CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

Department of Systems Engineering

D I P L O M A T H E S I S

Criteria Weight Estimation Effect on Decision-Making and Rating Methods in the Czech National Basketball League

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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DIPLOMA THESIS ASSIGNMENT

Bc. Jan Maštálka

Economics and Management

Thesis title

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Objectives of thesis

The main goal of the thesis is to design an alternative rating system for Basketball managers' decision making. The rating system will improve the selection of candidates for a Czech National Basketball League team. Proposed approach will be compared with the commonly used rating on the basis of their ability to forecast examined season's results.

Methodology

The literary research aims on multi-criteria analysis and correlation analysis and explaining the core principles of basketball, European and US statistical surveying description, sport talent identification.

Data are obtained from Czech National Basketball League database.

As the application, the rating method is suggested based on adjusted NBA procedures and indicators. Also the manager's requests are formalized using a multi-criteria decision-making method. The analyses outcomes are confronted with the current season data to evaluate their explanatory power and usability in forecasting models.

The proposed extent of the thesis

60-80

Keywords

statistics, multi-criteria analysis, correlation, exponential functions, attributes, rating method, weighted sum method

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Recommended information sources

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Expected date of thesis defence

2017/18 WS – FEM (February 2018)

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Declaration

I declare under penalty of perjury that I myself elaborated the diploma thesis “Criteria Weight Estimation Effect on Decision-Making and Rating Methods in the Czech National Basketball League” independently and all citations and sources are properly marked in the text. All used literature and background materials are cited in the references section. At the same time, I agree that this work may be accessed in the CULS library and used for educational purposes in accordance with copyright.

In Prague on …… ……

Jan Maštálka

Acknowledgement

I would like to thank Ing. Igor Krejčí, Ph.D. for the supervision of my thesis, his constructive criticism, and his recommendation of appropriate literature

Vícekriteriální rozhodování a metodika ratingů v Národní české basketbalové lize

Abstrakt

Cílem práce je, na základě kvalitativních požadavků manažera týmu nejvyšší české basketbalové ligy, doporučit vhodné kandidáty pro posílení mužstva. Literární rešerše se zaměřuje na, vysvětlení základních principů basketbalu, popis statistického šetření v Evropě a v USA, identifikaci sportovních talentů, vícekriteriální analýzu variant a na korelační analýzu. V praktické části bude navržena metodika vycházející z ratingového systému NBA. Přístup manažera bude formalizován pomocí vybrané metody vícekriteriálního rozhodování. Oba přístupy budou srovnány na základě schopnosti předpovídat výsledky v sezoně.

Klíčová slova: statistiky, vícekriteriální analýza variant, korelace, exponenciální funkce, atributy, rating, metoda váženého součtu

Criteria Weight Estimation Effect on Decision-Making and Rating Methods in the Czech National Basketball League

Abstract

The main goal of this thesis is to recommend sufficient candidates for strengthening a Czech National Basketball League team, according to conditions given by its manager. The literary research aims at explaining the very basic principle of basketball, a European and US statistical surveying description, sports talent identification, multi-criteria analysis and correlation analysis. In the practical part of this thesis, an NBA system based method is suggested. Additionally, the manager's requests are formalized using a multi-criteria decision-making method. Both approaches are compared by their ability to forecast the results of the season being examined.

Keywords: statistics, multi-criteria analysis, correlation, exponential functions, attributes, rating method, weighted-sum method

Table of Contents

1 INTRODUCTION

The Athletics' 2002 season became the most famous in the history of the club. Following the 2001 season, Oakland had to deal with the departure of three key players. Billy Beane, the team's general manager, responded with a series of underrated free agent signings. Despite a lack of star players, the new-look Athletics surprised the world of sport by beating the 2001 team's regular season record. The team won 20 consecutive games between August 13 and September 4, 2002, anyway, it is still the third-best winning streak in the history of MLB. " In this manner, Scott Flatow described the performance of the Oakland Athletics baseball club in the 2002 season within the MLB (Major League Baseball) in his book: *Great Baseball Feats, Facts* (2008). A film adaptation of the book, also titled *Moneyball*, was released in 2011.

The success of the team in the world of baseball had been work of General Manager who was using an unusual approach for the selection of players, by then. He used statistical methods and metric conversions to identify the most appropriate players for his team. Billy Beane's approach based on quantitative evaluating of exact match statistics was innovative unlike that time, highly qualitative approaches. Although the team Oakland Athletics in their legendary 2002 season didn't become champions, Billy Beane finally received a proper award for his contribution to baseball in the form of an offer from the management of the Boston Red Sox, at the time, most successful team in the MLB. It was one of the most lucrative offers at the time. Billy Beane refused this offer and he is still part of the Oakland Athletics as Co-owner and Executive Vice President of Baseball Operations. Despite the rejection of Billy Beane, the Boston Red Sox changed their leadership philosophy, inspired by Billy Beane's innovative approach. Thanks to this change, the Boston Red Sox won two championship titles in the next two years (2003 and 2004). Soon, the whole league started using same quantitative approach for player signings as Oakland Athletics, together with Boston Red Sox, as their own. (Sternbergh, 2011).

The legendary season of 2002 became one of the most important milestones of the modern concept of collective sport, particularly in the scouting of players. The biggest change was especially the transition from a qualitative evaluation of players to the quantitative evaluation of players, as well as the massive expansion of the statistical background and the development of systems for the monitoring players. Until then, it was common for teams to

track players primarily based on subjective evaluation. Even if experts with many years of experience often made up the reports, teams very often made wrong decisions. The problem was very limited and an imprecise evaluation scale of observers, which usually contains no more than five levels of quality. To evaluate the characteristics of players, various paraphrased expressions were used; such as: good, great, average, solid, and bad. These expressions lacked explanatory value.

Today, it is common practice for other collective games, such as baseball, to make decisions about the composition of teams based on statistical analysis. This trend is especially significant in Canadian-American professional leagues, namely the NBA (National Basketball Association), the NFL (National Football League) and the NHL (National Hockey League). The mentioned leagues have a very extensive and sophisticated statistical system that is constantly extending new important indicators. In Europe, monitoring and selecting players based on statistical analysis is especially trending among teams from the Euroleague. However, the occurrence and importance of using statistical models among European clubs achieves a much lower level than that of using the NBA, NFL, NHL or MLB models. While European clubs have a maximum of 10 scouts, American teams have dozens of scouts available all around the world.

Although statistical processing in a collective sport, it has evolved into a dynamically developing discipline but remains very simple compared to similar statistical systems used in other economic sectors. The trend of extending the statistical basis by further statistical indicators confirms the lack of input variables required for the final comprehensive evaluation of players, which has a major impact on making the composition of the team as strong as possible. Close coordination between the commercial sector and sports sector provides sufficient funding for the further development of systems for monitoring and evaluating players. Solid background, sufficient financial resources, unceasing pressure from sponsors and fans, hidden potential of unused mathematical approaches and finally; technological development, continuously encourage willingness of clubs to further develop their rating systems. This work applies NBA statistical processing together with a new rating system within the Czech National Basketball League.

2 OBJECTIVES AND METHODOLOGY

The main goal of the thesis is to recommend sufficient candidates for strengthening a Czech National Basketball League team according to conditions given by its manager.

The literary research aims at explaining the very basic principle of basketball, European and US statistical surveying description, sports talent identification, multi-criteria analysis and correlation analysis.

In the practical part, it is first necessary to obtain all essential data from the Czech National Basketball League database. In the next step, the collected data are processed and used for players' performance estimation.

In the theoretical part, an NBA system based method is suggested. Additionally, the manager's requests are formalized using a multi-criteria decision-making method. Both approaches are compared by their ability to forecast the results of the season being examined.

Furthermore, the new rating system is designed for the exact identification of the player's performance. Three working hypotheses will be used as the basis for the creation of that system:

Does the loss of the ball have a more substantial influence on the game compared to other sub-statistical indicators, such as a missed field goal or a personal foul? If yes, what is the effect of this statistical indicator for the overall evaluation of players?

Is it advantageous for statistically stronger teams to select a strategy of fast gameplay against weaker opponents if it means to try to score the ball as soon as possible?

Conversely, is it advantageous for the statistically weaker team to choose a strategy of slow gameplay against stronger opponents, if it means to try to score the ball in the later stages of attack?

Are there other statistical indicators, which currently are not used in common methodology, which have a major impact on player evaluation? If such statistical indicators exist, what are they?

3 LITERATURE REVIEW

3.1 The History of Basketball

Basketball was invited in 1891 by James Naismith, an honorary member of the Basketball Hall of Fame. He worked as a teacher at a school sports YMCA in Springfield, Massachusetts. At the beginning, it was a static game. Over the years, basketball began to evolve and with it concurrently rules that turned the game on fast, dynamic and technical sport. Basketball has become a popular sport worldwide and plays him more than 300 million people. In 1936, basketball was included in the Olympic Games. (Simmons, 2009).

3.2 National Basketball League

The first season of the National Basketball League (NBL) took place in the years 1993/1994 as a result of the breakup of Czechoslovakia Basketball League. Today NBL have 12 members. Running four rounds, where each round the teams play alternately one game at home and one game away. After playing the season followed by playoffs played on three winning matches. The duel for third place is played only for two winning matches. (ALK, 2017).

The Rules of Basketball

Basketball games are divided into quarters, each 10 minutes of net time. In the event of a draw, the match is extended by 5 minutes until one team wins. The goal is to gain as many points through shooting to the basket although at the same time preventing opponents or gain possession of the ball. (Vyklický, 2017).

Playing Surface

The official size of the basketball court is 28 m in length and 15 m in width. The distance-point line is 6.75 meters. The dimensions of the plates are 1.80 m horizontally and 1.05 m vertically. The ball must be inflated with air so that when the ball is thrown on the pitch from a height of 1.80 meters, it should jump to a height of 1.20 m to 1.40 m. (Vyklický, 2017).

The Game

A player cannot block opponents, push, hold, break through, hinder other players in any manner or be rough or violent. If a player commits one of these errors, it is called a personal foul. (Vyklický, 2017)

Technical error is an error that is not caused by touching or pushing the opponent. The player is excluded from the game when reaches his fifth personal foul in a game or behave unsportsmanlike. (Vyklický, 2017)

Points and Their Value

A field goal made (FGM) is achieved when the ball falls through the basket, or even the smallest part of the volume is inside the ring.

There are three key different types of FGM (Vyklický, 2017):

- FGM from the free-throw counts as one point.
- FGM from two-point territory counts as two points.
- FGM from three-point territory counts as three points.

3.3 Basketball Moves, Plays, and Actions

Game actions are specific movements or set of movements in the game, within the players try to accomplish their game tasks. Player actions are the basis for the game combinations and game systems. The efficiency of combinations and game systems depend on the level and quality of executing an individual action. Actions are divided into offensive actions and defensive actions. (Simmons, 2009).

Offensive Plays with Ball Possession

This is an individual action, aiming to gain an advantageous position for further actions with the ball thus to pass the ball or shoot the ball. (Simmons, 2009).

Offensive Plays without Ball Possession

This is a movement in which the player tries to get into an advantageous position for catching the ball passed by a teammate. Part of the release is the objective to attract the opponent's attention and enlarge space for the teammate's actions. (Simmons, 2009).

Passing

Passing is the action deal with a task to throw, hand, or roll the ball in the way that another teammate can catch. The basic techniques include possession, position and arm movements. (Simmons, 2009).

Shooting

Shooting is a one of the most difficult basketball activity. The aim is to gain points. It is a relatively difficult move requiring very good coordination and precise execution. Minor deficiency in a technique is immediately reflected on the successful of shooting. Unconditional obligation of every coach is to observe every deviation and fix them up. If the bad early shooting habits is not remove early, it is very difficult to remove these habits in the future. (Simmons, 2009).

Rebounds

The task of rebound is tip ball into the basket, grab it with both hands or bounce the ball to the teammates. Successful offensive rebound offers a new shooting attempt option. The ability to carve out a position for rebounds and timing of the jump are preconditions for a successful rebound. (Simmons, 2009).

Defensive Plays

It is not necessary to be able to control the ball and have the associated offensive skills to protect the basket against opponent's attack. The basic elements are, positioning, agility skills, voluntary effort and motivation of players on defensive side of the pitch. The defensive actions of individuals include: coverage of the player without the ball, with the ball, basket protection against the shooting or the defensive rebound. (Simmons, 2009).

Covering Players with Ball Possession

This is a defense action leading to prevent opponents from getting open position for shooting or get the ball. Preconditions for good cover off the ball are the distance from the attacker, the position of the legs, shoulders, and arms of a defender and peripheral vision. (Simmons, 2009).

Covering Players Without Ball Possession

The aim of ball defense is to prevent an opponent to shoot at the basket or stop ball move towards the basket. The effort is to steal the ball for defense. The main role is played lowered stance, maintaining the correct position against the attacking player and the ball, arm action. (Simmons, 2009).

3.4 Player Positions

In no other team sport, it does matter so strictly on the physical height as at basketball. It is of course mainly due to the nature of baskets. Basket is on the unattainable level for an individual who reaching an average height without extreme vertical jump. Positions are divided by the distance and location of the players towards the basket. Distinguishing players into attackers and defenders is not practiced in basketball since the offensive and defensive positions contribute equally to the result. European basketball distinguishes three positions. The NBA distinguishes five positions. Since further work is based on the European-style statistical processing, only three positions are considered. (NBA, 2017).

Point Guard

Quick point guard is assigned to the role of playmaker. Point guard announces game action and subsequently also manage them. The main task of the playmaker of the game is to find a teammate in a good shooting position and control the tempo of team plays. Guards are the smallest and fastest players in the team. The territory in which usually operate is the peak of three-point lane (NBA, 2017)

Small Forward

Forwards are the most complex players in the team. Their physical dispositions are balanced height, solid power and solid speed. On the offensive half of the pitch, they usually shoot from longer distances and also have the ability to threaten the opponent's basket through drive to the basket. On the defensive half, they act as flexible defenders and are able to defend the opponent’s best player. (NBA, 2017).

Center

Players on the position center are the tallest players in the team. Physically, centers are strong and big at the cost of slower speed and bad agility. On the offensive and defensive half operate always near the basket. In offense, the center is responsible for threaten the opponent's basket from close range and in defense stage is responsible for defensive rebounds and blocks. (NBA, 2017).

3.5 Basic Basketball Statistics

Basketball statistics can be divided into two levels. The first level consists of elementary statistical data describing the basic game actions. These basic statistics monitor production. Unlike the first level, the second level of the advanced statistics is based on a combination of basic statistics and efficiency of player's actions. (EuroLeague, 2018)

As was already mentioned, the game is composed of individual player's actions. These actions are described by basic statistics. As well as other similar team sports, since the basketball is a very complex sport, the range of the statistical base is relatively wide. There are two approaches to the current concept of recording of statistical data; European and American. American approach is based on processing of statistics in National Basketball Association, NBA hereinafter. The only difference is in the range of statistical bases, NBA use more indicators, while uses the same data as the European leagues. Further work will use both the European model and the American model of statistical processing. (EuroLeague, 2018)

Table no. 1 - Basketball basic statistical indicators

Monitored statistics	**Symbol**
Games played	*GP*
Minutes played	*MIN*
Seconds played	*SEC*
3-point attempt	*3FGA*
3-point attempt made	*3FGM*
2-point attempt	*2FGA*
2-point attempt made	*2FGM*
Free throw attempt	*FTA*
Free throw attempt made	*FTM*
Defensive Rebound	*DREB*
Offensive Rebound	*OREB*
Rebounds	*REB*
Blocks	*BLK*
Assists	*AST*
Steal	*STL*
Turnover	*TO*
Personal Foul	*PF*
Personal Foul Drawn	*PFD*
Points	*PTS*
Efficiency	*EFF*

Source – (EuroLeague, 2018)

Offensive Statistics

The primary offensive statistics are points. Points are the only statistic that directly affects the outcome of the game (result). Other offensive statistics are only indirectly involved in the result. Offensive statistics from the perspective of the player (EuroLeague, 2018):

- **2 and 3 Points Shooting**

  Assists or individual actions preceded shooting the ball. Shooting result in a block, scoring of points, a rebound or team steal.
- **Free Throw Shooting**

  A drawn foul precedes free throw shooting. This can result in a rebound or team steal.
- **Offensive Rebounds**

  The cause of rebounds is a teammate shooting the ball. Offensive rebounds lead to longer team possession in attack.
- **Assists**

  This is the result of individual actions. Assisting is always preceded a successful shooting by teammates.
- **Turnovers**

  This is caused by stealing the ball from an opponent. The result is the change of possession to the opposing team.
- **Fouls Drawn**

  Occur when opponent violated the rules. A drawn foul is followed by either change of possession or free throws.
- **Points**

  The main statistic. The only input that affects the result. Points are always the result of successful shooting. The possession of ball is always changed right after successful attempt. Exceptions are technical fouls of the opponent, the injured person, team shots, free throws. Technical fouls are recorded as personal fouls in the box score of the game.

Defensive Statistics

Defensive actions occur in a situation where the ball is not in possession of examine team. Defensive actions are always the effort to gain the ball possession for a team without an opponent's scoring. Defensive statistics are (EuroLeague, 2018):

- **Defensive Rebounds**
  Result of unsuccessful opponent shooting. Defensive rebound means a change of ball possession in behalf of examine team.
- **Steals**
  Individual action of the player. The result is a change in possession in behalf of examining team.
- **Personal Fouls**
  The cause of the violation. It is followed by a change of possession or free throws.

Productivity and Performance

The key statistics for evaluation of the player's productivity is EFF. It is the sum of all unit basic statistics of defensive and offensive actions. The principle is a positive evaluation of player actions productivity, and negative evaluation if inefficient. (NBA, 2017).

Technical Records, Boxscores, and Match Facts

Basic statistics are obtained based on the game technical protocols, game records and game facts. Technical record is processed in a table (box score) divided into two parts. One part of box score are stats for the home team, the second part of the visiting team. It is composed of individual player stats and summary of team statistics. (NBA, 2017) Technical record, Boxscore (CBF, 2017):

Table no. 2 - Technical record of the match

	MIN	SEC	2FGA	2FGM	3FGA	3FGM	FTA	FTM	OREB	DREB	REB	BLK	AST	STL	TO	PFD	PF	EFF	PTS
Pandula	26	6	9	5	3	1	2	2	3	5	8	0	1	1	3	2	4	14	15
Nečas	28	48	9	4	0	0	5	4	1	6	7	0	3	2	2	4	2	18	12
Marko	27	12	6	2	1	0	8	6	0	4	4	0	2	1	3	5	2	10	10
Švrdlík	22	24	10	5	0	0	4	0	1	4	5	2	0	1	0	2	0	11	10
Kratochvíl	13	11	2	1	0	0	0	0	0	1	1	1	0	3	1	0	2	3	2
Bohačík	30	7	10	4	2	0	8	8	0	4	4	0	2	0	1	5	4	14	16
Kohout	15	36	3	2	0	0	0	0	2	4	6	2	0	2	2	0	2	9	4
Polášek	5	26	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	-2	0
Slezák	31	6	6	4	5	2	4	1	2	6	8	0	2	0	0	4	2	19	15
Prášil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source – (CBF, 2017)

3.6 Advanced Statistics

A key principle in the statistic processing of the modern basketball is to focus on the number of possession in the match. During the match, both teams reach same amount of possessions. It is due to the nature of the game, especially because of the 24 seconds' rule. It's obvious that one team can in certain matches achieve a higher ratio. This is a situation where the teams have a possession at the end of the quarter, and simultaneously at the beginning of the upcoming quarter. However, teams play during the season matches with different levels of speed, which dramatically affects the importance of goals and points received. Therefore, analysts use conversion statistics to control the ball 100. (NBA, 2017).

The second basic principle says that it is more important to recalculate statistic to minutes than conversion to match. Match statistics tend to be influenced over time much more than the quality of the game, so players do not have to evaluation such as explanatory power of statistics to minutes. List of advanced statistics view (NBA, 2017):

Table no.3 – Advanced Statistics

Advanced Statistics	**Symbol**
True Shooting	*TS %*
Assist to Turnover Ratio	*AST / TO*
Personal Fouls Drawn Ratio	*PFD Ratio*
Assist Ratio	*AST Ratio*
Turnover Ratio	*TO Ratio*
3-Point Shooting Ratio	*3FGA Ratio*
2-Point Shooting Ratio	*2FGA Ratio*
Player Impact Estimate Ratio	*PIE*

Source – (NBA, 2017)

True Shooting

True shooting attaches different weights according to their relative point values. The final indicator reflects the player's actual efficiency of shooting at the basket. Effectively and comprehensively distinguishes good shooters from bad shooters. (NBA 2017).

Players with a high TS percentage are great shooters from long distance with a good drive to the basket, or players with the outstanding success of free throws.

Asist / Turnover Ratio (AST / TO)

The ratio of assists to turnover indicates the player's ability to create and effectively pass the ball to teammates. The big advantage is a player differentiation with different percentage possession. In practice, AST/TO Ratio significantly show the players ability to creating the game, this indicator is important especially for point guards. (NBA, 2017).

Ratios (Possession Ratio)

Ratios monitoring the distribution of all possible offensive actions that the player has available. Ratios are evaluated in relation to each other, the final value is expressed in percentage. The sum of ratios of the observed player is always equal to 100%. (NBA, 2017).

PIE Ratio (Player Impact Estimate)

PIE statistic evaluates the player's actual performance in the game. It is deduced based on the ratio of player productivity from the match total outcome. This indicator considers the different style and pace of play for each game played. This means that players with high value PIE significantly affect the match in favor of his team, so players can be described as the club as critical. (NBA, 2017).

Conversion to Minutes

Conversion to minutes is applied to all basic statistics calculated for the match, thus ensure a higher level of mutual comparability of players. Conversion to minutes is usually set to the average time in a match played to a key player. The consequence of recalculation is that in the final comparison stand out productive individuals with little gaming utilization. (NBA, 2017).

3.7 Talent Identification

According to one of many definitions, a talent is understood an endogenous structure of actively manifesting, highly qualitative personal attributes of a person, giving him/her an ability to perform a certain activity exceedingly well, even in very hard conditions. (Perič, 2010).

The stated definition implies that talented individual can be understood as a fully developed unit, changing its prerequisites into a talent, throughout time. The stated before implies, that youth categories athletes can be understood an athlete with good prerequisites. (Perič, 2010).

Out of assuming the probability of an occurrence of a talent, stating the relative count of talented individuals 13% of the population comes that occurrence of talented individuals is a sparse phenomenon and therefore using normal distribution is not sufficient describing the distribution of players. (Perič, 2010)

$$y = ae^{-bx} \qquad (3.1)$$

Where: e = Euler ‘s number

a, b are constants acquired by calculation (Perič, 2010, s. 40).

A graphical expression of this exponential function is ordinal axes, where the *x* axis carries the degree of talent while the *y* axis carries the counts of players in examined population.

3.8 Talent Structure

Recently, new research practices start to make their way through in bioanthropology. One of these is the qualitative research, which is characterized by specialized approach to the examined process, but also highlights the social reality context. It is main instrument is an examination based on inductive development of theories using a qualitative analysis of data. Taking these trends into account, Perič (notation) carries out a research focused on the topic of finding talent structure in a collective sport, ice hockey specifically. The research took three steps total, first, the variables to build the talent structure were stated, next up the pilot study of acquisition and analysis of data was performed. The last step was to verify the hypotheses on a set of children teams. (Perič, 2010).

In the first step of the research the key attributes for single players were chosen by licensed coaches i.e. experts in the domain. There are 14 basic variables, describing mostly skills and psychics. Brief characteristics where assigned to the variables to identify. Defense, skating, shooting, staff techniques, emphasis etc. Consequently, the collinearity, mutual relation within the variables, was examined. (Perič, 2010).

In the second part of the research project an investigation among the children teams was performed. For measurable data, the distribution of players was expressed as interval break-down. Variables, there is no rating criterium noted in literature for, were estimated using ranking method created based on coaches 'knowledge of the players. The acquired rankings were transformed to fit into the normal distribution. (Perič, 2010)

In the third part of the study a factor analysis was performed and based on this, factor weights of single variables were estimated. For final verification, a correlation analysis of the mathematical model was performed. The result is a relatively high correlation without closer quantitative specification. (Perič, 2010)

In the conclusion of the document, the Autor infers high rate of utilization of decomposing the skills of players into single variables. The author, however, suggests possibility of a more complex way to acquire information and more effective analyses of single factors. (Perič, 2010).

Models for evaluation of players

One of the most important models describing players and their talent structure is used to choose new players to come into the NBA, the Draft. This model works with elementary skills of the players on an integer scale ranging from 1 to 10. The skills of the players are evaluated, based on measurement within specifically assembled exercises, that are attended by all player signed up to Draft. The structure of the model is not available to public officially. (NBA, 2017)

Other models utilizing decomposition of the skills of the players are the virtual simulators. These simulators use variables describing the skills of the players in their calculations to simulate results of certain matches. Lacking deeper investigation, these simulators can be considered very effective in the case of result prediction. The structure of ranking players and evaluating single attributes is not available to the public in the purpose of protecting the confident trade information. The rareness of occurrence of players on various qualitative levels however supports the possibility of description via exponential distribution. (SEGA, 2017)

3.9 Multi-Criteria Analysis

Multi-criteria decision models show decision problems that are a result of decisions judged according to several criteria. Multi-criteria model characterizes almost every decision-making situation. It is solved conflicts arising from a general controversy criteria. If all criteria showed the same solution, it would be enough to select the most appropriate decision. The purpose of the models in these situations, either by finding the best options considered all aspects, the elimination of inefficient of variants, or configuration set. (Taha, 2007).

Approaches to multicriteria decisions vary according to the character of variants or sets of feasible solutions. According to the requirements, these models can be divided into two groups. One group of models is the multi-criteria evaluation of alternatives. (Vercellis, 2009).

3.10 Multi-Criteria Models

In models multicriteria analysis of variants m is a finite set of variants which are evaluated according to criterion n. The goal is to find a compromise variant, sort options from best to worst or eliminate inefficient variants. (Vercellis, 2009).

Variants are the specific decision options, subject of self-determination, they are feasible and logically permissible. Variants must be selected so that they are achievable and also make them suitable for solution. The options are then evaluated according to various criteria. (Taha, 2007).

The ideal variant is hypothetical or real option that achieves all the criteria with the best possible value simultaneously. Basal variant is a variant, which has the worst evaluation by all criteria (Vercellis, 2009).

Criterion is the aspect of evaluation of options. May be qualitative or quantitative. All criteria must be independent. It should cover all aspects of the selection. Their value may not be too big to solve the problem. If the evaluation of alternatives according to the criteria is quantified, it is possible to organize data into criterial matrix $\boldsymbol{Y}$, where the element y_{ij} expresses rating *i*-th variant of the *j*-th criterion. (Aubin, 2007).

$$\boldsymbol{Y} = \begin{array}{c} \\ v_1 \\ \vdots \\ v_i \end{array} \begin{array}{c} \begin{array}{ccc} k_1 & \cdots & k_j \end{array} \\ \begin{pmatrix} y_{11} & \cdots & y_{1j} \\ \vdots & \ddots & \vdots \\ y_{i1} & \cdots & y_{ij} \end{pmatrix} \end{array} \tag{3.2}$$

In the matrix, $\boldsymbol{Y} = (y_{ij})$ column represent the criteria and rows represent evaluated variants. If all the criteria are not quantitative, it is rather a criterion table than matrix. It contains both numeric and verbal evaluation of variants. For numerical calculations in need of evaluation, there are methods for quantifying qualitative information. (Aubin, 2007).

The best-chosen variants are divided according to different criteria. Criteria depending on the nature of variants (Vercellis, 2009):

• Maximization criteria: best option achieves the highest values.
• Minimization criteria: best option achieves the lowest values.

Distribution according to the criteria of quantification is as follows (Vercellis, 2009):

• Quantitative Criteria:

The value of options according to such criteria consists of objectively measurable data; therefore, it is called objective criteria. (Vercellis, 2009).

• Qualitative Criteria:

The value of variants according to these criteria cannot be objectively measured, very often a subjective value estimated by the user. In these cases, use different scoring scale or relative evaluation of options. (Vercellis, 2009).

To solve the problem, it is important if and how some criterion is preferred over another or not. (Vercellis, 2009).

Criteria preference reflects the importance of criterion in comparison with other criteria. Preference may be expressed in many ways; they can be determined (Vercellis, 2009):

• Aspiration level criteria
• Ranking criteria
• The weights of individual criteria
• The method of compensating criterial values
• May be unknown
• Subjective reasons

Criteria generally belongs to the value of the interval <0; 1>, which reflects the relative importance of this criterion in comparison with other criteria. The sum of the weights of the criteria is equal to one (Vercellis, 2009).

3.11 Scoring Method

Methods for determining weights can be divided into two categories; determining weights of the criteria of ordinal information about the preferences of criteria and determining the weights of the criteria of the cardinal information about criteria preferences. One method of specifying the weight of cardinal information is scoring method. (Taha, 2007).

Scoring methods for calculating weights is based on the evaluation of an expert in the field. Each criterion is assigned a certain number of points; the more important criterion, the more points are allocated. The values of weighted vector are normalized according to the equation (Taha, 2007):

$$v_j = \frac{b_j}{\sum_{j=1}^{n} b_j} \tag{3.3}$$

b_j – sum of points of *j*-th criterion.

3.12 Weighted Sum Method

A weighted sum method requires the cardinal information: **criteria matrix *Y*** and the **vector of criteria**. It creates an overall rating for each variant, so it can be used for configuration of variants from best to worst. It provides the user with benefits that can be expressed by a linear utility function. The overall benefit is expressed as the weighted sum of the partial utility functions (Aubin, 2007):

$$u(a_i) = \sum_{i=1}^{n} v_j u_j(y_{ij}) \tag{3.4}$$

Where u_i are sub-utility function of individual criteria and the criteria weights v_j

Procedure of weighted sum method (Aubin, 2007);

- Determine the ideal and basal variant
- Creating standardized criterial matrix R, elements are given by the formula:

$$r_{ij} = \frac{y_{ij} - d_j}{h_j - d_j} \tag{3.5}$$

The matrix ***R*** is a matrix that has values of the utility function of the *i*-th variation of the *j*-th by criteria, as the elements of this matrix are transformed by the criterion that $\boldsymbol{R}_{ij}$ belongs to the interval 0 to 1. Then, the ideal option 1 corresponds to the basal values and 0. (Aubin, 2007).

- **The calculation of aggregate utility function**

$$u(a_i) = \sum_{j=1}^{n} v_j \, r_{ij} \tag{3.6}$$

- **Sorting of variants descending order of values**

If it is necessary to select multiple variants, only the required number of variants with the highest values is selected. The option decisions provided by multi-criteria evaluation of alternatives, based on the information on the preference of the individual criteria and preferences of individual variants according to individual criteria and the method used solutions. (Aubin, 2007).

3.13 Correlation

Statistical methods are used for the data analysis of economic reality. To identify a mathematical description of statistical relationships are used in methods of regression and correlation analysis. (Hindls, 2007).

Regression and correlation analysis examines the relationship between two or more statistical variables. These are the causation analysis, the existence of one phenomenon causes the existence of another phenomenon. (Uboe, 2017).

There are two basic types of relationships. Dependence fixed means confidence that one phenomenon definitely causes the second event. Free dependency means that the appearance of a phenomenon increases the probability of the second event. The intensity measurements are used depending on the correlation coefficient. Measure tightness dependencies for any regression function for which it was used the least squares method (Uboe, 2017):

$$I_{yx} = \sqrt{\frac{s_{\hat{y}}^2}{s_y^2}} = \sqrt{\frac{\sum(\hat{y}_i - \bar{y})^2}{\sum(y_i - \hat{y})^2}} \tag{3.7}$$

Where: $s_{\hat{y}}^2$ is the variance of balanced values

s_y^2 is the variance of empirical values

From the definition of the correlation coefficient deriving basic properties:

- $-1 \leq I_{yx} \leq 1$
- If the variables *x* and *y* exist a linear functional dependence is $I_{yx} = 1$
- If the variables *x* and *y* are linearly independent, it is $I_{yx} = 0$

Due to the mentioned properties is used indicative scale for evaluating the tightness of the linear relationship between *x* and *y* (Tab. 4).

Table no. 4 scale for evaluating the tightness of the linear relationship

Variance	**Influence**
$0 \leq I_{yx} \leq 0.3$	*weak*
$0.3 \leq I_{yx} \leq 0.8$	*solid*
$0.8 \leq I_{yx} \leq 1$	*strong*

Source – (Uboe, Page 90, 2017)

It should be noted that the indicative scale distribution may subjective because its assessment is based on the observer. Knowledge of the intensity of dependency between the analyzed variables is useful for several reasons. (Uboe, 2017).

With high probability, it can be expected that changes in one variable will result in a change of relative variables. The degree of commitment of random variables characterizes what is the explanatory power of the model applied. If the variance of dependent variables is smaller, than the estimates is more accurate. The sign of the correlation coefficient is determined depending on linearity. Positive values indicate a direct linear dependence, the negative values then represent indirect linear relationship. (Uboe, 2017).

The square of the correlation coefficient is called the coefficient of determination I_{yx}^2, which indicates how many percent changes of the dependent variable explained by the selected linear feature. (Hindls, 2007).

The application of statistical methods is the final stage of the process of implementing statistical analysis. It is the practical application of verified model for economic analysis. One approach is the application of a statistical model approach ex-post analysis of the evolution and behavior of the system practiced in the monitoring period. Verifies compliance model and economic hypotheses. (Hindls, 2007).

4 PRACTICAL PART

4.1 Data Resources

The primary data source for processing are season stats and match stats of players and teams within Czech National Basketball League. These statistics are available on the website of the Czech Basketball Federation. To create the rating were used two types of tables relating to the seasons 2013/2014, 2014/2015, 2015/2016, 2016/2017 NBL. (CBF, 2017).

The first series of tables contain sums and ratios from the entire season. Monitored statistics are; games played, minutes played, shooting for 3 points, shooting for 2 points, shooting free throws, offensive rebounds, defensive rebounds, blocks, assists, steals, turnovers, received fouls, personal fouls, ratios and total points. View of tracked statistics (CBF, 2017):

Table no. 5 – entire season shooting statistics

	GP	*MIN*	*2FGA*	*2FGM*	*2FG%*	*3FGA*	*3FGM*	*3FG%*	*FTA*	*FTM*	*FT%*
Slezák P.	50	1321	252	119	47.2%	234	94	40.2%	213	179	84.0%
Kohout O.	45	963.2	321	180	56.1%	40	11	27.5%	113	83	73.5%
Nečas R.	49	1223	299	149	49.8%	6	0	0.0%	127	78	61.4%
Pandula D.	51	1343	319	174	54.5%	182	57	31.3%	183	124	67.8%
Bohačík J.	51	1412	257	123	47.9%	191	70	36.6%	177	142	80.2%
Švrdlík K.	53	1329	478	252	52.7%	5	1	20.0%	171	94	55.0%

Source – (CBF, 2017)

Table no. 6 - entire season averages

	GP	*ORE BØ*	*DREB Ø*	*REB Ø*	*BLK Ø*	*AST Ø*	*STL Ø*	*TO Ø*	*PFD Ø*	*PF Ø*	*EFF Ø*	*PTS Ø*
Slezák P.	50	0.82	2.36	3.18	0.04	2.26	1.32	1.54	4.14	1.92	15.32	13.98
Kohout O.	45	2.27	3.04	5.31	0.73	1.11	0.71	1.87	2.91	2.78	12.27	10.58
Nečas R.	49	2.29	5.08	7.37	0.59	2.92	1.22	2.22	2.61	2.73	13.24	7.67
Pandula D.	51	1.39	3.41	4.8	0.22	2.16	1.59	2.47	3.73	2.67	13.51	12.61
Bohačík J.	51	1.06	3.14	4.2	0.14	2.25	1.39	1.92	3.75	2.59	13.25	11.73
Švrdlík K.	53	1.79	3.55	5,34	0.75	1.23	0.66	1.6	2.74	2.79	11.87	11.34

Source – (CBF, 2017)

The content of the second series of tables are the performances of players in each match within an entire season. Monitored statistics are; minutes played, shooting for 3 points, shooting for 2 points, shooting free throws, offensive rebounds, defensive rebounds, blocks, assists, steals, turnovers, received fouls, personal fouls, ratios, total points.

These statistics differ with the tables related to individual matches, also processing of this tables are different. Match statistics via table no. 2.

4.2 Data Adjustment

Elimination of Unclassifiable Units

Players, who not played enough matches, or the average impact on individual matches was negligible, were excluded for the stability and relevance of the system. The criterion for inclusion in the evaluation was playing at least 120 minutes per season. Players with a lower game time were unclassified.

4.3 Advanced Statistics Calculations

Advanced statistics are based on the basic statistics and describe the effectiveness of players' impact. They are characteristic for their high informative value of player’s performance. Basic statistics compared to that measure only the production. (NBA, 2017).

European leagues do not provide advanced stats. It is necessary to calculate them by using of NBA statistical system. (NBA, 2017).

True Shooting TS Percentage

The first advanced statistics is True Shooting (TS%). This figure is based on a weighted sum of the success of different types of shooting; shooting for 3 points (3FG) for shooting 2 points (2FG) and free throw shooting counted as 1 point (FT). The result is the average efficiency of player's shooting per attempts. (NBA 2017) TS% is determining variable in the evaluation of attribute ATTACK.

True shooting (*TS %*) formula:

$$TS\% = \frac{FTM}{FTA} + 2 * \frac{2FGM}{2FGA} + 3 * \frac{3FGM}{3FGA} \quad (4.1)$$

Displayed TS% in table no. 7

Possession Ratio

The Possession Ratio determines the percentage distribution of all kinds of offensive activities responsible to the player with the ball. Mentioned activities are offensive options; shooting for 3 points (3FG), shooting for 2 points (2FG), received fouls (PFD), turnover (TO), assist (AST).

The Possession Ratio is divided into five basic sections. Calculation of the individual components is as follows (NBA, 2017):

$$3FGA\ Ratio = \frac{3FGA}{3FGA + 2FGA + PFD + TO + AST} \quad (4.2.1)$$

$$2FGA\ Ratio = \frac{2FGA}{3FGA + 2FGA + PFD + TO + AST} \quad (4.2.2)$$

$$PFD\ Ratio = \frac{PFD}{3FGA + 2FGA + PFD + TO + AST} \quad (4.2.3)$$

$$TO\ Ratio = \frac{TO}{3FGA + 2FGA + PFD + TO + AST} \quad (4.2.4)$$

$$AST\ Ratio = \frac{AST}{3FGA + 2FGA + PFD + TO + AST} \quad (4.2.5)$$

Displayed possession ratios in table no. 7

The distribution of offensive activities primarily used for evaluating the effectiveness of offensive skills of the player. However, it also serves to describe a player's offensive behavior. (NBA, 2017).

The Possession Ratio is considered as advanced stats because of the possibility of evaluating the effectiveness of player's performance based on the different unit then is time. (NBA, 2017).

It should be noticed that the player obviously has more options such as dribbling or pass to teammates that can be performed with the ball in the attack. These mentioned activities are not directly involved in the total production of the players. For example, received foul have an impact on the total production worth to positive value +1 (for the second team the same action mean impact with negatively value worth to -1), while dribbling or pass do not cause any effect on final production, therefore as a non-productive activity. (NBA 2017).

The Possession Ratio is determining variable in the evaluations of attributes *CREATIVITY* and *BALL CONTROL*.

AST / TO Ratio

Ratio AST / TO is used for efficiency evaluation of player's assists. This attribute shows a player ability to pass the ball to his teammates while he didn't loose ball.

This statistic indicator is a suitable variable for creating an attribute *CREATIVITY*. Its calculation is as follows (NBA, 2017):

$$AST/_{TO} = \frac{AST}{TO} \tag{4.3}$$

Displayed AST / TO ratio in table no. 7

Table no. 7 – Ratio indicators

	TS%	*AST / TO*	*TO Ratio*	*AST Ratio*	*2FG Ratio*	*3FG Ratio*	*PFD Ratio*
Slezák P.	49.83%	1.47	8.72%	12.80%	28.54%	26.50%	23.44%
Kohout O.	44.68%	0.6	13.42%	7.99%	51.28%	6.39%	20.93%
Nečas R.	26.85%	1.31	15.91%	20.88%	43.65%	0.88%	18.69%
Pandula D.	45.13%	0.87	13.59%	11.87%	34.41%	19.63%	20.50%
Bohačík J.	47.65%	1.17	11.50%	13.50%	30.16%	22.42%	22.42%
Švrdlík K.	36.74%	0.76	10.93%	8.35%	61.44%	0.64%	18.64%

Source – (CBF, 2017)

PIE **(Player Impact Estimate)**

PIE attribute indicates a real player's impact to examine match. Source of data comes from match stats. PIE is measured as a percentage corresponds to player's impact on examine match. PIE sum of all players involved in the match is always equal 100%. (NBA 2017).

Currently, PIE is widely used in NBA players for comparison. However, it is necessary to modify the structure of calculation according to PIE for the creation of player attributes and for further practical use. It is the result of different points of view on productivity between NBA and European basketball. (NBA, 2017).

The difference between the European and NBA points of view on the calculation of player's productivity is based on differentiation of weights for the blocks and offensive rebounds compared to other monitored statistics. NBA using weights for OREB and BLK worth one-half of the other stats, while the Europeans using weights equal to one for all variables. Moreover, they are using one more statistical indicator, it is received foul (PFD). (EuroLeague, 2018)

A new PIE is created based on both points of views. In contrast with classic PIE used in NBA, new PIE calculates with PFD according to point of view of Europeans. On the other hand, new PIE calculates with half weight for BLK and OREB, unlike Europeans.

The formula for PIE_{NBA} (NBA, 2017):

$$PIE_{NBA} = \\ = \frac{\mathrm{PTS} + \mathrm{FGM} + \mathrm{FTM} - \mathrm{FGA} - \mathrm{FTA} + \mathrm{DREB} + (0.5{*}\mathrm{OREB}) + \mathrm{AST} + \mathrm{STL} + (0.5 * \mathrm{BLK}) - \mathrm{PF} - \mathrm{TO}}{\mathrm{PTS_G} + \mathrm{FGM_G} + \mathrm{FTM_G} - \mathrm{FGA_G} - \mathrm{FTA_G} + \mathrm{DREB_G} + (0.5 * \mathrm{OREB_G}) + \mathrm{AST_G} + \mathrm{STL_G} + (0.5 * \mathrm{BLK_G}) - \mathrm{PF_G} - \mathrm{TO_G}} \tag{4.4}$$

Lower index G represents match statistics summary.

The modified form of calculation for the European basketball competitions is as follows:

$$PIE_{EU} = \frac{EFF}{EFF_G} \tag{4.5}$$

A new form of PIE_{EU} is used for the creation of new player's attributes. The average weight of new PIE_{EU} shows player's actual impact on team entire season result.

A sample of calculated PIE_{EU} and PIE_{NBA} overall game EFF = 140:

Table no. 8 – Both PIE indicators

	MIN	*SEC*	*2FGA*	*2FGM*	…	*TO*	*PFD*	*PF*	*EFF*	*PTS*	***PIE nba***	***PIE eu***
Slezák	31	6	6	4	⋯	0	4	2	19	15	**15.23%**	**13.57%**
Kohout	15	36	3	2	⋯	2	0	2	9	4	**6.09%**	**6.43%**
Nečas	28	48	9	4	⋯	2	4	2	18	12	**11.68%**	**12.86%**
Pandula	26	6	9	5	⋯	3	2	4	14	15	**8.63%**	**10.00%**
Bohačík	30	7	10	4	⋯	1	5	4	14	16	**5.08%**	**10.00%**
Švrdlík	22	24	10	5	⋯	0	2	0	11	10	**11.68%**	**7.86%**

Source - (CBF, 2017)

Conversion to a Constant Time Unit

It is necessary to track player's statistics on a constant time unit for the purposes of measuring and comparing the productivity of individual players. For conversion to the same unit of time is used the relationship:

$$Yx' = \frac{min_z}{min_x} Yx \tag{4.6}$$

Y_x – monitored indicator *x*; Y_x'- converted monitored indicator *x*; min_x – minutes per game; min_z – constant minutes per game

For better orientation in the results and for better data processing, the chosen value of the constant unit is 30 min / GP. The reason is a practical viewpoint. 30 MIN / GP is a usual game time of the most used player. Converted values show estimated player's performance in case that he will play 30 min / GP. However, since it is only an intermediate value required to evaluate players' skills and overall productivity, it is completely irrelevant what value of constant time unit will be chosen.

Table no. 9 – Converted season averages

	OREBØ	*DREBØ*	*REBØ*	*BLKØ*	*ASTØ*	*STLØ*	*TOØ*	*PFDØ*	*PFØ*	*EFFØ*	*PTSØ*
Slezák P.	0.93	2.68	3.61	0.05	2.57	1.5	1.75	4.7	2.18	17.39	15.87
Kohout O.	3.18	4.27	7.44	1.03	1.56	1	2.62	4.08	3.89	17.19	14.83
Nečas R.	2.75	6.11	8.85	0.71	3.51	1.47	2.67	3.14	3.29	15.92	9.22
Pandula D.	1.59	3.89	5.47	0.25	2.46	1.81	2.81	4.24	3.04	15.39	14.36
Bohačík J.	1.15	3.4	4.55	0.15	2.44	1.51	2.08	4.06	2.8	14.36	12.7
Švrdlík K.	2.14	4.24	6.39	0.9	1.47	0.79	1.92	3.27	3.34	14.2	13.57

Source - (CBF, 2017)

4.4 Creation of Attributes

Six basic attributes are monitored to simplify comparison and evaluation of players. Each attribute is evaluated by using a different formula using various variables, general procedure formation remains the same. This general process used.to determine player's attributes is based on combination of productivity and efficiency statistics.

Here is a list with statistics used for creation of each attribute:

1. DEFENSE (*BLK, STL, PIE*)
2. AIR (*OREB, DREB, BLK, PIE*)
3. CREATIVITY (*AST, Possession Ratio, AST / TO, PIE*)
4. ATTACK (*TS%, PTS, PIE*)
5. BALL CONTROL (*Possession Ratio, TO, PIE*)
6. OVERAL RATING (*EFF, PIE*)

DEFENSE Attribute

The defense attribute is composed of two basic statistical defensive elements that are involved in the final performance. The first statistics are BLOCK-BLK. Blocks effectively prevent against the opponents shooting. The second attribute is based on defensive statistic STEAL-STL. Since the blocks a steal participate equally on overall production, equal weight is assigned to them. In conclusion, these two statistics are simply added together to the attribute of Defense. Formula is here:

$$DEFENSE = BLK + STL \tag{4.7}$$

AIR attribute

Defensive rebounds DREB, offensive rebounds OREB and blocks BLK equally contribute On AIR attribute. All these statistics have the same effect on the final production, so they have same weight. In fact, the game in the air is affected by the four basic factors: the height of jump, the height of the player, the timing of jumping and choosing of location for jumping.

All these factors are reflected in the basic statistics of air in the correct proportions despite the fact that the real value of these conditions is unknown. AIR attribute formula:

$$AIR = DREB + OREB + BLK \tag{4.8}$$

CREATIVITY Attribute

Unlike the previous two attributes, CREATIVITY attribute is no longer based on a simple sum. CREATIVTY is based on one elementary statistic AST and two advanced statistics; AST / TO Ratio and AST Ratio. AST is involved a factor of production. AST / TO and AST Ratio determine the effectiveness of this production. In fact, creative is a player who frequently and effectively looking for the teammates in shooting position, while he does not take an unnecessary risk of losing the ball. Calculating attribute CREATIVITY as follows:

$$CREATIVITY = \frac{AST * {}^{AST}/_{TO}}{ASTRatio} \tag{4.9}$$

ATTACK Attribute

As well as *CREATIVITY*, attribute, *ATTACK* is based on the production and efficiency at the same time. *PTS* is statistic for evaluating offensive productivity. Advanced statistic TRUE SHOOTING $TS_{\%}$ is used to determine the effectiveness of the offensive productivity within the game. Attacking is player who often gets into a shooting positions while he is shooting with high effectiveness as often as possible. Formula for calculating the attribute attack is presented below:

$$ATTACK = PTS * TS_{\%} \tag{4.10}$$

BALL CONTROL Attribute

BALL CONTROL attribute is based on a player's *TO Ratio* statistic. In fact, a player who loses ball from his possession as little as possible while he not shooting, is considered as player with good ball control. The condition that the player does not shoot, is involved because the loss of possession by shooting the ball shall not be classified as a loss of ball but as unsuccessful shot. Therefore, calculation of the ratio is specific because of excluding shooting statistics. The formula for calculation is as follows:

$$BALL\ CONTROL = \frac{1}{TO\ Ratio_i} \tag{4.11}$$

Where:

$$TO\ Ratio_i = \frac{TO}{TO+PFD+AST}$$

OVERALL RATING Attribute

Overall Rating attribute is based on the basic production function. Valorization of EFF is basic statistic for determining of the productivity of a player. EFF is based on all elementary statistics. The calculation is as follows:

$$Rating = PTS + AST + OREB + DREB + BLK + STL + PFD - PF - TO - 3 * FGM - 2 * FGM - FTM \tag{4.12}$$

PIE Application

As was mentioned, the valorization of EFF is based on production function. EFF determines productivity. On the other hand, *PIE* determining the effectiveness of individual attributes and overall rating. Applications *PIE* ensure comparability between each attribute formed as statistics values converted to a constant unit of time. Using *PIE* is as follows:

$$GENERAL\ ATTRRIBUTE_{PIE} = GENERAL\ ATTRRIBUTE^{1+PIE} \tag{4.13}$$

The application *PIE* as exponent ensures that in case of positive (resp. Negative) *PIE*, relative attribute value increases (resp. Decreases) the more, the greater is original value. The opposite effect occurs at very low values (i.e. The interval (0; 1>).

Valorization may especially acquire negative values by they nature, which prevents the general application of this method, as well as standardization of data in the following method. Because of this variation is found the lowest indexation and is then subtracted from the entire column indexation. Consequently, all variants can be squared by their relevant exponents.

4.5 Attributes in Percentage

The data is partially standardized by dividing the values by the geometric mean of values of single observed attributes. Zero values are not included in the dataset.

$$x_{ri} = \frac{x_i}{\bar{x}} \mid \quad additionaly\ for\ x_i = 0\ \ x_{ri} = 0 \tag{4.14}$$

Final form of the rating for a single player is expressed as a cumulative distribution function of occurrences over relative values x_{ri} of this attribute.

Let there be a hypothetical statement that an occurrence of a player with high relative value of certain attribute is a phenomenon rare enough, then it is profitable to describe the probability of an occurrence of various manifestations using the exponential distribution, as stated in 3.8.

$$PDF_e = \frac{\delta f(x_{ri})}{\delta x_{ri}} = \alpha e^{-\beta x_{ri}} \tag{4.15}$$

$$CDF_e = f(x_{ri}) = \int \alpha e^{-\beta x_{ri}} \partial x_{ri} = -\frac{\alpha}{\beta} e^{-\beta x_{ri}} + C \tag{4.16}$$

The values of parameters α, β are determined implicitly based on the properties of the model. According to the fact, that the dataset values are varied after the first standardization, so the least value reaches zero, as stated in 4.4., which implies that the vector of relative values includes at least one zero value. Consequently, the observations show that cases, when the dataset includes more than one zero value are rare enough to make an assumption on probability density value for zero value of the attribute.

$$\frac{\delta f(0)}{\delta x_{ri}} = 1 \tag{4.17}$$

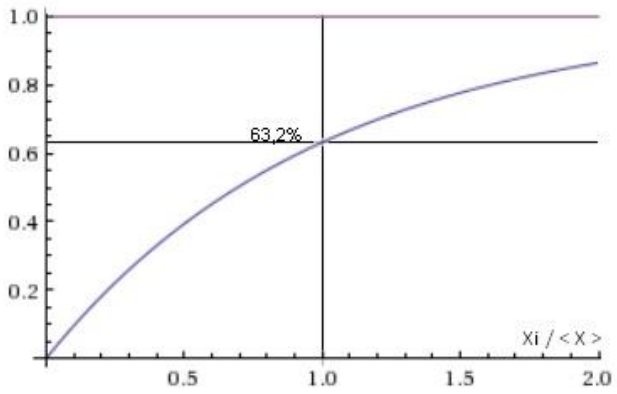
The last initial condition is expresses assigning the zero rating to the zero value of the attribute, if the CDF is defined for zero value of the attribute, of if the definition of the function is extended to zero.

$$\lim_{x_r \to 0} f(x_{ri}) = 0 \tag{4.18}$$

These conditions imply that $\alpha, \beta = 1$. Final expression:

$$f(x) = 1 - e^{-x_{ri}} \tag{4.19}$$

Graf no. 1 – Exponential Distribution



Source - (Perič, 2010).

Where on the *x* axis a ratio of the skill of the player against the league average. The *y* axis stands for the rating value of the attribute. The marked point on the figure shows that when the attribute of a certain player equals the league average, the rating value reaches 63.2%.

Final attributes and ratings view:

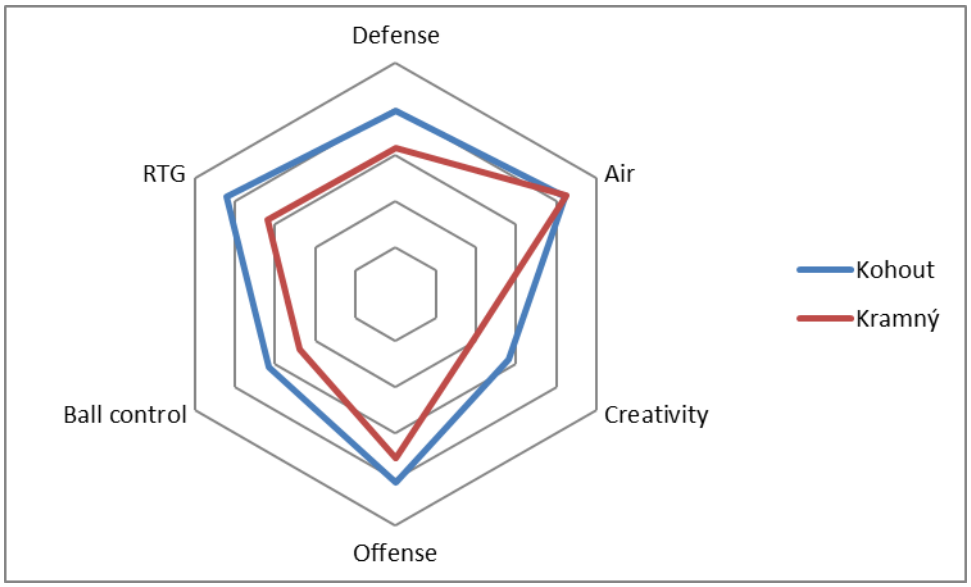
Table no. 10 - Table of attributes and ratings

CLUB	Pos.	Name	*Defense*	*Air*	*Creativity*	*Attack*	*Control*	***RTG***
OPAVA	**5**	**Blažek J.**	52	76	60	89	82	**90**
OPAVA	**1**	**Širina J.**	83	52	93	83	62	**84**
OPAVA	**5**	**Gniadek M.**	74	79	62	77	72	**79**
OPAVA	**3**	**Sokolovský L.**	85	67	85	70	76	**76**
OPAVA	**5**	**Cvek V.**	75	76	64	57	63	**71**
OPAVA	**5**	**Kramný R.**	63	85	39	71	48	**64**
OPAVA	**1**	**Vlček K.**	77	63	82	47	43	**61**
OPAVA	**3**	**Dukanovič M.**	47	36	63	75	61	**59**
OPAVA	**3**	**Dokoupil P.**	45	27	63	74	78	**54**
OPAVA	**1**	**Klečka R.**	83	42	80	55	49	**51**
OPAVA	**3**	**Palát M.**	27	44	61	46	38	**41**
PROSTEJOV	**3**	**Slezák P.**	70	53	80	87	81	**86**
PROSTEJOV	**5**	**Kohout O.**	79	84	56	81	63	**84**
PROSTEJOV	**5**	**Nečas R.**	82	88	86	44	57	**82**
PROSTEJOV	**3**	**Pandula D.**	80	70	73	80	63	**81**
PROSTEJOV	**3**	**Bohačík J.**	72	62	76	78	69	**79**
PROSTEJOV	**5**	**Švrdlík K.**	73	78	57	70	71	**78**

Source - (CBF, 2017)

Comparison of Players:

Graf no. 2 – Player comparison



Source - (CBF, 2017)

Table no. 11 - Comparison of the attributes in the table

Defense	Air	Creativity	Offense	Ball control	RTG
79	84	56	81	63	84
Defense	**Air**	**Creativity**	**Offense**	**Ball control**	**RTG**
63	85	39	71	48	64

Source - (CBF, 2017)

4.6 Weighted Scoring Method

Criteria weights were assembled based on Czech basketball manager opinion. For each of the three players' positions were established their own scoring criteria for each monitored statistic. Score according to positions see table 12. Values of weight vector were normalized according to the formula 3. The normalized values shown in percentages see Table no. 13.

Table no. 12 - Score weights

Criteria		**K1**	**K2**	**K3**	**K4**	**K5**	**K6**	**K7**	**K8**	**K9**	**K10**	**K11**	**K12**
		2FG	*3FG*	*FT*	*OREB*	*DREB*	*BLK*	*AST*	*STL*	*TO*	*PFD*	*PF*	*PTS*
Pos.	**PTS**												
PG	b_{PGi}	0.6	0.8	0.9	0.3	0.6	0.2	1	0.7	1	0.3	0.2	0.6
SF	b_{SFi}	0.7	0.7	0.7	0.6	0.7	0.5	0.5	0.6	0.6	0.7	0.1	0.8
C	b_{Ci}	0.9	0.3	0.6	1	1	0.7	0.3	0.4	0.6	0.8	0.3	0.7

Source - (CBF, 2017)

Table no. 13 – Normalized score

Criteria		**K1**	**K2**	**K3**	**K4**	**K5**	**K6**	**K7**	**K8**	**K9**	**K10**	**K11**	**K12**
		2FG	*3FG*	*FT*	*OREB*	*DREB*	*BLK*	*AST*	*STL*	*TO*	*PFD*	*PF*	*PTS*
Pos.	**Weights**												
PG	v_{PGi}	0.08	0.11	0.13	0.04	0.08	0.03	0.14	0.1	0.14	0.04	0.03	0.08
SF	v_{SFi}	0.1	0.1	0.1	0.08	0.1	0.07	0.07	0.08	0.08	0.1	0.01	0.11
C	v_{Ci}	0.12	0.04	0.08	0.13	0.13	0.09	0.04	0.05	0.08	0.11	0.04	0.09

Source - (CBF, 2017)

4.7 Weighted Sum Method

The method of the weighted sum was chosen for the comparison of the variants (players). First, a criteria matrix ***Y*** was created. Matrix ***Y*** contain entire season sums of variables related to the game time. All criteria were set as maximizing. After identifying the ideal and basal variants, Matrix ***R*** was created according to the Formula 4.

Table no. 14 – Criterial Matrix Y

		K1	**K2**	**K3**	**K4**	**K5**	**K6**	**K7**	**K8**	**K9**	**K10**	**K11**	**K12**
Variants		*2FG*	*3FG*	*FT*	*OREB*	*DREB*	*BLK*	*AST*	*STL*	*TO*	*PFD*	*PF*	*PTS*
V1	Slezák	0.101	0.11	0.03	0.03	0.09	0	0.09	0.05	0.06	0.16	0.07	1,07
V2	Kohout	0.146	0.03	0.03	0.11	0.14	0.03	0.05	0.03	0.09	0.14	0.13	0.91
V3	Nečas	0.123	0.01	0.04	0.09	0.2	0.02	0.12	0.05	0.09	0.11	0.11	0.61
V4	Pandula	0.108	0.09	0.04	0.05	0.13	0.01	0.08	0.06	0.09	0.14	0.1	1.02
V5	Bohačík	0.095	0.09	0.03	0.04	0.11	0.01	0.08	0.05	0.07	0.14	0.09	0.9
V6	Švrdlík	0.17	0	0.06	0.07	0.14	0.03	0.05	0.03	0.06	0.11	0.11	0.86
Criteria function		**MIN**	**MIN**	**MIN**	**MAX**	**MAX**	**MAX**	**MAX**	**MAX**	**MIN**	**MAX**	**MIN**	**MAX**
v_i		***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***	***Pos.***

Source - (CBF, 2017)

Minimization of criteria matrix ***Y*** are then converted to the maximization. Elements are subtracted from the maximum element of the criterion. The procedure is as follows:

Table no. 15 – Maximizing criteria matrix

		2FG	***MAX***	*3FG*	***MAX***	*FT*	***MAX***	*TO*	***MAX***	*PF*	***MAX***
V1	**Slezák P.**	0.101	**0.152**	0.106	**0.089**	0.026	**0.134**	0.058	**0.075**	0.073	**0.172**
V2	**Kohout O.**	0.146	**0.106**	0.030	**0.165**	0.031	**0.129**	0.087	**0.046**	0.130	**0.115**
V3	**Nečas R.**	0.123	**0.130**	0.005	**0.190**	0.040	**0.120**	0.089	**0.044**	0.110	**0.135**
V4	**Pandula D.**	0.108	**0.145**	0.093	**0.102**	0.044	**0.116**	0.094	**0.039**	0.101	**0.144**
V5	**Bohačík J.**	0.095	**0.158**	0.086	**0.109**	0.025	**0.135**	0.069	**0.063**	0.093	**0.151**
V6	**Švrdlík K.**	0.170	**0.083**	0.003	**0.192**	0.058	**0.102**	0.064	**0.069**	0.111	**0.133**

Source - (CBF, 2017)

Table no. 16 - Ideal and basal variant

	2FG	*3FG*	*FT*	*OREB*	*DREB*	*BLK*	*AST*	*STL*	*TO*	*PFD*	*PF*	*PTS*
Basal variant *d*	0.025	0.000	0.000	0.007	0.042	0.000	0.006	0.000	0.025	0.012	0.046	0.359
Ideal variant *h*	0.253	0.195	0.160	0.182	0.231	0.085	0.211	0.098	0.133	0.241	0.245	1.354

Source - (CBF, 2017)

Table no.17 – Matrix R

	K1	**K2**	**K3**	**K4**	**K5**	**K6**	**K7**	**K8**	**K9**	**K10**	**K11**	**K12**
V1	0.669	0.457	0.839	0.136	0.249	0.018	0.388	0.51	0.693	0.631	0.864	0.719
V2	0.468	0.846	0.805	0.565	0.53	0.405	0.224	0.339	0.424	0.541	0.578	0.553
V3	0.572	0.975	0.75	0.483	0.855	0.281	0.542	0.5	0.406	0.404	0.679	0.25
V4	0.636	0.523	0.725	0.261	0.462	0.097	0.371	0.615	0.362	0.565	0.721	0.663
V5	0.694	0.561	0.845	0.177	0.376	0.059	0.368	0.513	0.589	0.538	0.76	0.539
V6	0.364	0.985	0.638	0.368	0.525	0.356	0.209	0.269	0.64	0.423	0.67	0.503

Source - (CBF, 2017)

- Aggregated Utility Function

$$u(a_i) = \sum_{j=1}^{n} v_j \, r_{ij} \tag{4.20}$$

The utility function is calculated for each set of weights corresponding to positions. The cumulative probabilities (the CDFn) corresponding to each of the criteria and positions are calculated through normal distribution. The values of a certain criterium for all scenarios, regardless the position, are considered the data set in this case. CDFn is assigned to each player according to his position. This method is called Weighted Sum Method (the WMS). Analogically, values of the aggregate production function.can be distinguished according to the positions.

Table no. 18 - Final ratings obtained using the weighted sum

	u (PG)	***u (FS)***	***u (C)***	***CDF (PG)***	***CDF (SF)***	***CDF (C)***	***p***	***WMS***
Slezák P.	0.548	0.508	0.479	79.46%	73.47%	66.88%	3	**73.47%**
Kohout O.	0.520	0.534	0.525	60.27%	86.34%	87.72%	5	**87.72%**
Nečas R.	0.586	0.556	0.539	94.21%	93.24%	91.91%	5	**91.91%**
Pandula D.	0.514	0.502	0.482	55.73%	69.93%	68.38%	3	**69.93%**
Bohačík J.	0.537	0.500	0.474	72.82%	68.18%	63.43%	3	**68.18%**
Švrdlík K.	0.511	0.496	0.473	52.85%	65.85%	63.06%	5	**63.06%**

Source - (CBF, 2017)

4.8 The Selection of Suitable Candidates for Team Strengthening

To appropriate demonstration of the effectiveness of inclusion of selected players to the conceptual teams was created a model situation where two conceptual teams each of 8 players (3 point guards, 2 small forwards, 3 centers) are compared between themselves. Distribution of minutes for the player's game time will be as follows:

Starting five:

1. Point guard – 31 minutes
2. Small forward – 31 minutes
3. Small forward – 31 minutes
4. Center – 31 minutes
5. Center – 31 minutes

Bench players:

6. Point guard – 15 minutes
7. Small forward – 15 minutes
8. Center – 15 minutes

Redistribution of minutes was based on the anticipated ideal workload of players. Player's workload from starting five in compare to bench player's workload is in the ratio 2:1. Redistribution of minutes was based on a standard playing time of 40 minutes. This redistribution has a relatively similar proportion as all examined team's redistributions. It is interesting that a common feature among teams in the top half of the league table is the usually low ratio between starting player and bench player. On the other hand, among teams from the bottom half of the league table is often a higher starting-bench player ratio. The first conceptual team will be composed based on input information from a rating system. The second conceptual team will be composed of players ranked by the weighted sum method.

It is necessary to consider the availability of certain players to be able to recommend suitable candidates. Recommendations will be designed for the average level clubs in the league. The level was chosen based on the position of the team managed by chosen manager. Players will be also selected based on the following criteria:

1. A player’s age ≤ 28 years old
2. Czech citizenship
3. A player must be a member of different team then ČEZ Basketball Nymburk

The criteria were chosen based on observed patterns in the transfer market between the years 2014 - 2017 (CBF 2017).

The first criterion was chosen to provide increasing or at least constant performance over a period of next 3 years. Players aged 31 and older are prone to a sudden decline in their performance determined by player's physical condition degradation.

The second criterion was chosen based on the high rarity of transfers of foreign players among the clubs of NBL. The exception is the team CEZ Basketball Nymburk, which often complements the player's roster by foreign players achieving high performance within the National Basketball League. Since the recommendation of the selection of players is designed for the examined average level team, there is no need to take this exception into account.

The third criterion is based on high rarity transfers of ČEZ Basketball Nymburk players, who fulfill first and second criteria, among other clubs.

After selecting individual players into conceptual teams, for each team, it will be created overall team rating composed of individual player’s ratings. Then, game time is redistributed among players. Evaluation of individual players for both teams will be derived from the rating system for their comparability.

Based on the resulting outputs players will be recommended to strengthen the examine team.

A conceptual team composed of players evaluated by the rating system.

Table no. 19 - Conceptual team according to the rating system

Position in team	Player	Rating	Minutes
1	*Širina J.*	**84**	31
2	*Bohačík J.*	**79**	31
3	*Peterka M.*	**77**	31
4	*Kohout O.*	**84**	31
5	*Gniadek M.*	**79**	31
6	*Číž A.*	**77**	15
7	*Špaček J.*	**74**	15
8	*Švrdlík K.*	**78**	15
Team rating		**79.64**	

Source - (CBF, 2014)

Table no. 20 - Conceptual team according to the rating system 2017

Position in team	Player	Rating	Minutes
1	*Širina J.*	**85**	31
2	*Bohačík J.*	**91**	31
3	*Peterka M.*	**82**	31
4	*Kohout O.*	**79**	31
5	*Gniadek M.*	**82**	31
6	*Číž A.*	**78**	15
7	*Špaček J.*	**64**	15
8	*Švrdlík K.*	**83**	15
Team rating		**81.44**	

Source - (CBF, 2017)

Table no. 21 - conceptual team composed of players ranked by WSM 2014

Position in team	Player	Rating	Minutes
1	*Šotnar M.*	**70**	31
2	*Bohačík J.*	**79**	31
3	*Špaček J.*	**74**	31
4	*Kohout O.*	**84**	31
5	*Gniadek M.*	**79**	31
6	*Širina J.*	**84**	15
7	*Šmíd F.*	**66**	15
8	*Vošlajer T.*	**70**	15
Team rating		**76.33**	

Source - (CBF, 2017)

Table no. 22 - conceptual team composed of players ranked by WSM 2017

Position in team	Player	Rating	Minutes
1	*Šotnar M.*	**75**	31
2	*Bohačík J.*	**91**	31
3	*Špaček J.*	**64**	31
4	*Kohout O.*	**79**	31
5	*Gniadek M.*	**82**	31
6	*Širina J.*	**85**	15
7	*Šmíd F.*	**72**	15
8	*Vošlajer T.*	**70**	15
Team rating		**77.63**	

Source - (CBF, 2017)

5 RESULTS AND DISCUSSION

5.1 Methods comparison

To compare the accuracy of the rating system was chosen production function. This was deduced based on the weights set by scoring and general production function used in practice.

To verify the ability of attributes to describe the resulting productivity was used correlation. A correlation was observed dependence of the selected production function to produce the final score ΔPTS. Rated based on the difference between basket scored and collected points. The perception of the actual position as a measure of real productivity is inappropriate in the present case, because it depends on the distribution of output between each point matches and tournaments structure itself, which used methods are not recorded. Production function teams is derived based on minutes played, and rating of the players.

$$\omega_{EFF} = \sum_{i=1}^{n} (EFF_i \frac{t_i}{T}) \mid T = \sum t_i \tag{5.1}$$

$$\omega_{MVS} = \sum_{i=1}^{n} (MVS_i \frac{t_i}{T}) \tag{5.2}$$

Table no. 23 – Comparison of Methods.

Team	R	ΔPTS	RTG	WMS
NYMBURK	**1**	1142.00	81.24%	85.44%
PROSTEJOV	**2**	521.00	74.15%	67.03%
OPAVA	**3**	258.00	71.39%	65.46%
PARDUBICE	**3**	199.00	70.83%	67.85%
DECIN	**3**	181.00	72.51%	64.93%
OSTRAVA	**8**	6.00	70.05%	58.00%
USTI NAD LABEM	**6**	-75.00	70.01%	62.51%
KOLIN	**7**	-105.00	69.43%	58.62%
USK PRAHA	**9**	-349.00	67.45%	56.72%
SVITAVY	**11**	-359.00	65.27%	50.86%
BRNO	**12**	-430.00	65.17%	41.81%
JINDRICHUV HRADEC	**10**	-445.00	63.52%	58.41%

Source - (CBF, 2014)

Correlation of EFF against ΔPTS is 97.92%. Correlation MVS against ΔPTS is 90.87%. The results show that for the purpose of mutual team benchmarking or players comparison is best to use a rating system based on the revised commonly used production function. Production function based on the weights and scoring method does not have such a precise description as a rating system. Yet it cannot be described as useless, especially for a clearer comparison of the players on positions in which they play.

The fact is that a team composed by manager who determine the value of the of weights of individual criteria made by multicriteria analysis, according weighted sum evaluated relatively higher value, compared to other teams than when the team is evaluated based on the evaluation carried out by point comparison of the difference in season or based on data from the rating system.

In a case of ties in the ratings of two players, players can be distinguished by the individual attributes according to the rating system. Just in the case where even after the comparison by attributes could not be determined better option. It would be as one of the possible solutions, the recommended method for selecting the weighted sum option. A more appropriate solution would still, however, could be the inclusion of other criteria in rating system and subsequent conversion to the new assessment.

5.2 Comparison of Recommended Players for the Period 2013-2017

The recommended players were compared for the period of 2013 -2017. Results show progress approximately within all recommended players. Also this comparison proves correlation results. Rating systems provide much accurate outputs and results for further decision-making then classic approach or WMS.

Position in team	Player	RTG 2013	RTG2017	Change	Minutes
1	*Širina J.*	**84**	**85**	+1	31
2	*Bohačík J.*	**79**	**91**	+12	31
3	*Peterka M.*	**77**	**82**	+5	31
4	*Kohout O.*	**84**	**79**	-5	31
5	*Gniadek M.*	**79**	**82**	+3	31
6	*Číž A.*	**77**	**78**	+1	15
7	*Špaček J.*	**74**	**64**	-10	15
8	*Švrdlík K.*	**78**	**83**	+5	15
New Team rating				**81**	

5.3 Recommended Players

Based on the results of the evaluation of the conceptual team, is possible to propose following recommendations.

As the most suitable candidates to strengthen the team moving in the bottom of the table, according to specified criteria can be recommended players selected to the team concept of the rating system, see Table 19.

In the case of absence of any criteria based on the position of the team in the league table, as suitable candidates to strengthen team can be recommended all players whose individual rating is higher than the rating of a certain team.

6 CONCLUSION

The rating system in current form can be used primarily for scouting players, i.e. the selection of new candidates into the team, as well as the ideal team composition and for the optimal redistribution of game time. Despite all, rating system still has huge potential, mainly due to an exact and solid statistical base.

In the first phase, the new input variables for data processing exist will be included; such as field goals of each zone. Current processing considered only two zones: the 2-point zone and 3-point zone, while the newly available statistics considered fourteen zones.

In the second phase, new input variables for data processing that do not exist will be added. For instance: hustle points (action leading to the change of possession) or defensive impact points based on expertise evaluation. It should help provide more accurate and meaningful results.

As for the long term, a new module based on the training statistics will be added to the rating system. This module could be useful especially in the optimization of the training process and for the scouting of players.

In case that further development is successful, the rating system will be able to be applied for commercial and managerial purposes in the form of a control system assembled according to individual needs and requirements of users.

At the end of the work, the rating system can be described as a very valuable tool for managerial decision-making within domestic and European basketball leagues.

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ANNEX A: BASIC STATS

			minuty			2b				3b		
USTI NAD LABEM	**Mitchell K.**	8967,6	1650,4	36,68		480	247	51.5%		336	114	33.9%
USTI NAD LABEM	**Lewis Jr. V.**	8967,6	1335,2	29,67		385	175	45.5%		57	11	19.3%
USTI NAD LABEM	**Šteffel D.**	8967,6	1361,8	30,26		488	255	52.3%		3	1	33.3%
USTI NAD LABEM	**Steffeck M.**	8967,6	1125,0	25,00		184	98	53.3%		233	83	35.6%
USTI NAD LABEM	**Krakovič J.**	8967,6	964,0	21,91		282	137	48.6%		7	0	0.0%
USTI NAD LABEM	**Bowden S.**	8967,6	443,0	29,53		82	39	47.6%		89	34	38.2%
USTI NAD LABEM	**Žampach A.**	8967,6	748,8	17,41		109	45	41.3%		52	12	23.1%
USTI NAD LABEM	**Emerson A.**	8967,6	670,8	26,83		84	34	40.5%		104	34	32.7%
USTI NAD LABEM	**Bejček J.**	8967,6	162,5	6,25		17	7	53.8%		16	2	12.5%
USTI NAD LABEM	**Hejl V.**	8967,6	124,5	6,92		18	11	61.1%		7	0	0.0%
USTI NAD LABEM	**Slunečko M.**	8967,6	381,6	10,90		33	9	27.3%		23	3	13.0%
USK PRAHA	**Chán A.**	7817,0	976,6	26,40		358	210	58.7%		12	2	16.7%
USK PRAHA	**Slavík J.**	7817,0	890,0	21,70		212	118	55.7%		80	29	36.3%
USK PRAHA	**Votroubek S.**	7817,0	1221,7	29,10		164	73	44.5%		200	82	41.0%
USK PRAHA	**Feštr L.**	7817,0	983,0	23,40		221	115	52.0%		71	25	35.2%
USK PRAHA	**Šotnar M.**	7817,0	594,9	19,80		97	50	51.5%		55	15	27.3%
USK PRAHA	**Mareš M.**	7817,0	1061,1	27,90		227	103	45.4%		168	64	38.1%
USK PRAHA	**Grunt P.**	7817,0	260,1	7,90		64	38	59.4%		4	1	25.0%
USK PRAHA	**Křivánek J.**	7817,0	691,8	16,50		142	64	45.1%		57	8	14.0%
USK PRAHA	**Štěrba J.**	7817,0	108,3	9,80		9	3	33.3%		17	6	35.3%
USK PRAHA	**Vocetka M.**	7817,0	759,7	18,50		99	34	34.3%		137	39	28.5%
USK PRAHA	**Fait D.**	7817,0	105,6	9,60		19	8	42.1%		12	4	33.3%
USK PRAHA	**Šafarčík P.**	7817,0	164,2	10,30		35	12	34.3%		24	7	29.2%
SVITAVY	**Kornowski K.**	8242,4	1173,5	30,09		490	257	52.4%		18	3	16.7%
SVITAVY	**Kyles D.**	8242,4	727,5	30,31		227	117	51.5%		80	25	31.3%
SVITAVY	**Špaček J.**	8242,4	82	11,71		13	7	53.8%		17	6	35.3%
SVITAVY	**Davis J.**	8242,4	137	13,70		40	15	37.5%		4	1	25.0%
SVITAVY	**Jelínek J.**	8242,4	1199,2	28,55		308	147	47.7%		138	39	28.3%
SVITAVY	**Macela T.**	8242,4	957,1	23,34		176	79	44.9%		125	38	30.4%
SVITAVY	**Sedlák J.**	8242,4	563,5	13,42		154	78	50.6%		30	7	23.3%
SVITAVY	**Teplý T.**	8242,4	992,3	23,63		78	35	44.9%		232	81	34.9%
SVITAVY	**Peterka O.**	8242,4	903,7	21,52		135	66	48.9%		116	26	22.4%
SVITAVY	**Moravec L.**	8242,4	689,2	22,23		106	41	38.7%		65	23	35.4%
SVITAVY	**Šindelář L.**	8242,4	485,1	13,48		51	26	51.0%		14	6	42.9%
SVITAVY	**Sehnal M.**	8242,4	151,4	7,97		19	8	42.1%		15	7	46.7%
SVITAVY	**Andres P.**	8242,4	180,9	9,52		24	12	50.0%		22	3	13.6%
PROSTEJOV	**Slezák P.**	10620,1	1321,3	26,43		252	119	47.2%		234	94	40.2%
PROSTEJOV	**Kohout O.**	10620,1	963,2	21,40		321	180	56.1%		40	11	27.5%
PROSTEJOV	**Nečas R.**	10620,1	1223,3	24,97		299	149	49.8%		6	0	0.0%
PROSTEJOV	**Pandula D.**	10620,1	1343,0	26,33		319	174	54.5%		182	57	31.3%
PROSTEJOV	**Bohačík J.**	10620,1	1412,2	27,69		257	123	47.9%		191	70	36.6%
PROSTEJOV	**Švrdlík K.**	10620,1	1328,9	25,07		478	252	52.7%		5	1	20.0%
PROSTEJOV	**Marko R.**	10620,1	1219,6	23,01		174	94	54.0%		200	60	30.0%
PROSTEJOV	**Kratochvíl J.**	10620,1	600,2	12,25		144	60	41.7%		32	9	28.1%
PROSTEJOV	**Bratčenkov V.**	10620,1	687,4	15,99		74	33	44.6%		124	43	34.7%
PROSTEJOV	**Prášil J.**	10620,1	372,4	12,01		41	17	41.5%		66	20	30.3%
PROSTEJOV	**Polášek R.**	10620,1	148,6	5,72		16	6	37.5%		38	9	23.7%
PARDUBICE	**Nelson T.**	10644,6	1062,8	22,14		461	265	57.5%		0	0	0.0%

th				Z	DU		DO		DC		Bl		As		M+		M-		F+	
266	181	68.0%		45	46	1,0	180	4,0	226	5,0	8	0,18	256	5,7	126	2,8	124	2,8	295	6,6
163	124	76.1%		45	124	2,8	294	6,5	418	9,3	19	0,42	86	1,9	73	1,6	99	2,2	145	3,2
107	60	56.1%		45	103	2,3	201	4,5	304	6,8	31	0,69	53	1,2	37	0,8	63	1,4	118	2,6
59	37	62.7%		45	55	1,2	143	3,2	198	4,4	48	1,07	64	1,4	38	0,8	78	1,7	73	1,6
117	67	57.3%		44	73	1,7	118	2,7	191	4,3	14	0,32	35	0,8	37	0,8	63	1,4	112	2,5
20	11	55.0%		15	9	0,6	34	2,3	43	2,9	1	0,07	32	2,1	9	0,6	35	2,3	29	1,9
48	27	56.3%		43	48	1,1	68	1,6	116	2,7	8	0,19	38	0,9	19	0,4	34	0,8	55	1,3
31	23	74.2%		25	9	0,4	75	3,0	84	3,4	0	0,00	50	2,0	21	0,8	56	2,2	36	1,4
10	7	70.0%		26	6	0,2	9	0,3	15	0,6	0	0,00	12	0,5	3	0,1	7	0,3	10	0,4
5	4	80.0%		18	5	0,3	8	0,4	13	0,7	0	0,00	3	0,2	5	0,3	7	0,4	10	0,6
18	12	66.7%		35	10	0,3	31	0,9	41	1,2	2	0,06	30	0,9	18	0,5	23	0,7	30	0,9
116	98	84.5%		37	78	2,1	149	4,0	227	6,1	31	0,84	58	1,6	9	0,2	95	2,6	141	3,8
123	59	48.0%		41	65	1,6	140	3,4	205	5,0	17	0,41	36	0,9	20	0,5	49	1,2	117	2,9
38	29	76.3%		42	22	0,5	268	6,4	290	6,9	28	0,67	68	1,6	35	0,8	44	1,0	53	1,3
92	78	84.8%		42	18	0,4	88	2,1	106	2,5	0	0,00	151	3,6	27	0,6	98	2,3	119	2,8
48	37	77.1%		30	10	0,3	56	1,9	66	2,2	0	0,00	120	4,0	13	0,4	33	1,1	60	2,0
107	87	81.3%		38	29	0,8	77	2,0	106	2,8	1	0,03	62	1,6	25	0,7	82	2,2	138	3,6
21	12	57.1%		33	21	0,6	24	0,7	45	1,4	6	0,18	7	0,2	5	0,2	13	0,4	24	0,7
44	23	52.3%		42	48	1,1	69	1,6	117	2,8	2	0,05	40	1,0	17	0,4	35	0,8	51	1,2
8	4	50.0%		11	2	0,2	15	1,4	17	1,5	2	0,18	2	0,2	4	0,4	7	0,6	6	0,5
53	39	73.6%		41	9	0,2	64	1,6	73	1,8	2	0,05	29	0,7	34	0,8	41	1,0	62	1,5
7	3	42.9%		11	5	0,5	8	0,7	13	1,2	1	0,09	3	0,3	2	0,2	6	0,5	4	0,4
15	8	53.3%		16	3	0,2	14	0,9	17	1,1	1	0,06	10	0,6	0	0,0	12	0,8	12	0,8
179	133	74.3%		39	95	2,4	187	4,8	282	7,2	16	0,41	40	1,0	27	0,7	52	1,3	170	4,4
134	93	69.4%		24	17	0,7	107	4,5	124	5,2	12	0,50	55	2,3	36	1,5	72	3,0	126	5,3
13	10.I	76.9%		7	5	0,7	10	1,4	15	2,1	0	0,00	5	0,7	6	0,9	5	0,7	10	1,4
34	19	55.9%		10	12	1,2	27	2,7	39	3,9	2	0,20	6	0,6	7	0,7	11	1,1	33	3,3
98	72	73.5%		42	76	1,8	203	4,8	279	6,6	34	0,81	51	1,2	42	1,0	81	1,9	98	2,3
102	67	65.7%		41	11	0,3	93	2,3	104	2,5	1	0,02	98	2,4	46	1,1	75	1,8	125	3,0
69	48	69.6%		42	36	0,9	57	1,4	93	2,2	10	0,24	14	0,3	7	0,2	30	0,7	61	1,5
98	68	69.4%		42	26	0,6	63	1,5	89	2,1	2	0,05	52	1,2	23	0,5	47	1,1	124	3,0
37	27	73.0%		42	37	0,9	112	2,7	149	3,5	3	0,07	55	1,3	36	0,9	38	0,9	41	1,0
47	35	74.5%		31	12	0,4	41	1,3	53	1,7	4	0,13	80	2,6	28	0,9	66	2,1	52	1,7
30	17	56.7%		36	24	0,7	46	1,3	70	1,9	3	0,08	22	0,6	15	0,4	29	0,8	31	0,9
6	04.I	66.7%		19	8	0,4	8	0,4	16	0,8	0	0,00	3	0,2	1	0,1	10	0,5	8	0,4
12	07.I	58.3%		19	2	0,1	14	0,7	16	0,8	1	0,05	20	1,1	7	0,4	21	1,1	19	1,0
213	179	84.0%		50	41	0,8	118	2,4	159	3,2	2	0,04	113	2,3	66	1,3	77	1,5	207	4,1
113	83	73.5%		45	102	2,3	137	3,0	239	5,3	33	0,73	50	1,1	32	0,7	84	1,9	131	2,9
127	78	61.4%		49	112	2,3	249	5,1	361	7,4	29	0,59	143	2,9	60	1,2	109	2,2	128	2,6
183	124	67.8%		51	71	1,4	174	3,4	245	4,8	11	0,22	110	2,2	81	1,6	126	2,5	190	3,7
177	142	80.2%		51	54	1,1	160	3,1	214	4,2	7	0,14	115	2,3	71	1,4	98	1,9	191	3,7
171	94	55.0%		53	95	1,8	188	3,5	283	5,3	40	0,75	65	1,2	35	0,7	85	1,6	145	2,7
94	70	74.5%		53	32	0,6	125	2,4	157	3,0	4	0,08	127	2,4	66	1,2	90	1,7	92	1,7
36	30	83.3%		49	32	0,7	95	1,9	127	2,6	8	0,16	36	0,7	22	0,4	44	0,9	41	0,8
39	27	69.2%		43	19	0,4	67	1,6	86	2,0	14	0,33	26	0,6	40	0,9	45	1,0	41	1,0
18	18	100.0%		31	9	0,3	32	1,0	41	1,3	3	0,10	16	0,5	12	0,4	14	0,5	20	0,6
0	0	0.0%		26	4	0,2	10	0,4	14	0,5	0	0,00	8	0,3	4	0,2	8	0,3	2	0,1
158	129	81.6%		48	72	1,5	191	4,0	263	5,5	28	0,58	39	0,8	25	0,5	89	1,9	157	3,3

F-		TH/F+	Val			b.	
126	2,8	0,90	1138	25,29	25,29	1017	22,60
135	3,0	1,12	719	15,98	15,98	507	11,27
140	3,1	0,91	631	14,02	14,02	573	12,73
139	3,1	0,81	428	9,51	9,51	482	10,71
136	3,1	1,04	329	7,48	7,48	341	7,75
36	2,4	0,69	127	8,47	8,47	191	12,73
55	1,3	0,87	175	4,07	4,07	153	3,56
62	2,5	0,86	138	5,52	5,52	193	7,72
17	0,7	1,00	20	0,77	0,77	27	1,04
22	1,2	0,50	13	0,72	0,72	26	1,44
53	1,5	0,60	34	0,97	0,97	39	1,11
81	2,2	0,82	638	17,24	17,24	524	14,16
117	2,9	1,05	402	9,80	9,80	382	9,32
110	2,6	0,72	523	12,45	12,45	421	10,02
95	2,3	0,77	427	10,17	10,17	383	9,12
68	2,3	0,80	242	8,07	8,07	182	6,07
124	3,3	0,78	363	9,55	9,55	485	12,76
45	1,4	0,88	82	2,48	2,48	91	2,76
39	0,9	0,86	180	4,29	4,29	175	4,17
12	1,1	1,33	19	1,73	1,73	28	2,55
82	2,0	0,85	124	3,02	3,02	224	5,46
11	1,0	1,75	14	1,27	1,27	31	2,82
23	1,4	1,25	11	0,69	0,69	53	3,31
94	2,4	1,05	751	19,26	19,26	656	16,82
53	2,2	1,06	424	17,67	17,67	402	16,75
13	1,9	1,30	40	5,71	5,71	42	6,00
23	2,3	1,03	62	6,20	6,20	52	5,20
161	3,8	1,00	459	10,93	10,93	483	11,50
113	2,8	0,82	306	7,46	7,46	339	8,27
78	1,9	1,13	182	4,33	4,33	225	5,36
105	2,5	0,79	295	7,02	7,02	381	9,07
71	1,7	0,90	243	5,79	5,79	237	5,64
74	2,4	0,90	144	4,65	4,65	186	6,00
71	2,0	0,97	82	2,28	2,28	87	2,42
21	1,1	0,75	17	0,89	0,89	41	2,16
27	1,4	0,63	19	1,00	1,00	40	2,11
96	1,9	1,03	766	15,32	15,32	699	13,98
125	2,8	0,86	552	12,27	12,27	476	10,58
134	2,7	0,99	649	13,24	13,24	376	7,67
136	2,7	0,96	689	13,51	13,51	643	12,61
132	2,6	0,93	676	13,25	13,25	598	11,73
148	2,8	1,18	629	11,87	11,87	601	11,34
83	1,6	1,02	467	8,81	8,81	438	8,26
98	2,0	0,88	156	3,18	3,18	177	3,61
81	1,9	0,95	169	3,93	3,93	222	5,16
50	1,6	0,90	70	2,26	2,26	112	3,61
31	1,2	0,00	-11	-0,42	-0,42	39	1,50
134	2,8	1,01	723	15,06	15,06	659	13,73

PARDUBICE	**Muirhead C.**	10644,6	1044,5	28,23		368	176	47.8%		70	13	18.6%
PARDUBICE	**Pospíšil Z.**	10644,6	739,6	16,08		250	142	56.8%		1	0	0.0%
PARDUBICE	**Sanders L.**	10644,6	1651,6	31,76		413	186	45.0%		136	47	34.6%
PARDUBICE	**Peterka M.**	10644,6	1021,1	20,02		263	150	57.0%		71	27	38.0%
PARDUBICE	**Bohačík P.**	10644,6	1082,2	24,60		279	167	59.9%		92	25	27.2%
PARDUBICE	**Kotas L.**	10644,6	1256,0	26,17		124	66	53.2%		149	49	32.9%
PARDUBICE	**Šoukal T.**	10644,6	82,2	4,11		12	5	41.7%		6	2	33.3%
PARDUBICE	**Čarnecký M.**	10644,6	1126,1	23,96		113	43	38.1%		165	58	35.2%
PARDUBICE	**Příhonský J.**	10644,6	761,2	14,36		122	50	41.0%		88	26	29.5%
PARDUBICE	**Půlpán V.**	10644,6	248,4	7,53		35	16	45.7%		17	3	17.6%
PARDUBICE	**Faifr S.**	10644,6	376,9	9,92		44	22	50.0%		71	18	25.4%
PARDUBICE	**Šoula J.**	10644,6	192,0	6,62		53	20	37.7%		10	1	10.0%
OSTRAVA	**Folker A.**	8684,6	474,6	26,37		199	106	53.3%		0	0	0.0%
OSTRAVA	**Pelikán R.**	8684,6	359,4	8,77		141	75	53.2%		3	0	0.0%
OSTRAVA	**Willman J.**	8684,6	1499,7	34,08		500	269	53.8%		103	26	25.2%
OSTRAVA	**Ruach T.**	8684,6	1162,1	26,41		222	108	48.6%		181	60	33.1%
OSTRAVA	**Číž A.**	8684,6	1099,0	28,92		185	96	51.9%		171	47	27.5%
OSTRAVA	**Jurečka L.**	8684,6	1031,7	22,93		53	27	50.9%		154	80	51.9%
OSTRAVA	**Alič A.**	8684,6	1304,5	30,34		237	139	58.6%		194	65	33.5%
OSTRAVA	**Zbránek F.**	8684,6	847,8	20,19		134	66	49.3%		135	40	29.6%
OSTRAVA	**Stehlík J.**	8684,6	643,9	14,97		78	33	42.3%		97	31	32.0%
OSTRAVA	**Medvecký M.**	8684,6	80,3	4,72		9	3	33.3%		5	1	20.0%
OPAVA	**Blažek J.**	10447,2	1521,1	29,83		322	192	59.6%		143	55	38.5%
OPAVA	**Širina J.**	10447,2	1592,5	31,85		302	171	56.6%		216	81	37.5%
OPAVA	**Gniadek M.**	10447,2	1355,0	25,57		272	173	63.6%		135	44	32.6%
OPAVA	**Sokolovský L.**	10447,2	1374,0	28,63		208	88	42.3%		211	70	33.2%
OPAVA	**Cvek V.**	10447,2	521,4	20,05		79	45	57.0%		36	9	25.0%
OPAVA	**Kramný R.**	10447,2	780,3	14,72		171	87	50.9%		77	25	32.5%
OPAVA	**Vlček K.**	10447,2	331,3	9,20		68	29	42.6%		10	2	20.0%
OPAVA	**Dukanovič M.**	10447,2	530,3	18,29		66	36	54.5%		136	41	30.1%
OPAVA	**Dokoupil P.**	10447,2	1296,6	24,93		158	75	47.5%		300	119	39.7%
OPAVA	**Klečka R.**	10447,2	675,6	19,87		151	64	42.4%		40	13	32.5%
OPAVA	**Palát M.**	10447,2	140,3	7,02		17	10	58.8%		13	2	15.4%
OPAVA	**Tóth L.**	10447,2	328,8	13,70		43	18	41.9%		24	4	16.7%
NYMBURK	**Simmons T.**	6146,3	461,0	20,00		104	50	48.1%		98	48	49.0%
NYMBURK	**Mahalbašič R.**	6146,3	517,7	17,30		182	127	69.8%		3	2	66.7%
NYMBURK	**Rančík R.**	6146,3	278,2	18,50		80	45	56.3%		43	21	48.8%
NYMBURK	**Pomikálek T.**	6146,3	537,3	17,90		106	74	69.8%		43	15	34.9%
NYMBURK	**Houška P.**	6146,3	555,7	18,50		159	99	62.3%		21	9	42.9%
NYMBURK	**Page D.**	6146,3	427,0	21,30		88	46	52.3%		73	35	47.9%
NYMBURK	**Benda P.**	6146,3	298,9	16,10		93	57	61.3%		1	0	0.0%
NYMBURK	**Rančík M.**	6146,3	77,0	15,40		30	17	56.7%		8	1	12.5%
NYMBURK	**Hruban V.**	6146,3	635,1	21,90		118	73	61.9%		49	22	44.9%
NYMBURK	**Kříž M.**	6146,3	349,2	13,40		65	43	66.2%		30	8	26.7%
NYMBURK	**Ilievski V.**	6146,3	408,1	18,60		48	23	47.9%		47	16	34.0%
NYMBURK	**Massamba T.**	6146,3	653,2	21,10		90	41	45.6%		57	16	28.1%
NYMBURK	**Welsch J.**	6146,3	407,2	19,40		91	41	45.1%		7	2	28.6%
NYMBURK	**Palyza L.**	6146,3	540,7	18,60		76	42	55.3%		109	46	42.2%
KOLIN	**Field R.**	8797,4	1256,9	28,57		297	147	49.5%		119	34	28.6%

165	121	73.3%		37	47	1,3	177	4,8	224	6,1	17	0,46	68	1,8	63	1,7	89	2,4	168	4,5	70
108	84	77.8%		46	74	1,6	103	2,2	177	3,8	24	0,52	30	0,7	27	0,6	42	0,9	85	1,8	144
177	157	88.7%		52	34	0,7	175	3,4	209	4,0	2	0,04	224	4,3	90	1,7	138	2,7	173	3,3	134
78	55	70.5%		51	93	1,8	153	3,0	246	4,8	7	0,14	39	0,8	40	0,8	61	1,2	78	1,5	104
154	93	60.4%		44	106	2,4	160	3,6	266	6,0	4	0,09	35	0,8	31	0,7	90	2,0	141	3,2	145
80	51	63.8%		48	28	0,6	128	2,7	156	3,3	7	0,15	136	2,8	73	1,5	82	1,7	105	2,2	132
8	6	75.0%		20	7	0,4	14	0,7	21	1,1	1	0,05	5	0,3	3	0,2	10	0,5	8	0,4	8
70	48	68.6%		47	14	0,3	76	1,6	90	1,9	3	0,06	142	3,0	51	1,1	73	1,6	78	1,7	58
47	33	70.2%		53	24	0,5	73	1,4	97	1,8	2	0,04	46	0,9	26	0,5	58	1,1	47	0,9	87
20	9	45.0%		33	8	0,2	22	0,7	30	0,9	2	0,06	30	0,9	23	0,7	20	0,6	18	0,5	45
27	19	70.4%		38	20	0,5	38	1,0	58	1,5	3	0,08	7	0,2	15	0,4	22	0,6	24	0,6	56
14	11	78.6%		29	9	0,3	24	0,8	33	1,1	0	0,00	6	0,2	6	0,2	23	0,8	19	0,7	30
90	42	46.7%		18	48	2,7	92	5,1	140	7,8	3	0,17	13	0,7	13	0,7	37	2,1	85	4,7	52
79	58	73.4%		41	45	1,1	83	2,0	128	3,1	18	0,44	13	0,3	14	0,3	25	0,6	66	1,6	88
133	107	80.5%		44	111	2,5	200	4,5	311	7,1	11	0,25	82	1,9	53	1,2	64	1,5	145	3,3	148
135	106	78.5%		44	29	0,7	136	3,1	165	3,8	6	0,14	151	3,4	62	1,4	96	2,2	152	3,5	129
122	82	67.2%		38	16	0,4	123	3,2	139	3,7	6	0,16	155	4,1	45	1,2	78	2,1	143	3,8	74
47	33	70.2%		45	24	0,5	94	2,1	118	2,6	2	0,04	44	1,0	51	1,1	26	0,6	43	1,0	71
80	54	67.5%		43	40	0,9	117	2,7	157	3,7	9	0,21	98	2,3	42	1,0	102	2,4	98	2,3	132
86	76	88.4%		42	37	0,9	49	1,2	86	2,0	4	0,10	42	1,0	36	0,9	60	1,4	84	2,0	109
35	25	71.4%		43	30	0,7	70	1,6	100	2,3	3	0,07	39	0,9	29	0,7	45	1,0	58	1,3	109
0	0	0.0%		17	1	0,1	10	0,6	11	0,6	0	0,00	2	0,1	2	0,1	5	0,3	1	0,1	14
256	214	83.6%		51	111	2,2	203	4,0	314	6,2	11	0,22	73	1,4	36	0,7	76	1,5	247	4,8	117
187	136	72.7%		50	33	0,7	149	3,0	182	3,6	7	0,14	254	5,1	112	2,2	162	3,2	199	4,0	139
97	67	69.1%		53	105	2,0	218	4,1	323	6,1	12	0,23	70	1,3	68	1,3	73	1,4	128	2,4	185
150	126	84.0%		48	33	0,7	186	3,9	219	4,6	25	0,52	131	2,7	86	1,8	72	1,5	141	2,9	145
40	30	75.0%		26	21	0,8	98	3,8	119	4,6	6	0,23	28	1,1	26	1,0	27	1,0	48	1,8	56
84	63	75.0%		53	56	1,1	177	3,3	233	4,4	24	0,45	26	0,5	11	0,2	79	1,5	81	1,5	174
40	26	65.0%		36	16	0,4	41	1,1	57	1,6	2	0,06	39	1,1	20	0,6	44	1,2	51	1,4	45
74	50	67.6%		29	13	0,4	28	1,0	41	1,4	1	0,03	34	1,2	14	0,5	49	1,7	94	3,2	72
53	36	67.9%		52	14	0,3	60	1,2	74	1,4	0	0,00	61	1,2	35	0,7	52	1,0	66	1,3	123
33	23	69.7%		34	24	0,7	40	1,2	64	1,9	1	0,03	70	2,1	54	1,6	68	2,0	52	1,5	84
9	7	77.8%		20	2	0,1	13	0,7	15	0,8	0	0,00	9	0,5	2	0,1	15	0,8	9	0,5	11
8	2	25.0%		24	21	0,9	45	1,9	66	2,8	1	0,04	24	1,0	15	0,6	26	1,1	15	0,6	49
71	63	88.7%		23	18	0,8	65	2,8	83	3,6	7	0,30	55	2,4	28	1,2	32	1,4	72	3,1	35
81	51	63.0%		30	71	2,4	117	3,9	188	6,3	12	0,40	58	1,9	14	0,5	56	1,9	73	2,4	77
41	30	73.2%		15	9	0,6	40	2,7	49	3,3	3	0,20	21	1,4	13	0,9	18	1,2	53	3,5	35
57	40	70.2%		30	34	1,1	104	3,5	138	4,6	14	0,47	33	1,1	15	0,5	27	0,9	49	1,6	30
52	44	84.6%		30	38	1,3	94	3,1	132	4,4	11	0,37	35	1,2	16	0,5	36	1,2	44	1,5	44
40	33	82.5%		20	22	1,1	75	3,8	97	4,9	3	0,15	31	1,6	14	0,7	29	1,5	36	1,8	39
33	25	75.8%		18	24	1,3	40	2,2	64	3,6	4	0,22	22	1,2	9	0,5	24	1,3	36	2,0	25
12	10	83.3%		5	5	1,0	17	3,4	22	4,4	2	0,40	6	1,2	2	0,4	6	1,2	13	2,6	11
68	57	83.8%		29	15	0,5	67	2,3	82	2,8	13	0,45	69	2,4	39	1,3	48	1,7	64	2,2	54
36	19	52.8%		26	24	0,9	70	2,7	94	3,6	4	0,15	25	1,0	16	0,6	19	0,7	36	1,4	36
18	8	44.4%		22	8	0,4	45	2,0	53	2,4	1	0,05	86	3,9	40	1,8	33	1,5	30	1,4	33
58	52	89.7%		31	14	0,5	60	1,9	74	2,4	1	0,03	109	3,5	29	0,9	42	1,4	64	2,1	62
34	19	55.9%		21	10	0,5	50	2,4	60	2,9	2	0,10	62	3,0	27	1,3	31	1,5	40	1,9	33
34	24	70.6%		29	13	0,4	63	2,2	76	2,6	5	0,17	24	0,8	10	0,3	25	0,9	42	1,4	64
136	106	77.9%		44	88	2,0	210	4,8	298	6,8	11	0,25	67	1,5	80	1,8	67	1,5	140	3,2	140

70	1,9	0,98	600	16,22	16,22	512	13,84
144	3,1	1,27	392	8,52	8,52	368	8,00
134	2,6	1,02	760	14,62	14,62	670	12,88
104	2,0	1,00	501	9,82	9,82	436	8,55
145	3,3	1,09	504	11,45	11,45	502	11,41
132	2,8	0,76	406	8,46	8,46	330	6,88
8	0,4	1,00	29	1,45	1,45	22	1,10
58	1,2	0,90	342	7,28	7,28	308	6,55
87	1,6	1,00	136	2,57	2,57	211	3,98
45	1,4	1,11	44	1,33	1,33	50	1,52
56	1,5	1,13	63	1,66	1,66	117	3,08
30	1,0	0,74	20	0,69	0,69	54	1,86
52	2,9	1,06	278	15,44	15,44	254	14,11
88	2,1	1,20	244	5,95	5,95	208	5,07
148	3,4	0,92	779	17,70	17,70	723	16,43
129	2,9	0,89	549	12,48	12,48	502	11,41
74	1,9	0,85	498	13,11	13,11	415	10,92
71	1,6	1,09	374	8,31	8,31	327	7,27
132	3,1	0,82	444	10,33	10,33	527	12,26
109	2,6	1,02	238	5,67	5,67	328	7,81
109	2,5	0,60	138	3,21	3,21	184	4,28
14	0,8	0,00	-4	-0,24	-0,24	9	0,53
117	2,3	1,04	991	19,43	19,43	763	14,96
139	2,8	0,94	857	17,14	17,14	721	14,42
185	3,5	0,76	668	12,60	12,60	545	10,28
145	3,0	1,06	612	12,75	12,75	512	10,67
56	2,2	0,83	220	8,46	8,46	147	5,65
174	3,3	1,04	277	5,23	5,23	312	5,89
45	1,3	0,78	109	3,03	3,03	90	2,50
72	2,5	0,79	159	5,48	5,48	245	8,45
123	2,4	0,80	323	6,21	6,21	543	10,44
84	2,5	0,63	155	4,56	4,56	190	5,59
11	0,6	1,00	22	1,10	1,10	33	1,65
49	2,0	0,53	45	1,88	1,88	50	2,08
35	1,5	0,99	373	16,22	16,22	307	13,35
77	2,6	1,11	437	14,57	14,57	311	10,37
35	2,3	0,77	201	13,40	13,40	183	12,20
30	1,0	1,16	348	11,60	11,60	233	7,77
44	1,5	1,18	347	11,57	11,57	269	8,97
39	2,0	1,11	256	12,80	12,80	230	11,50
25	1,4	0,92	180	10,00	10,00	139	7,72
11	2,2	0,92	53	10,60	10,60	47	9,40
54	1,9	1,06	351	12,10	12,10	269	9,28
36	1,4	1,00	188	7,23	7,23	129	4,96
33	1,5	0,60	180	8,18	8,18	102	4,64
62	2,0	0,91	259	8,35	8,35	182	5,87
33	1,6	0,85	164	7,81	7,81	107	5,10
64	2,2	0,81	207	7,14	7,14	246	8,48
140	3,2	0,97	626	14,23	14,23	502	11,41

KOLIN	**Machač D.**	8797,4	1265,0	28,11		275	153	55.6%		94	36	38.3%
KOLIN	**Zuzák S.**	8797,4	907,4	21,60		188	95	50.5%		78	31	39.7%
KOLIN	**Horák L.**	8797,4	1057,3	23,50		319	149	46.7%		67	21	31.3%
KOLIN	**Lewis J.**	8797,4	912,8	21,23		152	62	40.8%		193	61	31.6%
KOLIN	**Ličartovský Š.**	8797,4	898,9	23,66		168	61	36.3%		157	64	40.8%
KOLIN	**Barnes C.**	8797,4	237,7	29,71		40	15	37.5%		45	16	35.6%
KOLIN	**Djukanovič D.**	8797,4	189,0	15,75		25	6	24.0%		10	2	20.0%
KOLIN	**Sýkora M.**	8797,4	813,9	18,50		75	32	42.7%		111	27	24.3%
KOLIN	**Harčár P.**	8797,4	159,2	10,61		10	3	30.0%		24	8	33.3%
KOLIN	**Holý P.**	8797,4	110,5	6,91		13	3	23.1%		9	4	44.4%
JINDRICHUV HRADEC	**Laroche H.**	8249,8	735,0	30,63		278	131	47.1%		50	15	30.0%
JINDRICHUV HRADEC	**Tracey B.**	8249,8	1201,2	33,37		371	175	47.2%		128	46	35.9%
JINDRICHUV HRADEC	**Ringgold M.**	8249,8	368,9	21,70		159	75	47.2%		0	0	0.0%
JINDRICHUV HRADEC	**Novák P.**	8249,8	899,0	22,48		244	114	46.7%		44	12	27.3%
JINDRICHUV HRADEC	**Hall F.**	8249,8	565,5	29,76		258	115	44.6%		8	0	0.0%
JINDRICHUV HRADEC	**Vošlajer T.**	8249,8	999,9	24,39		205	90	43.9%		96	28	29.2%
JINDRICHUV HRADEC	**Fröhde M.**	8249,8	370,4	17,64		50	22	44.0%		53	19	35.8%
JINDRICHUV HRADEC	**Aušprunk K.**	8249,8	275,0	19,64		43	14	32.6%		50	15	30.0%
JINDRICHUV HRADEC	**Rolls M.**	8249,8	889,0	28,68		150	61	40.7%		145	47	32.4%
JINDRICHUV HRADEC	**Pavlík J.**	8249,8	810,9	19,78		125	42	33.6%		157	53	33.8%
JINDRICHUV HRADEC	**Sahan F.**	8249,8	165,1	11,01		35	16	45.7%		1	0	0.0%
JINDRICHUV HRADEC	**Čech J.**	8249,8	111,7	10,15		10	2	20.0%		6	1	16.7%
JINDRICHUV HRADEC	**Melski A.**	8249,8	155,9	7,80		16	4	25.0%		31	10	32.3%
JINDRICHUV HRADEC	**Novák M.**	8249,8	335,3	9,31		64	21	32.8%		6	1	16.7%
JINDRICHUV HRADEC	**Kysela J.**	8249,8	187,4	9,86		23	7	30.4%		11	3	27.3%
JINDRICHUV HRADEC	**Vach R.**	8249,8	179,6	11,97		32	12	37.5%		22	2	9.1%
DECIN	**Bartoň L.**	9249,7	416,1	26,01		73	48	65.8%		73	21	28.8%
DECIN	**Houška J.**	9249,7	864,9	24,71		225	118	52.4%		57	25	43.9%
DECIN	**Soukup M.**	9249,7	635,9	14,79		129	76	58.9%		37	10	27.0%
DECIN	**Venta M.**	9249,7	1044,4	23,21		223	98	43.9%		109	40	36.7%
DECIN	**Stria L.**	9249,7	1518,5	33,01		302	135	44.7%		184	78	42.4%
DECIN	**Landa R.**	9249,7	1159,7	24,67		193	109	56.5%		71	24	33.8%
DECIN	**Vyoral T.**	9249,7	935,1	22,26		217	81	37.3%		80	34	42.5%
DECIN	**Jiřiček J.**	9249,7	682,8	16,26		203	101	49.8%		62	15	24.2%
DECIN	**Bosák P.**	9249,7	917,6	20,85		295	143	48.5%		78	29	37.2%
DECIN	**Bažant L.**	9249,7	648,9	13,81		136	59	43.4%		64	17	26.6%
DECIN	**Linhart L.**	9249,7	124,6	5,66		13	5	38.5%		18	6	33.3%
DECIN	**Kaša J.**	9249,7	301,2	11,58		49	25	51.0%		58	17	29.3%
BRNO	**McClain A.**	8194,2	662,7	27,61		203	125	61.6%		0	0	0.0%
BRNO	**Cvetinović N.**	8194,2	533,1	33,32		208	113	54.3%		15	1	6.7%
BRNO	**Geiger D.**	8194,2	903,2	33,45		236	111	47.0%		138	60	43.5%
BRNO	**Henderson E.**	8194,2	170	21,25		59	28	47.5%		16	2	12.5%
BRNO	**Dygrýn O.**	8194,2	405,8	23,87		83	36	43.4%		39	16	41.0%
BRNO	**Šmíd F.**	8194,2	724,2	26,82		160	70	43.8%		31	8	25.8%
BRNO	**Maric P.**	8194,2	1005,5	23,94		304	144	47.4%		30	7	23.3%
BRNO	**Zachrla R.**	8194,2	1188,8	29,00		238	107	45.0%		201	54	26.9%
BRNO	**Semerád M.**	8194,2	565,3	14,13		122	58	47.5%		30	7	23.3%
BRNO	**Šiška O.**	8194,2	617,7	15,07		115	53	46.1%		41	7	17.1%
BRNO	**Lenhart O.**	8194,2	140,9	8,81		25	14	56.0%		0	0	0.0%

113	92	81.4%		45	110	2,4	138	3,1	248	5,5	10	0,22	45	1,0	27	0,6	57	1,3	105	2,3	102
90	65	72.2%		42	50	1,2	132	3,1	182	4,3	10	0,24	30	0,7	27	0,6	37	0,9	90	2,1	100
119	81	68.1%		45	82	1,8	151	3,4	233	5,2	14	0,31	34	0,8	18	0,4	56	1,2	118	2,6	154
79	69	87.3%		43	23	0,5	95	2,2	118	2,7	3	0,07	102	2,4	44	1,0	84	2,0	85	2,0	78
90	68	75.6%		38	23	0,6	76	2,0	99	2,6	1	0,03	84	2,2	41	1,1	86	2,3	88	2,3	101
11	6	54.5%		8	11	1,4	30	3,8	41	5,1	0	0,00	23	2,9	2	0,3	15	1,9	13	1,6	24
20	10	50.0%		12	5	0,4	20	1,7	25	2,1	0	0,00	23	1,9	10	0,8	13	1,1	26	2,2	19
52	26	50.0%		44	38	0,9	111	2,5	149	3,4	4	0,09	24	0,5	24	0,5	25	0,6	58	1,3	71
3	1	33.3%		15	7	0,5	12	0,8	19	1,3	0	0,00	1	0,1	4	0,3	7	0,5	7	0,5	14
5	2	40.0%		16	1	0,1	10	0,6	11	0,7	0	0,00	4	0,3	6	0,4	10	0,6	3	0,2	19
108	71	65.7%		24	37	1,5	92	3,8	129	5,4	6	0,25	102	4,3	47	2,0	57	2,4	120	5,0	55
199	144	72.4%		36	81	2,3	209	5,8	290	8,1	15	0,42	56	1,6	53	1,5	85	2,4	171	4,8	119
97	38	39.2%		17	67	3,9	47	2,8	114	6,7	6	0,35	16	0,9	16	0,9	42	2,5	77	4,5	40
170	109	64.1%		40	100	2,5	110	2,8	210	5,3	6	0,15	37	0,9	47	1,2	50	1,3	142	3,6	158
58	40	69.0%		19	51	2,7	84	4,4	135	7,1	13	0,68	27	1,4	9	0,5	58	3,1	57	3,0	54
109	77	70.6%		41	84	2,0	163	4,0	247	6,0	23	0,56	51	1,2	28	0,7	57	1,4	118	2,9	148
26	16	61.5%		21	13	0,6	45	2,1	58	2,8	7	0,33	21	1,0	8	0,4	11	0,5	19	0,9	50
26	15	57.7%		14	15	1,1	41	2,9	56	4,0	11	0,79	9	0,6	6	0,4	17	1,2	29	2,1	36
52	39	75.0%		31	12	0,4	56	1,8	68	2,2	2	0,06	109	3,5	38	1,2	82	2,6	66	2,1	92
39	28	71.8%		41	6	0,1	64	1,6	70	1,7	1	0,02	42	1,0	25	0,6	29	0,7	46	1,1	66
14	8	57.1%		15	19	1,3	7	0,5	26	1,7	6	0,40	1	0,1	3	0,2	13	0,9	22	1,5	31
8	8	100.0%		11	10	0,9	7	0,6	17	1,5	0	0,00	7	0,6	3	0,3	9	0,8	10	0,9	18
6	5	83.3%		20	3	0,2	18	0,9	21	1,1	2	0,10	7	0,4	4	0,2	10	0,5	5	0,3	23
36	19	52.8%		36	26	0,7	31	0,9	57	1,6	6	0,17	9	0,3	10	0,3	31	0,9	31	0,9	67
6	4	66.7%		19	6	0,3	8	0,4	14	0,7	0	0,00	11	0,6	5	0,3	16	0,8	8	0,4	21
8	3	37.5%		15	5	0,3	12	0,8	17	1,1	4	0,27	10	0,7	4	0,3	11	0,7	8	0,5	23
49	38	77.6%		16	21	1,3	76	4,8	97	6,1	9	0,56	33	2,1	20	1,3	27	1,7	48	3,0	19
72	42	58.3%		35	90	2,6	140	4,0	230	6,6	32	0,91	35	1,0	42	1,2	54	1,5	86	2,5	105
117	71	60.7%		43	77	1,8	106	2,5	183	4,3	10	0,23	37	0,9	36	0,8	62	1,4	136	3,2	132
114	99	86.8%		45	24	0,5	95	2,1	119	2,6	0	0,00	177	3,9	56	1,2	104	2,3	145	3,2	112
148	107	72.3%		46	26	0,6	156	3,4	182	4,0	14	0,30	169	3,7	51	1,1	120	2,6	170	3,7	105
141	102	72.3%		47	111	2,4	147	3,1	258	5,5	25	0,53	37	0,8	44	0,9	70	1,5	138	2,9	134
105	87	82.9%		42	40	1,0	87	2,1	127	3,0	2	0,05	142	3,4	32	0,8	82	2,0	110	2,6	86
73	53	72.6%		42	55	1,3	104	2,5	159	3,8	15	0,36	40	1,0	26	0,6	54	1,3	62	1,5	89
105	81	77.1%		44	34	0,8	98	2,2	132	3,0	3	0,07	53	1,2	32	0,7	84	1,9	82	1,9	119
37	25	67.6%		47	35	0,7	63	1,3	98	2,1	7	0,15	31	0,7	28	0,6	41	0,9	47	1,0	38
4	2	50.0%		22	10	0,5	10	0,5	20	0,9	0	0,00	5	0,2	5	0,2	4	0,2	2	0,1	13
11	5	45.5%		26	20	0,8	17	0,7	37	1,4	3	0,12	6	0,2	6	0,2	17	0,7	15	0,6	46
121	77	63.6%		24	105	4,4	139	5,8	244	##	56	2,33	13	0,5	8	0,3	27	1,1	107	4,5	67
95	63	66.3%		16	44	2,8	93	5,8	137	8,6	5	0,31	26	1,6	15	0,9	45	2,8	87	5,4	46
127	110	86.6%		27	16	0,6	95	3,5	111	4,1	0	0,00	103	3,8	32	1,2	79	2,9	135	5,0	44
27	22	81.5%		8	5	0,6	35	4,4	40	5,0	3	0,38	5	0,6	8	1,0	21	2,6	26	3,3	19
36	28	77.8%		17	26	1,5	60	3,5	86	5,1	2	0,12	37	2,2	21	1,2	35	2,1	46	2,7	52
99	59	59.6%		27	39	1,4	110	4,1	149	5,5	5	0,19	44	1,6	21	0,8	57	2,1	100	3,7	80
82	67	81.7%		42	54	1,3	116	2,8	170	4,0	25	0,60	41	1,0	14	0,3	74	1,8	82	2,0	128
93	70	75.3%		41	40	1,0	161	3,9	201	4,9	17	0,41	76	1,9	22	0,5	100	2,4	99	2,4	117
64	36	56.3%		40	19	0,5	59	1,5	78	2,0	5	0,13	43	1,1	14	0,4	60	1,5	70	1,8	61
60	41	68.3%		41	24	0,6	56	1,4	80	2,0	4	0,10	60	1,5	19	0,5	67	1,6	71	1,7	79
9	05.l	55.6%		16	10	0,6	13	0,8	23	1,4	3	0,19	3	0,2	3	0,2	11	0,7	11	0,7	24

102	2,3	1,08	581	12,91	12,91	506	11,24
100	2,4	1,00	385	9,17	9,17	348	8,29
154	3,4	1,01	395	8,78	8,78	442	9,82
78	1,8	0,93	334	7,77	7,77	376	8,74
101	2,7	1,02	286	7,53	7,53	382	10,05
24	3,0	0,85	65	8,13	8,13	84	10,50
19	1,6	0,77	43	3,58	3,58	28	2,33
71	1,6	0,90	181	4,11	4,11	171	3,89
14	0,9	0,43	16	1,07	1,07	31	2,07
19	1,2	1,67	-3	-0,19	-0,19	20	1,25
55	2,3	0,90	451	18,79	18,79	378	15,75
119	3,3	1,16	680	18,89	18,89	632	17,56
40	2,4	1,26	192	11,29	11,29	188	11,06
158	4,0	1,20	384	9,60	9,60	373	9,33
54	2,8	1,02	230	12,11	12,11	270	14,21
148	3,6	0,92	388	9,46	9,46	341	8,32
50	2,4	1,37	97	4,62	4,62	117	5,57
36	2,6	0,90	71	5,07	5,07	88	6,29
92	3,0	0,79	211	6,81	6,81	302	9,74
66	1,6	0,85	162	3,95	3,95	271	6,61
31	2,1	0,64	28	1,87	1,87	40	2,67
18	1,6	0,80	12	1,09	1,09	15	1,36
23	1,2	1,20	15	0,75	0,75	43	2,15
67	1,9	1,16	14	0,39	0,39	64	1,78
21	1,1	0,75	2	0,11	0,11	27	1,42
23	1,5	1,00	-3	-0,20	-0,20	33	2,20
19	1,2	1,02	270	16,88	16,88	197	12,31
105	3,0	0,84	450	12,86	12,86	353	10,09
132	3,1	0,86	335	7,79	7,79	253	5,88
112	2,5	0,79	487	10,82	10,82	415	9,22
105	2,3	0,87	658	14,30	14,30	611	13,28
134	2,9	1,02	520	11,06	11,06	392	8,34
86	2,0	0,95	396	9,43	9,43	351	8,36
89	2,1	1,18	290	6,90	6,90	300	7,14
119	2,7	1,28	328	7,45	7,45	454	10,32
38	0,8	0,79	190	4,04	4,04	194	4,13
13	0,6	2,00	23	1,05	1,05	30	1,36
46	1,8	0,73	39	1,50	1,50	106	4,08
67	2,8	1,13	539	22,46	22,46	327	13,63
46	2,9	1,09	330	20,63	20,63	292	18,25
44	1,6	0,94	550	20,37	20,37	512	18,96
19	2,4	1,04	76	9,50	9,50	84	10,50
52	3,1	0,78	175	10,29	10,29	148	8,71
80	3,0	0,99	252	9,33	9,33	223	8,26
128	3,0	1,00	308	7,33	7,33	376	8,95
117	2,9	0,94	343	8,37	8,37	446	10,88
61	1,5	0,91	147	3,68	3,68	173	4,33
79	1,9	0,85	141	3,44	3,44	168	4,10
24	1,5	0,82	26	1,63	1,63	33	2,06

ANNEX B: ADVANCED STATS

	FTS%	TS%	AST/TO	TO/100	AST/100	2b/100	3b/100	F+/100	POS/t	TO/100-střelba
Mitchell K.	40,94%	**45,46%**	2,06	8,32%	17,2%	32,19%	22,54%	19,79%	0,90	0,18
Lewis Jr. V.	29,76%	**37,48%**	0,87	12,82%	11,1%	49,87%	7,38%	18,78%	0,58	0,30
Šteffel D.	40,90%	**43,43%**	0,84	8,69%	7,3%	67,31%	0,41%	16,28%	0,53	0,27
Steffeck M.	42,68%	**46,02%**	0,82	12,34%	10,1%	29,11%	36,87%	11,55%	0,56	0,36
Krakovič J.	19,43%	**25,74%**	0,56	12,63%	7,0%	56,51%	1,40%	22,44%	0,52	0,30
Bowden S.	41,95%	**44,12%**	0,91	13,11%	12,0%	30,71%	33,33%	10,86%	0,60	0,36
Žampach A.	30,36%	**34,67%**	1,12	11,81%	13,2%	37,85%	18,06%	19,10%	0,38	0,27
Emerson A.	35,81%	**42,20%**	0,89	16,97%	15,2%	25,45%	31,52%	10,91%	0,49	0,39
Bejček J.	23,97%	**31,64%**	1,71	11,29%	19,4%	27,42%	25,81%	16,13%	0,38	0,24
Hejl V.	24,44%	**33,70%**	0,43	15,56%	6,7%	40,00%	15,56%	22,22%	0,36	0,35
Slunečko M.	18,74%	**26,72%**	1,30	16,55%	21,6%	23,74%	16,55%	21,58%	0,36	0,28
Chán A.	33,46%	**41,97%**	0,61	14,31%	8,7%	53,92%	1,81%	21,23%	0,68	0,32
Slavík J.	44,01%	**44,67%**	0,73	9,92%	7,3%	42,91%	16,19%	23,68%	0,56	0,24
Votroubek S.	42,40%	**48,06%**	1,55	8,32%	12,9%	31,00%	37,81%	10,02%	0,43	0,27
Feštr L.	41,94%	**49,08%**	1,54	14,85%	22,9%	33,48%	10,76%	18,03%	0,67	0,27
Šotnar M.	36,98%	**43,67%**	3,64	9,04%	32,9%	26,58%	15,07%	16,44%	0,61	0,15
Mareš M.	41,01%	**47,72%**	0,76	12,11%	9,2%	33,53%	24,82%	20,38%	0,64	0,29
Grunt P.	38,75%	**41,82%**	0,54	11,61%	6,3%	57,14%	3,57%	21,43%	0,43	0,30
Křivánek J.	26,45%	**30,75%**	1,14	10,77%	12,3%	43,69%	17,54%	15,69%	0,47	0,28
Štěrba J.	34,51%	**37,09%**	0,29	17,07%	4,9%	21,95%	41,46%	14,63%	0,38	0,47
Vocetka M.	30,82%	**37,95%**	0,71	11,14%	7,9%	26,90%	37,23%	16,85%	0,48	0,31
Fait D.	36,84%	**37,84%**	0,50	13,64%	6,8%	43,18%	27,27%	9,09%	0,42	0,46
Šafarčík P.	31,21%	**34,90%**	0,83	12,90%	10,8%	37,63%	25,81%	12,90%	0,57	0,35
Kornowski K.	30,98%	**38,20%**	0,77	6,75%	5,2%	63,64%	2,34%	22,08%	0,66	0,20
Kyles D.	39,37%	**44,37%**	0,76	12,86%	9,8%	40,54%	14,29%	22,50%	0,77	0,28
Špaček J.	42,71%	**48,42%**	1,00	10,00%	10,0%	26,00%	34,00%	20,00%	0,61	0,25
Davis J.	30,00%	**34,31%**	0,55	11,70%	6,4%	42,55%	4,26%	35,11%	0,69	0,22
Jelínek J.	36,05%	**42,28%**	0,63	11,98%	7,5%	45,56%	20,41%	14,50%	0,56	0,35
Macela T.	36,19%	**41,11%**	1,31	12,52%	16,4%	29,38%	20,87%	20,87%	0,63	0,25
Sedlák J.	34,26%	**40,14%**	0,47	10,38%	4,8%	53,29%	10,38%	21,11%	0,51	0,29
Teplý T.	38,90%	**43,98%**	1,11	8,82%	9,8%	14,63%	43,53%	23,26%	0,54	0,21
Peterka O.	33,00%	**39,67%**	1,45	9,87%	14,3%	35,06%	30,13%	10,65%	0,43	0,28
Moravec L.	36,70%	**43,00%**	1,21	17,89%	21,7%	28,73%	17,62%	14,09%	0,54	0,33
Šindelář L.	46,11%	**47,87%**	0,76	19,73%	15,0%	34,69%	9,52%	21,09%	0,30	0,35
Sehnal M.	44,84%	**48,48%**	0,30	18,18%	5,5%	34,55%	27,27%	14,55%	0,36	0,48
Andres P.	28,18%	**33,21%**	0,95	19,81%	18,9%	22,64%	20,75%	17,92%	0,59	0,35
Slezák P.	42,99%	**49,83%**	1,47	8,72%	12,8%	28,54%	26,50%	23,44%	0,67	0,19
Kohout O.	38,93%	**44,68%**	0,60	13,42%	8,0%	51,28%	6,39%	20,93%	0,65	0,32
Nečas R.	19,93%	**26,85%**	1,31	15,91%	20,9%	43,65%	0,88%	18,69%	0,56	0,29
Pandula D.	40,61%	**45,13%**	0,87	13,59%	11,9%	34,41%	19,63%	20,50%	0,69	0,30
Bohačík J.	41,13%	**47,65%**	1,17	11,50%	13,5%	30,16%	22,42%	22,42%	0,60	0,24
Švrdlík K.	33,09%	**36,74%**	0,76	10,93%	8,4%	61,44%	0,64%	18,64%	0,59	0,29
Marko R.	39,61%	**45,42%**	1,41	13,18%	18,6%	25,48%	29,28%	13,47%	0,56	0,29
Kratochvíl J.	33,54%	**41,84%**	0,82	14,81%	12,1%	48,48%	10,77%	13,80%	0,49	0,36
Bratčenkov V.	38,64%	**43,74%**	0,58	14,52%	8,4%	23,87%	40,00%	13,23%	0,45	0,40
Prášil J.	34,77%	**45,64%**	1,14	8,92%	10,2%	26,11%	42,04%	12,74%	0,42	0,28
Polášek R.	29,21%	**29,21%**	1,00	11,11%	11,1%	22,22%	52,78%	2,78%	0,48	0,44
Nelson T.	57,48%	65,54%	0,44	11,93%	5,2%	61,80%	0,00%	21,05%	0,70	0,31

Muirhead C.	30,27%	**37,45%**	0,76	11,66%	8,9%	48,23%	9,17%	22,02%	0,73	0,27
Pospíšil Z.	22,72%	**31,90%**	0,71	10,29%	7,4%	61,27%	0,25%	20,83%	0,55	0,27
Sanders L.	38,75%	**47,07%**	1,62	12,73%	20,7%	38,10%	12,55%	15,96%	0,66	0,26
Peterka M.	45,63%	**49,78%**	0,64	11,91%	7,6%	51,37%	13,87%	15,23%	0,50	0,34
Bohačík P.	40,25%	**43,60%**	0,39	14,13%	5,5%	43,80%	14,44%	22,14%	0,59	0,34
Kotas L.	41,02%	**44,81%**	1,66	13,76%	22,8%	20,81%	25,00%	17,62%	0,47	0,25
Šoukal T.	36,67%	**43,06%**	0,50	24,39%	12,2%	29,27%	14,63%	19,51%	0,50	0,43
Čarnecký M.	36,31%	**41,69%**	1,95	12,78%	24,9%	19,79%	28,90%	13,66%	0,51	0,25
Příhonský J.	34,12%	**40,14%**	0,79	16,07%	12,7%	33,80%	24,38%	13,02%	0,47	0,38
Půlpán V.	28,87%	**31,56%**	1,50	16,67%	25,0%	29,17%	14,17%	15,00%	0,48	0,29
Faifr S.	35,21%	**41,07%**	0,32	13,10%	4,2%	26,19%	42,26%	14,29%	0,45	0,42
Šoula J.	21,09%	**30,67%**	0,26	20,72%	5,4%	47,75%	9,01%	17,12%	0,58	0,48
Folker A.	53,27%	**51,07%**	0,35	11,08%	3,9%	59,58%	0,00%	25,45%	0,70	0,27
Pelikán R.	21,28%	**29,97%**	0,52	10,08%	5,2%	56,85%	1,21%	26,61%	0,69	0,24
Willman J.	36,67%	**43,96%**	1,28	7,16%	9,2%	55,93%	11,52%	16,22%	0,60	0,22
Ruach T.	39,35%	**45,88%**	1,57	11,97%	18,8%	27,68%	22,57%	18,95%	0,69	0,24
Číž A.	37,25%	**42,24%**	1,99	10,66%	21,2%	25,27%	23,36%	19,54%	0,67	0,21
Jurečka L.	51,55%	**54,66%**	1,69	8,13%	13,8%	16,56%	48,13%	13,44%	0,31	0,23
Alič A.	43,56%	**47,55%**	0,96	13,99%	13,4%	32,51%	26,61%	13,44%	0,56	0,34
Zbránek F.	37,48%	**45,96%**	0,70	13,19%	9,2%	29,45%	29,67%	18,46%	0,54	0,32
Stehlík J.	36,10%	**41,99%**	0,87	14,20%	12,3%	24,61%	30,60%	18,30%	0,49	0,32
Medvecký M.	25,33%	**25,33%**	0,40	22,73%	9,1%	40,91%	22,73%	4,55%	0,27	0,63
Blažek J.	46,93%	**53,04%**	0,96	8,83%	8,5%	37,40%	16,61%	28,69%	0,57	0,19
Širina J.	45,15%	**49,75%**	1,57	14,30%	22,4%	26,65%	19,06%	17,56%	0,71	0,26
Gniadek M.	45,00%	**49,01%**	0,96	10,77%	10,3%	40,12%	19,91%	18,88%	0,50	0,27
Sokolovský L.	36,83%	**44,69%**	1,82	9,44%	17,2%	27,26%	27,65%	18,48%	0,56	0,21
Cvek V.	37,78%	**43,99%**	1,04	12,39%	12,8%	36,24%	16,51%	22,02%	0,42	0,26
Kramný R.	39,83%	**45,69%**	0,33	18,20%	6,0%	39,40%	17,74%	18,66%	0,56	0,42
Vlček K.	29,06%	**35,05%**	0,89	20,75%	18,4%	32,08%	4,72%	24,06%	0,64	0,33
Dukanovič M.	39,91%	**44,52%**	0,69	12,93%	9,0%	17,41%	35,88%	24,80%	0,71	0,28
Dokoupil P.	42,79%	**46,98%**	1,17	8,16%	9,6%	24,80%	47,10%	10,36%	0,49	0,29
Klečka R.	36,45%	**41,99%**	1,03	17,85%	18,4%	39,63%	10,50%	13,65%	0,56	0,36
Palát M.	32,76%	**40,26%**	0,60	23,81%	14,3%	26,98%	20,63%	14,29%	0,45	0,45
Tóth L.	26,74%	**26,45%**	0,92	19,70%	18,2%	32,58%	18,18%	11,36%	0,40	0,40
Simmons T.	48,62%	**55,30%**	1,72	8,86%	15,2%	28,81%	27,15%	19,94%	0,78	0,20
Mahalbašič R.	67,91%	**67,09%**	1,04	15,05%	15,6%	48,92%	0,81%	19,62%	0,72	0,30
Rančík R.	51,80%	**55,36%**	1,17	8,37%	9,8%	37,21%	20,00%	24,65%	0,77	0,20
Pomikálek T.	48,85%	**52,41%**	1,22	10,47%	12,8%	41,09%	16,67%	18,99%	0,48	0,25
Houška P.	50,62%	**56,29%**	0,97	12,20%	11,9%	53,90%	7,12%	14,92%	0,53	0,31
Page D.	49,68%	**55,15%**	1,07	11,28%	12,1%	34,24%	28,40%	14,01%	0,60	0,30
Benda P.	24,52%	**33,06%**	0,92	13,64%	12,5%	52,84%	0,57%	20,45%	0,59	0,29
Rančík M.	30,17%	**39,03%**	1,00	9,52%	9,5%	47,62%	12,70%	20,63%	0,82	0,24
Hruban V.	51,68%	**57,04%**	1,44	13,79%	19,8%	33,91%	14,08%	18,39%	0,55	0,27
Kříž M.	42,46%	**44,18%**	1,32	10,86%	14,3%	37,14%	17,14%	20,57%	0,50	0,24
Ilievski V.	39,59%	**40,40%**	2,61	13,52%	35,2%	19,67%	19,26%	12,30%	0,60	0,22
Massamba T.	35,06%	**44,16%**	2,60	11,60%	30,1%	24,86%	15,75%	17,68%	0,55	0,20
Welsch J.	35,16%	**38,62%**	2,00	13,42%	26,8%	39,39%	3,03%	17,32%	0,57	0,23
Palyza L.	47,43%	**51,29%**	0,96	9,06%	8,7%	27,54%	39,49%	15,22%	0,51	0,27
Field R.	36,94%	**43,77%**	1,00	9,71%	9,7%	43,04%	17,25%	20,29%	0,55	0,24

Machač D.	45,23%	**51,26%**	0,79	9,90%	7,8%	47,74%	16,32%	18,23%	0,46	0,28
Zuzák S.	44,06%	**48,75%**	0,81	8,75%	7,1%	44,44%	18,44%	21,28%	0,47	0,24
Horák L.	37,49%	**42,59%**	0,61	9,43%	5,7%	53,70%	11,28%	19,87%	0,56	0,27
Lewis J.	35,28%	**43,96%**	1,21	13,64%	16,6%	24,68%	31,33%	13,80%	0,67	0,31
Ličartovský Š.	38,98%	**45,08%**	0,98	14,75%	14,4%	28,82%	26,93%	15,09%	0,65	0,33
Barnes C.	36,33%	**39,37%**	1,53	11,03%	16,9%	29,41%	33,09%	9,56%	0,57	0,29
Djukanovič D.	21,60%	**26,33%**	1,77	13,40%	23,7%	25,77%	10,31%	26,80%	0,51	0,21
Sýkora M.	31,66%	**34,72%**	0,96	8,53%	8,2%	25,60%	37,88%	19,80%	0,36	0,23
Harčár P.	32,00%	**32,22%**	0,14	14,29%	2,0%	20,41%	48,98%	14,29%	0,31	0,47
Holý P.	35,90%	**36,58%**	0,40	25,64%	10,3%	33,33%	23,08%	7,69%	0,35	0,59
Laroche H.	36,85%	**41,66%**	1,79	9,39%	16,8%	45,80%	8,24%	19,77%	0,83	0,20
Tracey B.	40,43%	**45,75%**	0,66	10,48%	6,9%	45,75%	15,78%	21,09%	0,68	0,27
Ringgold M.	47,17%	**44,50%**	0,38	14,29%	5,4%	54,08%	0,00%	26,19%	0,80	0,31
Novák P.	35,05%	**39,90%**	0,74	9,67%	7,2%	47,20%	8,51%	27,47%	0,58	0,22
Hall F.	17,83%	**26,35%**	0,47	14,22%	6,6%	63,24%	1,96%	13,97%	0,72	0,41
Vošlajer T.	35,06%	**40,99%**	0,89	10,82%	9,7%	38,90%	18,22%	22,39%	0,53	0,25
Fröhde M.	39,11%	**42,85%**	1,91	7,14%	13,6%	32,47%	34,42%	12,34%	0,42	0,22
Aušprunk K.	31,02%	**35,47%**	0,53	11,49%	6,1%	29,05%	33,78%	19,59%	0,54	0,31
Rolls M.	35,71%	**42,26%**	1,33	14,86%	19,7%	27,17%	26,27%	11,96%	0,62	0,32
Pavlík J.	33,69%	**40,04%**	1,45	7,27%	10,5%	31,33%	39,35%	11,53%	0,49	0,25
Sahan F.	18,29%	**24,76%**	0,08	18,06%	1,4%	48,61%	1,39%	30,56%	0,44	0,36
Čech J.	18,00%	**31,67%**	0,78	21,43%	16,7%	23,81%	14,29%	23,81%	0,38	0,35
Melski A.	29,35%	**38,35%**	0,70	14,49%	10,1%	23,19%	44,93%	7,25%	0,44	0,45
Novák M.	23,13%	**28,07%**	0,29	21,99%	6,4%	45,39%	4,26%	21,99%	0,42	0,44
Kysela J.	28,54%	**34,89%**	0,69	23,19%	15,9%	33,33%	15,94%	11,59%	0,37	0,46
Vach R.	20,45%	**23,30%**	0,91	13,25%	12,0%	38,55%	26,51%	9,64%	0,46	0,38
Bartoň L.	43,56%	**49,23%**	1,22	10,63%	13,0%	28,74%	28,74%	18,90%	0,61	0,25
Houška J.	47,29%	**49,13%**	0,65	11,82%	7,7%	49,23%	12,47%	18,82%	0,53	0,31
Soukup M.	39,78%	**43,27%**	0,60	15,46%	9,2%	32,17%	9,23%	33,92%	0,63	0,26
Venta M.	39,60%	**47,47%**	1,70	13,72%	23,4%	29,42%	14,38%	19,13%	0,73	0,24
Stria L.	43,32%	**48,15%**	1,41	12,70%	17,9%	31,96%	19,47%	17,99%	0,62	0,26
Landa R.	42,87%	**47,78%**	0,53	13,75%	7,3%	37,92%	13,95%	27,11%	0,44	0,29
Vyoral T.	40,43%	**47,50%**	1,73	13,00%	22,5%	34,39%	12,68%	17,43%	0,67	0,25
Jiřiček J.	34,42%	**40,78%**	0,74	12,83%	9,5%	48,22%	14,73%	14,73%	0,62	0,35
Bosák P.	41,70%	**47,61%**	0,63	14,19%	9,0%	49,83%	13,18%	13,85%	0,65	0,38
Bažant L.	33,29%	**39,00%**	0,76	12,85%	9,7%	42,63%	20,06%	14,73%	0,49	0,34
Linhart L.	35,38%	**37,82%**	1,25	9,52%	11,9%	30,95%	42,86%	4,76%	0,34	0,36
Kaša J.	37,99%	**39,24%**	0,35	11,72%	4,1%	33,79%	40,00%	10,34%	0,48	0,45
McClain A.	61,58%	**62,26%**	0,48	7,71%	3,7%	58,00%	0,00%	30,57%	0,53	0,18
Cvetinović N.	25,73%	**32,49%**	0,58	11,81%	6,8%	54,59%	3,94%	22,83%	0,71	0,28
Geiger D.	44,90%	**51,85%**	1,30	11,43%	14,9%	34,15%	19,97%	19,54%	0,77	0,25
Henderson E.	26,48%	**35,65%**	0,24	16,54%	3,9%	46,46%	12,60%	20,47%	0,75	0,40
Dygrýn O.	41,96%	**47,93%**	1,06	14,58%	15,4%	34,58%	16,25%	19,17%	0,59	0,30
Šmíd F.	32,98%	**37,42%**	0,77	14,54%	11,2%	40,82%	7,91%	25,51%	0,54	0,28
Maric P.	32,95%	**41,07%**	0,55	13,94%	7,7%	57,25%	5,65%	15,44%	0,53	0,38
Zachrla R.	34,10%	**40,96%**	0,76	14,01%	10,6%	33,33%	28,15%	13,87%	0,60	0,36
Semerád M.	33,02%	**36,89%**	0,72	18,46%	13,2%	37,54%	9,23%	21,54%	0,57	0,35
Šiška O.	28,68%	**35,29%**	0,90	18,93%	16,9%	32,49%	11,58%	20,06%	0,57	0,34
Lenhart O.	56,00%	**55,85%**	0,27	22,00%	6,0%	50,00%	0,00%	22,00%	0,35	0,44

ANNEX C: NORMALIZED STATS

PER 30min	DU	DO	DC	Bl	As
Mitchell K.	0,84	3,27	4,11	0,15	4,65
Lewis Jr. V.	2,79	6,61	9,39	0,43	1,93
Šteffel D.	2,27	4,43	6,70	0,68	1,17
Steffeck M.	1,47	3,81	5,28	1,28	1,71
Krakovič J.	2,27	3,67	5,94	0,44	1,09
Bowden S.	0,61	2,30	2,91	0,07	2,17
Žampach A.	1,92	2,72	4,65	0,32	1,52
Emerson A.	0,40	3,35	3,76		2,24
Bejček J.	1,11	1,66	2,77		2,22
Hejl V.	1,20	1,93	3,13		0,72
Slunečko M.	0,79	2,44	3,22	0,16	2,36
Chán A.	2,40	4,58	6,97	0,95	1,78
Slavík J.	2,19	4,72	6,91	0,57	1,21
Votroubek S.	0,54	6,58	7,12	0,69	1,67
Feštr L.	0,55	2,69	3,24		4,61
Šotnar M.	0,51	2,83	3,33		6,06
Mareš M.	0,82	2,18	3,00	0,03	1,75
Grunt P.	2,42	2,76	5,18	0,69	0,81
Křivánek J.	2,08	2,99	5,06	0,09	1,73
Štěrba J.	0,56	4,17	4,73	0,56	0,56
Vocetka M.	0,36	2,53	2,89	0,08	1,15
Fait D.	1,42	2,27	3,69	0,28	0,85
Šafarčík P.	0,55	2,55	3,09	0,18	1,82
Kornowski K.	2,43	4,78	7,21	0,41	1,02
Kyles D.	0,70	4,41	5,11	0,49	2,27
Špaček J.	1,83	3,66	5,49		1,83
Davis J.	2,63	5,91	8,54	0,44	1,31
Jelínek J.	1,90	5,08	6,98	0,85	1,28
Macela T.	0,34	2,92	3,26	0,03	3,07
Sedlák J.	1,92	3,03	4,95	0,53	0,75
Teplý T.	0,79	1,90	2,69	0,06	1,57
Peterka O.	1,23	3,72	4,95	0,10	1,83
Moravec L.	0,52	1,78	2,31	0,17	3,48
Šindelář L.	1,48	2,84	4,33	0,19	1,36
Sehnal M.	1,59	1,59	3,17		0,59
Andres P.	0,33	2,32	2,65	0,17	3,32
Slezák P.	0,93	2,68	3,61	0,05	2,57
Kohout O.	3,18	4,27	7,44	1,03	1,56
Nečas R.	2,75	6,11	8,85	0,71	3,51
Pandula D.	1,59	3,89	5,47	0,25	2,46
Bohačík J.	1,15	3,40	4,55	0,15	2,44
Švrdlík K.	2,14	4,24	6,39	0,90	1,47
Marko R.	0,79	3,07	3,86	0,10	3,12
Kratochvíl J.	1,60	4,75	6,35	0,40	1,80
Bratčenkov V.	0,83	2,92	3,75	0,61	1,13
Prášil J.	0,73	2,58	3,30	0,24	1,29
Polášek R.	0,81	2,02	2,83		1,62
Nelson T.	2,03	5,39	7,42	0,79	1,10

M+	M-	F+	F-	Val		
2,29	2,25	5,36	2,29	20,69	0,96	1,70
1,64	2,22	3,26	3,03	16,15	0,82	0,91
0,82	1,39	2,60	3,08	13,90	0,70	0,52
1,01	2,08	1,95	3,71	11,41	0,53	0,08
1,15	1,96	3,49	4,23	10,24	0,45	-0,12
0,61	2,37	1,96	2,44	8,60	0,34	-0,41
0,76	1,36	2,20	2,20	7,01	0,25	-0,69
0,94	2,50	1,61	2,77	6,17	0,20	-0,83
0,55	1,29	1,85	3,14	3,69	0,10	-1,26
1,20	1,69	2,41	5,30	3,13	0,09	-1,36
1,42	1,81	2,36	4,17	2,67	0,07	-1,44
0,28	2,92	4,33	2,49	19,59	0,93	1,51
0,67	1,65	3,95	3,95	13,56	0,68	0,46
0,86	1,08	1,30	2,70	12,84	0,63	0,33
0,82	2,99	3,63	2,90	13,03	0,64	0,36
0,66	1,67	3,03	3,43	12,22	0,59	0,22
0,71	2,32	3,90	3,51	10,27	0,45	-0,12
0,58	1,50	2,76	5,18	9,44	0,40	-0,26
0,74	1,52	2,21	1,69	7,79	0,29	-0,55
1,11	1,95	1,67	3,34	5,29	0,16	-0,99
1,34	1,62	2,45	3,24	4,90	0,15	-1,05
0,57	1,70	1,14	3,13	3,98	0,11	-1,21
	2,18	2,18	4,19	2,00	0,06	-1,56
0,69	1,33	4,35	2,40	19,20	0,93	1,44
1,48	2,97	5,20	2,19	17,48	0,87	1,14
2,20	1,83	3,66	4,76	14,63	0,74	0,64
1,53	2,41	7,23	5,04	13,58	0,68	0,46
1,05	2,03	2,45	4,03	11,48	0,54	0,09
1,44	2,35	3,92	3,54	9,59	0,41	-0,24
0,37	1,60	3,25	4,15	9,69	0,41	-0,22
0,70	1,42	3,75	3,17	8,92	0,36	-0,35
1,20	1,26	1,36	2,36	8,07	0,31	-0,50
1,22	2,87	2,26	3,22	6,27	0,21	-0,82
0,93	1,79	1,92	4,39	5,07	0,15	-1,02

0,20		1,98		1,59		4,16		3,37	0,09	-1,32
1,16		3,48		3,15		4,48		3,15	0,09	-1,36
1,50		1,75		4,70		2,18		17,39	0,87	1,12
1,00		2,62		4,08		3,89		17,19	0,86	1,09
1,47		2,67		3,14		3,29		15,92	0,81	0,87
1,81		2,81		4,24		3,04		15,39	0,78	0,78
1,51		2,08		4,06		2,80		14,36	0,72	0,60
0,79		1,92		3,27		3,34		14,20	0,71	0,57
1,62		2,21		2,26		2,04		11,49	0,54	0,10
1,10		2,20		2,05		4,90		7,80	0,29	-0,55
1,75		1,96		1,79		3,54		7,38	0,27	-0,62
0,97		1,13		1,61		4,03		5,64	0,18	-0,92
0,81		1,62		0,40		6,26		-2,22	0,01	-2,30
0,71		2,51		4,43		3,78		20,41	0,95	1,65

1,81		2,56		4,83		2,01		17,23	0,86	1,10
1,10		1,70		3,45		5,84		15,90	0,81	0,86
1,63		2,51		3,14		2,43		13,80	0,69	0,50
1,18		1,79		2,29		3,06		14,72	0,74	0,66
0,86		2,49		3,91		4,02		13,97	0,70	0,53
1,74		1,96		2,51		3,15		9,70	0,41	-0,22
1,09		3,65		2,92		2,92		10,58	0,48	-0,06
1,36		1,94		2,08		1,55		9,11	0,37	-0,32
1,02		2,29		1,85		3,43		5,36	0,17	-0,97
2,78		2,42		2,17		5,43		5,31	0,16	-0,98
1,19		1,75		1,91		4,46		5,01	0,15	-1,03
0,94		3,59		2,97		4,69		3,13	0,09	-1,36
0,82		2,34		5,37		3,29		17,57	0,88	1,16
1,17		2,09		5,51		7,35		20,37	0,95	1,64
1,06		1,28		2,90		2,96		15,58	0,79	0,81
1,60		2,48		3,92		3,33		14,17	0,71	0,56
1,23		2,13		3,90		2,02		13,59	0,68	0,46
1,48		0,76		1,25		2,06		10,88	0,50	-0,01
0,97		2,35		2,25		3,04		10,21	0,45	-0,13
1,27		2,12		2,97		3,86		8,42	0,33	-0,44
1,35		2,10		2,70		5,08		6,43	0,22	-0,79
0,75		1,87		0,37		5,23		-1,49	0,02	-2,17

0,71		1,50		4,87		2,31		19,55	0,93	1,50
2,11		3,05		3,75		2,62		16,14	0,82	0,91
1,51		1,62		2,83		4,10		14,79	0,75	0,67
1,88		1,57		3,08		3,17		13,36	0,66	0,42
1,50		1,55		2,76		3,22		12,66	0,62	0,30
0,42		3,04		3,11		6,69		10,65	0,48	-0,05
1,81		3,98		4,62		4,07		9,87	0,43	-0,19
0,79		2,77		5,32		4,07		8,99	0,37	-0,34
0,81		1,20		1,53		2,85		7,47	0,27	-0,60
2,40		3,02		2,31		3,73		6,88	0,24	-0,71
0,43		3,21		1,92		2,35		4,70	0,14	-1,09
1,37		2,37		1,37		4,47		4,11	0,12	-1,19
1,83		2,09		4,70		2,28		24,33	0,99	2,33
0,81		3,24		4,22		4,45		25,26	0,99	2,50
1,41		1,95		5,73		3,78		21,73	0,97	1,88
0,84		1,51		2,74		1,68		19,44	0,93	1,48
0,86		1,95		2,38		2,38		18,76	0,91	1,36
0,99		2,04		2,54		2,75		18,03	0,89	1,24
0,93		2,48		3,73		2,59		18,63	0,91	1,34
0,78		2,34		5,06		4,29		20,65	0,95	1,69
1,84		2,27		3,02		2,55		16,58	0,84	0,98
1,38		1,64		3,10		3,10		16,19	0,82	0,91
2,93		2,42		2,20		2,42		13,20	0,65	0,39
1,33		1,93		2,94		2,84		11,88	0,56	0,16
1,99		2,28		2,95		2,43		12,08	0,58	0,20
0,56		1,39		2,34		3,56		11,51	0,54	0,10
1,91		1,60		3,34		3,34		14,94	0,76	0,70

0,64		1,35		2,49		2,42		13,78	0,69	0,49
0,89		1,22		2,98		3,31		12,73	0,62	0,31
0,51		1,59		3,35		4,37		11,21	0,52	0,05
1,45		2,76		2,79		2,56		10,98	0,50	0,01
1,37		2,87		2,94		3,37		9,54	0,40	-0,24
0,25		1,89		1,64		3,03		8,20	0,32	-0,48
1,59		2,06		4,13		3,02		6,83	0,24	-0,72
0,88		0,92		2,14		2,62		6,67	0,23	-0,74
0,75		1,32		1,32		2,64		3,02	0,08	-1,38
1,63		2,71		0,81		5,16		-0,81	0,02	-2,05
1,92		2,33		4,90		2,24		18,41	0,90	1,30
1,32		2,12		4,27		2,97		16,98	0,85	1,05
1,30		3,42		6,26		3,25		15,61	0,79	0,81

1,57		1,67		4,74		5,27		12,81	0,63	0,33
0,48		3,08		3,02		2,86		12,20	0,59	0,22
0,84		1,71		3,54		4,44		11,64	0,55	0,12
0,65		0,89		1,54		4,05		7,86	0,30	-0,54
0,65		1,85		3,16		3,93		7,75	0,29	-0,56
1,28		2,77		2,23		3,10		7,12	0,25	-0,67
0,92		1,07		1,70		2,44		5,99	0,19	-0,86
0,55		2,36		4,00		5,63		5,09	0,15	-1,02
0,81		2,42		2,69		4,83		3,22	0,09	-1,35
0,77		1,92		0,96		4,43		2,89	0,08	-1,40
0,89		2,77		2,77		5,99		1,25	0,05	-1,69
0,80		2,56		1,28		3,36		0,32	0,03	-1,85
0,67		1,84		1,34		3,84		-0,50	0,02	-2,00
1,44		1,95		3,46		1,37		19,47	0,93	1,49
1,46		1,87		2,98		3,64		15,61	0,79	0,81
1,70		2,92		6,42		6,23		15,80	0,80	0,85
1,61		2,99		4,17		3,22		13,99	0,70	0,53
1,01		2,37		3,36		2,07		13,00	0,64	0,36
1,14		1,81		3,57		3,47		13,45	0,67	0,44
1,03		2,63		3,53		2,76		12,70	0,62	0,31
1,14		2,37		2,72		3,91		12,74	0,62	0,31
1,05		2,75		2,68		3,89		10,72	0,48	-0,04
1,29		1,90		2,17		1,76		8,78	0,35	-0,38
1,20		0,96		0,48		3,13		5,54	0,17	-0,94
0,60		1,69		1,49		4,58		3,88	0,11	-1,23
0,36		1,22		4,84		3,03		24,40	0,99	2,35
0,84		2,53		4,90		2,59		18,57	0,91	1,33
1,06		2,62		4,48		1,46		18,27	0,90	1,28
1,41		3,71		4,59		3,35		13,41	0,67	0,43
1,55		2,59		3,40		3,84		12,94	0,64	0,35
0,87		2,36		4,14		3,31		10,44	0,47	-0,09
0,42		2,21		2,45		3,82		9,19	0,38	-0,31
0,56		2,52		2,50		2,95		8,66	0,35	-0,40
0,74		3,18		3,71		3,24		7,80	0,29	-0,55
0,92		3,25		3,45		3,84		6,85	0,24	-0,71
0,64		2,34		2,34		5,11		5,54	0,17	-0,94

ANNEX D: ATTRIBUTE INDEXES AND RATES

b.		Jmeno	DUIndex	DURate	DOINdex	DORate	DCIndex	DCRate	BlIndex	BlRate	As	
18,49		Mitchell K.	37%	57%	49%	90%	45%	79%	32%	37%	85%	228%
11,39		Lewis Jr. V.	79%	189%	74%	182%	74%	182%	67%	108%	54%	95%
12,62		Šteffel D.	72%	154%	60%	122%	62%	130%	83%	173%	37%	57%
12,85		Steffeck M.	56%	100%	54%	105%	53%	102%	96%	324%	50%	84%
10,61		Krakovič J.	72%	155%	53%	101%	58%	115%	68%	110%	35%	53%
12,93		Bowden S.	29%	41%	38%	63%	34%	56%	16%	17%	58%	106%
6,13		Žampach A.	66%	131%	43%	75%	49%	90%	57%	81%	46%	75%
8,63		Emerson A.	20%	27%	50%	92%	42%	73%	0%	0%	59%	110%
4,98		Bejček J.	46%	75%	29%	46%	33%	54%	0%	0%	59%	109%
6,27		Hejl V.	49%	82%	33%	53%	36%	61%	0%	0%	25%	35%
3,07		Slunečko M.	35%	53%	39%	67%	37%	62%	34%	40%	61%	116%
16,09		Chán A.	74%	163%	61%	126%	63%	135%	92%	241%	51%	87%
12,88		Slavík J.	70%	149%	62%	130%	63%	134%	78%	145%	39%	60%
10,33		Votroubek S.	26%	37%	74%	181%	64%	138%	83%	174%	49%	82%
11,69		Feštr L.	26%	37%	42%	74%	37%	63%	0%	0%	84%	226%
9,19		Šotnar M.	24%	34%	44%	78%	38%	64%	0%	0%	91%	297%
13,72		Mareš M.	37%	56%	36%	60%	35%	58%	7%	7%	51%	86%
10,47		Grunt P.	74%	164%	43%	76%	53%	100%	84%	175%	28%	39%
7,58		Křivánek J.	68%	141%	46%	82%	52%	98%	20%	22%	50%	85%
7,79		Štěrba J.	27%	38%	57%	115%	49%	92%	77%	141%	20%	27%
8,86		Vocetka M.	18%	24%	40%	70%	34%	56%	19%	20%	37%	56%
8,81		Fait D.	55%	97%	37%	63%	41%	71%	52%	72%	29%	42%
9,65		Šafarčík P.	26%	37%	41%	70%	36%	60%	38%	46%	52%	89%
16,77		Kornowski K.	74%	165%	62%	132%	65%	139%	66%	103%	34%	50%
16,58		Kyles D.	32%	48%	59%	122%	52%	99%	73%	125%	60%	111%
15,37		Špaček J.	64%	124%	53%	101%	55%	106%	0%	0%	52%	90%
11,39		Davis J.	77%	179%	70%	163%	71%	165%	68%	111%	41%	64%
12,08		Jelínek J.	65%	129%	65%	140%	63%	135%	89%	215%	40%	63%
10,63		Macela T.	17%	23%	45%	80%	38%	63%	8%	8%	71%	151%
11,98		Sedlák J.	65%	130%	46%	84%	51%	96%	75%	135%	26%	37%
11,52		Teplý T.	35%	53%	32%	52%	32%	52%	15%	15%	47%	77%
7,87		Peterka O.	49%	84%	53%	102%	51%	96%	23%	25%	52%	90%
8,10		Moravec L.	25%	36%	31%	49%	28%	45%	37%	44%	75%	171%
5,38		Šindelář L.	56%	101%	44%	78%	46%	84%	38%	47%	42%	67%
8,12		Sehnal M.	59%	108%	28%	44%	37%	61%	0%	0%	21%	29%
6,63		Andres P.	17%	23%	38%	64%	32%	51%	35%	42%	74%	163%
15,87		Slezák P.	40%	63%	42%	74%	41%	70%	11%	11%	64%	126%
14,83		Kohout O.	83%	216%	58%	118%	66%	144%	93%	260%	46%	76%
9,22		Nečas R.	78%	187%	71%	168%	72%	171%	84%	180%	75%	172%
14,36		Pandula D.	59%	108%	55%	107%	55%	106%	47%	62%	63%	120%
12,70		Bohačík J.	47%	78%	50%	94%	48%	88%	32%	38%	62%	120%
13,57		Švrdlík K.	70%	146%	58%	117%	60%	124%	91%	228%	44%	72%
10,77		Marko R.	35%	54%	47%	85%	43%	75%	23%	25%	71%	153%
8,85		Kratochvíl J.	59%	109%	62%	131%	60%	123%	65%	101%	51%	88%
9,69		Bratčenkov V.	37%	56%	45%	81%	42%	73%	80%	154%	37%	56%
9,02		Prášil J.	33%	49%	41%	71%	38%	64%	47%	61%	40%	63%
7,87		Polášek R.	36%	55%	34%	56%	33%	55%	0%	0%	48%	79%
18,60		Nelson T.	68%	138%	67%	149%	66%	144%	87%	200%	36%	54%

M+		M-		F+		F-		Val	b.	
79%	204%	53%	105%	74%	176%	38%	65,41%		71%	
67%	146%	53%	104%	56%	107%	47%	86,63%		53%	
43%	73%	37%	65%	48%	85%	47%	88,09%		57%	
50%	90%	51%	97%	39%	64%	54%	105,87%		58%	
54%	102%	48%	91%	58%	114%	59%	120,88%		51%	
34%	54%	55%	110%	39%	64%	40%	69,63%		58%	
41%	68%	37%	63%	43%	72%	37%	62,93%		34%	
47%	84%	57%	117%	33%	53%	44%	79,19%		44%	
31%	49%	35%	60%	37%	60%	48%	89,64%		28%	
56%	107%	43%	79%	45%	79%	67%	151,41%		34%	
62%	126%	46%	84%	45%	77%	58%	119,00%		19%	
17%	25%	63%	136%	66%	142%	40%	71,05%		66%	
37%	60%	43%	77%	63%	129%	56%	112,68%		58%	
44%	76%	31%	50%	28%	43%	43%	77,12%		50%	
43%	73%	64%	139%	60%	119%	45%	82,82%		54%	
36%	58%	43%	78%	53%	99%	51%	98,09%		46%	
38%	63%	54%	108%	63%	128%	52%	100,21%		60%	
32%	51%	40%	70%	50%	90%	66%	147,90%		50%	
39%	65%	40%	71%	43%	72%	30%	48,22%		40%	
53%	99%	48%	91%	34%	55%	50%	95,38%		41%	
60%	120%	42%	76%	46%	80%	49%	92,63%		45%	
32%	51%	44%	79%	25%	37%	48%	89,25%		44%	
0%	0%	52%	102%	42%	72%	58%	119,58%		47%	
38%	61%	36%	62%	66%	142%	39%	68,63%		67%	
64%	132%	63%	138%	73%	170%	37%	62,42%		67%	
78%	195%	46%	85%	60%	120%	63%	135,84%		64%	
65%	136%	56%	112%	84%	237%	65%	143,85%		53%	
51%	93%	50%	94%	46%	80%	57%	115,03%		55%	
63%	128%	55%	110%	63%	128%	52%	101,16%		51%	
22%	33%	42%	74%	56%	106%	58%	118,60%		55%	
38%	62%	38%	66%	61%	123%	48%	90,66%		54%	
56%	106%	35%	59%	29%	45%	39%	67,32%		41%	
56%	108%	62%	134%	43%	74%	49%	92,00%		42%	
47%	83%	45%	84%	38%	63%	60%	125,41%		30%	
13%	18%	49%	92%	33%	52%	58%	118,85%		42%	
55%	103%	69%	162%	55%	103%	61%	127,88%		36%	
64%	133%	45%	81%	69%	154%	36%	62,25%		65%	
49%	89%	59%	122%	64%	134%	55%	111,19%		63%	
63%	131%	60%	125%	55%	103%	50%	93,86%		46%	
71%	161%	61%	131%	66%	139%	47%	86,77%		62%	
64%	134%	51%	97%	64%	133%	44%	80,09%		57%	
42%	70%	48%	89%	56%	107%	50%	95,42%		60%	
67%	144%	53%	103%	43%	74%	35%	58,31%		51%	
53%	98%	52%	102%	40%	67%	64%	139,90%		45%	
70%	155%	49%	92%	36%	59%	52%	100,96%		48%	
48%	86%	32%	53%	33%	53%	57%	115,04%		45%	
42%	72%	42%	75%	10%	13%	73%	178,74%		41%	
38%	63%	57%	117%	67%	145%	54%	108,03%		71%	

14,71		**Muirhead C.**	53%	92%	65%	140%	60%	124%	72%	123%	54%	96%
14,93		**Pospíšil Z.**	81%	204%	57%	115%	65%	139%	92%	246%	39%	60%
12,17		**Sanders L.**	29%	42%	48%	88%	42%	73%	9%	9%	80%	200%
12,81		**Peterka M.**	78%	186%	60%	124%	65%	140%	42%	52%	37%	56%
13,92		**Bohačík P.**	80%	200%	60%	122%	66%	143%	25%	28%	32%	48%
7,88		**Kotas L.**	31%	45%	46%	84%	42%	72%	35%	42%	73%	159%
8,03		**Šoukal T.**	76%	174%	65%	141%	67%	148%	62%	92%	52%	89%
8,21		**Čarnecký M.**	19%	25%	34%	56%	29%	46%	19%	20%	78%	186%
8,32		**Příhonský J.**	41%	64%	44%	79%	42%	74%	19%	20%	52%	89%
6,04		**Půlpán V.**	41%	66%	42%	73%	41%	70%	47%	61%	77%	178%
9,31		**Faifr S.**	59%	108%	46%	83%	49%	89%	46%	60%	20%	27%
8,44		**Šoula J.**	54%	96%	54%	103%	52%	100%	0%	0%	31%	46%
16,06		**Folker A.**	81%	206%	70%	160%	72%	171%	39%	48%	28%	40%
17,36		**Pelikán R.**	88%	255%	76%	191%	79%	207%	98%	380%	35%	53%
14,46		**Willman J.**	71%	151%	56%	110%	59%	120%	44%	56%	48%	80%
12,96		**Ruach T.**	34%	51%	51%	97%	46%	82%	33%	39%	79%	191%
11,33		**Číž A.**	22%	30%	50%	93%	42%	73%	35%	41%	82%	207%
9,51		**Jurečka L.**	32%	47%	43%	75%	39%	66%	14%	15%	40%	63%
12,12		**Alič A.**	40%	63%	42%	74%	41%	70%	42%	52%	59%	111%
11,61		**Zbránek F.**	52%	89%	30%	48%	36%	59%	31%	36%	45%	73%
8,57		**Stehlík J.**	54%	95%	49%	90%	49%	90%	31%	35%	52%	89%
3,36		**Medvecký M.**	19%	25%	53%	103%	45%	80%	0%	0%	26%	37%
15,05		**Blažek J.**	70%	149%	56%	110%	59%	120%	43%	55%	44%	71%
13,58		**Širina J.**	29%	42%	44%	77%	39%	66%	29%	33%	85%	235%
12,07		**Gniadek M.**	72%	158%	63%	133%	64%	138%	50%	67%	46%	76%
11,18		**Sokolovský L.**	33%	49%	56%	112%	50%	93%	76%	138%	68%	140%
8,46		**Cvek V.**	49%	82%	68%	155%	63%	132%	59%	87%	48%	79%
12,00		**Kramný R.**	70%	146%	75%	188%	73%	173%	91%	233%	33%	49%
8,15		**Vlček K.**	55%	99%	53%	102%	53%	100%	38%	46%	76%	173%
13,86		**Dukanovič M.**	34%	50%	28%	44%	28%	45%	14%	14%	54%	94%
12,56		**Dokoupil P.**	16%	22%	25%	38%	22%	33%	0%	0%	43%	69%
8,44		**Klečka R.**	45%	72%	30%	49%	34%	55%	11%	11%	71%	152%
7,06		**Palát M.**	21%	29%	43%	77%	37%	62%	0%	0%	54%	94%
4,56		**Tóth L.**	65%	130%	57%	113%	58%	117%	21%	23%	58%	107%
20,02		**Simmons T.**	48%	80%	58%	117%	54%	105%	70%	115%	76%	176%
17,98		**Mahalbašič R.**	90%	279%	75%	186%	79%	210%	84%	175%	74%	164%
19,78		**Rančík R.**	42%	66%	59%	119%	53%	103%	57%	82%	60%	111%
13,02		**Pomikálek T.**	65%	129%	70%	160%	67%	149%	87%	198%	52%	90%
14,54		**Houška P.**	68%	140%	65%	140%	64%	138%	79%	150%	53%	93%
16,20		**Page D.**	58%	105%	66%	146%	63%	132%	42%	53%	58%	107%
14,39		**Benda P.**	75%	169%	57%	114%	62%	128%	66%	105%	60%	112%
18,31		**Rančík M.**	66%	132%	74%	183%	71%	166%	87%	197%	61%	115%
12,71		**Hruban V.**	33%	48%	48%	87%	43%	75%	80%	155%	73%	160%
11,11		**Kříž M.**	68%	141%	71%	166%	69%	157%	59%	87%	58%	106%
7,48		**Ilievski V.**	28%	40%	49%	91%	43%	75%	17%	19%	92%	309%
8,35		**Massamba T.**	30%	44%	43%	76%	39%	66%	11%	12%	87%	245%
7,88		**Welsch J.**	34%	50%	53%	101%	47%	85%	32%	37%	84%	224%
13,68		**Palyza L.**	33%	49%	51%	97%	46%	82%	52%	70%	41%	65%
11,98		**Field R.**	69%	143%	64%	138%	64%	138%	50%	66%	47%	78%

71%	161%	58%	119%	70%	158%	34%	57,42%		63%	
53%	97%	44%	79%	58%	113%	70%	166,82%		63%	
67%	145%	57%	117%	55%	103%	40%	69,52%		56%	
55%	105%	45%	84%	44%	75%	47%	87,27%		57%	
44%	76%	57%	116%	63%	128%	57%	114,80%		60%	
70%	155%	48%	91%	47%	82%	48%	90,05%		41%	
53%	97%	71%	170%	52%	96%	46%	83,39%		41%	
60%	121%	48%	91%	41%	68%	27%	44,13%		42%	
50%	91%	54%	107%	37%	61%	51%	97,93%		43%	
85%	247%	56%	113%	42%	71%	68%	155,22%		33%	
56%	106%	45%	82%	38%	63%	60%	127,31%		46%	
47%	83%	70%	167%	53%	97%	62%	133,88%		43%	
43%	73%	55%	109%	74%	176%	50%	93,88%		66%	
55%	104%	51%	97%	75%	180%	78%	209,79%		69%	
51%	94%	35%	60%	52%	95%	46%	84,56%		62%	
66%	142%	57%	115%	63%	128%	50%	95,11%		58%	
57%	109%	51%	99%	62%	128%	34%	57,69%		53%	
64%	132%	23%	35%	27%	41%	35%	58,97%		47%	
48%	86%	55%	109%	43%	74%	47%	86,70%		55%	
58%	113%	51%	99%	53%	97%	55%	110,16%		54%	
60%	120%	51%	98%	49%	88%	65%	145,04%		44%	
40%	66%	47%	87%	9%	12%	66%	149,38%		20%	
38%	63%	40%	70%	71%	159%	38%	65,91%		63%	
76%	188%	64%	142%	61%	123%	42%	74,79%		60%	
64%	134%	42%	75%	51%	93%	57%	116,98%		55%	
72%	167%	41%	73%	54%	101%	48%	90,42%		53%	
64%	133%	41%	72%	50%	90%	49%	92,03%		43%	
25%	38%	64%	142%	54%	102%	75%	191,06%		55%	
71%	161%	74%	186%	69%	151%	57%	116,38%		42%	
42%	70%	61%	129%	74%	174%	57%	116,33%		60%	
42%	72%	33%	56%	32%	50%	45%	81,28%		57%	
81%	213%	64%	141%	44%	76%	54%	106,53%		43%	
25%	38%	66%	149%	38%	63%	39%	67,18%		38%	
61%	122%	55%	111%	29%	45%	61%	127,69%		26%	
71%	162%	51%	97%	69%	154%	38%	65,19%		74%	
42%	72%	67%	151%	65%	138%	60%	127,12%		70%	
62%	125%	48%	91%	76%	188%	54%	108,07%		73%	
44%	75%	40%	70%	50%	90%	29%	47,87%		58%	
45%	77%	48%	91%	45%	78%	39%	67,93%		62%	
49%	88%	50%	95%	47%	83%	44%	78,44%		66%	
47%	83%	57%	116%	61%	122%	42%	73,91%		62%	
41%	69%	55%	109%	72%	166%	59%	122,40%		71%	
72%	164%	54%	106%	53%	99%	41%	72,85%		57%	
61%	123%	43%	76%	54%	101%	48%	88,53%		52%	
86%	261%	56%	113%	42%	72%	40%	69,10%		39%	
60%	118%	48%	90%	52%	96%	45%	81,22%		43%	
74%	177%	54%	106%	52%	96%	40%	69,40%		41%	
32%	49%	38%	65%	44%	76%	52%	101,66%		60%	
73%	170%	42%	75%	57%	109%	50%	95,44%		55%	

12,00		**Machač D.**	76%	177%	49%	90%	57%	114%	46%	60%	35%	52%
11,51		**Zuzák S.**	60%	112%	59%	120%	58%	116%	58%	84%	33%	49%
12,54		**Horák L.**	72%	158%	58%	118%	61%	128%	65%	100%	32%	47%
12,36		**Lewis J.**	34%	51%	47%	86%	43%	75%	23%	25%	74%	164%
12,75		**Ličartovský Š.**	35%	52%	40%	70%	38%	64%	8%	8%	68%	137%
10,60		**Barnes C.**	54%	94%	54%	104%	53%	100%	0%	0%	69%	142%
4,44		**Djukanovič D.**	36%	54%	48%	87%	44%	77%	0%	0%	77%	179%
6,30		**Sýkora M.**	54%	95%	57%	113%	55%	106%	32%	37%	30%	43%
5,84		**Harčár P.**	52%	90%	37%	62%	40%	69%	0%	0%	7%	9%
5,43		**Holý P.**	14%	18%	43%	75%	35%	58%	0%	0%	35%	53%
15,43		**Laroche H.**	57%	103%	54%	103%	53%	102%	47%	62%	81%	204%
15,78		**Tracey B.**	67%	138%	66%	144%	65%	140%	62%	95%	43%	69%
15,29		**Ringgold M.**	95%	371%	54%	105%	74%	179%	72%	123%	41%	64%
12,45		**Novák P.**	84%	227%	53%	101%	64%	136%	41%	51%	39%	61%
14,32		**Hall F.**	78%	184%	60%	123%	64%	139%	84%	174%	44%	70%
10,23		**Vošlajer T.**	75%	171%	63%	135%	66%	143%	84%	174%	46%	75%
9,48		**Fröhde M.**	44%	72%	53%	100%	49%	91%	77%	143%	49%	83%
9,60		**Aušprunk K.**	60%	111%	60%	123%	59%	118%	96%	303%	33%	48%
10,19		**Rolls M.**	20%	28%	32%	52%	28%	44%	16%	17%	77%	180%
10,03		**Pavlík J.**	12%	15%	38%	65%	31%	50%	9%	9%	46%	76%
7,27		**Sahan F.**	85%	235%	23%	35%	49%	91%	94%	276%	7%	9%
4,03		**Čech J.**	77%	183%	32%	52%	48%	88%	0%	0%	53%	92%
8,27		**Melski A.**	27%	39%	51%	95%	44%	78%	63%	97%	42%	66%
5,73		**Novák M.**	72%	158%	43%	76%	52%	99%	75%	136%	28%	39%
4,32		**Kysela J.**	41%	65%	23%	35%	28%	43%	0%	0%	51%	86%
5,51		**Vach R.**	37%	57%	34%	55%	34%	55%	83%	169%	49%	82%
14,20		**Bartoň L.**	57%	103%	67%	151%	64%	135%	82%	164%	61%	117%
12,24		**Houška J.**	82%	212%	63%	134%	68%	154%	95%	281%	39%	60%
11,94		**Soukup M.**	87%	247%	64%	138%	71%	167%	71%	119%	50%	86%
11,92		**Venta M.**	32%	47%	43%	75%	39%	66%	0%	0%	87%	249%
12,07		**Stria L.**	25%	35%	47%	85%	40%	70%	52%	70%	74%	164%
10,14		**Landa R.**	80%	195%	54%	105%	62%	129%	82%	164%	32%	47%
11,26		**Vyoral T.**	51%	87%	43%	77%	44%	79%	15%	16%	84%	223%
13,18		**Jiřiček J.**	74%	164%	61%	126%	64%	135%	82%	167%	51%	86%
14,84		**Bosák P.**	46%	76%	48%	88%	46%	84%	23%	25%	50%	85%
8,97		**Bažant L.**	59%	110%	45%	80%	48%	88%	57%	82%	44%	70%
7,22		**Linhart L.**	74%	164%	39%	66%	50%	93%	0%	0%	38%	59%
10,56		**Kaša J.**	67%	135%	29%	47%	41%	71%	54%	76%	21%	29%
14,80		**McClain A.**	93%	323%	72%	173%	80%	214%	100%	641%	21%	29%
16,43		**Cvetinović N.**	75%	168%	66%	144%	67%	149%	52%	71%	44%	72%
17,01		**Geiger D.**	26%	36%	48%	87%	41%	71%	0%	0%	75%	168%
14,82		**Henderson E.**	39%	60%	72%	170%	64%	137%	75%	134%	30%	43%
10,94		**Dygrýn O.**	66%	131%	60%	122%	60%	123%	32%	37%	67%	134%
9,24		**Šmíd F.**	59%	110%	61%	126%	59%	119%	42%	52%	52%	89%
11,22		**Maric P.**	59%	110%	51%	95%	52%	98%	86%	189%	39%	60%
11,26		**Zachrla R.**	43%	69%	56%	112%	52%	98%	67%	108%	54%	94%
9,18		**Semerád M.**	43%	69%	47%	86%	45%	80%	50%	67%	60%	112%
8,16		**Šiška O.**	48%	79%	43%	75%	43%	75%	40%	49%	69%	143%
7,03		**Lenhart O.**	69%	145%	43%	76%	51%	95%	81%	162%	23%	31%

35%	57%	37%	63%	47%	82%	40%	69,09%		55%	
46%	79%	34%	57%	53%	97%	50%	94,43%		54%	
29%	45%	42%	74%	57%	110%	60%	124,80%		57%	
63%	129%	61%	129%	50%	91%	41%	73,22%		56%	
61%	122%	62%	134%	52%	96%	50%	96,27%		57%	
16%	22%	47%	88%	34%	54%	47%	86,51%		51%	
66%	141%	50%	96%	65%	135%	47%	86,14%		26%	
45%	79%	27%	43%	42%	70%	42%	74,74%		34%	
40%	67%	36%	61%	28%	43%	42%	75,35%		32%	
67%	145%	60%	127%	19%	27%	66%	147,33%		30%	
73%	171%	54%	108%	71%	160%	37%	64,12%		64%	
59%	118%	51%	99%	66%	140%	46%	84,88%		65%	
59%	116%	69%	159%	79%	205%	49%	92,91%		64%	
66%	140%	43%	78%	70%	155%	67%	150,59%		56%	
28%	42%	65%	143%	53%	99%	45%	81,82%		62%	
44%	75%	44%	80%	59%	116%	60%	126,82%		49%	
36%	58%	26%	42%	32%	50%	57%	115,66%		47%	
36%	58%	47%	86%	55%	104%	56%	112,17%		47%	
58%	114%	61%	129%	43%	73%	48%	88,67%		49%	
47%	82%	30%	50%	35%	56%	40%	69,74%		49%	
31%	48%	55%	110%	63%	131%	69%	160,88%		38%	
42%	72%	56%	113%	49%	88%	63%	138,07%		24%	
41%	68%	48%	90%	21%	31%	60%	126,41%		42%	
46%	80%	61%	129%	50%	91%	71%	171,21%		32%	
42%	71%	58%	119%	28%	42%	50%	96,02%		25%	
37%	59%	46%	86%	29%	44%	55%	109,73%		31%	
63%	128%	48%	91%	58%	113%	25%	39,12%		61%	
63%	130%	47%	87%	53%	98%	53%	104,02%		56%	
69%	151%	63%	136%	80%	210%	73%	177,86%		55%	
67%	143%	64%	139%	65%	136%	49%	91,88%		55%	
50%	90%	55%	110%	57%	110%	35%	59,25%		55%	
54%	101%	46%	84%	59%	117%	51%	99,00%		49%	
50%	91%	59%	123%	59%	116%	44%	78,80%		53%	
54%	102%	55%	111%	50%	89%	56%	111,68%		58%	
51%	93%	61%	128%	49%	88%	55%	111,12%		63%	
59%	115%	47%	88%	42%	71%	31%	50,18%		45%	
56%	107%	28%	45%	11%	16%	48%	89,40%		38%	
33%	53%	44%	79%	31%	49%	61%	130,86%		51%	
22%	32%	34%	57%	70%	159%	47%	86,63%		63%	
44%	75%	58%	118%	71%	160%	42%	73,93%		67%	
52%	95%	59%	122%	68%	147%	26%	41,74%		68%	
62%	126%	71%	173%	68%	150%	50%	95,76%		63%	
65%	138%	58%	121%	57%	111%	55%	109,79%		52%	
45%	77%	55%	110%	65%	136%	50%	94,65%		46%	
25%	37%	53%	103%	46%	80%	55%	109,07%		53%	
32%	49%	57%	118%	47%	82%	46%	84,33%		53%	
40%	66%	66%	148%	61%	122%	49%	92,46%		46%	
47%	82%	67%	152%	58%	113%	55%	109,58%		42%	
35%	57%	55%	109%	44%	77%	65%	145,95%		37%	

ANNEX E: PIE EXPONENTS

		PIE		Vzduch	VzdIndx	Utok	UtokIndex	Obrana		Base3
Mitchell K.	90,84%	112,99%	107,87%	5,13	**60,55%**	11,07941136	**90,84%**	2,75	**86,08%**	77,94%
Lewis Jr. V.	88,97%	109,39%	104,49%	12,17	**88,97%**	4,892612978	**65,21%**	2,26	**80,21%**	77,49%
Šteffel D.	79,12%	107,91%	103,11%	8,64	**79,12%**	6,272432403	**74,17%**	1,62	**68,59%**	73,83%
Steffeck M.	82,28%	105,31%	100,64%	7,25	**73,11%**	6,49983216	**75,40%**	2,42	**82,28%**	76,83%
Krakovič J.	71,40%	104,30%	99,69%	6,91	**71,40%**	2,852004539	**45,96%**	1,66	**69,46%**	61,08%
Bowden S.	73,79%	104,80%	100,16%	3,14	**43,39%**	6,204821549	**73,79%**	0,71	**39,86%**	50,35%
Žampach A.	60,80%	102,47%	97,93%	5,17	**60,80%**	2,165392716	**37,33%**	1,11	**54,80%**	49,92%
Emerson A.	55,82%	102,97%	98,39%	3,91	**50,73%**	3,785253649	**55,82%**	0,97	**49,98%**	52,11%
Bejček J.	39,53%	100,24%	95,78%	2,78	**39,53%**	1,578961289	**28,87%**	0,56	**32,82%**	33,46%
Hejl V.	58,03%	100,58%	96,07%	3,15	**43,52%**	2,120760099	**36,72%**	1,21	**58,03%**	45,27%
Slunečko M.	67,76%	100,49%	95,96%	3,40	**46,00%**	0,818561435	**16,19%**	1,58	**67,76%**	36,95%
Chán A.	83,08%	110,30%	105,29%	9,81	**83,08%**	8,222156842	**83,04%**	1,36	**62,12%**	75,40%
Slavík J.	78,46%	106,15%	101,37%	8,47	**78,46%**	6,40819366	**74,91%**	1,32	**61,28%**	71,15%
Votroubek S.	80,50%	107,05%	102,24%	9,02	**80,50%**	5,560262207	**69,87%**	1,66	**69,46%**	73,10%
Feštr L.	74,81%	106,16%	101,40%	3,48	**46,75%**	6,389869588	**74,81%**	0,87	**46,57%**	54,61%
Šotnar M.	60,27%	104,58%	99,90%	3,52	**47,17%**	4,277236432	**60,27%**	0,69	**38,85%**	47,98%
Mareš M.	79,15%	105,52%	100,80%	3,22	**44,19%**	7,26543643	**79,15%**	0,78	**42,66%**	53,04%
Grunt P.	66,60%	101,74%	97,20%	6,05	**66,60%**	4,49261059	**62,07%**	1,29	**60,25%**	62,92%
Křivánek J.	62,36%	102,79%	98,18%	5,39	**62,36%**	2,385436019	**40,23%**	0,85	**45,43%**	48,49%
Štěrba J.	70,22%	101,26%	96,70%	5,40	**62,40%**	2,929007606	**46,85%**	1,69	**70,22%**	58,99%
Vocetka M.	64,58%	101,73%	97,13%	3,02	**42,17%**	3,433188896	**52,33%**	1,45	**64,58%**	52,23%
Fait D.	51,77%	100,85%	96,27%	4,02	**51,77%**	3,367324634	**51,65%**	0,86	**45,98%**	49,72%
Šafarčík P.	51,80%	100,37%	95,78%	3,29	**44,92%**	3,382424514	**51,80%**	0,18	**12,27%**	30,56%
Kornowski K.	82,51%	111,50%	106,37%	9,62	**82,51%**	7,932308613	**81,94%**	1,23	**58,45%**	73,38%
Kyles D.	85,68%	110,15%	105,13%	6,68	**70,20%**	9,007350224	**85,68%**	2,18	**79,03%**	78,04%
Špaček J.	81,62%	102,68%	98,04%	5,74	**64,68%**	7,849917872	**81,62%**	2,25	**80,11%**	75,06%
Davis J.	82,82%	103,63%	98,93%	9,72	**82,82%**	4,10549439	**58,77%**	2,04	**76,85%**	72,05%
Jelínek J.	80,51%	106,90%	102,04%	9,02	**80,51%**	5,717881989	**70,88%**	2,03	**76,69%**	75,92%
Macela T.	66,67%	104,11%	99,40%	3,46	**46,54%**	4,640992839	**63,26%**	1,53	**66,67%**	58,12%
Sedlák J.	66,05%	102,57%	97,92%	5,73	**64,58%**	5,006761512	**66,05%**	0,93	**48,58%**	59,18%
Teplý T.	68,79%	103,89%	99,17%	2,86	**40,46%**	5,395923701	**68,79%**	0,79	**43,03%**	49,29%
Peterka O.	61,90%	103,34%	98,63%	5,33	**61,90%**	3,241547686	**50,31%**	1,34	**61,65%**	57,69%
Moravec L.	64,08%	102,59%	97,91%	2,54	**36,89%**	3,595487728	**53,97%**	1,43	**64,08%**	50,34%
Šindelář L.	56,53%	101,22%	96,58%	4,60	**56,53%**	2,605155418	**43,00%**	1,13	**55,39%**	51,25%
Sehnal M.	57,53%	100,55%	95,92%	3,19	**43,91%**	3,968551555	**57,53%**	0,20	**13,30%**	32,27%
Andres P.	61,51%	100,46%	95,79%	2,83	**40,14%**	2,210745506	**37,94%**	1,33	**61,51%**	45,42%
Slezák P.	87,50%	109,56%	104,43%	4,14	**52,75%**	9,637004721	**87,50%**	1,69	**70,24%**	68,70%
Kohout O.	83,58%	107,62%	102,62%	9,97	**83,58%**	7,651733508	**80,82%**	2,18	**79,01%**	81,11%
Nečas R.	87,64%	108,31%	103,30%	11,54	**87,64%**	2,669311539	**43,78%**	2,36	**81,62%**	67,91%
Pandula D.	80,58%	108,47%	103,49%	6,63	**69,91%**	7,595261148	**80,58%**	2,23	**79,75%**	76,59%
Bohačík J.	78,00%	108,20%	103,26%	5,33	**61,93%**	7,016529401	**78,00%**	1,79	**72,32%**	70,43%
Švrdlík K.	78,34%	107,38%	102,50%	8,44	**78,34%**	5,611044243	**70,20%**	1,82	**72,81%**	73,71%
Marko R.	72,74%	105,37%	100,62%	4,26	**53,82%**	5,329342908	**68,34%**	1,81	**72,74%**	64,44%
Kratochvíl J.	71,85%	101,89%	97,30%	7,00	**71,85%**	3,794459857	**55,90%**	1,53	**66,53%**	64,41%
Bratčenkov V.	82,24%	102,36%	97,72%	4,52	**55,90%**	4,384835128	**61,18%**	2,41	**82,24%**	65,52%
Prášil J.	59,57%	101,34%	96,73%	3,61	**47,96%**	4,196818892	**59,57%**	1,22	**58,41%**	55,06%
Polášek R.	43,81%	99,64%	95,07%	2,82	**39,96%**	2,293015131	**39,03%**	0,80	**43,81%**	40,88%
Nelson T.	96,43%	109,45%	104,37%	10,02	**83,73%**	15,43918427	**96,43%**	1,64	**69,06%**	82,31%

Muirhead C.	83,62%	109,91%	104,86%	8,39	**78,12%**	6,522154883	**75,52%**	2,53	**83,62%**	79,02%
Pospíšil Z.	80,58%	104,95%	100,18%	9,05	**80,58%**	5,143775409	**67,04%**	2,17	**78,89%**	75,26%
Sanders L.	76,25%	108,65%	103,71%	4,30	**54,16%**	6,66242372	**76,25%**	1,82	**72,77%**	66,98%
Peterka M.	78,35%	105,74%	100,97%	8,34	**77,94%**	7,092291042	**78,35%**	1,46	**64,87%**	73,44%
Bohačík P.	78,94%	106,88%	102,07%	8,60	**78,94%**	6,869500268	**77,29%**	1,04	**52,43%**	68,39%
Kotas L.	76,31%	105,19%	100,47%	4,18	**53,09%**	3,770861151	**55,68%**	2,01	**76,31%**	60,87%
Šoukal T.	77,66%	101,43%	96,89%	8,27	**77,66%**	3,518763833	**53,20%**	1,48	**65,38%**	64,64%
Čarnecký M.	65,92%	104,46%	99,75%	2,58	**37,34%**	3,613353311	**54,15%**	1,50	**65,92%**	51,08%
Příhonský J.	55,15%	101,42%	96,85%	3,98	**51,36%**	3,395422717	**51,94%**	1,12	**55,15%**	52,79%
Půlpán V.	88,78%	101,13%	96,53%	3,92	**50,88%**	1,919776228	**33,92%**	3,05	**88,78%**	53,51%
Faifr S.	64,59%	101,13%	96,50%	4,94	**59,17%**	3,883450044	**56,74%**	1,45	**64,59%**	60,08%
Šoula J.	61,06%	100,58%	95,97%	5,21	**61,06%**	2,602492918	**42,97%**	0,94	**49,11%**	50,51%
Folker A.	88,09%	108,78%	103,71%	10,97	**86,29%**	9,862775028	**88,09%**	1,10	**54,53%**	74,56%
Pelikán R.	91,07%	103,59%	98,80%	13,33	**91,07%**	5,520700674	**69,62%**	2,77	**86,23%**	81,77%
Willman J.	80,86%	110,09%	104,98%	7,77	**75,54%**	7,662416189	**80,86%**	1,41	**63,57%**	72,96%
Ruach T.	76,67%	107,09%	102,18%	4,90	**58,88%**	6,745852347	**76,67%**	1,88	**73,99%**	69,38%
Číž A.	68,75%	107,61%	102,70%	4,39	**54,90%**	5,390472792	**68,75%**	1,50	**65,81%**	62,86%
Jurečka L.	70,34%	104,88%	100,13%	3,71	**48,93%**	5,632503866	**70,34%**	1,62	**68,59%**	61,80%
Alič A.	74,77%	105,83%	101,04%	4,13	**52,66%**	6,382514693	**74,77%**	1,24	**58,90%**	61,44%
Zbránek F.	70,27%	103,13%	98,48%	3,30	**45,03%**	5,621807479	**70,27%**	1,46	**64,86%**	58,99%
Stehlík J.	66,30%	101,84%	97,22%	4,94	**59,14%**	3,685312444	**54,85%**	1,52	**66,30%**	59,92%
Medvecký M.	52,43%	99,84%	95,28%	4,10	**52,43%**	0,852025721	**16,79%**	0,75	**41,40%**	33,16%
Blažek J.	88,97%	111,89%	106,71%	7,99	**76,51%**	10,21699412	**88,97%**	1,04	**52,43%**	70,93%
Širina J.	83,08%	110,34%	105,33%	4,06	**52,08%**	8,233098136	**83,08%**	2,47	**83,00%**	71,08%
Gniadek M.	79,17%	107,73%	102,90%	8,66	**79,17%**	6,784231056	**76,87%**	1,91	**74,51%**	76,83%
Sokolovský L.	84,59%	107,70%	102,91%	6,06	**66,65%**	5,654750134	**70,48%**	2,61	**84,59%**	73,52%
Cvek V.	75,77%	104,27%	99,67%	7,82	**75,77%**	3,935102314	**57,22%**	1,92	**74,73%**	68,68%
Kramný R.	85,33%	103,04%	98,49%	10,59	**85,33%**	5,771527151	**71,22%**	1,39	**62,97%**	72,60%
Vlček K.	76,70%	102,06%	97,54%	5,53	**63,29%**	2,918949982	**46,73%**	2,03	**76,70%**	60,99%
Dukanovič M.	75,64%	103,24%	98,62%	2,44	**35,77%**	6,544313852	**75,64%**	0,88	**46,61%**	50,15%
Dokoupil P.	74,23%	103,53%	98,88%	1,74	**27,11%**	6,283145241	**74,23%**	0,84	**45,15%**	44,95%
Klečka R.	83,45%	102,81%	98,18%	2,97	**41,65%**	3,671031411	**54,71%**	2,51	**83,45%**	57,51%
Palát M.	46,07%	100,68%	96,12%	3,23	**44,33%**	2,861347254	**46,07%**	0,43	**26,54%**	37,85%
Tóth L.	67,69%	101,09%	96,46%	6,23	**67,69%**	1,209295345	**22,97%**	1,48	**65,26%**	46,64%
Simmons T.	95,11%	109,72%	104,64%	6,97	**71,72%**	13,98821461	**95,11%**	2,50	**83,38%**	82,85%
Mahalbašič R.	95,97%	108,44%	103,49%	14,21	**92,39%**	14,88061659	**95,97%**	1,63	**68,89%**	84,85%
Rančík R.	94,42%	108,35%	103,46%	6,49	**69,17%**	13,37641182	**94,42%**	1,87	**73,89%**	78,44%
Pomikálek T.	83,41%	107,25%	102,45%	9,92	**83,41%**	7,84008384	**81,58%**	1,74	**71,20%**	78,54%
Houška P.	87,14%	107,12%	102,37%	8,94	**80,21%**	9,504937081	**87,14%**	1,56	**67,37%**	77,80%
Page D.	89,85%	107,82%	103,09%	8,20	**77,38%**	10,60144139	**89,85%**	1,29	**60,34%**	74,86%
Benda P.	76,52%	106,54%	101,91%	8,00	**76,52%**	5,267511034	**67,91%**	1,43	**64,20%**	69,36%
Rančík M.	82,24%	100,89%	96,54%	9,54	**82,24%**	7,273050368	**79,18%**	1,57	**67,58%**	76,07%
Hruban V.	84,91%	107,46%	102,76%	5,02	**59,72%**	8,401398926	**83,68%**	2,64	**84,91%**	75,15%
Kříž M.	81,67%	104,87%	100,34%	9,36	**81,67%**	5,303294762	**68,16%**	1,81	**72,58%**	73,93%
Ilievski V.	89,56%	104,93%	100,39%	4,24	**53,59%**	3,190390069	**49,76%**	3,15	**89,56%**	62,04%
Massamba T.	64,53%	105,14%	100,60%	3,67	**48,53%**	3,942030346	**57,28%**	1,45	**64,53%**	56,40%
Welsch J.	79,76%	104,42%	99,92%	4,88	**58,71%**	3,196080081	**49,82%**	2,23	**79,76%**	61,56%
Palyza L.	80,60%	104,10%	99,61%	4,79	**58,03%**	7,600000024	**80,60%**	0,87	**46,32%**	60,06%
Field R.	81,53%	108,54%	103,86%	8,75	**79,51%**	6,042712426	**72,85%**	2,36	**81,53%**	77,87%

Machač D.	78,00%	107,25%	102,70%	6,98	**71,75%**	7,017599686	**78,00%**	0,94	**49,04%**	64,99%
Zuzák S.	73,55%	105,47%	101,04%	7,02	**71,98%**	6,163537379	**73,55%**	1,29	**60,32%**	68,35%
Horák L.	75,58%	105,37%	100,97%	7,78	**75,58%**	5,843125714	**71,66%**	0,96	**49,61%**	64,53%
Lewis J.	71,85%	104,62%	100,28%	4,24	**53,61%**	5,874126495	**71,85%**	1,62	**68,58%**	64,16%
Ličartovský Š.	73,71%	104,26%	99,93%	3,51	**47,09%**	6,19137305	**73,71%**	1,46	**64,90%**	60,85%
Barnes C.	64,04%	105,29%	100,92%	5,64	**64,04%**	4,501219247	**62,14%**	0,27	**17,34%**	41,01%
Djukanovič D.	68,73%	102,21%	97,99%	4,09	**52,35%**	1,174450597	**22,39%**	1,62	**68,73%**	43,19%
Sýkora M.	65,48%	102,31%	98,04%	5,87	**65,48%**	2,228204689	**38,17%**	1,06	**53,07%**	51,00%
Harčár P.	48,22%	101,12%	96,86%	3,63	**48,22%**	1,895755138	**33,57%**	0,76	**42,08%**	40,84%
Holý P.	69,03%	100,44%	96,13%	3,00	**41,94%**	1,992315247	**34,94%**	1,64	**69,03%**	46,60%
Laroche H.	82,15%	111,20%	106,33%	6,67	**70,14%**	7,917833233	**81,89%**	2,41	**82,15%**	77,85%
Tracey B.	85,74%	111,28%	106,56%	9,58	**82,37%**	9,025408486	**85,74%**	1,89	**74,18%**	80,61%
Ringgold M.	87,00%	106,29%	101,95%	11,26	**87,00%**	7,67629207	**80,92%**	1,90	**74,40%**	80,61%
Novák P.	76,86%	105,77%	101,50%	8,08	**76,86%**	5,44746614	**69,13%**	1,87	**73,82%**	73,20%
Hall F.	80,58%	106,87%	102,60%	9,05	**80,58%**	4,135342592	**59,03%**	1,25	**59,08%**	65,50%
Vošlajer T.	80,67%	105,40%	101,26%	9,07	**80,67%**	4,531499107	**62,39%**	1,61	**68,51%**	70,12%
Fröhde M.	63,07%	102,62%	98,62%	5,50	**63,07%**	4,212000381	**59,70%**	1,25	**59,06%**	60,59%
Aušprunk K.	75,42%	102,91%	98,85%	7,74	**75,42%**	3,5283298	**53,30%**	1,91	**74,52%**	66,91%
Rolls M.	63,41%	103,97%	99,84%	2,44	**35,78%**	4,56410157	**62,65%**	1,40	**63,41%**	52,19%
Pavlík J.	59,23%	102,52%	98,44%	2,69	**38,59%**	4,1577601	**59,23%**	0,99	**50,66%**	48,74%
Sahan F.	69,43%	101,15%	97,08%	5,93	**65,87%**	1,81195518	**32,36%**	1,65	**69,43%**	52,90%
Čech J.	56,62%	100,63%	96,49%	4,61	**56,62%**	1,277684305	**24,10%**	0,81	**44,06%**	39,17%
Melski A.	56,42%	100,41%	96,16%	4,45	**55,37%**	3,188267148	**49,74%**	1,16	**56,42%**	53,76%
Novák M.	64,23%	100,25%	95,88%	5,66	**64,15%**	1,609067465	**29,33%**	1,44	**64,23%**	49,44%
Kysela J.	43,67%	100,08%	95,58%	2,24	**33,39%**	1,508679237	**27,79%**	0,80	**43,67%**	34,35%
Vach R.	61,57%	99,89%	95,23%	3,50	**46,99%**	1,283748177	**24,20%**	1,33	**61,57%**	41,21%
Bartoň L.	84,09%	110,17%	104,83%	9,40	**81,78%**	8,520142545	**84,09%**	2,30	**80,80%**	82,21%
Houška J.	86,32%	108,19%	103,15%	10,89	**86,09%**	6,96798268	**77,77%**	2,78	**86,32%**	83,30%
Soukup M.	84,04%	104,82%	100,06%	10,13	**84,04%**	5,589178517	**70,06%**	2,27	**80,40%**	77,94%
Venta M.	74,52%	106,52%	101,69%	3,70	**48,88%**	6,335774543	**74,52%**	1,71	**70,70%**	63,62%
Stria L.	76,92%	108,88%	104,03%	4,37	**54,67%**	6,795321377	**76,92%**	1,40	**63,28%**	64,32%
Landa R.	78,21%	106,96%	102,38%	8,41	**78,21%**	5,408202531	**68,87%**	1,91	**74,53%**	73,77%
Vyoral T.	72,00%	105,84%	101,43%	4,50	**55,72%**	5,899133435	**72,00%**	1,15	**56,27%**	60,89%
Jiřiček J.	77,87%	104,18%	99,92%	8,32	**77,87%**	5,767429234	**71,19%**	1,88	**73,94%**	74,28%
Bosák P.	79,92%	102,64%	98,43%	4,59	**56,47%**	7,440984375	**79,92%**	1,17	**56,89%**	63,56%
Bažant L.	69,51%	102,47%	98,18%	5,05	**59,93%**	3,608029239	**54,09%**	1,66	**69,51%**	60,85%
Linhart L.	58,46%	100,44%	96,12%	4,85	**58,46%**	2,743888368	**44,68%**	1,21	**57,95%**	53,29%
Kaša J.	59,53%	100,84%	96,25%	4,03	**51,83%**	4,192591999	**59,53%**	0,90	**47,67%**	52,79%
McClain A.	96,87%	113,11%	107,67%	19,12	**96,87%**	12,33222197	**93,01%**	3,28	**90,44%**	93,40%
Cvetinović N.	84,74%	112,57%	107,76%	10,38	**84,74%**	6,590801259	**75,88%**	1,27	**59,65%**	72,66%
Geiger D.	91,30%	111,47%	107,38%	4,28	**53,97%**	11,31876271	**91,30%**	1,18	**57,21%**	65,57%
Henderson E.	78,44%	105,42%	102,21%	8,47	**78,44%**	5,783532319	**71,29%**	2,05	**76,92%**	75,49%
Dygrýn O.	73,25%	105,99%	102,99%	7,28	**73,25%**	5,792355426	**71,35%**	1,80	**72,51%**	72,36%
Šmíd F.	72,26%	105,60%	102,94%	7,08	**72,26%**	3,705154518	**55,04%**	1,14	**55,73%**	60,52%
Maric P.	67,90%	104,26%	102,00%	6,27	**67,90%**	4,917442295	**65,39%**	1,21	**58,07%**	63,65%
Zachrla R.	66,04%	104,70%	102,73%	5,96	**66,04%**	4,953758405	**65,66%**	1,03	**52,20%**	60,95%
Semerád M.	56,14%	102,16%	100,69%	4,55	**56,14%**	3,477186352	**52,78%**	1,03	**52,19%**	53,67%
Šiška O.	55,84%	102,12%	100,78%	4,20	**53,31%**	2,944517577	**47,03%**	1,14	**55,84%**	51,92%
Lenhart O.	64,05%	101,15%	100,02%	5,65	**64,05%**	3,986524611	**57,69%**	1,29	**60,38%**	60,65%

ANNEX F: PLAYER RATINGS

Tým	Jmeno	Obrana	Vzduch	Kreativita	Útok	Kontrola	RTG
USTI NAD LABEM	Mitchell K.	86	61	100	91	85	**92**
USTI NAD LABEM	Lewis Jr. V.	80	89	71	65	65	**84**
USTI NAD LABEM	Šteffel D.	69	79	65	74	68	**78**
USTI NAD LABEM	Steffeck M.	82	73	64	75	56	**69**
USTI NAD LABEM	Krakovič J.	69	71	46	46	63	**65**
USTI NAD LABEM	Bowden S.	40	43	70	74	55	**60**
USTI NAD LABEM	Žampach A.	55	61	59	37	66	**52**
USTI NAD LABEM	Emerson A.	50	51	60	56	52	**49**
USTI NAD LABEM	Bejček J.	33	40	72	29	69	**36**
USTI NAD LABEM	Hejl V.	58	44	26	37	55	**33**
USTI NAD LABEM	Slunečko M.	68	46	60	16	64	**31**
USK PRAHA	Chán A.	62	83	65	83	62	**89**
USK PRAHA	Slavík J.	61	78	60	75	72	**75**
USK PRAHA	Votroubek S.	69	81	80	70	68	**74**
USK PRAHA	Feštr L.	47	47	91	75	68	**74**
USK PRAHA	Šotnar M.	39	47	98	60	86	**70**
USK PRAHA	Mareš M.	43	44	66	79	64	**66**
USK PRAHA	Grunt P.	60	67	37	62	62	**60**
USK PRAHA	Křivánek J.	45	62	67	40	65	**55**
USK PRAHA	Štěrba J.	70	62	19	47	45	**44**
USK PRAHA	Vocetka M.	65	42	50	52	60	**42**
USK PRAHA	Fait D.	46	52	33	52	46	**38**
USK PRAHA	Šafarčík P.	12	45	60	52	55	**27**
SVITAVY	Kornowski K.	58	83	74	82	82	**90**
SVITAVY	Kyles D.	79	70	78	86	67	**86**
SVITAVY	Špaček J.	80	65	72	82	69	**74**
SVITAVY	Davis J.	77	83	54	59	74	**73**
SVITAVY	Jelínek J.	77	81	55	71	57	**71**
SVITAVY	Macela T.	67	47	83	63	69	**62**
SVITAVY	Sedlák J.	49	65	38	66	64	**61**
SVITAVY	Teplý T.	43	40	72	69	76	**60**
SVITAVY	Peterka O.	62	62	73	50	64	**56**
SVITAVY	Moravec L.	64	37	74	54	58	**49**
SVITAVY	Šindelář L.	55	57	36	43	55	**43**
SVITAVY	Sehnal M.	13	44	19	58	45	**34**
SVITAVY	Andres P.	62	40	66	38	55	**33**
PROSTEJOV	Slezák P.	70	53	93	88	81	**86**
PROSTEJOV	Kohout O.	79	84	59	81	62	**84**
PROSTEJOV	Nečas R.	82	88	84	44	66	**82**
PROSTEJOV	Pandula D.	80	70	77	81	65	**81**
PROSTEJOV	Bohačík J.	72	62	83	78	73	**79**
PROSTEJOV	Švrdlík K.	73	78	65	70	65	**78**
PROSTEJOV	Marko R.	73	54	84	68	64	**69**
PROSTEJOV	Kratochvíl J.	67	72	56	56	54	**54**
PROSTEJOV	Bratčenkov V.	82	56	41	61	51	**53**
PROSTEJOV	Prášil J.	58	48	62	60	64	**45**
PROSTEJOV	Polášek R.	44	40	60	39	47	**0**
PARDUBICE	Nelson T.	69	84	52	96	63	**90**

PARDUBICE	Muirhead C.	84	78	76	76	69	**86**
PARDUBICE	Pospíšil Z.	79	81	58	67	67	**79**
PARDUBICE	Sanders L.	73	54	94	76	70	**78**
PARDUBICE	Peterka M.	65	78	50	78	58	**77**
PARDUBICE	Bohačík P.	52	79	40	77	59	**77**
PARDUBICE	Kotas L.	76	53	83	56	69	**64**
PARDUBICE	Šoukal T.	65	78	39	53	48	**63**
PARDUBICE	Čarnecký M.	66	37	89	54	70	**61**
PARDUBICE	Příhonský J.	55	51	53	52	52	**44**
PARDUBICE	Půlpán V.	89	51	76	34	62	**44**
PARDUBICE	Faifr S.	65	59	24	57	49	**42**
PARDUBICE	Šoula J.	49	61	25	43	44	**33**
OSTRAVA	Folker A.	55	86	43	88	68	**85**
OSTRAVA	Pelikán R.	86	91	53	70	71	**85**
OSTRAVA	Willman J.	64	76	87	81	77	**83**
OSTRAVA	Ruach T.	74	59	93	77	72	**78**
OSTRAVA	Číž A.	66	55	97	69	78	**77**
OSTRAVA	Jurečka L.	69	49	69	70	73	**67**
OSTRAVA	Alič A.	59	53	70	75	58	**66**
OSTRAVA	Zbránek F.	65	45	54	70	59	**58**
OSTRAVA	Stehlík J.	66	59	58	55	59	**49**
OSTRAVA	Medvecký M.	41	52	19	17	36	**5**
OPAVA	Blažek J.	52	77	77	89	83	**90**
OPAVA	Širina J.	83	52	95	83	70	**84**
OPAVA	Gniadek M.	75	79	68	77	68	**79**
OPAVA	Sokolovský L.	85	67	92	70	78	**76**
OPAVA	Cvek V.	75	76	61	57	68	**71**
OPAVA	Kramný R.	63	85	31	71	49	**65**
OPAVA	Vlček K.	77	63	69	47	58	**61**
OPAVA	Dukanovič M.	47	36	65	76	65	**60**
OPAVA	Dokoupil P.	45	27	71	74	63	**54**
OPAVA	Klečka R.	83	42	70	55	55	**52**
OPAVA	Palát M.	27	44	41	46	46	**41**
OPAVA	Tóth L.	65	68	52	23	51	**38**
NYMBURK	Simmons T.	83	72	98	95	80	**93**
NYMBURK	Mahalbašič R.	69	92	84	96	64	**93**
NYMBURK	Rančík R.	74	69	90	94	81	**90**
NYMBURK	Pomikálek T.	71	83	75	82	71	**87**
NYMBURK	Houška P.	67	80	70	87	62	**86**
NYMBURK	Page D.	60	77	79	90	64	**85**
NYMBURK	Benda P.	64	77	72	68	64	**85**
NYMBURK	Rančík M.	68	82	80	79	69	**83**
NYMBURK	Hruban V.	85	60	85	84	69	**83**
NYMBURK	Kříž M.	73	82	77	68	72	**80**
NYMBURK	Ilievski V.	90	54	97	50	74	**73**
NYMBURK	Massamba T.	65	49	97	57	79	**70**
NYMBURK	Welsch J.	80	59	92	50	72	**70**
NYMBURK	Palyza L.	46	58	65	81	66	**68**
KOLIN	Field R.	82	80	74	73	72	**81**

KOLIN	Machač D.	49	72	56	78	67	**77**
KOLIN	Zuzák S.	60	72	56	74	72	**73**
KOLIN	Horák L.	50	76	52	72	67	**68**
KOLIN	Lewis J.	69	54	84	72	61	**67**
KOLIN	Ličartovský Š.	65	47	75	74	58	**62**
KOLIN	Barnes C.	17	64	87	62	64	**59**
KOLIN	Djukanovič D.	69	52	85	22	75	**51**
KOLIN	Sýkora M.	53	65	50	38	71	**50**
KOLIN	Harčár P.	42	48	8	34	45	**33**
KOLIN	Holý P.	69	42	24	35	38	**10**
JINDRICHUV HRADEC	Laroche H.	82	70	99	82	81	**89**
JINDRICHUV HRADEC	Tracey B.	74	82	68	86	70	**87**
JINDRICHUV HRADEC	Ringgold M.	74	87	49	81	62	**80**
JINDRICHUV HRADEC	Novák P.	74	77	61	69	75	**73**
JINDRICHUV HRADEC	Hall F.	59	81	53	59	52	**73**
JINDRICHUV HRADEC	Vošlajer T.	69	81	65	62	70	**70**
JINDRICHUV HRADEC	Fröhde M.	59	63	81	60	74	**55**
JINDRICHUV HRADEC	Aušprunk K.	75	75	44	53	61	**55**
JINDRICHUV HRADEC	Rolls M.	63	36	84	63	60	**53**
JINDRICHUV HRADEC	Pavlík J.	51	39	77	59	69	**48**
JINDRICHUV HRADEC	Sahan F.	69	66	6	32	54	**43**
JINDRICHUV HRADEC	Čech J.	44	57	43	24	56	**34**
JINDRICHUV HRADEC	Melski A.	56	55	45	50	46	**32**
JINDRICHUV HRADEC	Novák M.	64	64	21	29	47	**23**
JINDRICHUV HRADEC	Kysela J.	44	33	39	28	46	**17**
JINDRICHUV HRADEC	Vach R.	62	47	55	24	52	**12**
DECIN	Bartoň L.	81	82	86	84	72	**89**
DECIN	Houška J.	86	86	55	78	63	**81**
DECIN	Soukup M.	80	84	56	70	68	**79**
DECIN	Venta M.	71	49	95	75	72	**77**
DECIN	Stria L.	63	55	90	77	70	**77**
DECIN	Landa R.	75	78	40	69	66	**76**
DECIN	Vyoral T.	56	56	94	72	71	**73**
DECIN	Jiřiček J.	74	78	63	71	57	**71**
DECIN	Bosák P.	57	56	57	80	53	**64**
DECIN	Bažant L.	70	60	53	54	57	**58**
DECIN	Linhart L.	58	58	56	45	54	**44**
DECIN	Kaša J.	48	52	28	60	47	**37**
BRNO	McClain A.	90	97	47	93	85	**95**
BRNO	Cvetinović N.	60	85	66	76	68	**90**
BRNO	Geiger D.	57	54	94	91	73	**89**
BRNO	Henderson E.	77	78	31	71	52	**74**
BRNO	Dygrýn O.	73	73	76	71	64	**74**
BRNO	Šmíd F.	56	72	60	55	65	**66**
BRNO	Maric P.	58	68	46	65	54	**61**
BRNO	Zachrla R.	52	66	63	66	55	**60**
BRNO	Semerád M.	52	56	57	53	56	**54**
BRNO	Šiška O.	56	53	65	47	57	**51**
BRNO	Lenhart O.	60	64	17	58	47	**45**