



The European Elite 2019

Football Clubs' Valuation

May, 2019

KPMG Sports Advisory Practice

footballbenchmark.com



What is KPMG Football Benchmark?

A business intelligence tool enabling relevant comparisons with competitors, including:

Club finance & operations



A consolidated and verified database of the financial and operational performance of over 200 football clubs, both in Europe and South America.

Social media analytics



A historical tracking of the social media activity of hundreds of football clubs and players.

Player valuation



A proprietary algorithm, which calculates the market value of 4,700 football players from nine European and two South American leagues.

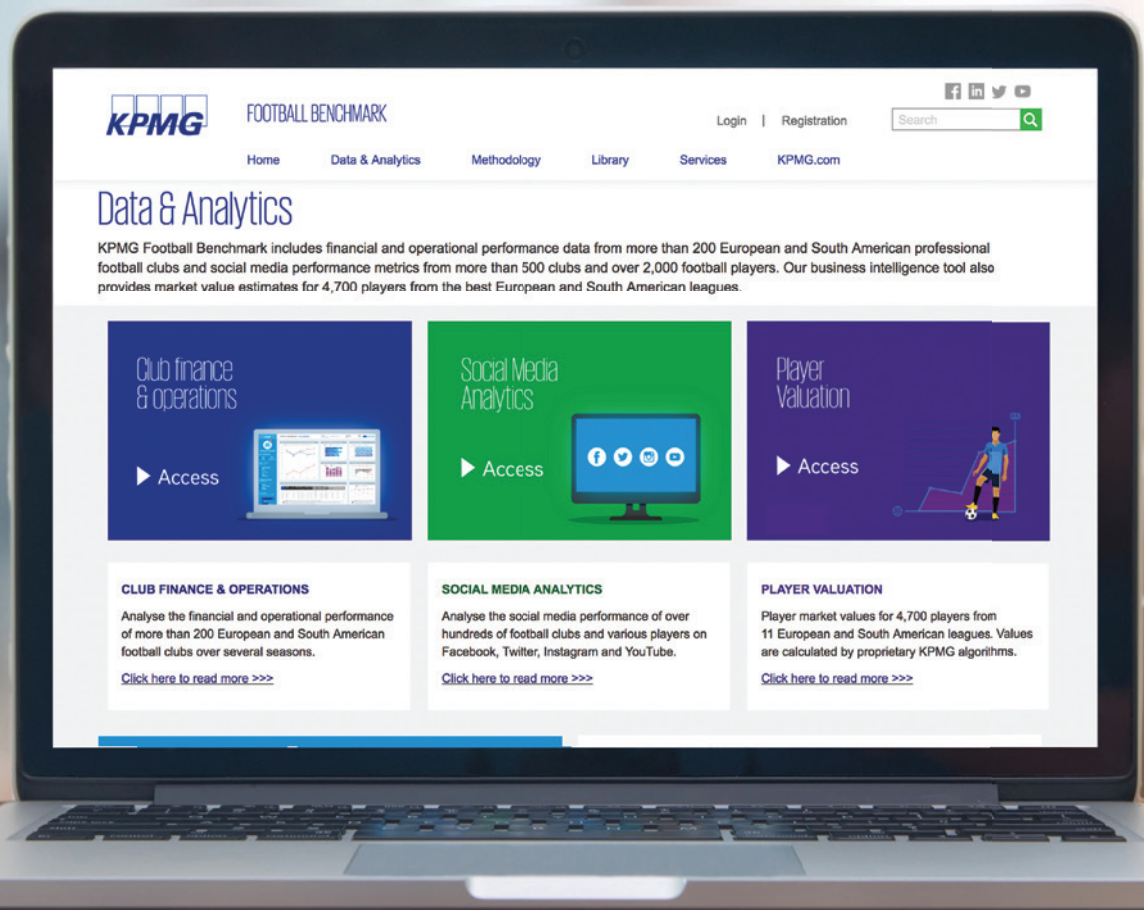
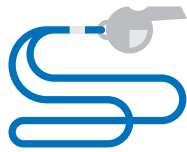


Table of contents



04

Foreword



05

Selection criteria



06

Headline findings



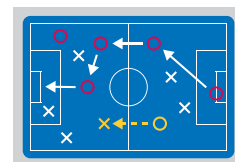
16

**Squad and player valuation
- impact on EV**



24

**Enterprise Value
ranges & mid points**



26

Our methodology



Foreword

Dear Reader,

Following the success of the past three years, I am delighted to introduce you to KPMG's fourth edition of the club valuation report, an annual analysis providing an indication of the Enterprise Value (EV) of the 32 most prominent European football clubs as at 1 January 2019. We trust our report, prepared by the Football Benchmark team of the KPMG's Sports Advisory Practice, provides stimulating insights into the European football landscape.

After three years of stability on the podium, this year brought some turbulence, with **Real Madrid CF leapfrogging Manchester United FC at the top**, and **FC Barcelona slipping to the 4th spot, letting FC Bayern München take the 3rd position**. *Los Blancos* jumped above the EUR 3 billion EV level for the first time, the only club to do this alongside the *Red Devils*; however, the Spanish giants' current EV is still lower than the *Red Devils* was last year. Similarly, the *Bavarians'* current value is lower than the *Blaugrana's* in 2018.

Further changes among the top 10 include **Tottenham Hotspur FC surpassing Juventus FC** to reach the 9th position, and **Arsenal FC dropping two spots to land in the 8th position, surpassed by Chelsea FC and Liverpool FC**. The latter two clubs claim an EV in excess of EUR 2 billion for the first time, making to eight the number of clubs having an EV over EUR 2 billion.

The two 2019 UEFA Champions League finalists boast remarkable financial performance in the past season: Liverpool FC's 33% annual EV growth is second only to FC Internazionale Milano's 41% year-on-year increase, while Tottenham Hotspur FC came in third with a 31% growth. They also registered record levels of pre-tax profit – EUR 157 million for *Spurs* and EUR 136 million for the *Reds*. Tottenham Hotspur FC's 39% staff costs-to-revenue ratio is also the lowest among the 32 clubs.

As last year, the big five football leagues are represented by 27 clubs. The **English Premier League has confirmed its absolute dominance**, having nine clubs on the list and accounting for 43% of the total aggregate value. **This year, Scotland's Celtic FC is a new joiner together with Spanish Villarreal CF**. On the other hand, Valencia CF and Fenerbahçe SK dropped out, whereas both clubs had been on this list in all the three previous editions of our analysis.

For the third consecutive year, **the overall EV of the 32 most prominent European football clubs has increased by 9% (an impressive 35% over the past three years)**. This growth rate is in contrast with the overall trend of major European Stock Exchanges, notably the STOXX Europe 50 Index¹, showing a year-on-year decrease of -13% (-9% from 2016), and demonstrating the different pace at which the football industry is evolving.

The transition of major clubs into media and entertainment companies, with global brand exposure, also helps create more stable and predictable cash flows and consequently better warranties to investors and financiers. It comes by no surprise, that such remarkable growth has heated the debate concerning the transformation of European clubs' competition structure. However, the stakeholders involved do not necessarily share the

same interests and rather sit on conflicting positions that are likely to make future decisions even more challenging.

Comparing the best five listed clubs according to their EV on the stock exchange (market capitalization plus net debt) at the first trading day of 2019, to KPMG's EV, we can see minor differences for Manchester United FC (+7% in KPMG's valuation), Juventus FC (+5%) and AS Roma (-5%), while the difference is more prominent for Borussia Dortmund (+49%) and Olympique Lyonnais (+21%).

Considering the 3-year EV evolution of the top 32, Olympique Lyonnais boast the highest (+150%) overall increase, followed by Tottenham Hotspur FC (+110%).

On the other hand, FC Barcelona are the only club in the current ranking who suffered a decrease in their EV (-3%) since the publication of the first edition of our report in 2016.

Acknowledging that players and squads constitute the most significant assets of the majority of football clubs, in this year's analysis we dedicate **a focus section to the context surrounding player valuation, measured through KPMG's proprietary algorithms**.

In preparing our report, firstly, we surveyed the publicly-available statutory financial statements of the 38 professional football clubs that meet our selection criteria (see on the opposite page), and of which the top 32 by EV are selected for the purposes of this publication. It is important to note that this analysis does not consider the business and sporting results achieved by each club in the 2018/19 season. Then, we adopted the so-called Revenue Multiple approach, used in corporate finance valuations. However, to avoid the overly simplistic approach of using uniform multipliers, KPMG professionals have applied a proprietary algorithm, consistent with the one adopted in previous editions, that considers the differences between football clubs and the markets and the economies in which they operate. Our formula takes into account five parameters – profitability, popularity, sporting potential, broadcasting rights and stadium ownership – each with their own specific weight, and calculating ad-hoc revenue multipliers, varying from club to club.

If you would like to receive further information concerning our findings, please contact us through www.footballbenchmark.com or myself directly. I would be delighted to discuss them with you.

Yours sincerely,

Andrea Sartori
Partner
KPMG Global Head of Sports
andreasartori@kpmg.com

¹The STOXX Europe 50 index, Europe's leading blue-chip index, provides a representation of supersector leaders in Europe covering 50 stocks from 17 different European countries.

Selection criteria

Besides availability of annual financial statements of the clubs, KPMG set three parameters to be fulfilled in order for a club to be included in our research. The two primary criteria that have to be simultaneously fulfilled are:

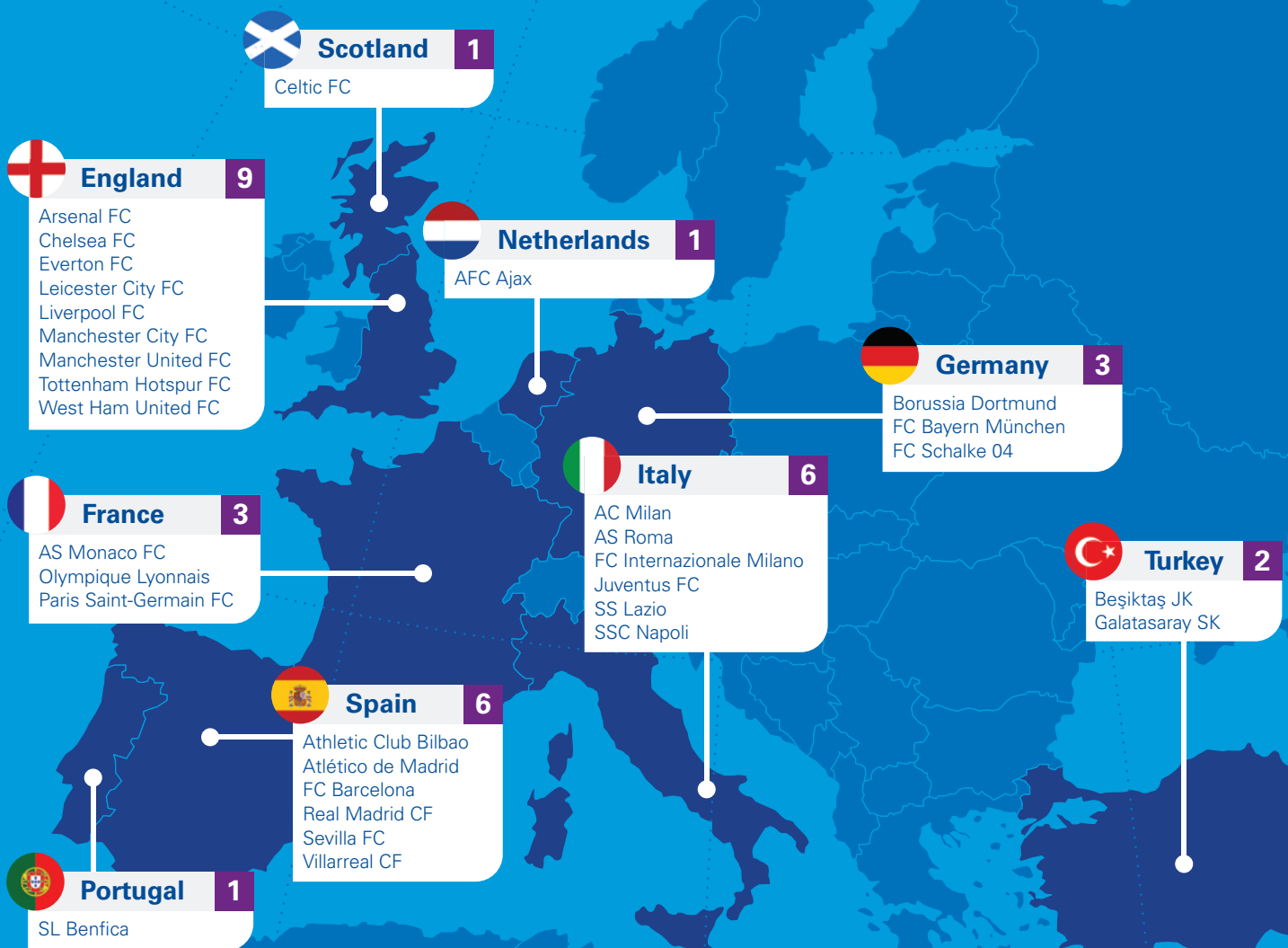
1. Clubs must be among the top 50 European teams by total operating revenues; and
2. Clubs must be among the top 50 teams according to the 5-year UEFA coefficient.

In case one of the above criteria is not fulfilled, a club could still be shortlisted if:

3. It is among the top 30 European teams by number of social media followers (Facebook, Twitter, Instagram and YouTube combined) followers as at 1 January 2019.

The rationale behind these selection criteria is that the chosen clubs are largely successful on pitch, are not in danger of being relegated and possess a brand with high international visibility.

Based on the pre-established selection criteria, 38 clubs from 9 European countries have met the requirements and have been analysed by KPMG. The 32 clubs ranked according to EV which make this year's edition of KPMG's Football Clubs' Valuation report are provided in the map below, while the six "runners-up" ranked by their EV, are: Olympique de Marseille (France), Valencia CF (Spain), Fenerbahçe SK (Turkey), ACF Fiorentina (Italy), FC Porto (Portugal) and Sporting Clube de Portugal (Portugal).



Who is new in the top 32

- Celtic FC (Scotland)
- Villarreal CF (Spain)



Who is out of the top 32

- Fenerbahçe SK (Turkey)
- Valencia CF (Spain)

Headline findings

Movement among the top three clubs

The positions of the top three clubs atop the podium have been stable over the three previous editions of our report.

In the first year (2016), Real Madrid CF and Manchester United FC shared the first spot followed by FC Barcelona, while in the following two seasons, the English giants finished ahead of the Spanish club, with FC Barcelona keeping the third spot. In this year's edition, **for the first time, Real Madrid CF leapfrogged Manchester United FC, taking the first spot, while FC Barcelona slipped to fourth, letting FC Bayern München take the 3rd position.**

This "revolution" atop the podium is a consequence of both Manchester United FC and FC Barcelona suffering an annual decrease in their EV (-1% and -4%, respectively). On the other hand, *Los Blancos* can boast a 10% annual EV increase, paired with a 6% growth by FC Bayern München.

The chart below shows the evolution of some main key performance indicators over the last four years, explaining the underlying reasons that have ultimately led to this year's bettering at the top.

In the past four seasons, Real Madrid CF have been cashing in significantly more from UEFA prize money than Manchester United FC, having won the UEFA Champions League for three times in a row. Moreover, the outstanding international sporting performance has, in turn, allowed Real Madrid CF to register almost double the commercial revenue growth of the *Red Devils*

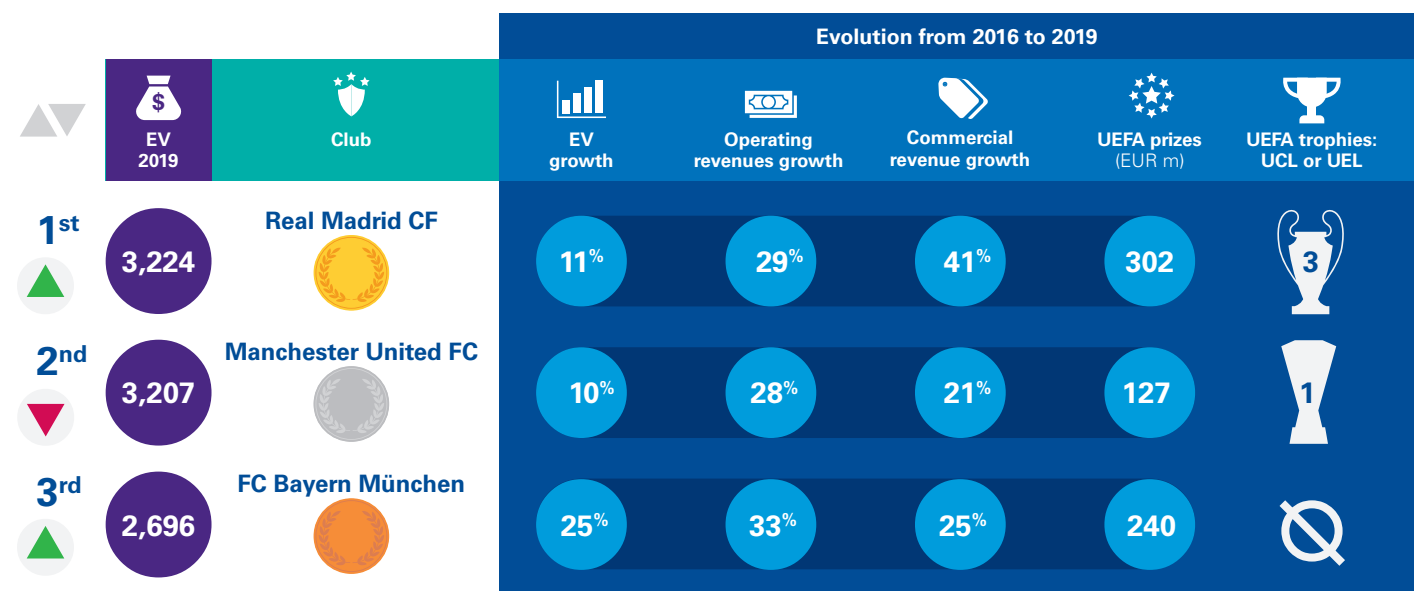
over the last four seasons. Consequently, *Los Blancos* could benefit from a cumulated 29% operating revenue growth from 2016 to 2019, slightly higher than their English counterpart, which made them the highest revenue generating club.

The Spanish side's improvement in profitability in the 2017/18 season and the growing in popularity, fostered by spectacular international success, represented the final key factors helping them surpass Manchester United FC. **In the EV evolution's analysis over the past four years, it is relevant to observe that the devaluation of the GBP has negatively affected all English clubs' value.**

The change on the third spot is mainly a consequence of financial sustainability. In fact, the large difference in 3-year aggregate EV growth registered by the two clubs (+25% for FC Bayern München and -3% for **FC Barcelona, the only club who suffered an aggregate EV decrease over the four editions of our report**) is mainly explained by the increasing staff costs of the Spanish club. Indeed, FC Bayern München managed to keep their staff costs-to-revenue ratio at 50%, while the *Blaugrana* reached a record level of 81%.

From the top three, only FC Bayern München can claim a domestic dominance, having recently secured their 7th Bundesliga title in a row. While Real Madrid CF have been successful on the international level, they could clinch the LaLiga title only twice in the past ten seasons, and the last time Manchester United FC won the Premier League was in the 2012/13 season.

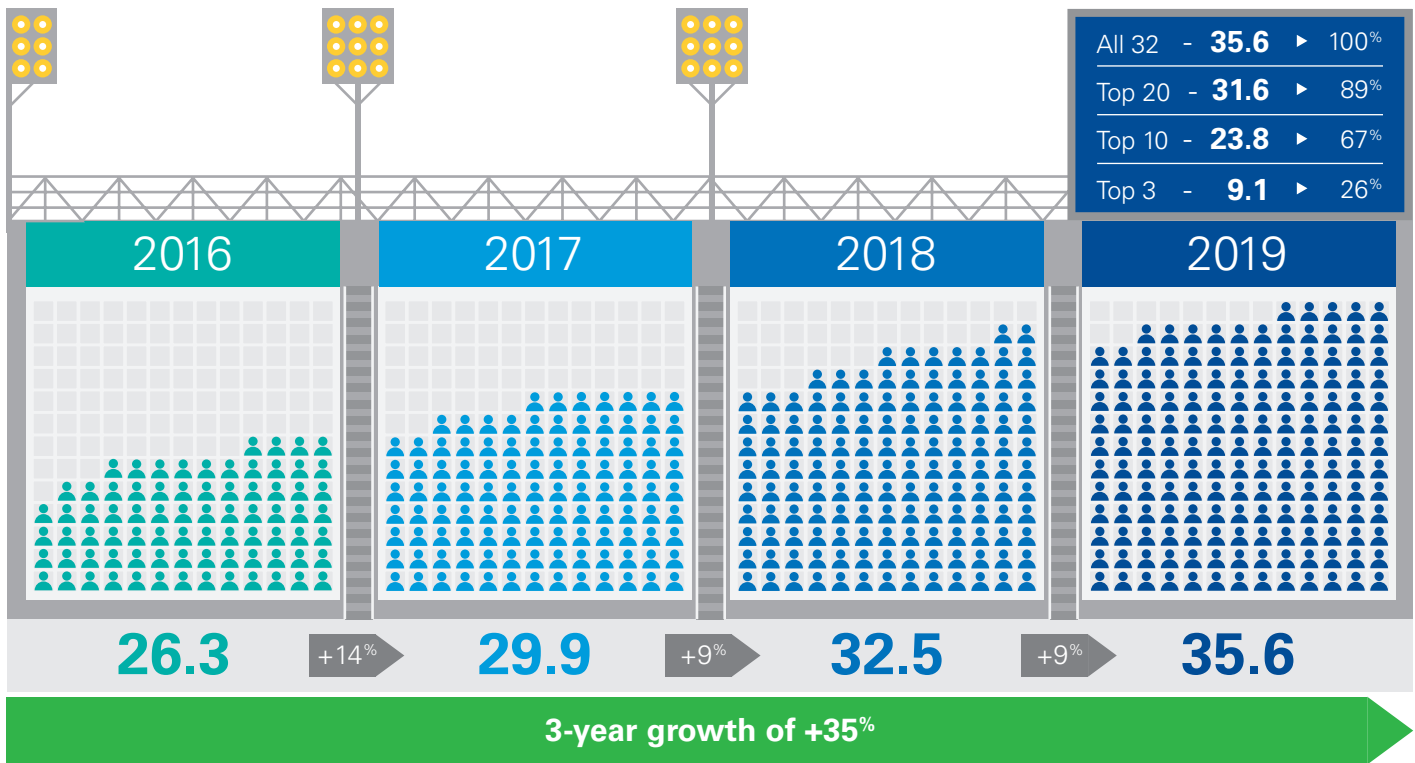
Top 3 by EV 2019 (EUR m), and their EV evolution from 2016 to 2019





Los Blancos gained the throne as the most valuable football club by Enterprise Value.
Credits: Real Madrid CF

Aggregate EV of Top 32 (2016-2019) and EV of top groups in 2019 (EUR billion)



Source: KPMG Football Benchmark

Overall trends and EV by leagues

For the third consecutive year, the overall Enterprise Value of the 32 most prominent European football clubs has increased, growing by 9% to EUR 35.6 million.

The pace at which football clubs are growing is in contrast with the overall trend of major European Stock Exchanges, notably the STOXX Europe 50 Index¹, showing a year-on-year change of -13% (-9% from 2016).

The top three clubs represent a quarter (26%) of the total aggregate EV, while the top 10 account for two-thirds (67%) of it, the same proportion as last year.

At club level, FC Internazionale Milano registered the highest (41%) year-on-year EV increase and a "jump" of five positions, followed by the two 2019 UEFA Champions League finalists, Liverpool FC and Tottenham Hotspur FC, with a growth of 33% and 31%, respectively. The *Nerazzurri's* outstanding result is driven by commercial revenue growth (+126% over the last two seasons), by increasing squad market value (+57% year-on-year) and improved profitability.

Compared to last year, five clubs have seen their individual EV drop in our report: Manchester United FC (-1%), AS Monaco FC (-2%), FC Barcelona (-4%), Arsenal FC (-4%) and Galatasaray SK (-26%).

The overall EV growth of the top 32 clubs is driven primarily by an aggregate 5% increase in total operating revenues, with AS Roma registering the highest year-on-year growth rate (43%), thanks to the remarkable result achieved in the UEFA Champions League in 2017/18, during which they have reached the semifinals.

On the other hand, staff costs continued to grow too, with the average staff costs/operating revenues ratio of the top 32 increasing by four percentage points, up to 63%.

At league level, **the English Premier League has confirmed its absolute dominance, having nine clubs in the top 32 and accounting for 43% of the total aggregate value.**

Spanish LaLiga maintained the second position per aggregate EV, with six clubs accounting for 22% of the total EV, followed by Germany, with three Bundesliga clubs representing higher aggregate EV (13% of the total) than Italy's Serie A (six clubs accounting for 12% of the total EV). However, Italian clubs have showed the highest year-on-year aggregate EV increase (+19%).

¹The STOXX Europe 50 index, Europe's leading blue-chip index, provides a representation of supersector leaders in Europe covering 50 stocks from 17 different European countries.

This year **the five clubs of non-big five leagues count for only 4% of the total Enterprise Value, one percentage point less than in the previous edition**, mainly due to the dropping of one Turkish club from the ranking.

In the 4-year history of our study, the 32 clubs considered in our list were always comprised of clubs from the same eight countries – however, this year Scotland, represented by Celtic FC, is also featured. The other newcomer is Villarreal CF, also a debutant in this elite ranking. On the other hand, Valencia CF and Fenerbahçe SK dropped out, whereas both clubs were on this list in all the three previous editions.

Both Celtic FC and Villarreal CF managed to be featured among the top 32 clubs due primarily to their revenue and profitability improvements, as the two clubs also benefitted from their participation to the UEFA Champions League and Europa League in the last seasons.

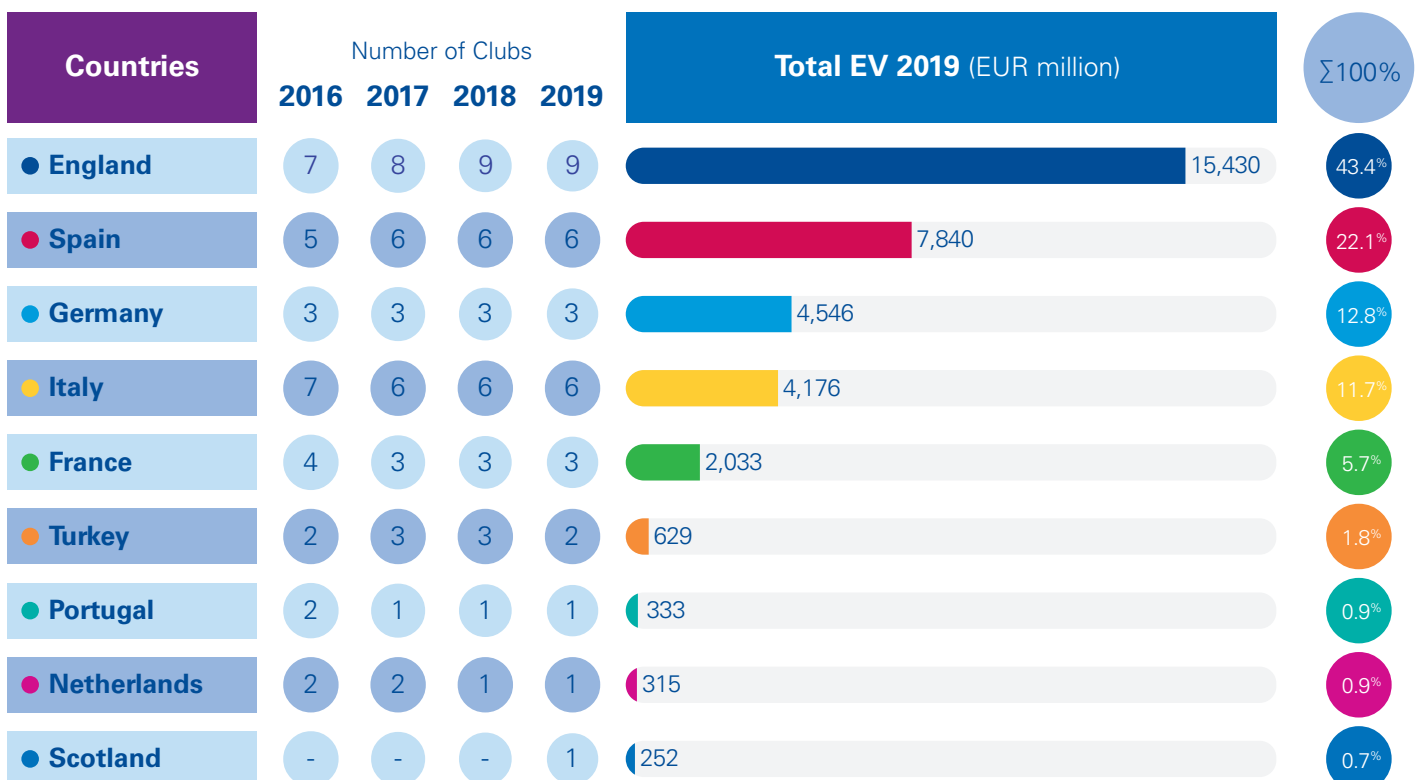
While the dominance of the big-five leagues is palpable, only the English Premier League and the Spanish LaLiga could strengthen their positions, by adding further clubs to the list over the 4-year editions of our report. Germany remained stable with three clubs, while both French Ligue 1 and Italian Serie A dropped one club over the years. The overall representation of the non-big five leagues (Turkey, Netherlands, Portugal, and now Scotland) has also been decreasing.



Les Monégasques registered a record EUR 316 million of Profit/Loss on disposal of players' registrations.

Credits: AS Monaco FC

Number of clubs, aggregate value by country and share of EV





Celtic FC have made it to the top 32 for the first time, also the first Scottish club ever in this ranking.

Credits: Celtic FC

Top ten turbulence

Although **we see the same clubs in the top 10 of our ranking** as in last year's edition, there has been a major reshuffle in the order: **with the exception of Manchester City FC, which retained their 5th position, all the other nine clubs changed places.**

Unsurprisingly, the top 10 is dominated by English clubs (six out of the top nine), while Spain maintains its second position, thanks to its giants Real Madrid CF (1st place) and FC Barcelona (4th). The German Bundesliga and Italian Serie A are represented by one club each: namely the new third-ranked FC Bayern München and Juventus FC, which takes the 10th slot now, one less than the previous year.

Beyond Real Madrid CF leapfrogging Manchester United FC on the top, and FC Bayern München surpassing FC Barcelona, taking the 3rd position, further changes in the top 10 include Arsenal FC dropping two spots to land in the 8th position, surpassed by both Chelsea FC and Liverpool FC, and Tottenham Hotspur FC advancing Juventus FC to reach the 9th position.

The top eight clubs can boast now EVs over EUR 2 billion, whereas last year only six clubs were above that level. The two new joiners of this group are Chelsea FC and Liverpool FC.

Along with the developments that led to a revolution on the podium, the remaining clubs in the top 10 have been the actors of important changes too, after the crystallization of the previous edition.

Manchester City FC, which retained the 5th slot, increased their EV by 14% year-on-year, by combining a 3% revenue growth with a 5% reduction of their staff costs.

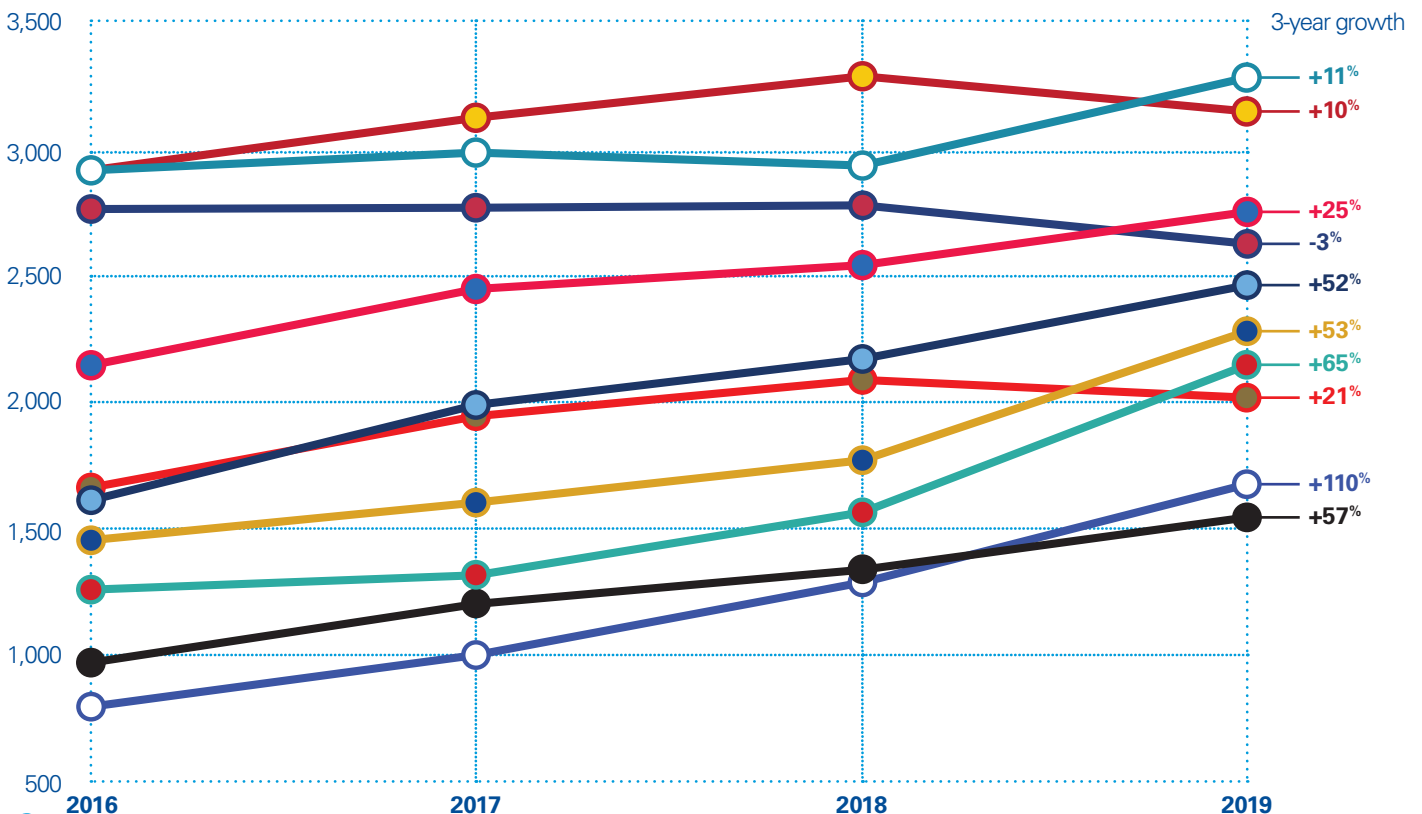
Arsenal FC suffered the worst performance among the top 10, with their -4% annual EV decrease, which cost them two positions, mainly due to -10% operating revenues and +17% staff costs. The *Gunners'* result is also strongly affected by their missing out on participation in the UEFA Champions League for the first time since the 1997/98 season.

Top 10: Key performance indicators, 2017/18

Position	Top 10 Clubs	Operating revenues (EUR m)	Staff costs to revenue ratio	EBIT (EUR m)	Squad market value* (EUR m)	Social media followers* (in m)	Stadium utilisation rate
+1	Real Madrid CF	743	58%	42	958	230	81%
-1	Manchester United FC	666	50%	52	846	121	100%
+1	FC Bayern München	629	50%	47	749	71	100%
-1	FC Barcelona	689	81%	36	1,111	222	66%
=	Manchester City FC	568	52%	19	1,182	59	98%
+1	Chelsea FC	506	55%	49	842	78	99%
+1	Liverpool FC	514	58%	143	1,038	58	99%
-2	Arsenal FC	439	62%	83	624	66	99%
+1	Tottenham Hotspur FC	430	39%	168	876	17	76%
-1	Juventus FC	402	64%	-1	788	68	95%

*Note: Figures as at 1 January 2019

Top 10: EV trend 2016-2019 (EUR m)





The Nerazzurri registered the highest (41%) year-on-year EV increase, helping them jump five positions in our ranking.

Credits: FC Internazionale Milano

Chelsea FC managed to boost their EV by +26% year-on-year, taking advantage of their city rivals' situation, **and thus jumping to the 6th place**. The *Blues* have been able to increase their revenues by 18%, reducing staff costs to revenue ratio from 60% to 55% in the last season. The remaining two English clubs in the top 10 also registered impressive growths.

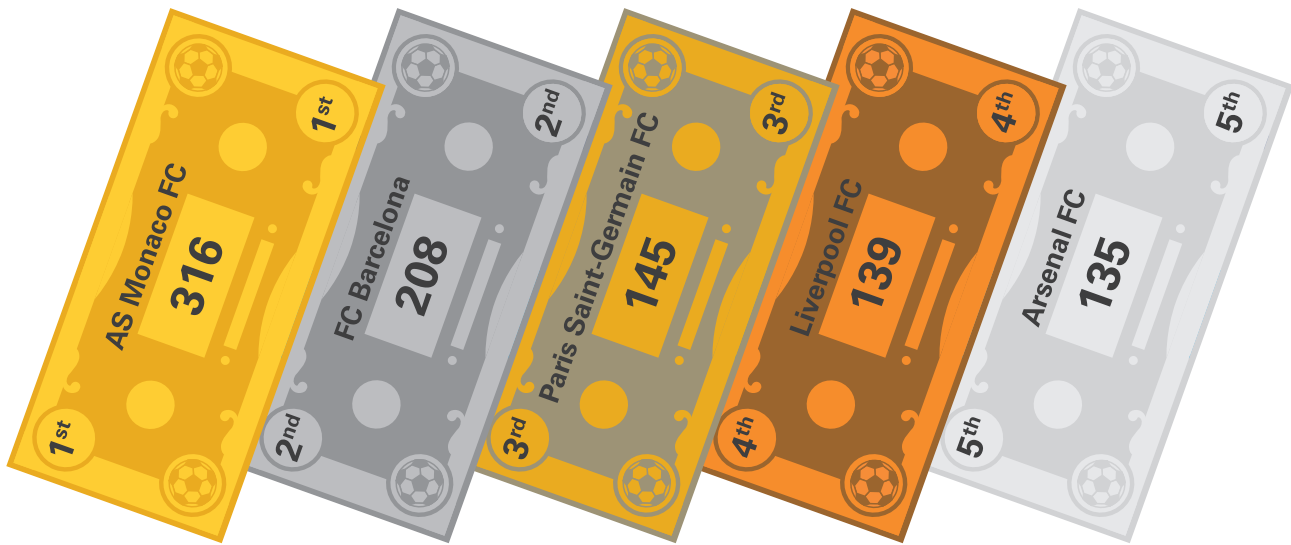
Seventh-placed Liverpool FC increased their EV by 33% over the previous edition, especially thanks to reaching the UEFA Champions League final in 2018, where they lost to Real Madrid CF. **The Reds' broadcasting revenue growth (+38%) and the increase in their squad market value (+90%) represent the key factors for their achievement**; furthermore, during the 2017/18 season, the *Reds* achieved a pre-tax profit of EUR 136 million.

That record did not last long though, because in the same season, **Tottenham Hotspur FC (9th) registered a record EUR 157 million pre-tax profit, a key factor for their +31% annual EV increase**. That figure assumes even more relevance

considering the overall growth of the *Spurs* since 2016: they boosted their EV by a record +110%, helping them jump from 12th to 9th place. Furthermore, in the 2018/19 season they have inaugurated the New White Hart Lane stadium, a modern 62,000-seat arena which will likely deliver multiple benefits for the club going forward.

Finally, **Juventus FC have lost one position, falling to 10th place, one above Paris Saint-Germain FC, despite their 19% year-on-year EV growth**. The *Bianconeri's* EV growth was mainly driven by a 21% year-on-year growth in commercial revenues and by the 40% annual increase in their squad's market value, a first consequence of the purchase of 5-time Ballon d'Or winner Cristiano Ronaldo in summer 2018. Besides the unquestionable sporting, commercial and branding potential the Portuguese superstar can bring, it remains to be seen how such an acquisition will impact on the sustainability of the club and on their EV in the next seasons. In 2018, Juventus FC have also registered the highest growth on the Milan stock exchange that allowed the club to enter in the FTSE MIB.

Top 5 by Net Profit on disposal of players' registrations (2017/18, EUR m)



Source: KPMG Football Benchmark

The importance of player trading activities

Football players constitute the key assets of any football clubs and transactions of players are a regular activity of any club. Besides traditional income streams such as gate receipts, broadcasting and commercial, **football clubs have been leveraging more and more often on player trading activities in order to find additional resources to run their business and reach financial sustainability.**

Once a player is sold, the outcome for the seller can be twofold: a profit occurs when the transfer fee paid by the buyer is higher than the player's carrying amount at the moment of the disposal, while a loss is seen when such a transfer fee is lower than the net book value at the moment of the disposal.

Profits and losses on disposal of players' registrations often represent one of the main items in football clubs' income statements, as confirmed by the **average 33% weight of the profit/loss on disposal of players' registrations on the total operating revenue among the top 32.**

The chart above shows the top 5 clubs in terms of profit/loss on disposal of players' registrations among the top 32 in the 2017/18 season.

AS Monaco FC (29th by EV) shows an all-time record net profit on players' disposals of EUR 316 million, as they capitalised on the transfers of, among others, French sensation Kylian Mbappé to Paris Saint-Germain FC, and both Bernardo Silva and Benjamin Mendy to Manchester City FC.

FC Barcelona, Paris Saint-Germain FC and Liverpool FC are part of this top 5 ranking thanks to a domino effect started with the acquisition of Brazilian superstar Neymar by the French champions from the *Blaugrana* that, in turn, replaced him with Philippe Coutinho, acquired from the *Reds*.

Even for big and stable clubs, strong investments in the transfer windows need to be offset by some disposals, as UEFA Financial Fair Play Regulations continue to have an impact on the decisions taken by clubs' management. Thus, *PSG* were able to generate significant profits on players mainly thanks to the sales of Lucas Moura, Blaise Matuidi, Serge Aurier and Javier Pastore. Finally, another English club features in this specific ranking, as the *Gunners* took advantage of the disposals of Alexis Sánchez and Alex Oxlade-Chamberlain.

These figures show how player values influence both on and off the pitch results; in the next chapter, we will provide a detailed focus on player valuation.

Clubs' profitability – ROS analysis

Profitability represents a pivotal parameter in KPMG's algorithm adopted to estimate clubs' EV. Hereafter we present a return on sales (ROS) analysis, taking into account the pre-tax profit/loss compared to the operating revenues for the 2017/18 season.

The aggregate pre-tax profitability of the top 32 clubs is EUR 641 million, an average of EUR 20 million per club and a 2% increase compared to the previous edition. This result also demonstrates how the football industry is achieving better sustainability and, consequently, higher enterprise values.

The best performers in terms of ROS among the top 32 are Tottenham Hotspur FC (+36%), SS Lazio (+32%) and Liverpool FC (+26%). On the other hand, the bottom performers, displayed in the picture as "sitting on the bench", are AS Roma (-7%), Galatasaray SK (-44%) and AC Milan (-57%).

Return on sales - ROS (Pre-tax Profit/Loss on Total operating revenues), 2017/18

Top 3 clubs by ROS



The record result reached by **Tottenham Hotspur FC** is mainly explained by significant **cost control**, as their **39% staff-costs-to-revenue ratio**, the lowest among our sample of clubs, clearly highlights. This high level of efficiency, combined with revenues coming from UEFA Champions League participation until the last 16 and additional income deriving from player trading (EUR 82 million Net Profit on disposal of players' registrations), justify the *Spurs'* achievement.

SS Lazio (28th by EV) confirmed their reputation for being a sustainable club by registering a pre-tax profit of EUR 40 million; the *Biancocelesti* have in particular benefitted from a 29% year-on-year increase in their operating revenues as well as from their positive player trading results. Liverpool FC's third place in this special ranking is a direct consequence of their international success on the pitch last season, paired with their player trading activities (EUR 139 million of Net Profit on disposal of players' registrations).

Bottom 3 clubs by ROS

AC Milan (19th for EV) showed the lowest performance in terms of ROS. *Rossoneri's* staff costs are growing faster than their operating revenues (+11% against +4% year-on-year), as the club suffered from their ownership's turmoil and made significant investments in order to improve the squad. Pre-tax losses at Galatasaray SK (32nd for EV) are partially due to the financial costs borne by the club and the devaluation of Turkish Lira, while for AS Roma (21th for EV), such a result is mainly due to interest payable since debt restructuring occurred in 2015 and modified in 2017.





Mohamed Salah was one the key players of the Reds with 44 goals in the 2017/18 season.

Credits: Liverpool FC

Squad and player valuation - impact on EV

Sporting potential is one of the five drivers in KPMG's proprietary algorithm determining the Enterprise Value of a club. Whilst there are many ways to account for the sporting potential of a football team, we consider that the squad value – defined as the aggregated market values of each individual player in a particular club – captures this concept best. Indeed, the more valuable the players are, the more likely the club is to perform well on pitch and eventually succeed economically.

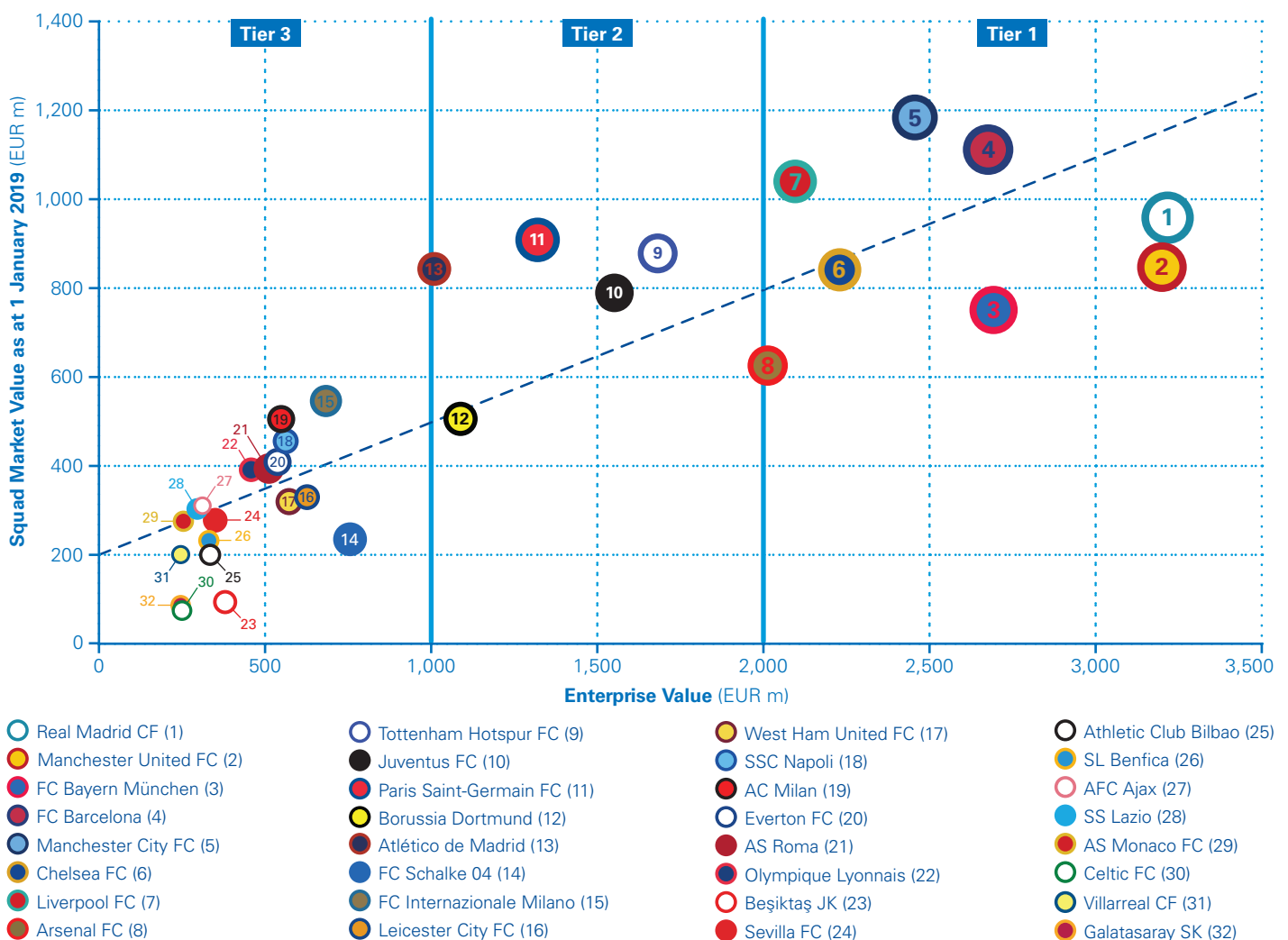
As players are the key assets of any football club, it is crucial for clubs to acquire, develop and retain playing talent. More generally, overall increases in revenue, growing internationalization, as well as the professionalization of practices in clubs' sports departments (e.g. scouting, data performance analytics, investments in academy infrastructure, etc.) are the drivers explaining why clubs are constantly looking

to build successful squads by securing valuable players to the best of their financial ability.

This, in turn, has accelerated **a global race for talent among the European elite**, with more and more players being scouted, monitored and then purchased by clubs, **resulting in booming transfer fees**. The phenomenon is indeed mirrored by the **growth of the transfer market of professional football players, both in volume and value**. More than ever, player trading activities have become in recent years an essential component of clubs' business models, as the acquisition or sale of talents place a significant weight on their financial sustainability and on pitch success.

All these factors explain why the topic of player and squad valuation is such a crucial issue in today's football industry.

Correlation between enterprise value and squad value of Top 32 clubs by EV – bubble size indicates revenue level size





PSG boast the two most valuable footballers, Neymar and Mbappé.

Credits: Paris Saint-Germain FC

Squad value as a key component of EV

Using the KPMG Player Valuation Tool (more about which follows in a section dedicated to explaining it), KPMG professionals have analysed the relationship between clubs' EV and market value (as of 1 January 2019), in order to better understand how sporting potential could impact EV. As illustrated in the previous chart, **the correlation between EV and squad market value is undeniable: the better the players are, the more likely the clubs are to achieve sporting success, which, in turn, drives financial success and improves EV.** Interestingly, three distinct tiers of clubs could be identified among the top 32 clubs under analysis:

- **Tier 1:** top teams mainly comprised of iconic star players, enjoying the highest levels of revenue, always fighting for national and international titles (e.g. Real Madrid CF, Manchester United FC, FC Bayern München, etc.);
- **Tier 2:** top teams with fewer iconic star players, enjoying comfortable levels of revenue, always fighting for national titles and strong contenders in international competitions (e.g. Paris Saint-Germain FC, Juventus FC, Borussia Dortmund, Tottenham Hotspur FC, etc.);
- **Tier 3:** mid-size clubs, with a limited number of star players, enjoying established positions in their domestic leagues, regularly playing in European competitions, strongly relying on positive trading balances to grant long term financial sustainability (e.g. SSC Napoli, Olympique Lyonnais, Sevilla FC, etc.)

It is also worth noting that within Tier 3 two sub-groups stand out. The first sub-group is exclusively made of top-table Italian (i.e. AC Milan, AS Roma, FC Internazionale and SSC Napoli) and mid-table English clubs (i.e. Everton FC, Leicester City FC and West Ham United FC), with the exception of German side FC Schalke 04. These teams – thanks to their league environment or their strong domestic positions – enjoy comfortable levels of income, enhanced commercial appeal, and can boast relatively good squads, which enable them to play contender roles in national and European competitions.

In the second sub-group, clubs generally rely on lower income level and squad value, as they operate in smaller markets or have limited resources to afford and retain highly valuable players likely to be attracted by top clubs offering better financial and sporting prospects. Outgunned financially, they have considerable ground to make up on the rest of the teams in question and hence experience more difficulty in forming squads able to compete for European trophies (or even domestic rewards in the cases of Olympique Lyonnais, Sevilla FC and SS Lazio).

This classification further illustrates the **growing disparity in wealth among the European elite** and **how crucial squad development and management are for the sustainability of clubs**, both on and off the pitch.

KPMG Player Valuation Tool: methodology

There is an increasing need in the industry for independent, reliable and data-driven valuation of professional football players. Football stakeholders (e.g. clubs, leagues, owners, agents and sponsors) are constantly vying for a better understanding of players' value, as the related stakes are manifold: maximize profits on the player trading market, provide a fair market value of the players on the clubs' financial books, especially in regards to academy-grown players, or enhance the commercial and media potential of the squad.

KPMG's Player Valuation Tool provides estimations of professional football players' market values based on proprietary algorithms and a consistent modelling approach. The ultimate goal of this analytics tool is to foster a more informed decision-making process when acquiring and disposing of football players.

Backed by Opta's sporting performance data, the Player Valuation Tool enables industry stakeholders to better understand the impact of signings through the features listed below:

- **Market values for approximately 5,000 players** covering the first divisions from the following 11 countries: Argentina, Belgium, Brazil, England, France, Germany, Italy, Netherlands, Portugal, Spain and Turkey;
- **Detailed sports performance metrics** of each player for the last three seasons (2016/17, 2017/18 and 2018/19);
- **Comparison of selected players' market values and sporting performances** and ability to analyse drivers of the market value (e.g. age, position, league, nationality, etc.) in an interactive and dynamic fashion;

- **Regular update of the KPMG proprietary algorithms** based on market dynamics, ongoing transfers and with the update to be released in June 2019.

The proprietary algorithms designed for these purposes rely heavily upon an analysis of past football players' transactions. After reviewing thousands of transfers, the Football Benchmark team of KPMG's Sports Advisory practice has devised a linear regression model (generalized linear model) to identify the most relevant variables that influence the value of a player. Several models have been developed in order to fully capture the specific characteristics of different playing positions. In so doing, **several drivers**, each with their own specific weight, **were identified as key to estimating the market value of football players**, such as the ones illustrated below.

Price vs. Value: Two different concepts

Economic theory teaches us that price is what a person pays for a given product or service, whilst value is what any given product or service is worth. Actual transfer fees in football are often distorted by several factors, such as the specific financial/sporting situation of the seller or the buyer at the time of a transaction, the willingness of a player to leave or join a club, league-specific rules and regulations, terms of release clauses, agent fees, etc.

Our consistent approach and methodology, together with an understanding of the difference between the concept of price and value, might explain the possible discrepancies between our value estimate conclusion and the specific price at which a transaction takes place. These may differ from each other due to the aforementioned reasons.

Key drivers of market value





Harry Kane is the most valuable English player according to KPMG Player Valuation tool.
Credits: Tottenham Hotspur FC



The *Cityzens* have the most valuable team, with an aggregate squad value of EUR 1,182 million.

Credits: Manchester City FC

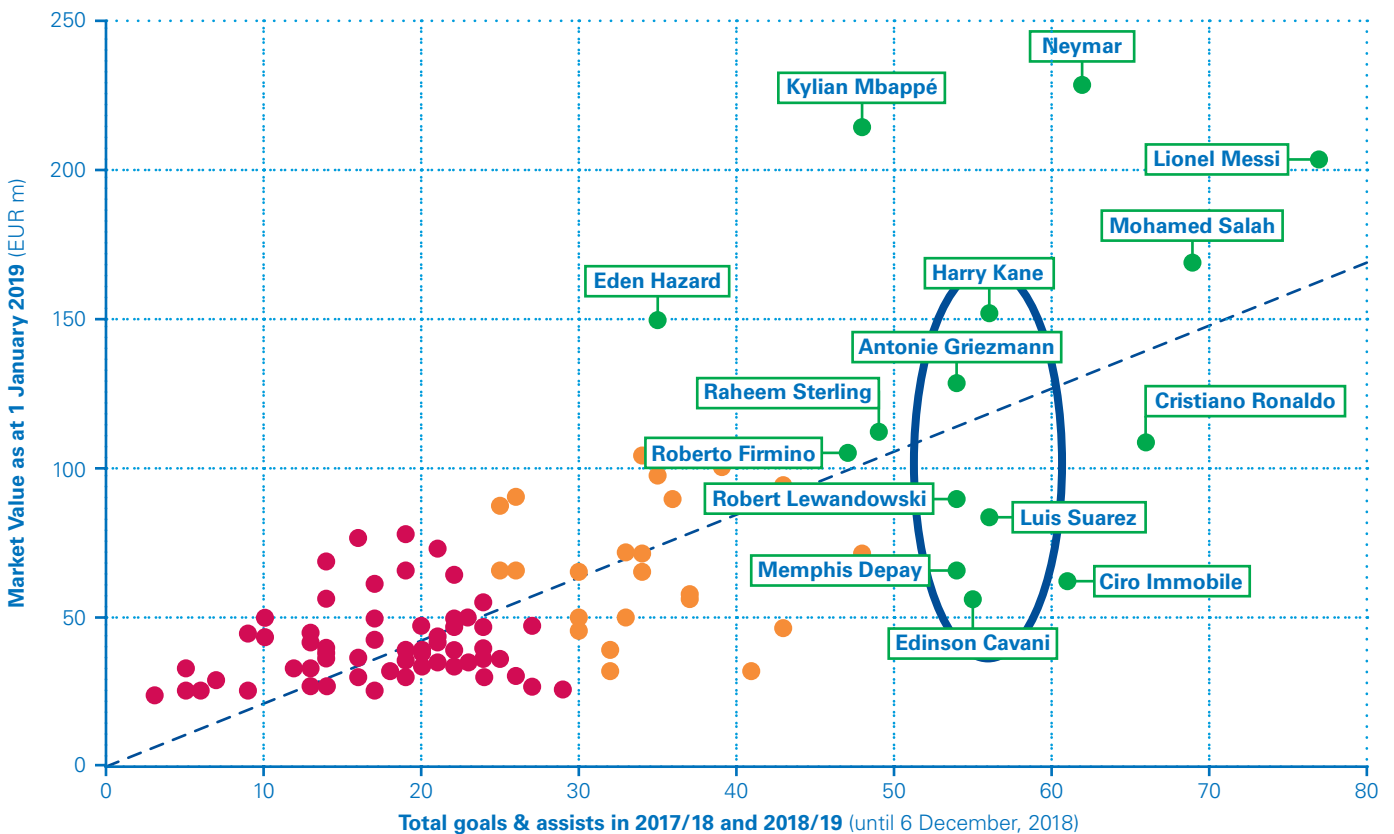
Player valuation: insights

Sporting performance statistics are at the heart of the market valuation of football players and teams. Although there are many other criteria to factor in, players are primarily evaluated on how well they perform on pitch, and clubs seek to thoroughly assess their potential through the use of data and analytics. In so doing, several sports metrics (or variables) can be defined as key to harness the sporting value or potential of players, with these variables being adapted to each playing position and also tailored to the league context.

An interesting case-in-point lies in **the importance of combined goals and assists, as these two metrics are usually regarded as quite relevant to judge how decisive offence players (central forwards and wingers) are.**

Although the evaluation process implies much more complexity and granularity, it is undeniable that there is a positive relationship between these variables and the overall value of an offence player, as such metrics outline how these players effectively contribute to scoring.

Correlation between market value and goals & assists





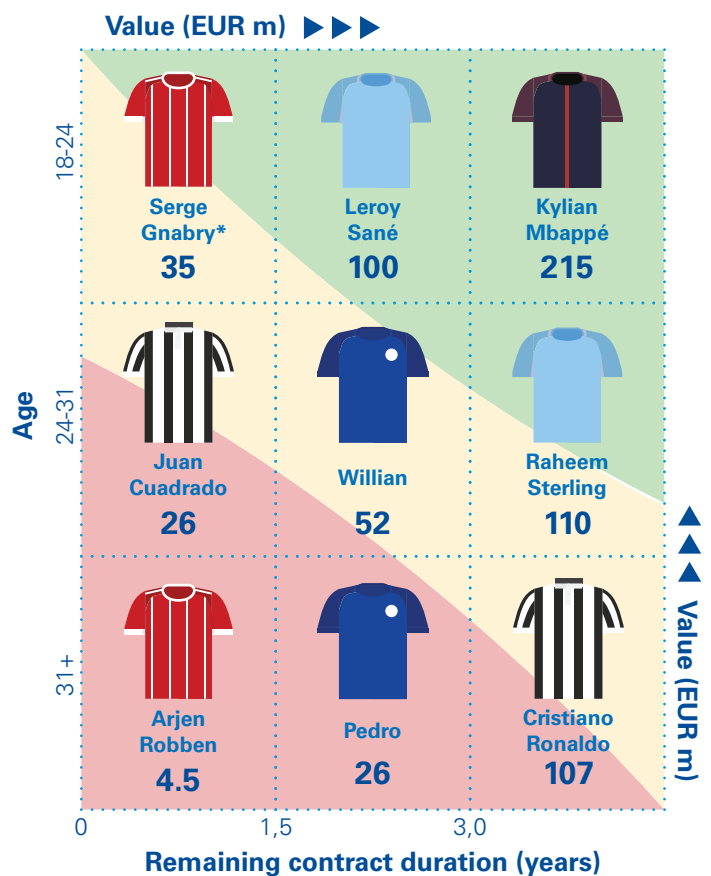
As reflected in the previous chart some players, although scoring and assisting as much as their peers, end up with a very different market value, which accounts for the complexity of the exercise and the diversity of other parameters to be factored in as explained hereafter. **Top strikers** Harry Kane, Antoine Griezmann, Robert Lewandowski, Luis Suarez, Memphis Depay and Edinson Cavani all **showcase very similar numbers of goals and assists, however there is a difference in market value of approximately EUR 100 million between the most and the least valuable players in this sample.**

Beyond sporting statistics, **age and contractual situation also stand out as instrumental in the valuation of football players.** Age is a key parameter of the equation, as the younger the player is, the longer his playing career and the higher his potential is to develop. As for contractual agreements, the logic goes as follows: a longer contract, and hence a higher remaining contract duration, means that a higher transfer fee will be needed to acquire a player showcasing consistently high performance on the pitch. A well thought-out optimization of the relationship between age and contractual situation, combined with an understanding of a player's performance growth potential, can help club management maximize the economic exploitation of players and ultimately increase squad value.

In clubs' squad management strategy, age and contract duration can actually account for compelling differences in market value. Indeed, for a given sample of players assumed to possess similar playing level skills and characteristics, a younger player with a long contractual agreement will be valued significantly higher than other players – older or with shorter contract durations.

In the figure on the right, we highlight how players' particular situations can impact their market values by providing concrete examples. **In their quest for player portfolio maximization, long-term planning is now pivotal to improve the quality of the squad, its value and overall team success.**

The impact of age and remaining contract duration on market value as at 1 January 2019 (illustration for the Winger position)



*Note: Gnabry has renewed his contract until June 2023 in March 2019



Los Leones entered in the European elite for the third consecutive year.

Credits: Athletic Club Bilbao

Top 15 countries by players values of the Top 32 as at 1 January 2019

Top 15 Countries	Number of players	Percentage of total	Average market value (EUR m)
1. Spain	106	14.3%	19.20
2. France	74	10.0%	28.40
3. England	59	8.0%	27.30
4. Brazil	53	7.2%	31.69
5. Italy	53	7.2%	17.35
6. Germany	40	5.4%	31.14
7. Argentina	35	4.7%	27.80
8. Portugal	27	3.6%	22.53
9. Netherlands	27	3.6%	17.79
10. Belgium	21	2.8%	34.63
11. Turkey	19	2.6%	7.79
12. Croatia	17	2.3%	18.36
13. Scotland	16	2.2%	6.80
14. Switzerland	12	1.6%	17.51
15. Uruguay	11	1.5%	31.04

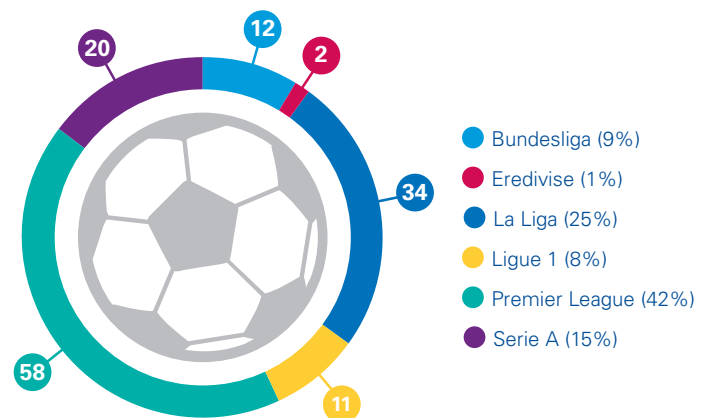
Source: KPMG Football Benchmark

A closer look at the European top 32's squad values shows **significant disparity between leagues and countries**. Indeed, **almost half (46%) of all players from the top 32 clubs are from the Big 5 European countries, with Spanish and French players leading the way** – with 14.3% and 10%, respectively. Brazil (7.2%), Argentina (4.7%) and Portugal (3.6%) are other prominent “football factories” of elite talents. **Only 10 countries provide nearly 70% of the players performing in the European top 32.**

Looking at players whose market value exceeds EUR 40 million, whom we could refer to as “Top Players”, 42% of them play in the English Premier League, far above Spanish LaLiga and Italian Serie A, who possess respective values of 25% and 15%. **For clubs from smaller markets – or mid-size clubs from the Big 5 – the underlying challenge lies in retaining their best players, who understandably want to move to one of the high-profile markets with the aim to boost their careers and salaries.** This is evidenced by the very low number of players in consideration evolving outside of the Big 5 leagues (1%).

This takeaway is indicative of **the growing polarisation of talents among the European elite**, with top clubs concentrating the bulk of playing talents and leaving fewer valuable players to the rest of the pack. Clubs with limited resources stand little chance of upsetting the odds.

Players with over EUR 40 million value by league as at 1 January 2019

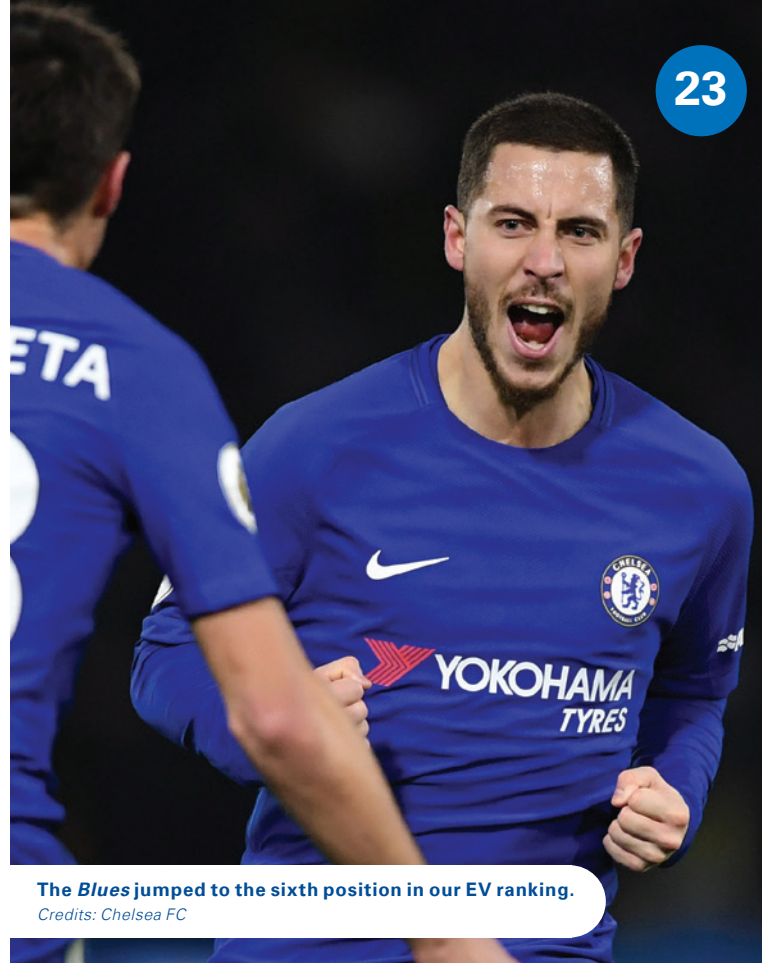


Source: KPMG Football Benchmark

Conclusions

Whilst top clubs benefit from the presence of star players, established market positions and secure income streams, clubs with lower sporting potential tend to look at talent development as a key way to bridge the gap and improve their chances of success. Thus, many clubs have decided to increase the size of the envelope dedicated to academy development and/or scouting activities, hoping it will pay major dividends in the future. More generally, teams also need to work the room to ensure that they maximize their squad value through a sophisticated use of data, advanced scouting and monitoring, as well as long-term vision and planning.

Sporting potential, captured by the squad value, **is at the heart of a club's success and plays an important role in increasing its EV as it generates economic and sporting value.** Thus, efficient squad management is highly influential in optimizing EV. The implications of today's decisions will be played out over time as successful clubs who manage to optimize their squad potential will reap rewards both financially and on the pitch, and enable them to develop on a sustainable basis.



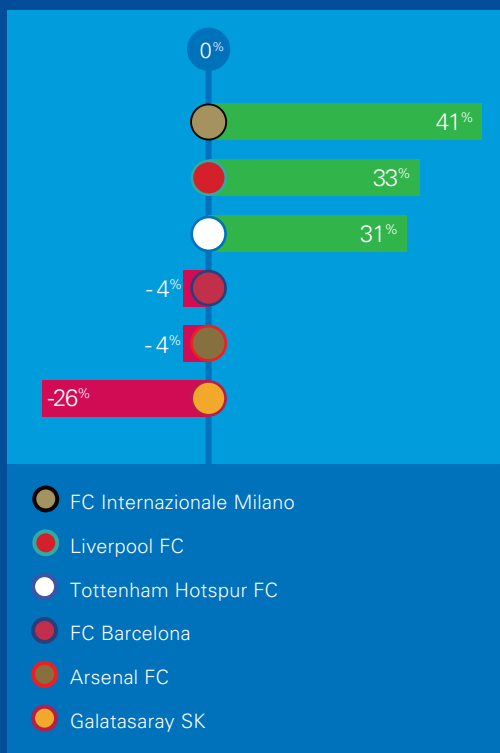
The Blues jumped to the sixth position in our EV ranking.

Credits: Chelsea FC

Top 16 most valuable squads as at 1 January 2019 (EUR m)

Club	Aggregate value	Average player value	Average age of players
1. Manchester City FC	1,182	49.3	27.2
2. FC Barcelona	1,111	48.3	27.5
3. Liverpool FC	1,038	47.2	27.0
4. Real Madrid CF	958	41.7	26.6
5. Paris Saint-Germain FC	906	39.4	27.0
6. Tottenham Hotspur FC	876	38.1	27.4
7. Manchester United FC	846	33.8	27.5
8. Chelsea FC	842	38.3	28.3
9. Atlético de Madrid	840	42.0	27.7
10. Juventus FC	788	34.3	28.6
11. FC Bayern München	749	37.5	28.3
12. Arsenal FC	624	27.1	27.7
13. FC Internazionale Milano	548	24.9	28.3
14. AC Milan	508	19.5	26.7
15. Borussia Dortmund	506	22.0	25.3
16. SSC Napoli	456	20.7	27.3

EV growth: Top 3 vs. Bottom 3



Source: KPMG Football Benchmark

Top 5 EVs on stock exchange vs KPMG EV as at 1 January 2019

(EUR million)

Clubs	EV on stock exchange*	KPMG mid point	% Delta
Manchester United FC	2,999	3,207	+7%
Juventus FC	1,481	1,548	+5%
Borussia Dortmund	728	1,085	+49%
AS Roma	543	516	-5%
Olympique Lyonnais	384	463	+21%

*Note: EV on stock exchange has been calculated as Market Capitalization plus Net Debt

Source: KPMG Football Benchmark

32 clubs' Enterprise Value range as at 1 January 2019

Clubs	Range (in EUR million)	
	Bottom	Top
1 ▲ Real Madrid CF	3,115	3,334
2 ▼ Manchester United FC	3,069	3,345
3 ▲ FC Bayern München	2,599	2,793
4 ▼ FC Barcelona	2,556	2,797
5 = Manchester City FC	2,386	2,534
6 ▲ Chelsea FC	2,142	2,312
7 ▲ Liverpool FC	2,022	2,169
8 ▼ Arsenal FC	1,928	2,088
9 ▲ Tottenham Hotspur FC	1,612	1,746
10 ▼ Juventus FC	1,486	1,610
11 = Paris Saint-Germain FC	1,256	1,374
12 = Borussia Dortmund	1,046	1,124
13 = Atlético de Madrid	959	1,050
14 = FC Schalke 04	736	794
15 ▲ FC Internazionale Milano	661	723
16 ▼ Leicester City FC	611	655
17 ▼ West Ham United FC	557	598
18 ▼ SSC Napoli	543	594
19 ▼ AC Milan	521	588
20 ▼ Everton FC	524	562
21 = AS Roma	491	542
22 = Olympique Lyonnais	440	486
23 = Beşiktaş JK	360	406
24 ▲ Sevilla FC	334	370
25 ▼ Athletic Club Bilbao	322	349
26 = SL Benfica	318	348
27 ▲ AFC Ajax	296	334
28 ▲ SS Lazio	282	312
29 ▲ AS Monaco FC	240	271
30 NEW Celtic FC	238	266
31 NEW Villarreal CF	235	260
32 ▼ Galatasaray SK	235	257

32 clubs' Enterprise Value mid points as at 1 January 2019

Clubs	YoY increase	Mid points*		
		Million EUR	Million GBP	Million USD
1 Real Madrid CF	+10%	3,224	2,907	3,675
2 Manchester United FC	-1%	3,207	2,892	3,655
3 FC Bayern München	+6%	2,696	2,431	3,073
4 FC Barcelona	-4%	2,676	2,413	3,050
5 Manchester City FC	+14%	2,460	2,218	2,804
6 Chelsea FC	+26%	2,227	2,008	2,538
7 Liverpool FC	+33%	2,095	1,889	2,388
8 Arsenal FC	-4%	2,008	1,811	2,289
9 Tottenham Hotspur FC	+31%	1,679	1,514	1,913
10 Juventus FC	+19%	1,548	1,396	1,764
11 Paris Saint-Germain FC	+15%	1,315	1,186	1,499
12 Borussia Dortmund	+2%	1,085	978	1,236
13 Atlético de Madrid	+12%	1,004	906	1,145
14 FC Schalke 04	+14%	765	690	872
15 FC Internazionale Milano	+41%	692	624	788
16 Leicester City FC	+6%	633	571	721
17 West Ham United FC	+9%	578	521	658
18 SSC Napoli	+10%	569	513	648
19 AC Milan	+8%	555	500	632
20 Everton FC	+6%	543	490	619
21 AS Roma	+13%	516	466	588
22 Olympique Lyonnais	+8%	463	418	528
23 Beşiktaş JK	+15%	383	346	437
24 Sevilla FC	+11%	352	317	401
25 Athletic Club Bilbao	+1%	336	303	383
26 SL Benfica	+1%	333	300	380
27 AFC Ajax	+12%	315	284	359
28 SS Lazio	+23%	297	268	338
29 AS Monaco FC	-2%	255	230	291
30 Celtic FC	NEW	252	227	287
31 Villarreal CF	NEW	247	223	282
32 Galatasaray SK	-26%	246	221	280
Total		35,554	32,057	40,520

*Note: Exchange rates as of 2 January 2019: 1 EUR = 0.902 GBP, 1 EUR = 1.140 USD

Our methodology

For the purposes of this study we adopted the Revenue Multiple approach, a method that measures the value of a company relative to the revenues that it generates. This methodology is suitable and often applied for establishing an indicative value of football clubs for three main reasons:

- Revenue figures are quite easy to access and compare, as they are less distorted by accounting adjustments;
- Unlike earnings, which can be negative for many clubs, revenue multiples can be applied also to the most troubled clubs;
- Revenues are not as volatile as earnings.

Revenue figures are then multiplied by a multiplier derived from observations of similar clubs which are publicly listed (Comparable Companies Methodology) and acquisitions of similar companies (Comparable Transactions Methodology). Obviously, this approach also presents some limitations. First, focusing on revenues could lead to high EV for clubs generating high volumes of revenues while making significant losses because of their inability to control costs. Second, it does not fully reflect a club's assets position.

What KPMG professionals have developed is a **proprietary algorithm** that, **starting from the premises of the Revenue Multiple** used in corporate finance valuations, seeks to reduce risks and shortcomings inherent in the methodology and provides an indication of the EV of the most prominent European football clubs as at 1 January 2019 on the basis of a review of the financial statements of the 2016/17 and 2017/18 football seasons.

In the simplest application of the Revenue Multiple method, once the multiplier is determined, it is uniformly applied to all clubs in our analysis. However, this overly simplistic approach is unsuitable for taking into account differences between football clubs in terms of the markets in which they operate, their broadcasting revenue sharing methods, operational efficiency and level of profitability, potential to succeed on-pitch at national and international level, etc.

Therefore, in order **to reflect club-specific characteristics that influence clubs' EV, our proprietary formula takes into account five parameters—each with their own specific weight—so that the applied revenue multiplier varies from club to club.**

We list the five key metrics which express differences between clubs, the markets and the economies in which they operate. These parameters, which bear different levels of significance and therefore a different weight in our formula, are the most important factors that can influence the EV of a club.

What is Enterprise Value (EV)?

The enterprise value (EV) of a company is calculated as the sum of the market value of the owners' equity, plus total debt, less cash and cash equivalents. It indicates what the business is worth regardless of the capital structure used to finance its operations.

Why do we use EV?

Because EV is a capital structure-neutral metric which allows to compare companies (in our case football clubs) with different debt and equity structures.



1. Profitability

In our formula, in order to consider the profitability dimension of a football club, the staff costs-to-revenue ratio of the last two financial years is taken into consideration. Wages of players, technical and other staff make up by far the largest part of all expenditures. A high ratio indicates a lower capability to generate bottom-line profits. Although with a lower weight, because of their higher volatility, clubs' Profit before Player Trading and EBIT are also considered in our algorithm.



2. Popularity

Undoubtedly, there is a strong correlation between on-field success and social media engagement expressed, amongst others, by the number of Facebook, Twitter, Instagram and YouTube followers. Therefore, in our formula the social media followers of a team are deemed to be a good indicator of popularity and fan engagement.



3. Sporting potential

In order to take into account the potential of the on-field success of a club, which in turn can generate significant matchday, commercial and broadcasting revenues, we assume that clubs with a more valuable squad (the key asset of any football club) have better chances to succeed on pitch. To capture this effect, the market value of the squad measured by KPMG's Player Valuation tool has been adopted within our formula.



4. Broadcasting rights

The impact of broadcasting rights already agreed upon at league level for the next seasons and the distribution method utilised are also captured in KPMG's algorithm, as this metric plays a fundamental role in the revenue generation potential of football clubs.



5. Stadium ownership

Beside players' registrations, a club's stadium is one of the most relevant assets of a football team. A club-owned stadium generally represents more opportunity to generate revenues. Therefore, ownership of the home ground is also considered in our formula.



The new 68,000-seater Wanda Metropolitano has replaced the Estadio Vicente Calderón as new home venue of Los Colchoneros.

Credits: Atlético de Madrid

Basis of preparation

The objective of this report is to provide an indication of the EV of the most prominent European football clubs as at 1 January 2019.

The foundation of this study is an analysis of the publicly available statutory financial statements ("the Financial Statements") of the 32 professional football clubs selected for the purposes of this report. In respect of each professional football club, all financial figures have been extracted from the Financial Statements of the 2016/17 and 2017/18 football seasons. Thus, this analysis does not take into account the sporting results achieved by the 32 clubs in the 2018/19 football season.

Wherever we considered it necessary, KPMG member firms have consulted with the management of the clubs in order to obtain additional information or clarifications to support our value analysis. For the few clubs having a financial year-end not aligned with the European football season, we extrapolated financial figures from their two latest publicly available Financial Statements.

The Financial Statements utilised for the purpose of KPMG's analysis were acquired from the relevant public sources in each country. As far as the team responsible for the production of this report is aware, the Financial Statements for each professional football club have been prepared on the basis of the accounting regulations and principles in their respective country or in compliance with International Financial Reporting Standards ("IFRS"). In performing our analysis, we also relied upon information of a non-financial nature obtained from publicly available sources: national governing bodies, trade associations, international federations and social media.

The team responsible for the production of this report has relied on information included in the published Financial Statements of each club. KPMG professionals have not performed any verification work or audited any of such financial information or any of the non-financial publicly available data obtained from other sources considered authoritative.

The squad market values have been calculated using the KPMG's Player Valuation tool. Based on proprietary algorithms, this tool provides market

values for all players from the top professional leagues in Europe and South America (Belgium, England, France, Germany, Italy, Netherlands, Portugal, Spain, Turkey, Argentina and Brazil).

The estimated players' market values are aimed at capturing the worth of a player based on an analysis of several thousands of past player transfers, historical sports performance and all the drivers that have an impact on the transfer fees. Our consistent approach and methodology, together with an understanding of the difference between the concept of price and value, might explain the possible discrepancies between our value estimate conclusion and the specific price at which a transaction has taken place.

Whilst every effort has been made by KPMG to make the analysis between professional football clubs consistent and comparable, in undertaking this research we faced several challenges that are difficult to overcome. Differences of accounting practice in the respective countries, differences in reporting currencies, fluctuation in exchange rates, and differences in year-ends limit to a certain extent the comparability of data and affect the outcome of our analysis.

We used consistent methodologies for the value analysis of the subject football clubs. This might explain the possible differences between the conclusion of our value analysis and the share prices of publicly traded entities. As share prices of listed football clubs are not necessarily an indication of the intrinsic value of the club itself, due to the fluctuations and the number of shares actually traded, the value conclusion of our analysis cannot be strictly compared to the pricing of publicly listed companies.

KPMG is aware that some professional football clubs have diversified their businesses into other sports and/or into non-sport activities. Where the financial results of this diversification are evident in the Financial Statements, they have been excluded from the analysis.

For interpretation of financial terms used in this report, please refer to the methodology section of the Data & Analytics tab of KPMG's www.footballbenchmark.com website.



Limiting Conditions and Assumptions

This report, and all opinions formulated and conclusions stated regarding the football clubs included in the survey are subject to, and contingent upon, all of the following general assumptions and limiting conditions and any additional assumptions and limiting conditions set out elsewhere in this report. Acceptance and/or use of this report constitutes acceptance of the assumptions and limiting conditions included therein.

Scope of Analysis—The pricing analysis of any asset or business is a matter of informed judgment. The accompanying analysis has been prepared on the basis of information and assumptions summarised in the report and includes certain limitations and exclusions. Amounts presented have in some cases been rounded off from the detailed underlying calculations.

Nature of Opinion—Neither our opinion nor our report are to be construed as an opinion as to the fairness of an actual or proposed transaction, a solvency opinion, or an investment recommendation. Instead, they are the expression of our determination of indicative Enterprise Values based on publicly available information and a consistently applied methodology. For various reasons, the price at which an entity might be sold in a specific transaction between specific parties, or quoted on a stock exchange, on a specific date, may be significantly different from the indicative Enterprise Value presented in this report. Potential investors always need to perform their own investigation and analysis, and are advised to seek their own professional legal, financial and taxation advice. Nothing in this report is, or should be interpreted or relied upon as a warranty or representation as to the future, nor should it replace the due diligence investigations which a prudent investor would be expected to make prior to investing. Prospective investors are not to construe the content of this report as investment, legal or tax advice. In making an investment decision, investors must rely on their own examination of the investment and the terms of the investment, including the merits and risks involved.

Value Conclusions—While every effort was made to be consistent in the methodology applied, in order to arrive at our value range conclusions, in certain instances, we have applied professional judgment to club-specific factors that were not addressed by the valuation methodology.

No Verification of Information Provided—We relied upon publicly available data from recognised sources of financial and other information. KPMG International and KPMG member firms make no representations nor provide any warranties regarding the accuracy or completeness of the information contained in this report. KPMG International and KPMG member firms, their managers, directors, partners and employees expressly disclaim any and all liability for errors and omissions from the report. The information contained in it is selective and does not purport to contain all the information that a reader, including potential investors, may require.

No Undisclosed Contingencies—Our analysis: (i) is based on the past and present financial condition of the entities as of the analysis date; and (ii) assumes that entities had no undisclosed real or contingent assets or liabilities, no unusual obligations or substantial commitments other than in the ordinary course of business, no pledges or encumbrances on assets limiting their tradability and had no litigation pending or threatened that would have a material effect on our analyses.

Subsequent Events—This report is based on information available at the date we wrote it. KPMG has no obligation to update this report or to revise the analysis if new information becomes available or because of events and transactions occurring subsequent to the analysis date.



FC Bayern München reached the third place in our ranking for the first time.
Credits: FC Bayern München

How can we help?

KPMG member firms deliver value to the sports industry



**Strategy
& Business Planning**



**Commercial Revenue
Maximization**



**Operating Review
& Cost Optimization**



**Venue Feasibility
& Conceptualization**



**Club Valuation
& Transaction
Support**



**Governance
& Organization Development**



**Event Planning
& Socio-economic Impact**



**Sport Digital
Planning**



Audit & Tax



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

© 2019 KPMG Advisory Ltd., a Hungarian limited liability company and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. Printed in Hungary.