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“ **Money scoring goals** ”

Forecasting the European Football Championship 2012

- According to the idea of "money scoring goals", a national team's strength is reflected by the market values of its individual players. Based on this criterion and using data from www.transfermarkt.de, Spain is the undisputed title favorite with a team value of EUR 658mn. The Spanish team is also homogenous across sections with the most valuable goalkeeper, defense and midfield.
- In the semi finals, we are looking forward to two genuine classic matches: Portugal (EUR 338mn) versus Spain and Germany (EUR 459mn) playing against England (EUR 392mn). In our view, France (EUR 340mn), Italy (EUR 296mn), Russia (EUR 162mn) and the Czech Republic (EUR 101mn) will make it to the quarter finals.
- Our portfolio analysis indicates that the *Équipe Tricolore* and the *Squadra Azzura* look attractive for risk-off (and betting) football fans, even offering a "free lunch" compared to Portugal.
- In our clients' corner, we play the ball to some of UniCredit's valued pan-European clients. They comment on our results and provide a lot more to think about when it comes to football and the participating countries.
- Enjoy, and let us hope that the "best" team wins!

Acknowledgements

First and foremost, I would like to heartily thank UniCredit clients for providing us with their insightful perspectives on the upcoming Euro 2012 championship. Every time, a new comment arrived in my mailbox in the last few days, I immediately started reading it. Very often I laughed aloud and wondered at yet another new perspective I hadn't thought of. To be sure, the comments would not have been written without UniCredit people asking clients and establishing contacts. So many of my colleagues supported me that I will not try to list all the names. In any case, their efforts are much appreciated. To get the ball rolling in the beginning, UniCredit's top management gave the go-ahead and we cheerfully got on with it.

I also wish to extend thanks to my research colleagues, our English editor and the publication office. While my highly esteemed colleagues analyzed such interesting things as business cycle patterns and interest rates, I had the pleasure of being immersed in European football land. I marveled at the declining market value of Fernando Torres, thought about 4-3-3 versus 4-2-3-1 and the impact of superstars on the performance of national teams. When I had a question, I simply asked my colleagues who were always eager to help. But I couldn't escape the feeling that they envied me a lot recently.

Last but definitely not least I would like to thank the people at www.transfermarkt.de from whose site I obtained the market value data and other valuable information. When I asked them whether I could use the data they gave the green light. English and Italian speaking football fans can refer to www.transfermarkt.co.uk and www.transfermarkt.it.

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Executive Summary

Football fans are really looking forward to the 2012 European Championship, which takes place from 8 June to 1 July, hosted by Poland and Ukraine. Naturally, the most hotly disputed question is which team will win the cup. Our preferred forecasting model is based on the idea of "money scoring goals". Accordingly, a national team's strength is adequately reflected by the market values of its individual players. The higher the transfer prices paid by clubs, the greater the players' abilities on the football field. According to this criterion and based on data obtained from www.transfermarkt.de, Spain is the undisputed title favorite with a team value of EUR 658mn. If the Spanish team were to win, it would be the first European national team ever to win three major tournaments in a row, having won Euro 2008 and the World Cup in 2010. Our model also suggests that the two semi-final matches will be genuine classics: Portugal (EUR 338mn) versus Spain, and Germany (EUR 459mn) playing against England (EUR 392mn), with France (EUR 340mn), Italy (EUR 296mn), Russia (EUR 162mn) and the Czech Republic (EUR 101mn) making it to the quarter finals. Spain is not only the most valuable team as a whole but is also very homogenous across sections. It ranks number one in the goalkeeper, defense and midfield categories. Only Portugal's and England's forward sections, with superstars Ronaldo and Rooney, are more valuable than the Spanish one. In addition, we conducted a portfolio analysis by calculating a risk-return profile for each team. Our risk measure is the standard deviation of the market values of the individual players. The return equals the average market value of a team (per player). Accordingly, France and Italy look attractive for risk-off (and betting) football fans, even offering a "free lunch". Both the *Équipe Tricolore* and the *Squadra Azzura* have a similar average return compared to Portugal but with a far lower risk. From a risk-return perspective, one should also prefer Russia over Croatia and Ukraine over Sweden. Ireland and Greece look more attractive than Denmark and Poland. We briefly discuss to what extent superstar effects and transfer market bubbles may distort our calculations. Some thoughts on the role of football coaches and the home advantage of Poland and Ukraine conclude our analysis, before playing the ball to some of UniCredit's valued pan-European clients. In our clients' corner, you will find comments on our results and a lot more to think about when it comes to football and the participating countries. Enjoy, and let us hope that the "best" team wins!

"Razem tworzymy przyszłość."

"Терпимо імпію пазом."

"Creating history together", logo of Euro 2012 in Polish and Ukrainian

I. Kick-off

A thrill of anticipation and excitement has been building among European football fans in the last couple of weeks. This is little wonder! Fans are looking forward to the 2012 UEFA European Football Championship, to be held from 8 June to 1 July in Poland and Ukraine. It is only the second time that a European tournament will be played in CEE after being hosted by former Yugoslavia in 1976 (see table 1). It will be the 14th European Championship, with 16 national football teams: the Czech Republic, Croatia, Denmark, England, France, Germany, Greece, Ireland, Italy, the Netherlands, Poland, Portugal, Russia, Spain, Sweden and Ukraine.¹ Twelve of these nations participated 4 years ago. England and Denmark will return after failing to qualify for the 2008 championship. Ireland managed to qualify for a European

¹ From 2016 onwards, there will be 24 nations participating in the final tournament.

tournament for only the second time in its history after being absent for 24 years. Ukraine, qualifying as co-host, will make its debut as an independent nation having previously won in 1960 as part of the Soviet Union.

TABLE 1: EUROPEAN FOOTBALL CHAMPIONSHIPS

Year	European champion	Host country	Final	Result
2008	Spain	Austria and Switzerland	Spain – Germany	1:0
2004	Greece	Portugal	Greece – Portugal	1:0
2000	France	Netherlands and Belgium	France – Italy	2:1
1996	Germany	England	Germany – Czech Republic	2:1
1992	Denmark	Sweden	Denmark – Germany	2:0
1988	Netherlands	Germany	Netherlands – USSR	2:0
1984	France	France	France – Spain	2:0
1980	Germany	Italy	Germany – Belgium	2:1
1976	CSSR	Yugoslavia	CSSR – Germany	5:3*
1972	Germany	Belgium	Germany – USSR	3:0
1968	Italy	Italy	Italy – Yugoslavia	1:1 and 2:0**
1964	Spain	Spain	Spain – USSR	2:1
1960	USSR	France	USSR – Yugoslavia	2:1

*on penalties; ** replay; source: Wikipedia, UniCredit Research

Do you want to know anything else? We bet you do. Naturally, every football fan is interested in the question of which team will win Euro 2012. Forecasting the outcome of football tournaments has always been one of the most enjoyable but difficult tasks in recent human history. Inevitably, methods and forecasts differ widely with sometimes surprising actors and accuracy.

Two years ago, during the World Cup in South Africa, an octopus named Paul caused a furor among German football fans. In his tank, Paul was presented with two boxes each marked with the flag of one of the football teams (Germany and the opposing team) and – of course – containing identical food. The box Paul chose first was interpreted by spectators as choosing the winner. Believe it or not, the octopus "forecast" the correct outcome in all seven matches in which Germany participated. In addition, he managed to choose Spain against the Netherlands in the final. Unfortunately, Paul died in October 2010.

More seriously, a good alternative to believing in a magic octopus is asking football experts across European countries. We did exactly this by using UniCredit's pan-European client network. At the end of our analysis, you will find excellent arguments, forecasts and a lot more to think about when it comes to football and the various participating countries. Before making your bet, you should really read this!

Maybe you're now wondering where economics and all that stuff come into play. To be sure, economists are big football fans, too. In the last couple of years, they have been looking systematically for variables explaining international football performance. Apart from having fun like everyone else, the question is an intellectually interesting one. Can football success be forecast in any consistent and rational way? And what are the factors behind it? Some economists have used "classic" macroeconomic variables like GDP per capita to explain differences in national team performance (see box 1). While acknowledging the benefits of such traditional macro models, we will present another maybe even more promising approach. It is based on market values of national teams, thereby reflecting the simple but appealing idea of "money scoring goals".

Box 1: "Macroeconomics-driven" football research

Some economists identified macroeconomic variables to explain differences in football success across nations. Examples are the studies conducted by Hoffmann, Ging and Ramasamy (2002) and Torgler (2006).² These authors found that real GDP per capita – as a proxy for the physical and organizational infrastructure of football in each country – positively influences international performance. However, success is subject to the law of diminishing marginal return. Performance rises in line with higher GDP per capita but at a decreasing rate. After a certain point, additional increases in income may even negatively impact international football success. One major reason is that, with rising income, kids (or rather, their parents) can afford to purchase electronic toys for entertainment instead of practicing on the football field. The shift from outdoor to indoor activities then leads to a loss in human (football) capital and weighs on the national team's performance. According to Torgler (2006), the "optimal" level of GDP per capita is USD 18,980. Hence, apart from Ukraine (USD 3,621 in 2011), Russia (USD 12,993), Poland (USD 13,540) and Croatia (EUR 14,457), all countries participating at Euro 2012 already exceed this threshold.

"Football today is a highly efficient market in which players' past, present, and particularly future skill levels are revealed in the form of the prices teams pay to 'buy' the players."

Jürgen Gerhards and Gert C. Wagner (2010)³

II. The "money scoring goals" approach

"Money scoring goals" means that a national team's strength is best reflected by the market values of its individual players. Assume that a player's transfer between two clubs takes place. The higher the price paid for a player, the greater his abilities on the football field are deemed to be (see also box 2). Economists' "iron" law of supply and demand can therefore also be applied to the football transfer market. This intuitive approach was developed by Professors Jürgen Gerhards and Gert C. Wagner and has already been used with some remarkable success in the past. The outcomes of World Cups 2006 and 2010 with Italy and Spain as champions were forecast correctly. The same is true for the last European Championship four years ago (Spain).

We think that there are two major reasons why the idea of "money scoring goals" is so appealing as a forecasting exercise. First, football clubs have become more and more commercial with transfer sales of players having increased enormously. Fans may like it or not but all of us should be aware that football is not only fun but also serious business. A few numbers may illustrate this. As can be seen in chart 1, total transfer turnover (sales plus purchases) in both the English Premier League and the Italian Serie A was more than EUR 1,000mn last season. This compares to about EUR 700mn in the Spanish Primera División and EUR 400mn in the German Erste Bundesliga. From an economist's perspective, the transfer market is therefore a deep and liquid one, reliably reflecting the forces of supply and demand.

Second, football has probably become the most globalized sport, with huge "exports" and "imports" of players taking place. One important trigger was the Bosman ruling by the European Court of Justice in December 1995. The commonly used transfer system at the time was regarded as not being in accordance with European law, as it placed severe limits on the op-

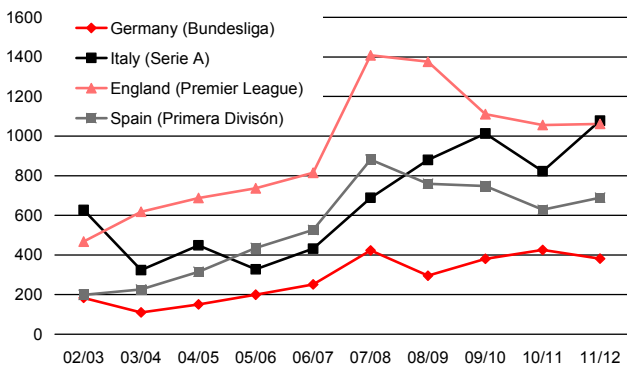
² Hoffmann, R., L.C. Ging and B. Ramasamy, The socio-economic determinants of international soccer performance, *Journal of Applied Economics*, Vol. V, No. 2, 2002 and Torgler, B., Historical Excellence In Soccer World Cup Tournaments: Empirical evidence With Data From 1930 To 2002, *Rivista Di Diritto Ed Economia Dello Sport*, Vol. 2, 2006.

³ Gerhards, J. and G.G. Wagner, Money Predicted Spain as Football World Champion, *Weekly Report No. 25/2010*, German Institute for Economic Research, Berlin, p. 193f.

erations of a free market. The new ruling extended players rights of contractual freedom and enhanced the free flow of football talent within the EU. Since then, the mobility of players across countries has increased markedly. An economist would put it this way: the Bosman-ruling marked a regime shift in football, as we moved from a situation of almost no international trade in players to a free (European) market. Understandably, players tend to go to clubs where they can command the highest salaries and earn the most money.⁴ In the 2011/12 season, nearly 64% of players in the English Premier League came from outside England. In the German Erste Bundesliga the share of foreign players was about 49%. In the Italian Serie A this figure was 48% (French Ligue 1: 42%; Spanish Primera División: 37%).⁵

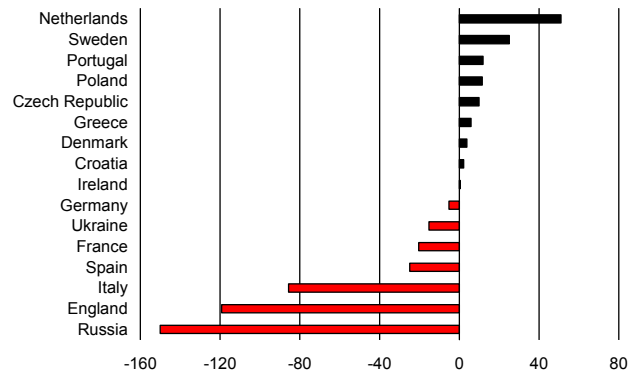
Interestingly, when looking at recent international transfer flows, there are significant differences across the 16 participating European countries (see chart 2). For instance, the Netherlands was the biggest "exporter" of football players in the 2011/12 season with net exports amounting to more than EUR 50mn. Sweden (EUR 25mn), Portugal and Poland (with EUR 12mn each), the Czech Republic (EUR 10mn), Greece (EUR 6mn), Denmark (EUR 4mn) and Croatia (EUR 3mn) also recorded international transfer surpluses. Notably, Portugal and Greece catch the eye, since they turn the classic macroeconomic picture of these two countries with current account deficits on its head. The same unorthodox message can be derived for Germany. With minus EUR 5mn, its football trade balance was slightly negative in the last season! By far the biggest net importers were Italy (EUR 86mn), England (EUR 119mn) and Russia (EUR 150mn).

Chart 1 – Total transfer turnover (sales plus purchases) by football league, in EUR mn



Source: www.transfermarkt.de, UniCredit Research

Chart 2 – International net transfer sales by football league (season 2011/12), in EUR mn



Source: www.transfermarkt.de, UniCredit Research

Among football researchers, the implications of these huge trade imbalances on the performance of national teams remain hotly disputed. As is nearly always the case when economists are involved, there are two opposing camps. Pessimists think that international player migration causes a "leg drain", as it directly leads to a loss of human capital in the origin countries. Furthermore, it may limit the development of players in countries that import superstars. The result could be a classic crowding-out effect, damaging the quality of the national team. Optimists point out that international trade in football talent is beneficial for countries with a below-average league. By playing against better competition, migration allows players to improve their skills and increase their human capital. This positive effect rises with the difference in

⁴ If you are interested in more details about the Bosman ruling and its consequences, please refer to Binder, J.J. and M. Findlay, *The Effects of the Bosman Ruling on National and Club Teams in Europe*, *Journal of Sports Economics*, Vol. 13, April 2012.

⁵ These data are provided by www.transfermarkt.de.

quality between the foreign leagues and the domestic league. Hence, countries with lower football standards get the opportunity to produce good or even excellent national teams.⁶

Box 2: Market value data

Market values were obtained from the webpage www.transfermarkt.de. It is important to note that these data are not actual valuations but those estimated by football fans. This approach has both advantages and disadvantages. One major advantage is that estimated market values can reflect the latest available information. In contrast, market values based on actual transfers could be outdated, as transfers may have occurred months or even years ago. To give an example, Spanish top-scorer Fernando Torres was purchased from Chelsea for EUR 58.5mn in January 2011. Currently, he is estimated to be worth "only" EUR 35mn and hence 40% less. Admittedly, and of course, using estimated data entails the risk of making mistakes. In more technical terms, the estimated market value y consists of the "true" fundamentally based component x (which may not be observable in a timely manner) and an error term ε :

$$y_i = x_i + \varepsilon_i$$

However, this is only a serious problem for our analysis if mistakes occur systematically. If errors are randomly dispersed across players and teams, they cancel each other out. For instance, football fans may now underestimate Fernando Torres' abilities but may overestimate the market value of Andrés Iniesta, who is currently found to be worth EUR 65mn.⁷ Recent academic football research concluded that the market values used are reliable. According to Bryson, Frick and Simmons (2009), the correlation between estimated market values and actual salaries in the German Bundesliga is comparatively high. In line with the human capital theory, the better a football player plays, the more he should earn.⁸

III. Overall team strength

Based on the criterion of "money scoring goals", Spain is the undisputed title favorite with a team value of EUR 658mn when taking all 23 players into account (see chart 3). It is followed by Germany (EUR 459mn), England (EUR 392mn), France (EUR 340mn), Portugal (EUR 338mn), Italy (EUR 296mn), the Netherlands (EUR 277mn) and Russia (EUR 162mn). Croatia ranks No. 9 with EUR 153mn followed by Sweden (EUR 123mn), Ukraine (EUR 107mn), the Czech Republic (EUR 101mn), Denmark (EUR 87mn), Poland (EUR 85mn), Greece (EUR 84mn), and Ireland (EUR 71mn).

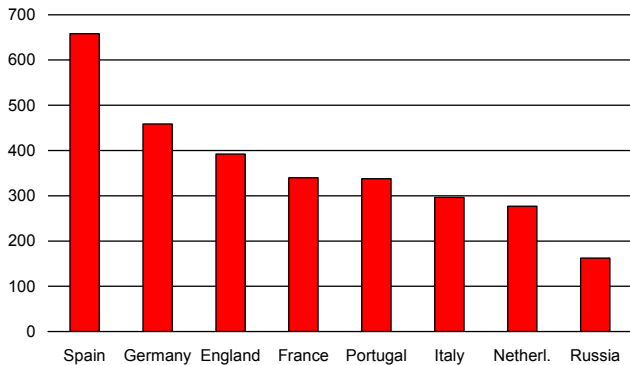
If you are interested in single market values of players or additional statistics (experience in national team, age, goals scored, club team, etc.), please refer to the statistical annex at the end of our analysis. For each country you can find a one-pager which enables a quick overview or, if you like, a more detailed look at the statistics.

⁶ See Berlinschi, R., J. Schokkaert, Swinnen and J.F.M. Swinnen, *When Drains and Gains Coincide: Migration and International Football Performance*, LICOS Centre for Institutions and Economic Performance, University of Leuven, September 2011 and Milanovic, B., *Globalization and goals: Does soccer show the way?*, Carnegie Endowment for International Peace, December 2003.

⁷ Spanish football fans should please note that this is only a hypothetical example for illustration!

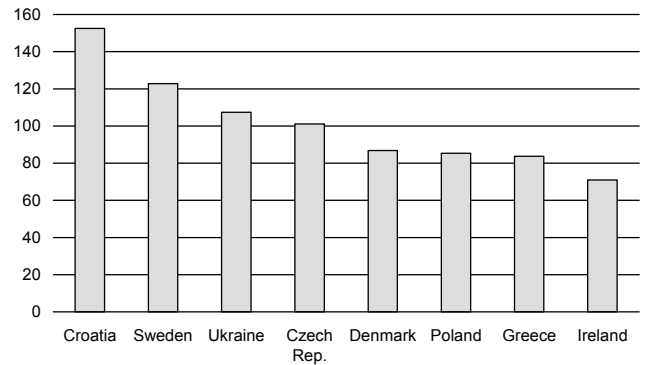
⁸ Bryson, A., B. Frick and R. Simmons, *The Returns to Scarce Talent: Footedness and Player Remuneration in European Soccer*, CEP Discussion Paper No 948, September 2009. However, there might be superstar effects making the human capital theory less reliable. We will deal with this problem in chapter VI.

Chart 3 – Most valuable teams by country (23 players), in EUR mn



Source: www.transfermarkt.de, UniCredit Research

Chart 4 – Least valuable teams by country, in EUR mn



Source: www.transfermarkt.de, UniCredit Research

When focusing on overall team strength, Spain should retain its title. But what about the other teams making it to the semi finals or the final? This question not only depends on the market value of one team but also on the match schedule. For instance, Group B is called the "group of death", as it includes three heavyweights: Germany, Portugal and the Netherlands. According to the market-value approach, Germany and Portugal will make it to the quarter finals together with Russia, the Czech Republic, Spain, Italy, England and France (see table 2). The two semi-final matches will be Portugal-Spain and Germany-England. Well, if this proves to be correct, we can really look forward to two classic football matches! In line with the concept of "money scoring goals" (and Gary Lineker's famous saying which we do not quote here), Germany will make it to the final but will then lose.⁹

TABLE 2: COURSE OF EUROPEAN CHAMPIONSHIP ACCORDING TO TEAM-MARKET-VALUE APPROACH

Survivors first round				Quarter finals	Semi finals	Finals	Champion
Group A	Group B	Group C	Group D	Russia-Portugal	Portugal-Spain	Spain-Germany	Spain
1. Russia	1. Germany	1. Spain	1. England	Germany-Czech Republic	Germany-England		
2. Czech Republic	2. Portugal	2. Italy	2. France	Spain-France			
				England-Italy			
Knock-outs first round							
Group A	Group B	Group C	Group D				
3. Poland	3. Netherlands	3. Croatia	3. Sweden				
4. Greece	4. Denmark	4. Ireland	4. Ukraine				

Source: UEFA, www.transfermarkt.de, UniCredit Research

⁹ The outcome of Germany playing against England may be a close call, since "The Three Lion's" team value is "only" 15% lower. Luck could therefore play a considerable role. Just remember Lampard's shot against the bar in the first half of the two teams' last meeting in the round of 16 of the 2010 World Cup. The ball was behind the goal line which would have meant a 2:2 result. However, the referee decided otherwise. In the end, Germany won 4:1. At least Lampard cannot get Germany into a fix again, as he is not participating in the tournament, which is, of course, bad luck for England.

"You have to be eleven friends"

Sepp Herberger (1897-1977), World Champion 1954 as German national football coach

IV. Team work

Spain is clearly the favorite when simply aggregating the market values of the individual players. However, such a simple calculation may not entirely reflect the complexities of real football. Every fan knows how important team work is! A very good example of such complexities is the Spanish team. At least for some time, there has been much bad blood between the players of Real Madrid and Barcelona. Madrid's coach José Mourinho tried to install some kind of a "war mentality" in his players, thereby creating enormous tensions within the Spanish national team. Although things seem to have calmed down, the question remains whether the players can really put this rivalry behind them when representing their country.¹⁰

Besides such a rather unusual incident, there are further well-known examples of team work for illustration:

- Cristiano Ronaldo – worth EUR 90mn and hence the most valuable player participating in the European Championship 2012 – is definitely an outstanding forward. In the 2011/12 season, he played a total of 55 games for Real Madrid in which he scored an unbelievable 60 goals and made 17 assists. But in the Portuguese national team, Ronaldo can only be equally successful if he is sufficiently supported by his teammates as has been the case at Real Madrid.
- Even excellent goalkeepers like Iker Casillas of Spain (worth EUR 35mn) or Germany's Manuel Neuer (worth EUR 30mn) cannot prevent the opposing team from scoring if their team's defense has fallen asleep.
- To successfully apply the offside trap tactic, all defenders are required to display a high level of discipline in moving up together in a straight line. While a single defender cannot make the offside trap work, he may cause its failure all by himself. The "weakest link" can therefore dramatically endanger the whole team's success.

Looking at these examples illustrates that football success is not exclusively dependent on individual abilities but also on interaction among players. Team performance is therefore more than simply the sum of its parts. Besides the team members' task-relevant capabilities (goal-keeping, defense, midfield and attack), the intra-team talent composition matters as well. Economists developed sporting production functions to deal with this phenomenon. Accordingly, a football's team productivity (y) is a function of the sum (\sum) and the product (\prod) of positive individual playing abilities (x):¹¹

$$y_i = \alpha \sum_{p=1}^n x_{ip} + \beta \prod_{p=1}^n x_{ip} + \varepsilon_i$$

If players' abilities combine in a non-additive manner, β does not equal zero and interdependencies in team production matter. Please note that our productivity function also includes an idiosyncratic error (ε) which accounts for all the things that influence the outcome of a game in a non-systematic way. Examples are the home advantage of Poland and Ukraine, mistakes by referees and just sheer luck. We will deal with these issues in section VIII.

While the above-shown production formula may look impressive, it does not solve our prob-

¹⁰ For further details please refer to "No way José" in the Financial Times Weekend Magazine, 2 June 2012.

¹¹ Franck, E.P. and S. Nüesch, The Effect of Talent Disparity on Team Productivity in Soccer, Journal of Economic Psychology, Vol. 31, No.2, 2010.

lem of forecasting football success in reality. What is the impact of teamwork compared to having great individual players? Our answer is: We really do not know. As a matter of fact, it is extremely difficult, not to say impossible, to empirically disentangle these two effects.¹² However, there is no need to despair, since there are proxies available for teamwork and the intra-team talent composition.

Let us start with the exercise of comparing market values by team sections to uncover relative strengths and weaknesses. In order to keep it simple, we just focus on the most valuable goalkeeper, the four most valuable defenders, the three most valuable midfielders and the three most valuable forwards. Yes, we know what you're thinking now! Of course, not every team's tactic is 4-3-3. You can also see this in table 4 in section VII when we deal in more detail with the impact of football coaches on team success. While the Spanish coach Vicente del Bosque prefers an offensive 4-3-3, Germany's Joachim Löw is more in favor of 4-2-3-1. Furthermore, there is no guarantee that the most valuable players will make into the team. Finally, an offensive midfielder may also play as forward, thereby blurring the differences between separate team sections. But we think that our procedure sheds at least some light on the tricky issue of team composition.

As can be seen in table 3, for clarity we have highlighted the rankings in red when the differences are more than 2 ranks between the overall team strength and the various team sections. Our main findings are as follows:

- Spain is not only the most valuable team as a whole but is also very homogenous compared to other countries. It ranks number 1 in the goalkeeper, defense and midfield categories. Only Portugal's (EUR 113mn) and England's (EUR 99mn) forward sections are more valuable than the Spanish one (EUR 97mn) thanks to Ronaldo and Rooney. Market values of the German and the Dutch forward sections are also EUR 97mn.
- England's relative weakness is in the midfield (rank seven compared to an overall rank of third). The German and the French teams are comparatively homogenous across sections. Italy and Ukraine also show rather low intra-team talent disparity. This stands in stark contrast to Sweden, where the goalkeeper and defense are clearly weak spots and the Czech Republic and Poland, which have great goalkeepers compared to the quality of the rest of the team.
- The Netherland's big advantages are its excellent midfield and forward sections with Sneijder, van der Vaart, Robben, van Persie and Huntelaar (if they are really allowed to play together).

¹² Gerhards and Wagner (2010) argue that the impact of team play in national teams is lower than in club teams. Since the role of training and exercising set plays in the national team is inevitably less important due to limited time, we agree. But teamwork should nevertheless play a non-negligible role.

TABLE 3: MARKET VALUES BY MOST VALUABLE PLAYERS AND TEAM SECTIONS, IN EUR MN

	1 Goalkeeper		4 Defenders		3 Midfielders		3 Forwards	
	Market value	Ranking	Market value	Ranking	Market value	Ranking	Market value	Ranking
1 Spain	35.0	1	106.0	1	166.0	1	97.0	3
2 Germany	30.0	2	80.5	2	100.0	2	97.0	3
3 England	21.0	4	77.0	3	66.0	7	99.0	2
4 France	18.0	5	62.0	5	87.0	3	53.5	6
5 Portugal	12.0	8	77.0	3	73.0	5	113.0	1
6 Italy	16.0	7	59.5	6	70.0	6	52.5	7
7 Netherlands	9.0	10	28.5	8	74.0	4	97.0	3
8 Russia	17.0	6	23.0	11	42.0	9	32.5	9
9 Croatia	2.5	16	28.0	9	56.5	8	24.0	10
10 Sweden	4.0	13	13.6	16	25.0	10	48.0	8
11 Ukraine	6.0	11	19.0	13	22.0	12	24.0	10
12 Czech Republic	25.0	3	22.3	12	15.0	15	17.5	13
13 Denmark	5.0	12	27.0	10	23.5	11	10.3	16
14 Poland	12.0	8	15.3	15	15.3	14	18.8	12
15 Greece	3.5	14	29.0	7	14.8	16	11.0	15
16 Ireland	3.5	14	19.0	13	16.5	13	14.0	14

figures are rounded; source: www.transfermarkt.de, UniCredit Research

"In the future, the market value method should, however, incorporate UniCredit's improvement of including the overall distribution of the players' market values."
 Jürgen Gerhards and Gert C. Wagner (2010)¹³

V. Portfolio perspective

In this section, we are scaring football fans, of course with good and legitimate reason! Imagine the following situations. Portugal's Ronaldo is punching far below its weight, since his dribbling is without any success. He is getting more and more frustrated and will finally be substituted. Naturally, Ronaldo is furious and has a serious dispute with his coach, Paulo Bento. At the same time, English fans have also become quite desperate. Wayne Rooney was brutally fouled in the first game against France, knocking him out for the rest of the tournament. The Squadra Azzura is not making their fans happy, either. DeRossi received a red card after grumbling about the referee's decision and is now missing for three games. At the same time, Robert Lewandowski is not coming up to expectations and missing one scoring chance after another for Poland. The list could be continued. You certainly already guessed it. We are now talking about risks and their impact on team productivity and success.

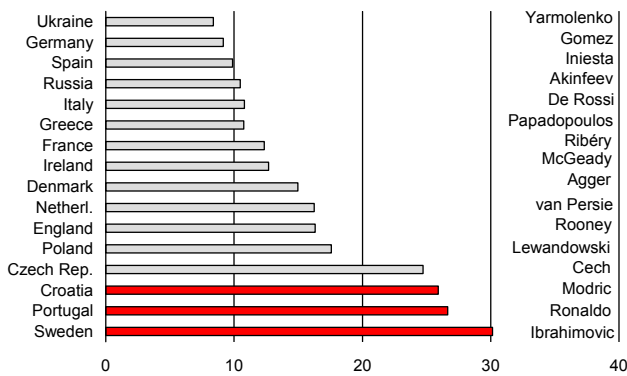
Our calculations show that the loss of the most valuable player would hit national teams to a significantly different degree. The actual playing capability of Sweden would suffer the most from the loss of their most valuable player, Ibrahimovic. The overall market value of Sweden's squad of 23 players would shrink by a very significant 30% (see chart 5). With losses of about 26% each, the market values of Portugal and Croatia are also very dependent on striker Ronaldo and midfielder Modric (Czech Republic: minus 25% due to its goalkeeper Cech). In contrast, the impact of the loss of Ukrainian player Yarmolenko on his team is the lowest among the 16 countries with only minus 8%. Italy could also get over losing De Rossi (-11%). The same is true for other countries like Germany, Spain, Russia, Greece, France and Ire-

¹³ Gerhards, J. and G.G. Wagner, Money Predicted Spain as Football World Champion, Weekly Report No. 25/2010, German Institute for Economic Research, Berlin, p. 197f.

land.¹⁴

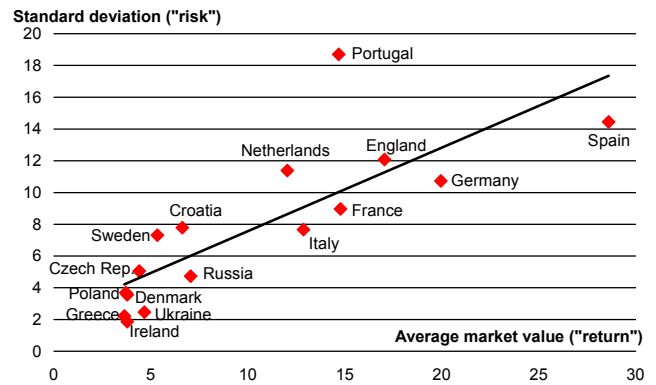
To obtain a statistically more sophisticated risk measure, we additionally calculated standard deviations of individual players' market values within each team. In line with classic portfolio theory, this was then expressed in relation to the return (see chart 6). The latter is equivalent to the average market value of a team (per player). Finally, a regression between both variables is estimated. All teams markedly situated above the regression line show an above-average risk-return ratio. These "high betas" are Portugal, the Netherlands, Croatia and Sweden. In case of Portugal, it is once again clearly a "Ronaldo effect". Excluding Ronaldo leads to a substantial reduction of the standard deviation from EUR 18.7mn to EUR 9.2mn. Hence, you should only place your bet on Portugal if you are in risk-on mode. In contrast, France and Italy look attractive for risk-off (and betting) football fans, even offering a "free lunch". Both the Équipe Tricolore and the Squadra Azzura have a nearly similar average return compared to Portugal but with a far lower risk. One should also prefer Russia over Croatia and Ukraine over Sweden. With about the same average market value, Russia has only nearly half the standard deviation of Croatia. Even more pronounced is the risk gap between Ukraine and Sweden. Both teams have an average return of about EUR 5mn. But Sweden's standard deviation is three times that of Ukraine! Clearly, these two effects are caused by Modric of Croatia (worth EUR 39mn) and Ibrahimovic of Sweden (EUR 37mn). Excluding the two players lowers the standard deviations substantially again. At least from a risk-return viewpoint, Ireland and Greece look more attractive than Denmark and Poland. Finally, what about Germany and good old England? The German team has a somewhat lower standard deviation but a higher average return, although the differences are comparatively small.

Chart 5 – Loss of team value on loss of most valuable player, in %



Source: www.transfermarkt.de, UniCredit Research

Chart 6 – Risk-return profile by national teams, in EUR mn



Source: www.transfermarkt.de, UniCredit Research

¹⁴ Baur and Lehmann (2007) analyze the effect of extreme individual market values of players on national teams. They find that rather the worst player determines the team performance than superstars. See Baur, D. and S. Lehmann, Does the Mobility of Football Players Influence the Success of the National Team?, Discussion Paper No. 21, Institute for International Integration Studies, April 2007.

"Football's a difficult business and aren't they prima donnas. But it's a wonderful game."
 Queen Elizabeth II to Premier League Chairman David Richards, November 2006

VI. Superstar effects and bubble risks

The underlying idea of "money scoring goals" is that prices adequately reflect supply and demand on international transfer markets. Put differently, transfer markets are efficient and prices always equal their fair values. However, and of course, this may not be true. For instance, if we look back at financial markets in the last 15 years as a yardstick, one may have doubts. At certain times at least, there have been inefficiencies and exaggerations. The same general caveat can also be applied to the market for football talent. A national team's market value may not automatically reflect genuine strength for two major reasons: superstar effects and bubbles.

More than 30 years ago, Sherwin Rosen published an influential article about superstars and their economic impact in the highly prestigious American Economic Review.¹⁵ Superstars are the few individuals in selected professions who enjoy exceptionally high popularity and salaries. Examples are rock stars, actors and people in professional sports. Consumers value their talent so highly that the money superstars earn is disproportionately larger than slightly lower performing individuals. With reference to football, fans may have the impression that specific players are highly imperfect substitutes who cannot be replaced at all. Certainly, purchasing such a superstar at an exorbitant price is not irrational but rather can make absolute sense for clubs. Media coverage of football matches and merchandising possibilities have increased enormously in recent years. As a result, superstars can attract large audiences and reach markets at a relatively low price, thereby creating enormous revenues for clubs.¹⁶

However, when coming to forecasting pure sports performance, the superstar phenomenon may lead to distortions. The problem is that both talent and popularity can contribute to a higher market value. All attempts to distinguish between these two components empirically, face the difficulty of measuring talent adequately. Let us make a – very unfair and exaggerated – example to illustrate the problem associated with superstars in our forecasting exercise.¹⁷ Assume that poor Cristiano Ronaldo is left by all of his teammates and has to play alone against Denmark (as scheduled in Group B with Denmark versus Portugal). Even if one takes into account all 23 Danish players, they are only worth EUR 87mn and hence less than Ronaldo (see chart 7). But would the superstar Ronaldo really win when playing alone against 11 Danish players? Of course not. Apart from Denmark's team play (see section IV), the differences in abilities between Ronaldo and some of the Danish players are probably less pronounced than reflected in market values.

Besides the risk of superstars distorting national team values to some extent, there is also another potential problem. The steadily rising market values of players in England, Spain and Italy could simply be a bubble and therefore be far higher than justified by fundamentals. There may at least be anecdotal evidence to support this. In the English Premier League, some football clubs purchased by billionaires such as Mansour bin Zayed Al Nahyan (Manchester City). In the last three seasons, Manchester City alone spent more than EUR 325mn (net) on transfers (see chart 8). Real Madrid ranks second with EUR 299mn, followed by Chelsea (EUR 206mn), Juventus (EUR 133mn) and Barcelona (EUR 121mn). Such purchases by rich or highly leveraged football clubs are not the only thing driving up the prices of top foreign players. A kind of suction effect may also increase market values of domestic Spanish and English football players. In this case, transfer prices are no longer a good reflection of playing abilities but merely an indication of bulging wallets. But unfortunately detecting bubbles before they burst is an ex-

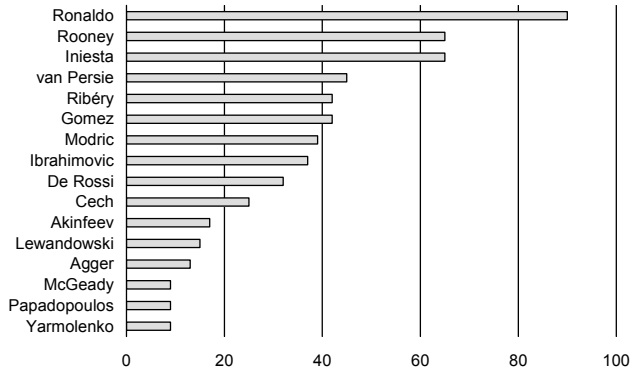
¹⁵ Rosen, S., *The Economics of Superstars*, *The American Economic Review*, Vol. 71, No. 5, December 1981.

¹⁶ Luciforca, C. and R. Simmons, *Superstar Effects in Italian Football: An Empirical Analysis*, February 2001.

¹⁷ Our apologies for making this comparison go to UniCredit's Global Chief Economist Erik F. Nielsen who is Danish.

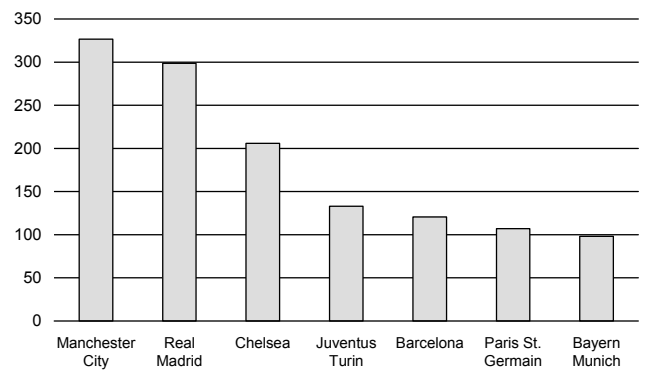
tremely tricky task. In the end, it remains a matter of belief. We'll leave it at that.

Chart 7 – Most valuable player for each country, in EUR mn



Source: www.transfermarkt.de, UniCredit Research

Chart 8 – Net transfer spending (expenditure minus revenues) by selected football clubs in the last three seasons, in EUR mn



Source: www.transfermarkt.de, UniCredit Research

"If I walked on water, my accusers would say it is because I can't swim."
Berti Vogts, German national football coach from 1990-1998

VII. Football coaches

So far, we have exclusively dealt with football players. But what about coaches, who may have an enormous impact on their teams' performance via choosing the right tactics and motivating players? If you believe in human capital theory, detecting managerial talent is a pretty easy task. The higher the salary, the better the football coach! While this sounds intuitive, there are empirical limits to this approach. To our knowledge, reliable and consistent data on salaries of European football coaches are not published. Furthermore, when it comes to coaching national teams, there seems to be some kind of a nationality issue. Only 3 of 16 European coaches are from foreign countries (see table 4): Fernando Santos, the Greek coach, is Portuguese; Dick Advocaat from the Netherlands is head coach of Russia; and Giovanni Trapattoni, an Italian, coaches the Irish team. Hence, the market for national football coaches is obviously less influenced by supply and demand than the one for players.

Finally, even if we had reliable data on salaries and perfect markets, there would really remain the question of causality. Let us make an example. Vicente del Bosque has performed exceptionally well. Since becoming national football coach for Spain in 2008, he has recorded an unbelievable 2.58 points per match on average (the so-called PPM; see table 4) with 2.49:0.74 goals. Bert van Marwijk (Netherlands) ranks second with a PPM of 2.27, followed by Joachim Löw (2.21). However, are these three guys really outstanding coaches or do they simply have great players at hand? Maybe it is a mix of both. As with superstar effects and bubble risks, we will leave it up to you to decide.

TABLE 4: COACH STATISTICS

Country	Coach	Since	Nationality	Age	Preferred formation	Matches	PPM*	Goals	Deployed players
Spain	Vicente del Bosque	July 2008	Spanish	61	4-3-3	53	2.58	2.49:0.74	48
Netherlands	Bert van Marwijk	July 2008	Dutch	60	4-3-3	48	2.27	2.15:0.77	56
Germany	Joachim Löw	June 2006	German	52	4-2-3-1	78	2.21	2.46:0.87	78
France	Laurent Blanc	July 2010	French	46	4-3-3	22	2.18	1.50:0.55	46
Sweden	Erik Hamrén	November 2009	Swedish	54	4-2-3-1	24	2.17	2.50:1.08	57
Croatia	Slaven Bilic	July 2006	Croatian	43	4-4-2	57	2.16	1.91:0.95	50
Portugal	Paulo Bento	September 2010	Portuguese	42	4-3-3	15	2.07	2.25:0.75	32
Greece	Fernando Santos	July 2010	Portuguese	57	4-3-3	21	2.00	1.14:0.62	47
Italy	Cesare Prandelli	July 2010	Italian	54	4-4-2	19	1.95	1.47:0.53	47
Russia	Dick Advocaat	May 2010	Dutch	64	4-5-1	20	1.85	1.20:0.50	41
Ireland	Giovanni Trapattoni	May 2008	Italian	73	4-4-2	41	1.78	1.41:0.80	49
Ukraine	Oleg Blokhin	April 2011	Ukrainian	59	4-4-2	11	1.73	1.69:1.38	41
Denmark	Morten Olsen	July 2000	Danish	62	4-5-1	83	1.70	1.57:1.04	104
Poland	Franciszek Smuda	October 2009	Polish	63	4-2-3-1	32	1.56	1.25:1.16	74
Czech Republic	Michal Bilek	October 2009	Czech	47	4-3-3	23	1.52	1.52:1.13	46
England	Roy Hodgson	May 2012	British	64	4-4-2	1	3.00	1.00:0.00	17

*points per match; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

"We lost because we didn't win."

Ronaldo, Brazilian football player and World Champion 2002

VIII. Home advantage and just sheer luck

There are of course further unknown quantities in determining football success. Maybe you have already wondered about the performance of the host countries, Poland and Ukraine. In terms of market value, the two teams are below average. The Polish team is worth EUR 85mn; the Ukrainian team EUR 107mn. However, and clearly, they also have the home advantage which may compensate for this shortcoming. According to a meta-analysis by Courneya and Carron (1992), the home advantage in football is usually greater than in other sports.¹⁸ Apart from being more familiar with the venue, Poland and Ukraine benefit from the support of their fans. The crowd could inspire both teams to a performance beyond the achievements one would expect in line with "money scoring goals".

What about just sheer luck? Admittedly, this may play an important role as well. This is especially true, since Euro 2012 is a knock-out competition from the quarter-finals onwards. The relationship between market value of teams and success could therefore be less pronounced than observed in national leagues with a regular schedule. Furthermore, one should not forget that football is really a special sport. Typically, very few goals (or points) are scored in comparison to, for example, basketball. According to our calculations, the average goal difference was 1.39 at the European Championship 2008. In 2004, it was a meager 1.10. Hence, a single goal – or a single mistake – can decide the game.

¹⁸ To be more precise, the two authors state that 69% of football games with a full and balanced schedule of home and away fixtures are won by the home team. This compares to only 53% in baseball, 61% in ice hockey and 64% in basketball. For more details, see Courneya, K. and A.V. Carron, The home advantage in sport competitions: A literature review, *Journal of Sport and Exercise Psychology*, Vol. 14, 1992.

Inevitably, and to conclude our analysis, we turn to the often most hotly disputed actors on the football field: the referees. Given their discretionary power, referees' decisions can really be crucial and tip the scales in favor of one team. Clearly, their tasks are often very tricky, as they have to make many split second decisions. Sometimes even fans and experts in TV studios cannot agree, even after having watched one slow-motion replay after another. While we acknowledge these imponderables, let us all hope that the best team will win in the end!

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Munich, 4 June 2012

Clients' corner

Football perspectives from Croatia by Jasminko Herceg, CEO of Medika d.d.

Thank you for your detailed analysis, which is very useful in relation to other analyses forecasting the winning team. Financial analysis as well as the results of the market value approach indicate that Spain will again be crowned European champions in 2012. Thus, it appears logical to forecast them as winners.

As an economist, I can confirm this prediction; but as a Croatian football fan I cannot rationally analyze the figures. To me, sport combines heart, friendship and a certain degree of luck, exceeding pure team structures and fans. Please do not forget that goddess Fortuna can exert her influence and turn a game. If this was not the case, sport would be uninteresting. Moreover, looking back in history we see that outsiders can win.

As a starting point, Spain, Italy, Croatia and Ireland are in the same group. According to UniCredit's market value approach, Spain and Italy will qualify for the quarter finals. However, I see things a bit differently.

Although Spain has a strong incentive to win its third title in a row, I believe that this will not be enough. On the one hand, Italy is striving to return to its glory days of Azzurri and will do whatever it takes to achieve that. On the other hand, Croatia is eager to prove that it is a country with highly talented football players that is even able to disprove the assumed betting odds within its group of favorites. Croatia strives for success.

Coming back to the market value parameter, Luka Modrić might be the only economic justification for Croatia's expected achievement. However, I strongly believe in the players' desire to win and their outstanding passion to prove themselves, which in the end will lead to success.

I am convinced that Italy and Croatia will get through the group stage, with Italy as the group leader identifying itself as the title favorite. Based on this, I did not specifically analyze other national teams as I see Croatia as being in the group of the new European champion!

Italy will be the European Champion in 2012!

Football perspectives from the Czech Republic by Radim Passer, Executive Director of Passerinvest Group

Although I am Czech, I consider myself a fan primarily of two South American teams: Brazil and Argentina. Due to the incredible goal-scoring feats of Lionel Messi, these days my heart tends towards Argentina. The reason is simple: for the spectator, these teams have boasted the most attractive football for decades. Though neither of them has yet to be crowned champion of Europe ...

I expect that the Spanish will show off the nicest football. Nevertheless, what matters is what happens on the pitch. This year's Champions League demonstrated that even a team that rarely breaks past the halfway line can advance and ultimately win, but to do so it must protect its "Eastern Bloc" with a well-placed, impenetrable "iron curtain". And in Eastern Europe, anything is possible. One day you are the prime minister, the next day you're leading a hunger strike in prison. Fortunately for football players, they needn't worry about such things – at least not yet. So, let's take a look at the predictions:

From Group A, the Czech Republic and Poland will advance. The famous Polish "solidarity" will send the Russians packing on their Tupolev back to Kamčatka. Greek leaders will leave before the final match in order to go on strike for a several-fold rise in salaries for government officials and will thus be disqualified. Their loss is the Czechs' gain – a team whose tactics continue to revolve around Jan Koller even several years after the exceptional Czech player's retirement.

Considering the fierce competition in Group B and the quality of play, UEFA has decided that all four teams from this group shall advance. But that will only last until someone figures out that 10 teams is simply too many for four quarter-final pairings. UEFA will then decide that the leading Portuguese will advance, accompanied by a combined German, Dutch and Danish team representing the EU – a new footballing powerhouse.

The favorites are sure to dominate in the southern island Group C. The Spaniards will progress without losing a single point, even though UEFA will have attempted to level the playing field by imposing a two-touch restriction on the Spanish players. The Italians will introduce their new and improved catenaccio system, employing 5 strikers. And thus they will advance with an aggregate score of 18:17 from three matches. The Irish and Croatians will play an attractive game full of unorthodox defending, but will head home all the same.

Ukraine will not make it out of Group D, thereby disobeying a government ordinance commanding at least a semi-final appearance. The Swedes will prove surprise winners of the group, having sent a team comprised partly of football players and partly of hockey players. The English will make the chivalrous gesture of relinquishing second place to France, who would otherwise have finished third, thereby extending their summer holidays.

Karel Poborský will make a surprise appearance for the Czechs in their quarter-final against Portugal. In the 20th minute of the first-half of added time, he will dribble past several Portuguese defenders before chipping the poorly positioned Portuguese keeper from his own half. In the second half, the Portuguese will then score three mediocre goals, but not one will count because the referee will already have mistakenly written the final result as 1:0 to the Czechs during the interval. He will apologize to the Portuguese for his error, and they will gratefully accept.

In another quarter-final match, the Poles will refuse to play against the combined EU team, but UEFA will nevertheless decide to allow the Poles to advance without a fight. In the third quarter-final, Spain will defeat France in a thrilling 7:6 encounter. And in the final quarter-final match, the result between Italy and Sweden will be annulled and the Ukrainian parliament

shall decree that none other than Ukraine will progress to the semi-final.

At this point in the competition, given the overall developments and general helplessness against surprise events, UEFA will hand the reins over to its senior organisation, FIFA. At the written request of a certain unimportant Czech fan by the name of Radim Passer, FIFA will declare CONMEBOL to be part of UEFA. Based on a vote by the remaining European teams, the final will be played between Argentina and Brazil. Hat-trick hero Lionel Messi will lead the Argentines to a 3:2 victory, thereby becoming European champions for the first time.

At the close of the championship, FIFA will decide that football will no longer be played based on goals but on possession statistics. And thus everyone will be happy.

Football perspectives from Denmark by Thomas Böttger, Senior Trader, ALM. BRAND MARKETS

Why Denmark will win Euro 2012?

In June 1992, after Denmark voted no to the Maastricht Treaty, the Danish foreign minister Uffe Ellemann Jensen became world famous (at least in Denmark) with the quote before an EU summit on the day of the final against Germany; "if you can't join them beat them". For those unaware of what followed, Denmark went on to win Euro 92 with a 2-0 win against Germany.

In 2000, the Danes voted again and once again the outcome was a no. Denmark still hasn't joined the euro, so according to the sentiment above, chances should be good (the fact that we have had a few attempts between then and now is not important).

However, being in the "group of death" with Germany, Holland and Portugal, chances look slim at best. We are still in an optimistic mood though as, in contrast to our government(s), the head coach of the national team has made the necessary changes and reforms (which of course are much easier when there is only one person in charge) and gotten rid of a lot of the dead weight that has crippled us in the last couple of years.

There are still a few unknowns though. In the squad we've got a lot of new and relatively inexperienced players, and it seems the head coach is still trying to work out the right tactics and formation (much like our new government). On the other hand, this should mean that it will be nearly impossible for our opponents to figure out how we play and should thus prove an advantage for our boys (as a bonus, our goalkeeper, who has a bad habit of making crucial errors in the finals, is out with an injury).

Lots of pros – almost no cons. So the question is not so much "why Denmark will win Euro 2012?" but "why not?"

Denmark is a definite buy this summer ...

Football perspectives from France by Xavier Langlois d'Estaintot, Group Treasurer of Alcatel-Lucent

Why France will win Euro 2012¹⁹

As demonstrated below, France can win Euro 2012. Why can France do better than the present Unicredit economic research "Money scoring goals" predicts?

1. There is more to the competition than simply market values

France can do better than the combined market value of its players (EUR 340mn) "predicts", which is lower than that of Spain (EUR 658mn), Germany (EUR 459mn) and England (EUR 392mn). The reason is, that France is one (after Denmark) of the undisputed European champions of going on strike (as many foreign visitor know). Those who think that it is only the French airlines, airports, trains, subways and taxis that are always on strike, are wrong: the French football team can go on strike as well. And they did it: they went on strike during the last World Cup (to complain about one of the coach's decisions). This reduces the players' market value by a good 30%. So, add back this 30% to its EUR 340mn players' market value and that puts France back into the potential winners' club, roughly on par with Germany and even better than England. When considering that the value of Spain's players, which is still higher, is inflated by their recent astronomic successes (there is certainly a 35% bubble effect there!) and that Italian players' market value should be increased by 40-50% to account for the typical Italian undisclosed revenues percentage, we have at least four countries approximately on par on that criteria. And beware of France and Italy playing head to head for the title: who knows who will have the strongest head this time ...?

2. It's a mind game

Team spirit is of course a key success factor, but, as the economic research points out, it is extremely difficult to measure "scientifically" from the outside. But all French football fans have become experts in decoding French team players' body language and team spirit since the last World Cup ...

Evidence that the French Team spirit is good: players have not publicly insulted the coach (yet); they have not demanded that their spouses and kids travel with them to Ukraine and Poland (for a change). Team spirit is further evidenced by the formidable victory of France against Iceland in the recent preparatory match 3-2. This score is less than the economist's score prediction for the match which, based on the population/economic differential between France and Iceland (65 million to 0.3 million citizens), was something like 200-1. But the excellent Icelanders did not know that and they scored two goals before France woke up and fought back ... thanks again to team spirit.

Tip for the Euros: if France wakes up before being down three-nil in its Euro matches, team spirit will win the game ...

My prediction

Based on a thorough reading of the present economic research and on my kid's expert advice, I can predict for sure that: France will win (almost) all its matches unless its players go on strike.

So the question is: will they go on strike, either officially (like in the last World Cup), or silently

¹⁹ Except if its players go on strike.

(just pretending to play and playing badly)? And when? During this championship (i.e. lose) or later (and win Euro 2012?). This depends on factors such as: food, commuting time, length of the working day, etc. ... i.e. the same questions as for any other French pilot or taxi driver considering whether or not to go on strike.

Prediction is difficult, but my conviction is clear: France will win, with style (*question de chic*), unless bad luck strikes ...

And it will be a very good risk-return.

Football perspectives from Germany by Hans Dick, CFO of Dräxlmaier Group

I would like to open my comments with a rather cautious opinion on the following terms, which have also been applied as basic assumptions in this analysis: "highly efficient market" – "rational market participants" – "prices always equal their fair value".

Real, practical experience has taught me that these cornerstones of the capital market are more often effective as an exception rather than as a general rule. As these basic assumptions have proven to be rather dubious in real life, I would not be prepared to bet my money on the "emotionally charged" football business. That being said, I would conclude that the analysis made here – no matter how sophisticated, logical and well-informed it may be – should ultimately be taken with caution.

Personally, as was stated in the analysis, I believe in **bubbles** when calculating transfer prices. For example, the amount of television fees or the appearance of sponsors, patrons or oligarchs are a decisive factor in determining pricing. For example, I would much rather have three good strikers at a fair market value of EUR 30mn each than one Ronaldo and two mediocre assistant strikers. Furthermore, I believe in the power of **team spirit** which can "move mountains". An honest, convincing answer to this question (of the impact of team work) in this analysis is: "We really do not know!"

And last but not least, we should not forget the element of **luck**. To my mind, a recent example of this was in the Champions' League final, which I was invited to watch live by UniCredit. I think that it was more luck that played a role here than "money scoring goals", even though of course the outcome could also be interpreted as such. At the end of a football match, that is exactly what excites and fascinates us, because the outcome is never foreseeable and cannot be mathematically calculated. There are too many (unknown) variables that can affect a game, and it is this assumed unpredictability that makes the best football history and manages to elate us all over and over again.

As I am aware of the unpredictability of this fascinating game, I would nonetheless venture to make the following prognosis:

- Due to its home advantage, Poland should not be underestimated under any circumstances and in my opinion will win Group A ahead of Russia.
- Germany and the Netherlands will end up as the victors of Group B (because of the Ronaldo element, Portugal is being overestimated – see his appearance in the Champions League against Bayern Munich).
- Italy is being overshadowed by continual betting scandals, which means that Croatia will advance into Group C behind Spain.

That will result in the following fixtures in the quarter finals:

Germany – Russia (with Germany as the winner)

Netherlands – **Poland** (with the host as the winner)

Spain will defeat France, as forecast in the analysis

England will be successful against Croatia

This will lead to the following semi-finals:

Germany – England and **Spain** – Poland

I actually believe that Germany and Spain will be in the final! Who will win? I have no idea! Having said this, may I have the benefit of betting that our team will win because ...

... I am on their side ... or because it is poetic justice for the players of Bayern ... or simply because we will be the luckier ones this time ... because ...

I would like to say with all my heart, in the spirit of this sport (ultimately the world's most wonderful pastime): may the best team win!

Football perspectives from Italy by Diego Cereda, Senior Portfolio Manager, Head of Credits, UBI Pramerica SGR SpA

We take a contrarian approach looking at this tournament. We think that this time team play and coaching will make the difference.

Germany and England will be the two teams to beat, with Italy as a potential surprise (like in the 2006 World Cup). Spain will be a disappointment at Euro 2012 and at least two teams out of your modeled quarter finals will advance (say, the Netherlands and Sweden).

According to our scenario, Portugal, Ireland, Greece and Spain will not take part in the semifinals.

Our guess is that England vs. Germany will be the game of the tournament in the semifinal, with the "Three Lions" winning the Cup. Italy will surely be in the news during the tournament: Balotelli will be either top scorer or at the top of the red-card list!

Football perspectives from the Netherlands by Willem Visser, High Yield Credit Analyst, Aegon Asset Management

A very interesting research piece with a very common sense approach, it manages to capture a different view on predicting the Euro 2012 winners.

Like most models, this model is not perfect and fails to pick up an anomaly. As they say the devil is in the detail, which is without doubt "the Netherlands", as it doesn't come up in the ranking as a candidate. It would have been interesting to measure whether the average contribution to club success (e.g. van Persie, top scorer in the English Premier League; Huntelaar, top scorer in the German Bundesliga, Robben ... maybe not such a good example) of the players selected for the national squads would be a good indicator for success at Euro 2012. I guess the result would have been very different.

Anyway, I'm eager to discover how accurate the predictions the study makes turn out to be.

All the best and lots fun during the tournament!

Football perspectives from Poland by Sławomir Jędrzejczyk, CFO of PKN ORLEN S.A.

If there is one archetypal story that lies behind football it's the famous story of David and Goliath. In the valley of Elah two armies are about to fight. The Philistine champion named Goliath challenges the Israelites to send someone to settle the outcome of the oncoming battle in a single combat. Eventually Goliath is confronted by David – not a champion, not even a strongman. No one you'd bet on. The odds are obviously against him and yet it is David who wins. All football championships repeat this story – to the extent that until the last whistle everything is possible.

Football is unpredictable. Otherwise it wouldn't have hundreds of millions of devoted fans all over the world. After all what fun would it be to watch 22 guys dressed in semi-tribal costumes chasing a single ball on a grass playing field if the result of the game were known in advance. The power of football lies in its potential to make dreams come true. Dreams, not calculations, even the most elaborate and supported by various data and analyses. This is the perspective from which one should look at various reports whose authors try to quantify the unquantifiable – great sporting events and the emotions they evoke.

The report "Money scoring goals" is based on several assumptions. From the point of view of detached economic analysis they are convincing and well argued. However, the history of Polish football alone proves that the practical value of some of those assumptions may be limited. Let's have a look at the thesis that a national team's potential could be associated with GDP per capita. In the 1970s Poland's GDP per capita was strikingly low, just like in all other communist countries, which however did not prevent Poland from being a major football power not only in Europe but in the world. Third place in the FIFA World Cups of 1974 and 1982 (with the latter being incidentally the first year of martial law imposed by the communist regime in Poland and, at the same time, the peak of the economic crisis in our country) are the best proof that there is no such thing as simple relation between GDP and football. (However there might be some other economic relationship at play as in the 1970s Poland's debt was growing heavily, which seems to match UniCredit's prognosis for the Euro 2012 results, with Portugal and Spain being very high on the list of potential winners...).

Similarly, it is very risky to associate the worth of the national team with the sums paid by clubs for individual players. It's like trying to create the most beautiful face by sticking together the eyes of Sophia Loren, the lips of Angelina Jolie, the nose of Scarlett Johansson, the eyebrows of – say – Elisabeth Taylor and the smile of Marilyn Monroe. The result is likely to be a complete mess rather than a beauty.

All this is to say that predicting results of any major football event is a very risky business. Having said that it has to be admitted that Poland's position before Euro 2012 is much closer to that of David than Goliath. It also has to be admitted that only exceptionally optimistic fans believe that the battle could be won by today's David. However, as the organizers of the football tournament ahead, we can look at Euro 2012 from a different perspective – one which allows us to be more than optimistic.

Poland has already won Euro 2012. The decision regarding placing the championship in Poland and Ukraine was taken in April 2007. As a natural consequence a plan of substantial investment in infrastructure was prepared and implemented. The peak of investment took place in the very same years when the crisis hit the global economy. As a result, while the majority of countries were busy with extinguishing fires in the economy, Poland also concentrated efforts on strategic investments. New roads, highways, stadiums, over 2,000 high-quality new sports facilities for kids, airports, railway connections – all those investments had to be financed despite the tensions in the state budget. EU funds were also extensively used for this purpose. In Poland, the total investment associated directly or indirectly with

Euro 2012 is estimated to have reached EUR 19.8bn in the last five years. It is obvious that without those investments, the Polish "green island of growth" would have been less green, if not altogether in the red.

Poland is now ready to celebrate those efforts and watch the Polish team play the best football they have ever played. The benchmark is obvious and has been defined by players like Boniek, Lubanski, Lato, Dudek, Smolarek and many others. The famous "Three Musketeers" from Borussia Dortmund, the German champions, unbeaten for two consecutive years in 2011 and 2012, will surely do their best to establish new benchmarks for Polish football. Robert Lewandowski, who is the best football player of this year in the Bundesliga, has alone scored 30 goals. In all probability a quarter of this tally will be enough for him to become the top scorer of Euro 2012. If you add one of the best goalkeepers in the world, Wojciech Szczesny, the picture becomes pretty clear: Poland will not only score goals but also won't let them in.

Polish football has been waiting for an international success for a while. But this is the past. The future is bright. The future is Poland.

Feel like at home!

Football perspectives from Russia by Timur Sokolov, Deputy Chairman of Board of Directors, Arkhangelsk Pulp&Paper Mill (APPM)

First of all, I would like to say, that I'm very interested in the "market value" approach of Dr. Andreas Rees. In my opinion, this approach can be called an innovation.

In general, I am skeptical about the validity of research that is based on the idea that a national team's strength is reflected only by the market values of its individual players. For me a famous example is Real Madrid (Spain), one of the most successful teams in the world. There was a time when Real Madrid was also the team with the highest market value with players such as Ronaldo, Beckham, Roberto Carlos, etc. However, as a fact, Real Madrid did not win any major tournament during this period. Thus, being the highest valued team did not lead to success.

I completely agree with the author that today's football is more than just a sport. Football has become a commercial product from which companies and football clubs can earn money. However, this can also lead to inaccurate calculations of market values. For example, Lionel Messi is in high demand for advertising, which I believe has an influence on his market value, and correspondingly, on the team's value. Thus, Messi's market value not only reflects his technical football skills but is also influenced by various other factors. To me, this is a major point that the author is missing in his analysis.

A coach is a crucial part of the team. There are a lot of examples, such as Sir Alex Ferguson, Josep Guardiola, Roberto Mancini and many others, who have proven that good management is responsible for at least half of the team's success.

Regarding home advantage I can give the counter argument referring to the hockey world championship that has only been won three times by the host country.

Football is a team sport and one player is not able to win a match by himself. In my opinion some teams run into danger when their top-stars interfere with a good team performance as all the top-stars, as a rule, are used to playing "first violin" at their clubs. This attitude is difficult to change, and so is the psychology of people. In this case, a team with no (or few) stars has the chance to win based on its cohesion and teamwork.

Taking a look at the Russian national team – the most expensive players are Andrew Arshavin (FC Zenit St. Petersburg, formerly Arsenal) and Dmitry Bulykin (FC AFC Ajax): it is not a secret that the coach of Russia's national team, Dick Advocaat, prefers to build the game around Arshavin.

In my opinion, the Spaniards have every opportunity to defend their current European Champion title and to become the European Champion for the third time. To me Spain is a strong bet for success due to their strong midfield (the whole midfield line is taken from FC Barcelona), strong forwards and an excellent goalkeeper in Iker Casillas.

I believe that Russia, the Czech Republic, the Netherlands, Germany, Spain, Italy, France, and England will qualify for the quarter finals. In the semi-finals Spain, Germany, England, and the Netherlands will compete against each other. The final will be a repetition of the last European Championship final and end in a fight between Spain and Germany. The Netherlands will come in third; regarding the Russian team, I think the most optimistic outcome is entry into the quarter finals.

Football perspectives from Ukraine by Pavel Fesyuk, CEO of Ukragrocom Group

Does money really play football? Are you 100% sure that there is direct correlation between a good's quality and its price? If your answer is yes... well, just read the following.

5 Worst Buys of All Time

Zlatan Ibrahimovich

From: FC Internazionale Milano

To: Barcelona

Date: July 26, 2009

Cost: USD 65mn and player exchange (+USD 51mn, the estimated value of Samuel Eto'o)

After three superb seasons in Italy, in which Ibrahimovich scored 57 goals in 88 appearances, Barcelona made one of the most bizarre deals of all time. Barcelona not only paid USD 65mn but also sent their best striker Eto'o to Italy. Ibrahimovich was considered one of the best strikers in the world at the time and Barcelona were expecting this deal to even further elevate the team's status. The deal didn't go to plan. Unfortunately, Zlatan's relationship with Pep Guardiola, as well as his goal tally, soon declined and in August 2010, after just one year with Barcelona, Ibrahimovich was loaned to AC Milan.

Andriy Shevchenko

From: AC Milan

To: Chelsea

Date: May 28, 2006

Cost: USD 51mn

From 1999 to 2006, Andriy Shevchenko scored 127 goals in 208 games. No wonder Roman Abramovich wanted him. This was Chelsea's highest transfer fee (at that time) and the Blues hoped that their new signing would score copious amounts of goals. In his two seasons at Chelsea, Shevchenko scored a lowly 22 goals (in 76 appearances). Apart from a good run of form at the end of 2007, Shevchenko was hugely disappointing with the Blues and never came close to living up to his transfer fee.

Fernando Torres

From: Liverpool

To: Chelsea

Date: January 31, 2011

Cost: USD 82mn

This transfer cannot yet have a spot on this list as Torres is still playing for Chelsea and there's a beam of hope that he will manage to remedy the situation. But it will be quite difficult for Torres to justify his transfer fee as the player managed to score 12 goals in two seasons – a total of 67 appearances!

Andy Carroll

From: Newcastle United

To: Liverpool

Date: January 31, 2011

Cost: USD 56mn

Having won the Lotto by palming off a fading Torres, Liverpool promptly paid a record transfer fee for an English player, who had only one half of a premiership season under his belt. Truth is, Andy, who quite apart from being something of a drunken lout off the field, is proving to be

one of the worst strikers ever to wear Liverpool's famous red shirt. He is slow, has no ball control and despite his height is not very good at heading the ball. In his 56 appearances (2 seasons) he has scored only 11 times. The "price" of each goal for the club could be considered as USD 5mn!

Kaka

From: AC Milan

To: Real Madrid

Date: June 8, 2009

Cost: USD 90mn

Kaka signed for AC Milan in 2003 from Sao Paulo. In six years at the San Siro, he scored 95 goals and assisted 48 in 270 appearances. He was AC Milan's star playmaker and played a significant role in the club's Champions League successes. Since moving to Real in 2009 he has scored 24 goals in 92 appearances.²⁰

Football players or trademarks?

If not quality, what else then can affect the estimation of value for such a specific "object" as a football player? We presume that clubs often buy not only "legs" but "faces" as well. Cristiano Ronaldo's transfer from Manchester United to Real Madrid in 2009 is a striking example of such an approach. On 26 June 2009, Real Madrid confirmed that Ronaldo would join the club on 1 July 2009 for GBP 80mn (USD 131.6mn). Despite his brilliant performance in a Real shirt (144 appearances and 146 goals!), it is an absolutely undeniable fact that this was not the only benefit the Royal club acquired from this transfer. When presented to the world media as a Real Madrid player on 6 July, Ronaldo was welcomed by 80,000 fans at his presentation at the Santiago Bernabéu Stadium, surpassing Diego Maradona's record of 75,000 fans when he was presented in Italy, after he was transferred from Barcelona to Napoli in 1984. Real Madrid has already recouped more than EUR 100 million in Cristiano Ronaldo's first season in shirt sales, having sold over one million CR9 shirts in the city of Madrid alone. Madrid has seen names like Luis Figo, Zinedine Zidane, Ronaldo and David Beckham printed on its shirts, but according to Madrid officials, Cristiano Ronaldo's name is like nothing they have ever seen in terms of sales revenues. And do not forget about the "image component" of the transfer for the club, which is almost impossible to estimate, but which directly affects the profitability of a business such as football.

Elliott Wave Principle for Die deutsche Fußballnationalmannschaft

When Elliott was working on his wave theory he could hardly imagine that it would be applicable to the track record of victories and defeats of the German national team in the finals of the European Football Championship. We noticed a very interesting and even somehow mystical pattern – from 1976 each time after losing in the finals of European Football Championship, Germany wins the next one!

1976 Czechoslovak Socialist Republic - Germany 5:3

1980 Germany - Belgium 2:1

1992 Denmark - Germany 2:0

1996 Germany - Czech Republic 2:1

2008 Spain - Germany 1:0

An additional incentive for the German national team's players to prove this incredible pattern should be the recent loss of Bayern in the UEFA Champions League final. You still have

²⁰ Data sources are Wikipedia, www.bleacherreport.com, www.transfermarkt.de and www.sportsnet.ca.

doubts on who is to be the winner of Euro 2012?

My home is my castle

We also shouldn't underestimate the fact that the tournament is being held in Ukraine and Poland for, as we know, at home even the walls help. Apparently, the Ukrainian team will be phenomenally supported by the fans, which will additionally motivate the players and the coach, who simply cannot afford to perform poorly. It looks like Ukraine has a great chance to become a member of the club of teams, which have won their home tournaments (European Championships: Spain 1964, Italy 1968, France, 1984; World Championships: Argentina 1978, France 1998). Another issue that might help the Ukrainians to win is the so called "Blokhin factor". The current coach of the Ukrainian team, Oleg Blokhin, was one of the most successful players of the famous Dynamo Kiev, Golden Ball winner of 1975 and the most successful coach of Ukraine since its independence. Furthermore, he has gained a serious and permanent reputation of being a "lucky coach". Well, here is another chance to test the theory in practice! Synergy effect: experience and youth. To date, the team can display a unique situation with a balance of experienced and young, but promising players. Undoubtedly, the experience of Shevchenko, Tymoshchuk, Voronin and the high potential and thirst for victory of Khacheridi, Konoplianka and Yarmolenko will form a strong basis of the team's success, which is so wanted by millions of Ukrainian fans around the world. And don't forget - the walls at home are your friends, your comfort and your helping hands.

Ukrainian alternative to octopus Paul ...

Man has always tried to find a way to predict or foresee the future. A spectacular example of such attempts is predicting the results of sporting events, including football games, by a variety of animals. The most successful "Nostradamus" was the German octopus Paul, who successfully predicted the outcomes of all seven matches at the World Cup in 2010. In view of the sudden and premature death of Paul in 2010 we present for your attention the Ukrainian alternative. Meet the Cow who wished to stay anonymous. We asked it to predict the results of all the matches of Euro 2012 and below is the table with the preliminary results. Note – the information is strictly confidential!

Group A 1. Greece 2. Czech Republic	1st Quarterfinal Greece – Denmark			
Group B 1. Netherlands 2. Denmark	2nd Quarterfinal Netherlands – Czech Republic	1st Semifinal Czech Republic – Ukraine		
Group C 1. Croatia 2. Italy	3rd Quarterfinal Ukraine – Italy		Final Ukraine – Greece	Winner Ukraine
Group D 1. Ukraine 2. England	4th Quarterfinal Croatia – England	2nd Semifinal Greece – Croatia		

And you cannot question the impartiality of our cow!

Statistical annex

Explanatory Remarks

For each participating country, we have compiled a table including all the individual players' market values. The players are ordered by position (goalkeeper, defense, midfield and forward). Within each team section, the most valuable players come first. In some cases, the exact position could be a bit arbitrary, since, for instance, offensive midfielders can play as forwards as well. Each table also includes the following statistics: the number of games and goals scored in the national team, age as well as their club team and minutes played in the 2011/12 season (in club and national team).²¹ **All these data (including positions) were obtained from the www.transfermarkt.de webpage and updated on 1 June.**²² Besides individual players' statistics, you find the following information:

- national team's total market value, in EUR mn
- national team's average market value (per player), in EUR mn
- standard deviation of individual players' market values, in EUR mn
- average age of players, in years
- percentage of players playing abroad
- total minutes played (all 23 players) in the 2011/12 season, thereby possibly reflecting stress and the risk of future injuries. However, clearly this yardstick is a double-edged sword and should be interpreted with caution. It could also reflect other factors like playing too little (and badly) in the club team, being injured for a long time, etc.
- FIFA/Coca-Cola World Ranking

²¹ Excluding friendly matches in the club team.

²² The recent replacements of Olic by Kalinic (Croatia) and Cahill by Kelly (England) were included.

Croatia

- Total market value: EUR 152.5mn
- Average market value (per player): EUR 6.6mn
- Standard deviation of individual market values: EUR 7.8mn
- Most expensive player: Modric (EUR 39.0mn)
- Average age: 26.7 years
- Share of players playing abroad: 83%
- Stress factor: 52,156 minutes played
- FIFA/Coca-Cola World Ranking: 8

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Ivan Kelava	2.5	0	0	24	GNK Dinamo Zagreb	3,510
	Stipe Pletikosa	2.0	90	0	33	FK Rostov	180
	Danijel Subasic	1.5	3	0	27	AS Monaco	3,240
Defenders	Darijo Srna	14.0	90	19	30	Shakhtar Donetsk	3,270
	Vedran Corluka	7.5	53	2	26	Bayer Leverkusen	1,479
	Ivan Strinic	3.5	15	0	24	Dnipro Dnipropetrovsk	1,929
	Domagoj Vida	3.0	7	0	23	GNK Dinamo Zagreb	3,645
	Gordon Schildenfeld	2.0	10	0	27	Eintracht Frankfurt	3,298
	Josip Simunic	1.5	94	3	34	GNK Dinamo Zagreb	1,319
	Jurica Buljat	1.0	2	0	25	Maccabi Haifa	3,564
	Midfielders	Luka Modric	39.0	54	8	26	Tottenham Hotspur
Ivan Rakitic		9.0	39	8	24	FC Sevilla	2,157
Ognjen Vukojevic		8.5	37	3	28	Dynamo Kiev	3,247
Niko Kranjcar		7.0	69	15	27	Tottenham Hotspur	1,202
Ivan Perisic		6.0	8	0	23	Borussia Dortmund	1,621
Ivo Illicevic		5.5	4	1	25	Hamburger SV	1,669
Milan Badelj		4.5	3	1	23	GNK Dinamo Zagreb	3,034
Danijel Pranic		3.5	42	0	30	Bayern Munich	665
Tomislav Dujmovic		2.0	16	0	31	Real Saragossa	863
Forwards		Mario Mandzukic	10.0	27	5	26	VfL Wolfsburg
	Eduardo	8.0	45	22	29	Shakhtar Donetsk	1,027
	Nikola Kalinic	6.0	13	5	24	Dnipro Dnipropetrovsk	1,682
	Nikica Jelavic	5.0	18	2	26	FC Everton	3,649

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June; replacement of Olic by Kalinic included), UniCredit Research

Czech Republic

- Total market value: EUR 101.1mn
- Average market value (per player): EUR 4.4mn
- Standard deviation of individual market values: EUR 5.1mn
- Most expensive player: Cech (EUR 25.0mn)
- Average age: 27.2 years
- Share of players playing abroad: 65%
- Stress factor: 66,024 minutes played
- FIFA/Coca-Cola World Ranking: 26

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Petr Cech	25.0	89	0	30	FC Chelsea	5,176
	Jan Lastuvka	2.5	1	0	29	Dnipro Dnipropetrovsk	2,773
	Jaroslav Drobny	2.0	6	0	32	Hamburger SV	3,292
Defenders	Tomas Sivok	7.8	26	3	28	Besiktas Istanbul	3,826
	Michal Kadlec	7.5	33	7	27	Bayer Leverkusen	3,485
	Roman Hubnik	3.5	21	2	27	Hertha BSC Berlin	2,946
	Marek Suchy	3.5	4	0	24	Spartak Moskau	135
	David Limbersky	1.6	8	0	28	FC Viktoria Pilsen	3,820
	Frantisek Rajtoral	1.5	2	0	26	FC Viktoria Pilsen	3,837
	Theodor Gebre Selassie	1.5	9	0	25	FC Slovan Liberec	2,842
	Jaroslav Plasil	7.0	70	6	30	FC Girondins Bordeaux	3,865
Midfielders	Tomas Hübschman	4.0	42	0	30	Shakhtar Donetsk	2,357
	Petr Jiracek	4.0	7	1	26	VfL Wolfsburg	3,270
	Tomas Rosicky	3.5	85	20	31	FC Arsenal	2,463
	Daniel Kolar	1.8	10	1	26	FC Viktoria Pilsen	3,727
	Milan Petrzela	1.7	10	0	28	FC Viktoria Pilsen	3,412
	Vladimir Darida	0.6	1	0	21	FC Viktoria Pilsen	1,682
	Milan Baros	8.0	88	41	30	Galatasaray Istanbul	1,677
	Tomas Necid	6.5	26	7	22	ZSKA Moskau	64
Forwards	Tomas Pekhart	3.0	9	0	23	1. FC Nuremberg	2,942
	Vaclav Pilar	2.0	8	1	23	FC Viktoria Pilsen	3,446
	David Lafata	1.4	17	3	30	FK Jablonec	2,968
	Jan Rezek	1.2	12	3	30	Anorthosis Famagusta	2,019

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Denmark

- Total market value: EUR 86.9mn
- Average market value (per player): EUR 3.8mn
- Standard deviation of individual market values: EUR 3.6mn
- Most expensive player: Agger (EUR 13.0mn)
- Average age: 26.5 years
- Share of players playing abroad: 70%
- Stress factor: 67,677 minutes played
- FIFA/Coca-Cola World Ranking: 10

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Anders Lindegaard	5.0	5	0	28	Manchester United	1,170
	Kaspar Schmeichel	2.0	0	0	25	Leicester City	4,670
	Stephan Andersen	1.75	9	0	30	FC Evian Thonon Gaillard	3,546
Defenders	Daniel Agger	13.0	45	5	27	FC Liverpool	3,092
	Simon Kjaer	8.0	23	0	23	AS Rome	2,485
	Simon Poulsen	3.5	17	0	27	AZ Alkmaar	4,823
	Daniel Wass	2.5	5	0	23	FC Evian Thonon Gaillard	2,711
	Andreas Bjelland	2.0	5	0	23	FC Nordsjaelland	2,689
	Lars Jacobsen	1.5	49	1	32	FC Copenhagen	2,846
	Jores Okore	1.0	2	0	19	FC Nordsjaelland	2,813
	Christian Eriksen	13.0	22	2	20	Ajax Amsterdam	3,994
Midfielders	William Kvist	7.0	27	0	27	VfB Stuttgart	3,529
	Michael Krohn-Dehli	3.5	20	4	28	Broendby IF	2,953
	Lasse Schöne	2.5	10	2	26	NEC Nijmegen	3,626
	Niki Zimling	2.5	10	0	27	FC Bruegge	4,402
	Christian Poulsen	2.0	91	6	32	FC Evian Thonon Gaillard	2,562
	Jakob Poulsen	2.0	21	1	28	FC Midtjylland	3,154
	Thomas Kahlenberg	1.5	37	4	29	FC Evian Thonon Gaillard	1,257
	Michael Silberbauer	1.5	24	1	30	BSC Young Boys	2,832
Forwards	Nicklas Bendtner	7.5	47	18	24	FC Arsenal	2,770
	Dennis Rommedahl	1.5	115	21	33	Broendby IF	1,849
	Nicklas Pedersen	1.25	8	0	24	FC Groningen	1,006
	Tobias Mikkelsen	0.85	2	0	25	FC Nordsjaelland	2,898

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

England

- Total market value: EUR 392.3mn
- Average market value (per player): EUR 17.1mn
- Standard deviation of individual market values: EUR 12.1mn
- Most expensive player: Rooney (EUR 65.0mn)
- Average age: 25.9 years
- Share of players playing abroad: 0%
- Stress factor: 73,648 minutes played
- FIFA/Coca-Cola World Ranking: 7

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Joe Hart	21.0	17	0	25	Manchester City	4,815
	Robert Green	4.5	12	0	32	West Ham United	4,103
	Jack Butland	0.25	0	0	19	Birmingham City	2,160
Defenders	John Terry	24.0	72	6	31	FC Chelsea	3,921
	Leighton Baines	18.0	8	0	27	FC Everton	3,991
	Phil Jones	18.0	5	0	20	Manchester United	3,338
	Ashley Cole	17.0	93	0	31	FC Chelsea	4,315
	Joleon Lescott	15.0	15	0	29	Manchester City	3,845
	Glen Johnson	14.0	35	1	27	FC Liverpool	2,612
	Phil Jagielka	12.0	11	0	29	FC Everton	3,030
	Martin Kelly	4.5	1	0	22	FC Liverpool	1,591
	Midfielders	Ashley Young	25.0	20	6	26	Manchester United
Steven Gerrard		21.0	91	19	32	FC Liverpool	2,117
James Milner		20.0	25	0	26	Manchester City	2,450
Stewart Downing		16.0	34	0	27	FC Liverpool	3,467
Jordan Henderson		15.0	2	0	21	FC Liverpool	3,514
Scott Parker		14.0	12	0	31	Tottenham Hotspur	3,485
Forwards	Wayne Rooney	65.0	73	28	26	Manchester United	3,640
	Andy Carroll	17.0	4	1	23	FC Liverpool	3,007
	Theo Walcott	17.0	23	3	23	FC Arsenal	3,638
	Danny Welbeck	13.0	4	0	21	Manchester United	2,552
	Jermain Defoe	11.0	46	15	29	Tottenham Hotspur	2,221
	Alex Oxlade-Chamberlain	10.0	1	0	18	FC Arsenal	1,553

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June; replacement of Cahill by Kelly included), UniCredit Research

France

- Total market value: EUR 340mn
- Average market value (per player): EUR 14.8mn
- Standard deviation of individual market values: EUR 9.0mn
- Most expensive player: Ribery (EUR 42.0mn)
- Average age: 26.7 years
- Share of players playing abroad: 48%
- Stress factor: 86,428 minutes played
- FIFA/Coca-Cola World Ranking: 16

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Hugo Lloris	18.0	31	0	25	Olympique Lyon	5,294
	Steve Mandanda	16.0	15	0	27	Olympique Marseille	4,830
	Cedric Carrasso	9.0	1	0	30	FC Girondins Bordeaux	3,675
Defenders	Patrice Evra	19.0	40	0	31	Manchester United	4,205
	Laurent Koscielny	16.0	1	0	26	FC Arsenal	3,806
	Adil Rami	14.0	18	1	26	FC Valencia	5,125
	Gael Clichy	13.0	11	0	26	Manchester City	3,332
	Mathieu Debuchy	9.0	4	1	26	OSC Lille	4,127
	Philippe Mexes	8.0	24	1	30	AC Mailand	2,326
	Anthony Reveillere	4.5	16	1	32	Olympique Lyon	4,688
	Midfielders	Franck Ribery	42.0	58	8	29	Bayern Munich
	Samir Nasri	25.0	28	3	24	Manchester City	3,503
	Yann M'Vila	20.0	18	1	21	FC Stade Rennes	4,624
	Jeremy Menez	15.0	11	0	25	FC Paris Saint-Germain	3,765
	Yohan Cabaye	12.0	11	0	26	Newcastle United	3,505
	Mathieu Valbuena	11.0	11	2	27	Olympique Marseille	3,624
	Marvin Martin	9.5	10	2	24	FC Sochaux-Montbéliard	3,315
	Blaise Matuidi	9.5	4	0	25	FC Paris Saint-Germain	2,512
	Florent Malouda	9.0	75	8	31	FC Chelsea	2,385
	Hatem Ben Arfa	8.5	9	2	25	Newcastle United	1,949
	Alou Diarra	7.5	38	0	30	Olympique Marseille	3,992
Forwards	Karim Benzema	35.0	43	13	24	Real Madrid	3,747
	Olivier Giroud	9.5	4	1	25	HSC Montpellier	3,881

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Germany

- Total market value: EUR 459.0mn
- Average market value (per player): EUR 20.0mn
- Standard deviation of individual market values: EUR 10.7mn
- Most expensive player: Gomez (EUR 42.0mn)
- Average age: 24.4 years
- Share of players playing abroad: 17%
- Stress factor: 84,903 minutes played
- FIFA/Coca-Cola World Ranking: 2

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Manuel Neuer	30	25	0	26	Bayern Munich	5,010
	Tim Wiese	7.0	6	0	30	Werder Bremen	2,717
	Ron-Robert Zieler	6.5	1	0	23	Hanover 96	4,500
Defenders	Philipp Lahm	28.0	85	4	28	Bayern Munich	4,744
	Mats Hummels	20.0	14	1	23	Borussia Dortmund	4,610
	Holger Badstuber	17.5	19	1	23	Bayern Munich	4,803
	Benedikt Höwedes	15.0	8	0	24	FC Schalke 04	3,066
	Per Mertesacker	14.0	80	1	27	FC Arsenal	3,085
	Jerome Boateng	13.5	20	0	23	Bayern Munich	4,529
	Marcel Schmelzer	7.5	6	0	24	Borussia Dortmund	3,407
	Bastian Schweinsteiger	38.0	90	23	27	Bayern Munich	2,819
Midfielders	Mesut Özil	32.0	32	8	23	Real Madrid	4,210
	Mario Götze	30.0	13	2	19	Borussia Dortmund	2,157
	Toni Kroos	23.0	25	2	22	Bayern Munich	4,569
	Sami Khedira	20.0	26	1	25	Real Madrid	3,281
	Lars Bender	14.0	4	0	23	Bayer Leverkusen	3,187
	Ilkay Gündogan	6.0	2	0	21	Borussia Dortmund	2,609
	Mario Gomez	42.0	51	21	26	Bayern Munich	4,227
Forwards	Thomas Müller	35.0	26	10	22	Bayern Munich	4,261
	Marco Reus	20.0	5	1	23	Borussia Mönchengladbach	3,432
	Lukas Podolski	20.0	96	43	26	1. FC Cologne	3,029
	André Schürrle	14.0	13	6	21	Bayer Leverkusen	3,633
	Miroslav Klose	6.0	115	63	33	Lazio Rome	3,018

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Greece

- Total market value: EUR 83.7mn
- Average market value (per player): EUR 3.6mn
- Standard deviation of individual market values: EUR 2.2mn
- Most expensive player: Papadopoulos (EUR 9.0mn)
- Average age: 27.2 years
- Share of players playing abroad: 30%
- Stress factor: 58,931 minutes played
- FIFA/Coca-Cola World Ranking: 14

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Michalis Sifakis	3.5	12	0	27	Aris Thessaloniki	495
	Alexandros Tzorvas	2.0	16	0	29	US Palermo	1,390
	Konstantinos Chalkias	0.6	30	0	38	PAOK Thessaloniki	2,039
Defenders	Kyriakos Papadopoulos	9.0	8	3	20	FC Schalke 04	4,302
	Sokratis	8.0	28	0	23	Werder Bremen	3,006
	Vasilis Torosidis	7.5	44	6	26	Olympiakos Piraeus	2,965
	Avraam	4.5	33	0	27	Olympiakos Piraeus	3,603
	Jose Holebas	2.75	4	0	27	Olympiakos Piraeus	3,056
	Stelios Malezas	2.75	2	0	27	PAOK Thessaloniki	4,320
	Georgios Tzavellas	1.5	6	0	24	AS Monaco	1,619
	Sotiris Ninis	6.0	19	2	22	Panathinaikos Athens	841
Midfielders	Konstantinos Katsouranis	4.5	91	9	32	Panathinaikos Athens	2,975
	Giannis Fetfatzidis	4.25	13	3	21	Olympiakos Piraeus	1,159
	Grigoris Makos	3.5	11	0	25	AEK Athens	2,718
	Georgios Fotakis	3.25	10	2	30	PAOK Thessaloniki	3,456
	Giannis Maniatis	3.0	9	0	25	Olympiakos Piraeus	2,957
	Georgios Karagounis	2.0	117	8	35	Panathinaikos Athens	1,241
	Konstantinos Fortounis	1.5	3	0	19	1. FCK Kaiserslautern	2,083
	Dimitrios Salpingidis	4.5	56	7	30	PAOK Thessaloniki	3,686
Forwards	Konstantinos Mitroglou	3.5	13	0	24	Atromitos Athens	3,197
	Georgios Samaras	3.0	54	7	27	Celtic Glasgow	2,927
	Theofanis Gekas	2.0	58	21	32	Samsunspor	2,228
	Nikos Liberopoulos	0.6	75	13	36	AEK Athens	2,668

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Ireland

- Total market value: EUR 71.0mn
- Average market value (per player): EUR 3.8mn
- Standard deviation of individual market values: EUR 1.9mn
- Most expensive player: McGeady (EUR 9.0mn)
- Average age: 28.3 years
- Share of players playing abroad: 96%
- Stress factor: 59,888 minutes played
- FIFA/Coca-Cola World Ranking: 18

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Shay Given	3.5	120	0	36	Aston Villa	3,160
	Keiren Westwood	1.5	9	0	27	AFC Sunderland	1,176
	David Forde	0.5	2	0	32	FC Millwall	2,644
Defenders	Richard Dunne	5.5	71	8	32	Aston Villa	3,037
	John O'Shea	4.5	71	1	31	AFC Sunderland	3,006
	Stephen Ward	4.0	5	2	26	Wolverhampton Wanderers	3,878
	Stephen Kelly	2.0	27	0	28	FC Fulham	3,026
	Paul McShane	2.0	23	0	26	Hull City	1,051
	Sean St. Ledger	1.25	21	2	27	Leicester City	2,901
	Darren O'Dea	0.5	9	0	25	Celtic Glasgow	3,546
	Aiden McGeady	9.0	48	2	26	Spartak Moscow	201
Midfielders	Glenn Whelan	4.0	31	2	28	Stoke City	3,623
	Stephen Hunt	3.5	29	1	30	Wolverhampton Wanderers	1,860
	Darron Gibson	3.0	14	1	24	FC Everton	1,862
	Damien Duff	2.5	92	8	33	FC Fulham	3,438
	Keith Andrews	1.5	23	3	31	West Bromwich Albion	2,614
	James McClean	1.5	1	0	23	AFC Sunderland	3,285
	Paul Green	0.75	9	1	29	Derby County	2,557
	Jonathan Walters	5.0	3	1	28	Stoke City	4,413
Forwards	Kevin Doyle	4.5	41	9	28	Wolverhampton Wanderers	2,618
	Robbie Keane	4.5	110	53	31	Los Angeles Galaxy	2,380
	Shane Long	4.5	25	7	25	West Bromwich Albion	2,468
	Simon Cox	1.5	6	2	25	West Bromwich Albion	1,144

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Italy

- Total market value: EUR 296.1mn
- Average market value (per player): EUR 12.9mn
- Standard deviation of individual market values: EUR 7.7mn
- Most expensive player: De Rossi (EUR 32.0mn)
- Average age: 27.9 years
- Share of players playing abroad: 13%
- Stress factor: 71,909 minutes played
- FIFA/Coca-Cola World Ranking: 12

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Gianluigi Buffon	16.0	113	0	34	Juventus Turin	3,510
	Salvatore Sirigu	12.0	2	0	25	FC Paris Saint-Germain	3,690
	Morgan De Sanctis	4.2	4	0	35	SSC Naples	4,440
Defenders	Giorgio Chiellini	24.0	50	2	27	Juventus Turin	3,606
	Leonardo Bonucci	13.5	13	2	25	Juventus Turin	3,135
	Ignazio Abate	12.0	2	0	25	AC Milan	3,633
	Andrea Barzagli	10.0	28	0	31	Juventus Turin	3,495
	Federico Balzaretti	7.5	7	0	30	US Palermo	2,452
	Angelo Ogbonna	6.0	2	0	23	FC Turin	3,779
	Daniele De Rossi	32.0	71	10	28	AS Rome	3,040
Midfielders	Claudio Marchisio	23.0	19	1	26	Juventus Turin	3,456
	Thiago Motta	15.0	7	1	29	FC Paris Saint-Germain	2,760
	Riccardo Montolivo	13.0	32	1	27	AC Florence	3,091
	Christian Maggio	11.0	15	0	30	SSC Naples	3,629
	Antonio Nocerino	11.0	8	0	27	AC Milan	4,197
	Andrea Pirlo	10.0	82	9	33	Juventus Turin	3,990
	Emanuele Giaccherini	4.7	0	0	27	Juventus Turin	1,607
	Mario Balotelli	30.0	7	1	21	Manchester City	2,095
Forwards	Sebastian Giovinco	12.5	7	0	25	FC Parma	3,284
	Antonio Cassano	10.0	28	9	29	AC Milan	1,273
	Fabio Borini	8.0	1	0	21	AS Rome	1,863
	Antonio Di Natale	7.0	36	10	34	Udinese Calcio	3,569
	Alessandro Diamanti	3.7	1	0	29	FC Bologna	2,315

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Netherlands

- Total market value: EUR 277.0mn
- Average market value (per player): EUR 12.0mn
- Standard deviation of individual market values: EUR 11.4mn
- Most expensive player: van Persie (EUR 45.0mn)
- Average age: 27.1 years
- Share of players playing abroad: 70%
- Stress factor: 72,579 minutes played
- FIFA/Coca-Cola World Ranking: 4

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Maarten Stekelenburg	9.0	46	0	29	AS Rome	3,112
	Michel Vorm	8.0	9	0	28	Swansea City	3,420
	Tim Krul	6.0	3	0	24	Newcastle United	3,900
Defenders	Johnny Heitinga	10.0	77	7	28	FC Everton	3,798
	Gregory van der Wiel	10.0	31	0	24	Ajax Amsterdam	2,435
	Ron Vlaar	5.0	6	0	27	Feyenoord Rotterdam	3,272
	Joris Mathijsen	3.5	80	3	32	FC Malaga	3,066
	Khalid Boulahrouz	3.0	35	0	30	VfB Stuttgart	2,188
	Wilfred Bouma	3.0	37	2	33	PSV Eindhoven	3,032
	Jetro Willems	1.5	1	0	18	PSV Eindhoven	2,578
	Wesley Sneijder	32.0	83	23	27	Inter Milan	2,339
Midfielders	Rafael van der Vaart	25.0	95	18	29	Tottenham Hotspur	2,937
	Nigel de Jong	17.0	59	1	27	Manchester City	2,550
	Ibrahim Afellay	10.0	37	3	26	FC Barcelona	206
	Kevin Strootman	8.0	11	1	22	PSV Eindhoven	4,033
	Stijn Schaars	7.0	18	0	28	Sporting Lissabon	4,234
	Mark van Bommel	2.5	76	10	35	AC Milan	3,132
	Robin van Persie	45.0	64	26	28	FC Arsenal	4,387
Forwards	Arjen Robben	32.0	56	17	28	Bayern Munich	2,918
	Klaas-Jan Huntelaar	20.0	52	31	28	FC Schalke 04	4,411
	Luuk de Jong	8.0	7	1	21	FC Twente Enschede	4,546
	Dirk Kuyt	8.0	87	24	31	FC Liverpool	2,692
	Luciano Narsingh	3.5	1	0	21	SC Heerenveen	3,393

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Poland

- Total market value: EUR 85.4mn
- Average market value (per player): EUR 3.7mn
- Standard deviation of individual market values: EUR 3.7mn
- Most expensive player: Lewandowski (EUR 15.0mn)
- Average age: 25.1 years
- Share of players playing abroad: 74%
- Stress factor: 62,933 minutes played
- FIFA/Coca-Cola World Ranking: 65

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Wojciech Szczesny	12.0	9	0	22	FC Arsenal	4,770
	Przemyslaw Tyton	3.0	5	0	25	PSV Eindhoven	1,843
	Grzegorz Sandomierski	1.2	3	0	22	Jagiellonia Bialystok	1,620
Defenders	Lukasz Piszczek	9.0	23	0	26	Borussia Dortmund	4,450
	Damien Perquis	3.5	6	1	28	FC Sochaux-Montbéliard	2,342
	Marcin Wasilewski	1.5	47	1	31	RSC Anderlecht	4,105
	Sebastian Boenisch	1.25	4	0	25	Werder Bremen	574
	Grzegorz Wojtkowiak	1.2	16	0	28	Lech Posen	2,742
	Jakub Wawrzyniak	1.0	25	0	28	Legia Warsaw	4,392
	Marcin Kaminski	0.6	1	0	20	Lech Posen	3,049
	Jakub Blaszczykowski	7.0	50	8	26	Borussia Dortmund	3,288
Midfielders	Adrian Mierzejewski	4.25	21	1	25	Trabzonspor	2,859
	Kamil Grosicki	4.0	13	0	23	Sivasspor	3,371
	Eugen Polanski	4.0	5	0	26	FSV Mainz 05	2,707
	Ludovic Obraniak	3.5	21	4	27	Girondins Bordeaux	2,882
	Dariusz Dudka	2.5	62	2	28	AJ Auxerre	3,541
	Adam Matuschuk	2.0	19	1	23	Fortuna Duesseldorf	944
	Rafal Murawski	2.0	42	1	30	Lech Posen	3,086
	Maciej Rybus	2.0	20	1	22	Terek Grozny	2,554
	Rafal Wolski	1.1	2	0	19	Legia Warsaw	1,789
	Forwards	Robert Lewandowski	15.0	41	13	23	Borussia Dortmund
Pawel Brozek		2.0	33	8	29	Celtic Glasgow	891
Artur Sobiech		1.75	4	1	21	Hanover 96	667

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Portugal

- Total market value: EUR 337.7mn
- Average market value (per player): EUR 14.7mn
- Standard deviation of individual market values: EUR 18.7mn
- Most expensive player: Ronaldo (EUR 90.0mn)
- Average age: 26.7 years
- Share of players playing abroad: 57%
- Stress factor: 62,183 minutes played
- FIFA/Coca-Cola World Ranking: 5

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Rui Patricio	12.0	10	0	24	Sporting Lissabon	4,409
	Eduardo	4.0	27	0	29	Benfica Lissabon	810
	Beto	3.2	2	0	30	CFR Cluj	2,452
Defenders	Pepe	28.0	38	2	29	Real Madrid	4,087
	Fabio Coentrao	24.0	21	1	24	Real Madrid	2,430
	Rolando	13.0	14	0	26	FC Porto	3,194
	Bruno Alves	12.0	49	5	30	Zenit St. Petersburg	836
	Joao Pereira	10.5	14	0	28	Sporting Lissabon	4,489
	Ricardo Costa	4.0	10	0	31	FC Valencia	1,484
	Miguel Lopes	1.7	0	0	25	Sporting Braga	908
Midfielders	Nani	36.0	53	12	25	Manchester United	3,006
	Joao Moutinho	23.0	41	2	25	FC Porto	3,751
	Raul Meireles	14.0	55	8	29	FC Chelsea	3,406
	Miguel Veloso	10.0	23	2	26	FC Genoa	2,433
	Hugo Viana	7.5	27	1	29	Sporting Braga	3,786
	Ruben Micael	5.0	8	2	25	Real Saragossa	2,300
	Custodio	1.5	0	0	29	Sporting Braga	1,877
Forwards	Cristiano Ronaldo	90.0	89	32	27	Real Madrid	5,062
	Ricardo Quaresma	15.0	34	3	18	Besiktas Istanbul	2,828
	Hugo Almeida	8.0	41	15	28	Besiktas Istanbul	2,710
	Silvestre Varela	7.3	6	1	27	FC Porto	1,855
	Nelson Oliveira	4.0	2	0	20	Benfica Lissabon	1,099
	Helder Postiga	4.0	48	19	29	Real Saragossa	2,971

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Russia

- Total market value: EUR 162.2mn
- Average market value (per player): EUR 7.1mn
- Standard deviation of individual market values: EUR 4.7mn
- Most expensive player: Akinfeev (EUR 17.0mn)
- Average age: 28.3 years
- Share of players playing abroad: 8.7%
- Stress factor: not available
- FIFA/Coca-Cola World Ranking: 11

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Igor Akinfeev	17.0	50	0	26	ZSKA Moscow	---
	Vyacheslav Malafeev	6.5	23	0	33	Zenit St. Petersburg	---
	Anton Shunin	4.5	2	0	25	Dynamo Moscow	---
Defenders	Aleksandr Anyukov	9.0	63	1	29	Zenit St. Petersburg	---
	Sergey Ignashevich	6.0	72	5	32	ZSKA Moscow	---
	Aleksey Berezutski	4.5	45	0	29	ZSKA Moscow	---
	Kirill Nababkin	3.5	0	0	25	ZSKA Moscow	---
	Vladimir Granat	2.8	0	0	25	Dynamo Moscow	---
	Roman Sharonov	0.7	12	0	35	Rubin Kazan	---
	Midfielders	Alan Dzagoev	16.0	18	4	21	ZSKA Moscow
Igor Denisov	14.0	23	0	28	Zenit St. Petersburg	---	
Yuri Zhirkov	12.0	49	0	28	Anzi Makhachkala	---	
Denis Glushakov	8.0	8	1	25	Locomotive Moscow	---	
Dmitri Kombarov	5.0	1	0	25	Spartak Moscow	---	
Roman Shirokov	5.0	19	4	30	Zenit St. Petersburg	---	
Igor Semshov	3.0	56	3	34	Dynamo Moscow	---	
Konstantin Zyryanov	1.2	47	7	34	Zenit St. Petersburg	---	
Forwards	Aleksandr Kerzhakov	13.0	58	17	29	Zenit St. Petersburg	---
	Andrey Arshavin	11.0	68	17	31	Zenit St. Petersburg	---
	Roman Pavlyuchenko	8.5	45	20	30	Locomotive Moscow	---
	Marat Izmailov	5.0	31	2	29	Sporting Lissabon	---
	Pavel Pogrebnyak	3.5	31	8	28	FC Fulham	---
	Aleksandr Kokorin	2.5	2	0	21	Dynamo Moscow	---

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Spain

- Total market value: EUR 658.0mn
- Average market value (per player): EUR 28.6mn
- Standard deviation of individual market values: EUR 14.4mn
- Most expensive player: Iniesta (EUR 65mn)
- Average age: 26.8 years
- Share of players playing abroad: 17%
- Stress factor: 88,894 minutes played
- FIFA/Coca-Cola World Ranking: 1

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Iker Casillas	35.0	128	0	31	Real Madrid	5,219
	Victor Valdes	20.0	7	0	30	FC Barcelona	4,770
	Pepe Reina	19.0	24	0	29	FC Liverpool	4,253
Defenders	Gerard Pique	38.0	38	4	25	FC Barcelona	3,052
	Sergio Ramos	34.0	83	6	26	Real Madrid	4,916
	Javi Martinez	22.0	7	0	23	Athletic Bilbao	4,793
	Alvaro Arbeloa	12.0	33	0	29	Real Madrid	3,630
	Jordi Alba	10.0	3	0	23	FC Valencia	4,212
	Raul Albiol	9.0	31	0	26	Real Madrid	1,332
	Juanfran	8.0	1	0	27	Atletico Madrid	3,085
	Andres Iniesta	65.0	64	11	28	FC Barcelona	3,546
Midfielders	Cesc Fabregas	55.0	63	8	25	FC Barcelona	3,525
	David Silva	46.0	55	15	26	Manchester City	4,216
	Xabi Alonso	35.0	93	12	30	Real Madrid	4,924
	Sergio Busquets	35.0	38	0	23	FC Barcelona	4,490
	Xavi	35.0	108	10	32	FC Barcelona	3,970
	Santi Cazorla	20.0	40	4	27	FC Malaga	3,779
	Jesus Navas	20.0	15	1	26	FC Sevilla	4,057
	Fernando Torres	35.0	91	27	28	FC Chelsea	3,173
Forwards	Juan Mata	34.0	16	5	25	FC Chelsea	4,162
	Pedro	28.0	15	2	24	FC Barcelona	2,897
	Fernando Llorente	25.0	20	7	27	Athletic Bilbao	4,063
	Alvaro Negredo	18.0	7	5	26	FC Sevilla	2,830

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Sweden

- Total market value: EUR 122.8mn
- Average market value (per player): EUR 5.3mn
- Standard deviation of individual market values: EUR 7.3mn
- Most expensive player: Ibrahimovic (EUR 37mn)
- Average age: 28.3 years
- Share of players playing abroad: 87%
- Stress factor: 64,556 minutes played
- FIFA/Coca-Cola World Ranking: 17

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Andreas Isaksson	4.0	91	0	30	PSV Eindhoven	3,225
	Pär Hansson	2.5	2	0	25	Helsingborgs IF	1,620
	Johan Wiland	2.5	7	0	31	FC Copenhagen	4,005
Defenders	Andreas Granqvist	3.8	16	2	27	FC Genoa 1893	2,706
	Martin Olsson	3.5	8	4	25	Blackburn Rovers	2,752
	Olof Mellberg	3.25	112	7	34	Olympiakos Piraeus	3,117
	Jonas Olsson	3.0	6	0	29	West Bromwich Albion	3,270
	Behrang Safari	2.5	24	0	27	RSC Anderlecht	2,912
	Mikael Lustig	1.9	23	1	25	Celtic Glasgow	1,016
	Mikael Antonsson	1.8	4	0	31	FC Bologna	1,862
	Kim Källström	9.0	90	16	29	Olympique Lyon	4,660
Midfielders	Sebastian Larsson	8.0	39	5	26	AFC Sunderland	3,669
	Ola Toivonen	8.0	22	4	25	PSV Eindhoven	4,266
	Rasmus Elm	7.5	22	1	24	AZ Alkmaar	4,692
	Samuel Holmen	4.0	25	2	27	Istanbul Büyükşehir Beledi.	3,473
	Pontus Wernbloom	3.5	21	2	25	ZSKA Moscow	2,700
	Anders Svensson	1.0	126	18	35	IF Elfsborg Borås	1,680
	Christian Wilhelmsson	1.0	72	8	32	Al-Hilal Riad	288
	Zlatan Ibrahimovic	37.0	75	29	30	AC Milan	3,966
Forwards	Johan Elmander	8.0	63	16	31	Galatasaray Istanbul	3,173
	Markus Rosenberg	3.0	30	6	29	Werder Bremen	2,460
	Emir Bajrami	2.0	15	2	24	FC Twente Enschede	1,961
	Tobias Hysen	2.0	21	7	30	IFK Göteborg	1,083

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

Ukraine

- Total market value: EUR 107.4mn
- Average market value (per player): EUR 4.7mn
- Standard deviation of individual market values: EUR 2.5mn
- Most expensive player: Yarmolenko (EUR 9mn)
- Average age: 27.3 years
- Share of players playing abroad: 8.7%
- Stress factor: 54,984 minutes played
- FIFA/Coca-Cola World Ranking: 50

Position	Name	Market value, in EUR mn	Games*	Goals*	Age	Club team 2011/12	Minutes played 2011/12**
Goalies	Andriy Pyatov	6.0	25	0	27	Shakhtar Donetsk	1,470
	Maksym Koval	2.0	0	0	19	Dynamo Kiev	849
	Oleksandr Goryainov	0.6	1	0	36	Metalist Kharkiv	2,160
Defenders	Yaroslav Rakitsky	8.0	15	3	22	Shakhtar Donetsk	3,517
	Taras Mykhalyk	4.0	26	0	28	Dynamo Kiev	861
	Evgen Khacheridi	3.5	9	0	24	Dynamo Kiev	2,084
	Oleksandr Kucher	3.5	29	1	29	Shakhtar Donetsk	2,975
	Bogdan Butko	2.0	8	0	21	Ilyichivets Mariupol	3,088
	Evgen Selin	1.8	6	1	24	Vorskla Poltava	4,089
	Vyacheslav Shevchuk	1.5	20	0	33	Shakhtar Donetsk	2,235
	Oleksandr Aliev	7.5	26	6	27	Dynamo Kiev	2,241
Midfielders	Evgen Konoplyanka	7.5	17	5	22	Dnipro Dnipropetrovsk	3,213
	Oleg Gusev	7.0	70	10	29	Dynamo Kiev	2,746
	Anatoliy Tymoshchuk	5.0	115	4	33	Bayern Munich	3,281
	Ruslan Rotan	3.5	56	6	30	Dnipro Dnipropetrovsk	2,585
	Denys Garmash	3.0	4	0	22	Dynamo Kiev	2,001
	Sergiy Nazarenko	2.0	47	12	32	Tavriya Simferopol	2,738
	Andriy Yarmolenko	9.0	19	8	22	Dynamo Kiev	3,988
	Artem Milevsky	8.0	44	8	27	Dynamo Kiev	2,563
Forwards	Marko Devic	7.0	19	2	28	Metalist Kharkiv	2,569
	Evgen Seleznev	5.0	28	5	26	Shakhtar Donetsk	1,445
	Andriy Shevchenko	5.0	106	46	35	Dynamo Kiev	1,729
	Andriy Voronin	5.0	71	8	32	Dynamo Moscow	557

* in national team; ** in club and national team; source: www.transfermarkt.de (updated on 1 June), UniCredit Research

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