CHALMERS

The Dotcom Bubble - Reading Project

MVE220 - Financial Risk

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Innehåll

Introduction

As the internet began its journey in the 1990s many entrepreneurs and investors quickly got fascinated over the endless possibilities this new technology could bring. Today, many of these visions have become reality and the internet is something we take for granted and use in everyday life. In the late 1990s however, the technology was not yet mature enough to be commercialized to the extent investors and the rest of society thought. The overconfidence in the dotcom companies fueled the equity markets, creating one of the biggest speculative bubbles in economic history. This report will analyze how this speculative bubble could arise and how the dotcom bubble affected the overall economy from both a micro and macro perspective. How is it possible for a whole society to forget about financial risk and fiscal responsibility and base their investments solely on speculative forecasting of a not yet profitable technology?

Background

The technology

In the 1980s the internet grew commercially as the semiconductor- and optical networking industry heavily improved. This gave new economic opportunities to deliver the services to the public. At the time the customer base was around half a million people. After further improvements with the technology the number of users grew exponentially. In 1990 the WorldWideWeb was introduced which gave new commercial opportunities. This gave Stanford Federal Credit Union the chance to offer fully online internet banking services, which also made them the first financial institution to do so. As technology became better it allowed the commercial volume to grow reciprocally. Moore's law affirmed this as it predicted that the performance of a computer should double every 18 months. It is said that in the late 90s the internet usage grew by 100 percent a year, which also means that the annual growth of users was between 20 percent and 50 percent. Netscape developed SSL, which is a method to transfer secure data launched in 1994. This opened for an online shopping market as the customers now could transfer money safely. The following years many companies launched their online shopping sites. Until 1995 it was free to register an internet domain, but it was added a fee as the interest grew. At the time there were around 12000 registered domains, but the number increased to two million in the following three years which demonstrates the public interest. (1stwebdesigner.com, 2022)

Speculative bubbles

Speculative bubbles are a recurring phenomenon in economic history. One of the most famous examples of this, despite the dotcom bubble, is the dutch tulip mania in 1636. Although the speculative bubbles occur in different forms, it is still possible to find several similarities. Speculative bubbles consists of 4 stages:

1. *Displacement* - Expectations are created, which increases investments. However, the majority of people are still observant and unconvinced.
2. *The Boom Stage* - When average people realize the opportunity of earning money by stocks, the value of the assets start to rise drastically. Furthermore, people that have

not been interested in stocks before start to be involved in it. This means an increase of participants in the market.

3. *Euphoria* - In this phase several average investors start to avoid economic models and their decisions turn into mania. The values of the asset reach a high unrealistic level.
4. *Profit-taking* - Investors that are experienced notice the fad, realize that the asset is overvalued and sell. Nevertheless, it is very difficult, even for an experienced investor, to notice the warning signs.
5. *The Burst* - The value of the asset decreases as fast as it rose. Everyone that has invested wants to liquidate.

(Investopedia, 2022)

Build up to the bubble

The dotcom bubble is said to begin at Netscape's initial public offering in 1995. In the late 1990s there was a massive rise in the equity market caused by large investments in internet-based companies. In 1999, 39% of all venture capital investments were going to dotcom. Between 1995 and 2000 the tech-dominated Nasdaq index rose from below 1 000 to 5 000. At the end of 2001 most dotcom stocks went bust, even the shares of blue-chip technology stocks like intel and oracle lost more than 80% of their value. (Investopedia, 2019)

Analysis

Macro perspective

How it affected the overall economy

The following years after the bubble had burst the economy in different parts of the world was affected differently. It took Nasdaq about 15 years to regain its value it had in March 2000 and many companies had declared bankruptcy in the aftermath. Overall, the public opinion about IT companies was damaged. Even companies which were not directly involved in the dotcom bubble from the beginning were seriously harmed. For instance, Intel, which is a company noted on the stock market in the 80s fell around 60% and it took them a long time to recover. The general public lost their trust for the potential of the internet and therefore the whole industry was slowed down for a couple of years. (studysmarter.de, 26-04-22)

Sweden was one of the countries that was heavily affected by the dotcom boom due to their early involvement in the bubble. In the middle of the 90s Carl Bildt was the first Prime minister to send an email to another government. There were also several tv shows about the stock market and the public interest grew fast. A reason why this occurred may be the aftermath from the finance crisis in Sweden in the first half of the 90s. In just a few years Swedish unemployment rose from 2 percent to 12 percent. When the population started to recover from the crisis and therefore could save more money the interest to invest grew. (IT-bubblan som aldrig sprack, 2021)

Another reason for the dotcom bubble to grow faster was the development of the new American economic system. The term emerged in the 90s after a 20-year period of a slowdown in the economy, when it suddenly changed. Around 1995 the economic growth accelerated. In America the employment rose and the inflation which earlier were at high levels decreased. This made the business leaders reconsider their old business models and that the old laws of economics were irrelevant. Many thought that an improvement in the computer software would have a bigger effect on the economy than it had. An occasion to this was that with the internet you could lower the unit cost to almost nothing and the expectations were unreasonably high. The new economy emerged to describe how new internet companies could be worth billions of dollars even if they had large losses and small revenues. To motivate these absurd values, economists came up with the idea to value companies after the number of employees instead. (ungaaktiesparare.se, 28-04-22)

At the time there were four ideas that dotcom companies followed. Firstly, a business idea should reach the market as soon as possible to be the first brand the customer would think about. Secondly, since the internet connection would increase in the following years, every company should invest more than they needed at the time in the software. Their platform needed to support several currencies and languages to be able to expand to new markets. The companies' homepages had to support images and sound to stand out from the others. Thirdly, all start-ups should launch their websites in a bigger region than they could manage for the time. Many companies had offices in other countries even before their service had launched in the main country. This was not seen as a problem since the company just planned for growth and therefore were foresighted. Lastly it was important to have a large database about the customers to understand what their needs were. The meaning of this was to send advertisements to them and therefore there was a big focus on marketing overall, even if the company did not have any sales yet. Consequently, did the market overestimate the intrinsic value of the companies and what they were worth. (internetmuseum.se, 28-04-22)

Small investors' impact on the dotcom bubble

Market bubbles, like the dotcom bubble, are investing fads, meaning that there is an overall exaggerated enthusiasm for a specific investment, which eventually is unendurable in the long term. Accordingly, the main reason that the stock price arises is the expectations on it rather than the intrinsic value of the companies. (Investopedia, 30-01-2021)

It is important to determine the difference between investing in a fad or a trend, as an investor. From an experienced investor's point of view, it is easier to comprehend the difference and therefore also highly profitable to invest in fads. However, this is not the case for the small and average investor, who has not any further experience in investing. These types of investors have more of a herd instinct, which means that they are more likely to invest in similar investments as others with the belief that others have made their research. Furthermore, this behaviour is mostly driven by the fear of missing out on a profitable investment. The herd instinct is proven by several psychological theories, claiming that people focus more on wealth relative to others' wealth, rather than on their individual economic growth. Thus, the relative-wealth is a big concern for humans and is a big leading factor in the creation of bubbles. (US. News, 2018)

In the case of the dotcom bubble, small investors were misguided by the internet focused companies and their potential disruptive innovations, which might have replaced big, settled companies in diverse markets. Therefore, the belief in the growth of these companies increased drastically, which is observed by the overvalued assets during the late 1990s. Although the new technology might play a big role in the future, it still has to pass a certain development in order to presently make it in the market. Several companies focused more on advertising, which meant that less money was spent on the development of the technology and the operation. Despite that companies had a vision on how the internet should be used in their service other factors around it were not sufficiently conceived. This means that the offers were not as practical as they should be to attract customers. For instance, when evolving e-commerce, parts as to how the purchased product should be paid and delivered was yet not discovered.Additionally, many companies were also before their time because the technology was yet not fully developed. A lot of people did not understand the use of the internet and neither had the need for the services that were offered. Consequently, many people thought that the companies would succeed simultaneously as none of them were supporting the companies' services through demanding their offers. (Ideas.Ted, 2018)

These behavioural patterns can be seen today as well, and history might repeat itself. This is clearly illustrated in meme-stocks, which means that high expectations on companies' growth spreads faster through social media. (Investopedia, 2022) Accordingly, more average and small investors that necessarily are not interested in investing in stocks, will indirectly be involved because of their herd instinct and FOMO ("fear of missing out"). In similarity with the dotcom bubble, small investors might get misguided, especially when they do not have any previous experience on stocks and investments.

The results of investing and being unaware of the risks is what happened to several small investors during the dotcom bubble. As a result of Japan entering a recession, a large sell-out started, and the technological focused stock prices got affected. Considering that several small investors only invested by herd instinct, they were not prepared for the big fall out and did not have the opportunity to sell in time. The losses have been calculated to 5 trillion dollars and many people were left with enormous debts instead. (CFI, 2015)

Micro perspective

How the investments affected the dotcom companies

Traditionally, is a listed company valued based on its profit and in addition to that the expectation of what the company's future can generate. During the dotcom-bubble however, speculative forecasting became the single most important factor in stock valuation. This resulted in, as previously stated, capital markets throwing money at the dotcom sector during this internet boom. This led to a race between the startups to quickly get big to be able to attract investors. The dotcom companies therefore focused a lot on marketing inorder to gain publicity. At the time, many startups strived to make use of the first-mover advantage, which can be defined as a firm's ability to be better off than its competitors as a result of being first to market. (CFI, 2015) Therefore, some companies spent almost their whole budget on marketing. However, this aggressive marketing strategy took resources from the main business. It had become more important to make it on the stock market and be appealing to investors than making a profitable business since it was possible to get money from investors even without revenue and profit. The companies lacked the logistic structure to be able to operate the type of business that their vision would require. (Investopedia, 25-06-19)

Venture capitalists invest money in a contractor for usually about one to two years, then they exit and expect to sell it for more than they had invested. The feverish stock market meant that there was a kind of automaticity in this; venture capitalists could make money even on bad and shaky business ideas since almost every dotcom stock skyrocketed at IPO. Thus, the venture capitalists often pushed for the market introduction since they could make a lot of money from it. (Moaffak Ahmed, 2020)

However, after a while, more and more started to realize that the value of many dotcom stocks was unrealistic. For example, the Swedish company Icon Medialab was worth 4.9 billion SEK but made a yearly negative result of 250 million SEK. The stock value was merely based on speculation and lacked value-creating processes. The internet had not yet reached its full capacity and the customers did not know how to use the platform. The technology was not mature enough to be commercialized to the extent that the investors thought. (Ibid)

Since the internet-based companies were showered with money, many of them got used to the abundance and started spending money on unnecessary things. The irrational economic climate made many lose their sense of fiscal responsibility. (Investopedia, 25-06-19)

Different outcomes for different companies

The dotcom bubble affected a lot of companies world wide which had many consequences, even bankruptcies. However, even though the burst of the bubble hit most firms, its outcome varied heavily depending on their fundamentals and ability to adapt to the situation. In order to conclude factors which helped corporations survive the dotcom bubble, we compare two different companies and their situation previous to the bubble, during the bubble and the aftermath.

A company founded in 1994 by the entrepreneur Jeff Bezos, focusing on e-commerce, is one of the firms in the spotlight from the dotcom bubble (Britannica, 26-04-22). Even though they work within e-commerce, Bezos stated that Amazon instead was a technology company working to simplify transactions online. After one year in business with the website, Amazon had 15.8 million dollars in revenues which then rose to 610 million in 1998 (ibid). Furthermore, in the beginning of 2000, Amazon sold bonds worth more than 500 million dollars just one month before the market started to plummet (NY Times, 27-04-22).

Because the company had growing revenues and a large amount of capital when the bubble burst, they used funds to cut costs where possible. In an interview, Bezos said "The stock is not the company and the company is not the stock. [...] Every single thing about the business was getting better and fast." (Bloomberg, 27-04-22) which describes the fundamental aspect of the corporation at the time. Moreover, in the interview he discusses what happened when the bubble burst and explains that raising money in the market crash would be hard, but since they already had capital to progress it was not an issue for them (ibid). To conclude why Amazon survived the dotcom bubble burst, there are two major reasons which made a large impact on the company. Firstly they had a solid business plan with growing revenues and amount of customers, something that allowed them to see past the plummeting stock and focus on the fundamentals of the company. Secondly the firm had raised capital just before the bubble burst, which allowed them to continue to invest funds through the period when it was difficult to raise capital.

The company Pets.com is another case in the spotlight from the dotcom bubble. Their business plan was an internet based pet shop where customers could buy supplies for their pets. Pets focused heavily on promoting their website and completed an initial public offering in february 2000. Even though their business plan had several questionable parts in it, such as how they were going to transport dog food and similar things which were heavy, investors were intrigued and therefore the IPO was successful. However, unlike Amazon, Pets did not have a solid business to stand on when the market started diving. This meant that investors got impatient when the firm did not show any profits. Therefore, already in October the stock of the company had gone from 11 dollars to a mere 0.22 dollars and they had to declare bankruptcy. A noticeable difference between the two companies, even though both had newly received funds, is that Amazon's business plan was more thought through and did not have any questionable parts within it. Thus, one might reason that is the foremost reason why Pets did not survive the dotcom bubble. (Investopedia, 27-04-22)

Conclusion

During the build-up of the dotcom bubble the equity market was fueled by overconfidence in the new technology and what it could bring which led to speculative and fad-based investments. The large hype regarding the dotcom sector created a “fear of missing out” making both investors and everyday citizens invest heavily in dotcom stocks. The abundance of venture capital funding for startups made the market skyrocket. The dotcom companies began to focus too much on marketing in order to attract investors instead of creating a profitable business. Later on, investors started to realize that the many dotcom stocks were overvalued and were not able to turn profit. As the capital began to dry out more and more companies went bankrupt since their main income came from investors. Japan entered a recession that caused uncertainty in the market making even more investors leave the market. The market now started to drop as rapidly as it rose, meaning the dotcom bubble had burst.

Looking back at the dotcom bubble it might seem obvious that it would burst eventually. The bubble could perhaps have been prevented if the investors had focused more on the substantial value instead of speculative forecasting when making investments. The dotcom market and the technology were not yet mature enough to be commercialized to the extent investors and society thought. The world was so caught up by the vision of the internet that they forgot to look behind the bright ideas and question the new technology’s ability to be profitable. The companies should also have focused on developing the operations and making a profit instead of just marketing in order to create a business that would make it in the long run and therefore not be as dependent on investors. If the banks would have informed their customers about the big financial risk of investing in internet-based companies then many citizens might not have had to lose as much of their savings, thus the socioeconomic consequences could have been reduced.

As seen many times in economic history, speculative bubbles are notoriously hard to recognize while happening but seem obvious after they burst. Most likely, we will see bubbles like the dotcom occur again in the future. However, by studying the build-up of previous bubbles we might get better at recognizing the financial risk and spotting the signs earlier on.

Reading list:

For those who want to learn more about the dotcom bubble and its impacts, we have put together a reading list below:

- A one hour long documentary produced by SVT about the dotcom bubble, mainly focused on the Swedish perspective. https://www.svtplay.se/video/30165160/it-bubblan-som-aldrig-sprack

- Over all facts about the dotcom bubble. An article by the Corporate Finance Institute.

  https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/dotcom-bubble/e

- An article from Luleå Tekniska Högskola about the dotcom bubble. https://www.diva-portal.org/smash/get/diva2:1026991/FULLTEXT01.pdf

- A radio documentary produced by P3, Sveriges Radio https://sverigesradio.se/avsnitt/93814

- An article about five companies in the dotcom sector that survived even after the bubble burst.
  5-successful-companies-that-survived-the-dotcom-bubble.aspx

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