BUBBLES, BOOMS, AND BUSTS

The Rise and Fall of Financial Assets

Donald Rapp

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Preface

One of the problems that has challenged us for as long as we can remember is: how to value assets? In response to that challenge, we have invented the "free market economy" in which the price of an asset is set by the give-and-take between buyer and seller, one seeking the lowest price, and the other seeking the highest possible price. The two types of assets of greatest consequence to most of us are real estate and corporate stocks. According to classical economics, "the price is right" because it is set by negotiation between a rational buyer and a rational seller as to the "worth" of the asset. Unfortunately, history shows that at frequent intervals, this system gets seriously out of whack and the pricing of assets goes haywire. Stock and real estate prices are driven to "irrational exuberance." Inevitably, the bubble bursts and there is great misery throughout the land. Then the cycle repeats itself – again and again.

What seems to happen is that some event, some expectation, or some development starts the asset price rise rolling. As asset prices rise, a vacuum is generated that sucks in more investors, hungry for quick profits. The momentum so generated attracts more investors. By now, most new investors ignore the original stimulus for the boom, and are only buying with the intent of selling at a profit to "a bigger fool" who is expected to come along soon. Greed descends upon the land like a ground fog.

We have seen this process repeat itself with minor variations as far back as we can remember,[1] whether in tulips in Holland in the 17th century, the South Seas bubble of the 18th century, the Florida land boom of the 1920s, the stock market

[1] Early booms and busts were discussed in: McKay, Charles (1841), *Extraordinary Popular Delusions and the Madness of Crowds*. Richard Bentley, London. Reprinted Farrar, Strauss Giroux: New York: 1932

boom and crash of the 1920s, the great bull market of 1982–1995, the Japanese boom of the 1980s, the savings and loan scandal of the 1980s, the dot.com boom of 1996–2000, and most recently, the sub-prime mortgage housing boom of 2002–2007.

To add to the confusion, the bubble atmosphere provides a playground for charlatans, schemers, and crooks within which to operate. The Republican Party has provided impetus to these corporate criminals by implementing "deregulation" and interpreting this as "no regulation." In such an environment, banks and investment companies are free to play with the public's money and be bailed out by the Government.

The first part of this book examines the nature, causes and evolution of bubbles, booms and busts in asset markets as phenomena of human greed and folly. In doing this, I have built upon the foundations laid down by John Kenneth Galbraith's various works and I have also utilized material from Kindleberger's work: "Manias, Panics and Crashes," as well as various other sources cited in my book. Understanding bubbles, booms and busts requires first and foremost examination of the human element (greed, extrapolation, expectation and herd behavior).

The process by which a boom is transformed into bubble and thence to a bust is explored in considerable detail. In many cases, there is a legitimate basis for expecting significant future growth (as with the expansion of automobiles and highways in the 1920s, or the introduction and expansion of the personal computer and the Internet in the 1990s). This leads to investment, which produces a boom. The boom expands into a bubble when the original basis for investing is gradually replaced by *momentum buying* when speculators invest only because the asset price is rising. As prices rise, more speculators are sucked into the vacuum. Eventually, when the rate of rise reaches epic proportions, the bubble pops.

The rationality of investors comes into question. So does the rationality of bankers, who also display these same tendencies to an irrational degree. There is evidence that bankers are among the stupidest of people. Recent events in 2008 show that just about every major bank, brokerage house and mortgage company has been rocked by multi-billion dollar losses in the sub-prime mortgage fiasco, and their stock values have plummeted.

In addition, we examine how Government policy (monetary policy, fiscal policy, tax structure) – or the perception by investors regarding the effects of Government policy – affects bubble formation and collapse. Bubbles require money. The money is supplied by banks, which in turn are enabled by loose government monetary policies. Government policies include manipulation of interest rates and tax laws. Over the past thirty years, Government policies have been skewed repeatedly to support bubbles in real estate and stocks. Low interest

rates hurt savers, and low income taxes (particularly on upper bracket income, capital gains and dividends) promote speculation and bubble formation. Asset bubbles enrich those who own assets. Therefore, it is relevant to examine who owns the assets in America. We find that a relatively few at the top own most of the assets. Hence preservation and enlargement of assets via bubbles preferentially benefits the rich, and that is, and has been the policy of the US Government. This raises the question whether asset bubbles create wealth, or vice versa? While classical economics might suggest that asset bubbles should merely create inflation, not wealth, there is considerable evidence in recent decades, that wealth has been created merely by bidding up the prices of stocks and housing (on paper), thus defying the laws of classical economics. As a result, the rich get richer (relative to the poor and middle class) and the disparity between the top and the bottom expands with time. The major supporter, architect and protector of bubbles over the past several decades has been Arthur Greenspan who used Federal Reserve policies to combat fragility in bubbles in almost every instance whenever it appeared.

A great proportion of the apparent prosperity of our times is illusory. First of all, much of the prosperity is confined to the rich. Most of the prosperity is due to asset growth and since the rich own most of the assets, they have profited the most. By contrast, real wages (adjusted for inflation) have been relatively flat for some time. Modifications to the income tax structure by Republicans have exacerbated this disparity. In addition to asset growth, a huge expansion in debt: federal, state, municipal and personal, has created the illusion of wealth. Ronald Reagan's introduction of "spend and borrow," as a new theme for the Republican Party over the past two decades, competes with the Democrat's "tax and spend" philosophy. Vice-President Cheney voiced the Republican viewpoint: "Deficits don't matter." The combination of (1) asset bubbles, (2) expansion of debt, and (3) temporary control of inflation by purchasing cheap goods from China (while losing our manufacturing industries and blue-collar jobs) seems to have worked – but this shaky house of cards could easily collapse, and likely will.

The second part of this book examines a number of specific boom-euphoria-bust cycles during the last 100 years. Most of the emphasis is on American bubbles but a few overseas bubbles are also included.

The Florida land boom of the 1920s ushered in the era of boom-bust cycles in the 20th century, when a single piece of property might trade six times in a single day with each purchase heaping promissory note upon promissory note until the whole thing collapsed.

The stock market in the late 1920s was a bubble in which stock prices rose incredibly from 1924 to 1929, and the general atmosphere was that of a gigantic

bubble driven by euphoric investors, with heavy margin buying and leverage introduced via investment trusts. However, a number of learned articles have claimed that most stocks were not overpriced in 1929. There are many explanations for why the stock market collapsed in October 1929, and all of these provide insights; nevertheless an all-inclusive explanation has yet to be found. Similarly, the explanations for the ensuing depression of the 1930s are diverse, but it is still not entirely clear why the depression was so profound and so lengthy.

The savings and loan scandal of the 1980s was partly a bubble and partly out-and-out fraud, encouraged, supported and abetted by policies of the Reagan administration that blindly believed that deregulation (interpreted as no regulation) would solve an inherent problem of S&Ls in which their revenues from mortgages would no longer cover their costs when interest rates on deposits escalated. The cost of bailing out failing S&Ls could have been contained if the Reagan administration had acted in a timely fashion; but it didn't, and unseemly speculators and criminals took over the S&L industry while Mr. Reagan kept his head in the sand. In the end, the taxpayers paid for the debacle after Mr. Reagan left office.

The dot.com mania of the late 1990s was based on a sound intuition that the Internet would have a profound positive effect on communications, business efficiency and information storage and retrieval. However, the boom very quickly turned into euphoria as new companies were created daily and bid up to incredibly high prices. The valuations (stock price × number of shares outstanding), given to minor Internet businesses with no earnings, often exceeded valuations of major companies like General Electric. It was inevitable that after the huge run-up in stock prices prior to 2000, the bubble would collapse in 2000; and collapse it did with a "thud."

Mr. Greenspan tried to rescue the collapsing stock market with a series of drastic rate cuts starting in 2002, and to some extent he was successful. But an unintended (at least presumably unintended) consequence of the rate cuts was the generation of a new huge bubble in residential housing prices from 2002 to 2007. This bubble was aided and abetted by the prevailing interpretation of deregulation of banks and home loan institutions as "no regulation" – allowing them to pursue speculative, risky, and in many cases just plain stupid policies regarding issuing mortgages without adequate down payments, and issuing gerrymandered loans to people who could not afford the payments, in the expectation that rising house prices would bail them out. This was further exacerbated by large financial institutions packaging large numbers of mortgages into investment vehicles that obscured the fragility of the underlying collateral.

When the housing bubble popped in late 2007, as it had to, it dragged down the stock market as the realization spread that most financial institutions had lost

countless billions in inflated real estate securities. However, once again "Helicopter Ben" and the Fed came to the rescue dropping down money on the markets after every significant falter in the stock market. And with each money drop, the dollar weakened, the price of oil shot up, and the price of gold inflated.

Perhaps most wondrous of all is not the repeated boom-bubble-bust cycle that we see over and over again in asset investments; but rather it is the almost religious belief of investors who prostrate themselves before the Federal Reserve with its rate-settings, as if like a Colossus astride the economy, it can single-handedly steer the ship of state to safety.

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Introduction: The Holland Tulip Mania of 1636–1637

History shows that there is a deep-rooted human urge to make a quick profit without working for it by trading in paper assets. One of the first documented boom-bubble-bust cycles was the "tulip craze" that took place in Holland in 1636–1637 when buying and selling tulips became a national mania that led otherwise rational people into mortgaging their worldly goods to invest in tulips.

Tulips originated in Asia and Turkey, where they were cultivated and propagated in Turkey almost a thousand years ago. They were introduced into Holland for the first time in 1563, where they were propagated and studied by a Dutch botanist from the 1570s to the 1590s. The culture of tulips and propagation from bulbs or seed is a slow process. By 1600, tulips were in some demand throughout Europe but supplies were limited. The colors of tulips began to change due to a virus and some magnificent tulips evolved. Tulips were valued by their color, and a hierarchy of tulips evolved with the most desirable ones bringing very high prices. A tulip called "*semper augustus*" was the most highly prized of all, and quickly became very valuable.[2]

Between 1600 and 1630, Dutch tulip growers propagated more tulips, and tulip sales became a thriving business. Tulips were taken out of the ground after the blooming season and dried and stored for the summer to preserve them prior to replanting in the fall. Most sales therefore took place in mid to late summer when the bulbs were accessible. With the passage of time, tulip prices rose significantly, but in an orderly fashion.

In this era, some Hollanders became wealthy through trade with distant lands, but the great majority of the Dutch were artisans or farmers who worked long hours for subsistence wages. It was tempting to these laboring people to try to earn some additional money by acquiring and propagating tulips themselves. Thus,

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[2] "Tulipomania", Mike Dash, Three Rivers Press, 1999.

with the expansion of the tulip market, a number of amateurs began growing tulips for sale in the early 1630s.

Dash described two national propensities of the Dutch of that time: savings and gambling. The plague killed off a number of people during the 1630s, leaving a shortage of labor. Wages went up as a result, and artisans had some extra savings to gamble on the tulip trade. Tulip prices rose considerably from 1630 to 1635, and the interest in earning profits from tulips expanded amongst the populace during that period.

The demand for tulips was such that a market that only existed for about two months in late summer was inadequate. As a result, in 1635, an important change was made in the way tulip sales were carried out. Instead of an exchange of cash for bulbs in late summer, the transactions could now take place at any time of the year, even while the tulip bulbs remained in the ground, and the exchange of cash was for a contract in which the bulbs would be made available to the buyer at the next late summer opportunity. This introduced several issues because the buyer was not sure exactly what he was getting, and the care of the sold bulbs was not always ideal. At the same time, many sales were made on contracts in which the buyers put up little cash, but paid a down payment in kind, with personal goods, and promised to pay the seller a large cash payment after the buyer took possession (based on the expectation that he could sell the bulbs to another buyer at a higher price). Most of these people could not possibly come up with the cash required at completion of the deal, except by selling their tulips to a hypothetical future buyer.[3] Very often, the down payment was a small percentage of the total price. Thus, buyers were highly leveraged. With these changes in the market, there was no need to know much about growing or propagating tulips. Investments were now made for the purpose of resale, not for the purpose of use. Thus, the tulip market passed from a boom phase to a mania phase.

Beginning in the autumn of 1635, prices escalated and as they did, more and more investors were sucked into the market to buy, driving prices higher and higher. By 1636, tulips were traded on the stock exchanges of numerous Dutch towns and cities. This encouraged trading in tulips by all members of society, with many people selling or trading their other possessions in order to speculate in the tulip market. By the autumn of 1636, a single tulip bulb could command a price equivalent to a few years' average salary, and the top bulbs were priced at several decades of average salary. Prices rose by a factor of ten from November 1636 to

[3] If this sounds familiar in 2008, it is because this was the same philosophy of those who bought housing that they could not afford during 2004–2007 with the expectation that rising prices would bail them out.

January 1637. The peak in the market occurred in early February 1637, when an auction of tulips netted 90,000 Guilders.[4] However, at an auction a few days later, there were no bids. This led to a nationwide panic as buyers disappeared from the markets. The ensuing collapse of the tulip market was swift and profound. By the spring of 1637, tulip prices had dropped by factors of 20 to 100. Many of the relatively common tulips became completely worthless. As in the case of the Florida land boom of the 1920s, a given tulip may have been bought and sold several times, each time with a small down payment and a promissory note. As each buyer defaulted, they left behind a tangled web of unpaid bills.

Had the tulip transactions been enforced, those who had mortgaged their few possessions to enter the tulip market would have been ruined – implying consignment to the workhouse, or starvation. Attempts were made to resolve the situation to the satisfaction of all parties, but these were unsuccessful. Ultimately, individuals were stuck with the bulbs they held at the end of the crash—no court would enforce payment of a contract, since judges regarded the debts as contracted through gambling, and thus, not enforceable by law. In many cases the people who owed had no assets worth suing for anyway. It appears that after the collapse of the tulip market, the courts decreed that all purchase contracts would be treated as options to buy and need not be fulfilled.

Dash described the end result of the tulip craze as surprisingly benign. Most of the crazy deals were negated and life went on, although bankruptcies increased and there are other signs of financial stress in the aftermath. However, Galbraith claimed that a recession followed the puncture of the bubble.

[4] For calibration, an artisan's salary was about 300–400 Guilders/year and a prosperous merchant may have earned 1,000 or more Guilders per year.

Chapter 1

THE NATURE OF MANIAS, BUBBLES, AND CRASHES

INTRODUCTION

John Kenneth Galbraith (JKG)[1] pointed out:

> The free-enterprise economy is given to recurrent episodes of speculation. These great events and small, involving bank notes, securities, real estate, art, and other assets or objects are, over the years and centuries, part of history.

He then sought to find common features for these episodes because as he said, only through such understanding can the investor be warned and saved from "what must conservatively be described as mass insanity." However, as JKG amply demonstrated, such warnings will be met with vilification and abuse by the ruling powers during the manic phase of a boom.

JKG concluded:

> The more obvious features of the speculative episode are manifestly clear [in which assets] when bought today, are worth more tomorrow. This increase and the prospect attract new buyers; the new buyers assure a further increase. Yet more are attracted; yet more buy; the increase continues. The speculation building on itself provides its own momentum.

JKG described two types of participants in these booms. The *true believers* "are persuaded that some new price-enhancing circumstance is in control, and they expect the market to stay up and go up, perhaps indefinitely." They envisage a brave new world ahead where the rules have changed. A smaller group of superficially more *astute speculators* are aware of the speculative mood of the moment and the likelihood that it will eventually come to an end. Their goal is to ride the

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upward wave with the aim of getting out before the speculation runs its course. If they are successful, they will do very well.

It is in the nature of speculative booms that there will be an inevitable fall, and that fall will not usually occur gently or gradually. It will typically occur with a comparatively sudden and decisive collapse. According to JKG, "that is because of the groups of participants in the speculative situation are programmed for sudden efforts at escape." At some point in the upward spiral, JKG postulated that "something, it matters little what—although it will always be much debated—will trigger the ultimate reversal." Astute (or lucky) speculators may get out in time. Those who thought the wave would continue upward forever ride the downward wave until they sell in desperation, driving the market down further. And as JKG summarized:

> . . . thus the rule, supported by the experience of centuries: the speculative episode always ends not with a whimper but with a bang. There will be occasion to see the operation of this rule frequently repeated.

The mathematics of rise and fall may not be widely understood. When the price of an asset doubles (increases by 100%) it only requires a 50% drop to restore it to its original price. Thus a stock that was originally priced at 10 that doubles to 20 needs only to drop by 50% to return it to 10. Similarly, if an asset goes from 10 to 40, a 400% appreciation, then a mere 50% reduction will wipe out half of the 400% gain. Thus, even a moderate drop from the high point can erase a substantial percentage of the previous gains. Those who joined the boom late may be hit especially hard by such losses.

JKG commented on the mass psychology of the speculative mood. In order for an individual to resist the suction generated by the allure of quick riches during a speculative boom, he must:

> . . . resist two compelling forces: one, the powerful personal interest that develops in the euphoric belief, and the other, the pressure of public and seemingly superior financial opinion that is brought to bear on behalf of such belief.

In this connection, JKG quoted Schiller's dictum:

> ***Anyone taken as an individual is tolerably sensible and reasonable but as a member of a crowd, he at once becomes a blockhead.***

Those involved with the speculation are experiencing an increase in wealth and there is a tendency for them to believe that this is neither fortuitous nor undeserved. "All wish to think that it is the result of their own superior insight or intuition."

According to JKG, two factors that contribute to the bubble mentality are:

(1) The short financial memory (or ignorance of history) that makes investors oblivious of previous financial disasters and

(2) The tendency to attribute greater intelligence to individuals, the more income or assets that they control.

The ignorance of the history of booms and busts is a theme that was oft repeated by JKG. He suggested that there are many characteristics in common between boom/bust cycles over the past 400 years and "the lessons of history are compelling—and even inescapable."

In a world where acquisition of riches is difficult for most people, admiration for those who have accumulated wealth is seemingly unbounded. The public's fascination for the great financial mind is only dampened by speculative collapse, which then leads to disillusionment—until the next speculative boom.

A third factor (not discussed by JKG) that contributes to the bubble mentality is the expectation that the Government and central banks will "bail out" speculators through active intervention with monetary and fiscal policies if and when the bubble pops. There is ample evidence of this in the United States. Recent examples of this are the Government and Federal Reserve reactions to the popping bubble from speculation in real estate and stocks during 2002–2007 in which they flooded the banks with low-interest funds, printed money to distribute to the public, and provided support to those who speculated and over-borrowed.[2]

JKG described the aftermath of the end of "the inevitable crash" as "a time of anger and recrimination and also of profoundly unsubtle introspection." The anger will be directed against those who were previously respected as the most perceptive financial gurus. Some of them will have "gone beyond the law, and their fall and, occasionally, their incarceration will now be viewed with righteous satisfaction."

It would be of great value to investors if there were a good method to sense the oncoming of the end of a bubble. However, this would not apply to those who believe the bubble will have no end. Unfortunately, there does not seem to be any reliable process for sensing that the end is near. However, there does seem to be some indication that high volatility with wild swings upward and downward may (at least sometimes) presage the end of a stock bubble.

JKG went on to say there will be investigations into previous financial practices that were highly praised in their heyday. Some of these practices were merely implausible; others were clearly illegal. And as JKG indicated:

> There will be talk of regulation and reform. What will not be discussed is the speculation itself or the aberrant optimism that lay behind it. Nothing is more remarkable than this: in the aftermath of speculation, the reality will be all but ignored.

JKG suggested that there are two reasons for this. One is that there are too many people and institutions involved and he emphasized:

> Whereas it is acceptable to attribute error, gullibility, and excess to a single individual or even to a particular corporation, it is not deemed fitting to attribute them to a whole community, and certainly not to the whole financial community. Widespread naiveté, even stupidity, is manifest; mention of this, however, runs drastically counter to the earlier-noted presumption that intelligence is intimately associated with money.

According to JKG, the second reason that the speculative mood and mania are exempted from blame is that there is an almost theological faith in the free enterprise market "so there is a need to find some cause for the crash, however far fetched, that is external to the market itself." JKG cited the investigations and probes after the 1987 stock market meltdown, none of which ever considered excessive speculation as the main contributing factor.

Finally, JKG closed with a discussion of what, if anything, should be done. He suggested that there probably is not a great deal that can be done. It is impractical to attempt to outlaw mass financial euphoria that seems to be imbedded in the human psyche.

THE HUMAN ELEMENT

It seems to be a fundamental (perhaps even genetic) trait of humans that people appreciate a windfall more than almost anything else. Many people are very proud of the profit they made from a rise in their investment, particularly if some unforeseen event (a buyout?) drove a stock price well above what they had originally expected. By contrast, fewer people seem to find satisfaction in the hard-earned bucks they made from their salaries by dint of their labor. We seem to value investment income over wages. Perhaps that is why wages are taxed at a much higher rate than capital gains.[3] The data on growth of real wages seem to be contradictory. One source indicates that real average wages in America have slowly edged up in the last twenty-five years as shown in Table 1.1.

Table 1.1 Average real wages in America (constant 2005 dollars)[4]

Year	Wages
1967	$25,500
1973	$29,700
1979	$29,900
1989	$32,700
1995	$33,700
2000	$37,900
2004	$37,400

Another source[5] presented data on average hourly wages of production and non-supervisory workers. If these data are adjusted for inflation using the consumer price index, the real gain in wages from 1964 to 2005 (41 years) was a mere 4.5%. However, use of other measures of inflation leads to larger gains in wages. Nevertheless, real wages have risen slowly since 1973 and many middle-class Americans had to depend heavily on asset growth (mainly stocks and real estate) as well as two earners per family to get by in the late 20th century.

Markets in common stocks, real estate and other assets have provided investors with media for seeking paper profits from capital appreciation for hundreds of years.

One may conceive of hypothetical criteria for determining the worth of an asset. For example to obtain an estimate of the *worth* of a residence as the replacement cost, one could estimate an average construction cost in the local area ($/square foot) and multiply this by the number of square feet in the residence, and add this to an estimated land value. At different times, buyers are willing to pay more (or less) than the estimated replacement cost of a residence. In fact, during the housing bubble in California from 2001 to 2007, the connection between sales price and replacement cost was not typically a consideration. The value of a share of common stock is even more subjective. On a theoretical basis, the *value* or *worth* of assets such as common stocks and real estate is almost always quite subjective. In actual practice, the *value* at any moment can be construed to be what someone else is willing to pay for it.

History shows that all asset markets fluctuate as buyers and sellers move into or out of the markets. In some cases, now and again, a strong trend (upward or downward) may be established. This may be due to a random occurrence, or more likely, to some important outside factor (or factors) that exerts an influence. Kindleberger and Aliber (K&A),[6] following Minsky, suggested that an upward boom can be initiated by "an exogenous outside shock to the macroeconomic

system . . . if sufficiently large and pervasive." They suggested: "the rapid expansion of automobile production and associated development of highways together with electrification of much of the country . . . provided such a shock in the 1920s." The development and expanded use of the Internet in the late 1990s provided a shock that also produced a common stock boom. K&A also described a form of shock they called a "displacement" in which an outside event, typically unforeseen, "changes horizons, expectations, anticipated profit opportunities, . . ." They mentioned changes in the price of oil or outbreak of war as examples of shocks that produce displacement. K&A also suggested that the aftermath of a bubble generated by such a boom is usually a crash.

In 1995, when JKG republished his classic work "The Great Crash," he described the boom-bust cycle as follows:

> There is a basic and recurrent process. It comes with rising prices, whether of stocks, real estate, works of art or anything else. This increase attracts attention and buyers, which produces the further effect of even higher prices. Expectations are thus justified by the very action that sends prices up. The process continues; optimism with its market effect is the order of the day. Prices go up even more. Then, for reasons that will endlessly be debated, comes the end. The descent is always more sudden than the increase; a balloon that has been punctured does not deflate in an orderly way.

He also emphasized: "at some point in the growth of a boom all aspects of property ownership become irrelevant except the prospect for an early rise in price." Any use of the enterprise, or its value in the long run becomes academic. Instead, the only concern becomes whether the market price will rise soon, as it has in the recent past. There is no other benefit to ownership than the hope of selling at a higher price in the near future. In fact, JKG suggested that if the actual business conducted by the enterprise could somehow be divorced from the "burdens of ownership, this would be much welcomed by the speculator. Such an arrangement would enable him to concentrate on speculation which, after all, is the business of a speculator."

While there are many theories, it is difficult to be certain how or why such a boom originates. The important point is that whether due to random fluctuations or exogenous shocks, moderate upward movements in the prices of assets occur rather frequently. In most cases, the natural laws of supply and demand dampen these movements, leading to limited oscillations about the long-term trend line as shown in Figure 1.1. In a few cases, a boom develops in which prices rise unaccountably, eventually reaching extraordinarily high values, as shown in Figure 1.2.

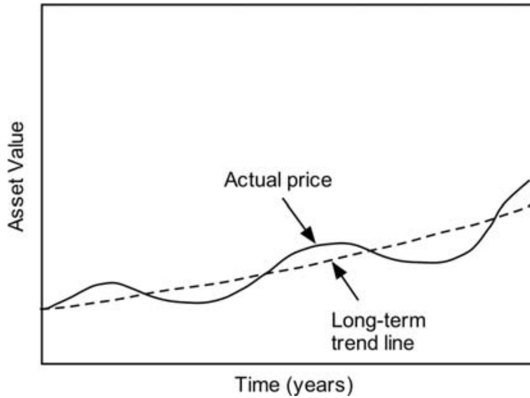

Figure 1.1 "Normal" fluctuations of asset value about a long-term trend line.

When such an upward trend begins, it provides a great attraction to many people who see this trend as a pathway to riches. While many hold back at first, as the boom accelerates upward, the urge to join in becomes almost irresistible.

A good metaphor is provided by the classic silent film of 1927, directed by René Clair: "A Nous La Liberté." There is a scene in the film in which many dignified members of the Chamber of Deputies, dressed in formal attire, are lined up in a courtyard to honor an entrepreneur who is upstairs preparing to abscond with a suitcase full of paper money. A windstorm comes up and blows the bills out the window where they drop down and swirl around at the feet of the Deputies. At first, no one makes a move. Then one, then two, then a few Deputies start picking up bills. Finally they are all floundering around on all fours retrieving errant bills.

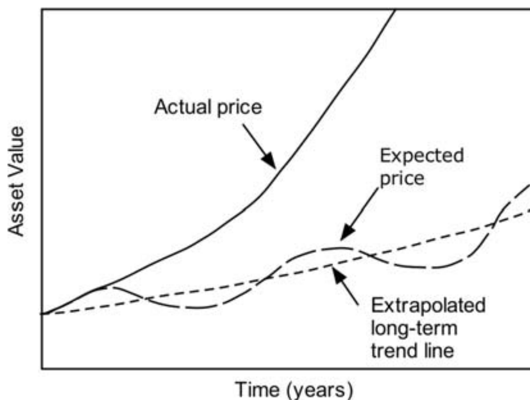

Figure 1.2 Market boom departs from a long-term trend line.

The essence of the boom is *momentum buying*. Whether it is stocks or real estate or whatever, the issue is no longer one of *value* in the usual sense. In this scheme of things, the whole notion of a *value* of an investment or commodity becomes irrelevant. Once such a trend is established, a large number of greedy investors jump on the bandwagon. By investing further into the boom, they create more demand, driving prices further up. As this upward momentum spiral expands, the lure of wealth, quick wealth, and wealth unearned becomes enormous. Those who held back in the beginning are sucked in, as by a gigantic vacuum.

As K&A pointed out astutely:

> "There is nothing as disturbing to one's well-being and judgment as to see a friend get rich."

Many more people cannot resist the temptation to make a quick buck for no effort, and more and more money pours into the system, driving prices to previously unimaginable levels. The urge to make quick unearned profits becomes so great that investors borrow to the hilt to invest even more funds into the boom, thus leveraging their investments.

Momentum buying involves: (1) identify a trend, (2) pay almost any price to get aboard the trend, (3) wait a bit for someone ("a bigger fool") to come along and drive up the price further, and (4) sell to him. Who has not received a circular urging purchase of a common stock at 50 that not so long ago was at 1 or 2?

Inevitably, the result of such a boom is that eventually, asset prices top out when they are driven to such extraordinary values that they can no longer be sustained. For example, housing prices may become so high that hardly anyone can afford to buy one, and the sales boom collapses. Or by some strange coincidence, a number of investors may feel that the boom has run its course, and sell, thus driving prices down. There may be more objective reasons for the end of the boom. For example, in the California housing boom of 2001–2007, many speculative house buyers took on adjustable rate mortgages with low initial rates, expecting that capital appreciation would allow them to sell out with a profit just about when the mortgage rate was programmed to increase to an unaffordable level. When capital appreciation topped out in 2007, they were left holding mortgages that stepped up to levels they could not afford. Some politicians rushed in to try to bail out these speculators under the belief that they were poor people manipulated by big bad banks.

Momentum selling works in reverse of *momentum buying*, although price drops tend to be more precipitous than price increases for a number of reasons

(it requires funds to buy, not to sell; margin calls can produce forced selling of stocks; during downward spirals, there may not be buyers around, . . .). The greatest challenge in *momentum buying* is step (4) selling to a bigger fool before the inevitable collapse of the bubble. The problem is that while a boom is racing upward, it is difficult to tell how far the market is from a top, and the euphoria is so endemic that few people perceive that there even will be a top. Very few people can sell out during the middle of a boom without great regret and heartache when prices continue to rise after they sold out. Many stories abound of investors who sold, agonized as the market continued upward, and then were lured back in, only to see the market collapse upon their second investment.

It is widely believed that loose monetary policy and low interest rates promote bubble formation. This is undoubtedly true to a great extent. However, JKG also concluded:

> Far more important than rate of interest and the supply of credit is the mood. Speculation on a large scale requires a pervasive sense of confidence and optimism and conviction that ordinary people were meant to be rich.

The effect of low interest rates does not seem to be a direct stimulation of business, as much as it discourages savers from investing in interest-bearing accounts and securities, thus promoting paper asset bubbles. JKG also reported on Will Payne's distinction between an investor and a gambler, saying that in gambling there is a fixed amount of money and there is a loser for each winner. However, in investing, if the bubble keeps expanding, everyone wins. A buys at 10, and sells at 20 to B. B sells to C at 30, etc. Until the bubble pops, everyone gains.

THE RISE OF MANIAS AND BUBBLES

It seems likely that manias and booms are not typically generated merely on the basis that an arbitrary market is rising due to a statistical fluctuation, and investors want to get "on board" before the train reaches its destination. In many cases, there seem to be external influences that lead investors to think that there is a basis in substance underlying the boom. These influences may be categorized as follows:

(1) New technology: K&A postulated (after Minsky) that "shocks" were responsible for booms. JKG suggested that discovery of something that is ostensibly new may provide the impetus for a new boom and bubble. These may be alternative ways of saying almost the same thing. Certainly, there have been booms and bubbles that were based on sound anticipation of gains to be made from new

technical developments. There may be beliefs that new technology will fundamentally alter the business picture, allowing companies to make unprecedented profits. This was a major factor in the 1920s boom (widespread expansion of automobiles, highways and electrification), and the 1990s (the belief that the Internet would change the way we purchase goods and communicate). In both instances, these beliefs proved to be correct in the longer run. Automobiles, highways, electrification, and the Internet have indeed eventually produced massive benefits to society and great increases in efficiency and productivity. Where investors went wrong was in anticipating a more immediate payoff than was possible, and more importantly, these fields became overpopulated with too many companies rushing in to participate too quickly. Ultimately, there had to be a shakeout that eliminated many of weakest. As the years went by, the stronger firms with the best products (e.g. Google) prospered. These booms were based initially on sound perceptions, even if the timing was off and the enthusiasm got out of hand. Nevertheless during the booms of the 1920s and 1990s, investors bid up the price of common shares to levels far beyond what could reasonably be considered appropriate (in retrospect), even taking into account the benefits of new technology.

(2) Domino effect: There is a phenomenon that K&A called "bubble contagion." According to K&A, four distinct asset price bubbles in the last fifteen years of the twentieth century were systematically related. As each bubble popped, the remaining accumulated funds found their way into an emerging bubble in another country. The Japanese real estate and stock bubble provided funds to expand the bubble in real estate and stocks of Finland, Norway, and Sweden. After the Japanese bubble burst around 1990, an inflow of funds from Tokyo in the several years following the Japanese implosion supported the bubbles in Thailand, Malaysia, and Indonesia and their neighbors in the mid 1990s. This eventually led to a surge in the flow of funds from the East Asian countries to the United States that helped boost the dot.com bubble of late 1990s in the United States. Asset price bubbles in major industrial countries had been rare prior to the last few decades of the 20th century, with the boom of the late 1920s representing a unique occurrence. However, beginning around 1982 we have experienced repeated bubbles, often with multiple nations participating.

(3) Money supply and interest rates: It is widely believed that actions (or inactions) of central banks via monetary policy and interest rate adjustment have a profound effect on the economy. For example, in late 2007 and 2008, whenever the US Federal Reserve System even hinted at a cut in interest rates, common stocks went shooting up, and in the absence of prospects for a rate cut, other financial woes weighed the stock markets down. The ensuing volatility

in the stock market was remarkable with many daily changes in the market averages of more than 2%.

The common belief is that the role of a central bank is a delicate balancing act. On the one hand, lowering interest rates and increasing the money supply improves prosperity, but it runs the risk of increased inflation. According to this theory, if it were not for the threat of inflation, central banks could reduce interest rates to generate almost any desired level of prosperity, but the threat of inflation inhibits this action. Typically, central banks lower interest rates when they fear stagnation in the economy. However, as this stimulus generates a boom, central banks are loath to stifle the boom by raising interest rates because of potential negative political consequences—they don't want to be the rain that falls on the investors' picnic. K&A discussed at some length whether monetary authorities should tighten credit to raise the cost of speculation during booms. They argued that when commodity and asset markets move together, up or down, the direction that monetary policy should take is clear (opposing extremes in either direction). But according to K&A, when share prices or real estate or both soar while commodity prices are stable or falling, the authorities face a dilemma. If they stifle speculation there is a likelihood that the economy could plunge. If they support the economy with low interest rates, speculation may be rampant. This dilemma was faced in the 1920s in the United States, in Japan in the late 1980s, and again in the United States in the late 1990s. Arthur Greenspan was concerned that United States stock prices were too high or increasing too rapidly when he made his famous remark "irrational exuberance" in December 1996. Despite this comment, the Federal Reserve was reluctant to raise interest rates to dampen the booming stock market because they were concerned that they might stifle economic growth. In addition, the Fed was concerned about the so-called "Y2K problem, the likelihood that US computer systems collapse because so many software programs were not designed to [accommodate] the transition to 2000." As a result, they pumped money into the banking system to promote liquidity in late 1999. As K&A said: ". . . the money had to go someplace so it fed stock market speculation."

Supposedly, central banks are most concerned with keeping inflation at 2% or lower, but should asset prices be included in the calculation of inflation rate? K&A pointed out: "in one view, asset prices should be incorporated into the general price level because, in a world of [supposedly] efficient markets, they hold a forecast of future prices and consumption. But this view assumes that asset prices are determined by the economic fundamentals and are not affected by herd behavior that leads to a bubble." K&A concluded that central bankers "have been exceedingly reluctant to attempt to deal with asset price bubbles or even to

recognize that they exist or could have existed." The answer seems to be that they don't want to be the *Grinch who stole Christmas*. Central banks would rather allow a bubble to expand than be accused of opposing prosperity.

This discussion by K&A seems to neglect the fact that the Federal Reserve is a quasi-political body that keeps one eye on the upcoming election. People are happier during boom times and are more likely to reelect the current party in power. In late 2007, the stock market underwent a number of severe one-day precipitous drops in reaction to the collapse of the housing bubble and its effect on sub-prime mortgages and bank losses, but the Federal Reserve rose to each such occasion with rate cuts that produced equally sharp one-day reversals in the stock market indices. The Federal Reserve seemed to take on the role of the protector of stock market bubbles.

Whether the Federal Reserve should intercede to protect the profits of speculators is arguable. But both sides of the debate do not seem to doubt the power of monetary policy to affect economic growth.

However, Robert E. Lucas (Nobel laureate in economics) argued against the common belief that easy money policy with low interest rates boosts economic growth. Ever more empirical evidence suggests that monetary policy may be ineffective. For example, two decades of close to zero interest rates in Japan and Switzerland have been totally inadequate to provide any stimulus to their sluggish growth. According to Lucas, the only significant effect of increasing the money supply is increasing inflation, which slows down growth in the long run. So any attempt to boost growth through reducing interest rates is therefore ultimately counterproductive.

It seems likely that easy money policy with low interest rates does boost speculation, paper profits and bubbles, but that is not quite the same as prosperity—or is it? In "Wealth and Inflation," I discuss the point that classical economics would predict that flooding the marketplace with easy money should produce significant inflation as more money chases the same amount of goods. However, in the past few decades, particularly the 1990s and 2002–2007, we have seen great expansions of the money supply without severe inflation (as defined by the conventional Consumer Price Index). However, if the rise in asset values were added to consumer price inflation, that would change inflation indices dramatically. In addition, there were special circumstances holding a lid on the cost of consumer goods in the 1990s that may not be working so well in 2007–2008.[7]

(4) Developing new areas with favorable features: On occasion, the prospect of opening up new areas for living in favorable climates can provide the impetus for investment bubbles. For example, over the years, there have been land booms in the South Seas, Florida and California and the Southwestern United

States [see "Florida Land Boom of the 1920s," "The Bull Market of 1982–1995," "The Sub-Prime Real Estate Boom" in Chap. 2].

(5) *Financial Innovation*: JKG[8] claimed that some booms and bubbles have been based on financial (as opposed to technical) innovations. One example is the advent of holding companies (a.k.a. investment trusts) in the 1920s. The stockholders issued bonds and preferred stock, and used the proceeds to invest in other common stocks, but all this amounted to was increased leverage: a means of increasing the amount of money invested in the stock market compared to the investment made by common stockholders in the holding company. Investment trusts were described in some detail by JKG.[9] They were in some sense a precursor to modern mutual funds. These trusts provided ordinary citizens with a means of investing on a leveraged basis into a broad aggregate of common stocks that they would not have been able to afford if they had bought stocks directly.

Another example was the issuance of junk bonds in the 1980s with comparatively high interest rates for the purpose of raiding and taking over legitimate companies. A third example during the 1980s was the deregulation of S&Ls in the misguided belief that this could allow them to cope with the underlying problem of high current interest rates paid out on deposits vs. low rates of return on long-term mortgages. A fourth example was the deregulation of utilities that led to criminal manipulation of utility assets by the Enron Corporation and others in the 1990s.

However, JKG took a dim view of "financial innovation." He suggested that what the world celebrates as great financial innovations are actually small variations on past systems that have been forgotten due to the "short memory of financiers." As JKG described it:

> The world of finance hails the invention of the wheel over and over again, often in a slightly more unstable version. All financial innovation involves, in one form or another, the creation of debt secured to a greater or lesser adequacy by real assets.

Many other booms and bubbles were based on pure fluff, and amounted to little more than elaborate Ponzi schemes. These include John Law's Banque Royale and its Mississippi Company (1716–1720) to pursue putative gold deposits in the Louisiana Territory in which the sale of stock was not used to prospect for gold but to pay French Government debts. The English version of the Ponzi scheme was the South Sea Company that also blew up in 1720, leading to passage of the "Bubble Act" to constrain illegitimate promotions. See "The New World" in

Chap. 2. The current debt of the US Federal Government in 2008 is a Ponzi scheme because there seems to be no way that these loans can be repaid except by borrowing via new loans.

FUELING THE BOOM

K&A discussed a number of factors that help fuel booms. Books, magazines, news reports and the media in general amplify the enthusiasm for the boom. JKG noted that during the boom years of the 1920s, there were many articles and press releases encouraging the bubble. One example was an article in the Ladies Home Journal entitled: "Everybody Ought to be Rich." The book "Japan as Number One—Lessons for America" was a 1979 best seller that "launched a thousand other efforts in *Japan Hyping*." In the 1980s, there were many rooms in the United States filled with white collar professionals paying hundreds of dollars each, for the right to hear a speaker tell of the wonders of Japanese management schemes that were far ahead of the rest of the world. The World Bank published "The East Asian Miracle" several years before the bubble in real estate prices and stock prices in Thailand and Malaysia and their neighbors imploded. As the boom progresses, the urge to create landmark skyscrapers and other buildings provides further fuel for the boom.

During bubble expansions, anyone who suggests that the bubble will pop is typically denounced in the press. On September 5, 1929, Roger Babson made his famous prognostication:

> Sooner or later, a crash is coming, and it may be terrific . . .. Factories will shut down . . . men will be thrown out of work . . . the vicious circle will get into full swing and the result will be a serious business depression.

Babson was roundly vilified by the whole investment community.

K&A asserted that rising asset prices (typically residential housing and stocks) provide positive feedback loops to national income, which then cyclically, further increases asset prices. According to K&A, households typically have savings or wealth objectives. As their paper wealth increases from the surge in asset prices, households save less from earned income because their future is secured by their increases in asset values, and thus they spend more for consuming goods and services. When stock prices increase, firms can raise cash from existing and new investors at lower costs and can undertake new projects that would be less profitable.

The main question here is whether rising assets produce wealth or increased wealth produces rising asset prices. This is discussed in the next section.

WEALTH AND INFLATION

ASSET GROWTH VS. WEALTH: CAUSE AND EFFECT?

Imagine that we could all get together at once and decide that the price of all housing in America will double as of today. Since the major asset of many people in the middle class is their residence, this would almost double the net worth of many millions of people. Similarly, suppose we could increase the price of stocks by a factor of ten. That would benefit the rich the most, but it would also increase the net worth of many in the middle class, particularly those at the higher end. Now if costs of consumer goods and services did not change much as a result of these changes in asset prices, they could borrow against the increase in value of their homes, or sell some securities, and use the money so released to purchase many more goods and services than they could yesterday. Homeowners and stock investors would be substantially richer than they were yesterday.

Alternatively, suppose that the federal government prints a huge pile of cash and distributes to each citizen an amount of cash equal to his net worth.[10] Then each person would be twice as rich as he was previously.

According to Economics 101, that cannot (or at least it should not) happen. For example, the following quote is lifted from an Internet source:[11]

> Inflationary money such as bankers create from thin air obviously does not increase wealth of a nation nor its real buying power, as their increase of the money supply is not accompanied by an increase of real goods or services. The nominal buying power such money provides to borrowers is merely diluted buying power. . .. Easy-money policy can never cause real growth, but merely creates a nominal illusion of progress. In the end real wealth can only be increased through increasing the availability of real goods and services, and the only way to increase production of tangible services and commodities is by working more or by producing more efficiently. And productivity can only be improved to a substantial extent through investment in better machines, superior techniques or improved infrastructure. So a policy aiming at real growth must therefore promote saving and investment, and certainly should not stimulate consumption. Easy money does the opposite: it promotes consumption, discourages saving, penalizes investment and productive