

STUDY OF AUCTION METHODS AND DRIVING FORCES OF BIDDING TO IMPROVE IPO SIMULATION

Kati Salo

10041

OPINNÄYTE	
Arcada	
Koulutusohjelma:	International Business
Tunnistenumero:	10041
Tekijä:	Kati Salo
Työn nimi:	Study of Auction Methods and Driving Forces of Bidding to Improve IPO Simulation
Työn ohjaaja (Arcada):	Henry Clay Ericsson
Toimeksiantaja:	Henry Clay Ericsson
<p>Tiivistelmä:</p> <p>Tämän opinnäytetyön tavoitteena oli tutkia erilaisia huutokauppa menetelmiä ja syitä huutokaupparjousten takana, jotta voitaisiin kehittää Arcadan Listautumisanti-simulaatiota. Arcada järjestää vuosittain Listautumisanti-simulaation osana Entrepreneurship 2 -kurssia. Simulaatiomenetelmät ja simulaatioprosessi vaihtelee kuitenkin vuosittain. Kirjoittaja sai opinnäytetyön aiheen Henry Clay Ericssonilta, jotta hän voisi kehittää nykyistä simulaatiota helpommaksi opettajille järjestää ja samalla tehdä simulaatiosta realistisempi opiskelijoille.</p> <p>Teoreettinen tutkimus perustui useisiin lähteisiin painetuissa materiaaleissa ja internetissä. Potentiaaliset huutokauppa menetelmät listattiin ja arvioitiin sopiva menetelmä käytettäväksi simulaatiossa. Arviointi perustui menetelmän soveltuvuuteen; simulaation tuli olla mahdollisimman realistinen, mutta samalla tasapuolinen kaikille opiskelijaryhmille, jotka osallistuivat simulaatioon.</p> <p>Laadullinen tutkimus tehtiin eri menetelmillä: Listautumisanti-simulaation suunnittelu ja toteutus 4.1.2010 osana tutkimustyötä, ja simulaation jälkeen opiskelijaraporttien tutkimus, selvittäen opiskejoiden mielipiteitä nykyisestä simulaatiosta ja opiskelijoiden tekemien huutokaupparjousten syitä. Kirjailija haastatteli Elina Gummerusta hänen kokemuksistaan antiikkiesineiden myyjänä / ostajana huutokaupoista ja internet-huutokaupoista. Kirjailija vertasi haastattelun tuloksia omiin havaintoihinsa Helsingin Panttin järjestämässä huutokaupassa ja hänen tutkimukseensa nettihuutokauppasivustolla Huuto.net.</p> <p>Tutkimus vahvisti, että modifioitu hollantilainen huutokauppa menetelmä on toimivin huutokauppa menetelmä Listautumisanti-simulaatioon. Tutkimuksen päätteeksi kirjoittaja suositteli Listautumisanti-simulaation keskittyvän opiskelijayritysten osakkeiden myymiseen käyttämällä vapaaehtoisia ostajina. Kirjoittaja korosti, että on tärkeää, että opiskelija keskittyy tarjoamaan osakkeita ja siten hän saa kokemuksia Listautumisanti-simulaatiosta yrityksen näkökulmasta.</p>	
Avainsanat:	huutokauppa menetelmät, tarjoaminen, Listautumisanti
Sivumäärä:	41
Kieli:	Englanti
Hyväksymispäivämäärä:	15.11.2010

DEGREE THESIS	
Arcada	
Degree Programme:	International Business
Identification number:	10041
Author:	Kati Salo
Title:	Study of Auction Methods and Driving Forces of Bidding to Improve IPO Simulation
Supervisor (Arcada):	Henry Ericsson
Commissioned by:	
<p>Abstract:</p> <p>The Objective of the thesis was to study different auction methods and driving forces of bidding to improve Arcada's IPO simulation. Arcada holds IPO simulation annually as a part of the Entrepreneurship 2 –course. However the method and simulation process varies every year. The thesis topic was given to the writer by Henry Ericsson to improve the current simulation to become easier for the lecturers to organize and more realistic simulation for the students.</p> <p>The theoretical framework was based on many sources in written literature and Internet. Potential auction methods for the simulation were listed and researched to find out the suitable method for the simulation. The evaluation was based on the usability of the method in order to make the simulation as close to reality as possible, but also equal for all the student groups participating into the simulation.</p> <p>The qualitative research was made by using different methods: an experiment in setting up an annual IPO simulation in 4.1.2010 and surveying the student reports after the simulation to study their opinions about the simulation, and the driving forces behind their bidding in the simulation. The writer interviewed Elina Gummerus about her experiments as an antique seller/buyer about the double auctions and internet auctions. The writer compared the results of the interview with her own observations made in double auction in Helsingin Pantti and her case study in internet auction site Huuto.net.</p> <p>The research confirmed that the modified Dutch auction method is the closest auction method for the simulation. At the end of the research the writer recommends the IPO simulation to focus on selling the shares of the student companies and using the volunteers to act as buyers. The writer points out that it is important for the students to concentrate on offering the shares and to get the experiences from the IPO simulation as a company.</p>	
Keywords:	auction methods, bidding, Initial Public Offering (IPO)
Number of pages:	41
Language:	English
Date of acceptance:	15.11.2010

TABLE OF CONTENTS

1	INTRODUCTION.....	6
2	DIFFERENT AUCTIONS AND BIDDING	7
	2.1 Different auction types.....	7
	2.2 Initial Public Offering	9
	2.2.1 Reasons for Listing.....	9
	2.2.2 Procedure.....	10
	2.2.3 Auction.....	11
	2.2.4 Pricing.....	12
	2.3 Bidding.....	12
3	PRESENTATION OF THE RESEARCH METHODS AND RESULTS.....	14
	3.1 Research Questions	14
	3.2 Research Methods	14
	3.2.1 Double auction	15
	3.2.2 Internet Auction	16
	3.2.3 IPO simulation	18
	3.2.3.1 The First Round.....	19
	3.2.3.2 The Second Round	20
	3.2.3.3 The Third Round	21
	3.3 Research results	22
	3.3.1 Driving Forces of Bidding	22
	3.3.1.1 Double auction	22
	3.3.1.2 Internet auction.....	24
	3.3.1.3 IPO	25
4	DISCUSSION	28
	4.1 Discussion about the IPO simulation	28
	4.2 Discussion about the Double Auction and the Internet auction bidding.....	32
	4.2.1 Double auction	32
	4.2.2. Internet auction.....	33
5	RECOMMENDATIONS FOR ARCADA IPO SIMULATION	35
	5.1 Place and time.....	35
	5.2 Roles during the simulation	35
	5.3 Procedure of the simulation.....	37
6	CONCLUSIONS	39
7	LIST OF REFERENCES	41

FOREWORD

This Thesis is dedicated to all those people who helped me to complete this project. Special thanks to my loving family and especially my auntie and my beloved boyfriend who stood by when I needed support. Also thanks to Henry Ericsson to his great mentoring throughout this Thesis project. Thank you.

1 INTRODUCTION

The aim of this thesis is to study different methods and driving forces of bidding to improve the IPO simulation of Arcada. The topic was given by Henry Ericsson as a thesis project to the writer who has an interest in auctions as well. The writer aims to study different auction bidding methods and to see whether there are similarities or differences between driving forces of bidding in different kind of auctions. By understanding driving forces of bidding and the effects of different auction methods, the writer is able to recommend a suitable method and ways to improve the IPO simulation of Arcada.

The thesis concentrates on three different types of auctions: double auction, internet auction and Initial Public Offering (IPO). From these three auctions, the writer puts a special attention on the IPO. The writer limits the research area into these three most common auctions, because the auction types of these three are very different from each other. The reason for the special focus that the writer puts on the IPO is to improve Arcada IPO simulation to become more realistic.

By visiting and observing double auction in Helsingin Pantti, IPO simulation in Arcada and internet auction in Huuto.net, the writer researches different bidding techniques as well as the differences in impulses that drive the buyer to buy the item. For the research on driving forces of bidding, the writer uses the student reports from the Arcada IPO simulation and the interview with Elina Gummerus about the double and internet auction. The writer compares the results with her own observations in auctions.

The problems and hypotheses of this thesis study are that, since driving forces of bidding vary as much as people's personalities, it might be difficult to point out all the driving forces that buyers have. The difficulty is also to find a way how to simulate IPO in such way that students would notice a difference between IPO and ordinary stock exchange. The writer concentrates on IPO results and the interview and from to define most common driving forces of bidding.

2 DIFFERENT AUCTIONS AND BIDDING

2.1 Different auction types

“An auction is a process of buying and selling goods or services by offering them up for bid, taking bids, and then selling the item to the highest bidder. In economic theory, an auction may refer to any mechanism or set of trading rules for exchange.” (Wikipedia, Auction)

The primary types of auctions listed by Wikipedia include English auction (an open ascending price auction), Dutch auction (an open descending price auction), sealed first-price auction or FPSD (a first-price sealed-bid auction) and Vickrey auction (a sealed-bid second-price auction).

English auction is most commonly used auction type these days (Wikipedia, Auction). In English auctions, the buyers bid openly against each other by bidding slightly higher than the other buyers. The auctioneer announces the starting price and the bidder raises his bids against the other bidders' bids. The bidders may also use a proxy to bid for them or the bids may be left with the auctioneer who places the bid into the auction for the bidder. The auction ends when there are no bidders who would like to bid further and after closing the higher bidder pays the winning bid. According to Wikipedia, in English auction the most significant factor is that all the participants are able to see the current highest bid, which makes the bidding and competing against other bidders easier.

Dutch auction or the open descending price auction starts always from the highest price and the price is lowered until a buyer is willing to pay the price for the good. The Dutch auction method is mainly used when there are several identical goods, like flowers or fishes, sold at the same time and there is equal number of bidders (Wikipedia, Auctions). Dutch auction is rather quick and if the bidder is not fast to make a move, he may leave empty-handed. Similarly, if bidder is afraid to lose the item, he may bid more than the actual value of the item.

Sealed first-price auction or FPSB is an auction where sealed bids are used and other bidders do not know which bid is the highest (Wikipedia, Auctions). The bids are made

only once and the highest bidder pays his bid. The sealed first-price auction method is used when selling government contracts or mining leases. FPSB is a matter of luck to bidders, since they are making bids blindly.

Vickrey auction is very similar to sealed first-price auction, but instead of paying his own highest bid, the bidder who wins pays the second highest bid. In some internet auctions, Vickrey auction method is used and the second highest bid plus a bidding increment is paid by the highest bidder. According to Wikipedia, Vickrey does not always give the highest bidder the lower price what he bid since the added bidding increment can be even 10% of the price.

From the secondary auction types most mentionable are All-pay auction, Top-up auction, Buyout auction, No-reserve and Reserve auctions, Reverse auction and Silent auction. (Wikipedia, Auctions)

In All-pay auction, every participant pays their bids despite they did not win the auction.

Top-up auction is used mainly in charities. It is variation of All-pay auction, where the highest bidder pays the difference between the highest and the lowest bid (Wikipedia, Auctions).

Buyout auction means that any of the bidders can accept the buyout price which is set by the seller before the auction starts (Wikipedia, Auctions). There are two types of methods used in buyout price: the temporary buyout price which is available only until the first bid is placed; and the permanent buyout price which is available until the end of the auction. When the buyout price is accepted, the item is sold despite the bids made.

Reserve auction is an auction where the seller reserves the possibility to accept or reject the highest bid (Wikipedia, Auctions). If the highest bid does not please the seller, he can reject the bid; and the reserve price set in advance is the lowest price that can be accepted.

In Non-reserve auction, the seller will accept any bid no matter how low the price will be. Sellers usually prefer to advertise the Non-reserve auctions because it attracts the bidders since there is a possibility to bargain with the prices (Wikipedia, Auctions).

Usually the bids get rather high because of the large amount of bidders, which is exactly what seller is looking for in Non-reserve auction.

Reverse auction means an auction where the roles of the buyer and seller are reversed (Wikipedia, Auctions). The sellers are in a competition to provide a good or service by offering lower bids until no lower bids are made.

Silent auction is a variation of an English auction where bids are written on a sheet of paper placed next to the item in sale (Wikipedia, Auctions). The time of the auction is determined before the auction starts and the highest listed bid wins. Silent auction is usually used in charities.

2.2 Initial Public Offering

“The IPO is the first sale of stock by a private company to the public. IPOs are often issued by smaller, younger companies seeking the capital to expand, but can also be done by large privately owned companies looking to become publicly traded.” (Investopedia, 2010)

An Initial Public Offering is a company's first offering shares to the public. IPO is a very significant moment for the company. The investors are interested on huge profits and try to avoid losses. This makes pricing the share crucial and all the actions of the company can make the changes in the investors buying decisions.

2.2.1 Reasons for Listing

“For the small to medium range company without the experience or expertise, the concept of taking the enterprise to the public market is often considered the ultimate corporate success.” (morebusiness.com, 1998)

Initial Public Offering is the first instance when the company becomes public. The main purpose of IPO is to attract investment banks and big investors to raise company capital by buying company's new shares. The successful IPO increases company capital more than regular stock exchange. According to Ross, Westerfield and Jordan (2008), when the private company decides to go public, it gains few benefits such as: allows

inexpensive access to capital, reinforces and expands equity base of the company, attracts and preserves the best management and employees. It also generates numerous financing opportunities such as equity, cheaper bank loans and so on, increased liquidity for equity holders, facilitates acquisition and exposure and prestige (Ross, Westerfield, Jordan, 1998). IPO's main objective is to offer shares outside the company. If the existing shareholder would like to buy more shares, the company wouldn't have to offer shares in IPO.

2.2.2 Procedure

IPO usually has an investment bank or syndicate as an underwriter who offers the shares to the investors on behalf of the issuer, the company. In IPO, stocks are traded on cash basis where investors buy the stocks with cash and have few days to settle the transaction (Ross, Westerfield, Jordan 1998). The underwriters keep a commission even up to eight percent based on a percentage of the value of the shares sold. According to Rahoitustarkastus, the IPO selling of shares commonly uses one of the following methods:

- Best efforts contract is a method where the underwriter agrees to sell as many shares as possible at the price agreed with the issuer.
- Firm commitment contract is a contract method where the underwriter guarantees the sale of the stock at the price agreed with the issuer. In the issuer's point of view this contract method is the safest but also the most expensive contract method, since the underwriter takes the risk of sale.
- In All-or-none contract, the underwriter agrees either to sell the entire offering or to cancel the deal. The issuer can be sure that either all the offered stocks are sold at the end of the offering or the issuer is able to cancel the deal with the underwriter.
- Bought deal is the contract where the underwriter acts as principal rather than agent, purchases securities from an issuer before a preliminary stock list is filed. The bank negotiates a price with the issuer and buys the shares if possible at discount to the current market price.

- Dutch auction as mentioned above is a method where offering starts always from the highest price and the price is lowered until some buyer is willing to pay the price for the good.

In Finland the companies that would like to offer shares in IPO have to go through several legal procedures in order to get their shares into offering. According to Rahoitustarkastus, generally the company uses emission organizer as a financial counselor who makes the needed Due Diligence –checking where the emission organizer researches the company’s abilities to be listed into stock markets as well as the total value of the company. In order to be listed into stock markets, the company has to follow the Finnish Securities Markets Act including the declaration duty.

Rahoitustarkastus also tells clearly that Finnish Financial Supervisory Authority confirms the IPO application if the company fulfills the required standards and issues the needed information for the valuation of the stock. The Listing Committee of the NASDAQ OMX, the world’s largest exchange company’s Helsinki department will make the final decision whether the company is allowed to be listed or not. The decision is largely based on the company’s ability to follow the Securities Markets Act, the regulations of the Finnish Ministry of Finance as well as the rules of the NASDAQ OMX Helsinki.

2.2.3 Auction

The actual IPO auctions start with the road show where companies make presentations to the investors and investment banks to get them to buy their shares. The name Initial Public Offering might be misleading:

“It would seem that, in the IPO, the shares would be offered to the general public. But in most cases they’re not. Large investors and investment banks buy big blocks of stock after private conversations with the company.”(HowStuffWorks, 2008)

The large investors and investment banks pay large amount of cash for the stock and almost immediately they start to sell the stocks they bought at the public exchange, where smaller investors can buy those. This is how the investors and investment banks make their money out of IPOs.

2.2.4 Pricing

Pricing the stocks in IPO is a quite complex part of the IPO preparations for the issuer company. According to HowStuffWorks (2008), the company can choose any price for its stocks but if the company puts the price too low, it leaves money on the table and does not get the full potential value out of its stocks. The price of the stock always gets higher when people start trading it. If the company puts the price too high, the stock price falls and that makes bad reputation for the company. The investors are not interested on buying shares that lose value immediately after purchase. This is the main reason why the companies are thinking carefully at what price to sell their stocks. Despite the efforts companies put into pricing their stocks, underpricing is the most common phenomena in pricing.

“Studies (made by W. P. Carey management professor Robert E. Hoskisson and researchers from three other U.S. universities) have found that IPOs in the United States are underpriced an average of 15 percent. Thus, at the end of the first day of trading, the stock price of a company is typically 15 percent higher than the initial price set by the underwriter.” (Knowledge@W.P. Carey, 2008)

Investment banks and large investors benefit the most from underpriced IPOs. They support underpricing since it is way to cash out at the issuing company’s expense. Since the pricing is very difficult for the companies, many of them underprice their stocks and therefore lose their capital. Still there are companies that use underpricing to interest institutional investors, venture capitalists and investment banks to buy the shares.

2.3 Bidding

“Bidding is an offer (often competitive) of setting a price one is willing to pay for something. A price offer is called a bid. The term may be used in context of auctions, stock exchange, card games, or real estate transactions.”(Wikipedia, Bidding)

Buying in auctions is done by bidding. Every buyer who is interested to buy an item makes an offer or a bid, to raise the price higher than the other buyer, since the highest bid gets the item. Some auctions houses require the bidders to register themselves. By registering the bidders, the auction house has every bidder's personal details and they give the bidder a personal bidder number. Also by signing the registration form, the bidder accepts the conditions of the auction. After accepting the conditions, the auction bid is unconditional offer to buy. It is buyer's duty to check each item before bidding. If the buyer realizes afterwards that the item is broken, there are no guarantee time for the purchase.



(Image: Bidding)

During the auctions the bids can be made by showing up bidder number, hand or saying the bid out loud. If the buyer cannot be present at the auction he or she may use a proxy to bid for him or her. Also bids can be made by phone or the buyer may leave his or her bid before the auction by contacting the auction house or the broker.

After the item has been sold to the highest bid, the bidder might have to sign a specific bid confirmation form. This is done especially when high value items like real estate or high value art is sold in auctions.

3 PRESENTATION OF THE RESEARCH METHODS AND RESULTS

3.1 Research Questions

The research questions of this study are:

- How can the Arcada's current IPO simulation be improved?
 - Which auction methods to use?
 - How to make the IPO simulation fairer, more realistic, quicker, and easier for students to understand and also less time consuming for the teachers?
- What are the different auction methods?
 - Which methods can be used in IPO?
 - How the different auction methods affect bidding?
 - Which method is the most suitable for the Arcada's IPO simulation?
- What makes buyers to bid?
 - What are the driving forces of bidding?
 - What were the reasons behind the students' purchases in the IPO simulation 4.1.2010?

3.2 Research Methods

The methods used in this research were:

- literature search
- internet search
- interview
- survey on student reports

- experiment in setting up the IPO session
- participatory case study on internet auction
- observations in auctions and in IPO simulation
- phenomenology on bidding behaviors

The writer studied different bidding methods by visiting auctions in Helsinki and in Internet. By visiting double auction in Helsingin Pantti, Initial Public Offering (IPO) simulation in Arcada and Internet auction in Huuto.net, the writer can see the difference in bidding techniques as well as the difference in impulses that drive the buyer to buy the item. The writer also interviewed Elina Gummerus, an antique shop-owner, who frequently visits auctions to buy items for her shop. She also has a lot of experience of internet auctions in both seller's and buyer's point of view.



(Image: Helsingin Pantti)

After observing different auctions and bidding methods, the writer took a closer look at the IPO simulation which was the planned simulation to give the students a glimpse of real IPO auction. Since the students were both selling and buying shares, there were different impulses that drove the students to buy specific shares even though none of the companies have ever stepped into the real business world. After IPO simulation, each student wrote short report about their personal success and the reason behind his/her buying decision. Since the previous success of the company wasn't involved, the buyers were more likely to follow their instincts and feelings when buying the shares.

3.2.1 Double auction

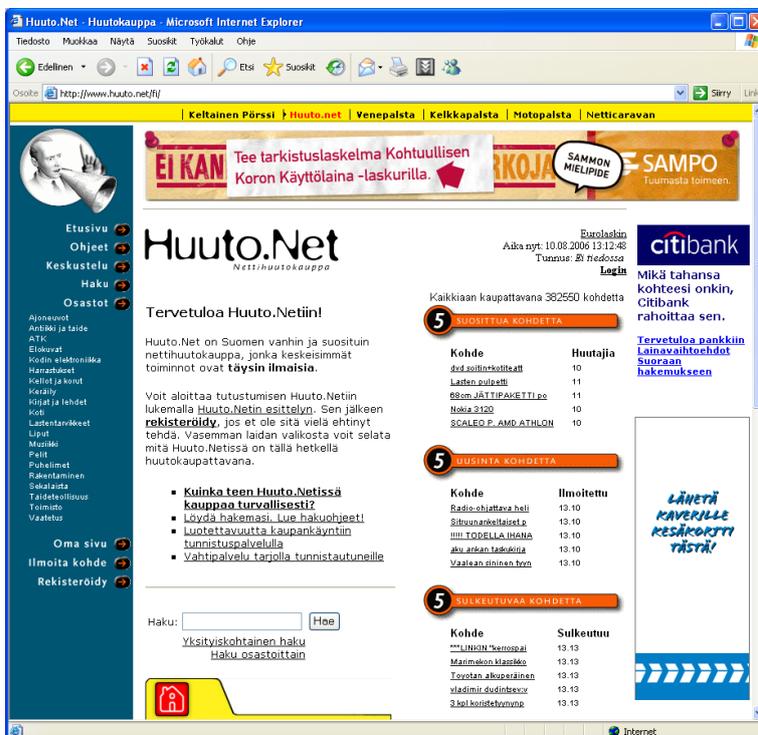
The writer visited a double auction held in Helsinki by Helsingin Pantti. The goods sold in auctions were unclaimed items from pawn-broking office. The buyers were provided

with an opportunity to observe items beforehand and state their pre-bids before the actual double auction started. In the auction session, the broker presented every item in their turn and announced the starting price. Buyers gave their bids simply by raising their hands or buyer numbers; and the broker announced the bids as they were given. When the highest bid was given, the broker announced the item to be sold.

In the double auction, there were two kinds of buyers; the ones who knew exactly what to look for and the ones who were just looking for unique treasure items. There were no hesitations among the buyers while the bids were given. The timing and a large budget were crucial, since the auction session was held fast and wanted items were quickly sold.

3.2.2 Internet Auction

The writer visited the oldest internet action website of Finland Huuto.net to compare the bidding done in the internet to the bidding done in other auctions.



(Image: Huuto.net front page)

In Huuto.net, the registered user can be both buyer and seller. The bidding method of the service is made as simple as possible so that everyone can successfully take a part in auction.

The registered seller puts his or her items into right item categories. The seller needs to write as attractive item description as possible for the buyers and set a right starting price, size of the minimum bid and decide the lowest price he or she is willing to sell the item for. After setting the prices, the seller sets the time that the item is available for bids and then to announce the item into the auction list. The seller will get an email when the item is sold and he or she will get the buyers contact information.

The buyer is recommended to go through all the listed items that are for sale. When the buyer finds something he or she is interested to bid for, he or she is recommended to check the price, the minimum bid of the item, and how long the item is for sale. Since the buyer cannot see and touch the real item, he or she is always recommended to check the detailed description of the item and find out as much information as possible about the seller. When the buyer has found the item he or she wanted to bid for, the buyer has to log in or register into the webpage and make a bid. The buyer will get an email if anyone makes a higher bid or if the buyer's bid is the highest after the closing of the sales. Since the emails are updating rather slow for the bidding, the buyer is always recommended to keep an eye on the auction page of the item. Huuto.net also provides automatic bidding service for the buyer, so that whenever someone bids higher price than the buyer the automatic bidding service will raise his bid higher than the competitors. The automatic bidding will keep on going until there are no higher bids or the automatic bidding service hits the price which the buyer has set to be his last offer.

3.2.3 IPO simulation

The IPO simulation was held in Arcada as a part of the Entrepreneurship 2 –course. IPO simulation was organized in 4th of January 2010 by Henry Ericsson and the writer had an opportunity to participate into the planning phase of the simulation.

During the Arcada IPO simulation, the students of the Entrepreneurship 2 –course were able to sell and buy the shares of the companies they had created during the course. The companies were familiar among the students. Since the companies were new, they did not have any history of doing business in their own business area. Each company offered ten new or old shares and each student acted as a buyer and bought the shares of the companies he or she wished to invest for.

In the beginning of the simulation, each student was given 400 Euros of play money to buy the shares individually. If the student was unable to attend in the simulation, he or she was able to name a proxy to buy the shares for him or her.

It was decided the simulation to have three bidding rounds and before every round companies have a chance to change price of their shares, but without knowing the competing share prices. The minimum price of the share was set to be 100 Euros.

In the IPO simulation, ten out of eleven companies were presented and 26 students participated into the bidding rounds.

3.2.3.1 The First Round

In the first round, the companies started with rather low prices that were both testing the buyers' willingness to pay and also making careful start because the companies didn't know how their competitors set their prices. The starting prices, share types and success of the companies in the first round can be seen from the table below.

The First Round

No	Company	Shares	Share price/€	Sold shares	Total after round 1
1	Helping Tools Oy	10 new	200	5	1000
2	Plastix	10 old	250	4	1000
3	Plasdeco Oy	10 new	300	0	0
4	Luutech Oy	10 new	400	1	400
5	Snova	5 new/5 old	300	3	900
6	Adcellent	10 new	300	10	3000
7	Helsinki Art	10 new	400	1	400
8	Score 99	10 new	500	0	0
9	Smarteckfin	10 new	250	3	750
10	Startin Point	10 new	300	0	0

Table 1: The First round of the IPO simulation 4.1.2010

In every round, the bidding was started from the highest price offered and then moved on to the second highest price until every company had their shares offered once. In the first round, the buyers bought mainly shares what they had planned to buy and also proxies tried to buy the shares that they were told to buy by people they were representing for. Because of the high demand of Adcellent shares, many buyers were left without the share.

3.2.3.2 The Second Round

In the second round, the companies had already seen their competitors in action; and therefore most of the companies lower their prices to 200 Euros, which was lower than the general price level in the first round. Still some of the companies stood by their old price and felt that their shares were worth for the whole price. They sold half of the total amount of shares despite of higher price level. In the following table the price changes and the followed sales are listed.

The Second Round

No	Company	Shares	Share price/€	Sold shares	total after round 1	total after round 2
1	Helping Tools Oy	5	200	0	1000	1000
2	Plastix	6	200	4	1000	1800
3	Plasdeco Oy	10	200	2	0	400
4	Luutech Oy	9	400	5	400	2400
5	Snova	7	200	7	900	3300
6	Adcellent	sold out			3000	3000
7	Helsinki Art	9	400	5	400	2400
8	Score 99	10	350	1	0	350
9	Smarteckfin	7	200	4	750	1550
10	Startin Point	10	200	0	0	0

Table 2: The Second Round of the IPO simulation 4.1.2010

In the second round, some of the buyers had already spent their money or most of it when the round started and it affected their buying behavior. Snova was sold out with their lowered price and made the highest profit at the end of the simulation. From all the companies, Startin Point did not attract any buyers in two rounds.

3.2.3.3 The Third Round

The third round was the last chance for the buyers to spend their money. Prices were reduced for the last time, but only three companies were able to attract remaining customers. In the following table, the final price changes and the final sales are listed as well as the total sales made by each company.

The Third Round

No	Company	Shares	Share price/€	Sold shares	Total after round 1	Total after round 2	Total after round 3
1	Helping Tools Oy	5	200	0	1000	1000	1000
2	Plastix	2	200	0	1000	1800	1800
3	Plasdeco Oy	8	150	3	0	400	850
4	Luutech Oy	4	400	0	400	2400	2400
5	Snova	sold out			900	3300	3300
6	Adcellent	sold out			3000	3000	3000
7	Helsinki Art	4	600	0	400	2400	2400
8	Score 99	9	200	1	0	350	550
9	Smarteckfin	3	400	0	750	1550	1550
10	Startin Point	10	200	2	0	0	400

Table 3: The Third Round of the IPO simulation 4.1.2010

Plasdeco Oy was able to sell three shares with the lowest price of 150 Euros, Startin Point sold two shares and Score 99 sold one share, both with the price of 200 Euros.

3.3 Research results

3.3.1 Driving Forces of Bidding

The writer concentrated on researching the driving forces of bidding. The main research questions were: What makes buyers to bid for the item in the auction? Are there influencing factors that make the buyers to bid? Does the bidding competition affect the buyers willingness to buy the item?

3.3.1.1 Double auction

The writer interviewed Elina Gummerus, an antique shop-owner from Kouvola, Finland, who has visited several double auctions in Mikkeli, Kotka, Ruotsinpyhtää, Kouvola, Anjalankoski, Hamina and Korja. She also buys and sells items in Huuto.net – internet auction webpage.

In the interview, Elina Gummerus described that auctions vary from small estate auctions, like bankruptcy auctions, to a bigger and more official double auctions such as the auctions in M. Helander Huutokaupat Oy.



(Image: M. Helander Huutokaupat Oy)

In bigger and more official double auctions, the broker presents the items with only facts and the prices; and the bids are made both by rising hand and by phone. In these auctions, the items are sold fast and the broker does not have to encourage buyers to bid. In smaller auctions, the bids rely much more on the broker's speech and often the broker tells more about the item and encourages buyers to bid. Gummerus says that a good broker makes buyers enjoy the auction and makes them also want to buy more items. If the broker is incapable in selling or acting unprofessionally, she feels that she does not want to buy anything. When the broker is professional, talkative and respects the buyers, it makes buyers like Gummerus stay in auctions for longer and also buy items.

Gummerus describes auction as an easy way of buying and selling. Usually there is time before the auction for the buyers to see the items in sale and to make decisions what to buy and how much to pay for. As an antique shop-owner, Gummerus tells that she is usually looking for particular items from the auctions that she knows that are demanded and asked by her customers, but also the items that have lower asking price than their real value. Gummerus also tells that when it comes to her own personal shopping, she is willing to bid for the items matching her own taste. In those cases, the good speech might make her to bid the items that she was not interested in the first place.

When asked about the bidding competition and does it affect her buying interests, Gummerus says the competition alone does not make her interested about the items and sometimes it might raise the prices so high that she has to give up and stop bidding. Although she has also seen that there are buyers who just enjoy bidding. If there is an item that no one is even interested to start bidding, as soon as you raise your hand for starting the bid, there are several competitors who just have to get that same item despite the price. Also the brokers in smaller auctions are affecting bidding. They try their best with humor and clever speeches to get buyers into the bidding competition and many times it works and there are many bidders for each item.

3.3.1.2 Internet auction

In the interview, Elina Gummerus described the internet auction as both an easy auction and a difficult auction. The reason why internet auctions are easy is simply because anyone can sell and bid for the items staying at home through the internet without anyone influencing on your buying decisions. The reason why internet auctions are difficult is because the buyer can only see the picture of the item before the purchase and without refunds or possibilities to return the item; the purchase is a risky business. Gummerus points out that honesty and reliability of the seller is valuable in internet auctions, since the seller works as a broker and tries to attract buyers only with picture and description of the item. Writing description is difficult since too embracing description might affect negatively and make the buyers to avoid the item. Gummerus tells the reason behind this avoiding is simply the belief that the item which needs a lot of embrace can be broken or there might be some other issues that the seller wants to hide. The only way to be clear about the seller's honesty is the buyers' feedback about the seller.



(Image: Internet Auction)

When asked about her preferences between the internet auction and the double auction, Gummerus says that she would go for the double auction. Internet auctions are crowded

with thousands of similar items and many times it is almost impossible for the buyer to find the items he or she is looking for. Even though the internet auction pages have several item categories, it does not seem to help the buyers. Also the purchasing process is uncertain even though the bidding itself is very easy. If you do not know the seller, there is the chance that you may lose your money or get the item in a bad condition. In the double auction, the item can be seen and the condition can be easily inspected; and therefore it less risky.

3.3.1.3 IPO

The writer studied the IPO simulation of Arcada a bit further to determinate what were the reasons why the buyers invested their money on certain companies. The fact that the companies were all made by the students and there were no items that buyer would have benefited in any ways, eliminates the effect of the product in bidding behavior. When it comes to double auctions or internet auctions, the buyers know exactly which item they want because of the benefit they get from buying that item. In the IPO simulation, the students used fake money to buy shares that did not exist in real life; and therefore did not give any benefit for the buyers.

The research was based on the reports the students made after the simulation. Out of 30 students that wrote the reports, 19 participated on the simulation and 11 used a proxy. Eight students combined their money to buy one share together.

Participants of the IPO simulation

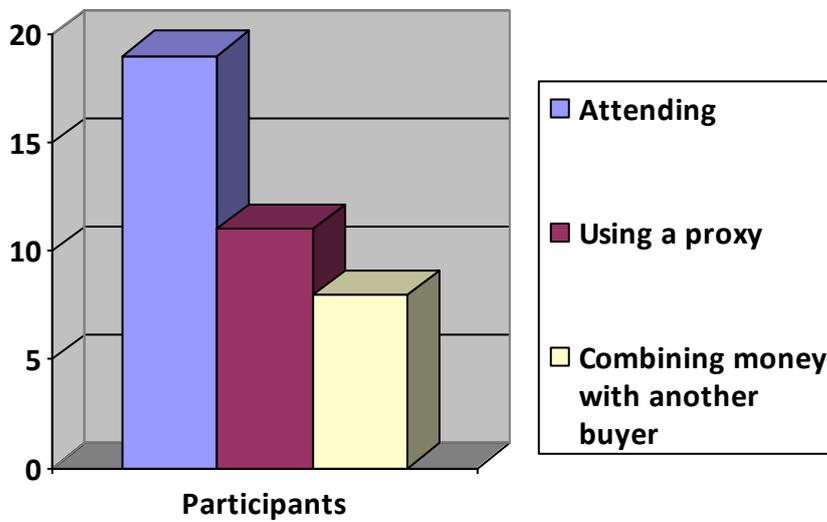


Figure 1: Participants of the IPO simulation 1.4.2010

In the chart below, it is shown that there were six buyers who bought one share, 17 buyers bought two shares and two buyers bought three or more shares.

Number of shares bought per buyer in IPO simulation

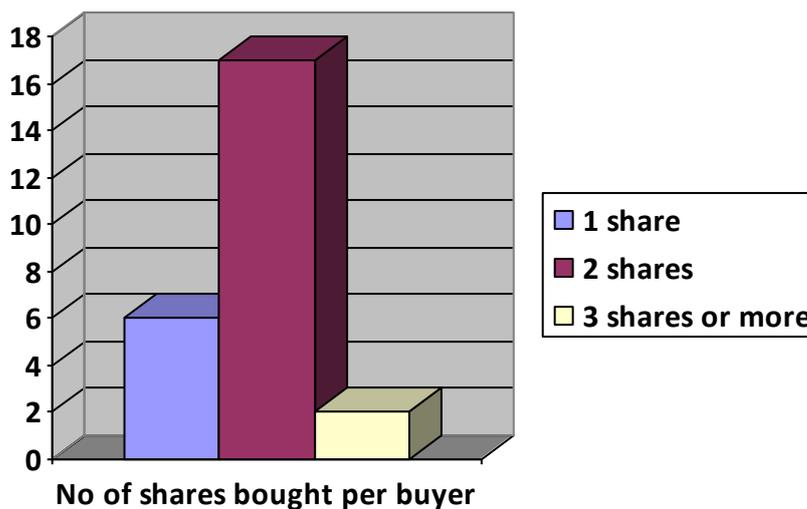


Figure 2: Number of shares bought per buyer in IPO simulation 4.1.2010

On the chart below are imaged different reasons that the buyers had for their bidding. The majority of the buyers bid for the shares because they liked the company business idea or they believed that the company would be successful in the future.

Good reputation or the good management of the company as well as the price of the share, were important features for the buyers when they made the bidding decisions. The minority of the buyers bid for the company shares because of the low risk or because of the good product that they would also use themselves. One buyer made a strategic move and bought a share of his own company to keep the decision making power in the former management team.

Driving forces of bidding in IPO simulation

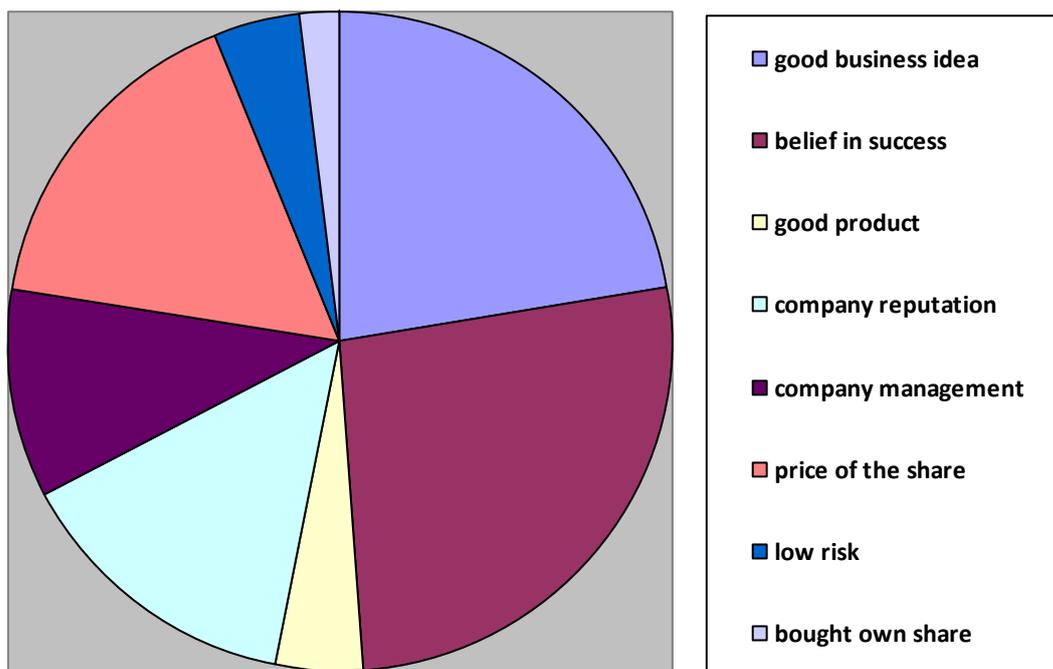


Figure 3: Driving forces of bidding in IPO simulation 4.1.2010

4 DISCUSSION

The topic of this research is Study of Auction Methods and Driving Forces of Bidding to Improve IPO Simulation. The research revealed a lot of different reasons for bidding and how the different auction methods may affect bidding. The topic interests the writer in many ways: in the beginning of this study, the writer knew only very basic things about auctions and almost nothing about IPOs. The writer has always been interested about the stock markets and investing. When Henry Ericsson gave the write this topic, the writer was excited about researching it further.

The writer's learning during the research has been remarkable, since the writer entered into the research with only very little amount of information about auctions and almost no information about the IPO. This research has helped the writer to understand further the differences between IPO and other auctions as well as the differences in bidding.

The writer thinks that this study will help Arcada and especially the Entrepreneurship courses. The recommendations will improve the IPO simulation to become more realistic and more understandable for students.

The writer also believes that this research will help the auctions sellers to understand how the different auction methods may affect to the buyers bidding decisions and also to realize the most common driving forces that make the buyers to bid.

4.1 Discussion about the IPO simulation

In the beginning of the research, the writer researched about auction methods and IPO; and designed an IPO simulation for the students in Entrepreneurship 2-course. The decision had to be made in a way that none of the companies would be in superior position compared to another. If the bidding method favored some of the companies more than the others, it might have affected the buying results and therefore also the buyers bidding decisions.

There were many different methods to choose from, but the result would vary a lot depending on the auction method. The good auction method should give all the participating companies equal chance to succeed, and therefore give more value to the company presentations. Good method for the IPO simulation is a method that is effective in a way that the companies get their shares sold in minimum time, generally the simulation may take maximum two hours. The preparations for the IPO should be quick and easy for the lecturers and at the same time as realistic as possible for the students.

English auction method is the most commonly used auction type. Since the English method is based on bidding slightly higher than your competitors, the method might have been useful if the companies would have offered only one share each. In English method, the shares would have been sold with the highest bid price. Since the students had equal, limited amount of money, bidding for the higher price would have ended up into the situation where each student would have been able to buy only one share. If this method would have been used in the Arcada IPO simulation, it would have been difficult for the companies to sell all the issued ten shares.

Sealed first-price auction or FPSB would not have worked for the Arcada IPO simulation either since the auction is based on blind bids, where bidders are trying to hit the highest bid and therefore get the offered item. As the students were given equal amount of money, the highest bid would always be the total 400 Euros given to the students. Similar to the English method, the Sealed first-price method would end up into situation where the students have enough money only to buy one share

Vickrey auction method is a bit better in theory than the Sealed first-price method and the English method since the highest bidder would pay the second highest bid. The problem in this method lies in the fact that the highest bid in the Arcada IPO simulation would always be the 400 Euros, which was the maximum amount of money each student was able to invest and as every student's bid would be the same 400 Euros, there would not be any second highest bids.

From the secondary auction methods, the All-pay method would have shortened the length of the IPO simulation majorly, because in All-pay auctions, every participated bidder pays their bid whether they win the item or not. Implementing this method would

end the IPO in a situation where only few students would be able to buy one share. The method does not fit into the purpose of selling 10 shares from each company.

The Top-up method would not have been suitable for the Arcada IPO simulation either. Even though the highest bidder would only pay the difference between the highest and the lowest bid, this method would not have worked if there were several highest bids with the same amount and no lower bids. Similarly, this method would end up into the same situation as the Sealed first-price auction.

Buyout auction method does not fit into the IPO simulation either since it simply eliminates the competition between the bidders before it even starts. Any bidder may accept the buyout price before the bidding even starts; and the item is sold despite the bids made. This method is not useful when there are many similar items offered simultaneously by many issuers and the bidders have a hard time to differentiate these offered shares from each other. Also the buyout method may not be ideal for the issuers either, since the bidding competition makes generally more profit for the company.

If reserve auction method is used, the issuer would have the possibility to accept or reject the highest bid, but in IPOs the issuers are generally accepting any price investors are willing to pay. Surely, the issuer decides the price for the stocks but often the issuer is willing to lower the price if that ensures investors to buy the shares.

After careful thinking, the writer ended up using the method almost similar to the Dutch method; the companies' shares are sold one after another by starting from the company with the highest stock price. The buyers interested may buy a stock and after the purchase, it is a turn for the company with second highest stock price.

The companies decided the price of shares beforehand so the company selling order is only a matter of luck. The writer noticed in the IPO that the companies that had made hard work for the presentations during the course also sold most of the stocks. After the first round, the companies were able to reduce their stock prices but this time the companies knew what was the general price level at the simulation and they were able to change the price accordingly.

In this Arcada IPO simulation, the student companies were not paying much attention to their pricing. In real IPO, the pricing is the most important part of the company

preparations because it can make or break company's reputation. It can affect the investors' decisions to buy the company stocks and therefore affect the company's capital either in a positive or in a negative way. Still the writer believes that the pricing did not play a big role in Arcada IPO simulation since the investors were not intended to sell their stocks after a purchase unlike in the real IPO investors. The price of the share was only third most important factor in the students bidding decisions. It was also one major difference between the Arcada IPO simulation and the real IPO that the students had only limited amount of money to invest on stocks; and they were able to buy approximately two stocks each with the money they were given. In real IPO, the investors are intending to buy a lot of stocks and the amount of money investor is able to put on stock sales may vary a lot. In Arcada IPO simulation, the intention was to give equal possibility to all students to buy the stocks, and they were therefore given the same amount of money; but in real IPO, the investors' possibilities to buy stock are not even close to equal. One or two investors or underwriters may buy most of the stock leaving only few to those with smaller budget. Still in Arcada IPO simulation, the writer was able to see how the competition over one company's stock might be harsh. All the stocks of Adcellent were sold immediately and many of the student investors were left with none. Some of the students even combined their money with other students to get one of the company shares.

The student investors of the Arcada IPO simulation were mostly buying stocks from the companies that they believed to be most successful or the company with the best business idea. Even in the real IPO, these factors may be important for the investors because they might affect the reselling value of the stocks.

Since the students in the Arcada IPO simulation were both buyers and the issuers who represented their own companies, some students were also able to buy the shares from their own company. The writer doubts this would be possible in real IPO since the company owners would not be the ones buying the stocks. The company buying its own shares would not make sense, since the main idea of the IPO is to raise capital by selling shares to the outside investors.

The students also put importance to the company reputation and the manager of the company, which is close to the reality since the company reputation and its managers'

business skills are put into high importance in real IPOs. If the company has bad reputation or some of the managers have bad business decisions in their past, it may affect in a way that investors will avoid the company and will not buy any of the stocks offered. Investors and underwriters are always focused on the reselling possibilities of the stocks, since that is the way to get their money back and make profit. No investor would buy a stock knowing that the company reputation will stop him or her from selling the stock later on in the stock market. The students in the Arcada IPO simulation would have bought stocks just because their friend owned part of that particular company; but in real life, investing in a company stock has nothing to do with anything else than business and profit.

4.2 Discussion about the Double Auction and the Internet auction bidding

4.2.1 Double auction

The writer bases the discussion of double auction and internet auction bidding on the interview with Elina Gummerus and her own observations.

Gummerus describes in the interview that there are two different kinds of double actions: formal and informal. In formal auctions, the items are sold fast and the broker does not have to encourage buyers to bid. In informal auctions, the bids rely much more on the broker's speech and often the broker tells more about the item and encourages buyers to bid. Gummerus values the broker's professionalism and respect towards the bidders but also the brokers' way to entertain the bidders with stories and jokes about offered items. Gummerus explains that in informal auctions, if the buyers enjoy the auction, it makes them want to buy more items. The writer agrees with Gummerus from her own observations also that the broker can make or break the auction. Good broker can sell the offered items in no time and with high prices. Unprofessional broker might not be able to get bidders to offer anything.

Gummerus thinks that auctions are easy way of buying and selling since the buyers are able to see the offered items and make decisions what to buy. In the double auctions, the writer observed how bidders were taking notes on a preview and making bidding decisions. Just like Elina Gummerus, many buyers are looking for particular items from the auctions. But it also seemed that some bidders are just enjoying the bidding competition. The writer witnessed some bidders to bid intensely for the item they did not show interest in preview. It could have been the bidders' technique not to show interest and then surprise the competitors by bidding. Although blindsiding in auctions does not seem to have effect since the bidders have to reveal themselves sooner or later. If the bidder really wants the item they are ready to offer a lot for it.

Gummerus has also seen similar phenomena where some bidders are bidding seemingly just because of the competition. If there is an item that no one is interested in and none is willing to start bidding; if someone starts bidding, suddenly, there are several competitors who just have to get that same item despite the price. Gummerus says the competition alone does not make her interested about the items and sometimes it might raise the prices so high that she has to give up and stop bidding. Bidding is seemingly affected by the competition in both positive and negative way. It may get some bidders to quit offering but it may also encourage some bidders to offer even more.

4.2.2. Internet auction

Elina Gummerus describes the internet auction as both an easy auction and a difficult auction; easy because anyone can sell and bid for the items staying at home through the internet and no one is trying to influence on others' buying decisions, but difficult because the buyer can only see the picture of the item before the purchase; and often there are no refunds or possibilities to return the item after the purchase. The writer found it also very difficult to be sure that the items were described honestly. Some items had a picture with the description but the pictures were often bad quality and the buyer cannot rely on them. For example while observing phones in Huuto.net, the writer found an item and the seller described in a description that there is a small crack in a surface of the item. The picture of the item did not show the faulty and the writer felt immediately that this item is too high risk to even to consider of buying. If the buyer cannot see

whether the faulty in the item is too big to bear, the risk is that the described “small crack” ends up being much more than expected after a purchase.

Internet auctions are also seemingly crowded with thousands of similar items, and despite many item categories it is difficult for the buyers to find the particular item that they are looking for. The writer tried to search for the Apple iPhone in Huuto.net and ended up with hundreds of results. If the buyer would not know what he or she is looking for in Huuto.net, he or she may end up viewing thousands of items in one day without finding anything interesting. The writer thinks that only by knowing exactly what to look for in internet auction pages, the buyer may find a product to bid for. The writer also found out that single product may stay in Huuto.net categories only for a couple of days, so as soon as there is interesting product the bids should be made fast, but only if the buyer relies on the seller.

The only way to get some idea about the sellers’ honesty is to read the buyers’ feedback on the seller. The problem lies on the fact that anyone, including seller with different usernames may write the good feedback on a seller. Whether the buyer trusts on these feedbacks is his or her own decision.

It is generally recommended that buyers should only purchase item at domestic internet auctions. When the buyer enters into international internet auctions like Ebay, there are lot of risks that buyer will face. If the buyer transfers money overseas, there is no guarantee that there will be any item shipped to the buyer. Therefore the international internet auctions are simply easy way to lose money fast. If the buyer gets the item in a described condition for his or her money, he or she is one of the lucky ones who actually found a real honest seller among the thieves. In domestic internet auctions like Huuto.net, the risks of being robbed are smaller but existing. Still it does not seem to affect on buyers’ will to buy items from internet auctions.

5 RECOMMENDATIONS FOR ARCADA IPO SIMULATION

The current IPO simulation is on a good base and after this thesis research of different methods and driving forces behind buyers bidding, the writer suggests following improvements to be used in Arcada's IPO simulation.

5.1 Place and time

The ideal place for the IPO simulation would be the lobby in the cafeteria or a big class room. The lobby is more suitable to get volunteers to play as the investors. The most suitable time would be two hours during the busiest lunch hours. Students should be given an hour for preparing a stand where they would present their companies. Stand requires minimum of company name and the sheet of paper indicating the current price of the share.

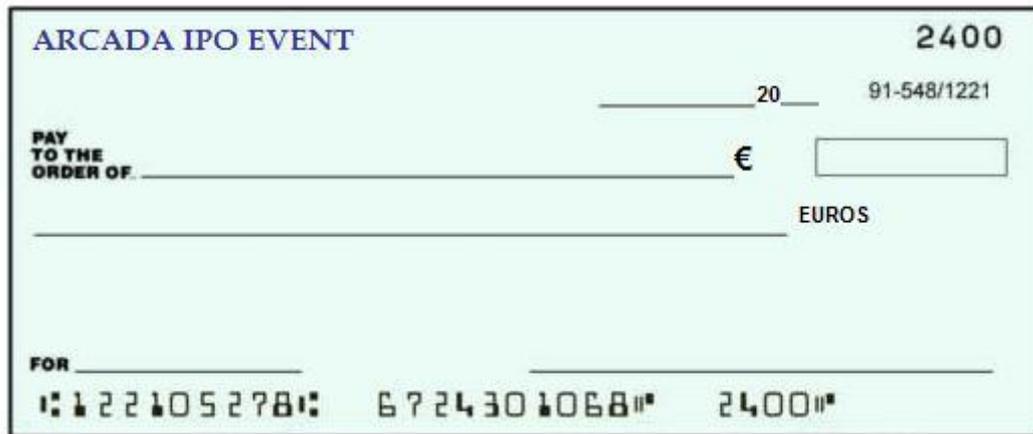
5.2 Roles during the simulation

The student companies are presented by their creators; the students of the Entrepreneurship-course. Before the IPO simulation, each student group / company, is given a task to create 30 second presentation for the investors regarding why they should invest for the company and what profits their company would give for the investors. Students need to come up with the amount of shares they are willing to offer – the limit can be set by the lecturer - and also to make the certificates for the investors indicating the shares they buy. Since making many share certificates is time consuming, the certificates could be left with the blank place where the number of sold shares can be written along with the name of the investor. The one certificate can represent many shares simultaneously.

The starting price for their shares can be anything between 10 to 100 Euros. The lecturer may remind the students that the pricing of the stock is one of the most important tasks they have to do for the IPO simulation. If the company sells its stocks in too low price,

the company will lose money, and if the company sets the price too high, it may not sell any stocks, which leads to the bad reputation of the company not only during the event but also in the future.

In the IPO simulation, available teachers or other school staff are playing the role of different investment banks. The investment banks will have power to purchase large number of shares from the company or companies of their choice. Instead of giving individual bills to the investment banks they are given two checks for the use of buying shares. Amount of money for investing is not limited since the banks are able to invest according to their instincts. If the bank believes that the company shares will bring profit for the bank, they are able to buy as many shares as they want.



(Image: A check for the investment banks)

The volunteering students outside of the course are playing the role of the individual investors. Each of them is given 100 Euros of play-money in 10 Euro bills to use for investing. The students may use their money to invest in one or more companies.



(Image: 10 Euro bill for the individual investors)

The reason behind using volunteers is simply to keep the students focus on offering the shares and participating in the IPO as a company. The previous IPO event drew too much students' focus on buying shares from each other. Afterwards most of the student reports concentrated on reporting how the individual student invested the given money. The volunteers are not needed for long time. Investing in a company takes approximately 30 seconds time from the volunteers if they know which company to invest in. This small participation will help the companies to concentrate on analyzing their own success and also to make the important decisions about price changes.

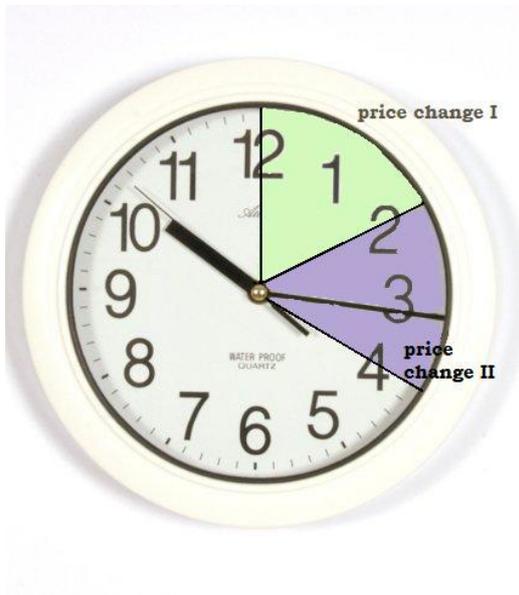
Money and checks can be collected back afterwards so that the same slips can be used in next years' simulation

5.3 Procedure of the simulation

The IPO simulation is started with the 30 second company presentations, where student groups present the company, their area of business, the reasons why their company would be a great investment and finally the starting price of their share. The starting prices should be collected by the teacher before the simulation to make sure that the companies will not get influence from each others' share prices in the beginning.

The simulation is going to follow the Dutch auction method, implicating that the price of the share will be changed. In the IPO simulation, the companies are given possibility to change the price of the share twice. These price changes represent the natural change

in share prices during the IPO, if the company is successful the price will rise and if the company is unsuccessful the price of the share will drop. The price change time will be set by the lecturer; two times during the simulation and all the companies will change their share prices at the same time. The price change is not compulsory and the price can either increase or decrease.



(Image: The Dutch Auction method)

The investors and the representatives of the investment banks are allowed to buy the shares at any time they want. The company stands are open for transactions at the same time, which allows all the companies equal possibilities to get their shares sold. When the company has sold all the offered stocks they close the stand, calculate the money earned and report the amount to the teacher. Similarly, when the simulation ends, the companies calculate the earned money as well as their sold and unsold shares. By calculating the results, the students may realize that the company that sold out first may not be the company with the highest profit at the end of the simulation. It would be also good for the students to write a report afterwards about their findings during the simulation.

6 CONCLUSIONS

After the thesis research, it is obvious that there are many different methods for auctions and many different reasons for the buyers to bid. Arcada has had the IPO simulations annually with different methods and procedures. The most parts of the 2010 simulations were working well and many of the participating students felt the simulations as a success. One of the reasons behind this research is to find a suitable method and procedure to make the Arcada IPO simulation as realistic as possible to increase students' knowledge about the IPO, and at the same time to help them to find out how successful their business idea is in the eyes of the investors.

During this research the writer studied different auction methods to find out the most suitable for the IPO simulation. It was also necessary to understand the relationship between the auction method and bidding behavior. There are many auction methods indicating how and which ways the buyers are bidding. The method itself may affect on buyers bidding behavior and also be unequal to the all offered items or in this case unfair to the all companies offering their shares. The auctions methods are made for different situations and events and therefore not all of them are suitable for IPO. After the research, the writer ended up using the Dutch method, which enables the price changes during the IPO simulation.

During this research, the writer concentrated on the driving forces of bidding in order to understand what makes the buyers buy the particular items or shares. In the IPO simulation 2010, the main reason behind students bidding was the good reputation of the company or the belief in the company's success. Also the price played a big role in the bidding decisions.

The price was also one of the main reasons for bidding in double auctions as well as internet auctions. The offered item surely was the main reason behind most of the bids but raising the price may end the bids fast. It was also revealed during the research that in some cases, simply the thrill of the competition in bidding might encourage buyers to bid. Some buyers were simply addicted to competing each other, despite the item offered.

In order to make the Arcada's current IPO simulation more fair and realistic for the students, it was necessary for the writer to go back to the steps of the IPO and to modify the basic IPO event into a simulation for the students. Unlike in Arcada IPO simulation, it is not usual that in a company's IPO event there would be several other companies offering shares at the same time. IPO as an event is the company's debut on a listed stock market and an event where company is offering shares for the big investors and investment banks for the first time. It is the company's biggest chance to raise capital and therefore one of the most important events in company's history.

The pricing of the share is extremely important task in IPO preparations. Therefore, it is necessary for the lecturer to remind the students before the simulation to think carefully in which price to sell their company shares. The students are able to see the affects of the pricing and the company presentation in the results after the event.

It is important for the students to focus on offering shares and procedures of the IPO as a company rather than thinking how they would invest on these available companies. Taking volunteers like teachers, Arcada staff members and other students to play the roles of buyers, will help the students to realize the main reason of the simulation.

Like the students in previous IPO event wrote reports about their thoughts afterwards, it would also be good for the students in the future simulations to write a report about the findings during the IPO simulation. This time the students will have more concentration on offering rather than buying.

The recommendations for the IPO simulation together with the base from the previous IPO simulations will create a useful method for the simulation that can be used many times in the future. These improvements allow the students to focus on offering the shares and participating as a company. The new simulation is a bit closer to the reality and allows the students to experience the excitement of the IPO as a company. The students are also a valuable resource when it comes to improving the simulation further in the future. The students' experiences are recommended to be taken into consideration when preparing the next year's simulation.

7 LIST OF REFERENCES

Wikipedia, Auction. Online document accessed 28.3.2010.

<http://en.wikipedia.org/wiki/Auction>

Wikipedia, IPO. Online document accessed 29.3.2010

http://en.wikipedia.org/wiki/Initial_public_offering

An interview with Elina Gummerus, 8.4.2010

Huuto.net. accessed 10.4.2010. <http://www.huuto.net/fi/>

Investopedia, Initial Public Offering. Online document accessed 25.8.2010.

<http://www.investopedia.com/terms/i/ipo.asp>

Morebusiness.com. Why do an IPO? Objectives of IPO and Alternatives. 1998. Online publication accessed 20.8.2010.

http://www.morebusiness.com/running_your_business/financing/ipo.brc

Ross, Stephen A. Westerfield, Randolph W. Jordan, Bradford D. 1998. Fundamentals of Corporate Finance. Fourth Edition. Irwin McGraw-Hill Companies. p. 436.

ISBN 0-07-115500-7

Rahoitustarkastus. Yhtiön listautuminen – mitä sijoittajan tulee tietää. Publication

6.6.2006. Online guide accessed 24.8.2010

http://www.rata.bof.fi/fi/Tiedotteet/Arkisto/Rata_tiedottaa/Documents/Rata_tiedottaa_032006.pdf

Brain, Marshall. 2008. How NASDAQ IPOs Work. IPO sales. HowStuffWorks.com. Publication accessed 24.8.2010. <http://money.howstuffworks.com/nasdaq-ipo2.htm>

Knowledge@W.P. Carey. 26.3.2008. Who Profits from IPO Underpricing? Publication accessed 25.8.2010. <http://knowledge.wpcarey.asu.edu/article.cfm?articleid=1578>

Ericsson, Henry M.; Rosenbröijer, Carl-Johan; Salo, Kati; Winkman, Stesha
Arcada University of Applied Sciences, Helsinki, Finland. Physical Simulations as a Tool for Increasing Motivation in Entrepreneurship Studies. Presented at the FINPIN conference in Joensuu, Finland, on April 25th - 27th 2010.

1 Images:

Pidding: http://cheaptravelstyle.com/wp-content/uploads/2010/01/17-bidding_paddle1.jpg

Intenet auction: http://www.roosey-roads.com/content/wp-content/uploads/2007/06/intpic_auction-process.jpg

Huuto.net Front page: <http://www.huuto.net/fi/>

Helsingin Pantti: <http://www.pantti.fi/>

M. Helander Huutokaupat Oy: <http://www.helander.com/>

10 Euro bill for individual investors:

http://personal.telefonica.terra.es/web/webtorsen/10_euros_V_G_anv.jpg (image

modified by Kati Salo)

A check for the investment banks:

<http://www.childrensmentaldisorders.org/Assets/check.gif> (image modified by Kati Salo)

The Dutch Auction Method: <http://www.vesi-vesterinen.fi/kello4.jpg> (image modified by Kati Salo)