

Where Was the Invisible Hand during the Crash?

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Abstract

If Adam Smith's invisible hands exist, why do bubbles in the financial markets develop and burst? Why do we even care about undervalued or overvalued stocks? Why do we have seasonality in the financial markets? If the invisible hand exists, why did the market mechanism failed to be a safeguard against the housing bubble? This paper will investigate the above questions. However, this paper will also examine, in brief, government intervention in the marketplace, justifying greed in accordance with Adam Smith's thought, and existence of free market since those issues are very relevant for discussing the main proposition of this paper, i.e., why does the market fail, if the invisible hand exist.

Key words: “invisible hand”, Adam Smith, stock market crash

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Introduction

On May 6th, 2010, the Dow Jones Industrial Average (DJIA) lost 9.2 percent within few hours though at the end of the day the market has recovered substantially. On Black Monday, i.e., October 19, 1987, stock markets around the globe crashed; the DJIA dropped by 508 points to 1738.74 or 22.61%. The crash started in Hong Kong, reach West through international time zones to Europe, hitting the U.S. after other markets had already dwindled by drastically. On that Black Monday, no significant news occurred, or over the preceding weekend, to cause a 22.61% devaluation of corporate America. The market crashed largely because of the irrational behavior of market participants. The *Invisible hand* or “market itself is efficient” concept failed to explain such *Black Swan* events.

In Bangladesh, the DSE all share price index hovered at around 1,000 in June 1996, and touched 3,627 on November 16 the same year; and then moved further down to 484.44 in January 2000. At the market's peak, shares were trading at an average of over 80 times of relevant earnings. Data shows that during this period, market capitalization increased by 265 percent and the average daily turnover increased by over 1000 percent. As all bull runs finally end in tears, the bubble eventually exploded: stock market prices declined by close to 70 percent in end-April 1997 from the top in November 16, 1996 (Ahsan, 2010).

If markets were efficient, stock market anomalies, e.g., overreaction, January effect, turn of the month effect, Post-Earnings-Announcement drift (PEAD), Day of the week effect, wouldn't exist. If the *invisible hand* sets prices efficiently, why do investors pay a large premium over a

company's stock price to buy it? If there is an invisible hand in the stock market, why do we even bother to find undervalued or overvalued securities? Why is it widely accepted that stock market mean is reverting? If market were efficient, Warren Buffet wouldn't be able to beat the market consistently. In fact, many investors made fortunes ignoring the Efficient Market Hypothesis (EMH) or invisible hand and betting on takeover.

Invisible Hand: Meaning & Origin

Adam Smith's idea of "invisible hand" refers to the self-regulating nature of the marketplace where even though individuals acted to maximize their self interest, it eventually leads to a socially desirable outcome. The invisible hand is the founding justification for the laissez-faire economic thought. Adam Smith introduced the "invisible hand" concept and says that if individuals are guided "naturally" by self-interest to uphold the greater good of society, then there is no need for the kind of central planning that authoritative government engages in. Smith also put forth the empirical argument that the government is in fact incompetent, and he emphasized that brazen impertinence of the bureaucrat who tells us what to do in areas where we clearly know our own interests much better than anyone else ever can (Ekelund, 2007). Friedman (1990) explains invisible hand and says, "the activity of millions of people, each seeking his own interest, in such a way as to make everyone better off ... Economic order can emerge as the unintended consequence of the actions of many people, each seeking his own interest." Friedman called Smith's invisible hand as "the possibility of cooperation without coercion" (Read, 1999).

In tracing the history of the notion of the invisible hand, it is commonly attributed to David Hume, Adam Smith, and Adam Ferguson. It is Adam Smith who is credited with coining the expression *invisible hand*; it is Adam Ferguson who formulated the splendid, formative phrase about people's "stumbling upon establishments, which are indeed the result of human action, but not the execution of any human design"; and it is David Hume who is generally acknowledged to have laid the philosophical foundations for these ideas (Ullmann-Margali, 1997). However, Friedrich Hayek (1978) claims that it was Bernard Mandeville, who "made Hume possible". In his *Fable of the Bees* (also known as *Private Vices, Public Benefits*), Mandeville (1924) articulated the idea that orderly social structures and institutions, e.g., law, morals, language, the market, money, and many more, spontaneously grow up without individuals having deliberately planned them or even anticipated them, and it is these institutions that ensure that individuals' divergent interests are reconciled. In addition, the metaphor of an invisible hand has been part of English literature at least since William Shakespeare. *The Tragedy of Macbeth*, for example, implores the dark night to cloak his impending crimes with "thy bloody and invisible hand" (Rothschild, 1994). Thus, it is widely believed that Adam Smith was familiar with this phrase and had no regrets about borrowing from earlier writers.

Smith exercised the term *invisible hand* three times but never more than once in the same work. It appears once in Adam Smith's *History of Astronomy*; once in *Moral Sentiments* and once in *Wealth of Nations*, referring to degrees of caution about the risks associated with distant trade with the British colonies in North America, which incentivized some, but not all, merchants to act circumspectly in their preference for domestic projects, thereby unintentionally benefiting the domestic economy (Kennedy, 2009). These are the only three times in over a million words published in Smith's surviving essays and books, written between 1744 and 1790.

Market Efficiency and Invisible Hand

In finance, *Efficient Market Hypothesis (EMH)* is analogous to Smith's invisible hand. Efficient market hypothesis is the idea that information is speedily and efficiently incorporated into asset prices, so that old information cannot be used to foretell future price movements. Hence, efficient market comes into effect when the current stock price reflects all information that is available in the marketplace.

The Efficient Market Hypothesis has been consented as one of the cornerstones of modern finance. Though EMH was first expressed by the French mathematician Louis Bachelier in his 1900 dissertation, "The theory of speculation," it was explained and marketed by Eugene Fama in the early 1960s. In 1970 Fama published a review of both the theory and the evidence for the hypothesis. Fama extended and refined EMH and included the definitions for three forms of financial market efficiency: weak, semi-strong and strong.

Three versions of EMH are distinguished depending on the level of available information. The *weak form EMH* stipulates that current stock prices already reflect past price and volume information. If there were a weak form of EMH, investors wouldn't be able to generate excess return, i.e., alpha, using technical analysis. The *semi-strong form EMH* states that all publicly available information is similarly already included into stock prices. An investor will not be able to generate alpha using fundamental analysis in a market which is semi-strong form efficient. The *strong form EMH* stipulates that private information or insider information too, is quickly incorporated by market prices and therefore cannot be used to reap abnormal trading profits. So, if a market is strong form efficient, even insiders like CEO or directors of the firm will not be capable to generate abnormal return. None of the empirical research in finance found strong form market efficiency. Notable number of research shows that most of the stock markets around the world are semi-strong form efficient.

However, a market does not become efficient automatically. Damodaran (2012) depicts the necessary conditions for a market inefficiency to be removed are:

- (1) The market inefficiency should provide the ground for an investor to beat the market and generate abnormal return or alpha. For this to hold right - the stock which is the cause of the inefficiency has to be traded in the market and also the transactions costs have to be lesser than the expected profits.
- (2) There should be profit maximizing investors in the market who will recognize the probable to make excess return and thus employ effective strategies to exploit that opportunity until it evaporates.

Crowd is Smart if...

James Surowiecki (2004), however, is the first who fully laid out necessary conditions for the invisible hand or efficient market hypothesis to work justly. He claims that a large groups of ordinary people, with certain characteristics -- diversity in the group, independence in opinion and conclusions that is free of manipulating influence, decentralization in the group, and proper environment to aggregate information -- can remarkably outperform a tiny group of professionals in making decisions and guesses. Through various illustrations, for instance, predictions market--Iowa's electronic market-- Surowiecki (2004) discusses the limitations of traditional decision making process and shows how hefty group of people can be wiser than small cadres of professionals even if they are not well learned or very rational. He suggests four key solutions that are crucial for valuable large group collective intelligence:

1. **Diversity of opinion:** Diversity in a group ensures that each person has some useful private information, even if it is just an unconventional interpretation of the known facts. A group with diverse experiences will guarantee better decisions than one where everybody knows the identical information. For instance, each investor in the stock market has different information or analysis of some known facts regarding a particular stock which decodes into demand and supply, and thus a stable price. If everyone in the market had the same information about a stock, no one would have bought or sold that stock which could be translated into a market crash or halt in transaction.
2. **Independence:** People's judgments should not be established by the opinions of those surrounding them. However, independence does not mean isolation, but relative freedom from the influence of others (Surowiecki, 2004). Lacking independence in opinion increases the possibility that the group will ultimately have the same old information rather than new data. Even if an individual were influenced and unreasonable, if (s)he is independent, the person would make the group smarter.
3. **Decentralization:** Effective decentralization will take place when local knowledge or inputs from the bottom are also factored into decision making process rather than only valuing inputs from the top end. Decentralized human actions can turn out as socially beneficial and viable outcome, even if these consequences are unpredicted and unintended. The open source software, for instance, Linux, Google Chrome, Android Operating system, development process is a great example of effective decentralization in action.
4. **Aggregation:** Since there are so many different means to aggregate information, and annoyingly, not all of which are right for a given situation, aggregation is the most complex of the four conditions mentioned here. Aggregation refers to some mechanisms which lead private judgments into collective decision making process. For example, successful aggregation process exists if a group's response truly represents majority of its members' individual actions.

However, Charles Mackay (1995) takes an opposite view on crowd behavior, and says that under certain circumstances, informed individual make better decisions than crowds or groups. Mackay provided some examples where crowd just failed. Some of these comprise the Mississippi scheme that swept France in 1720, the South Sea Bubble that destroyed thousands in England at the same time, and the tulip mania of Holland in 1637 which now became the metaphor to refer to any large economic bubble. Now, let's investigate some major stock market crashes in the light of Surowiecki's hypothesis.

Was the Invisible Hand Chained during the Market Crashes?

1930s bank run is a perfect example how a crowd loses its independence. A *bank run* occurs when a significant number of bank clients pull out their deposits because they think the bank is, or might become, bankrupt. As a bank run progresses, it gains its own impetus, in a kind of self-fulfilling prophecy as more people withdraw their deposits, the likelihood of default increases, and this encourages further withdrawals. This can destabilize a bank to the point where it faces bankruptcy and also can lead to a bank panic in the country. Much of the Great Depression's economic damage was linked directly by bank runs. According to Federal Deposit Insurance Corporation (FDIC) (2010), from 1929 to 1933, over 8000 bank failures resulted in losses to depositors of about \$1.3 billion. In the case of bank run, bank customer lost their independence, and thus started imitating fellow depositors. Market, as a whole, lost diversity in opinion. Even regulators failed to predict the extent of the damage in advance. Surprisingly, instead of alerting people about the situation, media, because of demand from the patrons, dumped only negative connotation about the situation in the market; and thus the stream of positive information was

halted. If one looks back in the history, in reality, in such a critical situation, the task media usually plays just increases the amount of the devastations.

Table 1: Ten All-Time Largest One Day Losses of Dow Jones Industrial Average

Rank	Date (mm/dd/yy)	Close	Net Change	% Change
1	10/19/1987	1738.74	-508	-22.61
2	10/28/1929	260.64	-38.33	-12.82
3	10/29/1929	230.07	-30.57	-11.73
4	11/6/1929	232.13	-25.55	-9.92
5	12/18/1899	58.27	-5.57	-8.72
6	8/12/1932	63.11	-5.79	-8.40
7	3/14/1907	76.23	-6.89	-8.29
8	10/26/1987	1793.93	-156.83	-8.04
9	10/15/2008	8577.91	-733.08	-7.87
10	7/21/1933	88.71	-7.55	-7.84

Source: Historical Index Data. *The Wall Street Journal*. Retrieved from http://online.wsj.com/mdc/public/page/2_3047-djia_alltime.html

In Table 1, ten all-time largest one day losses of Dow Jones Industrial Average (DJIA) index have been listed. It is evident from the above table that the stock market crash on the *black Monday*, i.e., September 19th, 1987, stands as the biggest daily percentage drop as measured by DJIA index. A comparable plunge today would take nearly 2,800 points of the Dow. Possible causes for the *Black Monday* include overvaluation, illiquidity, and market psychology. However, the most accepted explanation for the 1987 crash was selling by program traders (“History,” n.d.). In program trading, computer software carry out quick stock executions based on external inputs, for instance, the price of related securities. In a program trading, as a stock price get lowers, it generates its own impetus, in a kind of self-fulfilling prophecy as more people sells their stocks, and other trades also get forced to sell their stocks automatically which ultimately fuels the probability of a stock market crash. Traders in the Wall Street mostly used the same matrix as their input to take mechanical buy or sell decisions. Firms heavily relied on their “intelligent” devices without ensuring any check and balance mechanism. Once again, using program traders eliminated diversity in judgments among market participants which was ultimately translated into a notorious stock market crash in 1987. In fact, all the four factors from Surowiecki’s hypothesis, i.e., diversity of judgments, independence, decentralization and aggregation process, that makes a crowd smarter comparing to a small group of professionals were completely missing during the *black Monday*.

The dot-com episode was a speculative bubble covering roughly 1995–2000 during which stocks in the internet sector and related fields in the United States experienced their equity value ascends fast comparing to growth in the more recent years. During the Tech bubble investors also forgot about firms’ fundamental and invested heavily in the dotcom sector. Firms were experiencing their stock prices shoot up if they only added an “e-” prefix to their name and/or a “.com” to the end, which Masnick (2003) termed as “prefix investing”. Famed Wall-Street analysts as well as media constantly attracted to the idea of “get rich quicker.” The idea of fundamental analysis was replaced with the belief of “new era of investment.” Like other market crashes in the history, even during dotcom bubble investors lost their independence in thinking. Market was lacking diversity in opinion severely. Policy makers were also perplexed in that “new era” and forgot their job as regulators, and thus aggregation mechanism either halted or misguided. In the above example, investors lost their impartiality and start imitating

their fellow investors. However, the study shows that it is wise to imitate in the marketplace when information and skill was lacking.

In fact, in all bubble-burst phenomena, including the recent stock market massacre in 2010 in Bangladesh, at least one of the four elements described by Surowiecki was lacking. Who will ensure the existence of Surowiecki's four elements to have a desirable from a crowd and thus bubble free market? The answer is both individuals and the regulators must act responsibly and swiftly for a bubble free market. Since individuals will always be focused on maximizing their self-interest, the duty ultimately shifts onto the regulators. As regulators have to work under so much scrutiny and constraints, it sometimes becomes impossible to jump in on time.

However, to keep up with the market innovations, regulators also need to change themselves constantly. Whenever regulators fall short of market innovation, bubbles will form, and then burst will be a matter of time. In all the examples of bubble provided in this paper, regulators failed to act quickly and prudently. Regulators need to play mature role in optimizing all the four factors mentioned by Surowiecki to eliminate bubble from the market. For instance, when people started imitating, regulators could have participated in the market and increased level of confidence among the investors. In fact, FDIC, which was created in 1933 in response to the thousands of bank failures that occurred in the 1920s and early 1930s, is an example of confident upholding organization.

Invisible Hand and Role of Institution(s)

Government, as a regulator, can be a catalyst in ensuring James Surowiecki four elements in the marketplace. Invisible hand leads to what Hayek called "spontaneous order" (Petsoulas, 2010), but there is no guarantee that the invisible hand will produce order or progress without supportive institutions, and non-supportive institutions do not spontaneously correct themselves. Failure by government as watchdog could cause collapse. Even financial veterans believe that it is not markets or invisible hands or the EMH that have failed but government as a regulator, which did not fulfill its role. Weak regulation of the banking sector and extensive lending, encouraged by governments, are examples of this failure. For instance, Fed Chairman Ben Bernanke said that failed supervision was a key ingredient in the crisis (It wasn't us, 2010). Greenspan (2010) also acknowledged that the regulatory system has led the market to be failed. He says that Fed officials did not take seriously enough the risks building in the sub-prime mortgage market last decade, that regulators more broadly didn't demand that banks hold enough capital and that he did not do enough to rein in "too big to fail" banks that posed a risk to the whole financial system.

Then again Blinder (2010) says that Smith's invisible hand notion works only under certain conditions which include, among other things: appropriate incentives for risk taking, effective competition, safeguards against exploitation of what economists call "asymmetric information" (as when a deceitful seller unloads junk on an unsuspecting buyer), regulators to enforce the rules and keep participants honest, and — when relevant — protection of taxpayers against pilferage or malfeasance by others. Blinder (2010) believes that market in the recent ongoing crisis failed because "all [necessary conditions] failed". Regulators could have ensured all those necessary conditions. Now one might raise the questions that Smith did not talk about regulators in invisible hand concept, did he?

Some commentators point to the fact that Smith was passionate in denouncing government intervention, and invisible hand works best in absence of any central planner, i.e., government. Didn't Smith explicitly debunk Francois Quesnay's system of perfect liberty as theoretically and practically unappealing? To Smith, to insist on an ideal system of political economy was similar to a doctor prescribing one exact diet of food to be followed by every patient (Wight, 2007). The human body, according to Smith (1981), maintains "the most perfect state of health under a

vast variety of different regimens”. Accordingly, Smith’s support of markets was pragmatic and he endorsed a range of interventions when he believed they would advance his objectives (Gampp, 2000).

The success of the invisible hand requires both good institutions and good norms, whereby individuals pursue their interests within the rules of well-defined games, and not by seeking to influence institutions or rules. One viewpoint states that these good institutions are the outcome of policy: “it is the hand of the lawgiver,” for Lionel Robbins (1952), “which withdraws from the sphere of the pursuit of self-interest those possibilities which do not harmonize with the public good.” Another view claims that they are the outcome of custom: institutions are good if they are themselves the unintended consequence of individual self-interest. John Stuart Mill’s view is also similar and thus he mentioned exceptions to laissez-faire, e.g., consumer protection, general education, preservation of environment, public utility regulation, and public charity, which while respecting individual freedom recognizes the need for the State to protect the interests of those who, lacking capital, will under Smith’s view of the “invisible hand” have less freedom than is their right (Ekelund, 2007).

The extent to which countries’ stock markets are efficient depends on the extent to which transparency, accountability and justice ensured mainly by the government. For instance, stock markets in the developing market countries are less efficient as compared to the developed countries as the developed world succeeded in ensuring transparency in the marketplace. In addition, if government does not exist, who will curb some of individuals’ characteristics, e.g., crime, that goes against the social norm? After analyzing all the above facts, we can conclude that even Smith did not totally think that government is irrelevant while he was supporting invisible hand. Moreover, when Smith was presented the opportunity to become a regulator, he accepted. Adam Smith entered upon his duties as Commissioner of His Majesty’s Customs at Edinburgh early in 1778.

Some critics believe that Smith’s invisible hand only exists in a perfect free market. Since transaction cost, information asymmetry in the marketplace will always exist, market will never be perfectly competitive. Stock markets will never be strong form efficient; we will always find under/overvalued stocks. Thus, the idealized free market is a fiction; it has never existed, and it never will exist. In its place, we have a hybrid of private and public enterprise, of decentralized activity and central supervision. Didn’t such a mixed economic system have passed what economists refer to as the market test?

Conclusions

Adam Smith’s idea of “invisible hand”, i.e., the self regulating nature of the market, continues to be a powerful force even today. The invisible hand which is the foundation of Laissez-Faire was one of the most liberating ideas ever to emerge in the history of economic thought. Supervisory bodies need to focus on ensuring diversity in the marketplace, independence of opinion and conclusions that is free of manipulative and corrupting influence, decentralization of the market participants, and bottom up processes that aggregate information. In the absence of Surowiecki’s four crucial factors in the marketplace, bubbles will be created in the asset prices and thus a crash in the expenses of hundreds of investors. However, many conflicting views in analyzing Smith’s invisible hand continue to exist because of his expansive rhetoric, which was prone to inconsistency and exaggeration. Samuels (2004) thus lamented, “I wish that Smith had had an editor.”

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Unde era “mâna invizibilă” în timpul crizei?

Rezumat

Dacă mâna invizibilă a lui Adam Smith există, de ce mai apar „bule” care explodează pe piețele financiare? De ce ne pasă măcar de acțiunile subevaluate sau supraevaluate? De ce avem etape sezoniere pe piețele financiare? Dacă mâna invizibilă există, de ce mecanismul de piață nu reușește să acționeze ca măsură de protecție împotriva „bulei” imobiliare? Articolul de față analizează aceste întrebări. Totuși, această lucrare va urmări pe scurt și intervenția guvernului pe piață, justificând lăcomia în concordanță cu gândirea lui Adam Smith și existența pieței libere, întrucât acele probleme sunt relevante în discutarea principalei teme a acestui articol – „de ce piața se prăbușește, dacă există o mână invizibilă?”.