

NEKST

VOL. 22
NO. 4

SUMMER 2014
NEKST-ONLINE.NL

ALESSIO RASTANI

INVESTING IS LIKE DRINKING BEER

ALSO FEATURING

- SPECIAL: VISITING ECONOMETRISCH DISPUUT
- COLUMN: BEING INTERNATIONAL

ASSET



Econometrics

Towers Watson

An End and a Beginning



Before you lies the fourth and last edition of *Nekst* of the academic year 2013-2014. Besides articles on activities, we have also written a fair amount of special articles to make sure you do not have to get bored this summer. Let me start with mentioning an incredible interview; two editors got the opportunity to interview Alessio Rastani, a famous trader who spoke at the National Econometricians' Day. He told us everything we wanted to know, ranging from student stories to explaining one of his trading strategies.

Moreover, we paid Mark Timmermans and Celine Netten a visit. These two former board members now have a baby together and told us all about their experiences in life so far. Furthermore, we visited 'Econometrisch Dispuut', the study association in Rotterdam for econometrics. Furthermore, we have explored the use of mathematics in a practical field; fighting crime. In this edition you can read everything on how mathematics is used to catch criminals.

This concludes my last preface. I have had a tremendous time filling *Nekst* with articles, specials and beautiful pictures. I wish to thank all editors for their efforts, without you it would not have been possible. Furthermore I want to give special thanks to Laurant van Hoof and Daniël Schotanus. You have both done amazing in renewing the lay-out of the magazine this year. Without your creativity, *Nekst* would not have looked as good as it does. Last but not least, I wish my successor Ennia Suijkerbuijk all the best. Ennia, I am sure the magazine will flourish under your supervision!

And for you, reader, once again I only have a single piece of advice: relax, sit back and enjoy the read!

Ernst Roos
Editor-in-chief

COLOPHON

Nekst is the quarterly magazine of *Asset | Econometrics* ©2014

Correspondence

Asset | Econometrics
Tilburg University
Room E 1.10
P.O.Box 90153
5000 LE Tilburg
Telephone: 013 466 27 47
info@Asset-Econometrics.nl
www.Asset-Econometrics.nl

Editorial staff

Vince Dentener
Christian van de Koppel
Maha Lharoui
Floris van Loo
Jelle de Rooij
Ernst Roos
Ennia Suijkerbuijk
Nicole Verbeek
Mike Weltevrede

Lay-out editors

Laurant van Hoof
Daniël Schotanus

Contributions

Michiel van Erp
Frans Fonville
Thom Hopmans
Thijs Kramer
Rick van de Meulenhof
René Peeters
Masum Rahman
Rens Ramaekers
Corné Ruwaard
Lotte Ruwaard
Hans Schumacher
Yvonne Theeuwes
Elske van de Ven

Bas van Wely

Printing
Grafiplan

Circulation
850

Math and

6 Crime

Mathematics is a major factor in current day crime fighting. In this special we explain why mathematics is everywhere, haunting all criminals.



Mark and Celine 30

We catch up with two former board members of Asset I Econometrics: Mark Timmermans and Celine Netten.



AMW

32

We held our very own Olympic Games at the Active Members' Weekend in April.

ADVERTISEMENTS

Cover	Towers Watson
4	APG
12	MIcompany
Cover	Bake For Life
Cover	Actuarieel Instituut

ARTICLES

5	From the Board
6	Special: Math and Crime
9	Column Hans Schumacher
10	Practical Report by Thom Hopmans
14	Interview: Alessio Rastani
20	Special: Research at the EOR Department
22	Exchange Report by Rens Ramaekers
25	Column René Peeters
26	Special: FAECTOR/Econometrisch Dispuut
30	Special: FAM Mark Timmermans

Table of Contents

14 Alessio



In this article we interview Alessio Rastani; an independent trader, enthusiastic teacher, and public speaker.

Summer Photo Contest

54

As summer approaches, so does the Asset I Econometrics Summer Photo Contest. This year we are looking for pictures of you showing off your fancy Asset I Econometrics frisbee.

32	Active Members' Weekend
35	Asset Champions League
36	Economic Business weeks Tilburg
37	Crazy 35
38	Committee Profile: Education
39	Freshmen Activity
40	The Teacher: Hans Reijnierse
42	KOALA
43	Football Tournament & Announcement Drink
44	Symposium & Beerrace Drink

46	The Passion of: Pepijn van den Brink
48	Batavierenrace
50	The Father of: Jeroen Pars
52	Graduates
53	Quatsch
54	Summer Photo Contest
55	Puzzle
56	Agenda

APG

Dear Members,

The temperature is sky-rocketing, the ice-cream vendor is getting rich, swimwear is being taken out of the closets and the academic year is coming to an end. Of course, I could go for the familiar way and write another column bothering you with obvious truths stating that this association is the best association of the country and that econometricians are amazing. That would be rather mundane and cliché, because no-one, including myself, would be interested in such a tale. Let me instead enlighten you with some insights I acquired this year.

I found out the truth behind the expression that every accomplishment starts with the decision to try. At the beginning of this academic year, we had the task to bring this association to a new level after a merger process that took a lot of energy from former board members. Without the intention to brag about ourselves, I dare to say that all five of us were not afraid to come up with new initiatives and tried to be as critical as possible on current affairs. Now that the merger papers were finally signed and the new structure was already tested for a year, we could focus on internal cases such as new committees, the mobile application launched this spring and the celebration of a legendary Lustrum. Hopefully, you as a member noticed that we tried to serve you with our best intentions last year.

Not only philosophical phrases popped up in my mind last year; also less heavy though life-changing insights entered my reasoning. As an example, I developed great affection towards my daily cup of yoghurt with frozen fruit and an even stronger affection for my USB-stick with its flawless folder system. In general, I can conclude that a board year dares you to do things you would not do during a 'regular' study year, ranging from the breakfast you have every morning to meetings with important people in the academic and business world.

The candidate board 2014-2015 has been announced during the infamous Announcement Drink which took place on June 18. Whilst you will probably go on holiday this summer and relax, the candidate board has a bunch of tasks to perform this summer. They will get acquainted with all ins-and-outs of the association, write a policy document, compose a budget and make

a year planning. We are convinced of the fact that these five 'hipos' will form a great team and raise this association to an even higher level. Candidate board members, do not let hectic times and tensions overrule you and please do not forget every now and then to stand back and enjoy the honor of being in the board of Asset I Econometrics.

To end my memoirs, there might be no other option to close this story than the cheesy way. On behalf of the board I would like to thank all (active) members who put time and efforts in this association to raise it to a new level. And yes, I know the phrase coming might sound rather rigid and might generate some stomach cramps, but I truly mean the following: without you, the association would be nowhere.

It was with absolute pleasure to be at your service this year.

On behalf of the board,

Suzanne Vissers
Chairman Asset I Econometrics
2013-2014





Math wrapping up misdemeanor

Text by: Mike Weltevrede

A dark alley, a sinister park, or an abandoned manor; crime is everywhere and the delinquents are far from being caught. Police officers are busy day and night to find and catch notorious killers, not even mentioning the fact that it needs to be proven that the villain in question is indeed the culprit. Little did these officers know that their rescue would lie in a field of science which, at first sight, seems to be as unrelated to solving crime as televisions are related to a peanut butter sandwich, namely mathematics.



Yes, indeed. Mathematics is a major factor in current day crime fighting. Some people may already know that math plays an important role in crime fighting because of the hit show "NUMB3RS". For those of you who have not heard about the series, it is about a police officer named Don Eppes and his brother Charlie, a mathematical genius. Together, they solve crimes in the streets of Los Angeles. Enough about the series though. I shall put several ways in which math is used in current day crime fighting forward and shall show you the magical world of mathematics taking care of misdemeanor.

Detecting the Delinquent

Always bothering the minds of crime fighters is the location of the perpetrator. They seem to be able to determine an area in which the culprit should be living, but are rarely able to pinpoint the exact

p_{ij} denotes the probability that the villain resides in the location (i,j) and c denotes the total number of crimes.

Firstly, one calculates the distance from the center point of a square in row i and column j , (x_i, y_j) , to the square of each crime scene, namely (x_n, y_n) , where n denotes the number of the crime, i.e., $n=1$ means "first crime", $n=2$ means "second crime", etcetera. This whole bit is denoted by $|x_i - x_n| + |y_j - y_n|$. Rossmo's formula uses this expression in two ways. In the first term, with ϕ in the numerator, the expression is put in the denominator and is raised to the power f . How f will be determined depends on what works best when the formula is checked against data on past crime patterns. This term tells us that the probability of crime scenes decreases as distance increases.

Secondly, the travelling distance is used with regards to the so-called buffer zone, the area around the place where the criminal lives where they commit little to no crimes, as the chance to get caught is higher. In the second fraction, the distance is subtracted from $2B$, where B is chosen to describe the size of said buffer zone. This means that the subtraction will give us smaller answers when the distance increases and such, after raising this part in the denominator to another power, namely g , you will get larger results. These two parts together express that, as you move through the buffer zone, the probability of crimes being committed first increases and then decreases. We combine these parts by inserting the well-known sum sign Σ . The number ϕ will place more weight on one term or the other. When increasing ϕ , there will be more weight on the decreasing probability as distance increases. A smaller ϕ will put more weight on the effect of the buffer zone.

When having all probabilities p_{ij} calcula-

$$p_{ij} = k \sum_{n=1}^c \left(\frac{\phi}{(|x_i - x_n| + |y_j - y_n|)^f} + \frac{(1-\phi)(B^g - f)}{2B - |x_i - x_n| - |y_j - y_n|^g} \right)$$

Equation 1 Rossmo's formula

location. This is where we encounter our first application of mathematics in crime fighting: Rossmo's formula.

Assume that the city is partitioned in a grid of little squares, much like a matrix, with i rows and j columns. In this formula,

ted, we can construct a hot zone map, as seen in figure 1. The red part of the map shows us the places where the probability that the perpetrator lives in that area is highest. Moving out, this probability decreases and is denoted by green and blue colorings.

Proving the Perpetrator's Guiltiness

One of the most crucial parts of evidence is DNA. Officers often find traces of DNA at crime scenes, where it can be found as puddles of blood, hairs lying on the floor or the semen on the bed. Thinking about it, the mathematical aspect of DNA profiling seems obvious. Again, it is probabilities that play a role, as in many parts of crime fighting.

Most people have probably heard of the term CODIS, the name of the database of DNA samples of the FBI. CODIS is the abbreviation for Combined DNA Index System. The CODIS DNA database consists of four categories of DNA records:

- 1) Convicted Offenders: DNA identification records of persons convicted of crimes.
- 2) Forensic: Analyses of DNA samples recovered from crime scenes.
- 3) Unidentified Human Remains: Analyses of DNA samples recovered from unidentified human remains.
- 4) Relatives of Missing Persons: Analyses of DNA samples voluntarily contributed by relatives of missing persons.

CODIS contains over three million records of convicted offenders. The DNA profiles in CODIS are based on thirteen specific loci (also called sites), which were chosen because they show considerable variation among people. When two randomly chosen samples match in all or a lot of the thirteen loci selected for the CODIS system, it is safe to say that the probability that these samples have come from two totally unrelated people is nearly zero. Therefore, DNA identification is extremely reliable and is used often in practice.

Let us first consider a DNA profile based on only four loci. It is generally accepted that the probability that someone would match a random DNA sample at any one locus is roughly 1/10. It has been derived from empirical studies of allele frequencies of large numbers of samples that 1/10 is a good representative number. Hence, the chance that \rightarrow someone would match a random DNA sample of four loci would be about



Figure 1 Hotzone

1/10,000. When using this number with regards to all thirteen loci used in CODIS, then the probability of matching some given DNA sample at random in the population will be $(1/10)^{13}$, one in ten trillion. This number is known as the random match probability, or RMP for short. As devoted econometricians, we know that this rule only holds when the probabilities are independent of each other. There has been a lot of debating whether or not the probabilities are actually independent, but this issue has faded over time and has almost completely died away. Some people will still doubt whether the generally accepted probabilities are actually valid, but nevertheless, it is surely the case that when someone's DNA profile matches on all thirteen loci implemented in the CODIS system, that the identification is virtually certain, assuming that the match was deduced by a process consistent with the randomness regarding the RMP. However, the math is quite sensitive to how well that assumption is satisfied.

In reality, the authorities find evidence that ties a certain someone to the current running case, but they fail to deliver an identification with enough certainty to obtain a conviction. However, when CODIS points out that this person has a match with said DNA profile on (nearly) all thirteen loci, then we can safely assume that a match has been found, although we must not rule out the fact that the assumed culprit has relatives that closely match his or her DNA profile. Sometimes, siblings are separated at birth and these individuals may be unaware that they even have a sibling. Hence, this possibility must always be investigated.

Convicting the Culprit

After these two steps have been taken, there is one last step on the road of crime fighting: convicting the criminal for his deeds. The authorities take the culprit to court, where a jury or judge will decide whether or not the person is guilty of committing the crime. We have seen

that mathematics can provide a DNA profile match, but there is far too little evidence to prove an individual guilty. In court, there is often visual evidence presented, such as photographs. If you have ever seen photographs taken from afar, you can confer that they are almost never really clear. This is where mathematics takes a peek around the corner once again. Math is able to virtually enhance photographs to determine the actual validity of such a picture and whether it actually shows that the person in question is indeed guilty. The key technique to this method is segmentation: splitting up the image in regions that correspond to distinct objects, parts of objects or persons in the original picture, such as objects in the background.

Digital images are displayed as rectangular arrays of pixels, each pixel having a unique pair of coordinates (x,y) . Therefore, we can view any edge or line in the picture as a curve. As we know, we can define curves by equations. We all know that a straight line of pixels would then satisfy an equation of the form $y = ax + b$. We can thus try and identify collections of pixels of (roughly) the same color that satisfy such an equation. Of course, this equation will not be exact and hence we must allow for a reasonable amount of approximation, such that the equation is satisfied.

When assuming a black-and-white image, this picture is just a function f from a given rectangular space into the real unit interval, namely $[0,1]$. If $f(x,y) = 0$, then the pixel with coordinates (x,y) is colored white. Also, if $f(x,y) = 1$, then the pixel with coordinates (x,y) is

colored black. For all other cases, $f(x,y)$ denotes a shade of gray. The greater the value of $f(x,y)$, the darker the shade of gray. Since we can denote this formula so easily, it is generally also easier to enhance black-and-white images than to enhance colored pictures. Still, it is quite difficult to explain and we will not go into more detail here. However, one man did delve deeper into this problem.

There once was a man named Leonard Rudin, who asked himself certain questions, such as "Why do we see a single point on a piece of paper?", "How do we see edges?", "Why is a checker board pattern with many squares so annoying to the eye?" or "Why do we have difficulty understanding blurry images?". When he linked these questions to the corresponding function $f(x,y)$, he quickly found out what the significance of singularities in the function is. Because of this revelation, he focused his attention on finding a particular way to measure the closeness of a particular function to a given image, the so-called total variation norm. The details of his research are once again hard to explain and highly technical, but they are not required to be mentioned here. Do read into it, though, if you are interested. Due to his research, Rudin managed to develop computational techniques to restore images using what is now called the total variation method, which uses Euler-Lagrange PDE minimization on the total variation function.

Case Concluded

By now you know some of the most prevalent methods which are used for catching culprits, proving them to be the perpetrator and convicting them for the crook that they are. It is highly surprising to see that mathematics are so closely related to this common apparition, although at the same time, one could have expected this. Mathematics, after all, is currently one of the most used sciences. Try and think of a subject where mathematics is not used. Even in the assumed core science of physics, mathematics is used. Hence, mathematics is everywhere, haunting all criminals, so do not even dare to steal that candy bar you crave or to cheat on your exams. •

Being International

One of the things I like about working at Tilburg University is the international atmosphere. It is a joy to work with people from many different parts of the world, both among colleagues and among students. The diversity of nationalities generates liveliness and color; it underlines that science is not limited by the borders of nations.

There are a few side effects however which I like less. One of them is the use of the twelve-hour American system of indicating time, which within TiSEM is for instance used in announcements of research seminars. The AM/PM system is in my view unscientific and should be avoided in written communication. Here is a little quiz. Take the following three times of the day: (i) 4.30 PM, (ii) 8.30 PM, and (iii) 12.30 PM. Which one of these comes last? Answer (ii) is correct, even if it appears to defy logic. The system does not allow a proper treatment of midnight and noon; both are indicated by 12.00, and they are treated differently from all other times of the day since they are exempted from the AM or PM mark, but instead must be disambiguated as in "12.00 midnight" or "12.00 noon".

Perhaps the reasoning behind the use of the AM/PM system is that, if we want to be international, then we have to use English, which is certainly true; and if we use English, we also have to use the conventions that come with the language. I would say that this is rather

an underestimation of the capability of lecturers and students who grew up with to the twelve-hour system to adjust to the 24-hour system which, for good reasons, is standard for written time indications in the Netherlands and in most countries in Europe.

In a similar way, I do not think there was a need to replace the name "Universiteit van Tilburg" officially to "Tilburg University", as was done a couple of years ago, as if the Dutch word "universiteit" would be incomprehensible to students and academics from abroad. There is no

won by a new group under the name of "TiU international". Although the group was entirely TiSEM-based (due to short preparation time), they received almost 25% of the votes. Dr. Tobias Klein of the EOR department was elected, together with prof. Frank de Jong of the Finance department. Their purpose is to promote the truly international spirit within the university, which means for instance that cultural diversity should be reflected in the menu and the opening hours of the university restaurants. I am happy that this new group received so much support, and I wish Tobias and

'Science is not limited by the borders of nations'

need to pretend that Tilburg University was actually located somewhere in Texas, but was taken up into the air by a hurricane and carried across the ocean to the province of Brabant in the Netherlands. It may in fact not always be a good idea to try to emulate American universities. Here is another quiz: in 2013, the University of Texas at Austin paid one of its employees a salary of more than five million dollars. That employee was (i) the president of the university, (ii) the dean of the business school, (iii) the football coach. Google has the answer.

In the elections for the University Council that were held this spring, two seats were

Frank all the best in their efforts to let Tilburg University fully become more an international university, focusing on the creation of optimal conditions for academic achievements both by lecturers and by students.

Hans Schumacher

Hans Schumacher is an applied mathematician affiliated with the Department of Econometrics and Operations Research at Tilburg University. His activities in the modeling and control of dynamical systems have led him first to engineering and later in life to economics and finance.



Sentiment analysis using Support Vector Machines

As long as humans exist, they have been communicating, sharing, searching and storing information. Nowadays, in almost every sector of the economy, data is generated in vast amounts and big data seems to be the magic word as it is considered to be the next big frontier for innovation, competition, and efficiency. Asset | Econometrics already responded to this trend by organizing the Big Data symposium last May. The biggest challenge of big data is how to extract useful information from it. It is nice to have a large dataset consisting of 350 million rows of customer transaction data related with all kinds of other relevant customer characteristics, but if we do not have the tools to process this data and extract useful information from it, this dataset is worthless. This is where the field of machine learning comes into play. Machine learning is a general and popular term for systems that can study and learn from data.

Sentiment Analysis

For my master thesis, I applied machine learning techniques in order to construct a sentiment analysis tool for the Greenhouse Group (Eindhoven) as part of an internship. Greenhouse Group is the umbrella organization for six innovative and trend-setting companies in the digital marketing field, i.e., Blue Mango, Fresh Fruit Digital, Blossom, SourceRepublic, FlxOne and WithLocals. Innovation, Dedication and Fun are their core values and are carried out daily by over 150+ dedicated experts. Apart from these six successful companies, the Greenhouse Group also stimulates innovation by organizing a semi-annual Labs program. Greenhouse Group Labs aims to enable students to be the first to work on assignments that revolve around the most innovative technologies and products currently available. This approach helps further fine-tune good ideas while weeding out ideas with less potential. The sentiment analysis tool,

for example, is part of the machine learning project. Other projects involved the virtual reality headset Oculus Rift, the EPOC neuroheadset, and next semester there are projects involving the Google Glass and eye tracking technology.

The sentiment analysis tool we developed can be used to quickly determine the sentiment of any message. Therefore, this tool provides several interesting marketing-related purposes. For instance, it is possible to introduce sentiment analytics in customer relationship management systems. The sentiment of incoming mail of customers can be predicted and negative mails can be given a higher priority. More futuristic, and therefore by definition much cooler, sentiment analytics can help in creating automated human conversations between customers and organizations. If a computer is able to determine the sentiment of a user's message, it can greatly

reduce the number of possible replies. It is obvious that these examples would certainly provide any company a big competitive advantage in terms of efficiency and service levels.

Support Vector Machines

By now you may be wondering how machine learning works. In practice, there are a large number of machine learning techniques and algorithms. One of these techniques is the support vector machines technique (SVM). SVM is considered a state-of-the-art machine learning technique and is used in many real-life classification problems. Some of them you are most likely using every day without even realizing. For instance, if you upload a picture on Facebook, nowadays the faces of your friends are automatically tagged. Facebook used SVM in combination with the millions of images we uploaded to make this possible. What I specifically like about this example is that their users actually helped Facebook classify people's heads in images for free, because initially, they had to manually tag all of their friend's faces in the images they uploaded. This dataset was then used to create a 'machine' that could automatically recognize faces in newly uploaded images.

In short, what a SVM does is finding the best hyperplane that separates the data points of two different classes. For sake of simplicity and because we are creating a sentiment tool, we call these classes 'positive' and 'negative', and denote them by respectively +1 and -1. Both sides of the plane represent a different class and this plane can thus be seen as a decision boundary for any new point, because we can easily classify this new point based on which side of the plane it lies. Therefore, after a decision

boundary is obtained, a SVM is very useful for making accurate predictions of new data points. Figure 1 presents a simple classification problem and also provides three possible different separating hyperplanes.

The entire process of constructing a SVM can thus be divided into two parts. In the first part, we train a 'machine' by providing it a classified dataset. For the sentiment analysis tool, this data consisted of news articles which were labeled as one of six possible sentiments. Recall that, to keep things simple, we only consider the positive and negative sentiment for this practical report. The training is done by finding the best hyperplane that separates the different classes. This hyperplane is represented by $H = \{x \in \mathbb{R}^d \mid w^T x + b = 0\}$, where d represents the dimensionality of the data. Training the machine thus implies finding the best values for $w \in \mathbb{R}^d$ and $b \in \mathbb{R}$.

In the second part, we are now able to use the trained machine to make predictions about the classification of any data point. For sake of simplicity, we state that positive points lie on the side of the plane for which it holds that $w^T x + b > 0$ and vice versa for negative points. Moreover, we define the variable $y_i \in \{-1, 1\}$, which denotes the sentiment classification of message i . Using this notation we can state that $y_i(w^T x_i + b) > 0$ if data point x_i lies on the correct side of the plane. Note that this can be replaced by ≥ 1 , because w and b can be scaled up such that this equation holds. It is obvious that, once the best hyperplane has been found, it is fairly easy to make predictions, based on which side of the plane the data point is located. The difficult and tricky part is therefore how to find this best separating hyperplane, that is, how to find the values w that uniquely determines this hyperplane. For an OR student this is however where things get interesting!

The Model

Cortes & Vapnik (1995) tackled this problem by introducing the following (soft-margin) support vector machine optimization problem.

$$\begin{aligned} \min & 1/2 \cdot w^T w + C \sum_i \xi_i \\ \text{s.t. } & y_i(w^T x_i + b) \geq 1 - \xi_i \quad \forall i = 1, \dots, N, \\ & \xi_i \geq 0 \quad \forall i = 1, \dots, N, \\ & w \in \mathbb{R}^d, b \in \mathbb{R}, \xi \in \mathbb{R} \end{aligned}$$

The idea behind this model is to find the hyperplane that maximizes the margin around the hyperplane that separates the two different classes (Figure 2). Note that, using basic geometry techniques, it can be shown that $1/(w^T w)$ denotes the size of this margin. Since we want to maximize this margin, we want to minimize $w^T w$. Obviously, this only works if it is possible to exactly linearly separate the data. Otherwise, there is no margin

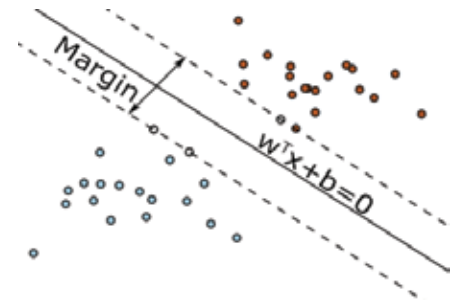


Figure 2

to maximize and any hyperplane would give a margin of value zero. To solve this issue, Cortes & Vapnik introduced an error-variable ξ_i . The idea behind this is that we allow data points to violate the margin constraint $y_i(w^T x_i + b) \geq 1$. This is done by softening the constraint to $y_i(w^T x_i + b) \geq 1 - \xi_i$ where $\xi_i \geq 0$. This makes it possible for data points to violate the margin and to even lie on the wrong side of the plane and thus to be misclassified by the hyperplane (Figure 3). However, we do want to penalize data points that violate this constraint. We do this by adding ξ_i to the objective function, so that we penalize by the proportion of which it violates the constraint. C is an additional parameter to set the intensity of the penalty for deviation. Note that if a data point is correctly classified and lies outside the margin, ξ_i will be equal to zero and thus there is no penalty for that particular data point. Also note that this model is a Quadratic Programming problem, and therefore a QP solver →

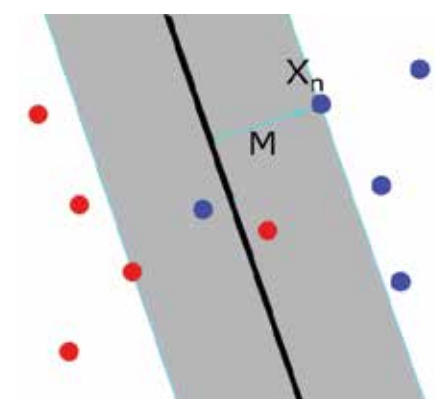


Figure 3

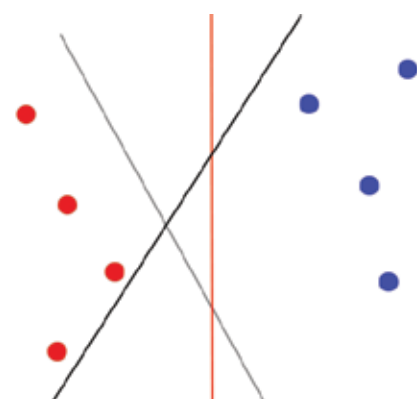


Figure 1

MIcompany

is needed in order to obtain reasonable solutions.

Unfortunately, using a linear classifier is a very restricting method of separating the data and in practice, this method often gives bad results. For instance, Figure 4 gives an example of data that is not easy to separate accurately using a linear decision boundary. Luckily, by applying the so-called 'kernel trick' it is possible to create non-linear classifiers using a SVM. The basic idea behind the kernel trick is to map the original non-linear separable data to a higher dimension in where it can be separated linearly. Figure 5 provides an example of how a simple quadratic function mapping, given by $\phi(x)=[x \ x^2]$, enables us to map a 1D non-linear separable dataset to a 2D dimension where it can be separated linearly. However, it is clear that this mapping results in a significant larger dataset. A polynomial mapping for example would result in going from d features to $1/2 \cdot d(d+1)$ features. Luckily, the kernel trick enables us to create this mapping without visiting this very high dimensional space. The trick is that calculating the inner product of the different messages generates the same meaningful information as mapping all the messages to a very high-dimensional space. So this means we map from d features to N features, where N is the amount of messages. However, this

comes at the expense of calculating a lot of inner products, which can be quite computationally expensive.

Results

Although we are still in the process of obtaining results, preliminary results seem to be promising. For example, for the binary classification case of classifying the sentiment of a message as positive or negative, we are able to obtain an accuracy¹ of around 80%. The major problem we face is how to efficiently solve the SVM model for large datasets. Text mining (extracting information from text) is well known for its large scale. For instance, our dataset of messages contained over 400.000 unique words. Now, representing every message as a vector with the word count of these unique words would imply that every message is represented as a vector of length 400.000, where obviously most of the values are zero. Considering we have around 60.000 classified messages, this would result in a very large QP problem. Also, applying the kernel trick to such a large scale dataset would imply a lot of heavy inner product calculations, which we would like to avoid. Data preprocessing techniques like stemming (reducing every word to its stem) and feature selection methods as Information Gain and Categorical Probability Difference enabled us to reduce this to more usable sizes, varying from 100 to 30.000 by eliminating words that express few sentiment. However, this of course raises new problems. Eliminating too many words that express sentiment results in difficulties predicting the sentiment of a message, whereas removing too few words results in too large data sets and thus results in problems when trying to efficiently train the machine.

As an OR student, however, it is more interesting to improve the SVM training model. The model we discussed in this article is the primal version of the SVM. In practice, however, often the dual version is solved for various reasons. Moreover, we also modeled the problem as a second order cone problem (instead of a QP) and we used the Sequential Minimal Optimization algorithm. Every version has its own pros and cons, but they all have in common that the training time becomes quite long for large data sets. Luckily, we still have plenty of time

to develop innovative solutions for all these kind of problems. So, if you are still interested, don't hesitate to contact us by then! ●

References

Corinna Cortes and Vladimir Vapnik. Support-vector networks. Machine learning, 20(3): 273-297, 1995.



Thom Hopmans

Age: 23

Began studies in 2009

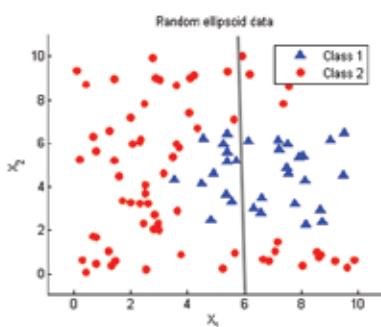


Figure 4

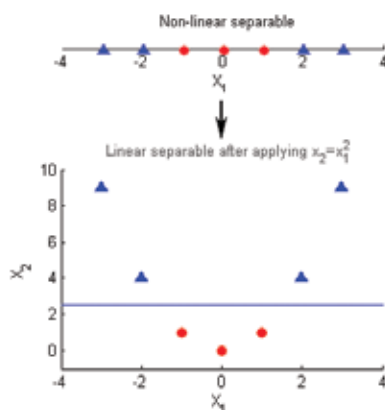
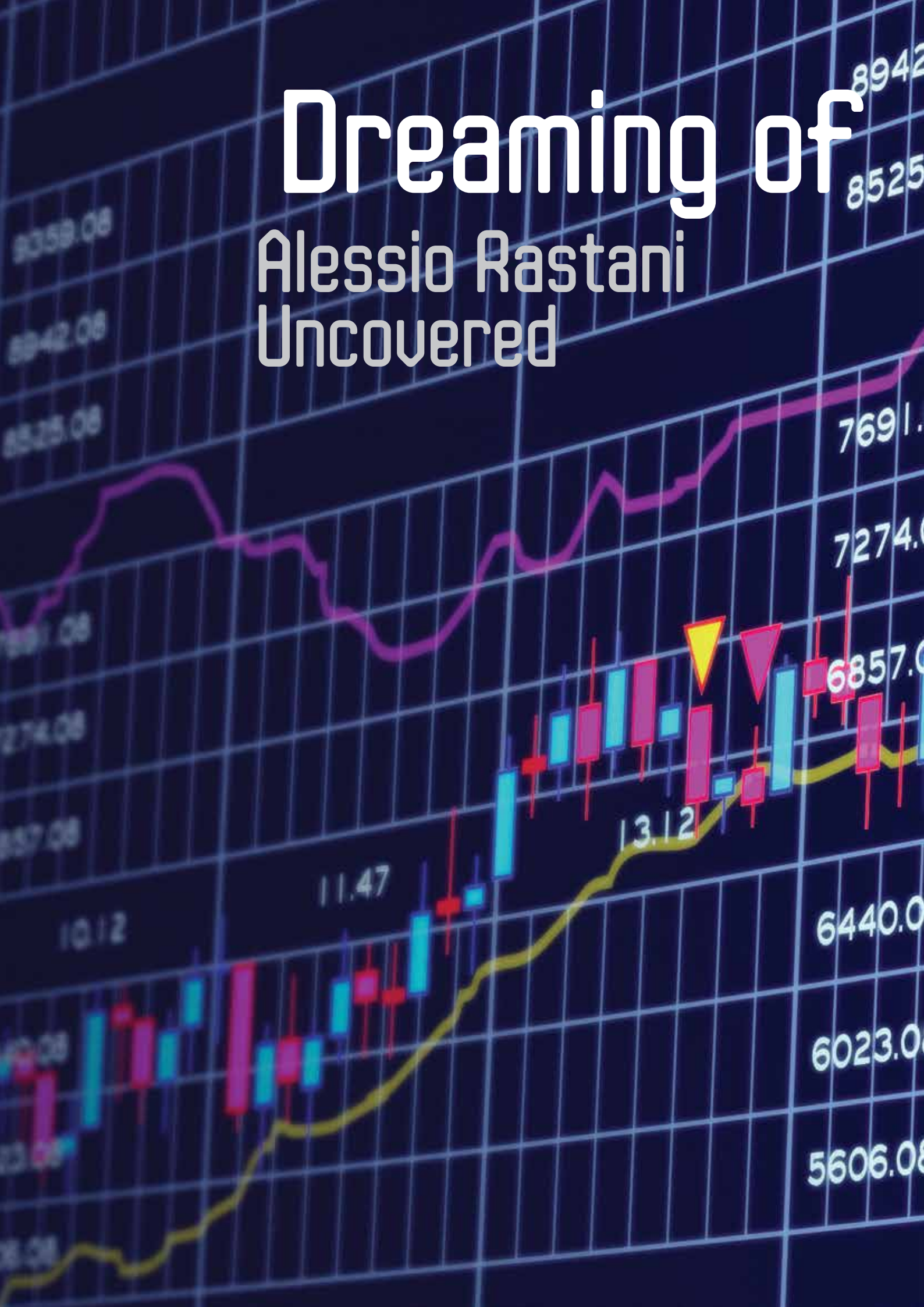


Figure 5

¹ Accuracy was calculated using stratified 10-fold cross-validation.

Dreaming of Alessio Rastani Uncovered





a New Recession

Text by: Nicole Verbeek

For those of you who did not go to the National Econometricians' Day (LED), Alessio Rastani is a trader and public speaker. Mr. Rastani has been an independent trader for more than ten years. He created a buzz in 2011, stating that he dreams of a new recession every night and that not governments, but Goldman Sachs rules the world. He set up the online platform leadingreader.com: a website accessible for everyone who is interested in trading. He also gave a very lively and vibrant speech during the LED. Presentations aimed at econometricians can be factual and placid; Mr Rastani, however, definitely shook the audience up with his interesting and informal performance.

Text by: Nicole Verbeek

For those of you who did not go to the National Econometricians' Day (LED), Alessio Rastani is a trader and public speaker. Mr. Rastani has been an independent trader for more than ten years. He created a buzz in 2011, stating that he dreams of a new recession every night and that not governments, but Goldman Sachs rules the world. He set up the online platform leadingreader.com: a website accessible for everyone who is interested in trading. He also gave a very lively and vibrant speech during the LED. Presentations aimed at econometricians can be factual and placid; Mr Rastani, however, definitely shook the audience up with his interesting and informal performance.



Some of us know you from the LED. How did you enjoy speaking there and was it different from other conventions you have spoken at?

I really enjoyed it. When I accepted the challenge, honestly, I did not know that the audience would consist of econometrics students only. I was actually a bit uncomfortable, afraid that I would get kicked in the backside, since my opinions are a bit unconventional, maybe even offensive to some of the econometrics students. Do not get me wrong, I really think econometrics is a fantastic profession, but what I said was a bit controversial so I was scared that some of you may have felt offended. For example, I mentioned a quote from Peter Lynch. He said: "If you spend more than 13 minutes analyzing economic and market forecasts, you have wasted 10 minutes." I meant to say that from an investing point of view, it does not really matter that the economy is in bad shape. On the contrary, the best time to invest in stocks is when the economy is terrible. Most people do the exact opposite and become so scared that they stay away from investing in the stock market. That being said, the LED was a fantastic event. There were a lot of smart people over there. I honestly believe that in the UK, we can learn a lot from Holland. I think you are generally smarter than the people in the UK. Unfortunately, I could not stay very long that day, so I did not really get a chance to talk to the students

If you have to choose one of the two, are you a trader or a public speaker?

I am more of a trader, I do not do that much of public speaking. However, I would like to do more of it. At school, I always got into trouble for talking too much, because I just enjoy talking so much. I love to do both. I like to trade, to talk about it and to share my opinions with other traders. Traders are quite the show-offs and they like to talk about themselves and their profession. What I personally hate, is to go to a presentation and to be bored to death. The thing about public speaking I love, is to get the audience involved. In my opinion there is no point in standing there and teaching when no one is listening. You have to get the audience interested. I may have gone a bit too personal during the LED, talking about my hair and the medicine I was taking

from a pharmaceutical company, Merck. I bought the shares of that company, so I wanted to know more about it. I even talked about Viagra, since the producing company Pfizer, is also an amazing company. I thought the Dutch would not mind me talking about these topics; you are open-minded. But looking back, I maybe should not have talked about Viagra (laughs).

During your presentation, you told us to go home and buy NVIDIA stocks. Do you usually follow your own advice?

Yes, I would never ever recommend buying something that I would not buy myself. NVIDIA makes a graphic card that is used by pretty much every computer. The reason, I said, to buy NVIDIA, is that they make a technology for new, self-driving cars. Not that I want to bore you with cars, but I think self-driving cars are the future, so that is why I said buy NVIDIA. The stock prices actually did go up over the past months, by the way. However, I try not to tell people that they should buy stocks in a particular company, because I do not want to be responsible for them losing their money if my predictions turn out to be mistaken.

Most traders like to keep their strategies a secret. Why did you decide to teach other people how to trade?

A lot of people ask me: "Why do you not just keep that information to yourself?". There are a lot of cynical, sceptical people out there and you know what, that is okay as well. It is reasonable to question my intents. The reason I set up leadingtrader.com is that I enjoy trading and sharing my knowledge with people.

'Women generally dislike beer because they do not know how to drink it properly'

I do not like this "scarcity mentality", the kind of mentality that says I cannot share this information, because it is mine. Believe me, there are many people out there, even some friends of mine, that will not share their information, not even when you pay them a lot of money for it. I do not enjoy being selfish and keeping everything I know to myself. My grandmother, whom I was very close to, used to be a teacher. Well, I actually

come from a family of teachers. Part of my personality is that I love teaching, I probably got it from her and I wanted to be as good of a teacher as her. That is also one of the reasons I became a public

'The thing about trading is, it is a very selfish profession'

speaker. It is not that I have a great voice or that I am that attractive (laughs), but I love to teach people. I made some huge mistakes in my life. Fifteen years ago, I bought stocks at the most terrible time. You have probably heard about the dot-com crash. I was one of the idiots that lost a lot of money. I had turned 50,000 pounds into half a million, and then I lost everything, including the money I started with. I have made every single mistake in the book, so I really want people to learn from these mistakes and save them money. Maybe 80 percent of the audience does not remember a single thing from the seminar and they will make the same mistakes as I did. However, I am confident that at least 10 to 20 percent will remember what I said and that I helped them not to make those mistakes.

After the dot-com crash you wanted to become an independent trader. For most people this will always remain a dream. How did you manage to become a trader, especially since you studied dentistry and law?

Well, I studied some physics to get into dentistry. See, my parents really wanted me to become a doctor, but I was not smart enough so I got into dentistry. I really hated it, despised it. I would not recommend it to anyone. Again, due to

always been interested in how to make money from stocks. One of the things he told me is that, the worst thing you can do is to rely on someone's tip or advice. I do not like to tell people what

to buy. I mean, what if I am wrong? What if the economy changes or the company you just invested in has bad news? You need to know how to do it for yourself. I needed to know how to do it for myself. After the dot-com crash, I managed to make my money back. It took a long time. I had some very good mentors, friends of mine, who helped me. That is how it all started. I watched one of them turn 14,000 into a 100,000 which was amazing. You do not go into trading just for the money. You should enjoy the subject that you are studying. It is always a bad idea to do something just for the money. I mean, for example, imagine going to a doctor that just wants to make money out of you. That never is a good doctor.

So you studied dentistry and law. How did you enjoy your student life?

I loved it! I was a terrible student though. I mean, during my first year at law I failed pretty much every exam. Not that I was stupid, I just did not study at all. You know what happens, I went partying, joined the drama club, those things. I did acting, comedy and pantomime, I even played Joker from Batman. I was not as good or as scary as Heath Ledger though. Funny fact, I was probably the only guy in the drama club that came for the acting, the others just came to find women (laughs). I hope they do not read this interview. My teachers almost expelled me from university. I did not go to any of the lectures and my attendance record was terrible. I had to resit all of my exams. Looking back that was a big mistake, I really wish I had studied harder. It was only during my second and third year that I got good grades. I did not manage to get a first as an average (highest possible grade), sadly, but I got the next best grade which is a 2:1. I know, I could have had a first; I hate to be second best. Anyway, that shows that you do not have to be smart to be a trader. If I can be honest with —>

you: if there is one thing I want to do in my life, it is going back to university. I loved it. I do not think anybody says that they enjoyed the studying. I actually want to go back and study medicine. The thing about trading is, it is a very selfish profession. You make money; it is you against the market. Even though I enjoy it, it does not always feel right. You can give money to charity of course. But that is not the same as the value you add by studying medicine. You always need a doctor.

You were only a member of the drama club during your study. If you would go back to the university, would you join any other clubs or associations?

There are no particular clubs or associations I would like to be a member of. I would have liked to run my own church though. Not that I am extremely religious, but I do thank God every day for what life has given me. One day I would like to become a pastor. I have considered this and I hope to make it happen at some point in the future.

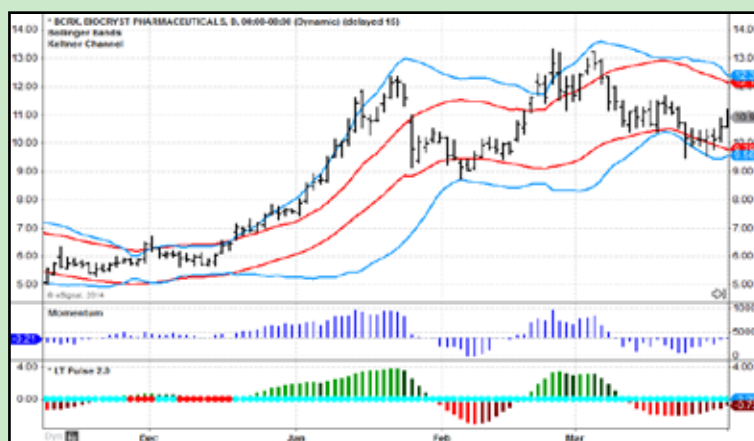
Do you have hobbies besides speaking and trading?

Right now, my only hobby is working out and trying to get fit. You know, the problem with trading is that you are always in front of your computer screen. It is really important to have somewhat of an active life. Do sports or go to the gym. That is what I do most besides my

■ 'Life is not about money or success'

work: swimming and going to the gym. I also love running. I got into exercise mostly because I put a lot of weight on last year. It was so bad, I bought a suit last year in Holland and I had to throw it away. When I lost the weight, it did not fit me anymore. That is probably the best thing I have ever done: get active and healthy. It really keeps your brain flowing and it helps your trading as well. You make much better decisions. A lot of rubbish is written about losing weight. The same goes for trading. Every magazine or book has some simple, easy strategy to make money or to lose weight. My advice to your readers: do not believe any of that. I am not saying that trading has to be difficult, not at all. It is very understandable, but you have

Trading Methods



to put the hard work in. You cannot just read something on the Internet and become an instant trader. Do not fall for the traps. It is the same with losing weight; there are no magic diet pills. I hated being fat, that is why I changed my life. I went to the gym and changed my regime. I learned another thing from going on a diet, that is also applicable to trading. Many people research it and go from one strategy to another. They just hop from one approach to another without staying true to some sort of game plan. The weight-loss industry is just like the trading industry, both are multi-billion dollar industries. As long as you keep your net intake under 1800 calories a day, you will lose weight. The same thing goes for trading. You do not need any amazing innovate techniques. I have been using three great strategies

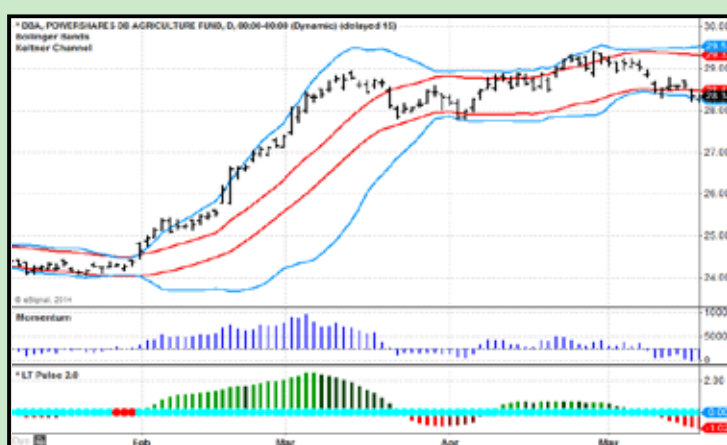
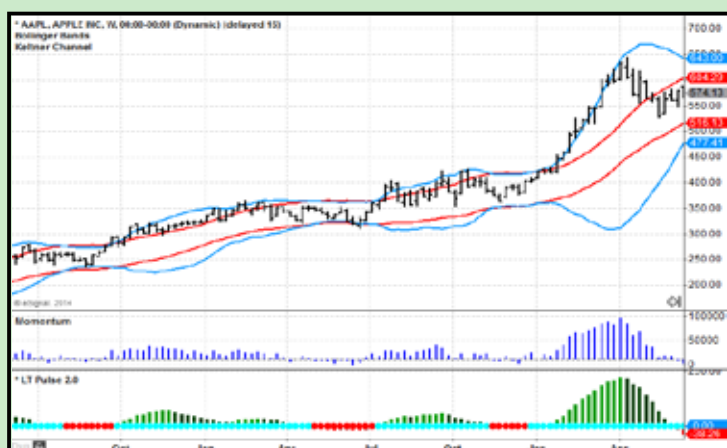
dots signify periods of low volatility. It is like a traffic light: red means stop do not do anything. When it goes to blue, do something. Red means be careful, do not do anything but be prepared because the market is going to explode. The biggest problem is how to find that moment of transition. Most people jump in too late, when the transition has already taken place. One of the reasons people lose money is because they wait too long. You want to jump in at the exact moment when the markets change from low to high volatility. You will always have trades that do not work out. It only needs to happen a few times to make big money. Just make sure you never lose too much money, keep your losses small. When the bars are green, the momentum is

for years and I still use them today. I just improve them every now and then. The important thing to remember is: stick to something that works.

Could you tell us something about those three strategies? Things you may have learned during your years as a trader?

Of course, I will try to explain it briefly. One of my methods is called the pulse-method. Basically the markets go through phases, just like economies. There is a cycle in the markets. Periods of low volatility are followed by high volatility, so one of my main strategies is how to find where the markets change from low to high volatility. This picture shows all the indicators I use. The red

increasing. You want to start buying when the momentum increases. You simply hold and you sell either when the momentum dies out or you exit when the moving average goes down. I use the eight-period moving average. As soon as the price goes below the eight-period moving average, I go out of the market. I never do anything until the red dot appears again. I apply it to many markets; silver, gold, coffee. I use a number of different methods, this is just one of them. I will explain quickly how the red dots appear and why this works. You can do this on any broker platform online. Please keep in mind that I did not invent this strategy, I just improved on it. You only need three indicators: Bollinger bands, Keltner channels and momentum. Every charting platform will have these indicators. You select these volatility



Trading Methods

indicators and change the momentum to a histogram. Essentially, how this works: the blue lines are the Bollinger bands; the red ones are the Keltner channels. Now, when the Bollinger bands go inside the Keltner channels, the red dots appear. That is how you know the market has low volatility. I call this a pulse. Some American traders call it a squeeze. When the lines intersect, I always say that the blue lines are making love to the red lines. I guess it is a bit like sex (laughs). They are making love and it leads to an explosion. When the Bollinger bands are inside the Keltner channels the market is going to explode, quite literally. The moment you take action is when the Bollinger bands come out. Your action depends on the momentum. The momentum is negative or positive and that tells you whether you have to buy or not. This is one of my favorite strategies. Another important thing is how to keep your money. There are two things to wealth: one is how to make it and two is how to keep it. One lesson I learned from the dot.com mistake is that in trading, even though it sometimes looks simple, people tend to rely too much on

emotion. You really need to be able to stick to your strategies.

You talked about your mentors before. Are there people you admire?

Yes there are. Some of them have stopped trading. One of them is Paul Tudor Jones, one of the traders interviewed in the book 'Market Wizards'. I like some of the things he said in his interview. He said that one of the main points you have to focus on is not to lose money when you try to make money. He focuses mainly on taking care of risks. He said that 80 percent of your profits will come from 20 percent of your trades, and it is true. A lot of your trades will not work out. Some will make a little money, some will be break-even and others will cost you money. Only 20 percent will be big massive winners. Knowing how to stick with a winning trade is one of the most difficult things you have to do. There is going to be a voice inside your head that will tell you to get out since you made all that money. When you give in, you will see that the market has gone another 100 percent up without you. That is the hardest part of trading. That voice will

do a lot of damage. It works the same way when you are losing money: you hope that it will get better if you stick around a little longer and then you end up losing more.

Is there anything we have not asked you, that our reader may like to know?

Well what I would like to know from you, is how your company Heineken makes their beer. It tastes amazing. I actually went to the Heineken museum. One of the guys told me something about drinking beer that I think a lot of traders could learn something from. Do you know why women generally dislike beer? They do not know how to drink it properly. I am not being sexist, but you need to drink it like a man. You have to drink beer with big gulps. Otherwise you just drink the bitter top part, while you need to drink the sweet, golden part. Most women take 'petite' sips from the top. If you drink beer like that, you just drink the bitter part. So if you change just one thing about the way you drink beer, it will taste different to you. The same goes from trading: you can change just one thing and you will have an improved result. It can be a massive difference.

Is there any final advice you would like to give our readers?

I would like to share one of my favorite quotes from Steve Jobs. He said "Being the richest guy in the cemetery does not matter to me. I want to go to bed at night knowing we have done something wonderful today. That is what matters to me." I love that quote. In trading, sometimes it is all about the money. But in the end, does it really matter? Steve Jobs, one of the richest men in the world, passed away. All that money, what does it get you in the end? So focus on enjoying life, enjoying your work. Get out more; in the end you do not know how long you are going to live. I recommend reading a book called, "The Top Five Regrets of the Dying" by Bronnie Ware. The author worked in a cancer clinic and wrote down everything her patients regretted at the end of their lives. It really changes the way you look at life. Life is not about money or success. Steve Jobs had a lot of money and was extremely successful. At the end of the day, he is not with us anymore. We thank Alessio Rastani for his time and the lovely interview. •

Researchers

Uncovered

Text by: Ernst Roos

Now that summer has come, it was time to interview another three researchers the department of Econometrics and Operations Research has to offer. First of all, we have chosen to interview Jalal Ashayeri, whose research focuses on the applications of OR/MS to supply chain management problems. Secondly, the research and book of Kuno Huisman, part-time researcher, part-time employee of ASML, are discussed. Thirdly, we discuss the diverse research of Bertrand Melenberg, who seems to be able to apply econometrics to any field he wants.



Jalal Ashayeri
Full professor

Supply Chain Management is the main topic of Jalal Ashayeri's research. Although this might sound quite specific, it definitely is not. Projects in the past have included various industry sectors such as healthcare, petrochemical, pharmaceutical, distribution logistics and warehousing, automotive, and electronics among others. All of these projects stem from a practical question, which is very important to Jalal. He is particularly interested in practical oriented research. The models and solutions that are developed in the process can then be generalized to be applicable to a class of problems. So in fact, Jalal does some theoretical research, but never without a practical cause.

Jalal enjoys the similarities between consulting and his current work. He does think, however, that working with companies from the university has some advantages over being a consultant. For one, he mentions that consultants tend

to have little time to develop extensive models to come up with a comprehensive solution and are usually hired to solve a firm's problems very quickly or confirm a firm's own solution. He, on the other hand, is usually approached to solve problems firms foresee in the future. In fact, he is solving problems that might not even exist yet but are foreseen in the future. Therefore, sufficient time and space is available for a thorough analysis.

An example of this is the current research of one of the master students he supervises. The student is currently working on a revenue management problem for SBS Broadcasting. They do not actually have a problem, but instead feel like their current advertisement revenues could be further optimized. To aid them, the student is currently developing a model to maximize their advertisement revenues.

Supervising PhD students and master thesis students is something Jalal definitely enjoys. He tries to keep in touch with them as much as possible, whether they decide to stay in the academic world or join a company. Through this, he has created a vast network of acquaintances with whom he regularly speaks. This network is very important, since it brings him the vast majority of his projects, whether they stem from old students now working for a firm with a problem, or a fellow researcher looking for a collaboration.

One of the projects he is currently

working on with a PhD student is truly innovating. It considers downsizing of firms from a supply chain management point of view. This is new, since up to now, the downsizing of firms is mostly looked at from an accounting point of view. Jalal, again, got interested in this subject because of a practical example. Several years ago he had revised the supply chain for a certain factory and made it very efficient. Sometime later, he found out that the factory was being shut down, in spite of the implementation of the efficient supply chain. This made him wonder whether the performance of a factory's supply chain is even considered in the downsizing of a firm.

In conclusion, although Jalal's research is only focused on supply chain management, it covers most aspects of society. Together with master and PhD students, he explores the supply chain side of manufacturing and service industries alike.

We thank Jalal Ashayeri for a glimpse into his version of the life of a researcher.◊



Kuno Huisman
Assistant professor

Kuno Huisman only spends one day a week at Tilburg University and spends the rest of his week at ASML as head of decision support. He works closely with the board of management there and advises them on important decisions with quantitative analyses. Although he does not use the theoretical models he develops in this job he does in fact use quite a lot of the same ideas. For him, his current life represents the perfect combination between theoretical and fundamental research and the practical application of this. He would not want to give this up for the world.

Naturally, one wonders how he might have ended up with such a great combination. Kuno tells us that he was inspired by Peter Kort to become interested in research while studying econometrics in Tilburg, after which he obtained his doctorate under his supervision in 2000. He then started to explore the business side of life by working at CQM. He missed doing research while working there, but fortunately he was offered a job for one day a week by Peter Kort a couple of years later. After that he switched jobs to start working for ASML. This brought him to the wonderful place he is right now.

The main topic of both his and Peter Kort's research is real option theory combined with game theory. The field of real options considers the optimal

timing of investment and develops a criterion to base investment decisions on. Kuno's research mainly concerns extensions of the models that already exist. The dynamics of investment decisions changes, for example, when one considers multiple firms in the market. What is optimal if another firm decides to invest? Do you immediately invest yourself or wait for information on how the invested firm is doing?

The extension Kuno is currently investigating involves extending the kind of investment decision that is considered. Instead of a yes or no decision, a firm now has to decide on the size of the investment as well. This complicates the investment decision by quite a lot, especially when multiple firms are considered as well.

There is one project Kuno is particularly proud of, his doctoral thesis. Besides the traditional printing for personal use, he also published it as a book. This book was one of the first, if not the first, to formally define and bring together the concepts in the field where real option theory and game theory are combined. His book is even recommended by several professors around the world to their PhD students who need a good foundation in real option theory. Whenever Kuno attends conferences, he is regularly recognized as its author, which is not only a nice recognition, but also a slight advantage for the PhD students he supervises.

We thank Kuno Huisman for sharing his experiences on combining research and working for a company. ◦



Bertrand Melenberg
Full professor

One of the more diverse researchers of the EOR department can be found in the person of Bertrand Melenberg. He does not conduct research in one area specifically, but instead works on several projects that are as diverse as one can imagine. Most students will probably know him from the course Introduction Finance (and Actuarial Sciences) in the first year and expect him to conduct research in this field. This is more or less true, as one of the projects mentioned is indeed in the field of financial econometrics. Two other projects, however, include environmental research and robust optimization.

The project on financial econometrics, jointly with Geng Niu, is mainly about predicting longevity risk. Instead of extrapolation, which is a common method for predicting longevity risk, this project tries to explain longevity risk

with an econometric model based on several factors. An advantage of using this method is that one can implicitly include the correlation of longevity risk between several countries in the model. Whereas this correlation clearly exists in practice, e.g., if a revolutionary medicine is discovered in Belgium people in the Netherlands will also tend to live longer, it is hard to include this correlation in models. In this particular project this is mainly done by including the GDP of said countries in the model. Since the GDP of countries also moves together, especially when they're geographically close, this results in the wanted correlation. Moreover, the correlation between GDP and longevity risk is quite high as well, which makes it a useful factor to include. Of course, there are also some things a research project cannot consider. For instance, no conclusions have been drawn on the nature of the relationship between longevity risk and GDP. It might be a causal one, but the specifics remain unknown. A high GDP could result in high longevity risk because of better medicine, but high longevity risk might also result in a high GDP due to increased productivity.

Besides research in the field of financial econometrics, Bertrand also conducts research in different areas. Of course, his skills in econometrics are also put to good use in these fields. A good example of this is the environmental research he

has done. In this project the effects of carbon dioxide and other air pollution on the temperature was investigated. Among the other air pollution there are so-called aerosols, among which sulfur dioxide. While carbon dioxide increases the temperature on earth due to the well-known greenhouse phenomenon, aerosols result in a lower temperature since they block sunlight. This project was primarily concerned with government policy on reducing air pollution. Since the effect of aerosols is a local one and the effect of carbon dioxide is global, lower air pollution might actually result in a higher temperature in a certain area. If, for instance, the Netherlands has very strict regulations on air pollution, but China keeps up the pollution, the air above the Netherlands will still be littered with carbon dioxide, whereas there will be few aerosols, resulting in a higher temperature.

The last project is a good example of the fact that inspiration for projects can come from anywhere. Not only is environmental research not as common for an econometrician, the idea for this project actually started at the coffee machine where Jan Magnus mentioned he had data on the subject.

We thank Bertrand Melenberg for these wonderful diverse examples of applying econometrics. ●

Adventurous Discoveries

A man is hiking on a dirt trail in a mountainous, green landscape. He is wearing a red and white soccer jersey with 'OREGON' on it, a grey baseball cap, and sunglasses. He has a large green and black backpack with a rolled-up white mat or tent attached to the side. He is smiling and looking towards the camera.

"Kazakhstan?! Why the hell do you want to go there?" was the reaction I got when I told people about my choice of exchange destination. To-day, people are still shocked that I went there. Most people have either not heard of Kazakhstan or they have got a wrongful impression from the movie Borat, which was a fully made up movie with non-realistic representation of what they called "Kazakhstan".

My first interest for this country started when there was a presentation about going on exchange at Tilburg University. After a consideration of all the possibilities it were the beautiful pictures of Kazakhstan that caught my attention. Pictures of beautiful mountains and crystal clear lakes, it was no doubt that I was going to choose this as my exchange destination. Secondly, I wanted to choose a place that was a little bit extraordinary. I knew for sure that I did not want to go to a typical destination crowded by tourists, which were the other alternatives I had (Hong Kong, USA, Australia etc). I wanted something different, somewhere I could not find many other Dutch people. Not much research was needed to assure that this was the place for me, and I have never regretted it.

Arriving in Kazakhstan

After arranging everything I needed, I finally stepped on Kazakh ground on January 9. My first impression was cold, snowy and a typical soviet style airport. After passing the border control, a bunch of men yelled "taxi taxi!", but fortunately the university had arranged a ride for me. When I arrived at the dormitory, the weather was still snowy and it was nighttime so we could not see much through the windows of the car but we could see a lot of snow down the road. It was exciting, driving into an unknown city for the first time, the city where I was going to spend the coming five months with total strangers. It was the beginning of my exchange!

The first months are the months of adjustments and differences. Everything is different when you compare Kazakhstan to Holland. I slept in the dormitory where I could rent a room for about 100 euros each month and it was not worth anything more. I was kind of lucky that I got a room on the second floor because those rooms were 'renovated', in other words those rooms had a proper shower and toilet. I had a shared room with 2 other guys, Max (Slovenian) and Luc (Dutch). Our dorm had two little rooms; one with three "cozy" beds with no space for anything else and one room with three desks, the study room.

New Experiences

Walking outside the first month was an

adventure; every day you experience something new and exciting. For example every car in Kazakhstan is a taxi. You walk to the side of the street, hold your hand out and within a minute a car will stop in front of you. You say where you want to go. "Skolka?" (How much) he will reply. "Triesta" (Three-hundred) I will say and I got my taxi for 1.20 euros. This system works perfectly and I would recommend to also try this in the Netherlands! The first couple of times catching a taxi is a nervous moment, as you do not really know the proper prices, pronunciations and the language itself. But it did not take long before you know exactly how much you are going to pay and the drivers understand you are not to be messed with. The prices of such taxis are ridiculously low. For only 2.50 euros you will go to the other side of the city!

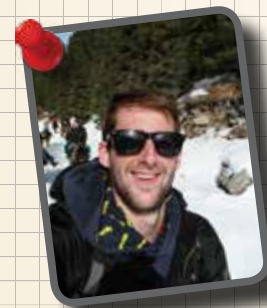
Another crazy experience was at the first day of school, when we had an excursion to the hospital! Everybody who studies at KIMEP needs an approved X-ray picture of his chest and a negative result on the HIV test. Luckily the doctor approved the X-ray of my chest and they also could not find any HIV in me, so I could stay at KIMEP.

Different Cultures

Kazakhstan is a mix of Turkish, Persian, Russian and Chinese people and you see that in everything. You see all the different people walking on the street



but also the food is mainly based on those nationalities. On every corner of the street you have a kebab shop. The prices varied from 1.50 to 3 euros. Another difference in the food is the great usage of horse meat in Kazakh



Rens Ramaekers

AGE: 22

Began studies in 2010

dishes. The national dish of Kazakhstan 'Bes-barmak' is also made of horse meat. It is a kind of pasta with horse meat and people used to eat this with their hands, which is where the name of the dish comes from, "Bes-barmak" means 5 fingers. In the beginning of the period I often went for a cheap kebab. But even I got sick of the kebab in the end and went (with Ling from Norway) for dinner to some more (Central) Asian restaurants more often.

Even though more than 90% of Kazakhstan is Muslim, there is enough alcohol to buy and drink. The Russian influence is not hard to spot. You can buy a bottle of vodka in the supermarket at any price, starting from 1 euro to infinity. They told me that you only have to buy a bottle of vodka for around 3 to 4 euros. Everything less than that will give you shitty vodka and when you pay more than that you pay for the brand that is on the bottle. If we had a party of a friend it always was a BYOB party. Everybody brought a bottle of vodka with some juice and for 5 euros you could drink the whole night. The alcohol prices in the normal bars are —>

comparable to the prices in Holland with some exceptions. 'Stalkers' was a little pub where we often went and where you could drink half a liter of beer for 1 euro. Obviously, we spent a lot of time in this little pub. Another place we often went was "Chukotka". With live performances on some days, it was the ideal place to go out and all kind of different cocktails were served. I liked the 'Vedro'. This cocktail was 8 euros for half a liter and consisted of Vodka, absinth and other strong spirits. It was the ideal cocktail to get a head start when you just arrived at the party.

Naturally, I also had to study besides all the parties. I took 5 courses. Oil & Gas Policy, Investment Banking, Financial Modeling, Managing Change and Foreign Exchange Markets. The teachers where from all over the world, they came from the US, Singapore and of course Kazakhstan. The teaching methods differ a bit from Tilburg. Every course had two midterms and some courses also had presentations or writing assignments in between. I was not used to that but it was actually a positive thing. With those tests during the period you keep up with the subject and I passed all the courses without any problem.

Traveling

What I liked most about Kazakhstan was the traveling in and around Kazakhstan. The mountains that triggered me to visit Kazakhstan did not disappoint me. Almaty lays at the feet of the "TienShan" mountain range with its highest peak at the border of Kazakhstan, China and Kyrgyzstan with a height around 7000 m. From Almaty you can take the bus to the mountains and within an hour you are right where you want to be if you like mountains. Around Almaty I did some tops and also in Kyrgyzstan I hiked a lot. Besides hiking, Kazakhstan is also a perfect place to ski. Unfortunately I only did it twice, once in Kazakhstan and once in Kyrgyzstan but it was great. What I liked the most was that it was so unknown and untouched by tourists.



It was not busy and you can enjoy the nature without too many annoying tourists around you. In Kyrgyzstan I also did some horseback riding. At first it was a bit scary to ride a horse, but when you get used to it, it is a great way to travel through nature. On horses, you can make great trips and you see places you have never seen before.

Besides Kyrgyzstan I also saw some other countries in Central Asia: Uzbekistan and Tajikistan. Uzbekistan is really a beautiful country. We partially followed the old Silk Road in Uzbekistan and the city is beautiful. Even though it is all old, it is still clean and pretty. There where thousands (not lying) of mosques and they were all decorated with a kind of mosaic. We also visited the Aral Sea in Uzbekistan. This was one of the world's biggest lakes in the early centuries, but due to over usage of the river water it is just a small lake today. It was crazy to see the old town that was once a flourishing fishing city, now doomed to be almost a ghost city. We drove for hours to the Aral Sea, seeing nothing along the way. It was where the old lake used to lay but it is all gone now.

Before I conclude this, I need to mention my visit to the new capital "Astana".

As Kazakhstan is a rapidly developing country, the president wanted to create a whole new city, which was in the northern part of Kazakhstan. The temperature varies from -40 degrees to + 40 degrees in the summer time. I went there in May, which was a perfect time to go. It was almost like traveling into the future, as the buildings were all fancy and modern. It was a big difference from the former capital where I stayed, Almaty. There were many constructions going on and it has a great growth potential. People call it the Dubai of central Asia.

Going on this exchange was just an incredible experience. Of course you sometimes think of home and think of how it would be back there but the different experiences that you can get on an exchange are just incredible. I would recommend everybody to go on an exchange and go out of your comfort zone to find new boundaries of the world and of yourself. I would love to visit Central Asia again one day. I am not sure if I want to work there, but the untouched nature made it a beautiful place to visit. If anyone is interested in visiting Central Asia, just let me know and I will answer all of your questions! ●



Farmer Wants a Wife

Since 2004 we have our own version of the format called 'Boer zoekt vrouw' in the Netherlands. The idea is simple. Farmers that are single present themselves and try to find a partner out of the girls/women/persons that react on their advertisement. Because these farmers can be notoriously clumsy in their contact with the candidates for some reason, it is fun to watch.

Fact is that I was single for quite a long time too. Apparently I am hard to get. Of course I have dreamt many times about what would have happened if I would

We will never know what the outcome would have been because I was already happily married when the program started. I am sure that my wife, given her character, would not have been one of my candidates and hence not the lucky winner as she is now. Furthermore, I think I would have made a bad impression during the speed-dating. After asking for a girls age, height and weight I would have run out of questions. Meanwhile I have learned that you should ask open questions such as 'What are your dreams?', but I am still bored by the long vague answers that you typically

immediately when he found out that she had bought new curtains for the house to replace the existing ones that were already forty years old. Although I admit that the new curtains were a justifiable expenditure this guy got my sympathy forever. The lesson: if you want to be a good farmers' wife, do not spend too much money. Do not like shopping or holidays or jewelry. I see that in my current age-group (I am 47) the typical woman that reacts in 'Boer zoekt vrouw' is divorced, has debts and wants free housing for her horse or even horses. She has no chance finding a farmer that takes his farm serious. It is far better to bring in an income or money or, best of all, land.

For those of you who are seriously interested in marrying a farmer: visit the Zwarte Cross festival that will be held July 25, 26 and 27 in Lichtenvoorde. Do not go by car, bike or public transport but hire the biggest tractor you can find.

Have a nice summer!

'If you want to be a good farmers' wife, do not spend too much money'

have been a candidate in the program. How many letters would I get? 100? 200? 500? I imagine it must be great to select your partner out of this many candidates. It gives you the opportunity to put some decent constraints and to optimize your utility function. Short hair, big nose, irregular teeth, squint-eye, overweight: no thanks! Furthermore, it is an advantage that you do not have to choose your wife immediately. You have to reduce the number of candidates to 10, to 5, to 3, to 2 and finally to 1. This offers the opportunity to also let something like character play a role because little by little you get to know each other better.

get then. Another difficult part is when the last three candidates stay on the farm for a week. This is a typical example of getting less work done with more labor. Every farmer hates that and it is the reason why farmers get irritated or even rude when a guest tries to attract his attention when he is still busy.

For a farmer some practical issues concerning a potential wife are important because the continuity of the farm is his main goal. To give an example: A farmer close to where I live was single throughout his life except for some months when he lived together with a girlfriend. He ended the relation

René Peeters

René is a part time assistant professor in mathematics at the Tilburg School of Economics and Management. Together with his wife he runs a dairy farm in Dongen. He is interested in discrete mathematics, Celtic music and athletics.



The Ins & Outs of



As (future) econometricians, it is necessary to be aware of our competition in the labor market, and to keep a watchful eye on the other Econometrics & Operations Research students. Therefore, Floris and I traveled to the Erasmus University in Rotterdam, to interview the board members of their study association Econometrisch Dispuut (ED).

Text by: Ennia Suijkerbuijk

While making our way through the campus, we are somewhat distracted by the rather large group of Dalai Lama protesters, who keep singing "False Dalai Lama, stop lying". However, as we are already fashionably late for our meeting, we have to ignore their interesting flyers and hypnotic singing. As it happens, Floris and I have an appointment with two board members of the Econometrisch Dispuut, namely with ED's Commercial Officer and their Marketing Officer.

Board

Any attentive Asset I Econometrics insider might already notice that our own board does not include such positions, as we only have five board members every year. However, since there are more students participating in the Econometrics program in Rotterdam (almost 250 freshmen subscribe

every year), the board of ED contains seven members: Bas (President), Kim (Secretary), Jan-Willem (Treasurer), Ewout (Career Officer), Max (Commercial Officer), Isabelle (Educational Officer) and Joris (Marketing Officer).

The rooms of ED are situated in the H-building, an enormous building for the Erasmus school of Economics, which means that the board members work in the same building as professors and PhD students. While entering the hallway, the first thing that strikes our attention is an immense banner with the name FAECTOR on it. That is, from September 1st, ED will become Faculty Association Econometrics and Operations Research (FAECTOR). As real econometricians, the creators of FAECTOR could not deviate much from their love for mathematics, and so their logo is the normal distribution with its corresponding quartiles. ED's marketing officer: "A former board member suggested we also drew the 95% line, as we as EOR students are the special 5% that do not fit in".

Striking Differences

For this interview, we got to borrow some of Max Schotman's and Joris Blokland's time. While listening to their enthusiastic stories, we realize that the two associations, but also the two universities, deviate in numerous ways. The most remarkable difference between the EOR program at TiU and the Erasmus University, is that the students in Rotterdam have a BSA (binding study advice) of 60 ECTS and they can only use three resits over the year. Besides, their

students need to attend at least 70% of the classes, and they only have one extra holiday besides the summer holiday, as they have 35 weeks with classes. On the other hand, students at the Erasmus University do have the possibility to compensate for certain subjects. For instance, students can still pass a course for which they scored a 4.5, but only if they have a final grade of at least a 6.5 for another subject in that subject cluster. Another striking difference between the two universities, is that the EOR program in Rotterdam counts around 930 students, whereas the program in Tilburg has around 520 students.

However, where ED has only 60 active members, Asset I Econometrics has around 75. Joris: "I think the relative smaller amount of active members depends mainly on the BSA of 60 ECTS. Besides, less than 30% of our students actually lives in lodges, and so most students still live at home and have their main focus on passing their courses. Furthermore, our board consists of seven full-time members." However, many of ED's activities and drinks do trigger a lot of students. Max: "This year we had a drink where there were almost 250 people in total."

The City

When we ask the board members how they feel about Rotterdam, Joris says that Rotterdam is a real 'working city', whereas he feels that Tilburg is more like a big city. In fact, Rotterdam has over 600,000 inhabitants, which is three times the population size of Tilburg. Max agrees with Joris: "Rotterdam is not

really a city for students, as 45% of our students still live at home. As it happens, one of our board members actually still lives at home."

Something else in which Rotterdam differs greatly from Tilburg, is the crime rate. As a roommate of Joris works at the Erasmus MC (Medical Center), he tells us that every day around six people are brought in to the hospital with stab wounds. Joris also states that recently somebody got shot in Kralingen, which is a district near the Erasmus University. As Floris and I are still trying to comprehend this, Max laughs out loud and responds with: "That's typically Rotterdam. But hey, you have to give some to get some."

As it turns out though, the crime rate is much lower in student bars. Since recently, the ED has their new hangout Divosa, which is situated in the 'Oude Haven'. Joris: "Our drinks are both famous and notorious. A single beer only costs 50 cents." In the Divosa, they host different drinks, such as for instance a pub quiz, a name change party and a karaoke drink, which they appropriately called X-FAECTOR.

Activities

Obviously ED also organizes some other activities besides drinks. One of their interesting projects concerns the minor in the third year of the Bachelor. For this minor, the students can also do an internship. These internships are coordinated by the association and with the money they earn from this, the interns go on a joint summer trip. For instance, last year they went to America for three weeks, to check out some universities, companies, and big cities such as Boston and Toronto.

Another noteworthy activity is the EDC, the Econometric Career Days, which is a two-day career event on the Erasmus campus. The event consists of cases, workshops, a visit to the Port of Rotterdam and academic presentations. Ultimately, the event was concluded by an epic boat party on the Maas. This special party attracted over 150 students, according to Joris.

Max and Joris are also very enthusiastic about the Quantitative Finance Tour (QFT), which the Erasmus University organizes together with the Delft

University of Technology. The QFT gives quantitative students the opportunity to visit many famous and interesting banks in one week, as the event takes place in London.

After having asked all our questions, we say our goodbyes to ED's/FAECTOR's board members and find our way out. Surprisingly, the Dalai Lama protestors are still present, and they have actually changed their chanting to "Give religion free, false Dalai Lama." Sadly, it takes both a tram and train journey to get the song out of my head. If our own board likes the idea of the karaoke drink, perhaps we should invite the protestors to our very own first Asset I Econometrics karaoke drink?

Finally, we would very much like to thank the board of ED for their time and interesting stories, and we want to wish the upcoming FAECTOR board already a lot of good luck! •





Did you know that a profile picture makes your profile 7x as likely to be viewed by others? Use a professional looking close-up shot of your smiling face!

2

A summary of 40 words or more makes you more likely to turn up in a future employer's search. Tip: Include keywords featured in job descriptions for your field.



Testimonial

Letter written by a person who has experienced a product or service, often used to promote or endorse it.

3

Include information designed to encourage your potential visitor to find out more about you. You have got 110 characters. Make them count!

10 WAYS TO TAKE YOUR



8

10

- Update your status on a regular basis

- Share thoughtful/insightful news within your industry

JOB OPENINGS



List at least 10 of your core skills to set up others to endorse you.

4

Embrace the visual

Add pictures, videos, and presentations to your experience section to create an eye-catching portfolio



5

Make connections

Send comments, offer congratulations, and 'like' things so people know you are active. Also, introduce people if you think they should be connected - they may help you in the future. Connect with classmates, professors, past employers, folks you have interned for and more. You never know how those connections will pay off.



PROFILE FROM GOOD TO GREAT

Join relevant LinkedIn groups

- There are more than 200 conversations happening each minute across LinkedIn Groups
- Joining a group lets other contact you using the group messaging feature.

6

Make yourself contactable

Provide your email address and/or links to Twitter/Facebook.



7

Build credibility with recommendations

A few real recommendations can go a long way in helping to establish your credibility - you have got to ask for them!

Interview Former Active Members

Text by: Cleo Mauritsz

Mark Timmermans and Celine Netten were both in the Asset | Econometrics board 2006 – 2007. Just before their daughter's first birthday, we wondered: how did these two board members end up together in the first place? How do they look back upon their years at Asset | Econometrics? And what is it like to be the proud parents of an Asset | Econometrics baby? We traveled to Uden to find out.



Let me start with you, Celine. You were Editor-in-Chief of Nekst in 2005-2006. Do you still read Nekst when you receive it?

C: "Yes, I still read some parts of it, mostly the information about the association itself, or about companies that might interest me."

What has changed about Nekst since you were Editor-in-Chief?

C: "Not a lot has changed in fact. Of course every new editor in chief changes the layout of the magazine, either because he/she feels it is completely outdated or even just because it is fun to give Nekst your own personal touch. However, the content never really changes: it is always about the association, about its activities and its members and about companies."

Was it logical for you to become treasurer of the board in the year after?

C: "Yes, I have never seen myself as a real beta or alpha. I loved being editor in chief but I also thoroughly enjoyed being treasurer and learning skills like bookkeeping. Both fit me equally well."

Why did both of you decide to apply for the Asset | Econometrics board?

M: "Our reasons are probably not that different from the reasons the current board would give you. We were both active. I had done the 'External affairs' committee and

liked the contact with companies, so the board was an obvious next step."

C: "During the first two years of my studies, I actually thought TEV (previous name of Asset | Econometrics, ed.) was a bit lame. Nonetheless, I decided to join the International Business Tour to Istanbul and had a great time. That is where I was convinced to become active. As Editor-in-Chief of Nekst, I spent a lot of time at the TEV rooms and went to more drinks, so I got more familiar with the association. That is when I decided I would like to apply for a board year."

What was the greatest moment during your board year?

Mark starts to giggle and excuses himself to make the baby a bottle.

C: "I think the Active Members' Weekend was the best time of the year, it was one big party. Mark will probably say when we started dating."

M: "Well of course. But also, I am obliged to say that I loved the Congress. I was the chairman of the Congress committee, because of my function in the board. Asset | Econometrics does not host congresses anymore, but it was basically a full day with many different speakers. The theme was Transport&Logistics in my year. It was hard to find sponsors in that sector, but we managed to use some of the profit from another event. The point is that the committee works towards this day for almost a year. I got to say the opening and closing word and all in all it was quite the experience. I also started the National Econometricians' Day committee towards the end of my board year; that was a great challenge as well but of course I was not able to finish the committee. After my board year, I stayed as an advisor to the committee. It was incredible to build this whole event from scratch, choose a location (the Evoluon in Eindhoven) and make all types of arrangements for this day."

C: "That was one of the highlights of course. I also enjoyed being in the former Drinks&Activities committee. The preparation for the Sinterklaas drink and all the fun we had in advance comes to mind. We dressed up as Zwarte Piet and walked through Tilburg in costume and make-up, it was great fun. The etiquette dinner we hosted during our board year, at the Orangerie, also stands out."

M: "Though not one moment, I would like to say I really enjoyed our board meetings."

C: "We were always late and took forever, sometimes the rooms did not open until 12.00 o'clock, but we loved every minute of it."

What is the most significant skill you learned during your board year?

M: "Definitely planning and organizing. I was never very structured, but I was forced to plan during that year because I had multiple committees. Not only did I get better throughout the year, it also helped me to start my study again with more zest and I was better equipped to plan my study time. I also met more hardworking students who motivated me."

C: "As a treasurer, I learned bookkeeping of course, but I also loved the contact with different companies. A board year is like a little sneak peek into the working world, you get to see how things are done professionally, how to handle both internal and external contacts."

By the time this Nekst hits your door mat, the 36th board of Asset | Econometrics will have been announced. What advice would you like to give them?

C: "Have a lot of fun! By the time you start working, your life will be a lot more serious and structured, so enjoy the freedom that you have now."

M: "I would say that too. And try things, change things that have just been changed; it is okay if it does not work out because then you have learned from it. A board year is also about discovering yourself and what you are good at."

Mark just mentioned that you got in a relationship during your board year. How did this go and how did this affect you?

M: "The spark first kindled during the handover weekend. We flirted and started a relationship soon after. It was a little scary to tell the rest of our board, but thankfully nobody objected."

C: "We often had different points of view during board meetings, so we did not side with each other just because we were in a relationship, I think that helped."

What is great and what is hard about being in a relationship with another econometrician?

M: "I like that she understands what I do. It is easier to explain what you are

currently working on at your job and get some advice on issues you are dealing with. We both did the ORMS master, but our jobs are fairly different. I am the bigger nerd, haha. There are no downsides, in my point of view."

C: "My line of work is purchasing, so I do not use many of my econometric skills nowadays. We can discuss our jobs of course, but it is not like we talk about econometrics all day, thankfully."

M: "Another advantage is that we know each other's friends. We were in different years, so we both have our own group of friends but of course we all know each other."

Can you tell us more about your jobs?

M: "I work at TNT Express. I am a Strategic Supply Chain Development Project Manager and it is my job to manage or participate in projects that impact the structure of our European Road Network. I also work together with ORTEC, who create most of the tools and models for us that support me to find optimization opportunities. I did my internship here and was offered a job, so I stayed there ever since. My work concerns our European network: where to create new lines and how to optimize the network. We have about 6000 international truck movements per week, so you can imagine that this is quite a large problem to tackle."

C: "I work at Philips Healthcare. My official title is Program Manager Operational Procurement, which as you might expect has almost nothing to do with econometrics. I started here after Amber was born and I enjoy it very much. My job includes purchasing, communicating with suppliers and keeping the right inventory levels, as well as improvement projects in my department. After my study, I started as a software consultant for an energy company. That was a more econometric job that required me to program and use models, but my current job is a better fit for me."

How did your experience at Asset | Econometrics prepare you for the working life?

M: "It is actually the other way around if you ask me: I think you have really missed something if you did not undertake any extracurricular activities during your study. You miss out on a lot of personal development. It is too bad that it becomes harder and harder for students

to do things beside their studies."

C: "Like I said, you get a sense of what it is like to work, have company contacts and you learn how to work, meet and discuss efficiently."

M: "For instance, you cannot discuss everything you do with your fellow board members: there simply is not enough time during board meetings. You have to make choices, deal with the easy situations yourself and discuss only what needs more attention. That is similar to what you would do at your job: you do not go up to your boss and tell him or her exactly what you have done today, you ask for help whenever you need it."

And now you are the proud parents of Amber Sofie. Is she the first Asset | Econometrics baby?

C: "We think so, we have not heard of any others anyway."

M: "Our fellow board members used to joke that we should make a TEV baby and call it Stef."

C: "Thankfully she is a girl, haha."

She is obviously genetically 'burdened' with the econometrician-gene. Would you like it if she studied econometrics too?

C: "It does not matter, we will see."

Would you like to tell us a little bit more about Amber?

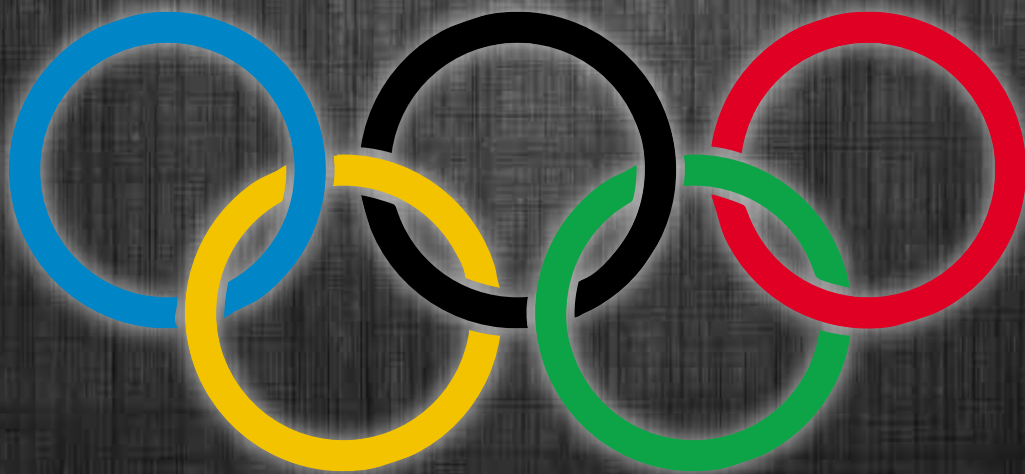
M: "All the cliché's are true. Having a baby is great, but it also dramatically changes your life. We just went on a holiday to Portugal and that was quite different from going on a holiday as a couple."

C: "Amber is ten months now and she is starting to babble a little and she can crawl and stand up, with a little support. It is very 'gezellig' to have her around."

M: "And many econometricians came to see the baby when she was born, that was lovely."

We would like to thank Mark, Celine and Amber for the interview and we wish you the best of luck! •

Peak Performance at the Olympic Games in Belgium



On April 11, it was finally time for the yearly weekend off for our active members: the Active Members' Weekend. As always, the AMW was set up as a competition between teams with a challenging theme: the Olympic Games. My team and I knew we would have to fight a tough battle to win.

Therefore, the team that I joined, which was team yellow, had prepared optimally in the week before. We sought for all the yellow clothes we had, and as if that was not enough already, we also went shopping to buy all kinds of ludicrous yellow stuff: a yellow boa, a yellow feathered headdress, yellow legwarmers... Neither costs nor efforts were spared to make this AMW a success for our team. I hope you can imagine how crazy our yellow club was already looking, so now think of multiple teams like this, but then in all kinds of other colors, gathered at Tilburg Central Station. Yes indeed, it was a colorful crowd. Asset I Econometrics on tour, let the AMW begin!

After this multicolored gang had collected at the station, the AMW committee handed out packed lunches to the participants. Finally, when everybody was present, we could enter the train. All of us were excited about the destination of this year, since the committee had succeeded in keeping it a secret. As the train headed to Maastricht, some of us already began to speculate about a foreign destination. This thought was strengthened by the fact that we were asked to bring our passports with us, so Germany and

take long before a willing girl was found. Score!

The train went further, and after a while we reached Maastricht. We received new instructions: we were to find and photograph certain buildings and statues, so our team rushed into the city center to finish our assignment. This lasted the rest of the afternoon, and also allowed the participants that were ready early to enjoy the bourgondic benefits of the south at one of the many café terraces. Around six o'clock it was time to gather with all teams again and we were told to take the bus that the committee had chartered. Where would we be going next? The bus appeared to drive westwards, and after half an hour we arrived at our final destination, the Viggel in Bree, Belgium. This lodge, that is situated in a forest and next to a castle, was our accommodation for the rest of the weekend. After we had dropped our bags and found a bed, it was time to make dinner. Traditionally, on Friday night spaghetti is eaten, so we prolonged this tasty habit with another year. Since everybody was hungry after this day of hard work in Maastricht, a lot of pots with these Italian strings rushed out of the kitchen. Later that evening, it appeared that a decent meal was very

'The international championships were held in Bree, so we realized the importance of this place in the international community'

Belgium were serious options. However, we also realized that this could just be a trick from the committee to put us on the wrong track. Regardless, we did not have to bore ourselves during the long journey, as each team was given an assignment to fulfill during the day. The task was to collect as many pictures as possible of the people specified on the list, so we already started taking pictures in the train to Maastricht. The targets were very diverse, varying from people with a red jacket to a kissing couple. Willem Jongen's team should get a special remark for the latter, as they turned out to be very inventive in finding a kissing couple: they just searched for someone who wanted to make out with Willem. Since Willem appeared to be a very popular guy on this train, it did not

useful, since that night it was time for beer drinking games that the committee came up with. After a pub quiz and beer pong competition, it was time for the traditional AMW beer cantus! This great opportunity to show off our singing qualities resulted in a big party that lasted until early in the morning. We even met our Belgian neighbors, who appeared to be from the Scouting and stayed in the lodge next to us.

After a tumultuous night on the first floor of the Viggel, it was time to have breakfast and listen to what the committee had planned for us today. The program was very exciting and it was clear that they had not forgotten about the theme, which was the Olympics, since the games we would play were all →





athletics. Well, at least if you call catapult shooting athletics, since that was where we went first: Catapult Club Vlaanderen. This association, located at the soccer club of Bree, gave us a workshop in catapult shooting. It appeared we had to deal with some serious internationals, because the woman who taught us was last year's Belgian champion. She told us that this year the international championships were held in Bree, so we realized the importance of this place in the international community. We were clearly on holy ground. This atmosphere of excellence resulted in fierce competition between the teams and we soon experienced the difficulty of the game. However, after some training and education by the international catapult elite, we soon began hitting the first plates with our marbles and everyone thought it was great fun to do.

After the lunch we went to the lawn next to the Viggel, where the committee had organized all kinds of games. The most impressive object was certainly the giant air bouncer on this field. It appeared that we were to run over it as fast as we could and try to set the fastest time we could, which was pretty exhausting. Another funny game was sumo wrestling. The committee had created a square arena and arranged some padded sumo suits. We had to put them on and fight our opponents, which resulted in some hilarious scenes as you can imagine. The day continued and after a final game in which we had to run over the air bouncer in these sumo wrestling suits, we went barbecuing. Since the weather was nice, we could enjoy our meals outside, while waiting for the meat to be prepared.

That night we went to the center of Bree to go out. It was about a 20-minute walk from the Viggel to the bars, but it was absolutely worth the effort. The Belgian beers tasted good and before we knew it, it was already time to go home. Eventually, all the participants returned to our lodge safely, looking back on a great party.

We did not have much time to sleep, since the committee had planned to get up early that Sunday. We all packed our cases and cleaned up the mess we made in the past few days. The priceless stories of the night before slowly took over all

conversations while we were all looking forward to the next activity, which was swimming. We went to the pool in Weert, Limburg, by bus. Everyone enjoyed the relaxing pool, but one place clearly had our preference: the hot tub. It was constantly filled up with tired econometricians seeking some rest.

The afternoon rushed by as we were laying back in the hot tub, and we realized the AMW was almost over. Together we walked towards the bus station and took the bus and train back to Tilburg. Finally back home, some diehards went out to eat together at café Brandpunt, after which a great weekend came to a definite end.

I would like to say thanks to the committee for their great effort to make this an amazing weekend! ●



Michiel van Erp

AGE: 20

Began studies in 2011

Champions of the Champions League



Thursday June 12th, Victory Day, the day from which no one will ever say that we, Econometricians, are just geeks. From now on we will be called winners, conquerors, victors and most of all: champions. Asset | Econometrics, winners of the Asset Champions League in both the mixed competition and the men competition. You should have seen the looks on their faces; how is this possible?

Asset | Econometrics participated in the tournament with two teams in two different leagues; the mixed team, consisting of the board with some reinforcements, and the men team, also known as the 'Tjoepentrekkers'. Where the men had some troubles with their first match, the mixed team had a kick start; they won all their matches with convincing results. The only team that was a bit of competition for our board, were their opponents in the final. With the hard match in the group stage between the later champions and runner-

up still in the back of their heads, the econometricians knew that it would be a tough game again. Luckily there was the rise of a hero, Ecco Nometrios, he scored a hat-trick in the final and led his team to the victory. His performance will probably make it to the Econometricians book of records for being the first soccer player ever to score three goals in the final of the Asset CL for our beloved association.

As said before, the men had some troubles at the start. A draw against Marketing 3 was not the result they expected or hoped for. Maybe it was due to the fact that the team was incomplete at the time of the first match. Dirk Parren showed up too late, because he had some other business to handle from the night before. Once Dirk showed up, the lady of the canteen could not resist making fun of our Dirk's nightly adventures. With Dirk on our side, we easily won the following matches in the group stage, which brought us to the quarterfinals. After a dull 0-0, we had to take a series of penalties to decide which team could continue to the semifinals. Last year, de 'Tjoepentrekkers' lost the semifinals after taking penalties, so afraid as we were, we started the series. Where we all scored, the penalties against Asset | Economics were almost

all saved by our magnificent goalkeeper Sjors 'Duitser' Reutelingsperger.

Already in the semifinals we all got the feeling that this would be our day, driven by this feeling we won the semifinal rather easily. Now we only had to beat SBIT to win the cup for the first time. An early goal, after a tremendous pass, gave SBIT the opportunity to lean back for the remainder of the match. It seemed like the match was lost, but then there was the influence of Sjors again. With a real German in our team we, of course, scored the equalizer just a few seconds before the last whistle. After this nerve-racking match, again a series of penalties was needed to decide the winner of the match. A bit more confident than before, we also won this series and so we became, together with the mixed team, champions of the tournament!

Afterwards there was a nice barbecue to end the tournament. 'Chef de la barbecue', Willem Jongen, made sure we all had some delicious pieces of meat to eat, so that we could scream as loud as we could when we received our prizes at the ceremony. I think we can all be proud at our two teams, who delivered a great performance. Who knows how many cups we can win next year! •



Rick van de Meulenhof

AGE: 21

Began studies in 2010

Economic Business weeks Tilburg

With a small group of five ambitious students we started to organize the Economic Business weeks Tilburg 2014 in the summer of 2013. From that moment on we worked hard to make it an unforgettable event. Then the moment of truth is almost there, in April we kicked off the largest recruitment event of Tilburg. We can proudly say that this year's edition was again a successful edition with over 60 participating companies and almost 1000 participating students.

Week One

This year the Asset International Conference was a new event of the EBT, and therefore the grand opening. The central theme of the day, 'Dream, Discover, Innovate' was enlightened by prominent international speakers like Jan Peter Balkenende and Søren Hansen. Next to that the registration day took place where students could collect their personal schedule and a goodie bag with lots of free stuff in it.

After this relatively relaxing start, the EBT could start with some company related activities. The informal activity consisted of a workshop and a nice tapas night with PwC. It is a great way to get to know a company in a less formal setting and to impress the recruiters with your personality for example. Next to this activity, the new EBT & Brabant Talents On Tour Day was organized on April 8. We developed a new concept to inspire Dutch as well as international students to get a taste about working opportunities

in Brabant. During a plenary session, College Tour, presented by Twan Huys, special guests were interviewed in an interactive way. In the afternoon program a Stand-Up Business session took place where companies presented themselves with a short pitch for the audience.

The Wednesday of the first EBT week was the Personal Development Day. On this day several training companies visited the university campus to give various trainings, such as a negotiation training or how to use social media effectively. It was an exceptionally educational yet fun day! We wanted to give the EBT a more international character and therefore we organized a special track for international students where they could join a workshop, visit presentations given by international alumni, the immigration service, and they had a chance to do a CV or LinkedIn check.

The EBT 2014 continued with the Assessment Day on April 11 which was held in the Willem II Conference Center. For the organization it was a pleasant chance since they took care of everything instead of organizing everything by ourselves at the Tilburg University Campus. We even had our own Business Skybox with a nice view of the football

field. During this day, students were trained and prepared to undergo an assessment. Since assessments are used very frequently in job applications and selections nowadays, these trainings really come in handy, especially when the participating students will start applying soon for a starters function, internship or traineeship.

The first week ended with the Case Day, again in the Willem II Conference Center. This year KPN and Accenture presented an intensive case for a small selected group of students. The day started with the case, which challenged lots of skills and competences of the students, and was followed up by an informal activity. A luxurious Business Dinner ended this day and week for the companies, participating students, and luckily also for the organization!

Week Two - Company Days

After a weekend full of rest, slumbering, relaxing and meditation, it was time for the second week of the EBT. While the first week is very diverse in activities, with a completely different theme every day, the second week completely consists of the so called Company Days. These days are filled with various activities such as company presentations, individual conversations, speed dates, workshops, and business dinners and lunches. Basically, these days offer everything from a brief introduction of a company to a thorough in-depth conversation. Students are eager to get in touch with the companies of their dreams, so in general these days are very popular and successful.

We, as an organization, were constantly running around trying to make everything go as smoothly as possible. These days were definitely the most demanding of the Economic Business weeks Tilburg 2014, but it was worth all the efforts, as the majority of the participants and companies were content. After the last Company Day we were very tired; in nine days we all worked around 140 hours to do the best we can to make this event a success. Luckily, the event was about to go out with a bang. As in previous years,

'It was an exceptionally educational yet fun day'

the EBT ends with the EBT End Party! With several free barrels of beer, some ridiculous stories about all the EBT board members and a nice crowd, this party was a great success and a remarkable ending of the Economic Business weeks Tilburg 2014.

Meanwhile, the new organization of the EBT has started the preparations for next year's edition, which will take place on April 13-23. Interested in the largest career event of Tilburg? You are more than welcome to participate in EBT 2015, but first, enjoy your summer holiday!

Kind regards,

The EBT organization 2014

Elske van de Ven – Daniëlle Liplijn – Jenna van der Meij – Maarten Hofmeester – Cissi Beek



Thijs Kramer

AGE: 19

Began studies in 2012

We gathered around 17:30 at Café Polly Maggoo, to start with a dinner. We had already indicated beforehand what we wanted to eat and I had chosen to go for an 'American Burger', which is just a really big burger. For dessert, I had set my sights on a brownie. During the dinner, the goal of the evening was explained: we were going to do some real crazy stuff.

We were divided into six groups and I formed a group with Anouk, Bart, Daniëlle, Floris, Jim, Jules and Willem, a dream team! The atmosphere in the group was immediately great and when we received the list with the 35 activities we had to perform, we started right away.

Every completed point of the list would give us some amount of points. The activities that were listed were various. They differed from grabbing a stranger's butt to lifting a car with your group. We had about three hours to finish all the tasks. We knew it was not going to be easy, but we figured it had to be possible.

First, we went to the supermarket, because we needed some products for the crazy stuff. Willem impressed us by putting an amazing amount of marshmallows in his mouth at once, and Floris ate two entire red peppers without hesitation.

Furthermore, we had to sing the Lustrum song on the 'Heuvel'. We actually did a

Econometricians are Crazy!!

On April Fools' Day, the Drinks & Activities committee organized another great activity, to find out how crazy econometricians actually are. This activity included a nice dinner and the game 'Crazy 35!', in which we had to perform 35 absurd activities in the city center of Tilburg.

really good job, but there were some slobos, who did not want to give us a single penny. Later, we received some money at the Central Station for our great show, so we could check the activity 'being a street artist' on the list.

This article is too short to describe all the crazy stuff we did, but one thing I will certainly not forget is the expression on some girl's face when Jules and I were changing clothes in the restroom of Café Bolle. One of the points of the list was to change as many clothing items as possible with your group mates. Jules and I decided to change everything except underwear, so we were just standing there in our underwear when then this girl walked in. Obviously, she did not know how to react, but after explaining the situation, she said she understood it. However, from her facial expression we could read that she thought we were completely insane, and that we were doing other stuff than just 'changing clothes'...

After the activity, we joined the lecture drink from the 'Actuariel Genootschap', which was in fact also an item on our list. They did not only talk about being an actuary, but they had also prepared a pub quiz about AG and some other interesting facts.

When the lecture drink had come to an end, the winners were announced. Most groups had completed all the activities, but our group won as we had the most original swap of clothes. Of course, we were really glad to hear we had won. As a prize, we all received a chocolate bunny and some chocolate eggs. Before we knew it, the drink started and it lasted until well past midnight.



After the drink, we all went home and probably everyone had thought at least once about all the weird stuff they had done that evening. I think it can be safely said that the econometricians are crazy indeed! •

The Klankbordgroep

It was April 16th, yet another warm and sunny Wednesday afternoon in the beautiful country of the Dutch. That afternoon, a special meeting was to take place in the Koopmans building. We, the education committee, were walking, talking and laughing until we realized the great building was already towering over us. It was time. Time to discuss more serious issues than last weekend's events, it was time for the Klankbordgroep meeting.

To start off, let us first discuss what had to be done prior to the meeting. At the end of each semester, a fraction of the econometrics students receive an e-mail in which it is kindly asked of them to fill out an online course evaluation for a course they attended previous semester (remember those?). Not having all the time in the world, reading an e-mail like that raises the most important question when it comes to filling out online forms: why would I waste ten minutes of my time on something that will not even be glanced at anyway? Well that is where we come in. We evaluate your evaluations and compile all the given compliments and complaints per course. Of course, this is all very well, but something more has to be done with these evaluations to make filling them out worth your time.

Therefore, we now return to the moment we were standing in front of the Koopmans building. Confidently, we stepped inside and took the elevators to the seventh floor (naturally, taking the stairs was not an option). We arrived at our destination, and were kindly



offered something to drink. Once we were all seated, the Klankbordgroep meeting could begin. Notice, by the way, how this Dutch word is surrounded by English ones. Why you ask? Well, the explanation is actually quite simple: we have not had our 'eureka' moment yet wherein we found a magnificent, or even fitting, translation. (If you think of one, please, do not hesitate to e-mail the education committee, suggestions would be greatly appreciated.) Anyways, to not let the story drift off any further, we return to the actual Klankbordgroep meeting again. The meeting takes place after each term and is held with the study advisor and the academic directors of the Econometrics Department. The structure of each meeting is more or less the same. We begin discussing first-years students' concerns regarding the courses, continuing on to the ones of second-years students, third years, and so on, you get the point. Even though it may not always feel like it, all comments given in the evaluations are discussed during these meetings and immediate action is always (and will always be) taken when necessary. Of course not only concerns are discussed, good experiences will also be brought to the table. Because surely, our goal is not to discourage the lecturers.

Lastly, we would like to draw some attention to the 'Lecturer of the Year Award'. This award is split into four categories whereof two are 'Best Lecturer Bachelor' and 'Best Lecturer Master', and two other captivating categories which will be known shortly.

It is a way we would like to thank the lecturers for all their efforts during the past year, and, above all, let them know their hard work is appreciated. These will be handed to the lecturer of your choice and the event will be held at the beginning of the first semester next year. When the time comes, we will invite you all to vote on the lecturer of your choice.

To conclude, we can only say that if you do not want your suppressed troubles regarding the courses to be one of your ninety-nine problems, or just want your opinion to be valued, do not hesitate to fill out an online course evaluation on the website! Also, if you were particularly satisfied during one of your courses, positive feedback is highly appreciated as well. •



Lotte Ruwaard

AGE: 19

Began studies in 2013

Cover me, I'm going in!

"Over there, behind the shed! Can you see him?" These are some of the most prevalent cries yelled at the last Freshmen Activity of this academic year. The committee once again managed to organize an excellent evening full of action and thrill, laughter and tears. I have to admit, I had never played a game of laser - is that correct? - in my entire life. I definitely would have loved to but it just did not happen. But on this evening, all of my wishes came true.

Text by: Mike Weltevrede



The Freshmen Committee offered us three nights in one. First of all, as an appetizer, we had some tasty pancakes at the restaurant on the premises of "De Zeven Geitjes," the location where we would also play the laser games. Although we could not pick the pancake we wanted and got a somewhat standard one, it was huge and therefore it did fill our famished bellies.

After this, we left the restaurant and went to the back of the area, where some horses and chickens were awaiting our arrival. Over here, we started the main course of the evening. We had some trouble making teams at first, but Amber eventually just drew an imaginary line and divided the group into two smaller ones. I fortunately got into the blue team, obviously the better side. We received our state-of-the-art guns and

were anxious to start destroying each other with powerful blasts of light. You would not believe it, but these shots do not actually hurt you as much as you would think. Besides these high-tech rifles, we had to wear specific jackets and hats, which would camouflage us in the woods. Lastly, the employee of "De Zeven Geitjes" put a ring of lights on our head, which were attached to our guns. These lights were the targets for us to shoot. Despite not having done laser gaming before, I feel that this is better than wearing vests. They are a tad more difficult to hit and I feel that this makes the game much more exciting and intense.

We got to play three games in total and every game was more intense than the one prior to it, which is unexpected in my opinion, because a game takes a

lot out of you. I teamed up with several people to try and go around the meadow to sneak up on the opposing team from the back. This worked out pretty well, until the referee blew his whistle to mark the end of the round. So much for our master play.

For dessert, we skedaddled out of there and went to Pathé, the cinema, to watch "Bad Neighbours", a movie featuring Zac Efron and Seth Rogen. Seth's character Mac, his wife Kelly and their daughter have just settled down in a quiet neighborhood when all of a sudden, they hear that they will be getting new neighbors. Being very excited when they see a homosexual couple talking to a real estate agent, they wonder what they will be like. However, it becomes apparent that these are not actually the people moving in, but a fraternity has decided to make the house next to Mac and Kelly's their own. This fraternity, whose president Teddy is played by Zac Efron, is called Delta Psi and is far from tranquil. Even though Teddy has agreed to keep it down, the music still blasts from the speakers every night. This gets Mac and Kelly on their nerves, which leads to hilarious scenes.

In conclusion, this was a great evening and I am sure that everyone who participated had a lot of fun and therefore I would like to thank the Freshmen committee for their hard work this academic year. •



Master of Game Theory, Wheelchair Rugby and Much More

Many of you will know Dr. Hans Reijnierse from the courses Analysis 1, StORM, DI&T or Probability and Statistics. However, there is much more to this professor than seems at first sight. Did you know for instance that Reijnierse was born in Nigeria? Or that he has a passion for wheelchair rugby? Read on if you want to know more about this well-known professor.

Text by: Maha Lharoui

A Child Of The Wild

Christian and I walked to the Koopmans building to interview Dr. Reijnierse in his office. After greeting us with coffee and telling us a bit about himself through the first few questions, we already knew we were in front of a clever individual with a rich past. Tracing back into his history, we found out that Dr. Reijnierse was born in a very small village in Nigeria, because his parents are doctors and his father ran a local hospital in that village. His family came back to the Netherlands when the civil war broke out in Nigeria,

except for his father who stayed for one more year. He grew up in Eindhoven, where his parents found jobs at Philips, a child welfare clinic and a training school for nurses. Hans himself studied in Nijmegen and still lives there, but he comes to Tilburg three times a week, mainly because of his part time job here.

A Brilliant Study

Hans discovered his passion already at a young age, as when he was a child he decided mathematics was his field. Nevertheless, at the age of sixteen

he was tempted to take a track in computer science, because computers got introduced to his school for the first time. However, it was just a passing idea and it was clear that mathematics was his field.

Hans studied mathematics and specialized in Functional Analysis during what is equivalent to the master thesis nowadays. He got introduced to Game Theory later on, which he liked very much and decided to write his PhD dissertation in that field. Dr. Reijnierse: "I like Game



Theory, because it is a nice field between economics and mathematics."

He enjoyed student university life more than secondary school. There were not many student associations in his university that interested him enough, apart from the faculty association 'Desda' for mathematical students, that mainly focuses on playing games. He also did not prefer to have part time jobs in his studies, except for assisting tutorials.

He got a scholarship to do research in Israel, however he had an accident and therefore he could not pursue with this endeavor. When asked about how he planned his studies, he did not take a gap year after his master thesis because he wanted to use the full six years for his study. He immediately wanted to become a PhD candidate in his favorite area, cooperative game theory, right away after his Masters.

Even though his parents are both doctors, Reijnierse himself did not want to become a doctor as profession. He does not like the aspect of the ethical concerns such as when to stop treatment. For similar reasons, he conscientiously objected for military service and performed civil duties instead at the Tilburg University. This tells much about his personal values and concern about humanity.

Dr. Reijnierse's current research is in fact still in game theory. As an attempt to explain game theory to us, he states that game theory is a model of economic situation. Hans: "You are modeling people involved in rational play." It is according to him a challenging topic that he considers as his field of interest. Reijnierse says that he feels more like a mathematician than an economist, and that the most important characteristics of econometricians is the use of an independent way of thinking. We joked that the downside of being an econometrician is probably not having much social life.

At Tilburg University

Regarding his expectations of being a professor at Tilburg University, he thought that it was much more applied in Tilburg than in Nijmegen. There is more cooperation within the department, and this turned out to be true. Here at Tilburg

University, he teaches mathematical courses in English, namely: Stochastic Models, Differentiation and Integration Theory, and Mathematical Analysis 1, Probability and Statistics, and Stochastic Operations Research Models. These five courses together cover quite a broad field in the world of mathematics. Although he does not teach game theory, he likes the stochastic models very much, and also the integration part. However, he does feel like this might be too abstract for many students. Hans feels like the most interesting part of his job is the interaction with PhD students to do research: "It is much more fun to work in small groups."

Personal Life

Two big hobbies of Hans are playing bridge with friends, as well as wheelchair rugby with a team in Nijmegen. The principle is simply just like in regular rugby, where one needs to direct the ball over the line to score. However, in this version you are allowed to have wheelchair contact (not physical contact), so wheelchairs can block each other.

Hans obviously also does some relaxing. His favorite TV programs are simply the news, sports and movies, but he does not watch any series. He is of course planning to watch the world cup, and expects Brazil to win. For books, he likes to read Scandinavian thrillers, fictions, and novels. Concerning food? Well, our professor eats not only Dutch, but also likes Indonesian and Indian food.

When asked about his favorite vacation spot, Reijnierse replied that he has a daughter of ten years, and so on holidays they like to go camping in France, as long as the weather is nice. His sister also visits the same camping, which results in nice holidays.

Miscellaneous

For the future, Hans is going to stay in the Netherlands rather than choose to be in another country. According to Dr. Reijnierse, Tilburg University is almost wheelchair friendly. Furthermore, about his future, he mentions that he would like to stay a mathematician rather than changing his profession.

When asked whether there was something similar to Nekst during his own student years, he replied that the

Bert & Ernie Questions

Education or Research?
Education

Computer or Pen & paper?
Computer

Listening or Speaking?
Listening

Theory or Practice?
Theory

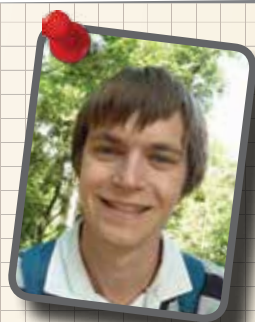
Students or Colleagues?
Students

Cinema or Theater?
Cinema

Beer or Wine?
Beer

Nekst is much more professional and therefore there was no magazine like it at the time. About his impression for being contacted by Nekst for an interview, he was not very enthusiastic as he claims he is not so good with interviews, but according to us, he did a nice job while answering our questions. He knew about the Ernie and Bert part and was amused to be asked such questions.

Regarding the final advice to be given to econometrician students based on his experience, he says it is better for students to focus on studies and not to try to win money in day jobs, nor waste valuable time that could be invested in studying. Dr. Reijnierse: "Therefore please avoid side jobs that are not relevant to your study." •



Frans Fonville

AGE: 25

Began studies in 2007

We all have different tastes. That is what makes a person unique. Another characteristic is whether you make the right choices in life or not; choosing the OR/MS master or the QF/AS master is a good example. Nevertheless, we all end up in the same place:

Loon op Zand for the former active membersweekend (KOALA Weekend).

A Taste of Awesomeness

This weekend took place on April 5 and 6. Unlike previous years, there were no activities on Friday and everybody arrived on Saturday morning for an interesting lunch. This weekend was clearly going to put our tastes to the test, because the lunch consisted of the following unique combination: tea or coffee accompanied by a savory sausage roll. So I shall label this with the least-known taste: savory. Savory, also, because it gave a satisfying feeling to be reunited with my fellow econometricians that I have known since the beginning of my studies. After the most important stories were exchanged, we were welcomed by the committee and they explained that we were going to do a GPS Tour in a nearby forest.

A lot of former active members had come by bike and were supported by their cavalry in the cars that raced by. Of course, there were occasionally some items thrown into the open windows of the cars. Mostly our coats though, because the weather was great! Although the staff of the GPS Tour had some difficulties ignoring our continuous jokes, we finally understood what our goal was for the afternoon and how the GPS equipment worked (at least, Mark Timmermans knew how). We walked through the forest while following the GPS landmarks to solve a murder that happened within the forest. At the finish, we were asked to give our solution to the murder case. The answers of the other groups were rather salty (yes, another taste) and mainly followed the

suggestions made by the staff with some sexual content thrown in for fun. We, on the other hand, had come up with a very original story and expected a prize. There was no prize. None.

When we returned to the basecamp, there was some free time to chat and play soccer. Then, the next activity started and everybody received a plastic cup. The cups were filled with beer during various tasting rounds and we were supposed to describe its flavor and guess the brand. I did not partake in such intelligent activities and rather just drank beer and let Dieuwertje Verdouw fill out the form. We turned out to be pretty bad at this profession and a lot of good beers were wasted on our taste buds. Still, we could make out that the more expensive a beer, the more bitter it becomes. So yes, this activity turned out to be rather bitter even though I must say I very much appreciated the skill with which the committee had set up this activity.

Not much to our surprise: there was a barbecue. And afterwards, the old and the very old econometricians played a soccer match until the night sky urged them to stop and drink more beers. The party started with a beer cantus, during which a lot of people misbehaved (myself included) and were punished accordingly by the committee. The cantus was great, but I did not really appreciate that nobody joined me in singing 'The Lion Sleeps Tonight' after

the official ritual was over. Perhaps it had to do with the fact that I was singing it without a shirt and that someone threw beer in my pants halfway the highest 'Ayiee'. The party was definitely the sweetest thing of the entire weekend and I heard that some people stayed up till the Johnny Cash playlist of Emile van Elen had finished.



On Sunday morning, we woke up with a sour taste in our mouth and everybody realized we had to clean up and prepare for the traditional auction. Some people already left early, because they either had to be someplace else or were just 'pissed off'. Nuff said. The auction saw some good profits for the next KOALA Weekend and everybody went home to enjoy a nice aftertaste. ●

A Memorable Announcement Drink

For several weeks I have attended secret meetings. Actually, mainly the composition of the attendees was strictly confidential. We were definitely not supposed to be seen in public together. Not only did we have to take turns leaving the meeting rooms, we also had to mask our presence at the announcement drinks of other associations.

We already failed to do so when we ignorantly arrived half an hour early at the announcement drink of Asset I IB&M and decided to, rebellious as we are, have a drink outside café Babbus. Fortunately, nobody spotted us, and for the remainder of the announcement drinks we did our utmost best to hide ourselves. Anouk even had to take a big detour when returning from a 'Tupperware party' with some fellow econometricians in order to misguide them. It goes without saying that we were really looking forward to our own announcement drink.

On the other hand, however, we were slightly frightened by announcement drinks that we had visited so far. Shameful photos, crazy outfits and lots of beer seemed to be what was ahead of us. The boards of most other associations used their announcements to ridicule their successors, and pictures of scarcely dressed men were no exception.

First we would have to compete in the Asset I Econometrics football tournament, however, all while keeping our true purpose for the evening a secret. Luckily, this did not prove to be too hard, since most econometricians present were mainly interested in playing football and doing the best they could. After we had lost to the Tjoepentrekkers, who would

later on win the tournament, and beat the team of ladies, we advanced to the semi finals as the second seed from our group. Little did we know that we would face the Ecco-Huib combination, a future finalist and serious contender for the tournament victory. Although we tried our best, we did not stand a chance and quickly advanced to the 3rd place final. In this match we finally met a team that seemed to play football about as good as us. In the end, our perseverance and accuracy proved to be enough to beat them and finish third in the tournament. It was time to barbecue and watch some football instead of play it.

Being in a good mood from a great Dutch victory, nothing could dampen our moods, not even the outlook of shameful pictures and crazy outfits. Fortunately, our board was much nicer and decent than what we had experienced at other announcement drinks. No drunk pictures, no embarrassing stories, no lengthy stories about our childhood that nobody can hear anyways. Instead, we were honored to wear a brand new line of homesuits designed by the one and only Royke Donders. For me, this was like a gift from heaven, as I was devastated to hear that the Jumbo homesuits were sold (I had been saving for weeks). Moreover, the homesuits provided a nice layer of isolation for the

cold atmosphere of a crowded pub like Qwibus.

After having drunk a delicious 'adje worstenbrood', which did not go too smooth for some of us, it was time for shaking hands. Many hands. And talking. Much talking. I always thought waiting in line to congratulate the candidate board was much worse than receiving the congratulations, but after having had the same conversation N times in a row (where N seemed to go to infinity), I must say that I slightly changed my mind. One could argue that the constant flow of beer should increase our level of joy over time, but the fact that most of the beer ended up on the piano behind us slightly weakens this argument. More than three hours later N turned out to be finite after all, and we finally had some time enjoy the party ourselves.

Despite the collection of beer on the piano, I must say that I could still feel that also a large amount of beer had actually entered my body. This, in combination



Bas van Wely

AGE: 22

Began studies in 2011

with the fact I was already feeling a bit ill, resulted in a not too comfortable next morning. Luckily, I was not the only one feeling this. This could not mean anything different than that it had been a great announcement drink! ●

Big Data is a

In the morning I had a tutorial Probability & Statistics, but fortunately the rest of the day would be better; to begin with the Big Data symposium and later on the beer race. I was interested in big data because of current developments and the fact that the topic is very important.



Yvonne Theeuwes

AGE: 18

Began studies in 2013

After we gathered at the foyer of building C, the symposium started with a good lunch consisting of nice paninis and wraps. After this amazing lunch, Professor den Hertog started an interesting introductory presentation about big data. This information was the basic knowledge that we used for the rest of the day. His introduction was followed by a lecture by Mr Duivestijn, which was about how big data work in practice. The examples and the cases were very fascinating, and I never expected big data had such an impact on us all. During his presentation we sure faced reality. This more practical lecture was followed by a theoretical lecture given by Mr Aly, assistant professor at the University of Twente. He taught us some theory and applications. For example how he uses big data at the University of Twente. After the break, two presentations and a workshop were given, and I attended the presentation by Achmea, which everyone knows is one of the biggest insurance companies in Holland. They explained models to us about things of which I never knew that they were related to each other; for example how the weather is related to the number of phone calls with claims they receive. For an econometrician these are very interesting models. The second presentation I attended was given by Ortec, a company specialized in big data. They told us how they work with big data, and how to transform them into the right information in order to get knowledge and wisdom about current trends. They explained it with a lot of incomprehensible models. During this

type of presentation I got a clear picture of the importance of our study. This was the last presentation of the day, followed by a drink. It was an educational day and beside that, it was also very entertaining. Thanks to the Symposium Committee, well done!



In the evening the memorable beer race took place, so at 22.00 hours we gathered at café Van Horen Zeggen. Some people were already drinking beer as a warming up. Eight teams were formed for this evening, a nice number to divide the teams into two pools. Daniëlle asked me to join her team, so Marleen, Senna, Daniëlle and I formed a team: Girl power. Our task for the night was to prove that power. They told me

Big Deal

they had never won before, even worse: most of the time they ended up last. I was happy to hear that because I had never experienced a beer race before. Knowing that definitely took some of the pressure off. This King's Day I tried my first 'adje'

first team that lost a game this evening. We were never going to win, but it looked like a reasonable goal to not end up last. When I saw some other teams drinking very fast, I didn't have any hope left. After a few games, we still ended up last. However, the good news is that I have quite a lot of years ahead of me to practice and hopefully improve.

I learned for example
not to drink between
two



to see if I was able to join them without failing miserably. My second 'adje' was at the beer race. Before we started we noticed that there was a party for children of around 12 years old upstairs, but unfortunately they did not want to join us drinking lots of beer.

We were the first team that had to drink, and at the same time we were also the

games. The price for the winners were golden cups in which you could refill your beer for free for the rest of the evening. It was funny to see everybody drinking a lot, while in the afternoon everybody was very decent. It was a nice moment to make lots of embarrassing pictures. So Floris did what he is very good at: taking beautiful pictures of everyone, including action photos. After the final game was played, the night was not over yet. On the contrary, everyone started dancing and drinking, as if we had not drunk enough yet. Some



people even started another race, two female chairmen, Janneke and Suzanne, against two male chairmen, Bart and Harold. The girls won, of course. After that, there was a game between last year's D&A committee against this year's D&A committee, which was won by last year's D&A. In this beer race I was the only first year's student, but I can recommend next year's game to everyone. After all, you still have a year to practice! This memorable night ended around 5 am for me, while some others were still partying. This was probably one of the most alcoholic nights in my entire life. Well done D&A Committee, we all had a very nice evening! ●



The Sport of (Really) Thinking Ahead

As usual we scouted the campus in the hope to find another fellow econometrician who so happens to be quite passionate about something. We found our man in the form of Pepijn van den Brink, a first-year student who not only likes some brain teasers during this study, but also in his spare time, as he plays the game of checkers at quite a high level. He agreed to meet with us for an interview, and in this article you can read the inspirational story that followed.

Text by: Vince Dentener



**Pepijn van den
Brink**

AGE: 19

Began studies in 2013

Pepijn grew up in a small town called Huissen, which is located in the south of the Gelderland province. The story of his checker-career began here and started at the tender age of 11 in middle school, where he enrolled in a checkers-class. It was immediately clear that he had potential, since he won every single game. After becoming champion of his middle school, he advanced to a regional competition of the township of Huissen, where children from all over the region participated. Yet again, he won every game, earning him some free checkers-classes. Now he wanted some bigger fish to fry, so he participated in the preliminary championship of the south of the province of Gelderland. Unfortunately, this time he did not win every game, but he became champion nevertheless. Next, he advanced to the championship of the entire province of Gelderland and, you may already guessed it, he became champion once more.

However, he did not stop there since this last win earned him a place in the Dutchcountrywide finals. His amazing streak ended there unfortunately; he became fourth, where the top three of men and top three of women would advance to the European finals. Luckily

for him, the third finalist was a woman, so he did in fact secure a top three position. Pepijn was going abroad! In the European finals he eventually finished a respectable 13th of 30, higher than any other Dutch participant in his age class. Safe to say he had quite a nice start. One year later Pepijn had to move up an age class, but he was hooked enough to keep on playing and further improve his skills.

So what was the secret to this success? Pepijn says it was youthful inexperience, because the level of skill among other 11-year-old kids is not quite high, so in a higher age class the competition gets considerably harder. Checkers is a game of thinking ahead and this is something which Pepijn is good at. Unlike chess, where it is difficult to anticipate more than five moves due to the variety of chess pieces, checkers only has two options: to the left, or to the right. To the layman, this apparently makes the game easier, but as a result, checkers players need to think ahead much further than their chess colleagues.

For example, top checkers players have the ability to think ahead for 30 moves or considerably more. Studying books about checkers and watching

grandmaster games improves your ability to recognize patterns, a vital element in checkers. In this game you try to use your ability to think ahead to reproduce patterns that are favorable for you, or at least unfavorable for the opponent. The more patterns you know and the more you can think ahead, the better a player you eventually will become. On the question of how skilled Pepijn is in the aspects mentioned above, he replies that when he is at his best, he is able to think ahead about 20 moves, a very respectable number indeed. Reading books about checkers though is not quite one of his favorite occupations, so he rarely, if ever, reads any.

He gets almost all his training from games and tutorships with former youth world champion and international grandmaster, Geert van Aalten, who acts as sort of a mentor for Pepijn. Geert happens to be a respected member of the Huissen checkers club, a club of which Pepijn has been a member for

Pepijn plays two types of checkers in which he had considerable success in the recent years: regular checkers, where there is no time limit and matches can last up to ten hours and speed-checkers, where each player has five minutes on the clock. The first player that runs out of time, loses the match. Concerning his recent success; three years ago he finished second in Dutch youth speed-checkers championship and in May of 2014 he became third in the highest Dutch youth division. Next to this, he also became senior champion of the province of Gelderland. He states that his greatest checkers related moment happened last year. Pepijn and the team he was in became Dutch national champions in the senior division. He says this experience was



thick skin are required. Furthermore, checkers is not really a people's sport and laymen usually have absolutely no idea of the deep complexities behind the moves that are being made. Hence it can really only be watched recreationally by other checkers players. This makes the sport relatively unknown, but surely not less interesting!

Looking to the future, Pepijn is going to participate in the youth European championships in the city of Pinsk in Belarus, which will be held in August. Furthermore in December he will compete in the youth World Championships in the city of Dabki in Poland. His ultimate goal in the long run is to win the Dutch championship within the next five years. So all in all a busy schedule as you can see, we naturally wish him the best of luck and hopefully he can eventually bring that trophy home! •

'You should be prepared to lose, lose, lose and then lose some more'

most of his life. Next to Geert, he also occasionally receives training from a former senior world champion, Guntis Valneris who comes from Latvia and occasionally flies over to also play at the Huissen checkers club.

So how does he fare against such overwhelming brute checker force? Not very well actually, he occasionally manages to win a match, sometimes draws, but usually loses. The amount of experience gained by these matches however, is invaluable, and with each typical game lasting about six hours, a lot of experience can indeed be gained. At the start of this year, Pepijn moved to Tilburg and also joined the checkers association here. In Tilburg, he plays a game about every Thursday, and almost every weekend he goes back to checkers club in Huissen to play a game there. Besides, he follows additional trainings and participates in the national and Dutch trophy competition in the youth division.

especially great because he himself still plays in the youth division and taking on seniors and winning is, understandably, pretty awesome.

As Pepijn seems like quite the checkers expert, what advice does he have for people who want to start playing checkers seriously? Well according to him, you should be prepared to lose, lose, lose and then lose some more. When you start at an early age, in the youth field, players all tend to be equally skilled and winning a game can be quite common. When you are older and you are only eligible to play in the senior division, the difference in skill can become really apparent and you will probably never win from the people who are light-years ahead of you. Therefore, a good determination and



The Little Indian and his Running Knights

On the eve of Friday May 9, a team of determined econometricians headed North to participate in the Batavierenrace. This annual student relay race is one of the biggest sports events of its kind, attracting thousands of students from all over the country.



Masum Rahman

AGE: 22

Began studies in 2010





The track takes teams from Nijmegen to Enschede, the total distance of 175 km being divided further into 25 distances. The race begins at Friday midnight, and lasts until Saturday evening. The teams are split into three shifts to cover the night, the morning and the afternoon. This allows one shift to run while the other shifts take a nap in Enschede. Each runner is accompanied by a team member on a bicycle. Each team also has a van to pick up the runner and cyclist at the end of each distance, and drop off a fresh pair to continue the next lap.

Traditionally, we have dinner together in Tilburg on Friday evening. Our stomachs filled with pasta, we head to the central station. Here, the night shift will take the van to Nijmegen, where they will take on the first part of the race. The other shifts will take the train to Enschede. I find myself in the morning and afternoon shifts (due to some last-minute cancellations, some of us would be running two distances).

It is a three-hour journey to Enschede, with a whole bunch of stuff on our backs: sleeping mats, cushions, clothing, sports equipment, food... We spend the journey talking to each other, mostly. When we finally arrive at the sports center of Twente University in Enschede, most of us are quick to find our sleeping spots in the sports hall. Some teams would be sleeping in tents outside; we are happy to be inside, given the horrible weather forecast. However, it turns out there are downsides to sleeping in a hall

filled with hundreds of students: some are obviously drunk and determined to let everyone know, someone thought it a good idea to bring in a vuvuzela, and one person's alarm goes off for ten minutes in the middle of the night.

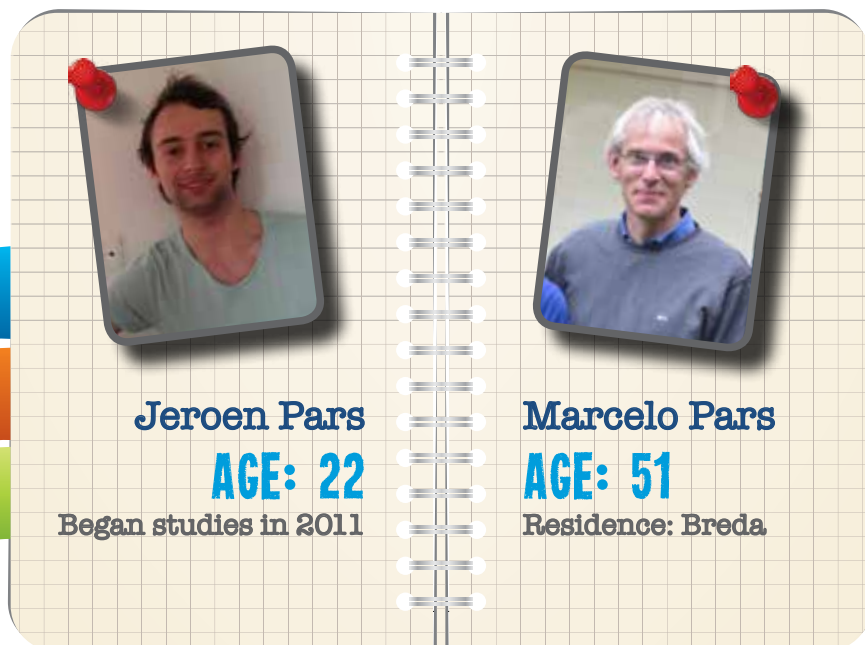
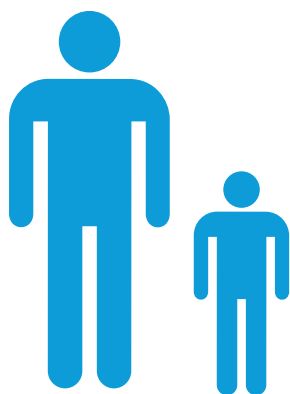
At 4.00 hours, it is time for the morning shift to wake up, although most of us never fell asleep to begin with. Still drowsy, we head to the buses which will bring us to the restart point. There we will take over from the morning shift. The 1.5 hour ride is spent dead asleep. We arrive too early at the restart point, so we continue sleeping right here on the floor. Finally, the night shift arrives – they are soaking wet and tired, but the intermediate results on the Batavieren-app show we are doing incredibly well so far!

The weather is indeed really gloomy: the skies are a dull gray, and the cold rain does not look inviting. In the morning I am cycling with Jeroen Pars, who runs very respectably despite not having trained at all - he even pulls off a sprint at the end of his 9.4 km! In the afternoon, I am lucky to run the final lap this year. It starts right in the city center of Enschede, finishing at the university campus. Before the start, I see my fellow runners doing extensive warming-up routines. They look really professional, and I wonder what the hell I am doing between them. Then the start signal sounds – the mass of over 300 running starts to move. The running itself is horrible: it is soaking

wet, and it seems to take forever before the finish comes into sight. Luckily, the last few hundred meters are lined with spectators, cheering the runners through the rain. It is a quite impressive sight. I can actually hear my teammates yelling, which gives an extra boost to get through those final meters.

Afterwards, we order pasta at the sleeping hall. Floris arranges some nice cans of beer for us. Some people have left for home early, due to exams, but most have stayed and are relaxing in the sleeping hall. At the end of the day, we head off to the huge party organized at the campus. But it is clear most of us are also very tired: around 2.00 hours most people are back in their beds.

It is funny how a story about a running competition ends up being mostly about other things. But I think that's where most of the fun is: checking the incoming results on the Batavieren-app together, cheering on your teammates, trying to steal a few minutes of sleep wherever you can... The event also made one thing about econometricians very clear: they are incredibly competitive! Two years ago, we participated for the first time, taking a very respectable 87th place. Last year, we improved ourselves, taking the 67th spot. This year, despite missing 4 runners, we outdid ourselves, finishing 57th! Imagine what is in store next year... ●



Jeroen Pars

AGE: 22

Began studies in 2011

Marcelo Pars

AGE: 51

Residence: Breda

Growing Up With Three Boys

Text by: Jelle de Rooij

After we took the train to Breda and the bus to our final destination, Jeroen came to pick us up from the bus stop. The bus stopped almost right in front of Jeroen's parents' house, but we were still happy he came to pick us up, because we could have easily missed his house anyway. When we entered their house Jeroen's parents and younger brother were already waiting for us.

Marcelo and The Family

After we were welcomed and received a drink, we started with the interview.

Marcelo, Jeroen's father, is born in Argentina. This needs some more explanation: his parents worked for Philips and moved for their work to Argentina together with their kids, and so Marcelo was born there. When Marcelo was seven years old, they moved back to the Netherlands. Now you might expect that living the first few years of your life in a different country, must result in having at least some roots there. However, this does not hold for Marcelo. In Argentina, for example, he had to speak Spanish in primary school, but nowadays he cannot speak Spanish anymore.

Argentina and the Netherlands were two completely different worlds, Marcelo very much enjoyed this. In Argentina for example, scoring high grades made you immensely popular. Here in the Netherlands however, as most of you will know, getting high grades equals being a nerd. Marcelo himself did not have such a big problem with this, but

his brilliant brother who was already in high school found it difficult to adapt. Actually the only way in which Marcelo still somewhat belongs to Argentina, is via his passion for soccer.

After finishing high school in the Netherlands, he studied Mining Engineering in Delft. In Delft, Marcelo met his wife, Margreet, in a disco. One day, his father came up with the idea to start his own company, which was specialized in recycling the rest products of galvanization in an efficient manner. Marcelo joined him and moved to Steenwijk, where the galvanization factories were situated. He worked for the company for four or five years, after which his father retired. Subsequently Marcelo decided to round up their company and start to work in wage labor, but only for four days per week. Marcelo: "This decision had a big





influence on my life. Working four days a week makes everything more relaxed, as you can really rest from your work." He has chosen to do this, because Margreet thought that the kids really needed a father.

Jeroen has two brothers: Cas and Wietze. Cas lives on his own, just like Jeroen, and works in Breda. Wietze, the youngest of the three, still lives at home. He studies Engineering in Tilburg, and is looking for a place to live in Breda with some friends. Now, how was Jeroen growing up, with three boys at home? Margreet: "The boys behaved rather well. They never got into trouble, not even while going through puberty." When we asked them whether they could describe Jeroen, Marcelo and Magreet immediately said that he is really enthusiastic. However, this was not always the case, as Jeroen was somewhat of a whiner ("huilebalk") when he was little. Nowadays this can hardly be noticed anymore, as Jeroen is definitely the person in their house who smiles the most.

About Jeroen

Jeroen was, and still is, enthusiastic about everything. For instance, when the family played monopoly, Jeroen always wanted to be the bank. Being the bank obviously also means that he is in control over the game, what he specifically liked.

Jeroen's teacher at primary school always said that he was really sportive,

but as Jeroen himself did not like a particular sport at that moment, he did not do anything with it. Later he still found his sport, ice-hockey, but sadly he was already too old to train in Tilburg. Planning has never really been one of his strengths, as Jeroen is very spontaneous. For instance, he decided one day to give a graduation party, but he wanted to do it already on the next day. Marcelo says that Jeroen came up to them, saying: "Mom, dad, tomorrow I want to give my graduation party." Though Jeroen has the tendency to not think about any possible problems, it all worked out and Jeroen's graduation party turned out to be really great.

Besides enthusiastic, Jeroen is also really caring, as he always took good care of his cuddly toys. While his parents would not change anything about him, they do think Jeroen is sometimes somewhat pig-headed. Jeroen is most of all really relaxed, which is both a good and a bad habit. It is perfectly ok to be relaxed, but it also makes him somewhat too easy-going and therefore not so ambitious.

Econometrics

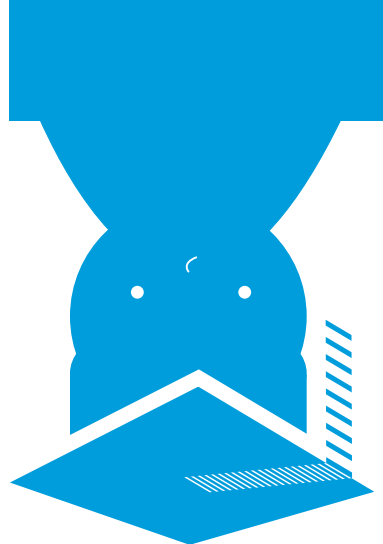
As the relaxed guy that he is, Jeroen did not know what he wanted to study, until the very last moment. Marcelo and Margreet did not know what the study exactly was about, and neither did Jeroen, not even when his classes started. He decided to study Econometrics because of his friend Bart, with whom he started the study. Bart stopped with econometrics, but Jeroen in fact already did find a study that fits him. Marcelo: "Jeroen already had something with mathematics in high school. One week, he had two tests, one for math and one for physics. Jeroen really wanted a high grade for his math test and therefore he studied really hard for it, but all the time he spend in math, he did not put in physics. The result was that he scored a 9.7 for the math test and a 1 for physics."

In the first year of his studies Jeroen already participated in lots of activities and drinks of Asset I Econometrics. He often had to stay over, or else he had to leave early to catch the last train. Therefore, he decided to move to Tilburg, so this would be a lot easier. While getting to know the association somewhat better, he decided to become an active member. Jeroen's parents also came to the Parents Evening of Asset I Econometrics, even though Jeroen did not participate. Marcelo and Margreet still really enjoyed the Parents evening and learned a lot from it.

The Future

When we ask them what they think Jeroen's future will look like, Marcelo and Margreet say that they see Jeroen working for a non-profit company. He might even go abroad for some time, but they hope and think that this will only be temporarily. They think he will definitely do a social profession, such as for instance being a teacher. Marcelo and Magreet do hope that Jeroen and his brothers will have some spare time to spend with their family. •





Asset | Econometrics congratulates...

Name: Lindsay Overkamp
Title: Production Planning in a Two-Stage Process
Industry
Supervisors: Dr.ir.J. Ashayeri, Dr. R.C.M. Brekelmans

Name: Tess Beukers
Title: Capacity estimation of stack yard cranes by use of non preemptive queues with priorities
Supervisors: Dr.ir.J. Ashayeri, Dr. J.P.C. Blanc

Name: Kamiel Verstraten
Title: A Generalization of the Football Pool Problem
Supervisors: Prof.dr.ir. E.R. van Dam, Dr. J. Vera

Name: Wouter van der Berg
Title: How can Nike reduce the carbon footprint of its transportation network?
Supervisors: Prof.dr. G. Kant, Dr.ir.ing. M.J.P. Peeters

Name: Michael van Paesschen
Title: Improving the Liquidity of Stocks Evidence from the Dutch Market
Supervisors: Dr. O. Boldea, Prof.dr. J.M. Schumacher

Name: Harold van Heijst
Title: Intergenerational Economic Value Transfers in the Dutch Pension System. The Road to a New FTK
Supervisors: Prof.dr. J.M. Schumacher, Dr. R.J. Mehlkopf

Name: Paul Peters
Title: Flexibility in customs operations in container import
Supervisors: Dr. R.C.M. Brekelmans, Dr.ir. J. Ashayeri

Name: Dieuwertje Verdouw
Title: Timetable Scheduling at Montessori College
Supervisors: Dr. R.C.M. Brekelmans, Dr.ir.ing. M.J.P. Peeters

Name: Rutger van Alphen
Title: Public Holiday Scheduling
Supervisors: Prof.dr.ir. H.A. Fleuren, Dr. R.C.M. Brekelmans

Name: Robin Maessen
Title: Methods for transportation planning in a hub group
Supervisors: Prof.dr.ir. H.A. Fleuren, Dr. R.C.M. Brekelmans

Name: Patrick Kuijpers
Title: On solving vehicle routing problem with outsourcing
Supervisors: Dr. R. Sotirov, Dr. R.C.M. Brekelmans

Name: Spiros Tsoumpas
Supervisors: Dr.ir. J. Ashayeri, Dr. R.C.M. Brekelmans

Name: Vincent Schothuis
Title: Dynamic Investment Strategies for Pension Funds
Supervisors: Dr. R.J. Mahieu, Dr. R. van den Akker

Name: Robbert-Jan Tijhuis
Title: Analyzing Team Formations for Transport through Hospital
Supervisors: Dr.ir.ing. M.J.P. Peeters, Prof.dr.ir. H.A. Fleuren

...on obtaining their Master's degree.

Quatsch!

Suzanne: 'Ik heb die mensen bij de Intertoys de hoepel laten inpakken. Dat vond ik komisch om te zien! Al die ellendie met die behangrol. En daarna met een soort windscherm op de fiets.'

Suzanne: 'Ik heb geen zin meer.' **Willem:** 'Dat heb je volgens mij altijd als ik op de kamer ben. Ik ben echt lust wegnemend voor jou.'

Floris van Loo: 'Die kamer die ik gisteren heb bezichtigd, heb ik vandaag toch maar afgewezen.' **Willem:** 'Oh, een beetje hard-to-get spelen?'

Floris van Loo:
'Hmm, nu heb ik weer de computer met inkijk.'

Daniëlle tegen Anniek:
'Ben jij naar China geweest?' **Anniek:** 'Ja, Shanghai ligt in China.' **Daniëlle:** 'Nooit geweten, ik dacht altijd dat dat een land was.'

Daniëlle: 'Als Willem z'n bril afzet zou hij best een knappe jongen zijn.'

Ashley Beringer: 'Wat zeg je dan in Groningen in plaats van aanfietsen? Of gaan jullie daar altijd op de tractor?'

Quatsch?

Over the past few months, the editorial staff of Nekst received many quotes that relate to the study of Econometrics and to the activities organized by Asset | Econometrics. Therefore, we present to you a selection of some striking and funny quotes! Please mail all remarkable quotes you have heard to Nekst@Asset-Econometrics.nl!

Catch that Prize



As summer approaches, so does the Asset | Econometrics Summer Photo Contest. This year we are looking for pictures of you showing off your fancy Asset | Econometrics frisbee. The most original and creative photo will win a pie or a crate of beer. The time has come to start shooting pictures!

The basic idea is simple: send us a photo that shows both you and the official Asset | Econometrics frisbee. This frisbee can be collected free of charge at E1.10. Including other Asset | Econometrics items in the photo might lead to a bonus as well.

Rules for Entry

- Entries must be sent to nekst@asset-econometrics.nl before October 1, 2013.
- All recipients of Nekst are allowed to enter the competition.
- Entries should show both the Asset | Econometrics frisbee and the person entering the contest.
- It is forbidden to edit your submission with Photoshop or any other photo-editing software.
- Entries will be assessed on originality by this year's and next year's Editor-in-Chief.
- No correspondence will be entered into.
- Entering a submission to this competition constitutes acceptance of the rules.





PUZZLE

Now that the summer has come, Nekst provides you with a game and accompanying puzzle to amuse you when it is hot outside. All you need is a regular coin and someone to play with!

The game this puzzle is about is a variation of simply choosing heads or tails. Instead, each player will publicly announce a sequence of three outcomes, for example 'heads, tails, heads'. Player 1 will first announce his choice, after which player 2 will announce his sequence.

The players will then start tossing a coin until one of their sequences has appeared. The player whose sequence appears first, wins the game. What is the probability player 1 will win this game when both players play optimally? And more importantly, what are the optimal strategies for both players?

Please send your solution to Nekst@Asset-Econometrics.nl before October 1. A crate of beer or a delicious pie, whichever the winner prefers, will be waiting for whoever has the best (partial) solution. Please note that as before, every recipient of this magazine is eligible to send in their solution, so members of the department are invited to participate as well. Good luck!



Robin Caljouw is the winner of the previous puzzle. As a reward, he can come and pick up a crate of beer or a pie at room E1.10. The solution of the previous puzzle was 15621.

Agenda

Summer 2014



DMM & Constitution Drink

Wednesday August 27

A new year needs a new board. On the first Wednesday of the upcoming academic year our DMM will take place and the new board will be constituted. Furthermore, we will present you with an overview of the past half year and the new board will present their policy. We will finish the evening with the constitution drink, where you have the time to recap with each other about the summer!

Introduction Activity

Tuesday September 2

This is an activity for first-year students, so they can get to know each other better. We will do some exciting games, build teams and end with a barbecue. Members of higher years can participate as a volunteer at one of the games, or become mentor of one of the groups.

LOTYA & Game Afternoon

Tuesday September 16

During the LOTYA, awards will be handed out to the best teachers (bachelor and master), the most passionate teacher and the teacher who makes the best hand-outs/slides. During the summer you will be able to vote for your favorites on our website. Afterwards you can try out some games during the Game Afternoon, eat a delicious pizza and of course visit our monthly drink!

LEVT

Thursday September 18

This is our opportunity to show off the football skills of students from Tilburg. During the LEVT we will compete with teams of econometricians from Amsterdam, Rotterdam, Maastricht and Groningen. In the evening there will be a barbecue.

Hart van Brabantloop

Saturday September 27

This year we will again participate with two teams in the Hart van Brabantloop, namely one beer team and one fanatic team. We will run stages ranging from 3 to 10 km and see the beautiful surroundings of Tilburg.

TUC

Monday September 1

A lot of beer, beautiful songs, hundreds of students, that is what the TUC is all about. Year after year the event is very popular, so if you still want to join us you have to be very lucky that there is still a spot left. We are looking forward to this event!

GMM Asset & Drink

Wednesday September 3

During the GMM the new board of Asset will be constituted. Afterwards we will have a great drink!

Kickoff Party

Wednesday September 17

A great drink to start the year together with all departments of Asset! Many liters of free beer will make sure you have a nice evening.

Business Dinner

Wednesday September 24

A luxurious dinner together with several companies in the field of Quantitative Finance and Actuarial Sciences, this could be the perfect start of your career. Before the dinner an interesting workshop will take place.



Bake For Life

Actuarieel Instituut