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**RELATORE:** 

CH.MO PROF. MENINI ANDREA

LAUREANDA: GUELFI EMILIA

**MATRICOLA N. 1188330** 

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#### ABSTRACT

La prova finale dal titolo "IPO Timing and Pricing: Evidence from Zoom" analizza nel dettaglio due delle componenti di un'offerta pubblica iniziale, quella del timing e quella del pricing, attraverso l'esemplificazione di un caso aziendale, Zoom Video Communications. Si illustrano alcuni modelli presenti in letteratura di noti autori come Ritter, Welch, Derrien, Rock e Benveniste per spiegare gli hot markets e il fenomeno dell'underpricing. Le informazioni prese dai bilanci d'azienda di Zoom pre e post IPO vengono utilizzate per analizzare come sono cambiati i risultati economici e finanziari di Zoom dopo la quotazione. Inoltre, si studia il trend del filing price range attraverso successive pubblicazioni degli emendamenti agli S-1 e il trend post- IPO del titolo per dimostrare se Zoom sia stata sotto quotata alla sua IPO.

#### **1. INTRODUCTION**

Initial Public Offering (IPO) is the process through which a private company offers existing or new issuance shares to the market. How can a company attend an IPO? Which processes are needed to go through in order to be listed? The firm needs to choose an underwriter, an investment bank that lead it in all the phases required in order to get listed on a Stock Exchange. When and why firms decide to attend an IPO? The answer depends both on the organization's culture and values and on the financial and economic background of the time in which the company is operating, but usually firms decide to liquidate existing stockholders or to raise new capital to take up new projects when they are in a certain stage of their life-cycle. The timing of the IPO (Ritter 1984, Plotnicki and Szyszka 2014) and pricing in an IPO (Ritter and Welch 2002, Derrien 2005, Lowry and Shu 2002) are two very important topics in accounting and finance literature.

Literature related to **Market Timing** concentrates on the existence of the so-called "Hot Market" Periods, favorable periods to get listed on a Stock Exchange since the market is tempting and investors are bullish. These hot market periods lead to a phenomenon, called "Clustering of IPOs", according to which firms tende to cluster their IPOs, both in time and in sector, in favorable financial markets' conditions, the hot market periods. Hot market periods have to do also with the speed of the quotation process, and the disposition effect demonstrate how firms who are getting listed in a bullish market period are willing to accelerate the speed of the process and all the requirements in order to get listed, whereas companies who are quotating in bearish market periods are willing to decelerate the process in order to benefit from future upward movements in stock prices.

Literature related to IPO Pricing converges around mainly three theories. They are:

- 1. Signaling Theories
- 2. Asymmetry information Theories
- 3. Litigation risk Theories

These theories aim to explain why shareholders undeprice their shares, and so doing leave money on the table.

Zoom Video Communications, Inc. will be used to exemplify theories of market timing and underpricing. The dissertation will try to determine whether Zoom got listed on a hot market period or not (analyzing the 2019 macroenonomic and financial scenario and Zoom balance sheet values pre and post IPO) and whether its IPO shares were underpriced or not.

#### 2. TIMING AND PRICING IN IPO LITERATURE

#### 2.1 What is an IPO?

The Initial Public Offering (IPO) is the process through which a private company, whose shares are owned by initial investors and/or venture capitalists/business angels, sells new or existing shares to the public. After an IPO, the private company becomes a publicly traded company on a recognised Stock Exchange. There are multiple reasons that lead a company to take the decision of going public:

when a company becomes publicly-traded on a Stock Exchange, attracting a larger number of financiers and investors becomes easier, and so easier becomes the raising of equity capital. (Schultz e Zaman, 2001). The going-public process, in fact, allows the creation of a dispersed ownership and the easy liquidability of ones' investment. (Zingales, 1995). Ritter and Welch (2002) try to give an answer to the question "Why firms decide to go public?" and their answer is that companies decide to go public for the desire to raise equity capital for the firm and to create a secondary market where firm's shares can be traded and the founders and other shareholders can convert their wealth into cash, but also to increase share capital to take up new investments and growth opportunities. Recapitulating, financial reasons which drive companies to the decision of going public are to create a secondary market where the free float is traded and so to liquidate previously stockholders, and to raise more equity to undertake future projects and investment opportunities. There are also non financial reasons to go public, such as increasing business visibility, publicity and reputation, also related to each other. (Zingales, 1995). A company traded on a regulated Stock Exchange acquires more visibility and finds easier attracting potential new investors. Potential investors are usually into the company's business and have faith in it, in fact the publiclytraded company must fulfill mandatory disclosure to encourage business transparency which boosts investors' trust. The going public process can add value to the company in itself as it may convey faith and trust to the investors, consumers and other stakeholders (Ritter and Welch, 2002) and a firm will gain popularity by following the required clear process. In US, businesses are requiered by SEC (Security Exchange Commission) to deposit a great amount of paperwork, before, during and after the quotation and this makes them transparent, so they will more easily receive fundings than private companies, who usually find difficult to raise equity capital from banks and third parties.

What is more, the going public process has a very strong power of publicity for the firm, because being traded in a stock Exchange means that products and/or services are broadly

known among customers. So being listed on a stock exchange makes the company gain prestige and fame, notoriety and visibility, intensifying its bargaining power (Maksimovic e Picher 2001).

An IPO brings with it all the advantages we have just discussed, but on the other hand it has some disadvantages, because the decision of going public brings some costs:

- Cost of disclosure: it is the cost of producing and releasing all filings required by SEC (in the US) before, during and after the IPO;
- Fees to pay to the underwriters for the allocation of the shares and for their pricestabilisation activity;
- Cost of mandatory disclosure publicly traded firms must fulfill (quarterly);
- Indirect costs such as underpricing, that will be explained in the next paragraphs. (Draho, 2005).

The IPO process has several phases: choose the underwriters, documentation, bookbuilding, setting the IPO price, price stabilization in the secondary market. Firms that want to go public must choose an investment bank, the so-called Underwriter, who has the task to provide advice to the company, prices and allocates the shares resulting from the IPO process. Underwriting is the process through which the underwriter (an investment bank) acts as an intermediary between the issuing company and the market to sell its initial offering of shares. It "markets the company to prospective investors. This roadshow helps underwriters to gauge demand as they record "indications of interest" from potential investors". (Ritter and Welch, 2002, page 1804).

The issuing company has many criteria that it can use to select the underwriter:

reputation, which is related to distribution (if the investment bank can provide the issued shares to more than one institutional investors and individual investors), business expertise and prior relationships with that bank. The firm can choose to have more than one underwriter, each one with agreements to buy a portion of shares, and one will behave as the lead underwriter. <sup>1</sup>

Once the issuing firm has selected the underwriter who will supply the underwriting tasks, there is due diligence to develop. The IPO company, together with its underwriter, must write and deposit the Registration Statement - required by the SEC- that is composed of all the details of the issue. SEC requires the Registration Statement so that potential investors are knowledgeable with reliable information about the shares. After the IPO's approval by the SEC, there is the bookbuilding activity to implement, in which underwriters invite

<sup>&</sup>lt;sup>1</sup> What is the IPO Process? https://corporatefinanceinstitute.com. Accessed on May 24th, 2021.

institutional investors to submit bids for the number of shares and price they would pay for them, after which the IPO company and the underwriter decide the offering price on the bases of the demand for its securities.<sup>2</sup> The IPO price is usually underpriced to capture the interest of the investors and in order to fully allocate all the IPO shares. Once the IPO has taken place, the underwriter must create an after-market stabilization and a secondary market for the shares to be traded. The role of the underwriter is then to provide advice to the issuing firm and to guide it throughout the process.

Academic papers investigates the relationship between the issuers' underwriters and institutional investors, who will probably buy high quantity of shares, and evidence suggests that IPO underwriters have conceded favorable allocations of IPO shares to insitutional investors, those who generate large brokerage commissions for the underwriters (Binay, Gatchev, and Prinsky, 2007). From previous literature, institutional investors are favored in the IPO process because they have more detailed information than the issuer, the underwriter and retail investors of the issuing companies (Benveniste and Spindt, 1989) – in fact we are in an asymmetric information environment and institutional investors work with their financial analysts who build up financial models that show what the offering price should be. Investment banks who act as underwriters for the issuer firms acquire information during the book-building process where institutional investors are requested to bid to buy the shares. Underwriters collect invetsors' bids, they price the IPO shares and market the issue more efficiently. Underpricing is a way to reward investors who have revealed private information. If underwriters promise insitutional investors regular participation in future issues, so building a regular clientele, they can lower expected IPO underpricing. (Binay, Gatchev, and Prinsky, 2007).

#### 2.1.2 When companies decide to go public?

Usually a company decides to go public at a certain point of its life cycle. As a matter of fact, we will not observe firms going public in the early stage of their lives, because in this phase they will be private - the ownership concentration being higher. We should observe firms going public whey they achieve good economic and financial results and when they have grown large enough, so they have reached their maturity stage. Going public in this phase is an optimal choice because the firm has already gained reputation, and will gain even more of it (Ritter and Welch, 2002, p. 1798). In the maturity stage, the company is in the heart of its business, the economic result is higher than ever and products manufactured or services

<sup>&</sup>lt;sup>2</sup> Glossario finanziario: Bookbuilding. www.borsa italiana.it. accessed on June 3th, 2021.

rendered by the company are widely established. In addition, the company has defined in detail its mission, vision and long term strategies and these are strongly perceived by clients.

2020 represents an exception and change in direction from what we have just said, since it has been a record year for financial markets and many companies decided to go public even though they were still in their start-up stage. Investors regained confidence and optimism thanks to BCE and FED manoeuvres after The Covid-19 Pandemic and financial markets had a positive comeback (Nasdaq recorded +38%).<sup>3</sup>

#### 2.2 Models of Timing

"Firms' equity decisions seem to be driven mainly by temporal overvaluation and by market timing attempts." (Plotnicki and Szyszka, 2014, p.49). Are there any more favorable periods in which firms should take the decision of going public? Many studies and theories show how financial markets' general conditions are determinants in timing when to go public. There are periods in which firms are more tempted to attend an IPO and get listed, because favorable market conditions occur and investors are bullish. Literature talks about the so-called "Hot markets":

Hot markets are periods of market's euphoria that periodically occur characterised by high IPO volumes and high initial returns, as well as positive serial correlation of IPO initial returns and correlation between recent levels of initial return and current IPO volume. (Ibbotson and Jaffe ,1975 and Ritter,1984). Lee, Shleifer, and Thaler (1991) and Lowry (2003) support that hot issue periods coincide with low discount on closed-end funds, their measure of noise traders' optimism. High initial returns are a symptom of a common phenomenon, called IPO underpricing, which many theories try to define. They find reasons to why shareholders would find interesting and necessary to underprice their shares. Assuming that the initial returns (the difference between the aftermarket price and the IPO price) reflect the fundamental value of the company and of the underlying assets, asymmetric information theories help us understand why firms underprice their IPO shares and, as a consequence, obtain such high initial returns in over-optimistic periods. Market's dynamics are based on investors' trades, and investors' trades are influenced by investors' emotions, feelings and forecasts. Not all investors are rational, many of them being retail investors with limited knowledge of non of finance and the trading field, which makes them easily

<sup>&</sup>lt;sup>3</sup> Wall Street nel 2020. Perché quotarsi? www.startingfinance.com. Accessed on May 16th, 2021.

influenced by others' moves. The so-called "Herding behaviour", the typical behaviour of individual and small investors who are insecure and tend to imitate others' plays and to search for others' confirmation, occurs not only between retail investors, but also among going-public firms, and "Hearding behaviour" among going-public firms leads to IPO clusterings. IPOs tend to cluster both in time and in sectors, in some periods of hot markets when they can benefit from overvaluations. (Ibbotson and Jaffe, 1975 and Ritter, 1984). Firms attempt to time the market in order to get listed in "hot moments" when they can benefit from overvaluation and from high initial returns, and these aggregated attempts lead to the "clustering of IPOs phenomenon".

Aydogan Alti (2005) talks about the so-called **Spillover effect** and the idea that information overflow is the main driver of the hot market phenomenon. IPO timing determinants are kept in consideration by managers who want to minimize the offer mispricing, which is recorded in an asymmetric information environment. (Alti, A., 2005). Institutional investors who participate in the offering are asymmetrically informed about the fundamental value of the company. On the one hand, informed investors can conceal information in order to use it at their favour in a second moment, and on the other hand they can reveal private information, as a consequence the IPO price being higher and triggering more subsequent IPOs. Institutional investors earn information rents, representing a cost to the issuer, since it will probably need to undeprice its shares to favour informed investors who will gain high initial returns and will reveal private information later on. Firms need to confront the cost they will bear issuing shares with its need for external financing (obtainable via IPO).

Adyogan Alti (2005) tries to explain the phenomenon of clustering of IPOs, and demonstrates that previous IPOs, if generating high initial returns, trigger more subsequent IPOs. This happens because followers could decide to go public in order to gain from reduced information rents. Once investors cannot earn any more information rents, a follower's cost to go public has become zero, since information is now symmetric. It is evident that an informed investor is incentivized to keep private information about the issuing company to himself, bidding a price which is lower than company market value, because by keeping it private he can use it profitably in a second moment, when followers decide to be listed and go public. This is a clear example of how firms try to time the IPO market and of how "firms' equity decisions seem to be driven mainly by market timing attempts" (Alti, A., 2005, p.1105), in fact many IPO firms are not in urgent need when they decide to go public.

Another topic related to Market Timing determinants is not concerned with the right moment to get listed, but with the speed of the Quotation process. Plotnicki and Szyszka

(2014)'s paper is concerned with market timing and hot markets that managers find very attractive also in lack of capital needs, but focuses primarily on the so-called disposition Effect. Following the disposition effect, managers who take advantage of high market's valuations will try to shorten the time necessary to go public (Plotnicki and Szyszka, 2014). The focus is not on market timing, but on the speed of the going-public process. There are two possible scenarios:

in the first one, managers who realize they are in the middle of a hot market will try to accelerate the process of going public;

in the second one, if they are in the middle of a cold market and face a drop in the potential valuation, they will decide to slow down the process. On the one hand, the IPO process will be faster when the market is growing (investors are bullish); on the other hand, it will be slower when investors are bearish.

Secondly the paper analyses the amount of money left on the table by companies going public in hot markets. This topic is related to the timing of quotation and underpricing, since if managers are fond of a favourable valuation of their firm, their going-public process could be too fast and they could give up on an even higher valuation", and so they leave money on the table. In fact if they had waited, perhaps they could have sold the company at a even higher price. Disposition effect might be the cause of a high amount of money left on the table by firms going public in particularly hot markets, for example when initial returns are very high. (Plotnicki and Szyszka, 2014).

#### 2.3 Models of Pricing

IPO underpricing is a phenomenon that causes high initial returns on the secondary market and can be explained by theory of signaling, theory of information asymmetry and theory of litigation risk.

In the **Signaling Theory**, the issuer is more informed than investors and "rational investors fear a lemons problem: only issuers with worse-than-average quality are willing to sell their shares at the average price" (Ritter and Welch, 2002, p.1803). In the market there are different quality issuing firms and high-quality firms can distinguish themselves from the low-quality firms by signaling their quality, and they do so deliberately selling their shares at a lower price than their market value and fundamentals "which deters lower quality issuers from imitating" (Ritter and Welch, 2002, p.1803). Doing so they leave money on the table. Why should they leave money on the table if their company worth more than IPO

underpricing?: "Its most appealing feature is that some issuers voluntarily desire to leave money on the table to create a "good taste in investors' mouths." As such, it is relatively compatible with higher levels of IPO underpricing." (Ritter and Welch, 2002, p.1804). To conclude, signaling theory gives a first explanation for IPO underpricing: issuing companies voluntarily underprice their company to reward investors and to signal their high quality.

**Information Asymmetry** theories aim to explain why firms decide to underprice their shares and why companies find interesting to go public in periods of high market's yields, when investors are bullish, as in the model developed by Derrien (2005), where noise traders' sentiment is kept in consideration. The basic characteristic of information asymmetry models is the trade-off between informed and uninformed investors: the former, institutional investors, the latter, retail investors. The model developed by Derrien (2005) tries to explore the relation between noise traders' demand and 1) the choice of IPO price, 2) the initial return and turnover following the offering, and 3) the long-term performance of IPO shares. In most of accounting and finance literature, positive initial return in the aftermarket is the result of a voluntary underpricing of IPO shares (Rock 1986, Benveniste and Spindt 1989). Ritter and Welch (2002) claim that the degree of undepricing will be higher when institutional investors communicate favorable information about the stock, because they have to be rewarded. In fact, if there is strong demand from the market, the underwriter could set a higher offer price, but if informed investors know that revealing good news about the company and showing an inclination to pay result in a higher offer price, they must get something in return. (Ritter and Welch, 2002, p.1804).

Many models explore the IPO underpricing and draw the conclusion that positive initial return is the direct consequence of a voluntary underpricing of IPO shares, since Rock (1986) claims that issuers undeprice their shares to induce uninformed investors to participate in their offerings (information about the fundamental of the company is held by large institutional investors). Informed investors will be rewarded in the aftermarket when the share price (reflecting the true value of the company that is now available to everybody since private information has now become public information) will be higher than the IPO price, that was underpriced.

The model developed by Derrien (2005) is partially different because he keeps in consideration noise traders' feelings, and the information about noise traders' sentiment (which is public at the time of the IPO) is included in the IPO price. If noise traders are bullish, they are willing to pay a high price for the IPO share, so IPO prices will be overvalued. Francois Derrien builds his models to answer two questions: 1) Why do market

conditions have an effect on the aftermarket price? 2) Why is this effect not wholly incorporated into IPO prices?

The answer to the first question comes from Miller (1977), who demonstrated that the price of financial securities subject to divergence of opinion among investors and short-sale constraints is driven by optimistic investors. So, if at the time of the IPO favorable market conditions prevail, then investors will be bullish and will influence the price of the securities.

The answer to the second question is given by the development of his model (Derrien, 2005). We are in a favourable market conditions environment and we know that noise traders are bullish. Derrien supposes that the IPO price chosen by the underwriter depends both on the intrinsic value of the company and on noise traders' sentiment, and he finds a positive link between traders' optimism and IPO price. The higher traders' optimism, the higher the IPO price. But, in this model, positivity impact is only partially incorporated into the IPO price, since the underwriter decides to partially adjust the price of the IPO share with noise traders' sentiments since he is concerned with the aftermarket behaviour. At the moment of the IPO traders are bullish, but they may turn bearish in the aftermarket, over the price support period. "This induces the underwriter to choose a conservative IPO price compared to the short-time aftermarket price of IPO shares", (Derrien 2005, p. 489) and he will set a price between the company's intrinsic value and the price noise traders are ready to pay. So, since the underwriter sets an IPO price that is between the company's intrinsic value and the price noise traders are ready to pay. Derrien (2005, p.490) draws the conclusion that "IPO shares are overpriced with respect to their long-run intrinsic value."

To recapitulate, the difference with Rock (1986) and Benveniste and Spindt (1989) is that in their models noise traders' sentiment is not included, so underwriters need to underprice IPO price in order to offer a rent to informed institutional investors as an incentive to reveal their signals truthfully, whereas in Derrien's model (2005) the rent offered to institutional investors is not paid by the issuer but by noise traders, who are willing to pay IPO prices (shares are overvalued).

The author draws the conclusion that IPO shares are overpriced, and as a consequence pre-issue shareholders do not leave money on the table, but noise traders who are willing to buy shares in the aftermarket at an excessive high price are the ones who leave the money on the table. In fact if investors are bullish at the time of the offering, the underwriter and the IPO company won't need to underprice the shares to induce informed investors to reveal their information about the firm's value, because the incentive to provide this information is given by noise traders' overoptimism who are ready to pay inflated prices for the shares in the aftermarket. According to this model (Derrien, 2005):

- the demand for IPO shares is related to markets conditions at the time of the issuance of shares and is driven by investors' emotions and sentiment;
- Individual investors are noise traders in this model, and their demand influences IPO prices;
- As a consequence, initial return and turnover are strongly correlated with noise traders' demand and the long-term stock price is negatively related to noise traders' demand.

The **theory of litigation risk** explains why firms going public and underwriters *"intentionally underprice their shares to insure against future liability"* (Lowry and Shu, 2002, p.310). When we are talking about litigation risk and litigation costs, we are referring to the settlement payment, that is the most highly publicized, but also to not directly observable costs such as reputations costs to both the IPO firm and managers, legal fees, and the opportunity cost of management time dedicated to the lawsuit.

Following this theory, managers undeprice their IPO shares in order to insure against these future possible liabilities. Underpricing shares, they lower the possibility of being sued, and so doing they lower the litigation risk. The going-public company faces a trade-off in setting the IPO price: a lower undepricing (a higher offering price) leads to higher proceeds from the offering but increases the expected litigation costs. (Lowry and Shu, 2002). According to this reasoning, it is probable that enterprises with higher expected litigation risk purchase more insurance ("The Insurance Effect"), incurring in lower expected litigation costs in the form of reduced probabilities of being sued ("The Deterrence effect").

Ritter (1984), Carter and Manaster (1990), and Michaely and Shaw (1994) note that issues whose values are certified by higher quality players are less uncertain because they are incentivized to spread accurate and true information regarding the fundamental value of the IPO company, since they have valuable reputations to protect. Therefore, firms whose underwriters are high quality players will underprice less since they are less uncertain. But firms in high-tech industries are subject to higher information asymmetry since they have more growth options and thus are harder to value. The higher uncertainty sorrounding younger firms, firms in high-tech industries, and firms listed on Nasdaq is also likely to increase these firms' legale exposure.

### **2.4 Conclusion**

This theoretical chapter has illustrated the general traits of an IPO, starting from what an IPO is, how this process works, why and when firms decide to go public, to the relashionship between underwriters and institutional investors. Then it has illustrated various theories about market timing and IPO undepricing.

In the following chapters these definitions and theories will be used to analyze Zoom case, and to find evidence whether Zoom went public in a hot market period and if its IPO shares were underpriced, or not.

## 3. ZOOM VIDEO COMMUNICATIONS, INC. 3.1 Introduction

This practical chapter is about Zoom Video Communications, Inc., and starts from a brief overview of its story and its business model, before focusing on the topic of its IPO at Nasdaq Global Select Market. Zoom is used to exemplify theories in accounting and finance literature of timing determinants in an IPO and underpricing of IPO shares.

For the former, it will be illustrated why 2019 was a hot market and why investors regained faith in financial markets. What is more, there will be a brief overview of the speed of quotation of Zoom company compared to that of Google and of ON24.

For the latter, there will be a study of the evolution of the filing price range compared to that of ON24 and Google and, finally, a review of all the consequences Covid-19 has had, and still has, on Zoom title.

#### 3.2 Zoom history

Zoom Video Communications, Inc. was founded in 2011 by Eric Yuan, the leading engineer of Cisco Webex, who decided to leave the company because its online conference service did not meet the expected standards. Eric Yuan initially found difficult to find investors since many of them thought that video telephony market was already saturated, but in 2013 Zoom started to grow and received its first fundings. In 2017, being valued at a US \$ 1 billion, it become a so-called unicorn. Eric Yuan's resilience allowed him to bring his video-communications platform to success, and nowadays Zoom is widely-spread between networkers and freelancers working directly online in video-conference. <sup>4</sup>

In April 18th, 2019, Zoom got listed on Nasdaq Global Select Market under the symbol "ZM" as an Emerging Growth Company, at a IPO share price of 36 \$<sup>5</sup>, and in the first months of 2020, as a result of the Covid-19 Pandemic which obliged people to use video conferences to work and study, its popularity ballooned and, as a consequence, revenues, net income and cash flows generated from operations raised a lot.<sup>6</sup>

<sup>&</sup>lt;sup>4</sup>Zoom Video Communications. it.wikipedia.org, accessed on May 8th, 2021

<sup>&</sup>lt;sup>5</sup> Form of prospectus disclosing information facts events covered in both forms 424B1 424B3. www.investors.zoom.us/sec-filings.com, accessed on May 8th, 2021

<sup>&</sup>lt;sup>6</sup> Annual Report 2021. www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 8th, 2021

#### 3.3 Zoom business model

Zoom Video Communications, Inc. provides a cloud-native sotware platform that delivers high-quality video and audio. It provides also an attractive ROI (return on investment, as costs savings on unnecessary and expensive job travels). Zoom's platform is accessible through website or mobile apps.

Its strengths are:

-it is easy to use;

-its video is high-performing;

-the possibility to attend video conferencing, online meeting and do group messaging on a single platform;

- robust customer support to clients;

-its scalable and sustainable business model.

It works with individual users (mass market), enterprises, schools, healthcare providers and anyone else who needs to host or attend a video conference. Its key resources are its software platform, its enginners, its sales and customer service staff. Revenues derive from subscription fees and its costs consists of wages to employees, marketing expenses and maintenance of the video&audio platform costs.

"Zoom's goal is to make Zoom meetings better than in-person meetings, joining thousands of people in a single meeting across disparate devices and locations. Its goal is to deliver a communication solution that "just works".

"Zoom's culture of delivering happiness drives their mission, vision and values.

- Mission: Our mission is to make video communication frictionless.
- *Vision: Our vision is to empower people to accomplish more through video communications.*
- Values: We care for our community, our customers, our company, our teammates and ourselves."<sup>7</sup>

Zoom's objectives are supported by industry trends, for example the now-become central role of communication and collaboration within an organization has made Zoom an innovative and widely-spread solution.

<sup>&</sup>lt;sup>7</sup> Form S-1 Registration Statement under the Securities Act of 1933 (page 5). www.sec.gov/Archives/edgar/data.com, accessed on May 8th, 2021.

### 3.4 Zoom IPO

Zoom got listed on Nasdaq Global Select Market under the simbol "ZM" on April 18th, 2019, but the decision was taken at the end of 2018 (December 21st, 2018) when it published the Draft Registration Statement "Draft registration statement submitted by Emerging Growth Company under Securities Act Section 6". Zoom has two classes of authorized common stocks: Class A common stock and Class B common stock. The difference between the two is concerning voting and conversion rights. At The Offering part (figure 1.1.), we read: "*The holders of Class A common stocks are entitled to one vote per share and the holders of Class B common stock are entitled to 10 votes per share, on all matters that are subject to stockholder vote.*" The offering concerned exclusively the issuance of Class A common stocks, offered by Zoom and by the selling stockholders.

THE OF	FERING
Class A common stock offered by us	9,911,434 shares
Class A common stock offered by the selling stockholders	
	10,958,131 shares
Class A common stock sold by us in the concurrent private placement	Immediately subsequent to the closing of this offering, Salesforce Ventures LLC will purchase from us in a private placement 2,777,777 shares of our Class A common stock. We will receive the full proceeds and will not pay any underwriting discounts or commissions with respect to the shares that are sold in the private placement. The sale of the shares in the private placement is contingent upon the completion of this offering. The sale of these shares to Salesforce Ventures LLC will not be registered in this offering and will be subject to a market standoff agreement with us for a period of up to 365 days after the date of this prospectus and a lock-up agreement with the underwriters for a period of up to 180 days after the date of this prospectus. See "Shares Eligible for Future Sale—Lock-Up Agreements and Market Standoff Provisions" for additional information regarding such restrictions. We refer to the private placement of these shares of Class A common stock as the concurrent private placement.
Class A common stock to be outstanding after this offering and the concurrent private placement	24,070,086 shares
Class B common stock to be outstanding after this offering and the concurrent private placement	232,318,285 shares
Total Class A and Class B common stock to be outstanding after this offering and the concurrent private placement	256.388.371 shares
Over-allotment option of Class A common stock offered by us	230,588,571 shares
over-anothern option of class A common stock offered by us	3,130,435 shares
Voting rights	We have two classes of authorized common stock: Class A common stock and Class B common stock. The rights of the holders of Class A and Class B common stock are identical, except with respect to voting and conversion rights. The holders of Class A common stock are entitled to one vote per share and the holders of Class B common stock are entitled to 10 votes per share, on all matters that are subject to stockholder vote. Each share of Class B common stock may be converted into one share of Class A common stock at the option of the holder thereof, and will be converted into one share of Class A common stock upon transfer thereof, subject to certain exceptions.

#### Figure 1.1: The Offering.

Source: Form S-1 Registration Statement under the Securities Act of 1933.

www.sec.gov/Archives/edgar/data.com, accessed on May 8th, 2021.

Always at The Offering part (figure 1.1) we read: "*proceeds from the sale of Class A common stock will be used for general corporate purposes, including working capital, operating expenses and capital expenditures.*" <sup>8</sup> Two were the financial reasons which drove Zoom to the choice of going public: one was to liquidate its primary investors (a part of Class A common stocks was offered by shareholders), and the second one was the use of proceeds for corporate expenses (another part of Class A common stocks was offered by Zoom company). Even though at the time of the publication of the S-1 Form they didn't have any plans or commitments for acquisitions or investments, they said they could use a portion of the net proceeds for acquisitions or strategic investments in complementary businesses, products, services or technologies.

#### 3.4.1 Zoom's underwriters

Zoom's representatives underwriters, who were by the side of Zoom in all the stages of the IPO, were Morgan Stanley & Co. LLC, JP Morgan Securities LLC and Goldman Sachs & Co. LLC. Other underwriters who accompanied Zoom in its IPO process were: Credit Suisse Securities & Co. LLC, Merryll Lynch, Pierce, Fenner and Smith Incorporated; RBC Capital Markets, LLC; Wells Fargo Securities, LLC; JMP Securities LLC; KeyBanc Capital Markets Inc.; Piper Jaffray & Co.; Stifel, Nicolaus & Company, Incorporated; William Blair & Company, L. L. C. They have agreed to purchase the number of shares indicated in the figure 1.2 below:

#### UNDERWRITERS

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, J. P. Morgan Securities LLC and Goldman Sachs & Co. LLC are acting as representatives, have severally agreed to purchase, and we and the selling stockholders have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	6,260,870
J. P. Morgan Securities LLC	4,173,913
Goldman Sachs & Co. LLC	4,173,913
Credit Suisse Securities (USA) LLC	1,826,087
Merrill Lynch, Pierce, Fenner & Smith	
Incorporated	991,304
RBC Capital Markets, LLC	991,304
Wells Fargo Securities, LLC	991,304
JMP Securities LLC	292,174
KeyBane Capital Markets Inc.	292,174
Piper Jaffray & Co.	292,174
Stifel, Nicolaus & Company, Incorporated	292,174
William Blair & Company, L.L.C.	292,174
Total:	20,869,565

Figure 1.2: Underwriters.

<sup>8</sup> Form S-1 Registration Statement under the Securities Act of 1933. www.sec.gov/Archives/edgar/data.com, accessed on May 8th, 2021. Source: Form S-1 Registration Statement under the Securities Act of 1933. www.sec.gov/Archives/edgar/data.com, accessed on May 8th, 2021.

As 3,130,435 shares of Class A common stock offered by Zoom are under the over-allotment "option", this is a short paragraph to explain what the over-allotment option is.

Over-allotment or "Green shoe" is a tool used by underwriters in their activity of price stabilization in the secondary market. In fact underwriters' task is not only that of allocating shares and attending pre-IPO activity, but consists also of price stabilization in the secondary market. Over-allotment option is exercised in case market's demand is very high (and as a consequence the secondary market share price is very high) and it works like this: the investment bank short sells a determined number of firm's shares at a price very close to the offering price. In order to be able to do that, the underwriter has the option to buy a determined number of shares (usually 15% of the offered shares) at an exercise price (equal to the offering price), usually within 30 days post the offering date. If, in the opposite case, market's demand is lower than the offering (and, as a consequence, the share price on the secondary market is low), the underwriter does not exercise the option and buys a quantity of shares which is necessary to stimulate shares' demand and to make share price rise.

#### 3.4.2 Timing of Zoom IPO: Zoom life cycle

Zoom was already popular and the use of its platform widely-spread across users among the world when in 2019 it got listed on Nasdaq Global Select Market, so definitely it was not in its early start-up stage of life at the moment of quotation.

The second stage of life for a firm is the development stage, in which it reaches the break-even point, that indicates the quantity of products manufactured or services rendered which equals revenues to costs. What is more, in this stage the expansion of the firm is strong, the firm is getting powerful and is able to influence consumers, clients appreciate the services it offers and a sense of euphoria, excitement and happiness thrives and is widespread among the founders, employers and stakeholders in general. In this stage the firm is driven to innovation, because it wants to innovate its product in order to stand out among competitors and take control.

In the maturity stage, the company achieves the maximum economical and financial results and its product or services are prominent on the market. What is more, in the maturity stage a lot of people use the firm's products and the so-called network effect is created. The rapid adoption of the platform is *"driven by a virtuous cycle of positive user experiences.* 

Individuals typically begin using our platform when a colleague or associate invites them to a Zoom meeting. When attendees experience our platform and realize the benefits, thay often become paying customers to unlock additional functionality."<sup>9</sup>

From Zoom's Financial Statement (2020) (figure 1.3)<sup>10</sup>, I observed that:

- In fiscal year 2018 (ended January 31th, 2018) it experienced a loss of 3,822,000 dollars;
- In 2019 (year ended January 31th, 2019) it experienced a net income of 7,584,000 dollars;
- In 2020 (year ended January 31th, 2020) it experienced a net income of 25,305,000.

Using these datas and the economic definitions for each stage of life of the firm, I can conclude that Zoom, when it got listed on Nasdaq Global Select Market, was in the first beginning of its development phase (or in the late start-up stage of its life), as it had just reached the break-even point. Observing the economic results for Fiscal Years from 2019 on, we notice that Zoom is achieving higher net incomes, so now it is in its maturity stage.

	_			Year Ended	Janua	ry 31,		
		2020		2019		2018		2017
			(in thos	isands, except sl	are an	d per share data	)	
<b>Consolidated Statements of Operations Data:</b>								
Revenue	s	622,658	s	330,517	s	151,478	\$	60,817
Cost of revenue(1)		115,396		61,001		30,780		12,472
Gross profit		507,262		269,516		120,698		48,345
Operating expenses:	_							
Research and development(1)		67,079		33,014		15,733		9,218
Sales and marketing(1)		340,646		185,821		82,707		31,580
General and administrative <sup>(1)</sup>		86,841		44,514	-	27,091		7,547
Total operating expenses		494,566		263,349		125,531		48,345
Income (loss) from operations	-	12,696	A.	6,167	0	(4,833)	W.	
Interest income and other, net		13,666		2,182		1,315		158
Net income (loss) before provision for income taxes		26,362		8,349		(3,518)		158
Provision for income taxes		1,057		765		304		172
Net income (loss)	s	25,305	S	7,584	S	(3,822)	S	(14

Figure 1.3: Annual Report Fiscal 2020.

Source: www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 19th, 2021.

<sup>&</sup>lt;sup>9</sup> Form S-1 Registration Statement under the Securities Act of 1933 (page 4). www.sec.gov/Archives/edgar/data.com, accessed on May 8th, 2021.

<sup>&</sup>lt;sup>10</sup> Annual Report Fiscal 2020. www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 19th, 2021.

#### 3.5 Economic scenario in 2019

This section is still related to the topic of Timing of Quotation, but here it is not related to the firm's business and life cyle or to the speed of quotation, but to the 2019 Economic & Financial Scenario. I have analyzed the period which goes from Zoom's announcement of the IPO (on Dec 21th, 2018 Zoom submitted its Draft Registration Statement) to April 2019 (the quotation date was April 18th, 2019).

Table 1. Overview of the World Economic Outlook Projections (Percent change, unless noted atherwise)

	Year over Year								
	Difference from Oct 2018				Q4 o	ver Q4 2/			
	E	Estimates		ons	WEO Projections 1/		Estimates	Projections	
2	2017	2018	2019	2020	2019	2020	2018	2019	2020
World Output	3.8	3.7	3.5	3.6	-0.2	-0.1	3.5	3.6	3.6
Advanced Economies	2.4	2.3	2.0	1.7	-0.1	0.0	2.1	1.9	1.7
United States	2.2	2.9	2.5	1.8	0.0	0.0	3.0	2.1	1.5
Euro Area	2.4	1.8	1.6	1.7	-0.3	0.0	1.2	1.9	1.5
Germany	2.5	1.5	1.3	1.6	-0.6	0.0	0.9	1.7	1.5
France	2.3	1.5	1.5	1.6	-0.1	0.0	1.0	1.6	1.5
Italy	1.6	1.0	0.6	0.9	-0.4	0.0	0.2	1.2	0.6
Spain	3.0	2.5	2.2	1.9	0.0	0.0	2.3	2.1	1.6
Japan	1.9	0.9	1.1	0.5	0.2	0.2	0.6	0.0	1.6
United Kingdom	1.8	1.4	1.5	1.6	0.0	0.1	1.3	1.5	1.6
Canada	3.0	2.1	1.9	1.9	-0.1	0.1	2.0	1.8	1.9
Other Advanced Economies 3/	2.8	2.8	2.5	2.5	0.0	0.0	2.8	2.3	2.9

Figure 1.4: Overview of the World Economic Outlook Projections

Source: International Monetary Fund, Outlook January 2019. www.imf.org. Accessed on April 28th, 2021.

2019 started from the low, since 2018 has not been a great year for financial markets, because the FED decided to hike the federal fund rate as a response to a growing economy. This led to a negativism of investors. Focusing on the Economic Scenario for 2019 in the United States, that is the geographic area we want to take in consideration since Zoom is American, we read from IMF Outlook that 2019 would be a year of growth, but of slower growth with respect to 2018 (2.5 % vs 2,9%, figure 1.4). *"Strong domestic demand growth will support rising imports and contribute to a widening of the US current account deficit.*"<sup>11</sup> Taking macroeconomics data from IMF Outlook of January 2019<sup>12</sup>, we read that the 2018 forecasts for 2019 were ambivalent, as on the one hand the global economy would continue to grow, but more slowly, due to a potential "no-deal" withdrawal of the United Kingdom from the European Union, a grater-than-envisaged slowdown in China, the introduction of new automobile fuel emission standards in Germany, concerns about sovereign and financial risks in Italy and trade policy tensions between US and China, while on the other hand, financial

<sup>&</sup>lt;sup>11</sup> International Monetary Fund, Outlook January 2019, page 4. www.imf.org. Accessed on April 28th, 2021.

<sup>&</sup>lt;sup>12</sup> International Monetary Fund, Outlook January 2019. www.imf.org. Accessed on April 28th, 2021.

markets (that do not depend only on the overall economic scenario, but on investor's sensations, emotionality and forecasts) seemed to be driven up since major central banks appeared to be slowering federal fund rates. "*While the US Federal Reserve raised the target range for federal funds rate to 2.25-2.50 in December, it signaled a more gradual pace of rate hikes in 2019 and 2020*"<sup>13</sup> and this would have a very positive effect on the financial market's sentiments and would lead investors to trade more.

The functioning on financial markets depends on investors' sentiments and forecasts. Market's sentiment depends on many factors, some are contingent to the historical and economic moment, others not, because many investors are irrational and very often the so called hearding behaviour takes place. IMF January 2019 Outlook writes that "If countries resolve their differences without raising distortive trade barriers further and market sentiment recovers, then improve confidence and easier financial conditions could reinforce each other to lift growth above the baseline forecast". When in the first quarter of 2019 Fed announced its policy of lowering funds rates, financial markets benefited from it and 2019 recorded the best financial growth never had since 2013<sup>14</sup>. Zoom title, listed on Nasdaq Global Select Market on April 18th, 2019 and part of Nasdaq Composite Index, with a firstday closing price of 62\$ per share recorded the highest initial return (difference between firstday closing price and the IPO price) ever. It was the most revalued in only one day tech title in the world, making investors yield 72% in a day<sup>15</sup>. From the day after the IPO, Zoom title's price increased and it never went below the threshold of 62\$ (first day closing price), being now valued at 372,95\$ (June 17th, 2021). Table 1.1 compares some significant balance sheet values before and after IPO (Fiscal Year 2019 vs 2020):

	Fiscal Year 2019	Fiscal Year 2020	% increase
Revenues	330,517,000\$	622,658,000	88%
Income from	6,167,000\$	12,696,000\$	106%
operations (EBIT)			
Net income	7,584,000\$	25,305,000\$	234%
Net income/Revenues	2%	4%	100%
ROS	1,8%	2,04%	13%

<sup>&</sup>lt;sup>13</sup> International Monetary Fund, Outlook January 2019, page 2. www.imf.org. Accessed on April 28th, 2021.

<sup>&</sup>lt;sup>14</sup> Mercati: dalle Borse ai bond il 2019 è stato l'anno dei record. www.ilsole24ore.com. Accessed on May 20th.

<sup>&</sup>lt;sup>15</sup> Zoom rocketed 72% on first day of trading. www.cnbc.com, accessed on May 28th, 2021.

(EBIT/Revenues)			
-----------------	--	--	--

Table 1.1

2019 year was a "hot market" issue period, a bullish market, characterised by investors' optimism and over excitement, and so a favorable moment for companies to get listed. One sentence could be used to summarize the 2019 Financial Year: "It was a year that began with investors courting a bear market and ended with the biggest gains from stocks since 2013."<sup>16</sup>

### 3.6 Speed of the Quotation process

Another element related to the Timing of Quotation is the speed of the quotation process, and I will analyze it for the Zoom Case. I will then compare Zoom's speed of the quotation process with the speed of the quotation process of another company: ON24, Inc., which is a San Francisco webcasting and virtual event software company. It was founded in 1998, providing platforms to broadcast video press releases. Now "*ON24 provides a leading, cloud-based digital experience platform that enables businesses to convert customer engagement into revenue through interactive webinar experiences, virtual event experiences and multimedia content experiences"*<sup>17</sup>. ON24 got listed on NYSE on Feb 5th, 2021<sup>18</sup> (still under Covid-19 Pandemic Emergency, that we will find out is a hot market period characterised by a growing number of IPOs) at an offering price of 50\$/share (and a capitalization of 430 million \$). I chose this company to use as a comparison because it got listed little time ago, still in the middle of the fight against the Covid-19 Pandemic, and because I want to compare Zoom with another tech company.

Topic of speed of the Quotation process is connected to the Disposition Effect discussed in the theory part, summarising Michal Plotnicki and Adam Szyszka's paper "IPO market timing. The evidence of the disposition effect among corporate managers". That paper, concerned with market timing and hot markets, illustrates that managers who want to benefit from high market valution in a hot market issue period will tend to minimize the time to go public in order to take advantage of it.

I want to analyze and study the period which goes from the publication of the "Draft Registration Statement", that we can consider as the date corresponding to the announcement

<sup>&</sup>lt;sup>16</sup> The Stock Market boomed in 2019. Here's how it happened. www.cnbc.com, accessed on May 28th, 2021.

<sup>&</sup>lt;sup>17</sup>ON24. www.on24.com, accessed on June 15th, 2021.

<sup>&</sup>lt;sup>18</sup> Calendario IPO. it.investing.com/ipo-calendar, accessed on May 28th, 2021.

of quotation -because to the publication of the draft registration statement corresponds the intention of the company to get listed- to the date of the publication of the 424B4 final version.

 Zoom: Zoom released its "Draft registration statement submitted by Emerging Growth Company under Securities Act Section 6(e) or by Foreign Private Issuer under Division of Corporation Finance policy" SEC filing on 21th December, 2021, and the date of the publication of the 424B4 final version "Form of Prospectus disclosing information facts events covered in both forms 424B1 424B3" is April 17th, 2019.

Almost 4 months passed from the publication of the first and the last one.

ON24: ON24 published the DRS "Draft Registration Statement"<sup>19</sup> on October 27th, 2020, and the 424B4<sup>20</sup> final version on February 4th, 2021.
A bit more than 3 months have passed between the first and the last publication. ON24's process through quotation lasted 19 days less than Zoom's one.

This is coherent because 2019 and 2021 are both hot market periods: 2019 for the Macroeconomics and Financial reasons explained in the last paragraph having a look at IMF datas, and 2021 still being characterized by an exceptional situation, the one of the Covid-19 Pandemic and the struggles and efforts we are implementing in order to face and overwhelm the Sanitary Emergency. 2021 year caused a huge increase in the number of IPOs, also for companies still in their start-up stage, desirous to benefit from stock market's yields.<sup>21</sup>

The analysis of Zoom and ON24 gives evidence to the disposition effect, because we have found out that they were both very quick in their process through quotation. ON24 took 17 days less than Zoom from the publication of the DRS to the publication of the 424B4 final version. This can be explained by the exceptional character of the Covid-19 Pandemic, which is characterized by a growing number of firms going public quickly in order to take advantage of the increase in stock prices. Table 1.2 summarizes these datas:

	Zoom	ON24
DRS Date	Dec 21th, 2018	Oct 27th, 2020
424B4 Date	Apr 17th, 2019	Feb 4th, 2021

<sup>&</sup>lt;sup>19</sup> ON24 SEC Filings. www.investors.on24.com, accessed on May 14th, 2021.

<sup>&</sup>lt;sup>20</sup> ON24 SEC Filings. www.investors.on24.com, accessed on May 14th, 2021.

<sup>&</sup>lt;sup>21</sup> Wall Street nel 2020. Perché quotarsi? www.startingfinance.com. Accessed on May 16th, 2021.

Table 1.2

## 3.7 Zoom IPO Underpricing

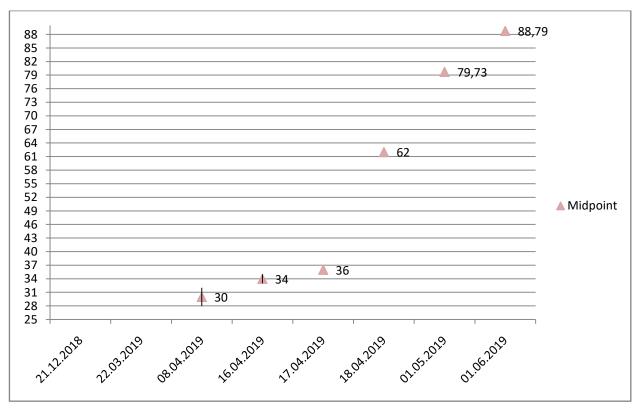
Usually companies and their underwriters set a IPO offering price which is below the fundamental value of the company, and as a consequence in the secondary market investors yield high initial returns (computed as the first-day closing price minus the IPO offering price). Underpricing occurs to signal the high-quality of the company and to reward investors, or in an asymmetric information environment, or as insurance against future liabilities.

Zoom IPO price of 36 dollar per share IPO price was probably underpriced, since the first day closing price of 62 dollar per share made investors yield 72% in a day, making Zoom the highest one-day revalued tech-title in the history.<sup>22</sup>

In this chapter I want to study the evolution of the **filing price range** of Zoom throughout various and following publications of the S/1, S-1/A and 424B4 Amendments, and then to compare it with the trend of the filing price range of ON24 and Google.

Zoom got listed on Nasdaq on April 18th, 2019. Amendment S-1 was published on March 22nd, 2019. This Registration Statement never contains the IPO price. The first S-1/A Form was published on April 8th, 2019 and the IPO price range was 28-32 \$. The second S-1/A Form was published on April 16th, 2019 and the IPO price range was higher than the previous one, 33-35\$ per share. On April 17th, 2019 the final version 424B4 was published with an IPO price of 36 \$ per share. In the months following its IPO, Zoom's title price increased at a steady pace, being valued 89,98\$/share on May 17th 2019 (one month after the publication of the 424B4 final version). From May 2019 on it recorded a stable trend, until the beginning of the Covid-19 Pandemic when its value exploded (reaching the peak of 568.34\$/share on October 19th 2020). Graph 1.1 reports the evolution of Zoom filing price range.

<sup>&</sup>lt;sup>22</sup> Zoom rocketed 72% on first day of trading. www.cnbc.com, accessed on May 28th, 2021.

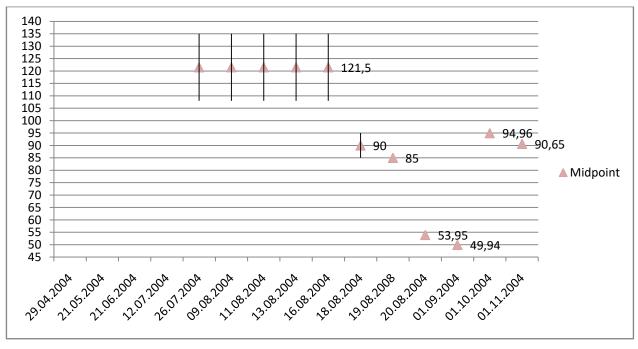


Graph 1.1

- the midpoint of the estimated offering price range has raised from the first publication to the final version;
- 36\$ offering price per share is probably underpriced, but looking at the evolution of the IPO offering price range, it raised more than once.

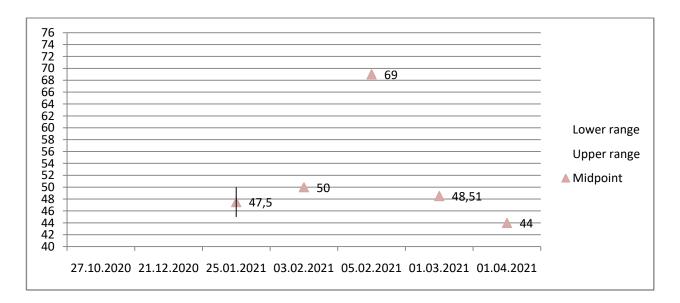
Google Inc. was listed on Nasdaq on August 19th, 2004<sup>23</sup>. The S-1 Registration Form was published on April 29th, 2004. It does never contain any initial offering price. The first, the second and the third S-1/A Forms were published, respectively, on May 21th 2004, on June 21th 2004 and on July 12th 2004. They did not contain any initial offering price. The fourth, fifth, sixth, seventh and eighth S-1/A Forms were published, respectively, on July 26th 2004, on August 9th 2004, August 11th 2004, on August 13th 2004 and on August 16th 2004. The IPO price range was 108-135\$. The ninth S-1/A Form was published on August 18th 2004. The IPO range price of 85-95\$. The 424B4 Final Form was published on August 19th 2004 with an IPO price, being 53,95\$/share. Graph 1.2 reports the trend of Google filing price range.

<sup>&</sup>lt;sup>23</sup> SEC Filings. www.sec.report/CIK.com, accessed on May 15th, 2021.





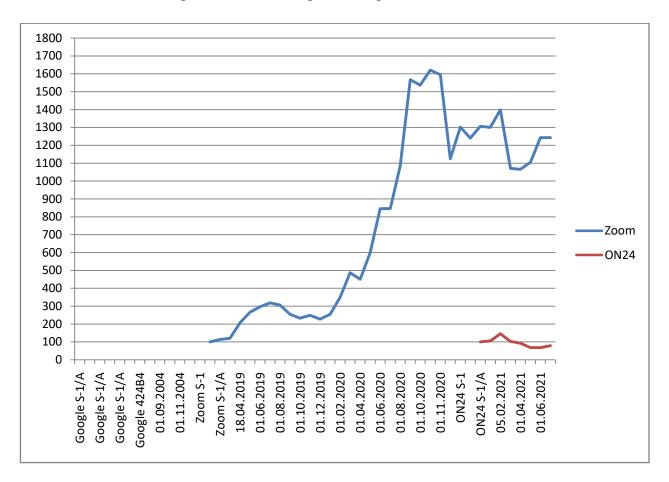
ON24 Inc. was listed on NYSE on February 5th, 2021<sup>24</sup>. ON24 published the **S-1** Form on December 12th, 2020. This Amendment does not contain any initial offerimg price. The **S-1/A** Form was published on January 25th 2021, with an IPO price range of 45-50\$. The **424B4** final version ws published on February 4th 2021, with an IPO price of 50\$/share. ON24 recorded a fist-day closing price of 69\$/share (38% higher than the IPO price) that is its highest peak so far achieved. After the first day, ON24's title price decreased following an unsteady path. Graph 1.3 reports the trend of ON24 filing price range.



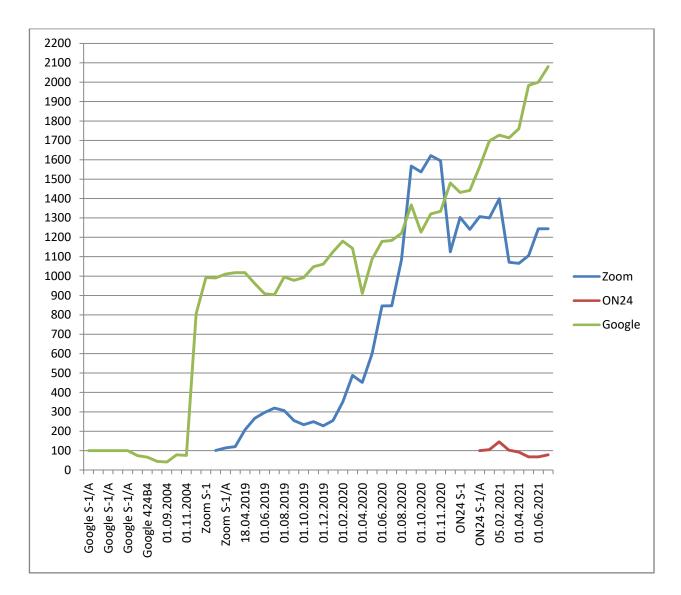
<sup>24</sup> ON24 announces pricing of initial public offering. www.on24.com, accessed on June 15th, 2021.

#### Graph 1.3

Google, Inc.'s IPO price range's trend is the opposite with respect to that of Zoom and ON24, in fact in Zoom and ON24's cases the IPO price range raised, whereas in Google's case it decreased. Graph 1.4 represents the evolution of Zoom and ON24's value from Zoom's DRS publication (Dec 21st, 2018) to June 17th, 2021. Graph 1.5 represents the trend of Zoom, ON24 and Google's title from Google's DRS publication to June 17th, 2021.



#### Graph 1.4



#### Graph 1.5

This short paragraph aims to explain why firms and primary shareholders are willing to leave money on the table. Leaving money on the table -shareholders are the ones who leave the money on the table- is a way to reward investors for their trust, confidence and commitment to the company. There are many other reasons, related to information asymmetry or litigation risk (a higher underpricing of IPO shares will lower the possibility for the firm of being sued), that attempt to explain IPO underpricing. These theories are illustrated in the theoretical chapter.

Zoom probably underpriced its shares in its IPO (at 36\$/share), so stockholders gained less than secondary market investors -who benefited from high initial returns-, but besides being a rewarding element for institutional investors who buy high quantity of shares, there is another reason why shareholders are willing to leave money on the table: if in the future they want to capitalize again in order to take up new investments, they can do it and their shares will be worth more. At the moment of the offering, the firm, that is already listed on a Stock Exchange, will probably be priced as the true value of its underlying assets. In this view, underpricing shares in an IPO makes shareholders leave money on the table, but if in the future the firm will recapitalize, shareholders won't leave money on the table because they will probably receive the true value of their shares from the market.

#### 3.8 Covid-19 Results on Zoom Title

In 2020 Zoom's success ballooned as a result of the Covid-19 Pandemic which obliged people all over the world to work, attend lessons and keep in touch thanks to the use of video-platforms, and Zoom is so easy to use and "just works" that many people decided to use it and download it. Eric Yuan, in his letter to the shareholders in Annual Report 2020, reported that the number of downloads was a record for Zoom in fact, on April 21st 2020, it overcame 300 milions daily users, 2900% more with respect to the 10 millions daily user recorded on December 2019. "Overnight, usage of Zoom ballooned, far surpassing what we expected when we first announced in late February our desire to help everyone stay connected. In April of this year, we reached more than 300 million daily meeting participants, free and paid, an incredible increase compared to the 10 million daily meeting participants we served in December 2019."<sup>25</sup> Obviously this was caused by a vertiginous increase of people working and attending meetings from home: Zoom allowed to connect teachers and students, businesses and employees, enterprises and customers, doctors and patients, friends and families during lockdown. Zoom's revenues more than tripled with respect to the previous year (Fiscal Year 2020 vs 2021, revenues passed from 622,658,000 \$ to 2,651,368,000\$, recording a 326% increase), net income increased by almost 26 times (Fiscal Year 2020 vs 2021, net income passed from 25,305,000\$ to 672,316,000\$), net cash provided by operating activities increased by almost 9 times (Fiscal Year 2020 vs 2021, net cash passed from 151,892,000\$ to 1,471,177,000\$) and number of users and downloads raised at a very quick pace (in a ordinary day in mid February 2020, before the Sanitary Emergency exploded, the number of downloads was about 171 thousands, whereas on March 25th, 2020 the number of downloads was of 2,41 millions. This shows a growth percentage on app dowloads of

<sup>&</sup>lt;sup>25</sup> Annual Report Fiscal 2020. www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 19th, 2021.

1300%<sup>26</sup>). Table 1.3 compares balance sheet values in Fiscal Year 2020 and 2021, and figures 1.5 and 1.6 are taken from Zoom's Annual Report Fiscal 2021.

	Fiscal Year 2020	Fiscal Year 2021	% Increase
Revenues	622,658,000 \$	2,651,368,000\$	326%
Net income	25,305,000\$	672,316,000\$	2556%
Net cash provided by	151,892,000\$	1,471,177,000\$	869%
operating activities			

Table 1.3

The following table presents a summary of our cash flows for the fiscal years presented and a reconciliation of FCF to net cash provided by operating activities, the most directly comparable financial measure calculated in accordance with GAAP:

Year Ended January 31,					
	2021		2020		2019
		(in	thousands)		
\$	1,471,177	\$	151,892	\$	51,332
	(79,972)	_	(38,084)		(28,432)
\$	1,391,205	\$	113,808	\$	22,900
\$	(1,562,420)	\$	(499,468)	\$	(39,719)
\$	2,050,277	\$	615,690	\$	17,534
	\$ <u>\$</u> <u>\$</u> \$	2021       \$ 1,471,177       (79,972)       \$ 1,391,205       \$ (1,562,420)	2021     (ir       \$ 1,471,177     \$       (79,972)     \$       \$ 1,391,205     \$       \$ (1,562,420)     \$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	2021     2020       (in thousands)     (in thousands)       \$ 1,471,177     \$ 151,892     \$       (79,972)     (38,084)     \$       \$ 1,391,205     \$ 113,808     \$       \$ (1,562,420)     \$ (499,468)     \$

Figure 1.5: Zoom Annual Report Fiscal 2021.

Source: www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 19th, 2021.

#### **Results of Operations**

The following tables set forth selected consolidated statements of operations data and such data as a percentage of total revenue for each of the fiscal years indicated:

	Year Ended January 31,					
		2021		2020		2019
			(in	thousands)		
Revenue	S	2,651,368	S	622,658	\$	330,517
Cost of revenue (1)		821,989	2	115,396		61,001
Gross profit		1,829,379		507,262		269,516
Operating expenses:			-			
Research and development (1)		164,080		67,079		33,014
Sales and marketing (1)		684,904		340,646		185,821
General and administrative (1)		320,547		86,841		44,514
Total operating expenses	21 12	1,169,531	2	494,566		263,349
Income from operations		659,848		12,696		6,167
Interest income and other, net	2	18,186		13,666	1	2,182
Income before provision for income taxes		678,034	6	26,362		8,349
Provision for income taxes		5,718		1,057		765
Net income	\$	672,316	\$	25,305	\$	7,584

Figure 1.6: Zoom Annual Report Fiscal 2021.

<sup>&</sup>lt;sup>26</sup> www.venturebeat.com, accessed on May 19th, 2021.

Source: www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 19th, 2021.

What is more, in October 19th, 2020 its price on Nasdaq Stock Exchange reached a peak of 568.34\$ per share, so we can strongly claim that Zoom benefited from the Covid-19 Pandemic, from favorable financial market conditions -its title is now valued 372,95\$ (June 17th, 2021)- and from the network effect it had created and that expanded and is expanding always more thanks to its use in distance learning, to the use firms and companies make of it for their meetings, and so on. Zoom managed to take advantage of this exceptional situation because it was prepared to face the Pandemic. *"To meet the surge in demand, we worked tirelessly to increase our server capacity across our own data centers and the public cloud. Our team's hard work helped ensure stable, uninterrupted video connectivity for our ballooning user base, and demonstrated the scalability of our platform* "<sup>27</sup>. Zoom's growth in revenues, net income, net cash and in its value on Nasdaq Stock Exchange is unquestionable and probably, if it had waited one year more to get listed, the IPO price it could set would have been much higher, reflecting the intrinsic value of Zoom company that increased a lot as a result of Covid-19 Pandemic.

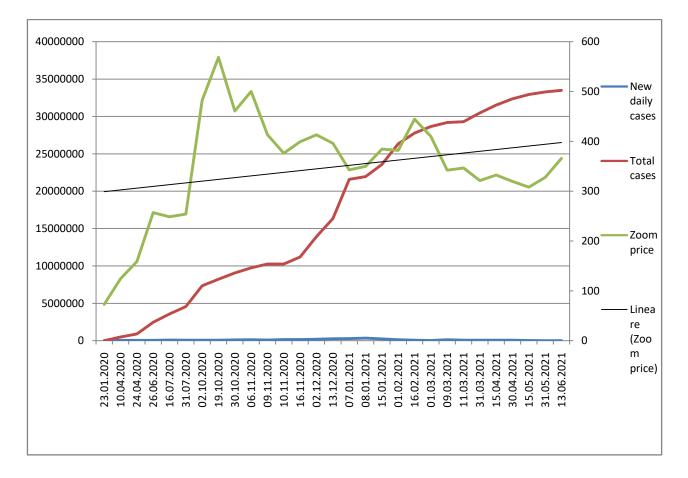
Paradoxically, after having analyzing Covid-19's effects on Zoom's Financial Statement and on the Stock Market, we can assert that probably Zoom's timing of quotation was unfavorable, since if it had waited one year more, its IPO offering price could have been much higher and shareholders would have left much less money on the table. Zoom Video Communication, Inc., took a big step going public on Nasdaq and gained a lot of popularity, since quotation brings with it visibility, reputation and publicity, but it is not its IPO that made its net income increase more than ever (net income in Fiscal Year 2019 was of \$7,584,000, whereas in Fiscal Year 2020 \$25,305,000, that is almost 234% higher), but the Covid-19 Pandemic (Net income in Fiscal Year 2020 was of \$25,305,000, whereas in Fiscal Year 2021 was of \$672,316,000, that is almost 26 times higher).

This section's aim is to analyze the evolution of Zoom title after the IPO, comparing it with some of the oustanding moments of the Covid-19 Sanitary Emergency in the US (development of number of daily cases<sup>28</sup>, the announcement of the efficacy of Pfizer

<sup>&</sup>lt;sup>27</sup> Annual Report Fiscal 2021. www.investors.zoom.us/financial-information/annual-reports.com, accessed on May 19th, 2021.

<sup>&</sup>lt;sup>28</sup> Statistiche Coronavirus Stati Uniti. www.statistichecoronavirus.it, accessed on June 15th, 2021.

BioNTech vaccine<sup>29</sup> and Biden's announcement that all Americans were to be eligible for vaccinations<sup>30</sup>). Table 1.5 in the Appendix reports all dates and datas related to Covid-19 new daily cases in the US and Zoom stock price. Graph 1.6 represents the number of new daily cases in the US and the number of total cases in the US (left vertical axis), and Zoom price (right vertical axis). Graph 1.7 illustrates only the number of new daily cases in the US (left vertical axis) and Zoom's price (right vertical axes), two values that may be positively correlated between eachother.

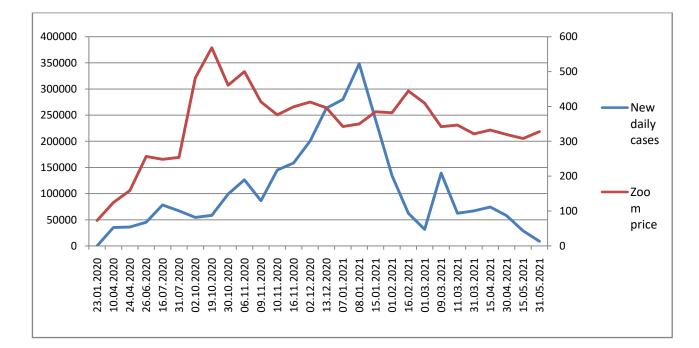


Graph 1.6

<sup>&</sup>lt;sup>29</sup> Pfizer and BioNTech Announce Vaccine Candidate Against COVID-19 Achieved Success

in First Interim Analysis from Phase 3 Study. www.pfizer.com, accessed on June 15th, 2021.

<sup>&</sup>lt;sup>30</sup> The White House. www.whitehouse.gov, accessed on June 15th, 2021.



#### Graph 1.7

In the US, the first Covid-19 infects were revealed in February 2020 and number of daily cases reached its first peak of 35,098 on April 10th, 2020. That day Zoom title was valued 124.51\$ -Zoom price started to grow after the announcement of Wuhan first cases and after the revelation of the first cases in the US in February. Month after month Zoom price per share continued to grow at an irregular pace until the end of July 2020. In the middle of July the number of new daily infects was high: on July 16th, 2020 the US recorded 78,310 new cases, the highest number of new infects from the beginning of the Pandemic to that moment. Then, during summer period, the number of cases recorded a decline, due to the fact that it is less easy to contract the virus when hot temperatures occur. From the end of July 2020 on, Zoom price per share experienced a vertiginous growth: it was valued 253.91\$ on July 31th, 2020 and reached the peak of 568.34\$ per share on October 19th, 2020. From the middle of July 2020 and the beginning of October 2020 the trend of the number of daily cases was the opposite of the trend of Zoom price per share: the former was decreasing, whereas the latter was increasing at a very fast pace. From October 2020 on, the US recorded a huge increase in the number of new daily cases and this was reflected on Zoom price per share that continued to grow (reaching the peak of 568.34\$/share on October 19th 2020), so there would seem to be a positive correlation between the two. How can this be explained? The Pandemic was progressing at a fast pace and people continued to buy Zoom's shares because they knew that, as a consequence to the development of the Covid-19 Sanitary Emergency and to restrictive measures imposed by the US government, more and more people would have dowloaded Zoom app and use it to study, work and meet with other people. On November 9th, 2020

Pfizer and BioNTech announced interim results from their COVID vaccine trial. The vaccine was reported to have an "efficacy rate above 90%". On that date, the number of new daily cases was of 86,403 and Zoom title faced a drop to 413.24\$ (it was valued 500.11\$ on 6th Nov). On November 10th its value decreased again at 376.01\$, and a possible explanation could be that the vaccine is the step necessary to go back to a normal life, where physical meetings will replace virtual ones, and as a consequence more people sold their Zoom shares. The US recorded the highest peak of 348,443 new daily cases on January 8th, 2021, and that day Zoom was priced 349.61\$. From that date on, a slow decrease of new daily cases was recorded, with an exception of a new peak of 139,189 new infects on 9th March 2021. The number of new daily infects faced a drop from April on, thanks to the efficacy of vaccines, and Zoom share's price unsteadily decreased after a peak of 444.51\$ in mid February. On March 11th 2021 (new daily cases were 62,404 and Zoom price per share was of 346.39\$), Biden announced that all Americans were to be eligible for vaccinations by May 1. After the news announced by Biden, Zoom price continued to slowly decrease. At the moment the number of cases is continuing to lower (The US recorded 4,575 new daily cases on June 13th) and the current price of Zoom title is 372.95\$ (June 17th, 2021).

Having a look at graphs 1.6 and 1.7 and at the table 1.8 in the appendix (where new daily cases in the US and Zoom price per share are reported monthly and for some important dates), there would seem to be a positive correlation between the variable "new daily cases in the US" and the variable "Zoom price per share". This positive correlation could be explained in reality in this way: when the Covid-19 Pandemic progressed with an increase in the number of new daily cases was recorded, Zoom price per share decreased. The more the Covid-19 progressed at a fast pace, the more Zoom's title value rose, because investors believed Zoom would be one of the leading video platforms to use during the Pandemic and laid trust in, so they decided to buy its shares. On the contrary, when the number of new daily cases because they knew this Pandemic was going to finish soon and online meetings would be replaced by phsical ones.

On excel I computed the correlation coefficent (Pearson Index) between the variable "**new daily cases in the US**" and the variable "**Zoom price per share**" (1 day lagged) from January 23th, 2020 to June 18th, 2021, and I found a value of 0,524376, signaling an intermediate level of **positive correlation** between the two. This positive correlation is neither weak nor strong, in fact, looking at graph 1.7, the number of new daily cases and Zoom price

per share do not increase or decrease at the same pace and there are periods in which their trend is different.

#### **3.9** Conclusion

This empirical chapter has focused on Zoom case, describing what kind of company it is, what is its story, which mission, vision and values drive the organization. The topic has been Zoom Video Communications quotation on Nasdaq Global Select Market, that took place on April 18th, 2019. The chapter has employed models exposed in the theory part to analyze Zoom IPO undepricing and timing determinants in Zoom's choice to go public, attributable both to its business life cycle and to the macroeconomic and financial scenario that 2019 had experienced.

To conclude, the empirical chapter has made an excursus on a current topic we are still living nowadays, the Covid-19 Pandemic, and has made some considerations on its implications on Zoom's financial statement and on the price of the title.

#### **4.CONCLUSION**

The aim of this dissertation has been to analyze if theories of underpricing and of market timing determinants in an IPO are met in reality, exemplifing our case study, Zoom Video Communications, Inc. Zoom Video Communication, Inc. got listed on Nasdaq Select Global Market on April 18th, 2019 and used the proceeds raised from the offering for general corporate purposes, including working capital, operating expenses and capital expenditures. This dissertation has used datas taken from the International Monetary Fund to analyze the macroeconomic scenario in the period of Zoom's IPO and datas taken from its Financial Statement to study the evolution of its revenues, net income and net cash flows after the IPO and under Covid-19 Sanitary Emergency.

We can conclude that 2019 was definitely a Hot Market period, characterised by bullish, over-optimistic investors who were willing to buy in the aftermarket to benefit from high yields, since FED manovres of lowering federal funds rated for 2019 (after the raising to 2.25-2.5% in 2018) made investors regain trust and confidence in the stock markets. So Zoom took the decision of going public in a financial and economic favorable moment. What is more, after having analyzed Zoom's IPO share price of 36\$/share and its post IPO trend, we can conclude that 36\$ per share IPO price was probably undepriced. Thanks to our exemplification of the case study Zoom, we have found evidence in reality to theories of market timing attempts and theories of undepricing.

A consideration that can be done is that even though Zoom went public in a so-called hot market period, it is paradoxical as if it had waited one year more to get listed, it would have probably benefited a lot more than 2019 from favorable market conditions, since the effect the Covid-19 has had on Zoom's revenues, operating cash flows, net income and in the stock market is huge. In this sense, if Zoom had waited one year to get listed on Nasdaq, the IPO share price would have probably been much higher and the selling shareholders would have left less money on the table, and so they would have benefited more.

## APPENDIX

Table 1.4 reports the dates of the publication of the DRS, S-1, S-1/A and 424B4 Amendments and datas about number of shares offered and the filing price range for Zoom and ON24.  $\Delta$  represents the number of days passed from the publication of an Amendment and the following one for Zoom company.

		Zoom Video	ON24, Inc.
		Communications, Inc.	(date, filing price
	Λ	(date, filing price range,	range, number of
		number of shares)	shares)
DRS		12.21.2018. No price.	10.27.2020
		No number of shares.	
S-1	91 days	03.22.2019. No price.	12.21.2020. No
		No number of shares.	price. No number
			of shares.
S-1/A	17 days	04.08.2019. 28-32	01.25.2021.45-
		\$/share. 20,869,565	50\$/share.
		shares.	8,600,977 shares.
S-1/A	8 days	04.16.2019. 33-35	
		\$/share. 20,869,565	
		shares.	
424B4	1 day	04.17.2019. 36 \$/share.	04.03.2021.
		20,869,565 shares.	50\$/share.
			8,560,930 shares.
IPO listing date		Apr 18th, 2019	Feb 5th, 2021

Table 1.4

Table 1.5 reports the dates of the publication of DRS, S-1, S-1/A and 424B4 Amendments and datas about number of shares offered and the filing price range for Zoom, ON24 and Google.

Zoom Video	ON24, Inc.	Google, Inc. (date,
Communications, Inc.	(date, filing price	filing price range,
(date, filing price range,	range, number of	number of shares)

S-1     03.22.2019. No price. No number of shares.     12.21.2020. No price. No number of shares.     04.29.2004. No pric No number of share       S-1/A     04.08.2019. 28-32     01.25.2021. 45-     05.21.2004. No pric       \$/share. 20,869,565     50\$/share.     No number of share       shares.     8,600,977 shares.     No number of share       S-1/A     04.16.2019. 33-35     06.21.2004. No pric       \$/share. 20,869,565     shares.     06.21.2004. No pric       \$/share. 20,869,565     07.12.2004. No pric     No number of share       \$/share. 20,869,565     07.12.2004. No pric     No number of share       \$/share. 20,869,565     07.12.2004. No pric     No number of share       \$/share. 20,869,565     No number of share     No number of share       \$/share. 20,869,565     07.12.2004. No pric     No number of share       \$/share. 20,869,565     07.12.2004. No pric     No number of share       \$/share.     07.26.2004. 108-133     \$/share. 24,636,659
S-1/A   04.08.2019. 28-32   01.25.2021. 45-   05.21.2004. No pric     \$/share. 20,869,565   50\$/share.   No number of share     shares.   8,600,977 shares.   06.21.2004. No pric     \$-1/A   04.16.2019. 33-35   06.21.2004. No pric     \$/share. 20,869,565   No number of share   No number of share     \$-1/A   04.16.2019. 33-35   06.21.2004. No pric     \$/share. 20,869,565   No number of share   No number of share     \$-1/A   07.12.2004. No pric     \$-1/A   07.26.2004. 108-135
S-1/A     04.08.2019. 28-32     01.25.2021. 45-     05.21.2004. No pric       \$/share. 20,869,565     50\$/share.     No number of share       shares.     8,600,977 shares.     No number of share       S-1/A     04.16.2019. 33-35     06.21.2004. No pric       \$/share. 20,869,565     No number of share     No number of share       \$/share. 20,869,565     07.12.2004. No pric     No number of share       \$/shares.     07.12.2004. No pric     No number of share       \$/shares.     07.12.2004. No pric     No number of share       \$-1/A     07.12.2004. No pric     No number of share
\$/share. 20,869,565   50\$/share.   No number of share     \$hares.   8,600,977 shares.   06.21.2004. No pric     \$-1/A   04.16.2019. 33-35   06.21.2004. No pric     \$\starterrow shares.   No number of share     \$-1/A   07.12.2004. No pric     \$-1/A   07.12.2004. No pric     \$-1/A   07.12.2004. No pric     \$-1/A   07.12.2004. No pric     \$-1/A   07.26.2004. 108-135
shares.   8,600,977 shares.     S-1/A   04.16.2019.33-35   06.21.2004. No pric     \$/share. 20,869,565   No number of share     shares.   07.12.2004. No pric     S-1/A   07.12.2004. No pric     S-1/A   07.12.2004. No pric     S-1/A   07.12.2004. No pric     S-1/A   07.26.2004. 108-135
S-1/A   04.16.2019.33-35   06.21.2004. No pric     \$/share. 20,869,565   No number of share     shares.   07.12.2004. No pric     S-1/A   07.12.2004. No pric     S-1/A   07.12.2004. No pric     S-1/A   07.26.2004. 108-135
\$/share. 20,869,565   No number of share     \$-1/A   07.12.2004. No pric     S-1/A   07.26.2004. 108-135
shares.     07.12.2004. No pric       S-1/A     07.12.2004. No pric       No number of share     No number of share       S-1/A     07.26.2004. 108-135
S-1/A   07.12.2004. No pric     No number of share   No number of share     S-1/A   07.26.2004. 108-135
S-1/A     O7.26.2004. 108-135
S-1/A 07.26.2004. 108-135
\$/share. 24.636.659
+
shares.
S-1/A 08.09.2004. 108-133
\$/share. 25,697,529
shares.
S-1/A 08.11.2004. 108-133
\$/share. 25,697,529
shares.
S-1/A 08.13.2004. 108-133
\$/share. 25,697,529
shares.
S-1/A 08.16.2004. 108-135
\$/share. 25,697,529
shares.
S-1/A 08.18.2004. 85-95
\$/share. 19,605,052
shares.
424B4 18.04.2019. 36 \$/share. 02.03.2021. 08.19.2004. 85
20,869,565 shares. 50\$/share. \$/share. 19,605,052
8,560,930 shares. shares.
IPO listing dateApr 17th, 2019Feb 4th, 2021Aug 18th, 2003

## Table 1.5

Date	New daily infects	New daily deaths	Zoom price per
	(US)	(US)	share (\$)
23.01.2020	0	0	73\$
14.02.2020	0	0	90.95\$
20.03.2020	5,894	82	130.55\$
10.04.2020	35,098	2,108	124.51\$
24.04.2020	36,163	1,995	158.80\$
22.05.2020	23,790	1,277	171.06\$
26.06.2020	45,255	629	256.80\$
16.07.2020	78,310	951	248.54\$
31.07.2020	67,023	1,259	253.91\$
14.08.2020	64,294	1,342	244.91\$
18.09.2021	48,595	936	438.73\$
02.10.2020	54,506	907	482.23\$
19.10.2020	58,387	445	568.34\$
30.10.2020	99,321	1,030	460.91\$
06.11.2020	126,480	1,146	500.11\$
09.11.2020	86,403	477	413.24\$
10.11.2020	145,017	1,649	376.01\$
16.11.2020	158,453	758	399.15\$
02.12.2020	200,609	2,804	412.86\$
13.12.2020	263,709	1,350	395.99\$
07.01.2021	280,229	4,194	342.50\$
08.01.2021	348,443	3,939	349.61\$
15.01.2021	241,576	3,802	384.53\$
01.02.2021	134,339	2,031	381.93\$
16.02.2021	62,398	1,756	444.51\$
01.03.2021	31,642	969	409.66\$
09.03.2021	139,189	1,947	342.11\$
11.03.2021	62,404	1,557	346.39\$
31.03.2021	67,133	1,076	321.29\$
15.04.2021	74,289	887	332.28\$
30.04.2021	57,922	1,038	319.57\$
15.05.2021	28,813	476	307.89\$
31.05.2021	8,843	155	327.72\$
13.06.2021	4,575	111	365.91\$

Table 1.6 reports dates and datas about the number of new daily infects (US), the number of new daily deaths (US) and Zoom price per share.

Table 1.6

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