# Performance of Recent Finnish SME´s IPOs and Impact on Financial Results

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This study explores the scenario of recent Finnish IPOs occurred in the timeframe 2016-2018, both in Nasdaq main market and in First North Growh Market. The research aims at analyzing the IPOs´performance based on market-adjusted price performance and the post-IPO developments in financial results. Thus, the author provides an investor-oriented perspective and a company-oriented perspective.

The study was carried out as a statistical study. The author collected share price data for a sample of twelve companies to find out performance trends and patterns. Data was analysed through buy-and-hold abnormal returns (BHAR) method to ascertain the price performance related to relevant market benchmarks. Post-IPO analysis about the impact on financial results consisted on describing the trends for a set of selected financial performance indicators to find out whether and at what extent IPOs benefited companies.

Stock performance analysis shows a general tendency to underperform in the short-run and to perform well in long-run, which confirms once more that companies shares are long-term securities by nature. Market severe volatility was, nevertheless, a peculiarity spotted in this study. Moreover, the study provided evidence that IPOs helped consistently companies in reducing business risk and improve operational efficiency at least in the short-run, whereas analysis on profitability and growth perspective did not show a a clear overall connection between IPOs and profitability across the whole sample, as results were mixed, although proving that in some cases companies improve profitability levels in the long-run and streghten their growth capabilities.

Moreover,  results leave room for further research, as to why market was so volatile and why financial performance either was not so strongly affected by public listing, or even deterioriated after the IPO.

**Keywords**
*Initial public offering, Volatility, Investments, Market-adjusted return, Financial Performance*

# 1 Introduction

Going public is a turning point for the life of a company. Behind the decision there can be multiple reasons, but the common aspect is that we can find evidence that IPO impacts at different degrees the company and the investment environment itself, as once listed public companies become open to receive capital from anyone who is willing to become a shareholder. The Finnish market of recent IPOs offered good opportunities, but also risks. Nevertheless, the evidence found through this research shows that some patterns repeated themselves and enable us to define the recent IPO scenario in Finland.
In this chapter, the author starts by introducing the audience to the theory around IPOs and the key concepts. This chapter prepares the reader to the core research part and to interpret the results, which through numbers and graphs reflect the concepts expressed in the theoretical framework.

## 1.1 Background

It is a repeated cliché in business that for a company to survive it must grow (Geddes 2003). Companies constantly want to improve many aspects of their business: they want to increase market share, boost manufacturing capacity, spend more in R&D and just to take any other action that allows the company to increase shareholders value.
As we might imagine, a lot of money is needed to make a company grow. One of the methods used to do that, especially by companies with a solid established position in the market, is to go public. Going public is probably one of the most important decisions that can be made during the life of the company (Espinasse 2011). Companies go public through what we call an IPO or *Initial Public Offering,* which are briefly defined as the process of selling a company's shares to public investors and listing them in a stock exchange.
This thesis will look further into the motives of the decision of going public and describe in an informative way the process, and target also a type of audience that has not yet advanced knowledge of finance. Moreover, the focus will be pointed to describing the post-IPO long-run share price performance and find out whether there has been an impact on companies’ performance in the Finnish business environment.

## 1.2 Research Question

This thesis aims to ascertain the long-term success of IPOs, by analyzing share price performance and the impact on company performance in the Finnish business environment.
The research question can be worded as it follows: How did recent Finnish SMEs’ IPOs perform in the long run?

RQ is divided into investigative questions (IQ) as follows:

IQ 1. What is the post-IPO share price performance of recently listed Finnish SMEs IPOs?

IQ 2. What is the IPOs' impact on the performance of recently listed Finnish SMEs?

Table 1. Overlay matrix

| **Investigative question** | **Theoretical Framework** | **Research Methods** | **Results (chapter )** |
|---|---|---|---|
| IQ 1. What is it the performance of recent Finnish SMEs´IPOs? | • IPO theory and process and legal framework in Finland<br>• Stock valuation methods<br>• BHAR method | Quanti tative | 5 |
| IQ 2. What is the post IPO impact on the performance of recently listed Finnish SMEs? | • Financial statement analysis<br>• Financial ratios<br>• Firm performance evaluation | Quantitative | 5 |

### 1.3 Demarcation

The demarcation criteria for this thesis follow certain patterns: the size of the companies, which is small or medium of the Initial Public Offering, and the timeframe, according to which, only companies that were listed in Nasdaq Helsinki main market and First North Growth Market, and between 2016 and 2018, were considered for the statistical analysis. By small-medium, in this context, the author refers to all those companies whose shares can be categorized as belonging to either small or medium cap, a difference based on market capitalization. The aim is also to focus also on the transitional effect of IPOs and the impact of it on firms ‘performance, with a focus on the enhanced growth potential resulting from an IPO, and the change of company dimension that an IPO brings. This is particularly emphasized in companies listed in the First North, which is a parallel market to the main Nasdaq, and it is tailored for those small companies that must raise capital for growth and have less extensive requirements than Nasdaq Helsinki. First North is often a sort first step to prepare companies to enter the main market at some point. All these aspects are obviously entrenched with the possibility that going public may enable companies to have access to new market shares and larger markets, since one of the assumptions is that through IPOs companies might want to have access to more resources for expansion. Moreover, the business environment chosen as a research framework is limited to the Finnish business environment. The analysis of the effects of IPOs will essentially consist of a statistical model applied to a sample of firms chosen from different industries. The author chooses not to focus on a limited set of industries, since the results aimed by this research, are to be seen in a holistic perspective, hence as an evaluation of the Finnish IPO market of small and mid-sized companies and as firm-based research of the indicators that define the firm performance after an IPO.

### 1.4 International aspect

The thesis expresses the international aspect in the fact that the business environment, considered as a research framework, is not located in the thesis writer´s home country. This aspect also entails the necessity of learning more about the business culture in the area considered, and how this affects customs and practices in respect to regulation of all activities related to Initial Public offerings. Moreover, the author will learn more about the mechanism of Finnish stock market, and more broadly of capital markets, which by nature express internationality, because firstly they can be accessed from anywhere most of times, and secondly require a certain understanding of international economics and a good degree of knowledge of the mechanisms of different key capital markets. Moreover, most of the companies considered in the sample used for statistical analysis have international operations, or aim at it.Some of them can be with no doubt categorized as multinational firms.

### 1.5 Benefits

The parties that benefit from this research work are different. The thesis writer himself, given the genuine interest in exploring a subject that was not covered in the studies conducted at Haaga-Helia, and the relevance of the topic in relation to the continuation of studies at a higher level than Bachelor´s. The non-finance expert audience, that have a particular interest in an area of finance, such as the capital markets and that are possibly interested in investing in stocks, want to learn about the process, the aspects related to IPO, and to possibly get acquainted with few methods that help evaluating the success of an IPO. Small-medium sized companies in the Finnish-Nordic business environment, that at the time of the publication of this thesis, have the legal status of a limited liability company, but that consider offering their share for sale to the public or that are researching possible ways to expand their business and are willing to find growth strategies. All those who are interested in getting a glimpse of what has been going on in the Finnish stock market recently, especially regarding firms with growth potential and that are relatively young in terms of company age. All of those who want to start exploring a stock market environment, that although smaller compared to others, offers lots of potential.

### 1.6 Key Concepts

**Initial public offering (IPO)**: is the process by which a company can go public by sale of its stock to public (The Economic Times 2020)

**Primary offering:** the raising of new money in an equity capital markets (ECM) transaction (Espinasse 2014, 1.)

**Secondary offering:** the sell-down, whether by a government in a privatization, or by long-term shareholder in a business that has, until now, remained in private hands and is now coming to market to generate liquidity (Espinasse 2014, 1.)

**Stock valuation:** The methods of determining the intrinsic value of a stock (Corporate Finance Institute 2020)

**Underwriting**: is the process through which an individual or institution takes on financial risk for a fee. In the case of IPOs, underwriting ensures that company filling for an IPO will raise the capital needed and provides underwriters with a premium or profit for their services. Underwriting allows to determine the risk and the appropriate price of securities, before a potential investor, often an investment bank, buy the securities and then sell them to capital markets. (Investopedia 2020).

**Financial statement analysis** is largely a study of relationship among the various financial factors in a business as disclosed by single set of statements and a study of the trend of these factors as shown in a series of statements (Myer 1969)

**Public company:** it is a business whose shares can be freely traded on a stock exchange or ´´over the counter´´. Also known as a publicly traded company, publicly held company, or public corporation. The stocks of this type of company belong to members of the public, as well as pension funds, and other large investing organizations (Market Business News 2020).

**Financial leverage**: also known as the *equity multiplier*, refers to the use of debt to acquire assets. When all assets are financed by equity the multiplier is 1. An increase of the multiplier from one means ultimately, an increased risk for the business. (Stobierski 2020)

**Standard deviation:** a standard deviation measures the dispersion of a data set from the mean. In stock performance analysis, standard deviation is measure of stock volatility. Very volatile stocks have higher standard deviation relative to the average stock return. Standard deviation is, thus, a tool to predict performance trend and determine the risk related to securities (Investopedia 2021).

**Volatility:** it is a statistical measure of a security´s deviations from a set benchmark or its average performance. In other words, it means the probability that sudden oscillations in the price of securities occur. Volatility is seen often as a peculiarity of risky investments. The higher the volatility, the higher the risk and vice versa. There are two types of volatility: *historical volatility* is found by observing the performance in the past of a security over a set timeframe. High or rising historical volatility often signals that something significant might happen with the security. *Implied volatility* rather focuses on predicting a security´s future activity based on its option prices (Business Insider 2020).

In this research work, only *historical volatility* will be taken into consideration, as the author deems it better descriptive of a market performance and more easily accessible with the research tools at the author´s hands, whereas *implied volatility* is more complicated to estimate.

# 2 Going public: the decision, the process, and the vision behind it.

This chapter introduces the reader to the key theoretical concepts related to IPOs. In addition to theories, the reader can expect a practical approach, based on the analysis of the post-IPO performance, also compared to the pre-IPO, of Finnish companies that were publicly listed between 2016 & 2018 to support the formulation of a hypothesis regarding the benefits of going public for small-medium sized companies in the Finnish business environment.
Statistical analysis will serve the purpose of finding specific patterns related to post IPO performance and elements in common between companies as well as carrying out an assessment of the long-run performance of IPOs of small-medium sized companies in Finland from an investor perspective.

## 2.1 Initial Public Offerings: Acts and Actors

Going public can be one of the most important decision during the life of a company (Espinasse 2014). Companies can benefit in many ways from a public listing, but it is a vision that enables companies to go public. It is usually the pursue of growth and expansion that makes private companies to decide to sell their share to the public. Stock markets are abundant of capital, and the easiness of access to capital determines possibilities of expansion and the success of growth strategies. Thus, going public is more than just accessing capital, it is, in the broadest meaning of the word, an opportunity.

IPOs are complex transactions, that need the contribution of different parties. Each party involved has a specific role in a determined sphere of influence such as financial, legal, strategic and advisories.
The working parties in an IPO are:

**Investment bank**: it is the division of a bank that provides governments, corporations, and institutions with advisory services for capital raising, mergers and acquisitions. The essential role of investment bank in IPO transactions is to act as middleman between potential investors and corporations. Investment bank is obviously appointed by the issuer, and it is the first external advisor appointed for the IPO transaction.  Choosing an investment bank to act as an intermediary is not as straightforward as it seems for corporations. There are certain factors that make some investment banks a better fit for a company instead of others such as: industry knowledge and expertise, capability of accessing a larger number of potential investors, reputation, and solid relationship with the issuing body (Corporate Finance Institute 2021). Booth and Smith (1986) hypothesized that choosing a highly reputable investment bank lowers the risk of underpricing. Moreover, is interesting to refer to other studies that ascertain the importance of a successful IPO for the bank itself. A poor long run performing IPO has seemingly adverse effects on the market share of underwriting banks (Beatty & Vetsuypens, 1995; Nanda et al., 1995; Carter et al.,1998). In practical terms, investment banks, after assessing the risk and determining the price of securities, decide to buy those securities from the issuing company and eventually sell it in the market. In international offerings banks are often known as ´´lead manager´´ or ´´lead bank´´. We can also refer to the investment bank as the ´underwriter´. The role of the lead bank is essential in some of the most critical steps of IPOs such as drafting documentation, coordinating the issue, organizing the due diligence and verification process. The lead bank or underwriter also provides advice regarding the timing of the issue, capital structure and development an investment story, and performs market and equity research to create perspective for positioning of the shares in the market. (Geddes 2005, 31-33). Examples of major investment banks often involved as underwriters in IPOs are the notorious JP Morgan, Credit Suisse, Goldman Sachs, and Morgan Stanley.

**Legal advisers**: they are a firm or a set of firms that focus on specific aspects of the IPO transaction. They serve both the issuing company and the underwriter. An essential task of legal firms is drafting the *circular offering.* A *circular offering* is a formal document provided for a new security listing. It contains relevant information for potential shareholders about the nature of investment, company´s business, management, financial standing, ownership structure and strategy (Hayes 2020). The legal firm advising is also responsible to conduct the necessary due diligence for the issuing company and drafts the underwriting and other agreements, as well as the guidelines for the publication of pre-deal research (Espinasse 2014,63.). *Predeal research* is an important step to be carried out prior the IPO itself. It leads to the draft of a document that is source of information for investors concerning financial information, industry analysis. Investors can perform their own analysis and create a financial model prior deciding to invest in the company (Moscow Exchange 2021). Pre-deal research is often commissioned either by the underwriter or by an *agent* that work on behalf of their clients. Interesting to point out that pre-deal research is pretty much a European practice, while it is not included in the IPO process in the US for instance. Equity research is a time-consuming step and requires resources.  Latham & Watkins (2013) questioned the utility of equity research given the burdens involved and that more investors than before pay little or no attention to the metrics and of research but focus mainly on understanding the company´s background and industry.

Back to legal advising, the choice is not as straightforward as it might seem. It is essential the advisor has great level of knowledge of the industry in which the issuing company operates, especially if referring to the financial sector or other complex industry such as pharmaceutical or healthcare. The scope in which legal advisors operate are agreed at the beginning of the transaction.

**Auditors:** their role is to carry out the auditing of the company´s financial history according to the relevant accounting principles. In Finland, for instance, regulations require that the issuing company that has applied only the Finnish accounting standards (FAS), reconciliates FAS to International Financial Reporting Standards (IFRS) before submitting the documentation for listing on the regulated market of Nasdaq Helsinki (Lehtimäki, M., Markkanen, N. 2020). Moreover, it is common practice for auditors to issue a *comfort letter,* which is a business documents that essentially states the activities that auditors performed and describe the process to arrive to the final audit opinion, which in the case of IPO, aims at confirming the accuracy of financial statements. (Gibson, Dunn & Crutcher 2021,44.)

**Specialist consultants and experts:** consultants assist investors in better understanding the company´s business and industry. They have knowledge of a specific market or a specific industry, and they

contribute to the making of pre-deal research, which then constitutes part of the circular offer. For instance, in a company with property assets, property valuers may be appointed for an independent valuation of assets. This is the case of companies in real estate business such as Colliers International or Sagax AB. In the case of companies in oil & gas industry, or mining and natural resources industry, consultants are appointed for a valuation on the levels of resources of these assets. Among consultants we can also include translators, for those countries where is legal requirement to produce documents in more than one language. (Espinasse 2014,72.). That is the case of Finland, which is a bilingual country.
**Stock exchanges:** it is common nowadays for issuers to enter into listing agreements with the relevant stock exchange. The issuer agrees to meet the ongoing listing requirements and pay the required listing fees (Espinasse 2011, 66.).

A *stock exchange* is a marketplace, under the umbrella of a physical company such as Nasdax Helsinki (which belongs to US Nasdaq Corporation), where financial securities are bought and sold. Stock exchanges provide creation of liquidity for financial securities. Trading in stock exchanges is carried out following a matching algorithm, according to which the best buy order matches the best sell order (Bloomberg 2020).

The main marketplace in Finland builds upon the Helsinki Stock Exchange, operated by Nasdaq Helsinki. Nasdaq provides globally trading, listing and information services, as well as exchange technology. Shares can be traded either in the main market, which operates under EU legislation (Markets in Financial Instruments Directive 2014/65/EU), or Nasdaq Firth North, a parallel market aimed at growth companies that want to raise liquidity and gain credibility in the market, in a sort of preparation for entering in the future to the main market. Rules are less extensive, as well as disclosure and accounting standards are generally lower than in Nasdaq´s main market. First North Premier is a higher tier of market within First North, that offers a market to growth companies that are in the more advanced steps towards the main markets, than those in First North, and thus enhance their disclosure and accounting standards. Nasdaq Helsinki main market is a more complex marketplace, not only due to the highest standards for reporting, transparency, and accountability, but also due to the division into further tiers (large, mid and small) according to companies´ market cap (Tuominen 2021).

### 2.2 Making the Going-public Move: Motives and Implications

As aforementioned, theoretical literature agrees on the fact that going public can be on the most important decision during the life of a company, if not the most important. It can impact the company in many ways in the short-term period but even more in long-term. The decision of going public is the result of a thorough analysis and consideration involving multiple levels within the company´s management. It certainly takes a comprehensive understand of the company´s current standing, and it evaluates several factors, such as financial solidity and perspective, the size of the company and its dimension in a business environment, and not less importantly company´s vision and market economics.

It´s a general idea that going public allows companies to become more liquid to finance its future projects, but since liquidity could be achieved through private sales of equity to venture capitalists or other

large investors, it´s essential understanding the economic factors that the going-public decision implies. The underlying economic factors affect different aspects of the going-public decision, regarding the listing requirements (in other words, what kind of firms should go public) or at what stage of their life firms should consider going public (Chanmanur & Fulghieri, 1999).
Chanmanur & Fulghieri (1999) approach the analysis of the going-public decision by first focusing on a comparison between a private firm and a public firm in relationship to the need of financing future projects, which is the very first tangible motive of a firm going public.

### 2.3 Understanding the differences between a private and a public firm

Share ownership is more disperse in public firms, because shares are sold to many investors in potentially large markets, while in private firms few large investors hold share ownership, often venture capitalists or the so-called *angels,* a small group of large investors. In private firms, investors tend to have more control in terms of bargaining power, given that there is less share dilution, and the more the concentration the more bargaining power. Moreover, becoming a public company it means having to convince a larger group of investors about the worthiness of a project. This is a sort of indirect cost of going public, and factor that contributes to determining a lower share price at the final stage of the IPO. Public equity markets are also subject to more price observability, meaning that outside potential investors incur in less costs of evaluating the worthiness of the investment. *Information cost* is another aspect that according to Chanmanur & Fulghieri (1999) separate private and public firms. Venture capitalists incur in lower cost of information production, and it can be deduced from the fact such investors evaluate the firm only once, since they become the first source of capital in the firm. Nevertheless, private equity owned firms are less diversified in terms of ownership, and from an investor perspective it would mean an investment at a higher risk, which is the reason why in private equity usually higher rates of return are demanded. More diversifications exist among shareholders in a public company, due to shares dilution, alas every investor owns a smaller stake in comparison with private equities. Public companies are, though, prone to information duplication, thus public firms must sustain a higher aggregate information cost. The issue about information can be also seen regarding a private company that wants to become public. In such case, investors will incur in lower information cost, the more information about that company is publicly available. Given the latter assumption, Chanmanur & Fulghieri (1999, 252) state that a in a market equilibrium, a firm can go public when enough information has been accumulated in the public domain. Otherwise, the choice should be remain privately owned by venture capitalists. This is particularly more indicated for younger firms.

### 2.4 Why do firms go public?

It is commonly an accepted assumption, that going-public entails a certain set of business needs, that responds always to the reality of a company in the bigger picture, which is a vision of growth and development. To pursue growth and development, companies need significant amount of capital. As Brau

(2010) points out, it is important, though, to understand why a company chooses the ´´going-public´´ way to fund growth, despite other options, such as raising funds by issuing debt, which is technically a cheaper funding option. Alternatively, venture capitals can be another option, as aforementioned, to raise capital and keep the firm privately owned. We can then assume, that a potential public company has run out of cheaper financing option, or that venture capitalist want to cash out their stake in the firm, but that is only one of the many points of views. We know that IPO market is often affected by the phenomenon called *underpricing,* that occurs when stocks during an IPO are offered at a price which is less than their intrinsic value (Capital.com 2021). According to Brau (2010) some companies may consider that underpricing is a signal that the market is overvalued and there is a window of opportunity for them to exploit.
The issue can be interpreted in multiple manners. In this section of this study paper, the author will present and analyze the key advantages of going public.

### 2.4.1 Increase bargaining power with banks and other financial institutions

Literature agrees on the fact that going public can be seen as an alternative source of finance to banks and venture capital. Going public can reduce the cost of debt in a company, because of the increased bargaining power and it certainly provides more flexibility, along with increasing firm transparency with investors (Pagano et. al 1998; Rajan 1992). The more information is available to the public, the cheaper potentially the cost of credit.
Pagano et al. (1998) offer an approach which is oriented to financial statement analysis to explain the correlation between IPOs and firms. There are key figures in financial statements that express a positive correlation to IPOs. Pagano et al. (1998) define a the ´´ready to go public´´ company as the one combining the following factors:

- *Large current investments*: detectable in financial statements through figures such Property,Plant & Equipment capital expenditure and CAPEX-
- *Future investments*: expressed by the industry market-to-book ratio
- *High Leverage*: lagged value of total debt plus equity
- *High growth*: rate of sales growth

Furthermore, the level of interest rate and credit concentration can be a discriminant for the decision of going public. Following an IPO, credit should become cheaper and credit concentration reduced (Pagano et al., 1998).

### 2.4.2 Liquidity and portfolio diversification

Going public represent a significant injection of capital into the business. Thus, liquidity is immediately impacted, but, as through IPO more shareholders take ownership in the firm, shares become more diluted. Dilution has the effect of making shares more diversified. Moreover, being listed on an organized stock exchange proves cheaper than trading shares of a private company informally. Liquidity is more impacted in those firms with a larger trading volume, which logically makes apparently larger firms more fit to be listed publicly, whereas shares dilution allows shareholders to possibly divest and re-invest in other assets, or to acquire new shares in other companies, by exploiting the fresh equity capital acquired in IPOs (Pagano, Panetta & Zingales, 1998, 40).

We can then assume, that as going public makes portfolios more diversified, hence is more likely that riskier companies go public and that through IPO companies seek some sort of risk mitigation.

### 2.4.3 Monitoring

Going public can be seen as a device to monitor management´s decisions as they are exposed to the assessment of the market but, also creates the danger of hostile takeovers. (Pagano, Panetta & Zingales, 40). *Hostile takeover* is an unsolicited acquisition of a company in which the acquirer presents an offer directly to the company shareholder, who can then vote on the approval of such an offer,and by-passing the decision of the board of directors (Capital.com 2020).

Furthermore, information embodied in stock prices can be used to design better compensation schemes for the management. It is widespread practice to index management salary to stock price development, or offering managers stock options (Holmström & Tirole 1993; Schipper & Smith 1986)

### 2.4.4 Publicity and credibility

Going public is in many cases, an attempt to enhance the public image of the firm. Maksimovic and Pichler (2001) define it as the *first-mover advantage*, as public-to-be firms try to strengthen their reputation in the business community. Company facts following the IPO will gain worldwide media coverage and more attention by analysts. Enhanced visibility and publicity generated by an IPO creates opportunities to expand into different markets, which is why the author holistically defines IPO, at the beginning of this paper, primarily as a set of opportunities, and not just a combination of steps within a process.

Publicity enhancement is, though, not as straightforward as it might seem.  It is required to work on it well before the public listing. This is done by building up appropriate investor relations, without mentioning the possibility of public offering. Investor relations is often looked after by external firms, whose task is to make sure that one or two key individuals withing the to-be public company are publicized, highlighting the reliability and competences of the management with business media and analyst community. Other ways to build investor relations are conference and trade shows for different target audiences such as investment banking firms, venture capitalists, business media and key analysts. Moreover, it is important restyling communication methods, first, by evolving in the utilization of social media and networking sites. We can deduce that publicity enhancement must be a carefully constructed plan that unfolds gradually, while IPO consolidates it. Going-public brings more transparency to the business, which means that the company gains more credibility to business partners, such as customers, suppliers, distributors, or potential investors.

### 2.5 The challenges of going public

An IPO is a big decision, which impacts the life of a company both in the short and long term. It is essential that companies take into consideration several challenges before making the decision, which is the result of the evaluation of benefits against the cost of going public.

The key challenges of going public according to Pwc (2013, 6) are:

**- Preparation is time consuming:** preparation requires a significant amount of work. The *due diligence* involves different parties, and it is essential for company´s management harmonize and optimize all steps, but it is fair to say that the pre-IPO stages are probably the most demanding. Moreover, preparation might leave less time to management to address critical business issues

**-Increased transparency:** this is essentially a positive side, but it can turn into a disadvantage as well, because public companies have stricter and more extensive disclosure requirements regarding sensitive areas of the company such as financial information, compensation of key management, and investment in company shares by the management and major shareholders. This type of information will be available employees, customers, but also to competitors.

**- Performance pressure:** it is the natural consequence of the changes incurred in terms of accountability when a company becomes public. Shareholders have expectations concerning sales, profitability, market share and business potential. Managers in public companies have the responsibility of balancing short-term expectations with long term strategies

**- Investor relations:** public companies incur in additional costs for maintaining investor relations, because more personnel are required to address investors inquiries, to prepare investment-community presentations, to report periodically on the company´s financial standing. Maintaining public relations is not only a critical duty of the management, but first, a significant cost added to the business.

**- Hostile takeovers:** Public companies are more vulnerable to hostile takeovers because the nature itself of a public company makes it challenging to control its ownership.

**- Financial reporting:** the management is under pressure to provide financial report timely-The frequency of financial reporting varies in accordance with relevant accounting and disclosure standards. Usually, financial statements are published on annual and quarterly/half-yearly basis.

**- Choosing the right market:** each securities market offers different opportunities to companies. But there might be a more convenient market for a company to enter. Market eligibility requirements can be related to different areas such as earnings history, market capitalization, corporate governance standards and industry performance. Choosing the right market is an important step, that requires thorough evaluation, and it is time consuming.

# 3 Narrowing down the IPO scenario: the Finnish stock market environment

The Finnish stock market environment was halted by the burst of technology bubble and the general decline of technology sector in Finland, which had had being making Finnish business environment prosperous, through global technology providers such as Nokia. This decline led a long-lasting stall of the stock market, and it is rare to find public listings in the first decade of 2000s. One of the few relevant signs of life in the stock market environment was the creation in 2007 of the First North, a sort of alternative stock exchange to Nasdaq Helsinki, mainly oriented to smaller companies and with less extensive entry requirements. In 2015, things started to get better, along with the improved economic situation in Finland that helped the stock market to return more alive. These are the years of an innovation wave, with new startups offering attractive investment opportunities. Also, the regulatory framework in Finland contributed to inject more confidence and stability into the stock market environment. Bank financing rules were tightened up, and companies have been imposed to seek more equity instead of raising capital through debt, whereas the Transparency Directive in 2015 eased the previous administrative requirement of having to report on quarterly-basis,and replacing it with one semi-annual report. Since 2018, the market slowed down, and in the following year only few IPOs were done. The global outbreak of COVID-19 worsened dramatically the stock market scenario in Finland, as economies experienced severe turbulence and many businesses were undermined. (Lehtimäki,M., Markkanen, N. 2020)

## 3.1 Regulatory framework of the Finnish stock market

The regulatory framework of IPOs in Finland consists of a set of regulations that governs security markets and, hence, IPOs. The relevant authority is the Finnish Financial Supervisory Authority (abbreviated in FSA). The role of FSA consists of approving prospectuses and impose sanctions for non-compliance to requirements, but also of supervising security marketplaces and ensuring listed companies comply with IFRS accounting standards. As aforementioned, the marketplace is operated by Nasdaq Helsinki, that also operates First North, a smaller company and startup-oriented secondary market with less extensive requirements. Nasdaq Helsinki reports directly to FSA, if it detects misconducts and non-compliance.

The regulatory framework of the Finnish stock market combines elements from EU regulations and national laws, as it follows:

**Securities Market Act***:* focuses on governing the issuance of securities, it sets requirements concerning disclosure, supervises the securities market making sure that market participants comply to the principles of the *Act*.

**Act on Trading in Financial Instruments***:* regulates licensing and operations, as well as trading, listing and de-listing in the organized and multilateral trading facilities, such as Nasdaq Helsinki and First North.

Securities Market Association supervises on the compliance to the *Governance Code and* the *Takeover Code,* which express the codes of conduct for good security markets and trading practices.

Applicable EU regulations: *Prospectus Regulation, Commission Delegated Regulations 2019/80 and 2019/979, Market Abuse Regulations 596/2014, Commission Implementing Regulations*

### 3.2 Public company responsibilities and obligations in Finland

The shift from private to public entails being subject to a longer list of obligations. In Finland, the companies that go listed in the Nasdaq Helsinki need to meet extensive requirements concerning disclosure, corporate governance and inside information. While, in the Nasdaq Firth North, these obligations are imposed to a limited extent, in Nasdaq Helsinki, the main securities marketplace in Finland, obligations are certainly more extensive. Public companies are required to keep investors informed about any circumstance that can be relevant, by issuing periodic stock exchange releases. Interesting to note that, concerning the listing rules for Nasdaq Helsinki, companies become bound to disclosure requirement upon the filling of the listing application, even before the start of actual trading of shares. Companies are required to disclose information about financial statements and managements reports, as well as dividend policy releases and auditor´s reports, and any other information that investors and the public have right to know. Disclosure requirements are regulated by the Market Abuse Regulation (EU 596/2014, often abbreviated in ´´MAR´´), whose aim is to preserve the integrity of financial markets and enhance investor protection. MAR also emphasizes the obligation of disclosing without delay unless the delay of disclosure is likely to jeopardize the legitimate interests of the company. However, when delaying disclosure, the issuer must still ensure that the delay does not mislead the public and that a protected information stays confidential. Furthermore, MAR requires companies to publicly disclose managers´ transactions and insider lists. (Lehtimäki,M., Markkanen, M. 2020.)

- Corporate governance aspects are regulated by the Corporate Governance Code, which is a collection of rules on good corporate governance in publicly listed companies. The Code aims at ensuring high quality corporate governance practices, and like IFRS for accounting related issues, promotes comparability of corporate governance practices internationally and transparency of corporate governance. The Code was introduced in 2015, and all companies listed in the Nasdaq Helsinki (alas Helsinki Stock Exchange) must comply with the Corporate Governance Code. This obligation does not apply to the securities traded in the First North, while there are exceptions for a certain type of security issuance. For instance, although not required to comply with the Code, issuers of bonds include a Corporate Governance Statement in the report by the board of directors, as required by the Securities Market Act. Furthermore, the Market Practice Board responsible for interpreting and providing guidance on the application of the Corporate Governance Code. (Securities Market Association 2021.)

# 4 Research methods

This thesis work will be carried out as desktop research and by using quantitative methods. The research framework consists of the Finnish stock market and a set of listed companies. To further delimit the scope of research, the companies chosen according to their capitalization in the market, abbreviated in ´´cap´´. The companies used as a statistical sample belong to the small and medium cap in the Nasdaq Helsinki main market and First North Growth Market. Moreover, the timeframe will be limited to listings between 2016 and 2018. This is to ensure that only companies that have been listed for at least 3 years are considered.

Since the goal of the author is to find out the overall success of recent IPOs conducted for small-medium sized firms in Finland, as already demonstrated with previous research, numbers prove to be the better expression of results in this field. The author will use the BHAR (buy and hold abnormal returns) method as a statistical analysis tool, often used in past research, to evaluate the long-term performance of an IPO. The post IPO effect on company performance, will be analysed by looking at a set of indicators, which are normally used in accounting to analyse financial performance.

## 4.1 The BHAR method (buy and hold abnormal returns)

This model was created by Loughran & Ritter (1995). This method is founded on the principle of *buy and hold*, according to which investors buy stocks to hold them for long time and achieve an appreciation of that stock. The BHAR calculates abnormal returns and deduces the normal buy-and-hold return from the realized buy-and-hold return (Event Study Tools, 2021). We start by defining what *abnormal return* means: as defined by Barone & Estevez (2021), it is the profit (or loss) from an investment, that diverges from an expected risk-adjusted rate of return. A *required return* is the minimum return demanded by investors to embark on a new investment. It is usually calculated by applying the CAPM (Capital Asset Pricing Model), which considers different variables expressing the risk, the return for similar securities on the market, as well as inflation (Corporate Finance Institute 2021).

Abnormal return can be either positive or negative, and help determine risk adjusted performance, and illustrate whether investors get adequate compensation for their investment, based on the risk they bear. (Barone & Estevez 2021)

By normal buy-and-hold return we refer to the return based on an industry or market benchmark. Market and industry benchmarks are, hence, used to indicate normal performance (Bergström 2020).

BHAR method has been often used to describe long-run stock price performance and, by extension, to evaluate long-run IPO performance. This study will focus on stock price performance at different points in time, specifically at 12, 24 and 36 months.

Due to the companies considered in this study belonging to different industries and having different types of business, finding a benchmark can be difficult. In such a case, as Bergström (2020) suggests, it could be handy to use as a benchmark a stock market index, specifically the First North 25 for companies listed in First North Growth Market and OMXHPI for companies listed in Nasdaq Helsinki.

The formula of which the BHAR method consists of is the following:

$BHAR_{i,t} = R_{it} - R_{s(i)t}$

The formula can be further streamlined as it follows:

$R_{it} = P_{i,t+m} / P_{i,t-1} - 1$ and $R_{s(i)t} = S_{i,t} / S_{i,t-1}\ S_{i,t} - 1\ R_{s(i)t}$

The figures that compose the formula can be explained as it follows:
$R_{it}$ equals the return on the stocks respectively at the time horizon considered (m). The time horizons considered are 12, 24 and 36 months. $R\ s_{(i)t}$ equals the return on the stock at the end first day of trading. With the same logic we explain the P figures of the equation.
$P_{i,t+m}$ equals the share price at the time horizon considered. Time horizons considered are 12,24 and 36 months. $P_{i,t-1}$ means the share price at the closing of first day of trade. We apply the same concept for S figures in the equation. $S_{i,t+m}$ means the price of the selected market benchmark index at the time horizon. Time horizons are for 12,24 and 36 months for S as well. $S_{i,t-1}$ represents the price of the selected market benchmark index at the end of the opening trade day.

### 4.2 Description of market benchmarks

The author has decided to follow the same approach of previous research works about IPOs. A market benchmark is needed to compare empirically the long-run performance of an IPO against general market performance. For this purpose, the author, as already has been done for instance by Lindemann (2020), chooses OMXHPI as a benchmark for general market performance for companies at the main Nasdaq Helsinki stock exchange. OMXHPI includes all shares listed in Helsinki stock exchange, and it reflects the status and the changes in the Helsinki Nasdaq main stock market. In addition to the OMXHPI, the author will use First North 25 for the companies listed in First North Growth Market. The index consists of the largest and most traded shares listed on the First North Growth Market. For the case in which a company switches from First North to Nasdaq Helsinki main market in the timeframe considered, and without having completed a full year, the author will use a weighted average of both indexes' performance.

### 4.3 Research framework

The author aims at researching on the recent performance of Finnish IPOs. Therefore, as a part of the research sample, only companies listed from 2016 onwards will be considered. The decision is first moti-

vated as it follows: to be able to make the sample as consistent as possible in terms of number of companies considered and allow the minimum time horizon needed for this study, hence 3 years. Therefore, time horizon considered is up to 10 October 2021, meaning that the among the statistical sample, the latest listing date was 10 October 2018 for Fellow Finance Oyj.
Another reason for choosing 2016 as time horizon start, is to avoid research overlapping with other known studies conducted on Finnish stock market performance, which delimited the time horizon up until June 2016. The author deemed this aspect important to create a new perspective on an often-studied phenomenon and find a point of differentiation in respect to other conducted studies.

The sample consists of 12 companies listed both at Nasdaq Helsinki main market and First North. To comply with one of the demarcation criteria, companies are small and medium sized. The categorization of SME is done in association to the market capitalization of each company´s shares. In other words, the sample is composed of companies with small and medium capitalization, according to principles specified by Nasdaq. In December 2020, Nasdaq highlighted the basic criteria to define market segments. Small cap stands for companies whose shares have market value of less than 150 million euro, whereas mid cap stands for companies whose share have market value between 150 million euro and 1 billion euro. Companies whose shares have a market value of 1 billion euro or above, are categorized as large cap (Nasdaq 2020).

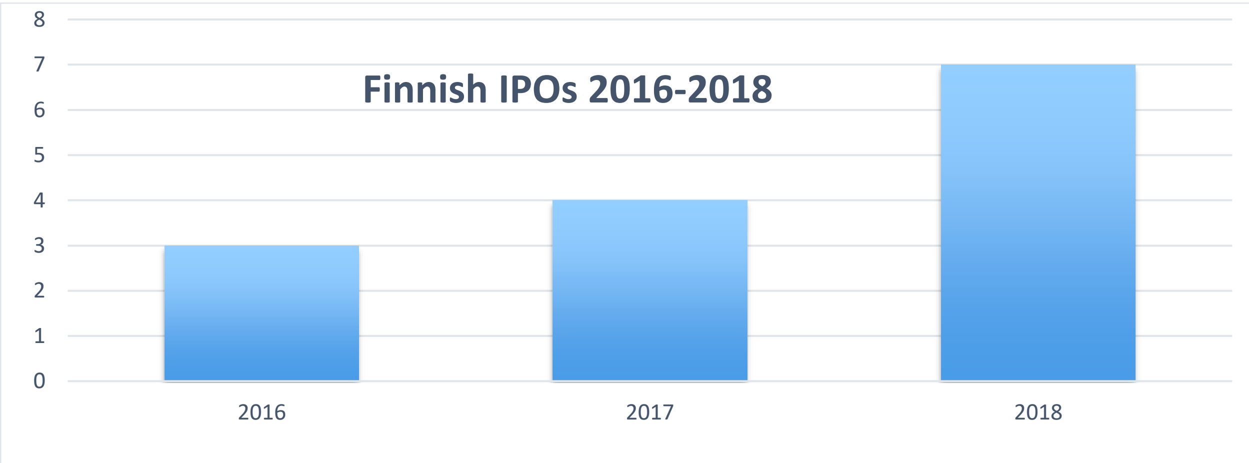


Figure 1. Number of listings per year in the timeframe considered for the research as of 2.7.2021

### 4.3 Impact of IPO on financial performance

In this subchapter the author will focus on spotting a correlation between IPOs and impact on financial performance. It is universally accepted that going public is a source of capital and prestige, but whether this aspect turns out to determine a raise in profitability, is still openly discussed in financial literature. Previous studies have often found out that profitability indicators tend to grow in the years prior the IPO, and gradually fall after the IPO. The theory underlined in this scenario is the window dressing, a fairly

common practice of portfolio managers, which consist in improving the appearance of financial statements, to make a stock or any other security more appealing to shareholders and investors (Chen 2021). It is also suggested that it is been quite a common a sort of short-termism of companies, when raising capitals through IPOs. In other words, companies raise liquidity through IPOs to finance planned investments, but often being unprepared to manage a possible equity surplus, which would then result in lower equity-related profitability ratios (Bolek M., Kacprzyk M., Malaczewski M. & Pastusiak R., 2016, 112).
The author will investigate the impact of financial performance on Finnish IPOs between years 2016 & 2018. Data are collected starting from the year prior the IPO, if publicly available, until October 10, 2021. As similarly approached in previous financial literature regarding the topic, the author has chosen a set of financial ratios, that provide a significant picture of financial performance. The indicators focus on liquidity, operational efficiency, profitability and leverage.
The ratios are described as per below:

- *Working capital*: it measures the level of operating liquidity, which can be used to meet short term obligations (Harvard Business School 2020). The excess of current assets over current liabilities can be used to spend on day-to-day operations (Corporate Finance Institute 2021). Working capital can be seen also as a measure of operational efficiency. The formula of working capital is the following:

$$\textit{Working capital} = \textit{Current assets} - \textit{current liabilities}$$

- *Return on Equity (ROE):* it expresses the ability of the company to use and maximize equity investments (Stobierski 2020). In other words, it measures how much in profits a company can make in relation to equity. ROE takes also into account company´s debt,.ROE is expressed with the following formula:

$$ROE = \frac{\textit{Net Income}}{\textit{Total Shareholders Equity}}$$

- Return on Assets (ROA)*:* it measures the capability of managing the available resources and assets to make profits (Stobierski 2020). Differently from ROA, ROE does not consider company´s debt *(*Hargrave M.*, 2021).* The formula is the following:

$$ROA = \frac{\textit{Net income}}{\textit{Total Assets}}$$

- Financial leverage***:*** this ratio tells us how much of company´s assets are financed by debt. Also known as the *equity multiplier,* if all the assets are financed by equity, then the multiplier is one. Otherwise, the multiplier increases as debt increases, and decreases as debt decreases. A high financial leverage suggests a higher overall risk for the business (Harvard Business School 2020). The formula is the following:

$$\text{Financial leverage} = \frac{Total\ Assets}{Total\ Equity}$$

- <u>Sustainable growth rate</u>***:*** the rate of growth that a company can expect to grow. The sustainable growth rate can be used to define the stage of a company´s life. It is used in multiple way, either to determine the risk of defaulting on financial obligations, or the orientation of the company towards R&D and profitable project. It is often averaged to obtain an historical overview of company´s growth (Corporate Financial Institute 2021)
  It is obtained by multiplying ROE times Retention Ratio, which is the ratio of retained earnings relative to net income. Below the formula:

$$SGR = ROE * Retention\ Ratio$$

It is however essential to point out that the ratios have higher significance, the higher it is their comparability. These indicators are often benchmarked to companies in the same industry or with some similarity between each other. Given the industry diversity of companies considered in the sample of this study, ratios are not comparable based on industry, but in this case based on the nature of the companies: all companies are public and have been publicly listed recently. The author will focus on the impact of IPO on these ratios, rather than defining if a given ratio is particularly good or not overall.

### 4.4 Data collection

All necessary data to carry out the research was collected by one unique publicly available source: Nasdaq Helsinki database of share prices and financial data. Since this research paper focuses on the aftermath of recent IPOs in Finland, the author deemed Nasdaq databases the most reliable source to serve the purpose of this paper. The database proves comprehensive as it contains relevant and consistent information on share price development and a vast historical overview on financial performance. The author was able to retrieve accurate data concerning the following:

- Share price history at exact points in time, essential to perform the study on share price development according to the Buy and Hold abnormal returns method (BHAR)
- Relevant financial figures used to calculate financial ratios: *current assets, current liabilities, net income, total assets, total shareholders' equity*
- Financial figures used to estimate find out *retention ratio*, which is then used with ROE to estimate *sustainable growth rate.*

# 5 Results

In this chapter the author will provide an answer to the IQs stated in the first chapter.
The author´s attempt to describe the results will be based on a study conducted on share price development of listed Finnish companies included in the statistical sample, according to the previously described Buy-and-hold abnormal return approach (BHAR). The results provide an interesting overview of stock performance and gives a nod to audiences interested in stock investments. Price performance is undoubtedly a measure of success for a hypothetical investor in stocks.

## 5.1 Price performance of Finnish IPOs between 2016-2018

Table 1. Share price trend of the statistical sample

| **Company** | **Return 12** | **Return 24** | **Return 36** |
|---|---|---|---|
| QT Group Oyj | 75,16% | 53,07% | 207,40% |
| Kamux Oyj | -20,37% | -29,63% | -6,61% |
| Fellow Finance Oyj | -56,08% | -64,30% | -62,03% |
| Titanium Oyj | 4,59% | 28,84% | 56,38% |
| Rovio Entertainment Oyj | -60,25% | -64,38% | -47,22% |
| Harvia Oyj | 28,42% | 45,60% | 480,00% |
| Anora Group Oyj | -2,84% | -6,99% | 42,23% |
| Efecte Oyj | -10,06% | 4,84% | 112,77% |
| Admicom Oyj | 152,34% | 657,57% | 965,42% |
| BBS Bioactive Oyj | -13,95% | 47,67% | -7,42% |
| Enersense International Oyj | -58,87% | -69,62% | 78,11% |
| VMP/Eezy Oyj | -10,34% | -22,03% | 11,11% |
| **Mean** | **2,3121%** | **48,39%** | **152,51%** |
| **Standard deviation** | **60,82%** | **196,99%** | **294,87%** |

Price data analysis for the statistical sample considered shows an overall positive trend. Stocks of publicly listed companies between 2016-2018 saw a return of 2,31% on average in the first 12 months. In the first 12 months of the timeframe considered a standard deviation of 60,82% from the average was spotted. This means in other words that stock returns could be as low as -50,58% and as high as 63,13% on average, assuming a stock portfolio consisted of the companies within the sample. At 24 months from the IPO the portfolio performance rose to an average return of 48,39%. Standard deviation increase confirms the overall volatility, since returns could be spread on a very wide range. Returns at 36 months were on average 152,51%. Standard deviation increased at by nearly 100 percentage points.

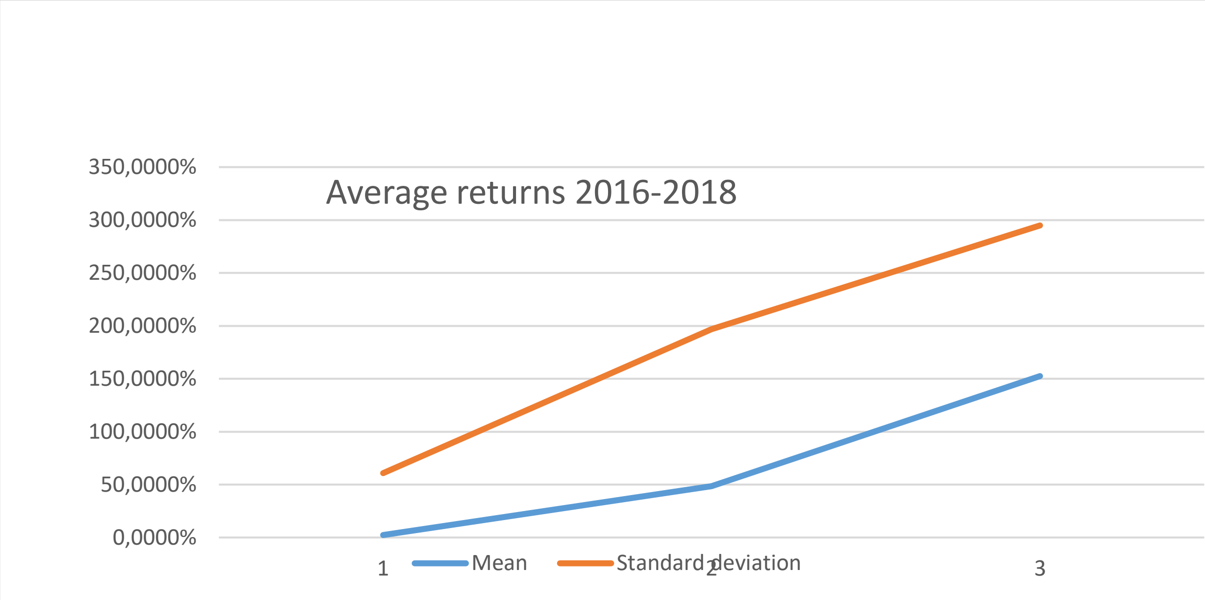


Figure 2. Stock return of companies listed between 2016-2018 for 3 years.

Table 2. OXMXHPI and First North25 market indexes performance for the same timeframe as price returns.

| **Companies** | Index 12 | Index 24 | Index 36 |
|---|---|---|---|
| QT Group Oyj | 22,23% | 27,34% | 20,37% |
| Kamux Oyj | 6,00% | -6,71% | -10,23% |
| Rovio Entertainment Oyj | 5,48% | -1,75% | 3,75% |
| Anora Group Oyj | 0,87% | -28,50% | 19,20% |
| Admicom Oyj | 22,30% | 66,16% | 220,22% |
| Harvia Oyj | 1,01% | -28,90% | 18,92% |
| Fellow Finance Oyj | 11,34% | 125,09% | 84,22% |
| Titanium Oyj | 21,09% | 30,25% | 164,37% |
| Efecte Oyj | 17,38% | 54,23% | 178,12% |
| BBS Bioactive Oyj | 13,02% | 42,96% | 172,68% |
| Enersense International Oyj | 23,34% | 63,41% | 187,27% |
| VMP/Eezy Oyj | 1,62% | 51,88% | 45,59% |
| **Mean** | **12,14%** | **32,96%** | **92,04%** |
| **Standard Deviation** | **8,96%** | **44,57%** | **85,76%** |

Market returns based on OMXHPI, and First North 25 indexes showed a similar trend. Average market return at maturity 12 months was 12,14%, gradually increasing at 32.96% at maturity 24 months and 92,04% at year 3. Standard deviation followed once again a similar pattern to price and increased gradually until peak at year 3. Market index returns calculations are timely adjusted to stock returns for every single company of the statistical sample, following the pattern of 3 years since the date of listing. The similarity in trends proved the connection between stock returns and average market performance at the timeframe considered. Although stock returns and market indexes performance express a similar pattern of growth in the medium-long term, stock return values are spread in a wider range. The fact that several companies of the sample are small-cap companies or listed in the First North Growth Market provides a perspective. For these kinds of companies, volatility is a peculiarity. Price oscillations are due to the very nature of these firms with a growth potential. As Jackson & Schimdt (2021) point out these companies can attract many investors because of groundbreaking technology or product, and at the same time rapidly progress towards the brink of bankruptcy, and not less importantly they are often illiquid.

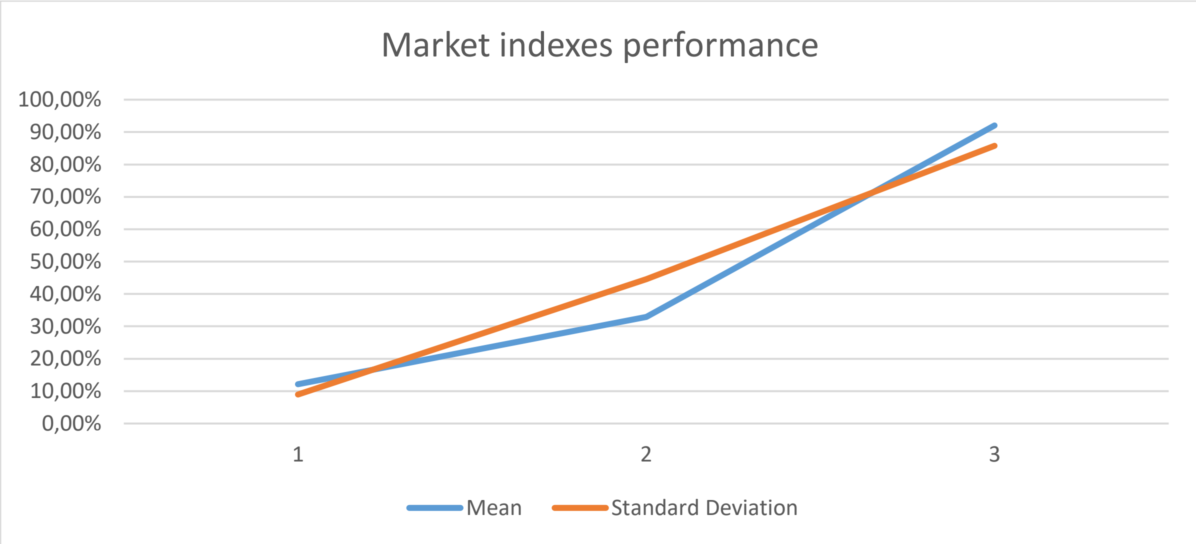


Figure 3 Market performance based on OMXHPI and First North 25 indexes between 2016-2018.

Table 3. Market adjusted buy-and-hold abnormal returns for the statistical sample.

| **Companies** | **BHAR 12** | **BHAR 24** | **BHAR 36** |
|---|---|---|---|
| QT Group Oyj | 52,93% | 25,73% | 187,03% |
| Kamux Oyj | 26,37 % | -22,92 % | 3,61 % |
| Rovio Entertainment Oyj | 65,73 % | -62,64% | 50,96% |
| Anora Group Oyj | -3,70% | 21,51 % | 23,03 % |
| Admicom Oyj | 130,04% | 591,41% | 745,20% |
| Harvia Oyj | 27,41% | 74,50% | 461,08% |
| Titanium Oyj | -16,50% | -1,42% | -107,98% |
| Efecte Oyj | -27,44% | -49,39% | -65,35% |
| Fellow Finance Oyj | -67,41% | -189,40% | -146,25% |
| BBS Bioactive Oyj | -26,98% | 4,72% | -180,10% |
| Enersense International Oyj | -82,21% | -133,04% | -109,15% |
| VMP/Eezy Oyj | -11,96% | -73,91% | -34,48 % |
| **Mean** | **-9,83%** | **15,41 %** | **60,47 %** |
| **Standard deviation** | **58,41%** | **195,29%** | **277,16%** |

Market adjusted returns were calculated with BHAR approach, which provide a combined result of stock prices and the stock market itself. Buy-and-hold abnormal returns describe with the better accuracy the overall trend, since it is essential to relate the performance of stock with a relevant benchmark. Stock performance is, or it must be at some extent, always depending on overall market performance. Very often the market situation suggests if it is convenient or not to invest in certain type of stock, and from the investor perspective to find out that a stock performs inconsistently with the overall market, might be a good measure of the worthiness of the investment.

Average abnormal returns fared at -9,83% on average at maturity 12 months, but as seen with previous data, growing trend shows also in market adjusted performance. BHAR at 24 months maturity went up on average by 5,58 percentage points at and expressed the highest value 60,47% at 36 months maturity. Standard deviation also, consistent with the previous data, rises as along with the increase in performance.

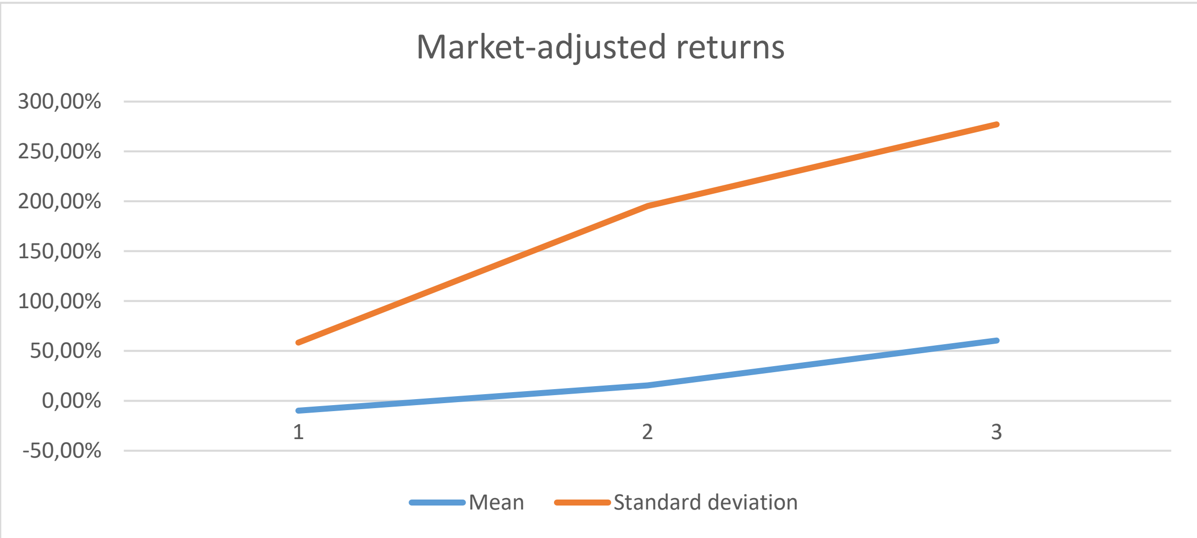


Figure 4. Buy-and-hold abnormal return of Finnish companies listed between 2016-2018

Figure 4 confirms the pattern arising from the analysis of this data. Performance gradually increased with the passing of time. While the uptrend between year 1 and 2 seems to be smooth, we see the trend of returns between year 2 and 3 going up more steeply. Concerning volatility, the steepest uptrend shows between year 1 and 2, for price performance and market adjusted performance, while for market performance we see a regularly swinging trend of volatility.

### 5.2 Post IPO financial performance

In this chapter we will look at the impact of IPOs on companies ‘financial performance. The goal is to find some patterns in the post IPO performance to spot correlations between the IPO and performance. The author will present the results and formulate hypothesis on certain key aspects, although there will not be an in-depth investigation on the reasons of performance, since the scope of this research paper is limited to a certain extent, rather results will serve as a starting point for further research.

The author retrieved data concerning some of the most characterizing ratios for financial performance: return on assets (ROA), return on equity (ROE), financial leverage, working capital, sustainable growth rate. These ratios define companies ‘operational efficiency, liquidity position and growth potential.

Data concerning ROA before and after IPO showed interesting points. The author did not find a clear impact of IPO on net income, nevertheless it seemed evident that for all the companies included in the sample after a year since IPO, there was significant boost in total assets. Total assets increased as much as 10 times compared to the year prior IPO, on average over 300%. This aspect confirms one of the most common purposes for going public: investing to enlarge the assets position to make business grow.

| PRE-IPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| CURRENT | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| **ROA** | | | | | | | |
| Kamux Oyj | | 14,03% | 11,36% | 12,70% | 10,46% | 12,18% | 9,18% |
| QT Group Oyj | 4,11% | -5,93% | -8,60% | -6,17% | -0,70% | 20,88% | 24,53% |
| Efecte Oyj | | 3,21% | -9,00% | -31,65% | -18,40% | -4,22% | 4,52% |
| Fellow Finance Oyj | | | 4,95% | 2,46% | -0,19% | -3,10% | -8,40% |
| Titanium Oyj | | 15,49% | 15,63% | 23,64% | 20,43% | 29,42% | 37,60% |
| Rovio Entertainment Oyj | | 7,08% | 10,83% | 12,10% | 6,08% | 15,41% | 11,84% |
| Harvia Oyj | | | 2,11% | 5,80% | 7,88% | 9,34% | 40,96% |
| Anora Group Oyj | | | 4,59% | 7,36% | 4,60% | 3,91% | 3,61% |
| Admicom Oyj | | | 45,63% | 23,58% | 26,25% | 41,67% | 30,27% |
| BBS Bioactive Oyj | | | -45,76% | 3,41% | -16,68% | -21,51% | -23,17% |
| Enersense International Oyj | | | 7,53% | -15,07% | -10,46% | -0,11% | 0,27% |
| VMP/Eezy Oyj | | | -6,02% | -2,95% | 2,17% | 1,31% | 2,58% |
| **Mean 2021** | | | | | | | **11,15%** |

Figure 5. ROA trends until 2021 for the statistical sample.

Average ROA was 11,15% by October 2021. Interesting patterns were spotted in this dataset analysis. In the majority of cases ROA reaches satisfactory levels withing year 3 or 4 since the IPO and either continue growing or stabilize withing a close range from the past year, whereas within year 1 in majority of cases we see either a diminishing ROA or non-significant increase. These signs might suggest that IPO impacts on firm´s ROA rather in long-term than in short term. Author hypothesis that, given the boost in total assets following the IPO, we can assume that IPOs might be tied to long-term strategies of optimization of the assets acquired.

| PRE-IPO | | | | | | | |
|---|---|---|---|---|---|---|---|
| CURRENT | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| **ROE** | | | | | | | |
| Kamux Oyj | | 38,08% | 19,86% | 21,19% | 23,28% | 24,37% | 21,97% |
| QT Group Oyj | 11,00% | -21,16% | -15,85% | -13,05% | -2,07% | 42,94% | 60,42% |
| Efecte Oyj | | 14,29% | -14,97% | -70,76% | -63,13% | -18,50% | 19,03% |
| Fellow Finance Oyj | | | 25,84% | 5,51% | -0,48% | -6,47% | -1,56% |
| Titanium Oyj | | 17,69% | 17,40% | 25,51% | 23,40% | 33,42% | 42,31% |
| Rovio Entertainment Oyj | | 12,20% | 14,67% | 15,41% | 7,87% | 19,42% | 14,66% |
| Harvia Oyj | | | 15,09% | 10,30% | 13,95% | 23,30% | 15,71% |
| Anora Group Oyj | | | 13,37% | 10,07% | 12,17% | 11,39% | 10,33% |
| Admicom Oyj | | | 62,26% | 28,66% | 32,39% | 29,76% | 37,09% |
| BBS Bioactive Oyj | | | -410,19% | 8,60% | -53,25% | -44,83% | -54,79% |
| Enersense International Oyj | | | 35,59% | -21,48% | -30,87% | -0,68% | 0,85% |
| VMP/Eezy Oyj | | | -31,78% | 5,33% | 4,50% | 2,66% | 5,32% |
| | | | | | | **Mean ROE** | **14,28%** |

Figure 6. Trend for ROE as of 2021 for the statistical sample.

The author finds similar patterns in the development of ROE figures. Within year 1 ROE often experiences a downturn, whereas sees a significant boost within year 3 and 4 since the IPO and tends to stabilize to a close range compared to previous year or growing further. In a fair majority of cases ROE at year 3 or 4 is higher than pre-IPO, whereas in other cases falls within an acceptable level or further deteriorates. Average ROE was 14,28% as of 2021. Many factors can influence ROE over the time, such as economic situation and industry, and often ROE results are benchmarked to the relevant industry. The industry diversity within the statistical sample does not make a comparison based on industry possible, rather we can benchmark the sample to the average required return to equity for investments in Finland.

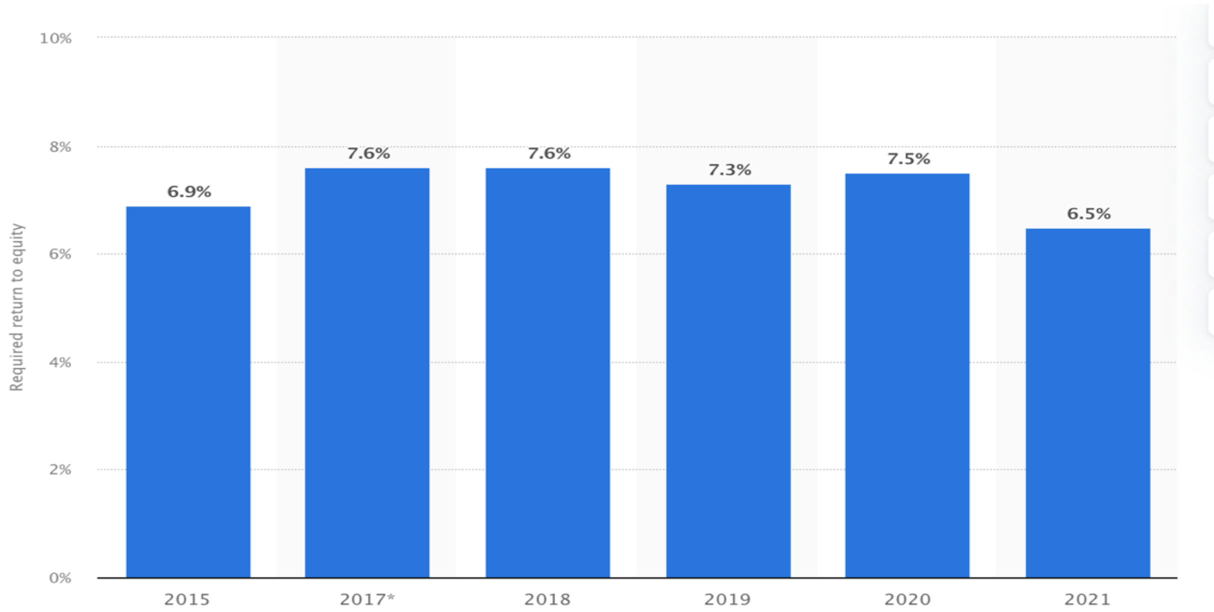


Figure 7. Average ROE for Finnish companies between 2015-2021 according to Statista (2021)

| PRE-IPO | | | | | | |
|---|---|---|---|---|---|---|
| **Working capital(year change)** | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Kamux Oyj | | 38,11 | 70,30% | 10,94% | 0,69% | 10,62% |
| QT Group Oyj | -2062,00 | 261% | 109% | -34% | -43% | 650% |
| Efecte Oyj | | -0,23 | 195% | -48,33% | -62,50% | -28,74% |
| Fellow Finance Oyj | | 6,78 | 6,76 | 63,46% | -60,09% | 132,65% |
| Titanium Oyj | | 5,24 | 139,89% | 15,99% | 4,66% | 15,20% |
| Rovio Entertainment Oyj | | 12,6 | 580,16% | 137,34% | 11,10% | 2,34% |
| Harvia Oyj | | 15,86 | 17,43 | 37,12% | 10,00% | 53,18% |
| Anora Group Oyj | | 75,53 | 50,17 | 31,15% | -1,52% | 4,17% |
| Admicom Oyj | | 75,55 | 50,17 | 31,15% | -1,52% | 4,17% |
| BBS Bioactive Oyj | | -1,06 | -1,29 | 152,00% | -185,88% | 401,00% |
| Enersense International Oyj | | 3,37 | 1,78 | 130,34% | -61,22% | -1815,09% |
| VMP/Eezy Oyj | | -1,44 | 1,5 | 262,67% | -202,57% | 5,73% |

Figure 8 Working capital trends for the statistical sample.

Working capital for years before the IPO is marked in yellow and express as nominal value, whereas other values express a percentage change from the previous year. The data set collected shows that for all companies there is significant boost in working capital by one year from the IPO. In nine cases out of twelve, the highest boost was after 1 year since the IPO, whereas working capital tended to grow at a slower pace or drastically decline in the following years, although except for two out of twelve companies, figures stayed within a positive range as of 2020. We can assume that the effect of the IPO was more tangible in the short term, as new liquidity pumped into companies from the market, either rebalanced or enhanced the capability of companies of meeting short term obligations, and hence operational efficiency.

| PRE-IPO | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Financial Leverage** | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | % change 1 year after IPO | %change at the time horizon |
| Kamux Oyj | | 2,713248011 | 1,748726655 | 1,66908563 | 2,224264706 | 2,001046025 | -35,55% | -26,25% |
| QT Group Oyj | 2,68 | 3,559854897 | 1,845888725 | 2,11572052 | 2,951593861 | 2,055555556 | 33,02% | -42,26% |
| Efecte Oyj | | 4,636363636 | 1,664884135 | 2,23391813 | 3,437788018 | 4,355 | -64,09% | -6,07% |
| Fellow Finance Oyj | | 5,519354839 | 5,236842105 | 2,229181 | 2,487232574 | 2,084496694 | -57,43% | -60,20% |
| Titanium Oyj | | 1,141097424 | 1,114 | 1,07961651 | 1 | 1 | -2,37% | -12,37% |
| Rovio Entertainment Oyj | | 1,723463044 | 1,35458366 | 0,28451358 | 1,293599286 | 1,260125741 | -21,40% | -26,88% |
| Harvia Oyj | | 6,457024303 | 5,912344398 | 1,77666363 | 1,769755956 | 2,492925948 | -69,95% | -57,84% |
| Anora Group Oyj | | 2,262337934 | 2,912340986 | 2,60266667 | 2,646825397 | 2,91490723 | -10,63% | 0,09% |
| Admicom Oyj | | 1 | 1,364516129 | 1,21516755 | 1,233925291 | 1,170146602 | -10,95% | -14,24% |
| BBS Bioactive Oyj | | 2,782608696 | 8,962962963 | 2,52488688 | 3,191558442 | 2,083743842 | -71,83% | -76,75% |
| Enersense International Oyj | | 3,120418848 | 5,199288256 | 2,10963455 | 2,952173913 | 6,294847921 | -59,42% | 21,07% |
| VMP/Eezy Oyj | | 7,164859002 | 5,280585106 | 1,80678149 | 2,079456403 | 2,034294776 | -65,78% | -61,48% |
| **mean** | | | | | | | **-36,37%** | **-30,26%** |

Figure 9 Financial leverage (equity multiplier) trend for the statistical sample

Figure 9 shows the trend for companies ‘financial leverage pre- and post-IPO. The basic concepts around financial leverage is that a debt to asset ratio is 1 when debt and equity match, whereas a higher or lower than 1 ratio shows respectively a higher or lower amount of debt compared to equity. Companies with a high financial leverage are essentially a riskier business. Many companies strategically choose to finance their growth with debt, but it proves to be a successful move if that makes earnings increase by a greater amount than loans interests, otherwise shareholder value would fall (Fernando 2021).

Data collected shows a high impact of public listing on Finnish companies ‘leverage. All companies except one of the samples experienced a drop in financial leverage one year after the IPO. The highest leverages pre-IPO were spotted among First North Growth companies, at the initial stage of their life and hence more exposed to risk. Leverage dropped on the first year after IPO by 43,13% on average. This means that prior to IPO companies had on average 2€ of debt for each euro of equity, where one year after one euro of equity was backed approximately by 1,20€ of debt. At the time horizon of year 2020, overall financial leverage had decreased by roughly -30%. This confirms the impact of IPO on overall business risk reduction. Since the major risk related to debt to asset ratio is essentially solvency, we can assume that companies became more solvent. Moreover, some figures of debt to asset ratio in the following years shows that leverage tended to go up within year 2, which confirms some the concepts expressed in the theoretical framework, alas that after rebalancing capital structure by lowering leverage, some companies might take on raising debt again, since the public status increases bargaining power with financial institutions. Thus, at some extent companies’ public status seems to mitigate the risk expressed by the leverage. One company of the sample increased their leverage compared to pre-IPO, meaning they might have raised more debt. However, this scenario is consistent with the theory part, since, as mentioned before, one of the motives for going public is to increase credibility and bargaining power with bank and loan institutions.

Table 4. Sustainable growth rate for the statistical sample as of 2021.

| **Company** | **Expected growth rate 2021** |
|---|---|
| Kamux Oyj | **74,16%** |
| QT Group Oyj | **25,17%** |
| Efecte Oyj | ***-449,00%*** |
| Fellow Finance Oyj | **0,88%** |
| Titanium Oyj | **22,08%** |
| Rovio Entertainment Oyj | **97,05%** |
| Harvia Oyj | **35,72%** |
| Anora Group Oyj | **73,77%** |
| Admicom Oyj | **44,07%** |
| BBS Bioactive Oyj | **-209,69%** |
| Enersense International Oyj | **-16,45%** |
| VMP/Eezy Oyj | **-5,56%** |
| **Mean** | **-25,65%** |

Data concerning sustainable growth rate show an overall average negative growth. It is certainly not a good sign, but average SGR was strongly influenced by strongly negative growth for part of the sample. Most companies considered show a positive expected growth in a range between 0,88% and 97,05%. The correlation with the IPO cannot be 100% certainly confirmed, but a similar negative was spotted in previous studies. Pagano et. al (1998) hypothesized that some companies 'main IPO priority is to re-balance their accounts, rather than implementing a growth strategy. These figures and the previous seem to suggest this kind of short-termism. Other possible variables do not make possible a certain answer, rather they give further room for future research.

# 6 Discussion

In this chapter the author will formulate answers to both the IQs and the RQ. Furthermore, the author will summarize the key findings and provide perspectives for further research, and possible explanations for the results presented. Other aspects such as relevance and validity will be pointed out.

## 6.1 Key Findings

The question stated in IQ1 was the following: What is the post-IPO share price performance of recently listed Finnish SMEs IPOs?

The performance of recent Finnish IPOs was generally positive. Stock returns showed a tendency to increase year after gradually, although asymmetrically, reaching the highest average return of 152,51% at year 3. Since we can ideally consider the statistical sample as a hypothetic stock portfolio made of companies listed between 2016-2018, we can consider the results a good sign for stock investors. Nevertheless, is worth to point out that standard deviation showed a consistent trend, hence gradually, but asymmetrically increasing and peaking at year 3 with the value of 294,87%. Market overall performance confirms the trend for the statistical sample. The pattern of incremental growth within year 3 is also visible in market performance, although more symmetrically. Growth at year 1 was 12,11% and peaked at 92,04% in year 3, whereas standard deviation as high as 85,76% confirmed that share price volatility was consistent with a general condition of volatility in the market. Consistence is found for market-adjusted share performance, obtained with the BHAR approach, as data analysis shows the pattern described previously. Market-adjusted performance reaches its peak at year 3, and where it differentiates is underperformance at year 1. Standard deviation peaked at 278,63% in year 3, as a further proof of severe volatility in long-term. It is also worth to note about the better accuracy of the BHAR approach, since it essentially weights the share price performance with the market performance. The fact the year 1 based on BHAR was negative, can be interpreted with the share price performance for the sample not being consistent with the overall market performance, although positive. The negative correlation at year 1 can be seen also from an investor perspective: by investing on another type of portfolio than the one studied in this research, an investor would have had the chance to gain 8% more overall. This is of course hypothetical, but it better explains the result conveyed with the BHAR approach. Nevertheless, hypothetic investors can be satisfied with the results in the medium-long term. Moreover, the results confirm the nature of these securities: they are a long-run type of investment. Moreover, the pattern showed in the performance might be also seen as an opportunity to develop active trading strategies to enhance returns (Ritter 1991, 4.)

The research showed severe fluctuations in returns, making the overall positive trend g that provides suggestions for further research. The author suggests the overall volatility is due to several companies of the sample being small cap listed in First North, and as previously suggested the uncertainty surrounding a firm with growth potential makes it subject to oscillations in investor sentiment and hence price. This idea might be also applied to other companies listed. The industries they belong to might be subject to trend oscillations, or simply investors did not possess enough information. The political and economic implications of COVID-19 pandemics are also worth to consider, as volatility are often a reflection of economic instability and uncertainty.

The question stated in IQ2 was the following: what is the post IPO impact on the performance of recently listed Finnish SMEs?

Empirical evidence of selected financial ratios provides interesting perspectives, although no final answer can be provided, and further research is worth doing. ROE figures showed in majority of cases growing and stabilizing performance in long term, but also a tendency to underperform within year 1, continuously or asymmetrically. ROA figures, although showed slightly less consistency. follow similar patterns and denote tendency to achieve the best numbers in long term.

Reasons for underperformance need further research. Reasons that could explain underperformance could be the company investing most cash from IPO into very long-term rewarding assets, as well using the cash to rebalance capital structure by reducing debt burden (Long et. al 2020,3). Chemmanur & He (2011) suggested that going public might be rather a move to deter new competitors in the industry, rather than an incentive to boost operating performance. Questions are still open. Nevertheless, an average ROE of 14,28% in October 2021 shows that the sample is well above the 7 years average ROE of 7,3% showed by Statista (2020) and considered as a benchmark. Overall sustainable growth rate was -25,65%, certainly not a good sign but strongly influenced by the severely negative SGR of few companies of the statistical sample. Eight out of twelve show a positive SGR. Evidence for working capital proves at least a short-term positive impact on operational efficiency but results in long-term are not consistent across the sample, as research showed either a less significant growth in working capital compared to year 1 or sever underperformance. Reasons for underperformance can be multiple and assessed company-wise. Finally, data concerning debt to asset ratio show that there is a positive correlation between the IPO and reduction of financial leverage. This aspect confirms one of the theoretical points stating that going public can reduce the overall business risk.

We can finally wrap up with the RQ question: How did recent Finnish SMEs' IPOs perform in the long run?

Investor wise the research shows positive overall returns on shares and confirms once more that company shares are long-term securities by nature and tend to increment their performance in the long term. However, research found out persistent and incremental volatility, denoting an overall situation of high risk.

Impact on the operational and financial side was described using selected financial indicators. The most evident impact of IPO was showed on short-term operational efficiency and reduction of overall business risk. Over 60% of the companies assessed show a growth potential as of 2021, alas after at least 3 years since the indicators of profitability showed encouraging signs especially in long-term, although underperformance in certain periods opens door for further investigation.

### 6.2 Validity, relevance, and reliability

The author deems this research work valid since it is founded on data collected from one of the most reliable sources as Nasdaq database. Nasdaq provides reliable data on performance indicators, company key facts overall market performance. Data analysis was carried out with methods that have been used in previous research regarding the topic of IPOs, thus it is a consolidated approach and through the knowledge of acquired during studies at Haaga Helia concerning financial performance evaluation. The author regrets not being able to provide a larger statistical sample. This was due to the number of SMEs listed between 2016 and 2018 and the necessary minimum timeframe of 3 years needed for the statistical study, and to avoid overlapping with another existing research. This research is deemed relevant for the investor environment and for stock analysts, as well as the audience interested in investing in shares and learn a bit more about the peculiarities of Finnish stock market and its trends recently listed SMEs. It is also considered relevant for non-public companies that want to assess the possibility of going public based on results shown regarding post-IPO financial performance.

### 6.3 Suggestions for further research

The author suggests additional research as to why certain stocks underperform in the short-term after the IPO and why did not seemingly impact or negatively impacted some companies. Based on previous research, the author formulated few hypotheses, but there seems not to be yet a definite answer. It would be interesting to investigate into the volatility of the market, which the author detected in this study, to find out the more certain causes of severe return oscillations for shares of SMEs listed in the period 2016-2018.Moreover, it would be interesting to find out if a correlation between going public and increase in sales turnover and net income exists.

### 6.4. Reflection on own learning

Writing this thesis and attempting to reach at least a satisfactory result was one of the biggest challenges I experienced both in my studies and in my personal life. Combining full time job with the efforts needed for this paper proved exhausting but rewarding at the same time, as I learned about a new myself, I did not know there could be. I enhanced my abilities to handle stress and pressure, as well as to work onto stretching my limits and go beyond them. I found the strongest motivation in what I envision myself being in the future as financial management professional and in the desire of continuing my studies in finance and accounting at master level and this was a necessary step towards it.

As in investment enthusiast I had the chance to study more about aspects that were not discussed during my course work and build up good knowledge about stock environment. This was also a way to use tools and knowledge I gained during the studies both regarding data analysis and financial management, which helped me approach the topic in a right manner. Working on this thesis improved my analytical skills, without sacrificing the ability of seeing the big picture, and made me more curious than ever. Despite the challenges, I enjoyed this journey and I found myself enriched after it.

## References

Banton, C. 2021. Underwriting. Investopedia. URL: https://www.investopedia.com/terms/u/underwriting.asp. Accessed: 22 August 2021.

Barone, A., Estevez, E. 2021. Abnormal return. Investopedia. URL: https://www.investopedia.com/terms/a/abnormalreturn.asp. Accessed: 07 October 2021.

Bergström, E., 2020. Factors affecting long-term performance of IPO stocks in Finland and Sweden.Haaga Helia University of Applied Sciences. URL:https://www.theseus.fi/bitstream/handle/10024/348720/Emil_Bergström_Thesis.pdf?sequence=2&isAllowed=y. Accessed: 01 October 2021

Betty, R., Vestuypens, M., 1995. Underpricing,overpricing and reputation: are underwriters penalized for IPO mispricing?. Southern Methodist University.

Bloomberg 2020. What is a stock exchange? URL:https://www.bloombergquint.com/financial-terms/what-is-stock-exchange-definition-meaning-and-basics-of-stock-exchange. Accessed: 21 August 2021

Bolek, M., Kacprzyk, M., Malaczewski, M. & Pasusiak, R., 2016. Company profitability before and after IPO. Is it a window dressing or equity dilution effect? Prague Economic Papers. URL:https://pep.vse.cz/pdfs/pep/2016/01/08.pdf. Accessed: 10 October 2021

Bowman, J. 2021. Are small-cap stocks risky? The Motley Fool. URL:https://www.fool.com/investing/stock-market/types-of-stocks/small-cap-stocks/are-small-cap-stocks-risky/. Accessed: 08 November 2021

Brau, J., 2010. Why do firms go public?Journal of Entrepreneurial Finance. URL: https://www.researchgate.net/publication/228252740_Why_Do_Firms_Go_Public. Accessed: 28 April 2021.

Business Dictionary. What is corporate governance? Business Dictionary. URL:http://www.businessdictionary.com/definition/corporate-governance.html. Accessed: 10 October 2020

Capital.com 2020. Hostile takeover. URL: https://capital.com/hostile-takeover-definition. Accessed: 10 October 2020.

Capital.com 2021. IPO Underpricing. URL: https://capital.com/ipo-underpricing-definition. Accessed: 22 August 2021.

Carter, R.., Frederick H. Dark, and Ajai K. Singh, 1998. Underwriter reputation, initial returns, and the long-run performance of IPO stocks, Journal of Finance.

Chemmmanur T., Fulghieri, P., 1999. A theory of the going public decision. Boston College. URL:https://www.researchgate.net/publication/5216780_A_Theory_of_the_Going-Public_Decision. Accessed: 12 November 2021.

Chemmanur T., He, J. 2011. IPO waves, product market competition, and the going public decision: Theory and evidence. Journal of Financial Economics, Volume 101, Issue 2.

Corporate Finance Institute 2020. What is Stock Price? URL: https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/stock- price/Accessed: 10 October 2020

Corporate Finance Institute 2020. What is Stock Valuation? URL: https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/stock-valuation/. Accessed: 10 October 2020

Corporate Finance Institute 2021. Sustainable growth rate. URL: https://corporatefinanceinstitute.com/resources/knowledge/finance/sustainable-growth-rate/. Accessed: 24 October 2021.

Corporate Finance Institute 2021. What is the Required Rate of Return? URL: https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/required-rate-of-return/. Accessed: 24 October 2021.

Deloitte 2021. Strategies for going public: 5th edition. Deloitte. URL: https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/audit/deloitte-ch-en-audit-strategies-for-going-public-5th-edition-update.pdf. Accessed: 28 April 2021.

Economic Times 2021. Initial public offering. URL: https://economictimes.indiatimes.com/definition/IPO. Accessed: 22 August 2021.

Economic Times 2021. Standard deviation. URL: https://economictimes.indiatimes.com/definition/Standard-Deviation. Accessed 22 August 2021.

Espinasse,P. 2011. IPO: a global guide. Hong Kong University Press. Hong Kong.

Espinasse, P., 2014. IPO: a global guide. Honk Kong University Press. Hong Kong.

Event Study Tools 2021. Buy-and-hold abnormal return approach. URL: https://www.eventstudytools.com/long-run-event-study. Accessed: 07 October 2021.

EY 2021. Guide to going public. EY. URL:https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/growth/ey-guide-to-going-public-strategic-considerations-before-during-and-post-ipo.pdf . Accessed: 23 April 2021.

Fahmida, A. 2021. The analysis of operating and financial performance of listed companies after issuing IPOs in Chittagong stock exchange. American Journal of Industrial and Business Management. URL:https://www.scirp.org/journal/paperinformation.aspx?paperid=106992. Accessed: 22 August 2021.

Fernando, J. 2021. Debt to Equity Ratio. Investopedia. URL:https://www.investopedia.com/terms/d/debtequityratio.asp. Accessed: 7 November 2021.

Geddes, R.2003. IPOs and Equity Offerings. Elsevier Science & Technology. Elsevier Science & Technology. Amsterdam

Gregoriou, G.2006. Initial Public Offerings: An International Perspective of IPOs. Elsevier Science & Technology. Amsterdam

Gibson, Dunn & Crutcher 2021. IPO Guidebook. URL:https://www.gibsondunn.com/wp-content/uploads/2019/11/CAP-IPO-Guidebook.pdf. Accessed: 26 March 2021.

Hai, L., Xiaochen, L. & Yu, C. 2021. Why the operating performance of post-IPO decreases: evidence from China.Journal of Risk and Financial Management. URL:https://www.mdpi.com/1911-8074/14/9/424/htm. Accessed: 18 October 2021.

Hargrave, M. 2021. Return on assets. Investopedia. URL: https://www.investopedia.com/terms/r/returnonassets.asp. Accessed: 24 October 2021.

Harvia Oyj. Harvia Oyj.n historialliset taloustiedot 1.1.2017-31.12.2017. URL:http://hugin.info/175784/R/2191220/848279.pdf. Accessed: 14 November 2021.

Hayes, A. 2020. Offering circular. Investopedia. URL: https://www.investopedia.com/terms/o/offeringcircular.asp#:~:text=An%20offering%20circular%20is%20a%20type%20of%20prospectus,but%20is%20still%20required%20to%20contain%20specific%20information. Accessed: 10 October 2020.

Holmström, E., Tirole, J. 1993. Market Liquidity and Performance Monitoring. Journal of Political Economy. URL: file:///C:/Users/fabio.mastropasqua/OneDrive%20-%20Uponor%20Corporation/Desktop/1993%20JPE%20holmstrom%20and%20tirole.pdf. Accessed: 28 April 2021.

Jackson A., Schmidt J. 2021. Investing basics: small-cap stocks. Forbes. URL:http://orbes.com/advisor/investing/small-cap-stocks/. Accessed: 31 October 2021

KPMG 2015. A guide to going public. URL: https://assets.kpmg/content/dam/kpmg/pdf/2015/06/KPMG-A-Guide-to-Going-Public-Interactive.pdf. Accessed: 23 April 2021.

Kagan, J. 2019. What is underpricing? Investopedia. URL: https://www.investopedia.com/terms/u/underpricing.asp. Accessed: 10 October 2020.

Latham & Watkins 2013. Promoting efficiency in the European IPO model. URL: https://www.yumpu.com/en/document/read/32898586/promoting-efficiency-in-the-european-ipo-model-latham-watkins. Accessed: 26 March 2021.

Lehtimäki, M., Markkanen, N. 2020. Initial public offerings 2020. Global Legal Insights.

Lindemann, N. 2020. Long-run performance of Finnish initial public offerings: a quantitative study of listings on the OMXH Main List from 2005 to 2016. Aalto University School of Business. URL: https://aaltodoc.aalto.fi/bitstream/handle/123456789/44101/bachelor_Lindemann_Niklas_2020.pdf?sequence=1&isAllowed=y. Accessed: 15 August 2021.

Maksimovic, V., Pichler, P. 2001. Technological innovation and initial public offerings. The review of Financial Studies.

Market Business News. What is a public company? Definition and meaning. Market Business News. URL: https://marketbusinessnews.com/financial-glossary/public-company/. Accessed: 10 October 2020

Moscow Exchange 2021. Preparing for an IPO. URL: https://ipoguide.moex.com/eng/section-3-1.html. Accessed: 26 March 2021.

Myer, J.1969. Financial statement analysis:4th edition. Prentice-Hall. Englewood Cliffs.

Nanda, V., Yun, Y. 1997. Reputation and financial Intermediation: an empirical investigation of the impact of IPO mispricing on underwriter market value. Journal of Financial Information.

Nasdaq 2016. First North listings 2016. URL: http://www.nasdaqomxnordic.com/news/listings/first-north/2016. Accessed: 04 October 2021.

Nasdaq 2016. Main market listings 2016. URL: http://www.nasdaqomxnordic.com/news/listings/main-market/2016. Accessed: 04 October 2021.

Nasdaq 2017. First North listings 2017. URL: http://www.nasdaqomxnordic.com/news/listings/first-north/2017. Accessed: 04 October 2021.

Nasdaq 2017. Main market listings 2017.URL: http://www.nasdaqomxnordic.com/news/listings/main-market/2017. Accessed: 04 October 2021.

Nasdaq 2018. First North listings 2018. URL: http://www.nasdaqomxnordic.com/news/listings/first-north/2018. Accessed: 04 October 2021.

Nasdaq 2018. Main market listings 2018. URL: http://www.nasdaqomxnordic.com/news/listings/main-market/2018. Accessed: 04 October 2021.

Nasdaq 2021. Companies listed on Nasdaq Helsinki. URL: http://www.nasdaqomxnordic.com/shares/listed-companies/helsinki. Accessed: 22 August 2021.

Nasdaq 2021. Main market segments.URL: https://www.nasdaq.com/solutions/nasdaq-nordic-main-market. Accessed: 22 August 2021.

Pagano, M., Panetta, F. & Zingales, L. 1998. Why do companies go public? An empirical analysis. National Bureau of Economic Research. URL:https://poseidon01.ssrn.com/delivery.php?ID=564097067103026124099118082099009066023084000087056003103124035100042122035049037033011029019023093122127070017067008093082100010102075073064001019120085100089091006027105007011124067081095085&EXT=pdf&INDEX=TRUE. Accessed: 15 April 2021.

Phillips, G. 2021. The effect of going public on firm performance and commercialization strategy: evidence from international IPOs. Harvard Law School Forum on Corporate Governance. URL:https://corpgov.law.harvard.edu/2021/09/22/the-effects-of-going-public-on-firm-performance-and-commercialization-strategy-evidence-from-international-ipos/. Accessed: 10 October 2021.

Pwc 2021.Roadmap for an IPO: a guide to going public.Pwc. URL:https://explore.pwc.com/c/glossary?x=nmqemH . Accessed: 14 May 2021.

QT Group 2016. Annual Financial Report 2016. URL:https://mb.cision.com/Public/14183/2327217/a1f720d70069f1e8.pdf. Accessed 14 November 2021.

QT Group 2017. Annual Report 2017. URL: https://mb.cision.com/Main/14183/2453953/793241.pdf. Accessed 14 November 2021.

Rajan, R. 1992. Insiders and outsiders: the choice between informed and arm´s length debt. The Journal of Finance. URL:https://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.1992.tb04662.x. Accessed: 15 April 2021.

Rhiannon, A. 2020. Volatility measures how dramatically stock prices change, and it can influence when, where, and how you invest. Business Insider. URL:https://www.businessinsider.com/what-is-volatil-ity?r=US&IR=T. Accessed: 29 October 2021.

Ritter, J. 1991. The long run performance of initial public offerings. The Journal of Finance. URL: https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1540-6261.1991.tb03743.x. Accessed: 21 August 2021.

Schipper, K., Smith, A. 1986. A comparison of equity carve-outs and seasoned equity offerings Share price effects and corporate restructuring. Elsevier. Amsterdam.

Securities Market Association 2021. The Corporate Governance Code. URL: https://cgfinland.fi/en/cor-porate-governance-code/. Accessed: 22 August 2021.

Statista 2020. Average required return to equity for investments in Finland from 2015 to 2021. URL:https://www.statista.com/statistics/926477/average-required-return-to-equity-finland/. Accessed: 2 November 2021.

Stobierski, T. 2020. 13 financial performance measures managers should monitor. Harvard Business School Online. URL:https://online.hbs.edu/blog/post/financial-performance-measures. Accessed 18 Oc-tober 2021.

Tuominen, S. 2021. The initial public offerings law review: Finland. DLA Piper. URL: https://thelawreviews.co.uk/title/the-initial-public-offerings-law-review/finland. Accessed: 1 November 2021.

Zattoni A.; Judge,W. 2012. Corporate Governance and Initial Public Offerings: An Interna- tional Per-spective. Cambridge University Press. Cambridge

TheEconomicTimes. Definition of IPos. URL: https://economictimes.indiatimes.com/definition/ipo - :~:text=Definition%3A Initial public offering is, exchange and hence goes public. Accessed: 10 October 2020

## Attachments

Attachment 1. Sustainable growth rate calculation

| Companies | ROE | Retention ratio | Sustainable growth rate 2021 |
|---|---|---|---|
| Kamux Oyj | 24,37% | 304,29% | 74,16% |
| QT Group Oyj | 42,94% | 58,61% | 25,17% |
| Efecte Oyj | -18,50% | 2427,03% | -449,00% |
| Fellow Finance Oyj | -6,47% | -13,64% | 0,88% |
| Titanium Oyj | 33,42% | 66% | 22,08% |
| Rovio Entertainment Oyj | 19,42% | 499,81% | 97,05% |
| Harvia Oyj | 23,30% | 153,29% | 35,72% |
| Anora Group Oyj | 11,39% | 647,75% | 73,77% |
| Admicom Oyj | 29,76% | 148,06% | 44,07% |
| BBS Bioactive Oyj | -44,83% | 467,77% | -209,69% |
| Enersense International Oyj | -0,68% | 2409,09% | -16,45% |
| VMP/Eezy Oyj | 2,66% | -209,33% | -5,56% |
| | | | |
| Formula | ROE * Retention Ratio | | |

Attachment 2. BHAR 12 months calculations

| Companies | Price return 12 | Index return 12 | BHAR 12 |
|---|---|---|---|
| QT Group Oyj | 75,16% | 22,23% | 52,93% |
| Kamux Oyj | -20,37% | 6,00% | -26,37% |
| Rovio Entertainment Oyj | -60,25% | 5,48% | -65,73% |
| Anora Group Oyj | -2,84% | 0,87% | -3,70% |
| Admicom Oyj | 152,34% | 22,30% | 130,04% |
| Harvia Oyj | 28,42% | 1,01% | 27,41% |
| Titanium Oyj | 4,59% | 21,09% | -16,50% |
| Efecte Oyj | -10,06% | 17,38% | -27,44% |
| Fellow Finance Oyj | -56,08% | 11,34% | -67,41% |
| BBS Bioactive Oyj | -13,95% | 13,02% | -26,98% |
| Enersense International Oyj | -58,87% | 23,34% | -82,21% |
| VMP/Eezy Oyj | -10,34% | 1,62% | -11,96% |
| | | | |
| Formula | Price return 12 months - Index return 12 months. | | |

Attachment 3. BHAR 24 months calculations

| Companies | Price return 24 | Index return 24 | BHAR 24 |
|---|---|---|---|
| QT Group Oyj | 53,07% | 27,34% | 25,73% |
| Kamux Oyj | -29,63% | -6,71% | -22,92% |
| Rovio Entertainment Oyj | -64,38% | -1,75% | -62,64% |
| Anora Group Oyj | -6,99% | -28,50% | 21,51% |
| Admicom Oyj | 657,57% | 66,16% | 591,41% |
| Harvia Oyj | 45,60% | -28,90% | 74,50% |
| Titanium Oyj | 28,84% | 30,25% | -1,42% |
| Efecte Oyj | 4,84% | 54,23% | -49,39% |
| Fellow Finance Oyj | -64,30% | 125,09% | -189,40% |
| BBS Bioactive Oyj | 47,67% | 42,96% | 4,72% |
| Enersense International Oyj | -69,62% | 63,41% | -133,04% |
| VMP/Eezy Oyj | -22,03% | 51,88% | -73,91% |
| | | | |
| Formula | Price return 24 months - Index return 24 months. | | |

Attachment 4. BHAR 36 months calculations.

| **Companies** | **Price return 36** | **Index return 36** | **BHAR 36** |
|---|---|---|---|
| QT Group Oyj | 207,40% | 20,37% | 187,03% |
| Kamux Oyj | -6,61% | -10,23% | 3,61% |
| Rovio Entertainment Oyj | -47,22% | 3,75% | -50,96% |
| Anora Group Oyj | 42,23% | 220,22% | -177,99% |
| Admicom Oyj | 965,42% | 18,92% | 946,50% |
| Harvia Oyj | 480,00% | 84,22% | 395,78% |
| Titanium Oyj | 56,38% | 164,37% | -107,98% |
| Efecte Oyj | 112,77% | 178,12% | -65,35% |
| Fellow Finance Oyj | -62,03% | 84,22% | -146,25% |
| BBS Bioactive Oyj | -7,42% | 172,68% | -180,10% |
| Enersense International Oyj | 78,11% | 187,27% | -109,15% |
| VMP/Eezy Oyj | 11,11% | 45,59% | -34,48% |

**Formula** Price return 36 months - Index return 36 months.