting the Bubble, Rationality in a Seemingly Irrational Market by David Derosa. CFA Institute Member Readings. 2021 CFA Institute Research Foundation. Part I: Empirical Tests for Bubbles & Part II: Neoclassical Finance & Bubble Theory.

EPILOGUE

Asset market bubbles and overvaluation represent real risks to market participants, and over the years, analysts, historians and economists have researched such episodes extensively shedding light on the anatomy of these market phenomenon and also proposing theoretical constructs which can greatly augment our understanding and help us manage risks associated with them.

Furthermore, investors may want to stay aware of the fact that short term volatility and longer term trends are shaped by numerous actions by several market participants as they maximise on their objectives in light of business and macro contexts. These pricing trends are difficult to forecast precisely and/or consistently and as such they present risks to short and long term returns from investment portfolios.

APPENDIX

Primary References

Books

1. *Tulipmania: Money, Honour & Knowledge in the Dutch Golden Age* by Anne Goldgar. Google Ebooks.

2. *Manias, Panics & Crashes: A History of Financial Crises*, 8th edition by Robert Z. Aliber, Charles P. Kindleberger & Robert N. McCauley.

Research Articles

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