An Econometric Study into the Efficacy of Interventions by the English Football Authorities for the Promotion of Financial Sustainability and the Impact on Competitive Balance in the English Football League (EFL) Championship

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Thesis Abstract

This thesis, which contains original regression analysis using a unique and original set of variables, in addition to the unitary indicators for receiving a parachute payment, the P&S Rules, and the COVID-affected seasons, makes three significant contributions. We believe it to be the first study into the interaction between English Premier League (EPL) parachute payments, the Profitability and Sustainability (P&S) rules, and the COVID-19 restrictions on the financial health, competitive balance at a season level, and uncertainty of outcome at match level for the English Football League (EFL) Championship.

Using Altman's z-score, the first contribution shows that P&S has not made Championship clubs healthier, nor has COVID-19 made the clubs more financially distressed. Although parachute clubs are less financially distressed than non-parachute clubs, this is due to an advantage in Total Assets, which disappears when we group similar clubs.

Our second contribution shows that the parachute payments have created a competitive imbalance in the Championship by giving the clubs receiving parachute payments a 16-point head start. However, contrary to established research, these payments provide this advantage only during the COVID-affected seasons. This is the first time club debt and club losses, among other things, have been controlled for in a competitive balance study of the Championship.

Our third contribution shows that games between a parachute and a non-parachute club were no more predictable in the pre-and post-P&S period nor the COVID-affected seasons. Instead, manager changes, player turnover, and differences in player spending have a greater impact on unpredictability.

This thesis helps practitioners, regulators, and football club owners improve their policy-making decisions for the EFL Championship. Future P&S regulations could consider a 'Pick and Mix' range of sustainability measures, and regulators should be mindful that competitive balance measures may harm attendance. This research is especially timely given that an Independent Football Regulator is proposed.

Keywords: Profit and Sustainability Rules; English Football League; Parachute Payments; Football Finance; Competitive Balance

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1.1 Background

The English domestic football league system comprises four main professional leagues. The top tier is the English Premier League (EPL), governed by the English Football Association (EFA) and consisting of 20 teams. Below are the three divisions governed by the English Football League (EFL), comprising 24 teams. Collectively, we will refer to the EFA and EFL as the English football authorities. Our study will focus on the English Football League Championship, the EFL's top tier, and English football's second tier overall.

The winning team is awarded three points, whilst the loser gets nil points. The teams will receive one point each if the result is a draw. The English Football pyramid has traditionally operated in an open structure with promotion and relegation. Every year, the bottom three EPL teams are replaced by the best three teams promoted from the Championship, the top two teams automatically and one via a four-team play-off comprising of places 3rd to 6th in the final table, and the bottom three Championship teams are relegated and replaced with three teams promoted from League 1, again the first two automatically and the third via a 4-team play-off. The two teams that finish at the bottom of League Two are relegated to 'non-league' football.[1] They are replaced by the teams that finished first and won the play-off final.

Given that 25% of the teams change yearly via promotion and relegation, a team cannot build dominance in the Championship like in the top tiers of European football.[2]

By most measures, the EFL Championship appears successful. It is the wealthiest second-tier division in the world and the eighth richest league in Europe behind the 'Big Five' (the EPL, Spain's La Liga, Italy's Serie A, France's Ligue 1, and Germany's Bundesliga) and the top tiers of the Russian and Turkish leagues, (Deloitte, 2014).

In the seasons before the COVID-19 pandemic, the audiences for live EFL games had grown by 12% during 2016/17 and were up a further 7% in the first months of 2017/18 (Advanced Television, 2017). The opening weekend of the 2023/24 Championship season has recorded

[1] The term 'non-league' is used in England to describe football played at a level below the EFL League Two. Currently, this means any club playing in the Vanarama National League or below. The National League consists of three divisions: the National League, National League North, and National League South. It has been called the 'Alliance Premier League' from 1979 until 1986. Between 1986 and 2015, the league was known as the 'Football Conference'. Traditionally, players in the non-League would be semi-professional or amateur. However, most clubs now in the National League are fully professional, especially those clubs recently relegated from the EFL.

[2] For Example, Bayern Munich won the Bundesliga title eleven years in a row and has won it thirty-two times. Real Madrid has won the La Liga five times and thirty-five times in total, while Barcelona has won twenty-seven La Liga titles

its highest viewing figures on Sky Sports, with an average of 630,000 viewers watching the four live matches, up 77% from the previous season. The popularity of Championship games can only bode well for future EFL broadcast rights deals.

The Championship has the highest average matchday attendance of any second tier, the fifth-highest average across Europe (How They Play, 2021), and the eleventh-highest attendance worldwide (worldfootball, 2019). This trend continues to the present day, with 317,000 football fans attending the 12 matches on the opening weekend of the 2023/24 EFL Championship football season, a rise of 44% compared to 2022/23, and this, combined with attendances for the EFL Leagues One and Two. made it the highest aggregate opening weekend attendance this century, up 20.7% on the previous season.

Nevertheless, in the 31 years of the EPL era, fifteen Championship clubs have gone into administration, while in the 71 years from the expansion of the English League in 1920/21 until the formation of the EPL in 1991/92, only one club from the second tier have liquidated or entered administration.

The football authorities have made two significant interventions: (1) parachute payments paid to relegated clubs and solidarity payments paid to other clubs by the EPL, and (2) the Profitability and Sustainability rules imposed by the EFL since the 2014/15 season.

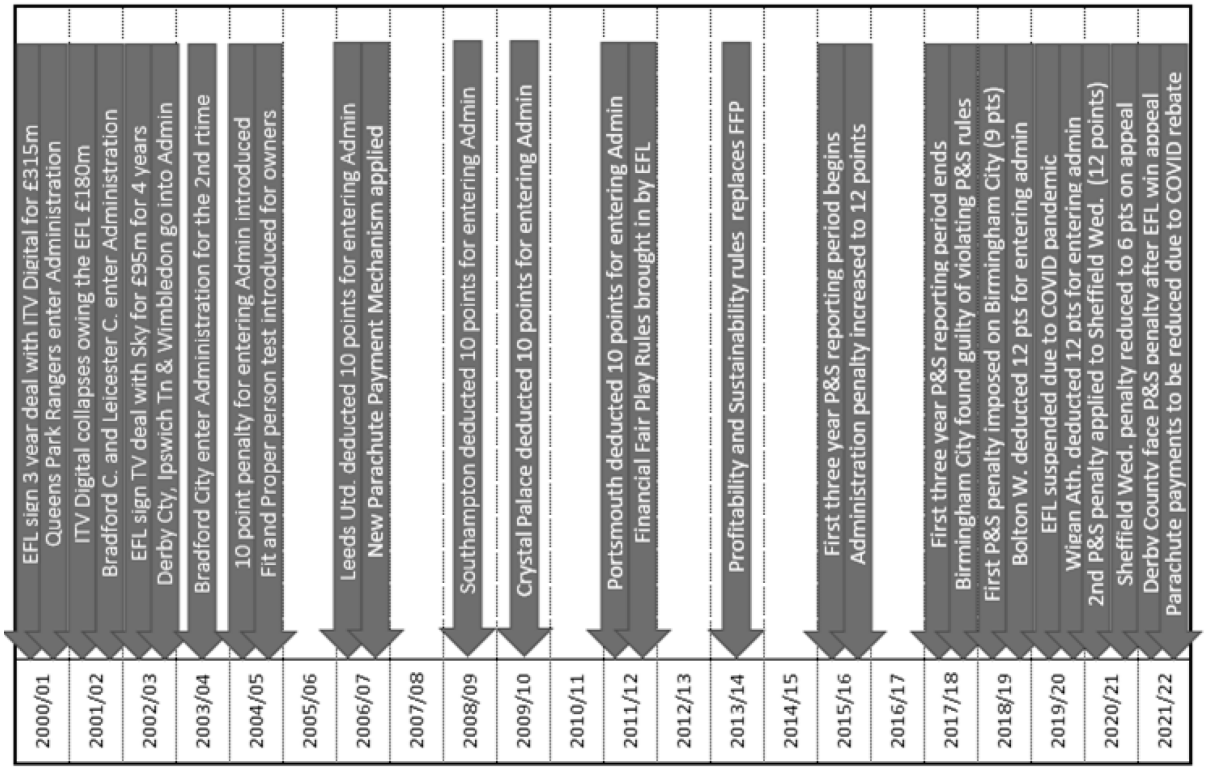

Chart 1.1 - A Chronology of events in the EFL Championship 2000/01-2019/20

We choose to investigate the impact of these interventions on the Championship because:

1. Clubs relegated from the EPL are typically ‘big clubs’ in stature. They will have more significant resources at their disposal via their larger-than-average market share, and the receipt of parachute payments may further amplify the differences in resources between parachute-receiving clubs and those that do not.
2. The overspending limits imposed on clubs by the Profitability and Sustainability rules could disproportionately impact a non-parachute club's ability to compete with parachute clubs when acquiring playing talent, which may harm competitive balance.

We began the research in 2000/01, marking the signing of the ITV Digital deal. This deal kicked off a spending spree that seriously affected EFL club solvency when ITV Digital collapsed. When this research was completed, only five club accounts were published for 2022/23.

Only one Championship club had previously been in administration during the EPL era. Mark Goldberg paid £23 million for the Crystal Palace EPL club, excluding the home ground, from Ron Noades in June 1998. However, by March 1999, the club had been relegated to the Championship. The club entered into administration due to the excessive purchase price, the expected co-investors disappearing on relegation from the EFL, the new company failed to launch on the Alternative Investment Market (AIM) as planned, and after Goldberg personally lost £40 million, (BBC, 1999).[3]

In 2018/19, the world suffered a COVID-19 pandemic, which affected football for the next three years. At first, the football league programme was suspended. When it did continue, the matches were played behind closed doors. This may have:

- a disproportionate impact on income and the financial sustainability of the non-parachute clubs compared to the parachute clubs,
- enhanced the competitive advantage provided by parachute payments when other commercial income more or less dried up overnight and
- reduced home advantage, which has impacted the predictability of results.

Therefore, our analysis will separate the COVID-affected seasons from the other post-P&S seasons.

[3] The Alternative Investment Market is the London Stock Exchange’s ‘Junior’ Stock Market for smaller companies

1.2 Research Questions

Our research poses three questions:

Have the P&S rules improved football clubs' financial stability as intended?

By setting annual loss limits, the EFL intended to improve the financial sustainability of all clubs in the EFL Championship. Therefore, we seek to calculate whether the EFL's P&S rules have effectively improved the financial stability of clubs as measured by an increase in Altman's z-score. With more significant financial resources in place, we also attempt to confirm that clubs in receipt of parachute payments are more financially secure than non-parachute clubs. With the onset of COVID-19, we seek to explore the impact of the restrictions on the parachute and non-parachute clubs' z-score. Furthermore, we examine what part of the z-score has been most affected by parachute payments and P&S if it is not due to profitability.

Are parachute payments distorting competitive balance in the EFL Championship?

The additional financial resources that parachute payment clubs receive may give them an unfair advantage on the field, distorting the competitive balance. [4] Therefore, we seek to calculate the benefit of parachute payments measured by points per game. We seek to confirm the established view that parachute clubs receive an increase in points per game relative to non-parachute clubs, and subsequently, they distort competitive balance. Furthermore, we examine if this competitive advantage has been enhanced by the P&S rules and during the COVID-affected seasons.

Have parachute payments made individual football match results in the EFL Championship less uncertain?

At a fixture level, we examine the impact of a widening income gap between the parachute and non-parachute clubs on the uncertainty of football match results. Furthermore, we investigate whether home advantage diminishes when the away team is a parachute club. With the restrictions on overspending imposed by the P&S rules expected to impact the non-parachute clubs disproportionately, we investigate whether matches have become less uncertain post-P&S and even more so in the COVID-affected seasons.

[4] Competitive balance is a theoretical concept that refers to either the uncertainty of predicting results or the balance in capabilities between sports teams and their possibilities to win any game. The greater the league's competitive balance, the more unpredictable the result of games is and the more attractive the league becomes for fans.

1.3 History of Football

Medieval 'Mob' Football

A form of sport played on foot, as opposed to on horseback, which involved the kicking and handling an object, often an inflated pig bladder, towards markers at the end of the playing field, has existed since medieval times. These archaic forms of football, typically classified as 'mob football', were wild and unruly, played mainly by the peasants, with teams from 2 up to 2,000. The playing area could encompass the whole village or the space between two villages and was usually associated with village celebrations, e.g. village fairs and feasts, etc. Sometimes, the game would last all day and be played for the pride of winning with no financial reward. [5]

These old-fashioned games went into sharp decline in the 19th century following the Enclosure Act 1773, which enabled the enclosure of common land and the removal of access to land available for playing the game, the increased urbanisation and the working conditions of the working classes that followed the Industrial Revolution in Great Britain (1780 -1830) and finally the Highway Act 1835, which banned the playing of football on public highways, saw the game disappear as a popular sport between 1750 to 1840 and continued mainly in the public schools and universities of Great Britain.

Public Schools and the Birth of Association Football

There had been a long history of some form of football in English universities, with evidence of it being played by 1555 when it was outlawed at St John's College, Oxford, and Cambridge University. A Latin text by William Horman, headmaster at Eton (1485/6–1494/5) and Winchester College, suggested it was likely being played at English public schools in 1519 (Magoun, 1938).

However, the benefit of sports in public schools was not widely accepted, with academic studies being prioritised over healthy pursuits such as sports. Even Horman, a sports advocate, was mindful that academic studies should not be adversely affected. Christopher Johnson, headmaster at Winchester in the 1560s, 'cared much more for balls…… than he did for books and school' when he was a scholar at Winchester between 1549 and 1553 (Bailey, 2007).

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[5] A modern-day equivalent is the annual Shrove Tuesday Atherstone Ball Game, which involves hundreds of competitors battling to gain control of an oversized ball along the town's boarded up main street. Dating back to medieval times, the two main rules are that you are not allowed to kill anyone and whoever holds the ball at the end of the two-hour game is declared the winner. It is described as 'the most brutal sport on Earth.' In the media.

Richard Mulcaster, a former student at Eton and later headmaster at Merchant Taylors' School (1561) and St Paul's School (1596) provides proof that the game was evolving from the disordered and violent ‘mob football’ of medieval times when he described a game that involved the ‘chiefe use of the legges’ for small teams (‘sides’ and ‘parties’), that is controlled by a referee (‘judge over the parties’), refers to players positions (‘standings’) and a coach (‘trayning maister’) and ruled that players should ‘not [be] meeting with their bodies so boisterously to trie their strength: nor shouldring or shuffing one another so barbarously’ (Mulcaster, 1581).

However, many early public school football games, like the Eton Wall Game today, remained somewhat unruly and were described as ‘brutal’ by old Etonians (Tucker, 1892). Although an alternative code of football was also being played at Eton at the same time, the Eton field game, the Eton Wall game, was the predominant form of football at Eton between 1811 and 1822. At most, forty pupils participated in the sport.

However, as the country approached the Victorian era, an enlightened attitude towards the value of team sports, such as football for character building, physical health, discipline, and providing moral responsibility, emerged, and football became ‘suitable’ for the sons of the ruling classes.

> “The cricket and football fields ……..are not merely places of amusement; they help to form some of the most valuable social qualities and manly virtues, and they hold, like the classroom and the boarding house, a distinct and important place in public school education”.
>
> The Clarendon Commission 1864

The earliest versions of football rules were first established by Eton College (1815), based initially on the Eton Field game variant. Along with Harrow, Westminster, and Charterhouse, the public schools are acknowledged as the inventors of organised football, which has evolved gradually into the modern game we know today.

With a rapidly expanding rail network in Britain during the 1840s, there was a boom in inter-school sports between 1840 and 1860. However, differences between the football played by individual public schools persisted, making inter-school football slower to develop than other sports. [6] Furthermore, when the schoolboys reached university, the players were used to

[6] Eton, Shrewsbury and Harrow favoured a dribbling football with a tight offside rule as in rugby which forbid forward passes (still played today as the Eton field game) whilst Westminster and Charterhouse pursued a game that excluded handling the ball but had a less restrictive offside rule which became the ‘passing game’ since it allowed forward passes (Sargeaunt, 1898). The choice of rules was dependent on local conditions

playing under different rules. So in 1848, members of the University of Cambridge devised and published a set of 'Cambridge Rules', which was intended to be used universally but was not too widely adopted outside of the Universities.

Realising that football could only thrive with a standardised game, the representatives of eleven London football clubs and schools, all playing their versions of football, met on 26 October 1863 at the Freemasons' Tavern in Great Queen Street, London. They agreed to form the English Football Association, which would draw up and maintain standard rules of what would become known as 'Association Football'.[7] Ebenezer Cobb Morley, a London solicitor who had formed Barnes FC in 1862, became the F.A.'s first secretary (1863–66) and drafted the first thirteen Laws of the F.A., commonly known as the 'London Rules' (The English FA). The laws were approved at the sixth meeting on the 8th of December, 1863.[8] The first match under the new F.A. rules was played between Barnes and Richmond on December 19, 1863, and ended in a 0-0 draw.

By 1867, the F.A. had chosen in favour of the Charterhouse and Westminster games and adopted an off-side rule that permitted forward passing for the first time, and the modern forward-passing game was born, (Marples, 1954). However, the FA's early impact on the game was limited; its membership was small, its authority was often challenged, and its laws were usually ignored (Butler, 1991); only through establishing a Challenge Cup competition in 1871 would the FA start to grow its influence.

Based on personal experience of inter-house 'sudden death' competition at Harrow, Charles Alcock, the F.A.'s newly appointed 3rd Secretary, proposed a national knockout tournament for which all Association members would be eligible to enter. The FA Committee approved the proposal, and the new competition rules were quickly drafted for an inaugural tournament in the 1871/72 season.

Working Class Football

In an account of the development of the game in 1906, it is claimed that

> "Football, in its modern form, is entirely the product . . . of the various public-school games."
>
> (Storey, 2016).

[7] The founding clubs present at the first meeting were Barnes, Civil Service, Crusaders, Forest of Leytonstone (later to become Wanderers F.C.), N.N. (No Names) Club (Kilburn), the original Crystal Palace, the original Blackheath, Kensington School, Perceval House (Blackheath), Surbiton F.C., Blackheath Proprietary School. Charterhouse sent their captain, B.F. Hartshorne but declined the offer to join.

[8] Despite objections from Blackheath F.C., the 'hacking' or kicking of an opponent on the leg was outlawed for the first time.

This position is based on the misconception that only the ex-public-school boys, free from the heavy toil of the working classes, had the time to invent Association Football from the many public school games they played. They then created the Football Association in 1863 and the FA Cup in 1871.

Like 'evangelists', they then came north from London to spread the gospel of this new football game amongst the working classes in the Midlands and the North of England. The Royal Engineers were the first football team to tour Nottingham, Derby, and Sheffield in 1873. Sir Frederick Wall, secretary of The Football Association from 1895 to 1934, states in his memoir that this tour introduced the combination game to Sheffield and Nottingham (Wall, 2005).

Whilst it is true that after the Industrial Revolution in Great Britain, most working-class people, including children, often had to work for more than 12 hours per day and six days a week, there is evidence that working-class football had not ceased post-industrial revolution but had continued to be played through the 19th Century outside of the public schools:

> "A match at football will be played at the cricket ground, Leicester, on Good Friday next, between eleven (principally printers) from Derby and the same number of Leicester."
>
> Bell's Life, London 1838

> "Although Christmas Day and Good Friday were the only fixed holidays in the mining region of Yorkshire, children had at least one day off a week and a fair portion of time in the evening. This they …..use to play [football] on the considerable areas of wasteland in the neighbourhood."
>
> Parliamentary inquiry, 1842

However, with the Factory Act of 1850, things began to change for the Working Classes. Increasingly, industrial workers were now getting Saturday afternoons off work, and they initially attended football matches as spectators for entertainment. Increased adult literacy rates amongst the working class spurred press coverage of the game, and an expansion in the rail network enabled spectators to travel to football games. Churches, trade unions, and schools rapidly formed recreational football teams for working-class boys and men to participate in as players.

Although the public school code in the south of England would officially come to dominate Association Football, an alternative code of working-class football was also being developed simultaneously in the north of England.

In 1855, the Sheffield Cricket Club began playing football matches as the 'Sheffield Football Club' to maintain their fitness in the off-season. In 1858, the Club created a code of football known as the 'Sheffield Rules', which introduced elements familiar to the modern game, such

as corners, throw-ins, free kicks for fouls, heading the ball, and goalkeeper and forward positions.

By 1862, the Sheffield Rules had become the dominant code in the city and would spread beyond the city boundaries to other clubs and associations across the north and midlands of England. In 1867, Nottingham Forest adopted the Sheffield code, and the Birmingham and Derbyshire FAs became affiliated with Sheffield, adopting its code in 1876. This made the Sheffield Rules one of the most popular forms of football during the 1860s and 1870s. The world's first competitive football tournament was played under the Sheffield Rules in 1867.

Although the responsibility for the Sheffield Rules was passed to the Sheffield District Football Association upon its creation in 1867, and the rules were subsumed into the FA's rules, the influence of the Sheffield Rules on the modern game cannot be underestimated. Eight of the twelve changes made to the FA code between 1863 and 1870 were taken from Sheffield Rules. By 1877, all the associations of Great Britain had agreed upon a uniform code, and the influence of the ex-public school-dominated London clubs in rule setting had significantly diminished.

Despite the common misconception that Association Football was rolled out as something 'new' to the working class of the industrial north and midlands of England, the area was well primed for a rapid take-up due to the popularity of Sheffield Rules football, that had already established the game as both an entertainment and participant sport. Post-industrial urbanisation resulted in significant concentrations of the working class attending factories, pubs and churches that the teams could draw from and the new railway connections that had made rapid transport between other working-class cities possible, meaning both players and fans could now attend matches further afield.

From 1870, football would develop rapidly in the Midlands and North, with many clubs familiar to football fans today, being formed from existing sports clubs, e.g. Burnley, Sheffield Wednesday, Preston North End, Derby County, Notts County, from churches, e.g. Aston Villa, Barnsley, Blackpool, Bolton Wanderers, Everton, Manchester City, Birmingham City, from workplaces, e.g. Stoke City, West Bromwich Albion, Manchester United, Coventry City, Crewe Alexandra and by teachers and school alumni, e.g. Blackburn Rovers, Leicester City, Sunderland.

Increases in 'real' wages during the 1870s also meant that even the working class could purchase discretionary items and were drawn in greater numbers to attend football matches as spectators. By the end of the 1870s, interest in the game had grown so much that football clubs, mainly in Lancashire and the north of England, could start charging admission fees to their working-class spectators without affecting demand.

With a large, urbanised catchment area to draw supporters willing to pay for admission from, the leading northern clubs, mainly from Lancashire, were in a position from the late 1870s to make 'illicit' payments to skilled working-class players, with many hailing from Scotland.[9]

At the same time, the working-class players required some financial inducement to play football. They needed to cover the opportunity cost of the time lost from their primary employment, typically in the mines and mills, and the risk of an injury, which could affect future wages. Unlike the ex-public-school players, drawn from the more affluent upper and professional classes that populated the clubs in the south, the working-class players in the north could not afford or were unwilling to be amateurs.

The Football Association (FA) Cup

Despite unanimous support for 'The Cup' amongst Committee members, many clubs felt such a competition could lead to an unhealthy rivalry and even bitterness. Therefore, the first competition had only 15 clubs out of the 50 eligible members enter it and suffered from withdrawals, with only 12 clubs playing. With byes, there were just 13 matches played in total. In the final, Wanderers, a team based in London that included four Harrow graduates, three old Etonians, and one each from Westminster, Charterhouse, Oxford, and Cambridge, beat the Royal Engineers 1-0 before 2,000 spectators at Kennington Oval in what the Sporting Life described as 'a most pleasant contest'. Wanderers went on to win the competition five times in its first seven seasons. The early winners were all teams of wealthy amateurs from South England.

Between 1875 and 1885, the FA spread nationally through a network of County and District Associations, which provided the framework for hundreds of new teams and granted them access to the FA Cup.

From the 1888–89 season, the tournament began to resemble the modern cup when several rounds of regionally based knock-out qualifying games were played until only one regional club was left to progress to the fourth qualifying round of the Cup.[10]

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[9] The Scottish game had developed differently to England in that English teams preferred to run forward with the ball in a rugby-like fashion whilst the Scottish chose to pass the ball between their players. As a result players from Scotland were in high demand as they possessed more-advanced ball-playing skills and exemplified the benefits of teamwork and passing. It would be the Scottish approach that would become predominant way of playing (FootballHistory.org) especially with the adoption of the Westminster and Charterhouse variants by the F.A. in 1877.

[10] In what would later be described as the 'magic of the cup', non-league Warwick County won 2-1 away at First Division club Stoke City on October 6th, 1888, to become the first FA Cup 'giant killers'.

The payments to players, a common practice in the northern clubs, directly contravened the FA's laws on amateurism. The matter would come to a head in the 1879 FA Cup when the Lancashire side Darwen became the first club from Northern England to achieve any measure of success in the FA Cup by reaching the quarterfinals. However, in doing so, Darwen fielded two paid players for the first time in any FA-sanctioned competition against the staunch amateurs, the Old Etonians. A last-minute motion to prevent Darwen from playing was defeated because an amateur status requirement to compete in the FA Cup was not clearly defined in the regulations at the time.

In 1882, Blackburn Rovers from Lancashire got to the FA Cup final, losing narrowly 1-0 to Old Etonians, followed by Blackburn Olympic a year later, who won the cup, beating Old Etonians 2-1.

> "The Cup is very welcome to Lancashire. It'll have a good home, and it'll never go back to London".
>
> Albert Warburton, Blackburn Olympic captain
> (Soar & Tyler, 1983)

The Blackburn Olympic victory was indicative of the class tensions that existed in the late Victorian era:

> "The …….vanquishing…….. of a club composed of sons…..of the upper class by a provincial club composed entirely of……the manual working-class." [11]
>
> The Blackburn Times (1883)

In 1883, Blackburn Rovers from Lancashire won the first of three consecutive FA Cup wins. However, the question of professionalism again came to the fore when Lancashire neighbours Accrington F.C. and Preston North End were expelled from the FA Cup for paying a player.

A dichotomy now appeared that threatened the FA's very existence. The clubs in the south, comprised of affluent ex-public schoolboys, wanted to strictly follow the FA's amateur code, while the working-class clubs in the north were increasingly disregarding it.

With their larger supporter bases and the financial revenues to attract the best players, the northern English clubs now sought a professional system to compensate their largely working-class players. On the instigation of Bolton Wanderers, some clubs from the North and Midlands, including Aston Villa, Sunderland, and Walsall Swifts, threatened to break away and form a British Football Association as a 'professional' rival to the Football Association in 1884.

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[11] Blackburn Olympics' team consisted of three weavers, a dental assistant, a gilder, a plumber, a clerk, a loomer, a licensed victualler, and two iron-foundry workers.

In 1885, the FA was finally forced to back down and passed a motion to allow clubs to 'professionalise' and legalise the paying of players as long as the player was born or lived for at least two years within six miles of the club's home ground. Even then, most players had other employment in heavy industry and only supplemented their wages by playing football.

After 1882, a team of ex-public schoolboys would never again win the FA Cup. As the working class came to dominate Association Football, the upper and middle classes would turn to cricket and rugby union.

The English Football League

We now describe the English League's development over the decades, setting it in the context of the economic and legislative externalities.

In the 1885/86 season, the first year after using professional players was legalised, Blackburn paid some players £1 a week, while West Bromwich Albion paid 10 shillings weekly. By 1888, Everton paid Nick Ross £10 a month on his transfer from Preston North End.

In 1888, Aston Villa director William McGregor proposed a league competition to provide a more reliable income stream from a guaranteed number of competitive matches each season. The first league season kicked off on September 8th, 1888 and replaced the ad hoc list of FA Cup, inter-county, and friendly fixtures that had existed until then.[12]

While England's public schools were important in the development of football, the sport came to be viewed as working-class, (Rewilak, 2023). Five of the English Football League's founding twelve clubs came from northern mill towns and six from the midland industrial belt that ran across the middle of England from Staffordshire to Nottinghamshire. Freed from the toil of working on Saturday afternoons by the 1850 Factories Act, the game had flourished in these areas, as industrial workers would congregate to watch or play the sport.

None of the early FA Cup winners, who mostly hailed from public schools in the South East of England, chose to join the League. They eschewed the professional game to stay resolutely amateur, firmly establishing the game as a working-class sport going forward. [13]

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[12] The twelve founder member clubs being Accrington F.C., Aston Villa, Blackburn Rovers, Bolton Wanderers, Burnley, Derby County, Everton, Notts County, Preston North End, Stoke, West Bromwich Albion and Wolverhampton Wanderers.

[13] Wanderers Football Club, five times winners of the FA Cup, including three in succession from 1876 to 1878, a feat which has been repeated only once, was dissolved around 1887. Two times winners, five times finalists Old Etonians are current members of the Arthurian League (affiliated to the Amateur Football Alliance). The Royal Engineers AFC, three-time finalist and one-time winner, joined a newly formed Army Football Association in 1888. Oxford University AFC, four-time finalist and one-time winner,

By coincidence, professional league football was developing in England while UK corporate insolvency law was changing. Beginning with the 1844 Joint Stock Companies Act, which created companies through registration rather than royal charter, the Joint Stock Companies Winding-Up Act of 1844 laid out the procedure for terminating a company and liquidating assets. This created a 'veil of incorporation', giving Companies a legal identity distinct from their shareholders. The 1855 Limited Liability Act protected shareholders from any debts the company had built up. Before the 1855 Act, the people who lent it money (creditors) could sue all the shareholders to pay off the company's debts. However, the shareholder's exposure to a company's debts would now be limited to their initial investment in the company's equity.

Football clubs began to consider incorporation a popular way to access debt finance and secure land to develop stadium facilities, (Szymanski S. , 2015). On August 22nd, 1888, Small Heath Alliance, now Birmingham City, became football's first limited liability company.[14]

Within a few years, virtually all the professional clubs in the English Football League had become limited liability companies. This led to a stadium-building boom, resulting in the great 'traditional' stadiums today, e.g., Hillsborough, Goodison Park, etc. (Montague, 2018).

Instinctively, the FA believed that the clubs should exist for the mutual benefit of the members and communities they served and thought owners or directors should not be able to exploit their clubs. Therefore, the FA did not officially sanction incorporation straightaway. However, with incorporation and access to debt, it was inevitable that clubs would begin to live beyond their means, and increased bankruptcy, i.e. where football clubs could not pay their debts, would result.

In 1889, the sharing of gate receipts appeared in the English Football League's first official rules and was intended to reimburse the visiting team for travel and other expenses. The first revenue-sharing mechanism required each home club to pay its visiting opponents £12 from the home team's gate receipts (Inglis, 1988).

Revenue sharing has been adopted by sports leagues, especially the sports leagues of North America, to rebalance the discrepancy between the revenues of the bigger teams with 50,000+ crowds and small market clubs with much lower attendances and thereby maintain competitive balance, i.e. competitiveness between teams. Revenue sharing is generally justified by the idea that if the bigger clubs are sharing the gate receipts with the smaller clubs, the smaller

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currently plays in the BUCS Football League, the league system of British Universities and Colleges Sport

[14] It is, perhaps with just a hint of irony, that Birmingham City were the first club to be docked points for falling foul of the Football League's Financial Governance Regulations over a century later.

clubs will be able to compete better with the bigger clubs in terms of player wages than would be otherwise afforded by their crowds. It is argued that the product in sport, i.e. the match, differs from a 'traditional' market in that a joint nature of production exists between the suppliers, i.e. the clubs, where one team relies on the other teams' quality to produce the output, (Leach & Szymanski, 2015).

Furthermore, Neale (Neale, 1964) introduced the concept of a 'product joint' or 'inverted joint product', whereby two firms combine to produce output using identical production technology (e.g., eleven players) at the same production plant (e.g., the stadium).[15]

At the start of the 1890s, the British economy had been in the 'Long Depression' since 1873. In addition to a financial and manufacturing recession, the UK suffered a decline in agriculture following the cultivation of the American prairies in the 1870s and cheap transportation provided by steamships, which resulted in a dramatic slump in grain prices.

Research into recessions and football attendance has shown that higher unemployment leads to lower attendance (Reade & van Ours, 2023). Sport is a normal good with positive income elasticity; as incomes grow, so does demand for sport. In some circumstances, the income elasticity for sport can be greater than one, i.e. sport is a 'luxury good'. Here, the demand for tickets grows faster than income (or does not decline with falls in income), e.g. Superbowl or FA Cup Final tickets, (Brown, Rascher, Nagel, & McEvoy, 2021). Despite the recession, the EFL proved very popular. It was quickly extended to 14 teams in 1891/92 with the election of Darwen, the club that had kicked off professionalism, and the re-election of Stoke, whom Sunderland had replaced for the 1890/91 season.

In 1892/93, three clubs from the rival 12-club Football Alliance joined an expanded First Division of 16 teams.[16] A twelve-team Second Division was formed by incorporating eight former Football Alliance members and Darwen, the league's bottom club, in 1891/92.[17] The remainder were Northwich Victoria from The Combination, Burslem Port Vale (now Port Vale) from the Midland League and Sheffield United (from the Northern League).

The UK remained in recession until 1896, but the long-lasting effect of the agricultural recession was an exodus of displaced farm workers to the cities to find work (Ensor, 1936).

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[15] This is distinct from a joint product, which is two or more products are produced in a single process by a single firm

[16] These clubs joined the First Division from the Alliance Nottingham Forest, The Wednesday (now Sheffield Wednesday) and Newton Heath (now Manchester United).

[17] These Alliance clubs joined Second Division Ardwick (now Manchester City), Bootle, Burton Swifts, Crewe Alexandra, Grimsby Town, Lincoln City, Small Heath Alliance (now Birmingham City), and Walsall Town Swifts (now Walsall), whilst the twelfth Alliance club, Birmingham St George's, was disbanded.

By the late nineteenth century, British manufacturers had eclipsed the land-owning aristocracy as the wealthiest class in the nation (Cannadine, 1992). By 1901, 80% of the British population lived in urban areas (Morgan K. , 2008).

From Chart 1.2, the average matchday attendance grew 8.4% annually through the decade from 5,466 to 10,058. With the end of the recession and an increased population in the urban areas, attendance grew by 23% in 1897/98. The second division saw annual attendance growth of 16.5% from 2,269 to 4,521 in 1897/98.

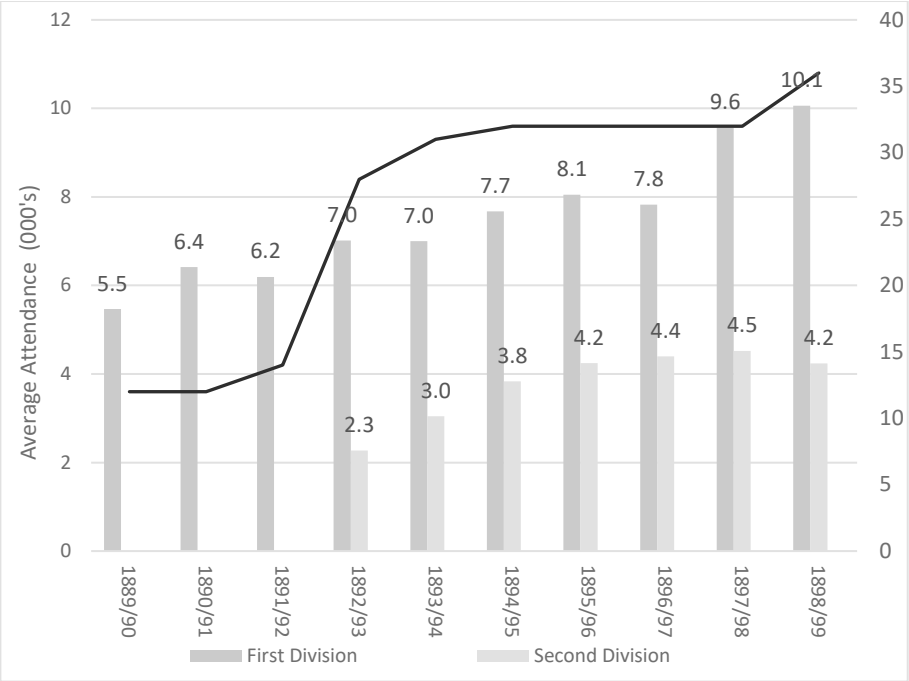

Chart 1.2 -Average Attendances (1889/90 –1888/89)

The league clubs soon recognised that professionalism could lead to a damaging 'wage race' between clubs and were compelled to control player costs. In September 1893, Derby County proposed a maximum wage of £4 a week at a time when the average working man earned about £1 and a skilled worker up to £2.50 a week, (Simkin, 2020). The proposal severely threatened a few star players earning as much as £10 weekly. However, most players at the time were part-time professionals earning less than £4 a week.

The EFL introduced the 'Retain and Transfer' system at the beginning of the 1893/94 season to curb the power of the wealthier clubs. A player could not be registered with any other EFL club unless permission was given by the club that held his registration, even if the contract had expired. The club was not obliged to play him, and without a contract, the player was not entitled to an income. EFL clubs could demand a transfer fee in return for transferring a player's registration to another club. The first-ever three-figure transfer fee of £100 (2023: £11,000)

was paid by Aston Villa in 1893 for the Scottish International Willie Groves from neighbours West Bromwich Albion.[18]

The only options available to players were moving to a club in the semi-professional English Southern League, formed in 1894, or the Scottish League, formed in 1890. However, wages were lower in these other leagues than in the EFL.

At the end of the 1893/94 season, Bootle FC (Liverpool Mercury (1892) (1893)) and Middlesbrough Ironopolis, (Darlington Northern Echo, 1894) resigned from the league and were liquidated. In 1895/96, Accrington F.C. was liquidated during the season (Manchester Courier, 1895), and bottom club Rotherham Town was liquidated with debts of £77 (2023: £8,500), (Sheffield & Rotherham Independent, 1896).

In light of the league's success, the players formed the Association Footballers' Union in 1898 to negotiate a relaxation of the registration system with the EFL and oppose the introduction of a maximum wage. The new players' union initially had some success in persuading the EFL to defer the introduction of a maximum wage, but the retain-and-transfer system remained.

At the end of the 1898/99 season, Darwen F.C. was liquidated with debts of £1,192 (2023: £127,000) (Blackburn Standard, (1896) (1899)). (see Appendix 1.4). Although the FA finally allowed clubs to form limited companies in 1899, steps were taken to protect the clubs' heritage and control club owners' profiteering. In what would become Rule 34 of the FA's Rules and Regulations, the directors were prohibited from being paid, dividends to shareholders were restricted, clubs were protected from asset-stripping, and payments to owners were prohibited on winding up.

The Edwardian era (1901–1910) was a period of prosperity with no serious depression. The nation still led the world in trade, finance, and shipping and remained strong in manufacturing and mining but started to fall behind the United States and Germany in terms of growth rate, manufacturing, and GDP.

In 1899/1900, Loughborough F.C. finished bottom of the league and was liquidated with debts of around £210 (2023: £21,000). At the end of 1900/01, New Brighton Tower was liquidated after low matchday attendances could not sustain the players' wages (Runcorn Guardian, 1901) (Ashbourne News, 1901). (see Appendix 1.5).

In the 1900/01 season, Liverpool won the League title, paying its players about £7 per week (2023: £700), which could reach £10 a week with bonuses (2023: £1,000). In response, the

[18] The Football Association fined Aston Villa amidst allegations that Groves and his Albion teammate Jack Reynolds had been illegally poached.

EFL accepted the proposal for the maximum wage for Professional EFL players of £4 a week (2023: £407). It banned match bonuses but allowed a benefit after five years to encourage longer stays with clubs. This rule was to apply from the 1901/02 season. The maximum wage was set at double what a skilled tradesman received around that time:

> "In 1906, casual dockers earned between 5s 6d and £1 2s 7d for a 44-hour week. Tram drivers made £2 3s for a 60-hour week, and men employed in the building trades averaged £2 8s for a 44-hour week."
>
> Charles Korr (1987)

The combined effect of the retain-and-transfer system and the maximum wage effectively created a monopsony for the club owners in the player market[19], and they would keep players low for many decades.

> "In effect, the Football League abolished the free market where players' wages and conditions were concerned."
>
> John Harding (1991)

Such maximum wage controls are common, especially in the US, usually as part of a package that includes revenue sharing and entry-level player drafts, introduced in the interest of competitive balance. In negotiating salary caps between owners and players, the US sports franchise model has resulted in salaries of approximately 50% of league revenue.

Monopsony power is borne out of the franchise system that ensured the team was the 'only team in town', with limited career windows for players to earn money in the league, and the deep pockets of billionaire franchise owners saw the players' share of revenue decline. Despite occasional player strikes and lockouts by club owners, the player's remuneration in the NBA and NHL has fallen from around 57% of income to 50%, while NFL players went from a 50/50 split to 47% (Pagels, 2014).

Salary caps only work where no viable alternative leagues exist to draw players. In English football, players decided to join Southern League clubs without wage restrictions after the maximum wage control was implemented in the 1901/02 season. To entice players, Southern League clubs began offering up to £100 signing-on fees (Harding, 1991). The English Premiership rugby league introduced a cap in 1999, but many of its star players moved to Japan and France, where spending was not restricted. Forming a rival league, like the EPL, has driven up salaries (Leeds, Von Allmen, & Matheson, 2022).

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[19] A monopsony occurs when a firm has market power in employing factors of production (e.g. labour). Collusion of the owners means there is effectively one buyer and many sellers.

Having failed to achieve its objectives, the first footballers' Union was dissolved, and some players decided to join Southern League clubs, where there were no wage restrictions. To entice players, Southern League clubs began offering up to £100 signing-on fees (Harding, 1991).

The Edwardian era marked the growth of an effective labour movement in the UK. Trade union membership more than doubled, and the Labour Party won its first seats in Parliament in the 1906 election. In 1907, a second attempt at unionising professional football players was made with the formation of The Association Football Players' and Trainers' Union (AFPTU), commonly known as the Players' Union. Their stated aims were freedom of movement of players and obtaining the same employment rights as other workers (Harding, 2004).

From 1908, Britain faced a period of inflation and stagnating wages, which resulted in a series of strikes, especially in traditional industries like cotton and shipbuilding, where jobs had been cut. In 1909, the Players Union threatened a player strike over the maximum wage and the retain-and-transfer system.

The EFL responded by withdrawing its recognition of the Union and banning those players still in the AFPTU after July 1st. The APFTU responded by joining the General Federation of Trade Unions. Most players resigned from the union.[20] However, the entire Manchester United team and seventeen Sunderland players refused to leave the union and were all suspended by their clubs.

On August 31st, 1909, the EFL agreed that professional players could be members of the AFPTU. The dispute ended when the union settled for official recognition and bonus payments to supplement the maximum wage. However, the maximum wage and the retain-and-transfer system remained.

The EFL continued to grow, expanding by four clubs in 1905/06. Matchday attendance grew by 6.2% annually from 7,483 to 12,849 through the 1900s. Although it declined by 6.5% in 1899/1900, strong growth returned with 12% in 1900/01 and peaked at 17% in 1905/96.

[20] At Aston Villa, all 28 players signed a public declaration saying they would not rejoin the union unless permitted by the Football League.

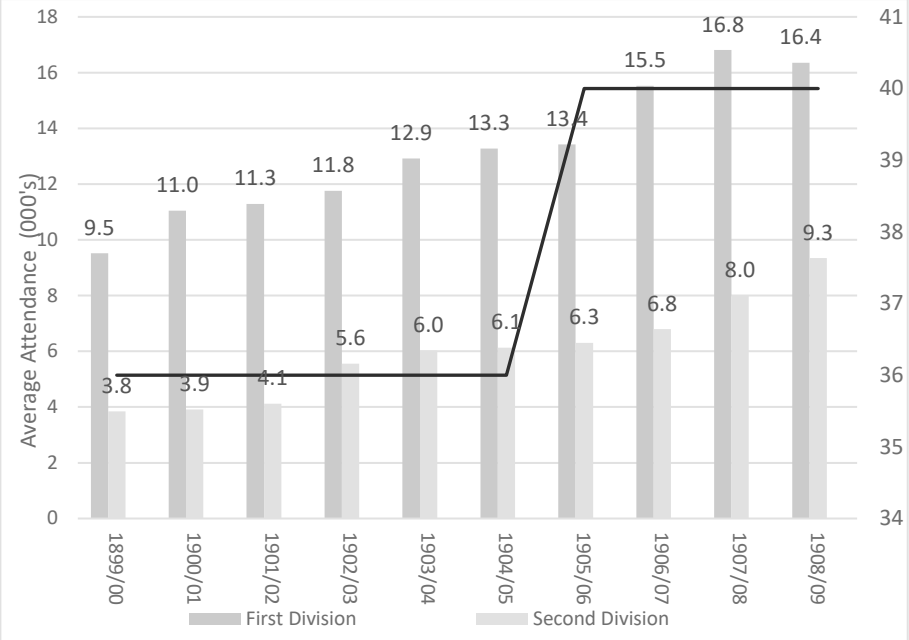

Chart 1.3 -Average Attendances and Number of Clubs (1899/00 –1908/09)

In 1910, British unemployment reached a record low of 3 per cent. The unions attempted to exploit their newfound bargaining power by demanding higher wages and job security. The start of the decade was marked by strikes in coal mining, on the railways, and at the docks (Morgan K. O., 2009). In Liverpool, clashes led to the death of two men and over 350 injuries. In 1912, the National Coal strike and another wave of transportation strikes cost the British economy an estimated 40 million working days (Carter & Mears, 2011).

The first legal challenge to the retain-and-transfer system came to court in March 1912 in Kingaby v Aston Villa. Back in March 1906, outside right Herbert Kingaby had joined Aston Villa from the Southern League club Clapton Orient for a fee of £300 (2023: £30,000). Unimpressed, the club offered him for sale at half the purchase price after only a few months, but there were no takers. Kingaby's wages were stopped, so he returned to the Southern League to play for Fulham. By the start of the 1910-11 season, Kingaby had rejoined his old club Clapton Orient. However, in 1910, the Southern League agreed to recognise the EFL's retain-and-transfer system. So, a proposed transfer of Kingaby to Southern League opponents Croydon Common fell through when Aston Villa demanded a fee of £350 as they still held his EFL registration. The union had agreed to fund the legal costs when Kingaby brought legal proceedings against his former employer, Aston Villa, for preventing him from playing. However, defeat in the case almost ruined the union financially. As a result, membership fell dramatically, and the case established the legality of the league's transfer system for years to come.

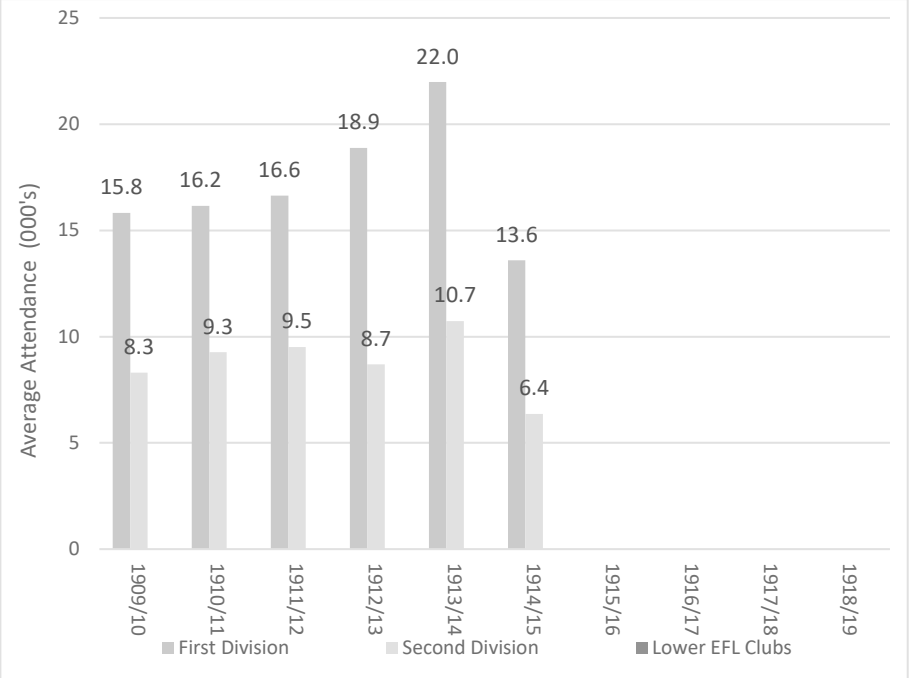

Chart 1.4 -Average Attendances (1899/00 –1908/09)

The EFL saw continued growth in matchday attendance from 12,849 to 16,359 in 1913/14, the last season before the league was suspended for World War 1 (1914/18), an annual growth of 5.2% per annum. This reflects the low levels of unemployment amongst the working classes in the early part of the decade. Football's popularity amongst the working classes had a detrimental impact on interest in other sports, notably cricket.

The First World War saw an 18% decline in consumer production between 1914 and 1919, with the wartime switch to munitions (Mitchell, 1971). Britain was forced to borrow large sums from the USA. Large numbers of women entered the workforce to take over the jobs vacated by men in the forces, and many entered the new munitions factories (Braybon, 1990).

Between 1915 and 1919, the EFL and FA Cup fixtures were suspended in England. Due to wartime travel restrictions, four regional league competitions were set up: the EFL Lancashire and Midlands sections and the London and South Western Combination leagues.[21] The EFL

[21] In 1915/16, the 14 EFL Lancashire teams were Manchester City, Burnley, Blackpool, Everton, Oldham Athletic, Liverpool, Stockport County, Stoke, Southport Central, Bury, Manchester United, Bolton Wanderers, Rochdale, Preston North End. In 1916/17, the league was expanded to 16, including Blackburn Rovers and Port Vale. .

In 1915/16, the 14 EFL Midlands teams were Nottingham Forest, Sheffield United, Huddersfield Town, Bradford City, Leicester Fosse, Barnsley, The Wednesday, Notts County, Lincoln City, Leeds City, Hull City, Bradford Park Avenue, Grimsby Town, and Derby County. In 1916/17, Birmingham, Rotherham County, and Chesterfield Town were added, but Derby County left. In 1917/18, Chesterfield Town left, and in 1918/19, the league added Coventry City.

sections operated a principal tournament, consisting of a single league in the first half of the season and then a subsidiary tournament of four groups in the second half. The London and Bristol Combinations ran a single-league tournament only.[22] During wartime football, Chesterfield Town was liquidated in 1915 with debts of £600 (2023: £51,000) (Derby Evening Telegraph, 1915). (see Appendix 1.6)

New wartime distribution rules for revenue sharing were implemented, and from 1917, the home club was required to pay 20% of its net gate money to the away team instead of the £12 fixed fee.[23]

During the war, clubs were banned from paying their players and 'guest players'. The club would hold a players' registration for the duration of the war, so players were required to return to their pre-war club at the end of the war.

On the EFL's return in 1919/20, the maximum weekly wage was increased to £10 (2023: £427) and the wartime distribution mechanism for revenue sharing, which required home clubs to pay the visitors 20% of net gate receipts for all league games, was made permanent (Inglis, 1988).

For the UK economy, it was anything but the 'roaring twenties' [24]. Instead, it was a decade of depression, deflation, and a steady decline in the UK's traditional industries. After a short-lived post-war boom in 1919/20, unemployment rose to over 10% and stayed at historical levels through the 1920s. Britain's tight fiscal and monetary policy to pay for the war stifled consumer demand, leading to little economic growth and wholesale prices fell by 25% during the 1920s.

In 1915/16, the London Combination teams were Arsenal, Brentford, Chelsea, Clapton Orient, Croydon Common, Crystal Palace, Fulham, Millwall, Queens Park Rangers, Tottenham Hotspur, Watford and West Ham United. In 1916/17, the Combination expanded to 14 teams, including Portsmouth, Southampton and Luton Town and the resignation of Croydon. In 1917/18 and 1918/19, the number of clubs dropped to 10 teams, playing 36 games, with the resignation of Portsmouth, Southampton, Watford and Luton Town.

In 1915/16, the South Western Combination teams were Portsmouth, Southampton, Cardiff City, Bristol Rovers, Bristol City, Swindon Town, and Newport County.

[22] In 1915/16, only the London Combination ran a supplementary tournament of 14 teams, which included the 12 teams of the principal league plus Luton Town and Reading.

[23] The clubs in the Football League Northern and Midlands sections were required to pay 20% of the proceeds from fixtures in the later subsidiary competition into an equally distributed pool for league members

[24] The 'roaring twenties' is a term commonly used to refer to the economic boom in the United States on the back of mass production techniques, growing efficiency – and increasingly a consumer credit bubble

Taxation increased dramatically to raise funds for the war effort. Before the war, most of the tax revenue was derived from indirect taxation, but by 1920, 60% was from income tax. Before the war, 1.13 million Britons were subject to a 6% income tax, but by 1920, there were 3 million income taxpayers at a rate of 30%.

Labour militancy increased during the 1920s, but the growth in real wages achieved by the unions led only to reduced hours and higher unemployment, and the deflation increased the burden of Government debt.

Eight games into the 1919/20 season, Leeds City became the first club to be expelled from the League, and the club's assets and players were auctioned off. Port Vale assumed Leeds City's results to date and took over their remaining fixtures. (See Appendix 1.7)

In 1920, the EFL Management Committee proposed reducing the maximum wage to £9 per week for the 1920/21 season (2023: £333) in response to the economic outlook. The change was implemented after the players took no action.

Emboldened by the lack of objection to the previous year's cut, at the end of the 1919/20 season and due to the ongoing economic downturn, the maximum wage was reduced again to £8 for the 37-week playing season (2023: £324) and £6 for a 15-week close season (2023: £243) from 1921/22 onwards.

Despite the ongoing recession, EFL membership remained an attractive prospect. In 1920/21, the leading clubs from the Southern League formed a new Third Division to bring the membership up to 66 clubs. A year later, the league structure increased to 86 clubs across four divisions, with Division Three initially split between the north and south. In 1922/23, the league added two more teams, bringing the number to 88 clubs.

Efforts to keep the British pound in the gold standard after 1925, when the pound was pegged at the pre-war exchange rate of $4.85, meant that UK exports were overvalued and interest rates needed to be kept artificially high. This led to a severe export-led depression; Exports fell to half their 1913 levels, and unemployment peaked at 17% (Carter & Mears, 2011).

When the coal miners rejected the mine owners' demands for longer hours and reduced pay, they were locked out of the coal mines. In support, the Trades Union Congress called the 1926 General Strike of railway and transport workers, printers, dockers, and iron and steelworkers. However, the strike lasted just nine days, and the coal mines remained locked.

By 1929, exports were still only 80% of 1913's exports. The traditional industries of the British industrial heartland, especially in the north of England and south Wales, such as cotton, steel, coal, and iron, suffered from global oversupply and falling international prices, resulting in regional social and economic decline. The growth in the new industries, like motorcars,

chemicals, and rayon, was slow and was concentrated around London and cities in the West Midlands (Scott, 2000).

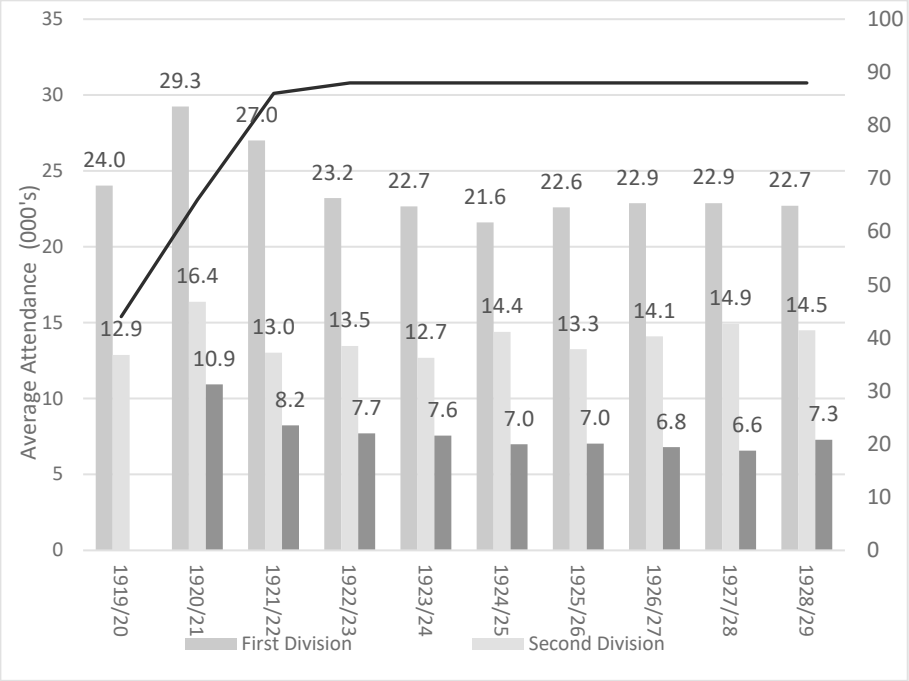

Chart 1.5 -Average Attendances and Number of Clubs (1919/20 –1928/29)

On resumption of the EFL in 1919/20, matchday attendance was up 12.8% on 1913/14. However, the average attendance in the top two divisions grew by only 0.5% per annum between 1920 and 1929, the slowest growth rate since the EFL's launch. However, football in the north proved remarkably resilient to the economic situation in the industrial heartland. Attendance grew by 7.8% per annum in Yorkshire and 1.4% in Lancashire, while it fell by 3.1% per annum in London.

After a decade of stagnation in the 1920s, the UK economy sharply declined during the global 'Great Depression', which started in the United States (1929-1939). British exports fell by half, and unemployment rose to around 2.75 million. The traditional industries of the industrial heartland, such as coal, iron, steel, and shipbuilding, were the most affected, resulting in extreme regional poverty. In 1931, real GDP fell by 5%.

In 1931/32, Wigan Borough became the first club to resign from the EFL mid-season with unpaid players' wages and liquidated with debts of £30,000 (2023: £1.7m) (Hull Daily Mail, 1931). Whilst Thames AFC players took a pay cut mid-season to try to save the club, it was still liquidated after finishing bottom (Northern Whig, 1931). (see Appendix 1.8)

Given the economy's state, the maximum wage did not increase, meaning players' wages were declining in real terms. Meanwhile, matchday attendance declined by 2.7% per annum in the first four years of the Great Depression.

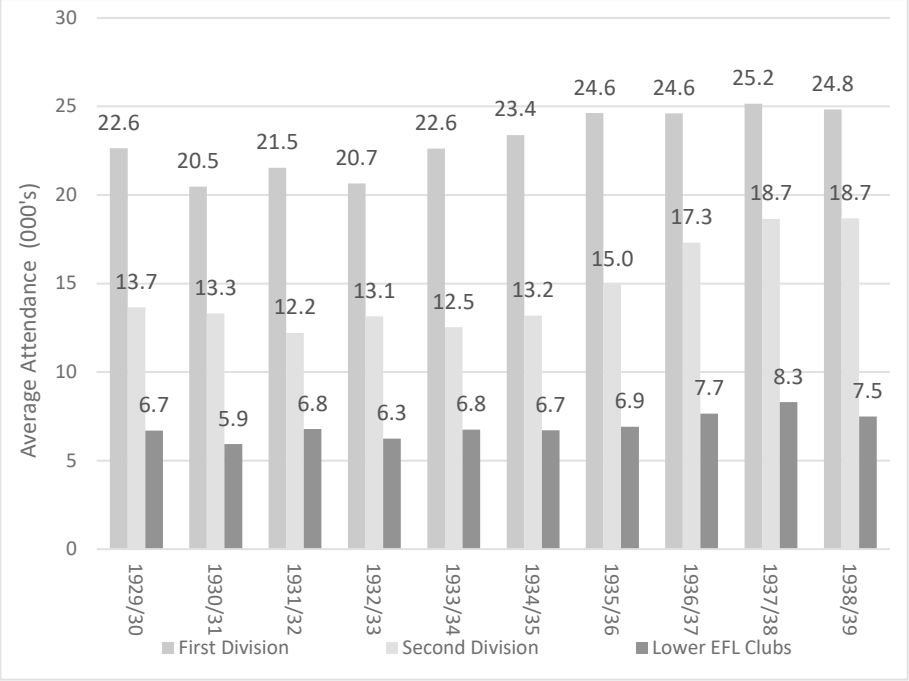

Chart 1.6 -Average Attendances (1929/30 –1938/39)

In the second half of the 1930s, there was a mini-economic recovery with rising living standards and prosperity in parts of the UK, mainly London and the Southeast and the West Midlands. The mini-recovery saw attendance grow by 5.5% per annum as the decade progressed. However, attendance increased in London and the Southeast by 4.3% and in the Midlands by 1.1% but fell in the Northeast by 0.1% and in Yorkshire by 1.7%. The northern club's league dominance has diminished, with Arsenal from London lifting the title 5 times in the decade.

The Second World War was declared in September 1939, and shortly after, the EFL was suspended as the country's attention turned to the war effort. Due to wartime travel restrictions, ten mini-regional leagues were set up in the EFL's absence. Six clubs did not participate in wartime football.[25]

As many footballers joined the military forces during the war, many teams were depleted, so they were allowed to field guest players. Payments to players were restricted to 30 shillings per match for a maximum of 12 players per side. Registered players in the forces could turn out as guests for other clubs if stationed nearby. No win or appearance bonuses were allowed, and no trophies were to be awarded.

[25] Aston Villa, Derby County, Gateshead, Ipswich Town, and Sunderland abstained. Exeter City could not participate as their ground had been requested for the war effort

The minimum admission charge during the war was 1 shilling except for armed forces members, women, and children. Gate revenue sharing would now be 70% for the home club and 30% for the away club, like the FA Cup, instead of the usual 80-20 split. The Chief Constable of Birmingham ordered the closing of football grounds in the City.[26] Despite the war, there were no football club liquidations in the 1940s.

The full EFL programme was reinstated for the 1946/47 season. As in the First World War, the players were required to return to their pre-war club. The maximum close-season wage was increased to £7 per week (2023: £250), while the in-season wage remained at £8 per week (2023: £285).

The UK economy entered the 1940s already in a poor state. After the war, Britain's national debt reached 230% of GDP, so the post-war period marked an era of austerity. Despite this, the UK experienced full employment during the war in the armaments industries and in the post-war boom caused by the US-funded reconstruction of Europe.

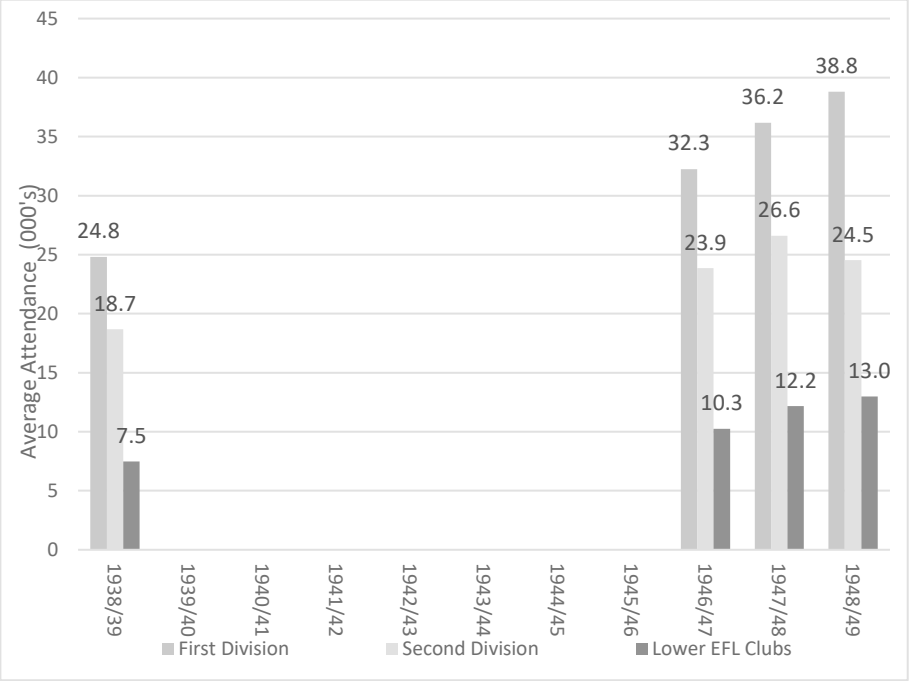

Chart 1.7 - Average League Attendances (1938/39 –1948/49)

With pent-up demand for League football from men returning home and full employment, the league restarted in 1946/47 with a post-war boom in attendance, some 31% higher than that in the 1938/39 season. Attendance continued to grow at 8% per annum for the rest of the

[26] This meant that Birmingham City had to play all their games away from Saint Andrews until 1940, and West Bromwich Albion could only open the turnstiles in the Staffordshire half of the ground (Football in World War Two, 2024).

decade. All regions saw double-digit growth in attendance, with over 21% in the Northeast and 17% in the Southwest, where Portsmouth were crowned Champions for the first time in 1949, with a club from Lancashire and London taking one title each.

A National Arbitration Tribunal was established in 1947, which decided that the maximum wage should be raised to £12 in the playing season (2023: £389) and £10 in the close season (2023: £324). For the first time, a minimum wage was set at £7 for players over 20 (2023: £227).

The Government's austerity policy to pay down post-war debt continued into the 1950s. However, with wartime rationing finally ending in 1954 and the boom in global trade, living standards rose rapidly. In an era of continued full employment, the country entered an age of consumerism, especially for labour-saving devices like vacuums and washing machines. The 1950s saw the social and cultural landscape of Great Britain transformed (Sandbrook, 2010).

"People have never had it so good."

Harold McMillan
UK Prime Minister 1957

However, Britain was quietly slipping behind its competitors despite improving living standards (Pettinger, 2010).

The EFL membership increased by 4 to 92 clubs in 1950/51. However, attendance fell by 2.7% annually through the 1950s, from 21,866 to 16,917. Even in the top division, matchday attendance fell by 1.9% per annum from 37,284 to 31,825. With falling attendance affecting club finances, the clubs colluded again and introduced a minimum ticket price of 2s in 1955.

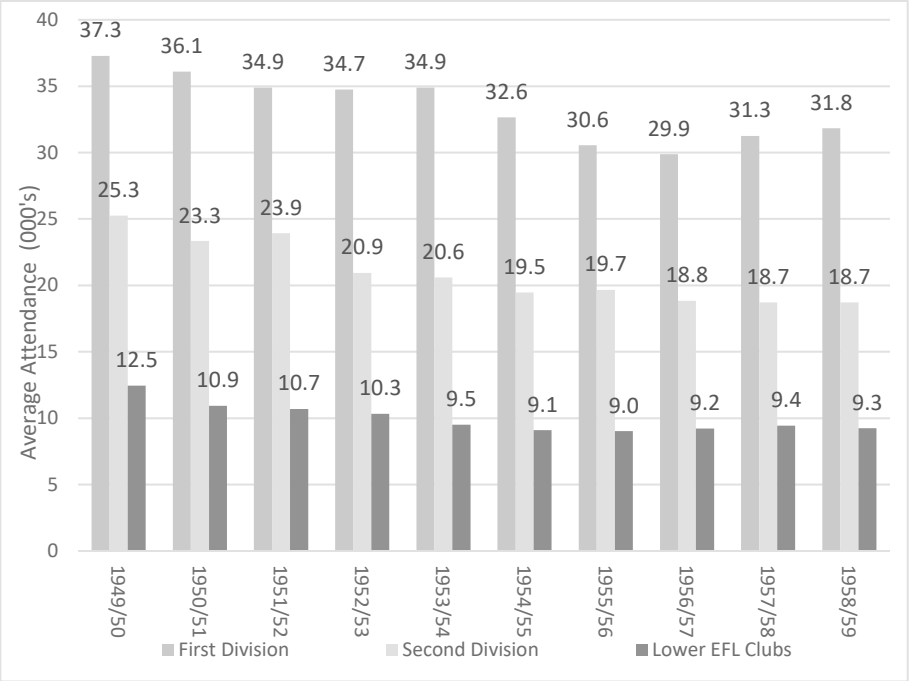

Chart 1.8 - Average Attendances (1949/50 –1958/59)

The Coronation of Queen Elizabeth the Second in 1953 saw over half a million TV sets sold. The BBC had a monopoly in the UK for televising football, for which the broadcaster would pay a facility fee for the 'right' to place their cameras in the sporting arena. However, the 1954 Television Act created the regional franchises that made up ITV, and the first commercial channel was launched in 1955. Fearful of domination by the advertising-funded channel, the Postmaster General issued a set of 'listed events', which had to be shared between the BBC and ITV in the national interest. By 1961, 75% of households had a television set.

Matchday attendance fell as football ticket prices increased, and match highlights were televised more frequently during the 1950s. The increase in ownership of affordable motorcars made alternative family activities available, and the smaller local clubs in the lower leagues lost fans to the big clubs, which were now easily reachable by car (Sterling, 2017).

At the same time, attendance was falling, and the clubs faced a steady increase in the maximum wage through the 1950s. In 1951, it increased to £14 (2023: £366) and in 1953 to £15 (2023: £348). In 1957, the maximum wage increased to £17 (2023: £341), and in 1958, it increased again, peaking at £20 per week (2023: £383).

In 1939, the footballers' £8 wage was equivalent to double the average industrial wage, but by 1960, the footballers' wage of £20 had narrowed to just $1^{1}/_{3}$ times the average industrial wage of £15 (2023: £288).

> "The average pro appears to have a pretty good life, with a possible £15 a week wage, plus bonuses, and the hope of a £750 benefit (less tax) every five years….., estimating the average retiring age at 35, provided injury has not curtailed it even earlier, the professional footballer finds himself, in the prime of life, jobless, homeless, with a few hundred pounds from the Benevolent Fund and no training for a trade or profession…… but on closer examination many flaws may be spotted in the set-up. In the first place, no more than twenty-five per cent of League players draw the maximum £15 wage."
>
> Len Shackleton (2000)
> England International

In 1961, the maximum player wages were £20 per week (£1,040 p.a.) or £371 per week in 2023's value (£19.300 p.a.), considered a luxury wage then (Prosport Wealth, 2022).

> "In comparison with the average working man you were doing very well…… What we earned was a fortune compared to the man in the street, but you had to live up to it. You had to dress correctly, be seen in the right clothes, and not let the club down like that, which cost money. And you knew you wouldn't be doing it forever."
>
> Tommy Lawton (Varley, 2002)
> England International

Since 1902, the players' wages, from Chart 1.9, have declined by £31 per year in real terms, and the decline has been even more significant since the 1930s. In 1958, Jimmy Hill (Fulham)

became chairman of the Professional Footballers' Association (PFA) and began campaigning to scrap the EFL's maximum wage.

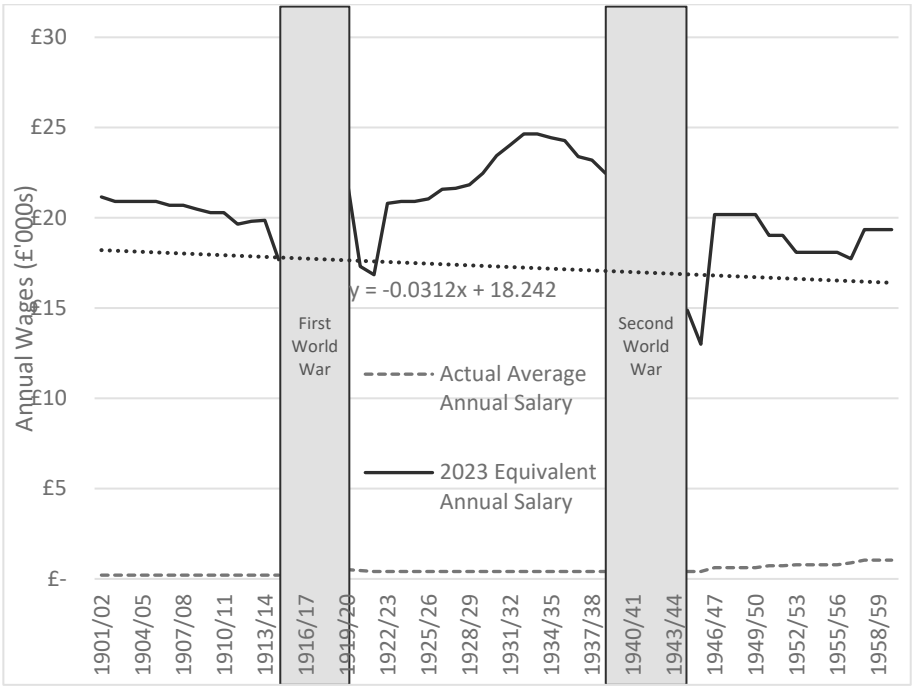

Chart 1.9 - Average Player Annual Salaries in Nominal and 2023 Value (1901/02 –1959/60)

Despite the fall in attendance and frequent increases in the maximum wage, no football clubs were liquidated in the 1950s.

The era of full employment and rising real wages in the UK continued into the early 1960s. Severe labour shortages in industries such as manufacturing and transport led to mass immigration from Commonwealth countries. UK inflation in the 1960s was, like global inflation, relatively low. Sustained economic growth resulted in rising living standards. Homeownership increased for the middle and working classes following a post-war house-building boom. Car ownership grew from 40% to 60%, and households purchased more domestic labour-saving 'white goods'.

Despite this economic growth, attendance continued its falling trend from the 1950s, which put pressure on football club finances in 1960. In response, the clubs agreed on a further increase in the minimum ticket price to 2s 6d, which led to further falls in attendance by pricing out some of the poorer working-class fans. By 1961/62, the top tier of the EFL was getting 18% fewer spectators than it had in the 1958/59 season. This decline was mirrored in the second tier, down 19% in 1960/61 and the lower EFL divisions, down 28% by 1966/67.

However, when the PFA threatened a player strike in January 1961, the EFL abolished the maximum wage controls altogether, perhaps buoyed by attendance, some 12% higher than

pre-war levels. Hill's Fulham teammate Johnny Haynes became the first £100-a-week player (2023: £1,900).

In the first season after the maximum wage controls were abolished,1961/62, Accrington Stanley became only the second team to resign mid-season, owing £4,000 in unpaid transfer fees and £4,000 to the Inland Revenue (2013: £143,000). It was eventually liquidated in 1966 (BBC, 2014), four years after relegation to the non-league (see Appendix 1.9). This marked the end of the League's most prolonged period of club solvency (1931-1960) since its creation in 1888.

Wages immediately started rising to £25 per week in 1961/62 (2023: £447) and £29 in 1962/63 (2023: £507) or £1,300 per year (2023: £23,244) to £1,508 (2023: £26,364). The club monopsony had weakened. Just as the game was freed from maximum wage controls, the post-war boom had ended, and football appeared to fall out of fashion.

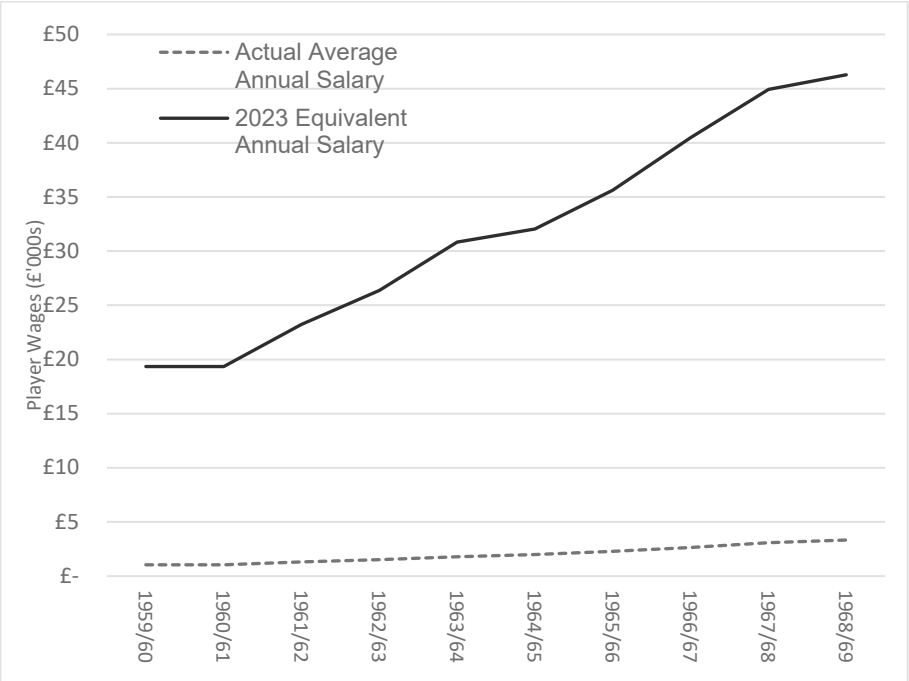

Chart 1.10 - Average Player Annual Salaries in Nominal and 2023 Value (1959/60 –1968/69)

The club monopsony was challenged further when, in 1963, Newcastle United refused a transfer when George Eastham requested a move to Arsenal.

The Players' Union took the matter to the High Court, where it was declared that the retain-and-transfer system was unreasonable. Newcastle's refusal to sell Eastham had amounted to a 'restraint of trade'. In response to the court ruling, the EFL reformed the retain-and-transfer system so that any out-of-contract player could obtain employment offers from other clubs. However, their current club could keep the player by matching the other club's terms.

Through the remainder of the sixties, weekly wages grew steadily, rising from £29 per week in 1962/63 (2023: £507) to £64 by 1968/69 (2023: £890), or £1,508 per year (2023: £26,364) to £3,328 (2023: £46,280), an annual growth of 15.7% since wage control abolition (11.7% in real terms).

The dynamics of the football market changed in the 1960s. First-division prices increased relatively more than in the lower divisions, yet attendance recovered more quickly. Thanks to television and motorways, a few 'celebrity' clubs in the top flight, such as Manchester United, began attracting fans outside their natural catchment areas (Johnes & Taylor, 2016).

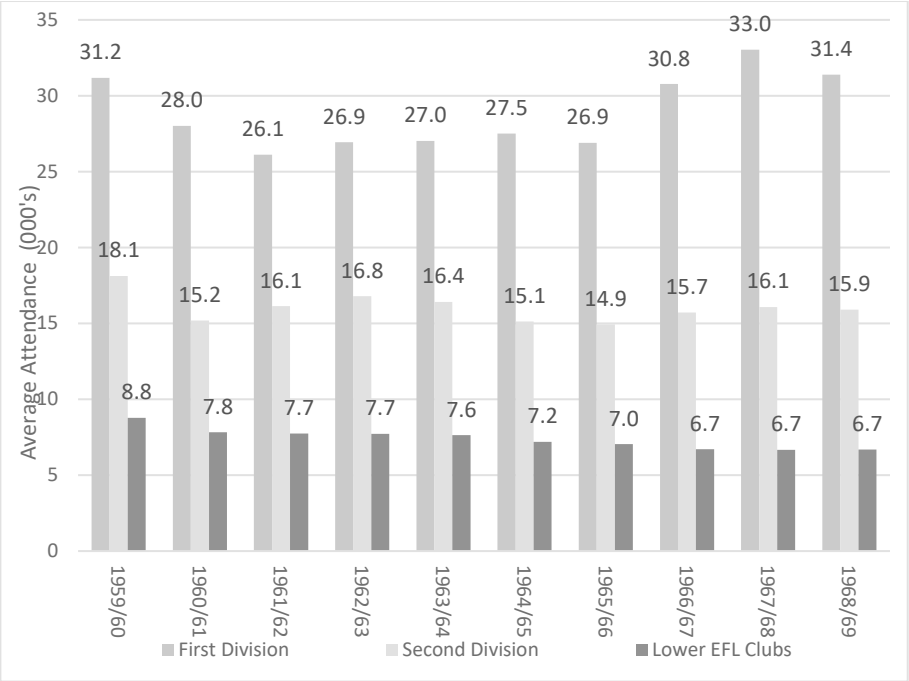

Chart 1.11 - Average Attendances (1959/60 –1968/69)

After England's World Cup win in 1966 and Manchester United's triumph in the European Cup in 1968, 'celebrity' football players like George Best and Bobby Moore became symbols of the 'swinging sixties'. As a result, by 1967/68, First Division attendance had grown by 26% from the lows in the early 1960s and was 4% up on the late 1950s. However, the second division and lower EFL attendance ended the decade at 15% and 28%, down from 1958/59, respectively.

In 1968, Manchester United's George Best was the first player to earn £1,000 weekly (2023: £14,600) (Football Betting Sites, 2021).[27]

[27] Best's teammates at United, Bobby Charlton and Denis Law, were amongst the league's highest earners, too (Football Betting Sites, 2021).

Through the 1960s, Prime Minister Harold Wilson had been committed to keeping the value of the British pound high, which led to high interest rates and a reduction in foreign currency reserves. Due to the artificially high pound, consumer demand was met by imports, and the resulting UK trade deficit forced the government to finally devalue the pound in November 1967, which resulted in inflation.

By 1973, inflation was heading towards 20%, caused by real wage demands from trade unions, an inflationary budget in 1972, credit card-led consumer spending growth, and a 70% rise in oil prices. The Bank of England's deregulation of the mortgage market fuelled a house price boom. [28]

In response, the new Conservative government, led by Ted Heath, increased interest rates and capped wages, resulting in widespread strikes and 'working to rule' practices. In 1973, the miners went on strike, coal supplies to power stations dropped, and Britain adopted a three-day working week to conserve energy. By 1974, Britain was in a deep recession when output fell by 3.4%. Unemployment levels, not seen since the 1930s, returned, and real living standards fell due to inflation.

During the 1974 economic crisis, Bradford Park Avenue became the first club in over ten years to be liquidated, with debts of just under £58,000 (2023: £0.5m). This was four years after relegation to the non-league and selling its Park Avenue home in 1973 to try to stay afloat (Parker, 2010), (see Appendix 1.10).

[28] This allowed High Street Banks to lend domestic mortgages for the first time. The 1970s saw rapid increases in house prices, especially in the early 1970s, and homeownership rates increased from 51% in 1970 to 57% by the beginning of the 1980s. However, real house prices fell between 1975 and 1977.

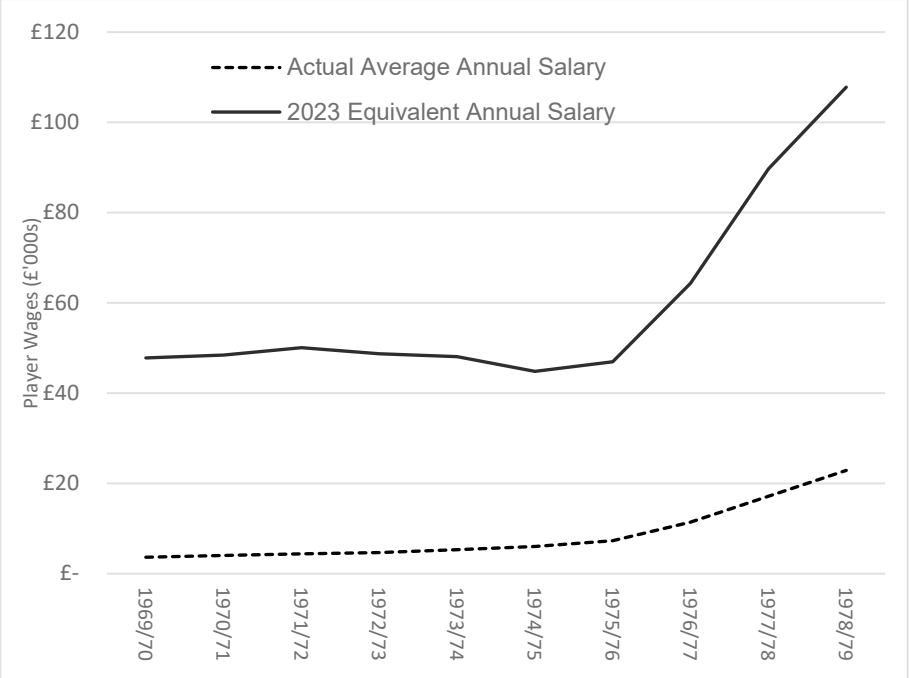

Chart 1.12 - Average Player Annual Salaries in Nominal and 2023 Value (1959/60 –1968/69)

According to Chart 1.12, the average players' weekly wages grew between 1972 and 1975 by 11% per annum and broke the £100 mark for the first time in 1973/74, increasing from £85 per week to £116, or £4,420 per year to £6,032. However, in real terms, the average players' weekly wages declined by 3.6% per annum between 1972 and 1975, falling from £963 per week to £862, or £50,076 per year to £44,824, which reflects the national inflation rate that peaked at 18% around this time.

With high UK inflation, UK goods became uncompetitive abroad, and imports flooded in to satisfy consumer demand. This resulted in a large trade deficit. With unemployment and inflation at exceptionally high levels, the UK requested a £2.3bn bailout from the International Monetary Fund (IMF) in 1976 after a run on the British pound. In return, the IMF required austerity measures from the UK government to tackle the budget deficit.

Bucking the trend in the wider economy, the players' average wages from Chart 1.12, grew in 1976 by 20.7% from £116 per week to £140 or £6,032 per year to £7,280. In real terms, the players' average wages grew by 4.8% in 1976 from £862 per week to £903 or £44,824 per year to £46,956. This was the first year-on-year growth in real wages since 1971.

By 1977, the economy began to recover, and the trade balance improved with North Sea oil revenues. The pound strengthened before the IMF loan was needed in full. With an improving UK economy, the players' wages, from Chart 1.12, grew by 53.6% between 1976 and 1978 from £140 per week to £330 per week, or £7,280 per year to £17,160. In 2023 prices, the

players' wages grew by 38.3% between 1976 and 1978 in real terms, from £903 per week to £1,726 per week, or £46,956 per year to £89,752.

Further structural changes were made to player contracts in 1978 following further court challenges to the retain and transfer system. First, the EFL established an independent tribunal to set transfer fees for out-of-contract players who sought to move to a new club when the clubs could not agree on an amount (Goddard, Sloane, & Wilson, 2012). Also, following the UK's admittance into the European Union in 1973, the ban on foreign professionals which had operated in the English game since 1931 was outlawed under E.C. rules.[29]

After the 1978 changes to player contracts, the average weekly wages from Chart 1.12, grew by 33.3% in the 1978/79 season from £330 per week to £440 or £17,160 per year to £22,880. In 2023 prices, the average weekly wages grew by 20% in the 1978/79 season in real terms from £1,726 per week to £89,752 or £17,160 per year to £107,726, a real increase that was attributed to the domestic players demanding parity after the influx of foreign 'stars' (Harris N. , 2011).

Until the decade's end, UK inflation remained a problem caused by rising oil prices and real wage growth. Again, the government sought to impose wage restraint, which was opposed by the unions. This led to a series of strikes in the traditional industries and extended to the public sector in what is now called the 'Winter of Discontent'.[30]

The 1970s was a period marked by stagflation.[31] Yet, the players' average weekly wages from Chart 1.12, had proven resilient to the wider economy, growing by 22.4% per annum from £64 in 1968/69 to £440 in 1978/79 or £3,328 per year to £22,880. In 2023 prices, the players' average weekly wages grew by 9.9% per annum in real terms from £890 in 1968/69 to £2,073 in 1978/79 or £46,280 per year to £107,796. In 1979, Nottingham Forest broke the British transfer record by paying Birmingham City £1m for Trevor Francis.[32]

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[29] This deregulation of foreign nationals resulted in a 'new wave' of foreign star players, including Ossie Ardiles, Ricky Villa, Ivan Golac, and Kaz Deyna, in the 1978-79 season.

[30] Public servants , from dustbin men to gravediggers in Liverpool, went on strike. Unburied coffins piled up in Liverpool, and garbage went uncollected in cities across the UK.

[31] A period of persistently high inflation combined with high unemployment and stagnant demand in the economy.

[32] Forest paid goalkeeper Peter Shilton £1,200 per week, making him the highest-paid player in the country (Football Betting Sites, 2021).

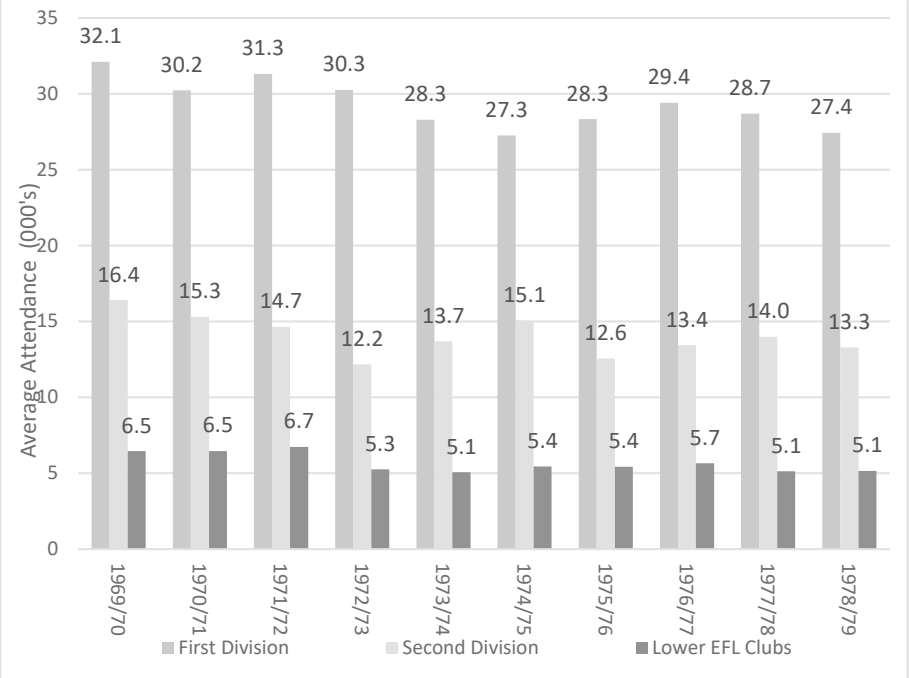


Chart 1.13 - Average Attendance By Football Tier (1969/70 –1978/79)

During the 1970s, from Chart 1.13, the average league attendance in the First Division fell by 1.5% per annum from 32,113 to 27,428, in the Second Division by 1.9% per annum from 16,410 to 13,303, and in the lower EFL divisions by 20.2% per annum from 6,455 to 5,149.

This decline is partially attributed to the state of the economy and high unemployment. However, football hooliganism, at and after football matches, peaked during the 1970s.[33]

During the 1970s, colour television became more prevalent in the UK, raising audiences for televised football matches. This was driven to some extent by the emergence of Liverpool, described as the 'first genuine British footballing dynasty' by FourFourTwo (Jones, 2014).[34]

The 1980s saw an ideological change in government policy after the election of a new Conservative Government under Margaret Thatcher in 1979. [35] Using a form of monetarism and free-market economics, the government intended to tackle the long-standing problems in the UK economy, such as inflation, poor industrial relations, and an economic decline relative to international competitors. Free market reforms included privatising utilities and telephony,

[32] Clashes between hooligan 'firms' like the Chelsea Head-hunters, The Inter City Firm (West Ham),) and The Zulus (Birmingham City) were increasingly commonplace in the media. . .

[34] In the 1970s, Liverpool, under Bill Shankly and later Bob Paisley, won four First Divisions, two European Cups, two UEFA Cups, and an FA Cup. .

[35] Commonly referred to as 'Thatcherism' after Margaret Thatcher, the UK's Prime Minister through the 1980s, and influenced by free-market economists like Milton Friedman. It replaced the post-war policy consensus that John Maynard Keynes had influenced

giving council tenants the ‘right to buy’, curbing trade union power, deregulating the stock market, insolvency, broadcasting, and the mortgage market.[36]

The government immediately increased interest rates, reduced the Budget deficit through higher taxes and spending cuts, and tightly controlled the money supply to control inflation. There followed a significant fall in domestic demand, and exports were made uncompetitive due to the high value of the British pound. As a result, unemployment rose to 3 million, the highest since the Great Depression, and it particularly affected the working classes in the industrial heartlands of the UK. To them, the recession felt unnecessarily severe and increased social inequality. This led to social unrest, with riots in many inner cities in the summer of 1981, and may have increased football hooliganism.

In football, even during the recession in the first half of the 1980s, the player's remuneration defied the state of the economy.

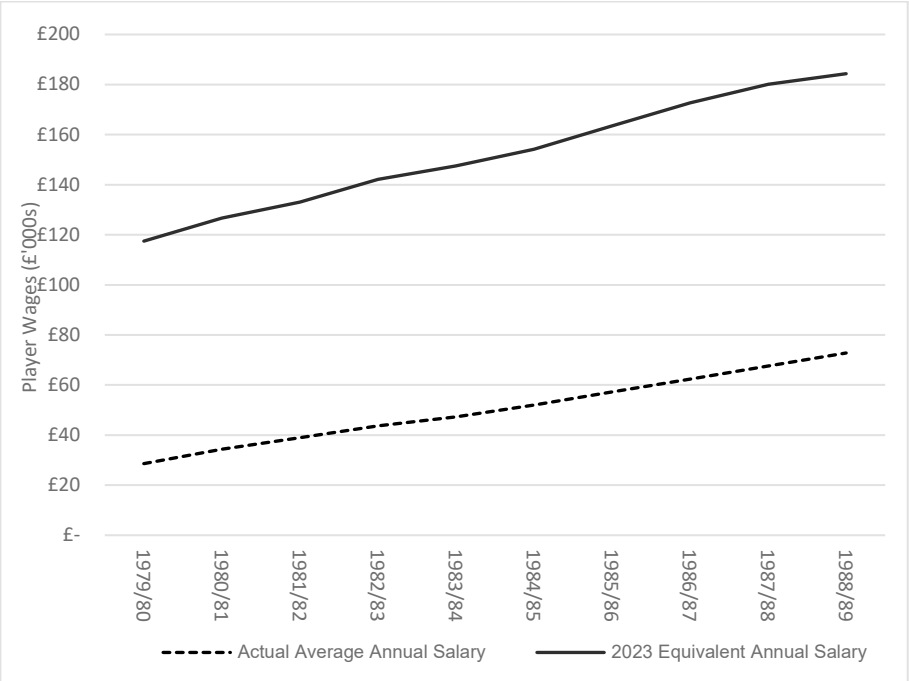


Chart 1.14 - Average Player Annual Salaries in Nominal and 2023 Value (1979/80 –1988/89)

> “Only eight players in England earned basic salaries of £50,000 per year in 1980-81, but this rose to 41 players by 1984-85 and steadily thereafter.”
>
> The Official History of the PFA

36 Government deregulation of the mortgage market in 1984 made mortgages readily available to more people. So, coupled with rising incomes and insufficient housing supply, nominal house prices in the UK almost tripled and, at their peak, grew by 30% a year. This increased household wealth, particularly in the Southeast and London, widening the north-south divide in terms of wealth and increasing social inequality still further.

From Chart 1.14, the players' average weekly wages increased by 15.8% per annum from £440 in 1978/79 to £910 in 1983/84, or £22,880 per year, to £47,320. In 2023 prices, the players' average weekly wages increased by 6.5% per annum in real terms from £2,073 in 1978/79 to £2,836 in 1983/84, or £107,796 per annum, to £147,472. From Chart 1.14, the player's average weekly wage, with an improving UK economy, breached four figures in 1985 for the first time and grew by 9.3%, from £910 in 1984 to £1,300 in 1987/88, or £47,320 per year to £67,600. In 2023 prices, the player's average wage grew by 5.1% in real terms, from £2,836 in 1984 to £3,463 in 1987/88, or £147,472 per year to £180,076.

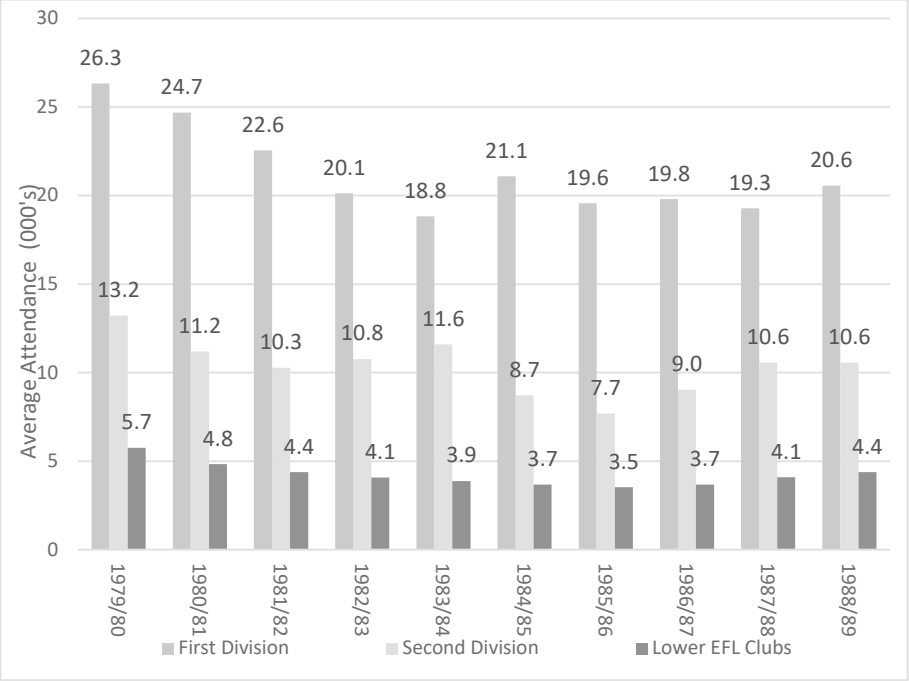


Chart 1.15 - Average Attendance Split Between Football Tiers (1979/80 – 1988/89)

From Chart 1.15 Matchday attendance fell between 1980 and 1986, in line with the UK economy: by 4.3% per annum in the First Division, dropping from 26,327 to 19,569; by 7.0% in the Second Division, dropping from 13,230 to 7,688; and by 6.4% in the lower EFL divisions, dropping from 5.749 to 3,532.

Meanwhile, the gate revenue sharing mechanism, which had existed since 1889, was abandoned in 1983 after the biggest clubs challenged it for their economic advantage. From now on, the clubs would now keep all the receipts from home league matches except for a 4% contribution to an equally shared pool for members.

While most research found revenue sharing to have little impact on competitive balance, Robinson and Simmons (2009) found that players were more likely to move from second-tier

to first-tier teams or be transferred to the most prominent clubs from the smaller clubs within the same division after gate-sharing was abolished. Planet Sport highlights the abolishment of gate sharing as the beginning of a power grab by English football's elite that ultimately ended with the creation of the EPL (Graham, 2023).

In the 1983/84 season, Bradford City, with debts to HMRC of £400,000 (2023: £1.3m), was saved by agreeing on a repayment plan with HMRC and receiving a £200,000 City Council grant (Manchester Evening News, 1983). Charlton Athletic, with debts of £1m (2023: £3.2m), was sold to a new company, Charlton 1984 Ltd., which cleared the club's debts (Western Daily Press, 1984) (see Appendix 1.11).

In 1983, Tottenham Hotspur became the world's first publicly listed club on a Stock Exchange when the FA disregarded its Rule 34 and allowed the club (a private limited company) to become a public limited company (PLC) subsidiary. This would enable the club to raise capital on the London Stock Exchange in return for a share of the club's profits (Guardian, The, 2007). Many clubs, such as Aston Villa, Manchester United, and Newcastle United, quickly adopted the holding company model, which permitted owners to withdraw profits from football clubs irrespective of whether the shares were publicly traded. Rule 34 was amended in 1998, and only the last part of the rule, which states that any surplus on a winding up has to go to a benevolent or charitable organisation, remains in the present FA Rules.

Deregulation of UK media in 1984 was intended to break the duopoly between what Thatcher described as 'a bloated, extravagant, and anti-conservative BBC' funded by the taxpayer and an ITV that was 'the last bastion of restrictive practices' (Brown, 2013). The 1984 Cable and Broadcasting Act and the 1984 Telecommunications Act liberalised the cable industry. For the first time, more television channels could be carried, in addition to the public service channels, alongside telephone and interactive services. In March 1984, the first cable TV channels, Sky Channel, Screensport, Music Box, and TEN - the Movie Channel- were launched.

At the end of the 1985/86 season, Middlesbrough Football and Athletic Club (1986) Ltd, a new company, brought the club out of administration following its relegation to the third tier. (Boro The Official Website, 2012), (see Appendix 1.11)

The 1986 Insolvency Act shifted the administration's focus towards rescuing insolvent businesses where previously it would have ended with liquidation.[37] A winding-up order brought by one or more creditors is presented at court, where an administrative order may be

[37] By which a company would be wound up or dissolved, ending its existence and the assets and property of the business sold

issued, putting the club under the control of the administrators or, worst case, declaring it insolvent and wound up (dissolved) (Companies Acts, 1986).

A more straightforward, non-court insolvency solution, a Company Voluntary Arrangement (CVA), was also introduced. This was a binding agreement between the indebted club and all of its creditors (as long as 75% of creditors by value vote in favour). This creates a moratorium that prevents creditors from issuing a winding-up order, allowing the club to repay some or all of its debts over an agreed period.

The implications for football were that football club directors could voluntarily enter administration as a delaying tactic, allowing the club time to continue playing whilst a financial solution is sought. The administrator would be responsible for practically 'everything apart from coaching the players and picking the team' (Farquhar, Gordon, 2008). They will attempt to recapitalise the existing company or sell the stadium and the club's 'golden share', which allows the holder to participate in the EFL, to a new owner and liquidate the old company. Money raised by the administrator is subject to the League's special 'football creditors' rule, which requires any football-related debts, such as wages owed to players and transfer fees owed to other clubs, to be paid first before the club is eligible to compete again in the EFL (Plainer, 2010), even before the taxman gets paid (Grant, 2008).

The CVAs had the advantage that existing Directors could emerge from the process still in control of the club, with a typical 50-70% of debt written off. As a result, it would rapidly become a popular mechanism for either keeping or getting football clubs out of administration with a significant debt write-down.

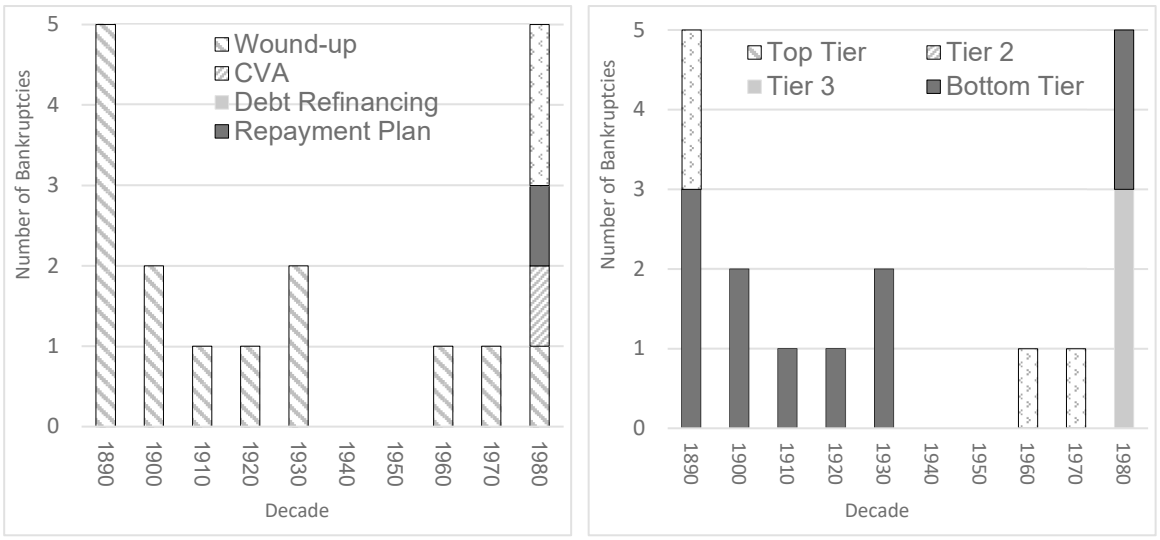


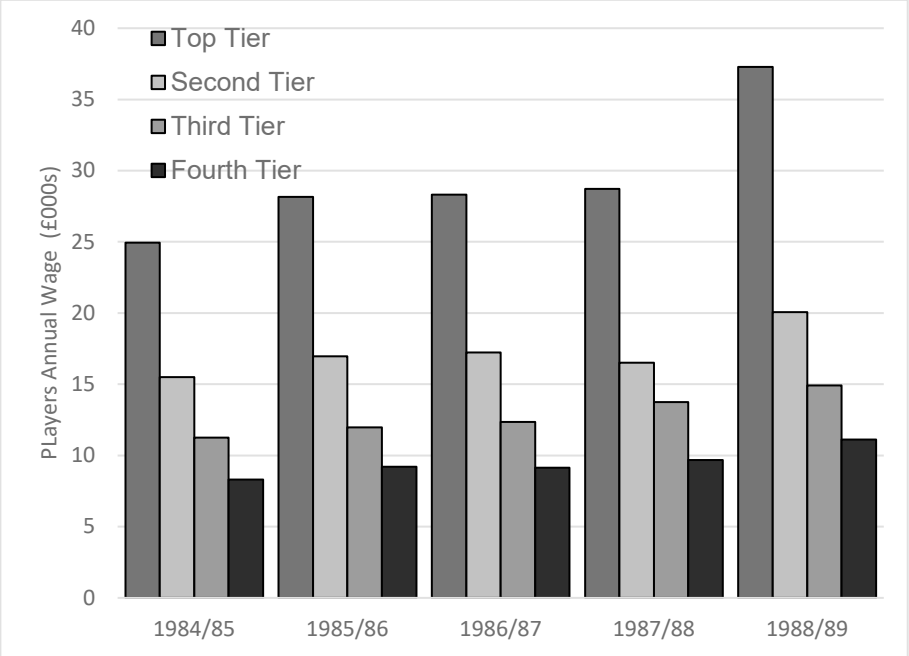
Chart 1.16 – (a) Number of Insolvencies by Exit and (b) by Football Tier (1888/89 – 1988/89)

Before the 1980s, all the clubs were liquidated when they encountered financial difficulties, except for Leeds City, which was expelled after breaking league rules. Accrington and Chesterfield Town were wound up after a few years in non-league football, and Wigan Borough were liquidated mid-season

during the Great Depression (1929-1939). All the other clubs were wound up in the close season, either in the bottom tier or non-league football, after resigning or being relegated from the EFL. In today's terms (2023 prices), these clubs' average debt on liquidation was £380,000.

The economy began to recover in the mid-1980s, with rising wages and house prices. The stock market boomed after the London Stock Exchange was deregulated in 1986.[38] Increased capital flows into 'The City' helped offset a growing trade deficit in manufactured goods. Sustained economic growth and revenues from North Sea Oil reduced the budget deficit and government debt.[39] This facilitated tax cuts in the 'Lawson Boom' budget in 1988.[40]

Despite the economic recovery, two clubs went into administration during the 1986/87 season. Tranmere Rovers was saved by new ownership (Liverpool Echo, 1987) (Tranmere Rovers, 2024), and Rotherham United became the first team to use a CVA to spread the repayment of debts until December 1993 (Company number 00158654). The indebtedness of the insolvent clubs during the 1980s had increased significantly to around £2.25 million in terms of 2023 value, compared to just £320,000 in the previous decade.



[38] This period is commonly exemplified by the high-spending ' young urban professional, ' ' young upwardly-mobile professional,' or ' Yuppie, ' who worked in the city in professional/financial services and gained from deregulation.

[39] The terms 'the City' and 'the Square Mile' are used as metonyms for the City of London, where the UK's trading and financial services industries have traditionally been based and is one of the world's leading financial centres.

[40] Also sometimes referred to as the 'Giveaway budget', funded by the falling budget deficit

Chart 1.17 - Average Player Annual Salaries by Football Tier (1984/85 – 1988/89)

According to Chart 1.17, the top-tier basic wages rose on average between 1984/85 to 1988/89 by 12.4% from £24,934 to £37,284, the second tier by 7.4% from £15,504 to £20,072, the third tier by 8.1% from 11,261 to 14,924, and the fourth tier by 8.4% from 8,314 to 11,128.

The BBC/ITV cartel, which had suppressed the value of broadcast facility fees since the mid-1950s, was finally broken in 1988 when ITV paid £44m to the EFL for the exclusive right to broadcast live First Division football matches from 1988 to 1992. After the exclusive contract with ITV was signed in 1988 until the end of the 1980s, the players' average weekly wages grew by 7.7% in 1988/89 from £1,300 to £1,400 or £67,600 per year to £72,800. In 2023 prices, the players' average weekly wages grew by 2.4% in real terms in 1988/89 from £3,463 to £3,545 or £180,076 per year to £184,340. From Chart 1.16, the average Division One wage leapt by 29.8% from £28,722 to £37,284 in 1988/89.

Meanwhile, with the economic upturn, the average matchday attendance from Chart 1.15, grew between 1986 and 1989 by 1.7% per annum from 19,569 to 20,553 in the First Division, by 12.4% from 7,688 to 10,558 in the Second Division and by 7.9% from 3,532 to 4,372 in the lower EFL divisions.

Towards the end of the decade, the economy began to overheat, with growth reaching post-war record levels of 8%. Household savings fell sharply, fuelling a consumer spending boom, which, due to high exchange rates, was met by cheaper imports. While manufactured output did begin to recover in the latter part of the 1980s, heavy industries like coal, steel, and shipbuilding in the traditional heartland disappeared due to the Conservative government's free-market ideology, which further widened the north-south divide.

Taking the decade as a whole, the players' weekly wages grew by 12.4% per annum from £440 to £1,400, or £22,880 per year to £72,800. In 2023 prices, the players' weekly wages grew by 5.5% per annum in real terms from £2,073 to £3,545, or £107,796 per annum to £184,340. At the same time, matchday attendance in the First Division fell by 2.4% per annum, from 26,327 to 20,553, in the Second Division by 2.2%, from 13,230 to 10,558 and in the lower EFL by 2.7%, from 5,749 to 4,372.

Football continued to be troubled by rising hooliganism, arguably reflecting the social unrest in the rest of the country. In response to hooliganism through the 1970s and 1980s, fans were penned behind high perimeter fences standing on terraces in dilapidated football stadiums. However, football suffered a series of stadium-related incidents during the 1980s, which would catalyse change.

Bradford City's Valley Parade stadium fire on May 11th, 1985, killed 56 spectators due to its antiquated design and its wooden construction (Inglis, 1987). Less than a month later, thirty-nine people were killed at The Heysel Stadium in Belgium on May 29th, 1985, when a wall collapsed during a fight between Liverpool and Juventus fans before the start of the 1985 European Cup Final.[41] Liverpool hooligans were found culpable, and English teams were banned from European competition until 1990/91.

Following the Football Spectators Act 1989, English clubs began restricting troublemakers from attending domestic games. However, the decade was to end with the Hillsborough tragedy when 96 Liverpool fans were killed when crushed against the pitch side fences due to inadequate policing and an antiquated stadium. The enquiry into the Hillsborough tragedy, the Taylor Report, would change football in the 1990s.

[41] Despite being Belgium's national stadium, the 55-year-old stadium was poorly maintained and crumbling in parts (Davis M. , 2015)

The Premier League Era

The 1990 Broadcasting Act further liberalised and deregulated the British broadcasting industry by promoting competition.[42] This deregulation of British broadcasting saw the emergence of Rupert Murdoch's new subscription-based TV broadcaster, Sky Sports.

Unemployment, after four years of decline, began growing again in 1990. To satisfy demand, imports rose, and inflation peaked at 10%. To control inflation and maintain the British pound's parity with the Deutsche Mark within the Exchange Rate Mechanism (ERM), interest rates were held artificially high after 1988. This eventually led to a run on the currency, and on 'Black Wednesday' in September 1992, Britain was forced to exit the ERM and devalue the pound. The exceptionally high interest rates turned a mild recession into the longest recession in Britain since the Great Depression, starting in 1990 and lasting until April 1993, when unemployment had increased to nearly 3 million (BBC, 1993). Nominal house prices fell between 1990 and 1995, resulting in negative equity and loan defaults.

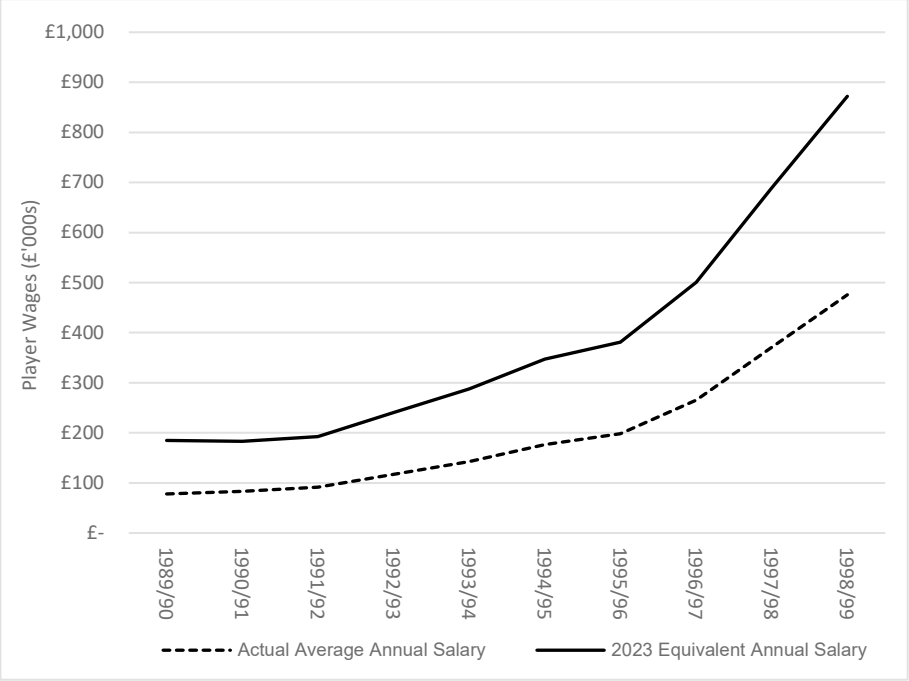


Chart 1.18 - Average Player Wages in Nominal and 2023 Value (1989/90 –1998/99)

As the UK entered a recession, the players' average nominal weekly wages, from Chart 1.18, increased in 1990/91 by 6.7% from £1,500 to £1,600 or from £78,000 per year to £83,200. In 2023 prices, the players' average weekly wages fell by 0.8% in real terms from £3,521 to

[42] By the end of Thatcher's term in office, there were five terrestrial channels instead of three, and the switch from analogue to digital TV broadcast systems was in progress. The Act catalysed the multichannel age in British broadcasting, resulting in a massive expansion in choice.

£3,550 or from £184,600 per year to £183,092. Despite the continuing recession, players' wages proved to be remarkably resilient to the effects of the recession, with players' weekly wages rising by 9.7% in the 1991/92 season from £1,600 to £1,755, or from £83,200 per year to £91,260. In 2023 prices, the players' wages grew by 5.3% in real terms in the 1991/92 season from £3,521 to £3,706, or from £183,092 per year to £192,712.

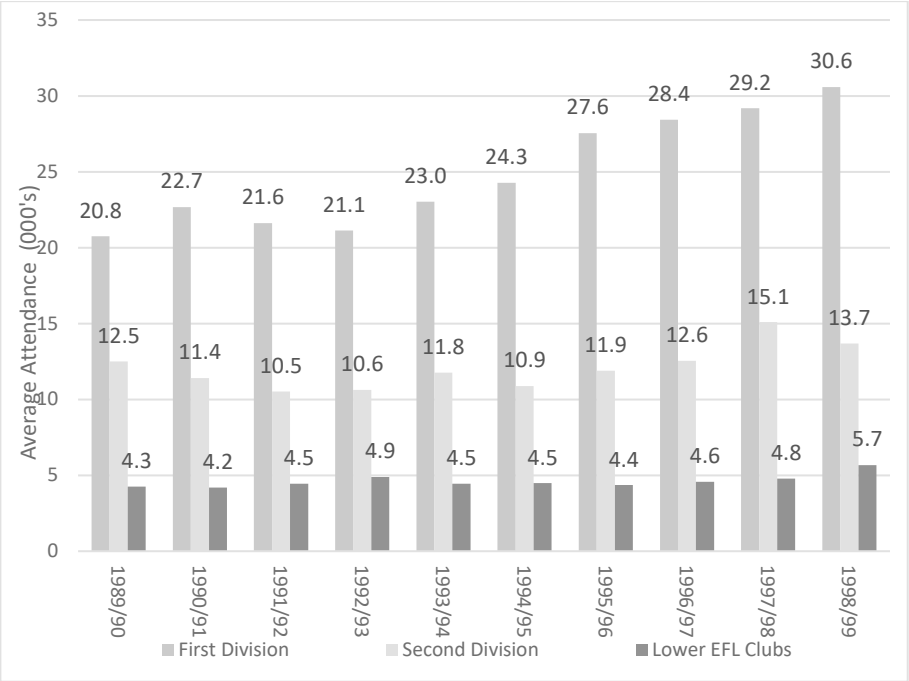


Chart 1.19 - Average Attendance Split Between Football Tiers (1989/90 – 1998/99)

During the height of the recession, the 1991/92 season, attendance fell by 6.9% for the top tier from 22,681 to 21,125 through to 1992/93, as the downturn neared its end. Attendance fell earlier for the second tier, falling 7.9% per annum from 12,496 in 1989/90 to 10,525 in 1991/92. However, attendance remained relatively static for the lower EFL clubs through the recession from 1989/90 to 1991/92.

From Chart 1.20, two teams went into administration during the recession. In 1991/92, Aldershot was wound up mid-season, and Northampton Town was rescued with a CVA

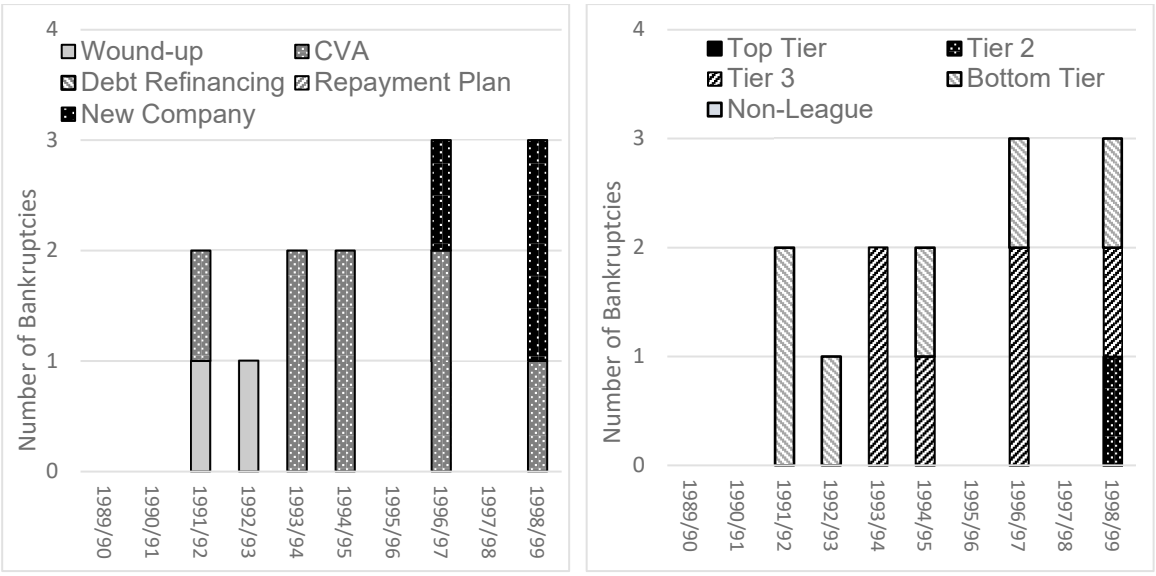


Chart 1.20 – The Number of Insolvencies by (a) Exit and (b) League Tier (1989/90 – 1998/99)

Fortunately, the fall in economic output was not as great as during the Great Depression or the 1980s recession. By the end of 1992, inflation was already below 3%, and economic growth resumed in 1993. There followed a sustained period of low inflation at or around the 2% target, 63 consecutive quarters of economic growth—the most prolonged growth period recorded, real wage and house price rise and the belief that the boom and bust cycle had been overcome, now known as the 'Great Moderation' (1993-2007).[43]

Coinciding with media deregulation, the 22 clubs of the old First Division broke away from the EFL to form the English Premier League (EPL) as the top tier of English football in 1992. Now, the league could negotiate its broadcast deals and share the revenue exclusively amongst its 22 members. The EPL agreed to a £304m five-year deal (1992/97) with Sky Sports.[44] This dwarfed the previous £44m four-year deal the EFL had negotiated with ITV in 1988 and the EFL's new four-year deal with ITV (1992/96) for live EFL matches worth £24m. The second deal with Sky for the EPL TV rights saw the value double to £670m for a four-year deal

[43] This period of stability was attributed to targeting inflation directly rather than indirectly through money supply or exchange rate. In 1997, the newly elected Labour Government under Tony Blair made the Bank of England independent of government in setting interest rates It was felt an independent Bank of England would not use interest rates as a political tool to create a boom just before an election, would be more willing to make unpopular decisions to keep inflation under control than politicians would, and expectations of inflation would be reduced if the nation had confidence in the Bank of England. The newly independent Bank of England had a specific inflation target of RPI of 2.5% +/- 1. The UK would experience 63 consecutive quarters of economic growth—the most prolonged growth period recorded

[44] In the end, Sky pays just £190m, after failing to meet certain foreign sales targets (The Guardian, 2003).

(1997/98-2000/01), whilst the second EFL deal saw the value increase five-fold to £125m for a five-year deal with Sky (1996/97-2000/01).

In contrast, before 1992, television revenue had been centrally negotiated by the EFL and distributed across the then four EFL divisions: 50% to First Division clubs (now the EPL), 25% to Second Division clubs (now the Championship), and 12.5% paid to clubs in each of the bottom two divisions (now Leagues One and Two). The EFL retained the bottom three divisions but was cut off from the television income of the top tier. As a result, a gulf in income emerged between the EPL teams and the rest of the English EFL, fuelled by the new television deals negotiated by the EPL.

From Chart 1.20, five teams went into administration between 1992/93 and 1996/97. Hartlepool United, Barnet F.C., Exeter City and Gillingham were saved with a CVA, and Maidstone United was liquidated. (see Appendix 1.12, **Error! Bookmark not defined.**)

The popularity of live football transformed a loss-making Sky in 1992 into a profitable business in just 12 months (Scelles, Dermit-Richard, & Haynes, 2019), and Sky Sports grew rapidly after the launch of its digital satellite service in 1998. This funded ever-increasing broadcast deals despite predictions that this could not continue indefinitely (Beech J. , 2010).

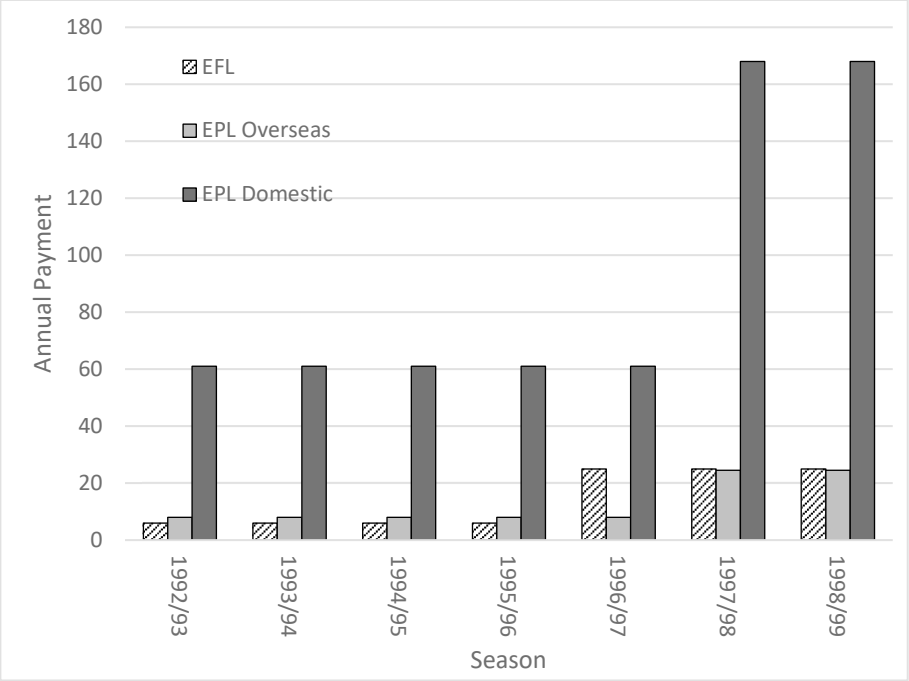


Chart 1.21 – Annual Broadcast Revenue in the EPL era 1992/93 -1998/99
[45]

[45] EPL income 1992/93 – 2024/25 (Mackey, 2023), EFL income 1992/93-2008/09 (Guardian, The, 2006)

From Chart 1.21, the EFL's broadcast income was equal to 9% of total broadcast income (not including any redistributions from the EPL) at the start of the EPL era in 1992/93. During the last half of the 1990s, the EFL's share of broadcast income had increased to 14.5% of football's total broadcast income.

With the additional income that came with the formation of the EPL and the end of the UK recession, players' weekly wage growth rate rose significantly, averaging 21.6% per annum over the next four years. We see, from Chart 1.18, wages rising from £1,755 per week in 1991/92 to £3,814 in 1995/96, or from £91,260 per year to £198,328. In 2023 prices, we see post-EPL wages averaging real growth of 18.7% per annum over the next four years, rising from £3,706 per week in 1991/92 to £7,326 in 1995/96, or from £192,792 per year to £380,952.

Following the Taylor Report into the Hillsborough disaster in January 1990, all-seater stadiums became required for clubs in the top two divisions. Perimeter fencing was to be removed and replaced with closed-circuit camera surveillance, and fans found to be misbehaving could be legally barred from attending games at any English stadium. The EFL required clubs to comply with the all-seater stadium recommendation by August 1994 and was given £31m a year of public money to do so through the levy on the pools channelled into the Football Trust.

> "The Taylor Report was the mechanism that signalled the end of an era of decrepit, dilapidated stadiums where fans were kept in cages."
>
> fourfourtwo.com
> (Simpson, 2014)

In 1992/93, as the recession neared its end, matchday attendance grew again by 1.2 % for all clubs but declined by 1.2% in the top two divisions as works continued to satisfy the Taylor report.[46] With the end of the recession and the work required for the Taylor report completed, matchday attendance grew by 4.3% per annum for all clubs and 5.8% for the top two divisions for the rest of the decade.

Recognising that the EPL still depended on the other league structures beneath it for its success to some extent, some attempts were made to redistribute some of this income to the EFL. At the outset, the EPL supported the EFL with around £4m annually to develop youth players.

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[46] Several iconic football terraces were demolished and replaced by all-seater stands, such as Manchester United's Stretford End and Arsenal's North Bank, in the summer of 1992, followed by Aston Villa's Holte End and Liverpool's Spion Kop in the summer of 1994. Some of the oldest football stadiums, including Middlesbrough's Ayresome Park in 1995 and Sunderland's Roker Park in 1997, were demolished, and the club moved to a new ground.

Relegation from the EPL and playing in a league that attracts far less revenue while short-term costs, especially player contracts, remain is potentially financially disastrous for a relegated club. For this reason, 'Parachute' payments have been made to relegated teams since the EPL's creation to soften the blow of relegation and reduce the risk of going into administration[47].

Table 1.1 shows that in the early years of EPL, the parachute payments were relatively modest in value, i.e. £0.4m per annum in 1994/95 and were paid for the first two years only after relegation.

Season	Term (Years)	Year 1 (£m)	Year 1 (Clubs)	Year 2 (£m)	Year 2 (Clubs)
1992/93	2	2.1	3	0.7	-
1993/94	2	2.1	3	1.4	2
1994/95	2	1.2	3	0.4	1
1995/96	2	1.6	4	1.2	3
1996/97	2	3.0	3	3.0	3
1997/98	2	4.5	3	3.0	2
1998/99	2	1.7	3	1.7	1

Table 1.1 – Parachute Payments for 1992/93 – 1998/99

In the early days of the EPL, media receipts were not highlighted in the accounts of Championship clubs, probably due to their immaterial value. The first reference we find in the published accounts as to the importance of EPL support being given after relegation was in 1995:

> "Despite receiving some Premier League money we also continued to carry some Premier League expenses and my cautionary note of last year has come true with a profit last time being translated into a loss of £122,421 this year."
>
> I. H. Stott, Chairman
> THE OLDHAM ATHLETIC ASSOCIATION
> FOOTBALL CLUB LIMITED
> Report and Financial Statements
> 31 May 1995

> "[F.A. Premier League distnbulions of £581.690 in 1995] are recognised in accordance with the F.A. Premier League's entitlement to sponsorship and broadcasting monies and their rules for distribution on a year by year basis".
>
> SWINDON TOWN FOOTBALL COMPANY LIMITED
> CHAIRMAN'S STATEMENT, REPORT AND ACCOUNTS
> For the year ended 31 May 1995

[47] In a number of press articles and in Wikipedia parachute payments have been reported as beginning in 2006/07 ((Wikipedia, 2021), (Guardian, The, 2008) (Ryan Kelly, 2019) (what this.com, 2020) (Dean Rudge & Phil Spencer, 2019) (Birmingham Mail, The, 2019) (Football 365, 2016) (Evening Standard, The, 2020)).)

In 1997, we found the first reference to ‘parachute payments’ in the club accounts:

> “It is rewarding to note the very real increased contributions from TV Revenue, the latter coming mainly from our second year ‘parachute’ payment of £1.1 million from the Premiership.”
>
> D.R. Sheepshanks, Chairman
> IPSWICH TOWN FOOTBALL CLUB COMPANY LIMITED
> FINANCIAL STATEMENTS
> For the year ended 31 May 1997

> “1997/98 represented the last year of our ‘parachute payment‘ from the FA Premier League. The parachute payment contributed approximately £1.9 million to turnover in 1998 and £1.0 million to turnover in 1997.”
>
> Chris Wright, Chairman
> LOFTUS ROAD PLC (QPR)
> Consolidated Profit and Loss Account
> For the period from 13 May 1996 to 31 May 1997

In December 1995, a further change to the retain and transfer system came with the ‘Bosman ruling’, which finally gave players over 24 years of age the complete freedom of contract, allowing a player to leave a club on a free transfer as soon as his contract expired. As a result, players now had the leverage to demand huge signing-on fees and salaries from new clubs instead of a transfer fee having to be paid to the player's original club for the player's registration. Players coming to the end of their contract could also ask for more money from their current club, who risk losing the player on a free transfer.

As part of the Bosman judgment, it was also ruled that restrictions on the number of foreign players before 1995 were incompatible with freedom of movement within the EU under Article 48 of the Treaty of Rome. Antonioni & Cubbin (2000) and Frick ((2007) (2009)) suggest that this made the labour supply curve much more elastic and created a global market for players.

In the wake of the Bosman Transfer ruling and the improving economy, players’ wages grow even faster. From Chart 1.18, the players’ wages grow by 33.9% per annum over the next three years, rising from £3,814 per week in 1995/96 to £9,148 in 1998/99, or £198,328 per year to £475,696. In 2023 prices, the players’ wages grow by 31.9% per annum in real terms over the next three years, rising from £7,326 per week in 1995/96 (2023:) to £16,771 in 1998/99, or £380,952 per year to £872,092. [48]

[48] The highest profile Bosman transfer was Sol Campbell, who earned a reported £60,000-a-week, plus bonuses and a signing-on fee worth around £2m a year, to move from Tottenham to rivals Arsenal in 2001 (Brand, 2015).

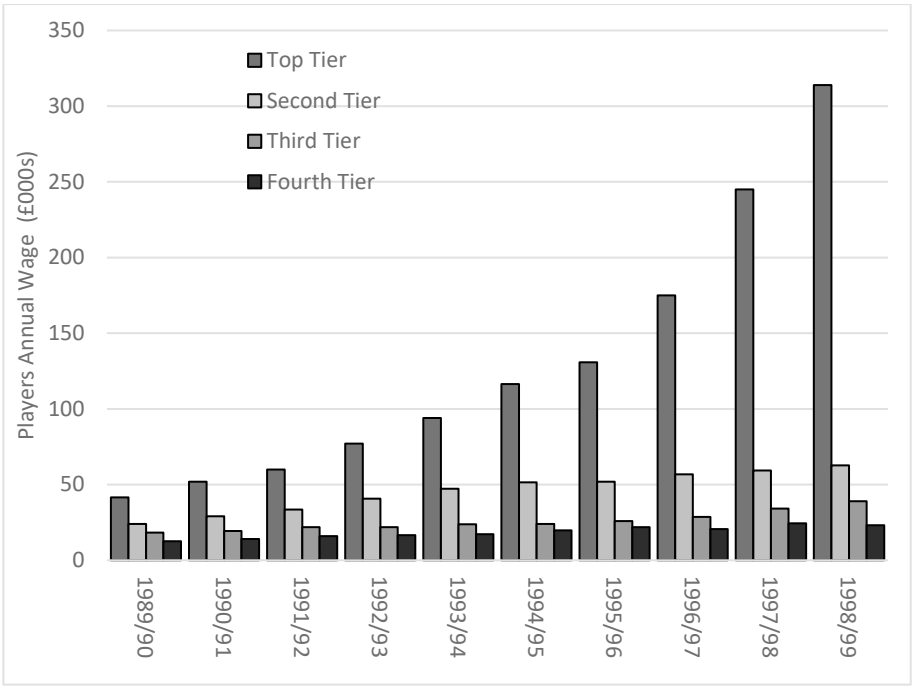


Chart 1.22 - Average Player Annual Salaries by Football Tier(1989/90 – 1998/99)

The gulf in income between the EFL and EPL that emerged during the 1990s significantly impacted players' wages between the leagues. From Chart 1.22, the top tier basic wages rose on average by 72.7% per annum from £41,600 to £313,959, the second tier by 18.0% from £23,902 to £62,608, the third tier by 12.8% from 18,200 to 39,104, and the fourth tier by 9.6% from 12,480 to 23,240.

After the Bosman ruling, EPL wages grew by 42.8% from £116,488 in 1994/95 to £313,959 in 1988/89. In the Second Tier, the growth was 5.4% per annum from £51,480 to £62,608; in the third tier, 15.6% from £24,076 to £39104 and in the fourth tier by 4.4% from £19,760 to £23,244. Liverpool's John Barnes became the first player to earn £10,000 a week in 1992/93 and 1993/94 (2023: £20,596). [49]

Over the 1990s, matchday attendance grew by 5.3% for the top tier (from 1992, the EPL) from 20,757 to 30,581, by 1.1% for the second tier (latterly the Championship) from 12,496 to 13,679 and by 3.7% for the bottom two divisions of the EFL from 4,253 to 5,677.

There were thirteen insolvent clubs in the nineties, but the value of indebtedness had fallen slightly to £1.95 million in 2023 values.

---

[49] Subsequent highest earners in the 1990s were Eric Cantona, at £18,000-per-week in 1994/95 (2023: £35,416), Dennis Bergkamp at £25,000-per-week in 1995/96 (2023: £48,025), Fabrizio Ravanelli at £42,000-per-week in 1996/97 (2023: £79,236), and Alan Shearer at £34,000-per-week in 1997/98 and 1998/99 (2023: £63,159) (O'Brien, 2022).

In the five years after the Bosman Ruling on players' contracts, there were six insolvent clubs: Millwall, Bournemouth, Doncaster Rovers, Chester City, Portsmouth and Crystal Palace. Millwall was saved with a CVA, Bournemouth became the first community-owned club in 1996/97, Doncaster Rovers and Chester City agreed on a CVA and were taken over by a new company, Portsmouth and Crystal Palace's Golden Share was transferred to a new company, and for the first time, a club from the second tier, Crystal Palace, went into administration one year after being taken over by new owners and relegated from the EPL.

Unemployment had fallen rapidly by the end of the 1990s due to labour market flexibility and curbing of trade union activity through the 1980s and 1990s, and the government recorded a rare budget surplus. Labour introduced the first ‘minimum wage’ in April 1999.

Therefore, the UK’s economy entered the 2000s in a reasonably healthy state; unemployment was consistently below 1.5 million for the first five years, the best it had been since the 1970s. By the end of 2007, the UK economy grew between 1.6% and 3%. The Bank of England's control of interest rates seemed to hold inflation at or around the 2% target. By 2005, the economy was still growing.

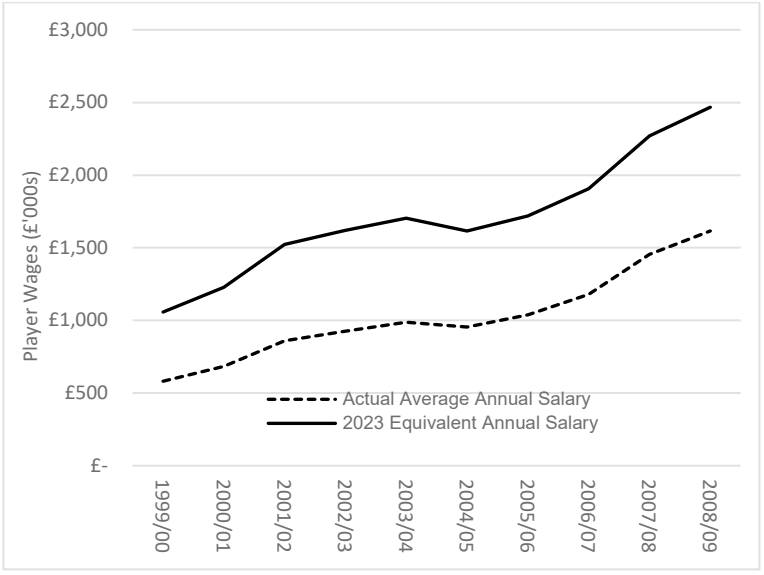


Chart 1.23 - Average Player Annual Salaries in Nominal and 2023 Value (1999/2000 –2008/09)

Reflecting the strength of the economy, we see in Chart 1.23, the average player's weekly wage breached £10,000 per week during the 1999/2000 season for the first time and rose by 22.2% from £9,148 in 1998/99 to £11,184 in 1999/2000. In 2023 prices, the average weekly wage rose by 21.3% in real terms from £16,771 in 1998/99 to £20,341 in 1999/2000.

The average weekly wage grew until the 2003/04 season, rising by 14.4% annually from £11,184 to £18,975. At 2023 values, it grew in real terms by 12.9% annually from £20,341 to £32,775.

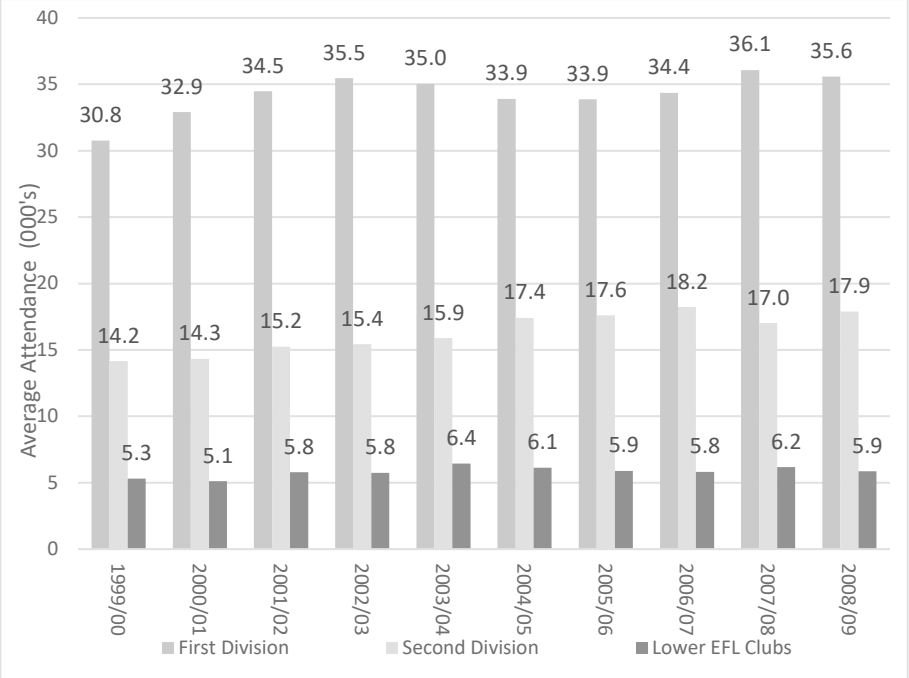


Chart 1.24 - Average Attendance Split Between the Football Tiers (1999/00 –2008/09)

Similarly, reflecting the economy, from Chart 1.24, the EPL attendance grew by 6.8% in 1999/2000; however, attendance was static across the EFL divisions.

Attendance in the EPL continued to grow until 2002/03, rising by 3.9% per annum, and in the lower EFL, until 2003/04, rising by 5.2% per annum. Meanwhile, attendance in the Championship grew until the recession in 2007/08, growing by 4.0% per annum since the start of the decade.

The next EPL deal with Sky Sports and NTL/Premiership Plus valued the TV rights at £1.2bn for three years (2001/02-2003/04). In June 2000, ITV Digital agreed to a £315 million three-year deal with the EFL to broadcast 88 live matches from the 2001–02 season. This was double the value of the EFL's previous TV rights deal.

We see in Chart 1.25 the EFL broadcast income rose briefly to 18% of the total broadcast income in 2001/02. Almost immediately, clubs like York City spent 180% of their turnover on wages, and Fulham, Wimbledon, and Wigan spent even more (Deloitte & Touche, 2002).

Within 12 months, ITV Digital collapsed, owing the EFL about £180m. At the time, Greg Dyke, BBC Director General, said, 'No one will pay that much again' (BBC, The, 2002). The rights were resold to Sky Sports for less than the pre-ITV Digital value (£95m for four years), and Annual TV revenue for second-tier clubs fell from £3m to £0.7m overnight.

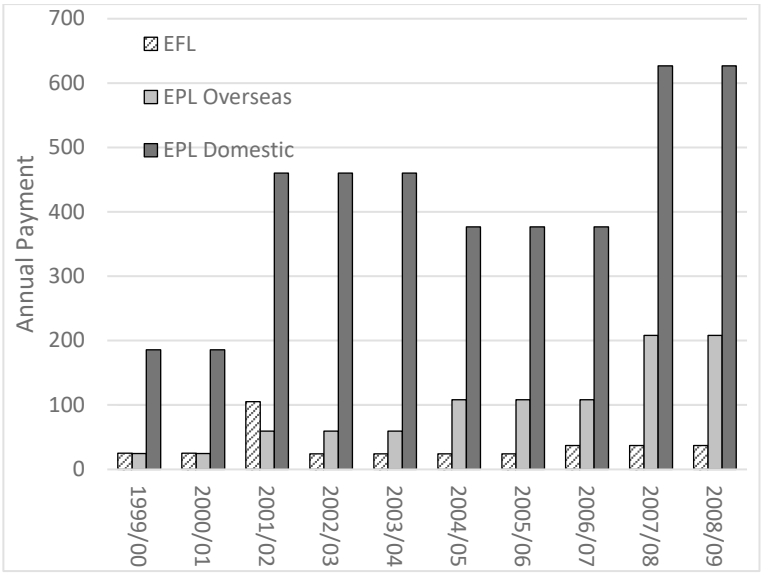
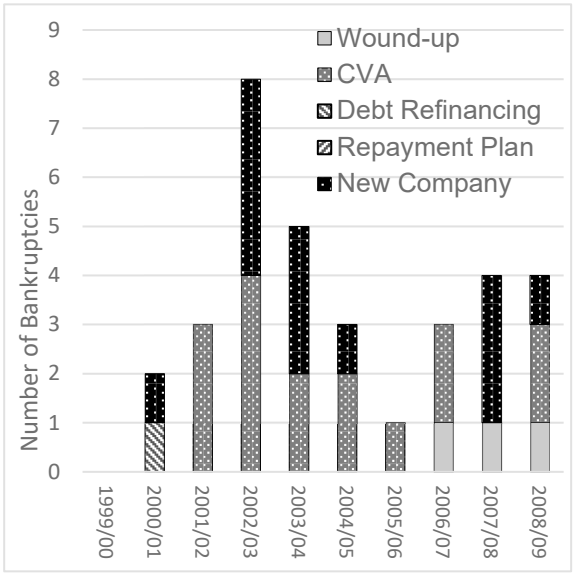
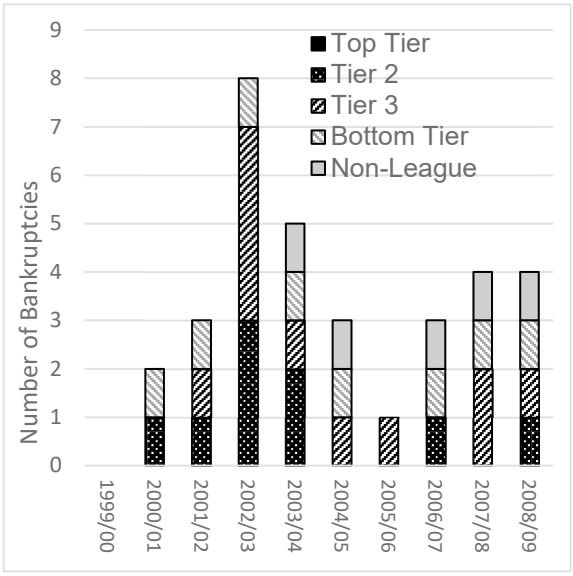


Chart 1.25 – Annual Broadcast Revenue in the EPL era 1999/00 - 2008/09
[50]

Many EFL clubs suffered when those new lucrative player contracts had to be honoured. (Parkinson , 2022). (see Appendix 1.14, **Error! Bookmark not defined.**) In the aftermath eighteen clubs went into administration: seven second-tier clubs (Queens Park Rangers, Bradford City for the second and third time, Leicester City, Ipswich Town, Wimbledon, and Derby County), six third-tier clubs (Bury, Notts County, Barnsley, Port Vale, Luton Town, Oldham Athletic), four fourth-tier clubs (Hull City, Halifax Town, York City and Darlington) and one former league club in non-league football, Exeter City, in administration for the second time (see Appendix 1.13).





[50] EPL income 1992/93 – 2024/25 (Mackey, 2023) EFL income 1992/93-2008/09 (Guardian, The, 2006),

Chart 1.26 – The Number of Insolvencies by Exit Route and League Tier (1999/00 – 2008/09)

For the first time, the nine second-tier clubs represented a significant proportion of the insolvent clubs, 27%. In contrast, only one club from the second tier had gone into administration since 1920, when the league grew into four divisions. The EFL became concerned that the Championship clubs were gambling on reaching the EPL by increasing losses funded by debt and abusing administration to unload debts when things went wrong. CVAs had made this process too easy; sixteen clubs, nearly 50%, had used them to write off their debts. Of the rest, thirteen clubs are in the hands of new companies, again giving the club a chance to leave behind their debts.

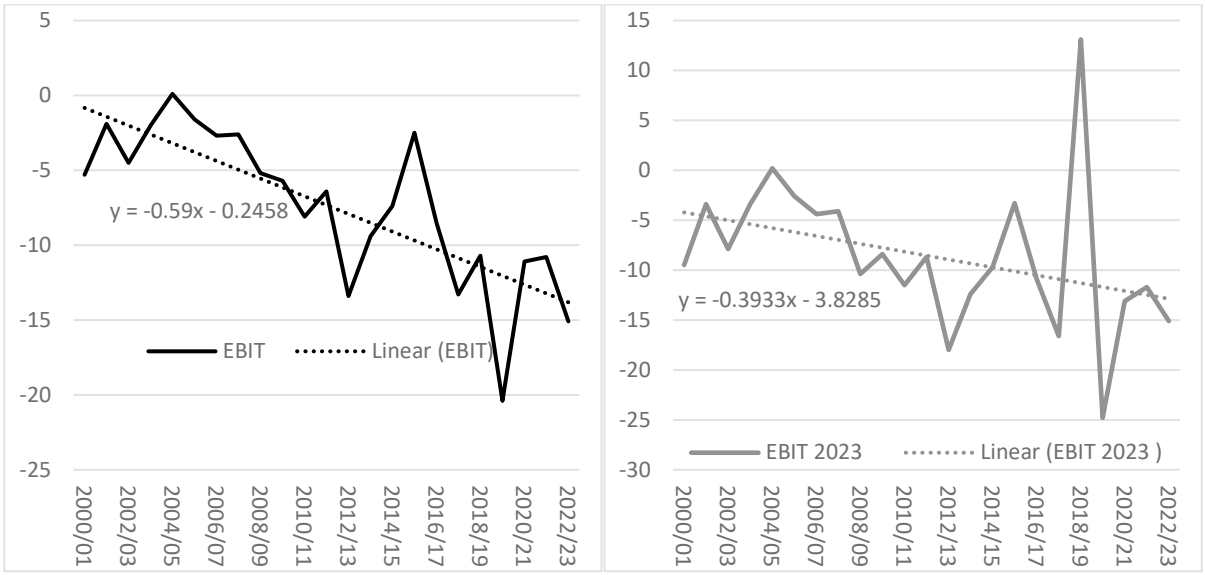


Chart 1.27 – Average Club EBIT in (a) Nominal and (b)2023 values (2000/01-2022/23)

Chart 1.27 shows that football clubs have been increasing losses by £590,000 per year over the last twenty-three years, or £393,000 per year in real terms.

The average indebtedness of clubs entering administration increased to £14.3 million from £1.95 million in the 1990s. As a result, to address the huge losses made by clubs in the Championship, the EFL introduced a ten-point deduction for clubs entering administration from the 2004/05 season and a 'fit and proper persons' test for club owners (The Independent, 2003).[51]

In the period after the deduction of points was introduced, there were fifteen insolvencies. League One side (third tier) Wrexham was the first club to have points deducted after going into administration in December 2004, with fourth-tier Cambridge United and non-league

[51] While the EPL clubs face a nine-point deduction for entering Administration.

Northwich Victoria following in the same season. The incidences of insolvency have fallen, with two being second-tier clubs (Leeds United and Southampton), five being third-tier [x](Wrexham, Rotherham United for the second time, Luton Town for the second time, Bournemouth for the second time and Stockport County), four being fourth-ter (Cambridge United, Boston United, Rotherham United for the third time and Darlington for the second time) and four after relegation to the non-league (Northwich Victoria for the first and second time, Scarborough, and Halifax Town).

On April 28th, 2007, Leeds United found themselves in bottom place in the Championship table following a 1-1 draw with Ipswich Town in the penultimate game of the 2006/07 season. With Leeds United's relegation virtually assured, being three points adrift of safety and with a significantly inferior goal difference, the Leeds United chairman Ken Bates took the club into the Administration on May 4th, 2007. The resulting 10-point penalty for entering Administration immediately confirmed their relegation to League One. On May 6th, 2007, their relegation would have been confirmed, irrespective of the 10-point deduction, following a 2-0 defeat to Derby County in the last game of the season. If the club had delayed going into administration until after their relegation had been confirmed with defeat in the last game of the season, the points penalty would have been imposed in League One the following season.

On May 5th, 2007, just one day after Leeds United's Administration, Boston United's chairman Jim Rodwell entered the club into a CVA during the last two minutes of the last game of the season whilst the team were already losing 3-1 away at Wrexham. This result would have confirmed the club's relegation from the EFL League Two to the Football Conference (BBC, 2007). However, by entering administration during the 2006/07 season, albeit by just two minutes, the 10-point deduction was applied immediately, although the club's relegation had already been confirmed without it. [52]

After Leeds United and Boston United, the EFL modified its rules for clubs entering administration and the timing of any penalties. From 2007/08, any club that entered administration after the fourth Tuesday of March would have their points deduction held over until the end of the season. If the club were subsequently relegated, the points would be deducted in the following season. However, if the club stayed up, they would receive the 10-point deduction in the current season, even if it resulted in relegation.

---

[52] Whilst Boston's action was intended to avoid a points deduction in their first season back in the Football Conference, the terms and timing of the CVA proved to be controversial. On June 10th, 2007, at the Football Conference's AGM, it was determined that Boston United would be demoted to the Conference North, two tiers down from the EFL's League Two, as punishment.

Season	Club	Breach	Points	Outcome
2006/07	Leeds United	Entering Administration	-10	Relegated
2008/09	Crystal Palace Southampton	Fielding an ineligible player Entering Administration	-1 -10 (Applied 2009/10 in League 1)	Survived Relegated
2009/10	Crystal Palace	Entering Administration	-10	Survived
2011/12	Portsmouth	Entering Administration	-10	Relegated After deduction
2014/15	Rotherham United	Fielding an ineligible player	-3	Survived
2018/19	Birmingham City	Breach of P&S Rules	-9	Survived
2019/20	Wigan Athletic	Entering Administration	-12	Relegated After deduction
2020/21	Sheffield Wednesday	Breach of P&S Rules	-6 [53]	Relegated After deduction
2021/22	Reading Derby County	Breach of P&S Rules Entering Administration, Additional financial irregularities	-6 -12 -9	Survived Relegated After deduction
2022/23	Reading Wigan Athletic	Breaching EFL business plan Failing to pay wages on time	-6 -3	Relegated After deduction Relegated

Table 1.2 - Table of Points Deductions (2006/07 - 2022/23)

Season 2006-07 marked a paradigm shift in the value of parachute payments. From the 2007/08 season onwards, payments would, for the first time, be linked to future EPL broadcast deals via a percentage of the primary TV money each EPL club receives annually, i.e. 50%, increasing from £7.5m to £11.4m. This is why it is often cited as the beginning of parachute payments.

Season	Term (Years)	Year 1 (£m)	Year 1 (Clubs)	Year 2 (£m)	Year 2 (Clubs)
1999/00	2	3.7	3	3.7	3
2000/01	2	9.0	3	6.0	2
2001/02	2	12.0	3	12.0	3
2002/03	2	15.0	3	10.0	2
2003/04	2	15.0	3	10.0	2
2004/05	2	19.5	3	13.0	2
2005/06	2	19.5	3	19.5	3
2006/07	2	22.5	3	22.5	3
2007/08	2	34.2	3	11.4	1
2008/09	2	35.4	3	35.4	3

Table 1.3 – Parachute Payments for 1999/2000 – 2008/09

[53] Sheffield Wednesday received a 12-point deduction for breaching the P&S Rules, reduced to 6 points on appeal.

At the same time, the EPL introduced a lump sum 'solidarity' payment (initially £1m per season) to be paid to the other Championship clubs to allay fears of the potential damage to competitive balance caused by these new parachute payments.[54] However, they will increase much slower in the coming years. Nevertheless, they did help to replace the income lost due to ITV Digital's collapse.

Following the ITV Digital debacle and a lack of rivals to Sky, we see the domestic EPL rights fall in value to £1.189bn in the next three-year deal (2004/05 - 2006/07). Added to this fall in TV Rights income, we see in Chart 1.24, the EPL attendance had declined since 2002/03 by 2.3% per annum.

As a result, Chart 1.23 shows that the players' average weekly wages dropped 3.2% from £18,975 to £18,367 in 2004/05. This was the first fall in nominal wages since the maximum salary cap was removed in 1961. In 2023 prices, the players' average weekly wages dropped by 5.2% in real terms from £32,775 to £31,085. This was the first fall in real player salaries since 1990/91.

In the UK economy, manufacturing output contracted in the mid-2000s, and unemployment rose to 1.6 million.[55] The UK entered a recession in 2008, the first since 1991, following the collapse of the subprime mortgage market in the US, which led to the international 'credit crunch' (2007-08).[56] [57] Domestic demand and exports fell, and government austerity measures worsened the GDP decline. In 2008, a hike in oil prices resulted in a brief spike in inflation.

Football continued to show its resilience against the economic downturn. Attendance grew during the recession years of 2007/08 and 2008/09, with growth of 0.7% per annum for all clubs and 0.9% for the top 2 divisions (see Chart 1.24).

Meanwhile, players' wages would return to growth between 2005/06 and 2008/09 despite the economic slowdown and subsequent recession in 2008. Average weekly wages rose by 14.2% from £18,367 to £31,072 in 2005/06, and the average annual salary broke the £1m salary level for the first time. At 2023 value, the average weekly wages rose by 11.3% annually

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[54] The EPL pays lower Parachute and Solidarity payments to the lower EFL Leagues and the National League.

[55] Due to companies folding or switching production overseas, especially in the car industry

[56] In the UK, the government intervened to bail out major commercial banks, such as Northern Rock, Nat West, and Lloyds TSB.

[57] Higher interest rates in the US soon increased the defaults on these 'riskier' mortgages. As the US mortgage companies had sold these mortgages as investment bundles to banks worldwide, the global banking system became short of funds. The resulting financial instability curtailed regular bank lending and destroyed consumer and business confidence.

in real terms from £31,085 to £47,451. This shows remarkable resilience, given that the UK has been in recession since 2008 (BBC, 2009).

The EPL Broadcast Rights had just been sold to Sky Sports and Setanta at the beginning of the 2007/08 season for an inflation-busting £1.706 billion (2007/08 to 2010/11), up 42%. Meanwhile, the value of the next EFL three-year deal (2006/7-2008/9) barely increased to £110m.

During the 2000s, top-tier basic wages rose on average by 19.8% per annum from £383,935 to £1,066,391, the second tier by 17.2% from £71,500 to £182,000, by 10.6% for the third tier from £38,532 to £75,400 and for the fourth tier by 4.0% from £25,272 to £34,424. EPL wages dipped in 2004/05 by 3.2%, while second-tier wages increased by 18.9%. With the advent of the Solidarity Payments, Championship players' wages grew by 14.3% per annum on average, while wages rose by 18.5% per annum in EPL. [58]

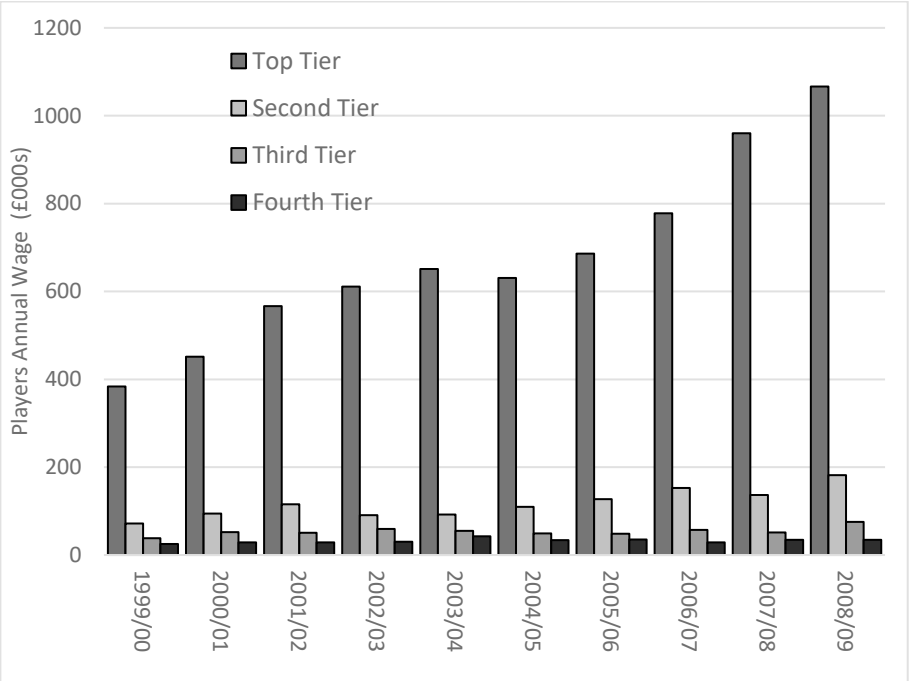

Chart 1.28 - Average Player Annual Salaries Split by the Four English Leagues (1999/00 –2008/09)

[58] The highest wage earners in the 2000s are Roy Keane at £52,000-per-week in 1999/00 and 2000/01, Roy Keane at £90,000-per-week in 2001/02 and 2002/03, Hernan Crespo at £94,000-per-week in 2003/04, Frank Lampard at £98,000-per-week in 2004/05, Steven Gerrard at £100,000-per-week in 2005/06, Andriy Shevchenko at £118,000-per-week in 2006/07, John Terry at £135,000-per-week in 2007/08, and Robinho, £160,000-per-week in 2008/09 (O'Brien, 2022).

In 1980, the clubs' wages as a percentage of income was around 40%, and yet by 2008-09, it had risen to 67% in the EPL, a sign that market power in the top tier had passed from the club owners to players (Harris N. , 2011), i.e. an owner monopsony had become a player monopoly.

In March 2009, the Bank of England announced its intention to pump £200 billion of new capital into the economy through 'quantitative easing' as interest rates were already cut to their lowest level ever, 0.5%. However, even with this injection, unemployment rose from 5.2% in May 2008 to 7.6% by May 2009, with the unemployment rate among 18 to 24-year-olds increasing from 11.9% to 17.3%. By the end of November 2009, the economy had shrunk by 4.9%. The UK economy had come to rely on the finance sector following a sustained decline in manufacturing, so the credit crunch caused a longer-lasting drop in GDP than in the 1930s and that of other major economies. Although the UK officially exited recession in January 2010, real household income per capita continued to fall until 2014. Inflation was below the 2% target for most of the decade and sometimes was as low as 0% in 2015.

David Cameron's new Conservative government followed a policy of austerity measures and tax rises between 2010 and 2012 to lower the budget deficit. This reduced aggregate demand, and business and consumer confidence fell, further reducing aggregate demand. Even with record lows in the interest rate and quantitative easing, the UK economy went into recession again in 2011.

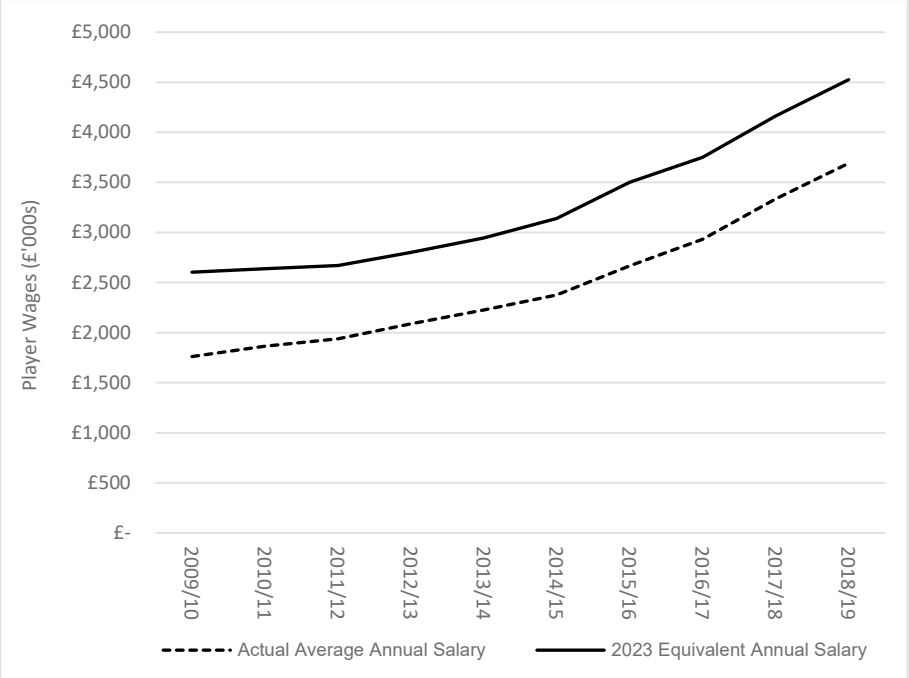

Chart 1.29 - Average Player Annual Wages in Nominal and 2023 Value (2008/09 –2018/19)

At the height of the recession in 2011/12, we see, from Chart 1.29, that the player wage growth was flat, with average weekly wages rising from £36,750 to just £36,812, or from £1.9m per

year to £1.9m in 2011/12. In 2023 value, average weekly wages declined by 2.5% in real terms in 2011/12, from £51,979 to £50,663, or from £2.7m per year to £2.63m

During the recession, from Chart 1.30, the attendance in the EPL in the 2011/12 seasons declined by 1.9% per annum but grew in the Championship by 2.0% and 0.9% in the lower EFL. Between 2012/13 and 2013/14, EPL match attendance grew by 2.9% from 34,600 to 36,657, while attendance declined in the Championship by 3.2% per annum from 17,739 to 16,609.

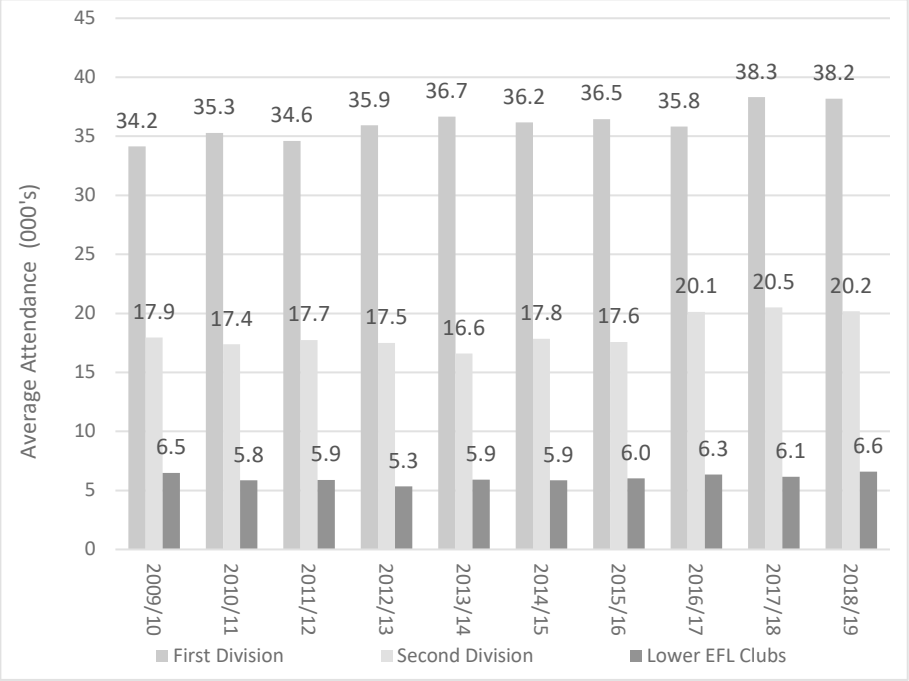

Chart 1.30 - Average Attendance Split Between the Football Tiers (2009/10 –2018/19)

Meanwhile, in 2010/11, despite the global recession, Sky Sports and Setanta/ESPN agreed to a three-year deal for EPL domestic rights worth £1.782 billion (2010/11 to 2012/13). In contrast, the EFL agreed to a new domestic rights deal worth £264 million with Sky and the BBC for three seasons (2008/09 to 2011/12).

In 2013/14, Sky Sports and BT Sport combined in the next three-year deal worth £3.018 billion (2013/14 to 2015/16). Meanwhile, in 2012, Sky Sports agreed to an exclusive three-year deal worth £195m for the EFL TV rights (2012/13 to 2014/15).

As the decade progressed, the UK saw modest economic growth, with unemployment quickly falling to 5.5%.[59]

[59] Unemployment fell quicker than in the 1980 and 1990 recessions due to low wage growth and the increase in 'zero-hour' contracts, which reduced job security.

In 2016/17, Sky Sports and BT Sport combined again for another three-year deal worth £5.136 billion (2016/17 to 2018/19), an increase of 70%. The rights are valued at £360m for four years (2015/16 to 2018/19) in the next EFL deal with Sky.

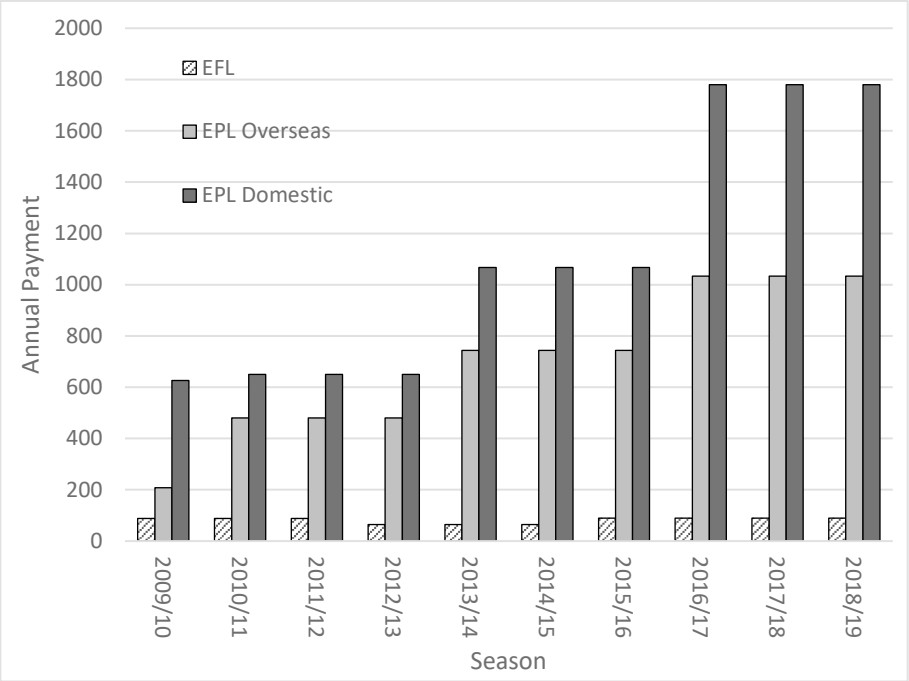

Chart 1.31 – Annual Broadcast Revenue in the EPL era 2009/10 – 2018/192 [60]

These TV Rights deals would ensure that average weekly wages returned to growth again despite the ongoing recession. We see, from Chart 1.29, the average weekly wages rose by 10.3% per annum between 2012/13 and 2018/19, from £36,812 per week to £72,894, or from £1.9m per year to £3.8 million. In 2023 value, the average weekly wages rose by 8.5% per annum in real terms between 2012/13 and 2018/19, from £50,663 per week to £89,377, or from £2.7m per year (2023:) to £4.6 million.

In line with the EPL TV Rights deals, parachute payments had risen to £15m per season by 2010/11. This season was the last time the payment was made over two seasons after relegation

[60] EPL income 1992/93 – 2024/25 (Mackey, 2023) EFL income 2009/10-2011/12 (Football League, The, 2007), 2012/13-2014/15 (BBC, The, 2011) 2015/16-2018/19 (talkSPORT, 2018)

Season	Term (Years)	Year 1 (£m)	Year 1 (Clubs)	Year 2 (£m)	Year 2 (Clubs)	Year 3 (£m)	Year 3 (Clubs)	Year 4 (£m)	Year 4 (Clubs)
2009/10	2	37.2	3	24.8	2				
2010/11	2	45.0	3	15.0	1				
2011/12	3	46.5	3	36.6	3	4.0	1		
2012/13	3	46.8	3	24.6	2	17.4	3		
2013/14	3	73.2	3	57.3	3	28.5	3		
2014/15	4	75.0	3	40.2	2	30.3	3	20.2	2
2015/16	4	77.7	3	41.6	2	21.0	2	31.5	3
2016/17	4	122.7	3	31.2	1	32.6	2	32.6	2
2017/18	4	124.8	3	68.0	2	16.6	1	33.2	2
2018/19	4	127.8	3	104.7	3	15.5	1	17.0	1

Table 1.4 – Parachute Payments for 2009/10– 2018/19

In 2011/12, the parachute payment mechanism changed, with payments made over three years instead of two. However, payments would now reduce for each subsequent year after relegation, i.e. £15.5m in year 1, £12.2m in year 2, and £4.0m in year 3.

By 2013/14, the annual parachute payments had increased to £24.4m in year 1, £19.1m in year 2, and £9.5m in year 3 when the mechanism changed again for the 2014/15 season. Payments were now spread over four years instead of three, and the payments increased to £25.0m in year 1, £20.1m in year 2, and 10.1m in years 3 and 4.

By 2011/12, the EPL youth support grant to the EFL had risen to £5m. However, from 2012/13, this was replaced by 'The Elite Player Performance Plan' (EPPP).[61] At the creation of the EPPP, payments ranged from £775,000 per year (one-third of the cost of a Category One academy) to £100,000 for a Category Four academy (two-thirds of the running costs) (thefsa.org.uk, 2012).[62]

In 2015, the Solidarity Payments were formally linked to future EPL broadcast revenue for the first time. From the 2016/17 season, the payment would be set equal to 30% of the parachute payment paid to relegated clubs in the third year after relegation, and the third-year parachute payment equals 20% of the equally shared element of an EPL club's TV income.

Over the 2010s, the players' average weekly wage grew by 9.0% per annum from £31,072 in 2008/09 to £72,894 in 2018/19 or from £1.62m per year to £3.79m. In 2023 prices, the players'

[61] Developed by the EPL in conjunction with the EFL, the FA, and the clubs

[62] It is reported that in the ten years of its existence, the EPPP has invested £ 1.94 billion in youth development since the start of the 2012-13 season. In addition to the EPL funding of the EPPP, the 'Professional Game Youth Fund', funded by a four per cent levy on all EPL and EFL player transfers, provided a significant amount of this with direct grants paid to clubs (Fifield, 2022)

average weekly wage grew by 6.6% per annum in real terms from £47,451 in 2008/09 to £89,377 in 2018/19 or from £2.47m per year to £4.65m. [63]

During the 2010s, matchday attendance grew by 1.1% per annum for all clubs, from 15,495 to 17,096. Attendance grew by 1.3% per annum, from 34,151 to 38,181, in the EPL and by 1.4% per annum, from 17,949 to 20,181, for the Championship, which perhaps reflects the Championships' importance as the EPL's feeder league. However, attendance in the lower EFL leagues grew by just 0.2% per annum, from 6,495 to 6,595.

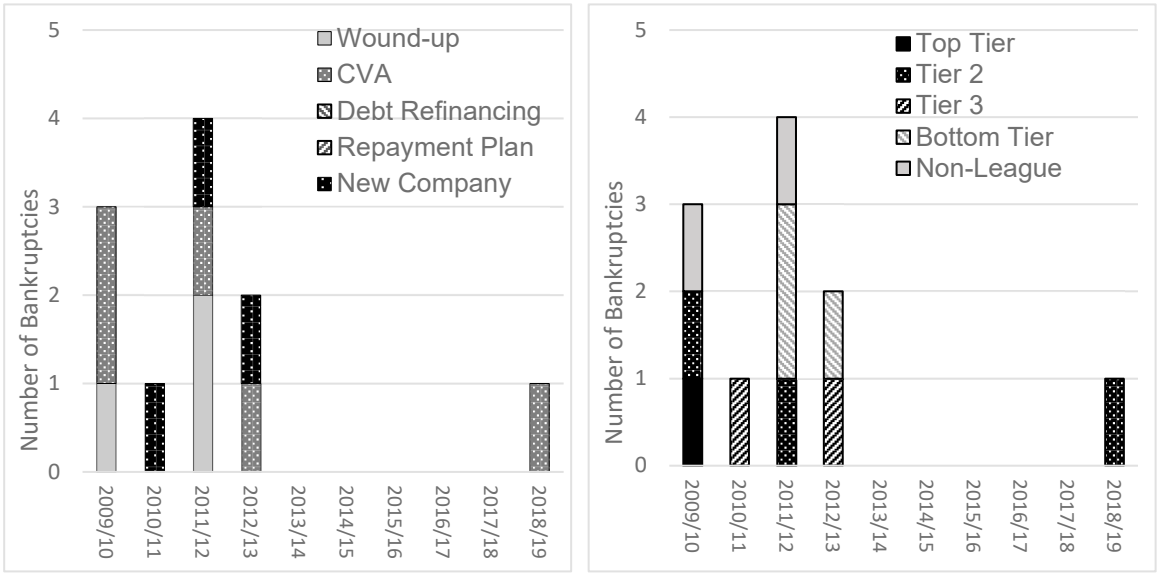

Chart 1.32 – Number of Insolvencies by Exit Route and League Tier (2009/10 – 2018/19)

In the 2010s, we see a club from the EPL go into administration for the first time: Portsmouth, three whilst in the Championship Crystal Palace, Portsmouth, and Bolton Wanderers, two whilst in DivisionOne, Plymouth Argyle and Coventry City, three whilst in Division Two, Darlington, Port Vale, and Aldershot Town and two whilst non-league, Chester City and Rushden & Diamonds. Upon entering administration, the club's average debt has risen to £19.9 million from £14.3 million in the previous decade. Although the points deductions were intended to encourage financial probity, it is often argued that they were unfair, as entering administration usually results in the club transferring ownership. Therefore, any points deduction punishes the new owners for the misdeeds of the previously guilty owner.

[63] The highest wage earners in the 2010s are Carlos Tevez, at £250,000-per-week in 2009/10, 2010/11, 2011/12 and 2012/13, 2013/14, Wayne Rooney at £300,000-per-week in 2014/15, 2015/16 and 2016/17 and Alexis Sanchez at £350,000-per-week in 2017/18 & 2018/19 (O'Brien, 2022).

Consequently, the EFL looked at other methods of preventing clubs from overspending, and the emphasis switched to prevention of administration rather than punishment for going into administration. Their attention turned to Financial Fair Play (FFP) regulation.

The first set of FFP regulations had been agreed to in September 2009 by the Union of European Football Associations (UEFA). The regulations provided sanctions for clubs that only broke even over three years after large cash injections from wealthy owners.[64] The penalties included disqualification from European competitions, fines, withholding prize money, and player transfer bans.

The EPL's FFP-style regulations introduced Short Term Cost Controls (STCC), where an EPL club's increase in player wages is limited to a cap of £4m per season unless the club could prove it was funded by non-broadcast income, and Sustainability Provisions (SP), which permitted clubs to make losses of £105m over a rolling 3-year accounting period (beginning with 2013/14, 2014/15 and 2015/16) subject to a £90m equity injection.[65] However, the first sanctions for breaking the STCC and SP rules would not be applied until spring 2016.

The EFL's FFP rules, based loosely on UEFA's Breakeven rules, were implemented in 2012 and set limits for overspending.[66] The loss limits set for the 2013/14 season were £3m if funded by debt and £8m if financed by £5m of equity, reducing to a maximum loss of £6m in 2014/15 and £5m (£2m debt and £3m equity) in 2015/16. Clubs that contravened these limits and remained in the Championship would be barred from signing players in the following January transfer window, and this embargo would continue until the club's finances showed a return to being within the FFP limits. Clubs that breached these limits but were promoted to the EPL, and therefore outside the control of the EFL, would be fined on a sliding scale up to £10m over and above the £8m limit plus 100% of the overspend amount over £18m.[67]

Encouraged by the EPL, the EFL's FFP rules morphed into the P&S rules from the 2014/15 season in return for linking solidarity payments to future TV deals. These new rules resembled the EPL rules, with losses calculated over a rolling three-year reporting period.[68]

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[58] The implementation of these regulations was intended to take place at the outset of the 2011/12 football season, but the rules were not applied in full until 2015 instead of 2012 (BBC, 2010).

[65] If a club is relegated to the Championship, the allowed losses are reduced by £22 million every season a club is outside the EPL.

[66] After two years of detailed negotiations, the EFL's FFP rules, based loosely on UEFA's Breakeven rules, were finally agreed upon by an overwhelming majority of 21 Championship clubs to three.

[67] Leicester City's loss of £30m in their promotion season resulted in a £7m fine for the first £10m over the £8m limit plus £12m for the excess of £30m over £18m.

[68] Combining the past two years of actual results with a forecast for the current year.

These new rules for Championship clubs would limit average annual losses (i.e. negative EBIT) to £13m (£39m over the three years) if funded by equity, or £5m per annum (£15m over three years) if funded by debt with a new penalty for contravention of the rules of a potential 12-point deduction introduced.

> " However, we cannot be complacent, and this is the right time to strengthen our insolvency policy and also refine its effects so that it is as fair as it can possibly be for clubs, creditors and supporters."
>
> Shaun Harvey, EFL chief executive
> (BBC, The, 2015)

In early 2020, the UK government moved swiftly to mitigate the economic damage of the COVID-19 pandemic by furloughing workers and protecting the incomes of the self-employed. From April 2020 to 2021, the UK government borrowed £299bn, the highest figure since records began in 1946 (King, 2021). In April 2020, the UK's GDP fell by 18.9%, the biggest monthly fall in GDP ever recorded. Unemployment of 1.23 million before the pandemic rose to 2.62 million by May. In 2020, the UK's annual GDP fall was a record 10.4 per cent.GDP

Although the UK economy quickly recovered in 2021, GDP grew by 8.7 per cent, and unemployment has been very low since 2022, by the end of 2023, the UK economy was in recession. It had barely grown compared to its pre-pandemic size (Clark, 2024).

UK inflation was already rising due to quantitative easing used to fund government borrowing for COVID-19 and the broken supply chains at the end of the COVID-19 pandemic when the energy and food hikes following Russia's invasion of Ukraine sent the UK inflation rate soaring to a 41-year high of 11.1 per cent in October 2022. Although it remained in double figures for several months, the Bank of England raised and held interest rates at 5.25%, their highest level for 16 years and by the end of 2023, it had fallen to four per cent. Since June 2023, real wage growth has returned after 20 months of decline.

On July 22nd, 2021, Tracey Crouch MP, chair of the fan-led review of football governance in the UK, announced the interim findings of the review that concluded that the EPL had

> "lost the trust and confidence [of fans]…….. therefore it is now time for external assistance".
>
> Tracey Crouch
> (BBC, 2021)

The Football Governance Bill was introduced to the UK Parliament on March 19th 2024, with support amongst Conservative and Labour MPs. The new law would formalise the creation of an independent regulator to oversee clubs in the top five tiers of English football. It is expected to cost £10m a year and be paid for with a new club levy. Further details of the regulator's exact responsibilities are still to be discussed by MPs and peers. The regulator's primary

responsibility will be to monitor the finances of all 116 Premier League, EFL, and National League clubs and issue licences to those in compliance.

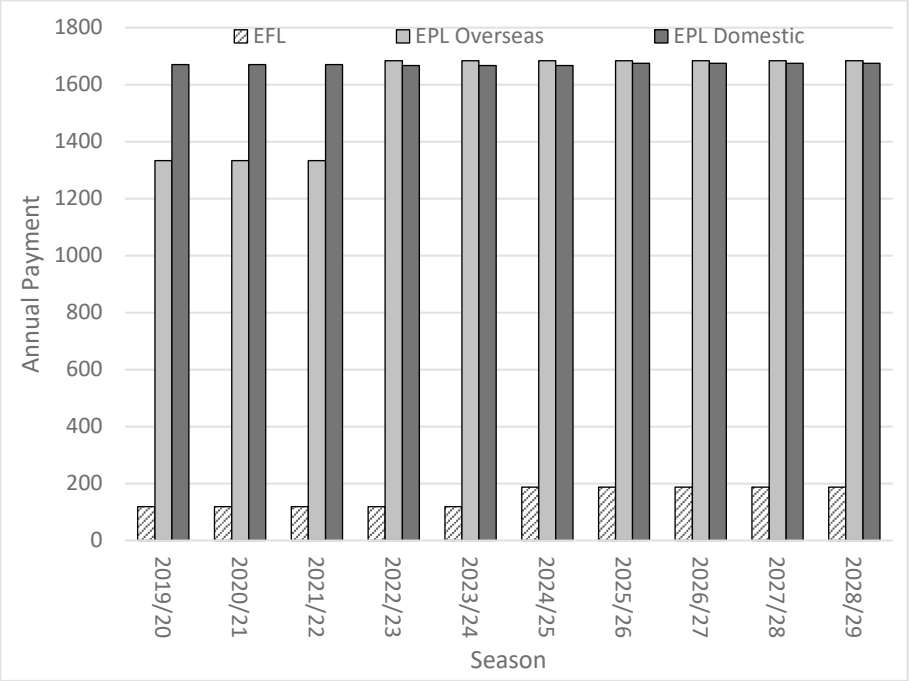

Chart 1.33 – Annual Broadcast Revenue 2019/20 – 2028/29 [69]

The EFL agreed a five-year deal with Sky Sports for 138 league matches per season, with an option to increase the number of matches to 158 in the final two years of the agreement for £595m (2019/20-2023/24). In the latest five-year deal between EFL and Sky Sports, over 1,000 matches per season, including 328 Championship matches, were valued at £935m with add-ons (2024/25 to 2028–29).

In contrast, EPL's domestic TV rights are sold to Sky, TNT and Amazon for £5.0bn for a three-year deal (2019/20 to 2021/22), and the overseas rights are sold for £4.0bn. Due to the COVID-19 pandemic, the domestic rights deal is rolled over for a further three years (2022/23-2024/25). However, the international rights, at £5.05 billion, exceeded the domestic rights for the first time between 2022 and 2025. Sky and TNT Sports agreed to a four-year deal for the EPL domestic rights worth £6.7bn (2025/26 to 2029/30) in the latest EPL TV deal.

[69] EPL income 1992/93 – 2024/25 (Mackey, 2023) 2025/26-2029/30 (MacInnes, 2023), EFL income 2019/20-2023/24 (Independent, The, 2018) 2024/25-2029/30 (Sky Sports, 2024)

In 2019/20, the parachute payments mechanism changed to the current three-year cycle:

- year 1 - 55% of the equal share of TV revenue each EPL club receive (i.e. 2022/23 £45.0m),[70]
- year 2 - 45% of the equal share of TV revenue each EPL club receive (i.e. 2022/23 £35.5m),
- year 3 (only if in EPL for over one year) – 20% of the equal share (i.e. 2022/23 £15.5m).

Season	Term (Years)	Year 1 (£m)	Year 1 (Clubs)	Year 2 (£m)	Year 2 (Clubs)	Year 3 (£m)	Year 3 (Clubs)
2019/20	3	127.8	3	104.7	3	15.5	1
2020/21	3	130.2	3	71.0	2	31.6	2
2021/22	3	133.2	3	37.9	1	16.1	1
2022/23	3	135.0	3	71.0	2	0.0	0

Table 1.5 – Parachute Payments for 2019/20– 2022/23

During the COVID-affected seasons, in the games where attendance was allowed, matchday attendance was down on pre-COVID levels by 7.9% in 2019/20 and 16.8% in 2021/22 only in the Championship. Meanwhile, attendance was up on pre-COVID levels by 2.9% in the EPL in 2019/20 and 13.6% in the lower EFL in 2021/22.

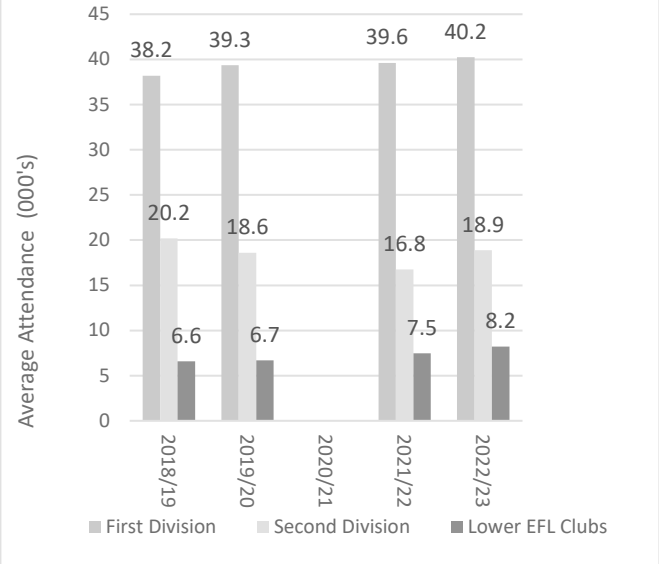

Chart 1.34 - Average Attendance Split Between the Tiers (2019/20 – 2022/23)

[70] The equal share of TV revenue is equal to 50 per cent of the value of the UK Rights and 100% of the 2019/20 value of the Overseas Rights. (Guardian, The, 2015)

In the first full season after the COVID-19 restrictions, average attendance was up on pre-COVID levels by 5.2% in the EPL and 24.2% in the lower EFL, but attendance in the Championship is down 6.4%.

Chart 1.35 shows a slowing in the growth of player wages to 4.8% per annum, from £3.8m to £4.4m, since the COVID-19 pandemic. At 2023 values, real wages fell 1.9% from £4.7m to £4.4m, mainly due to the national inflation rate since 2022.

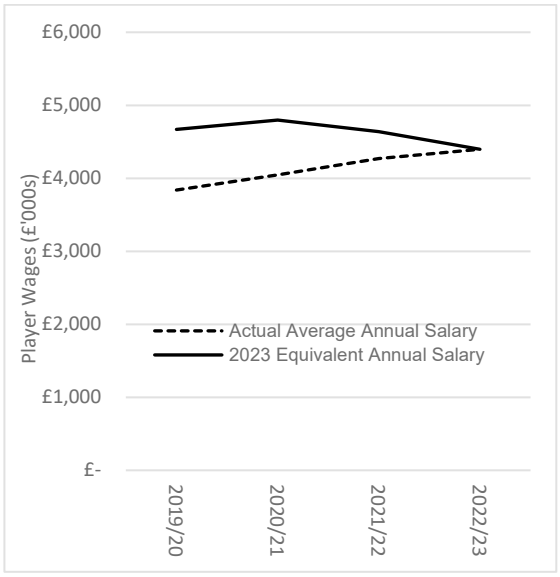

Chart 1.35 - Average Player Annual Wages in Nominal and 2023 Value (2008/09 –2018/19) [71]

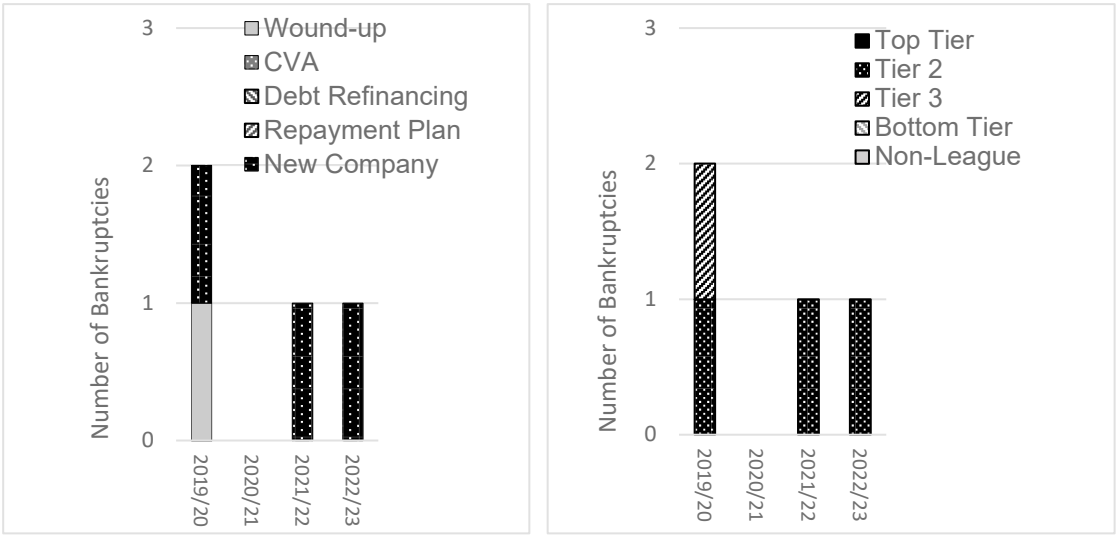

Chart 1.36 – The Number of Insolvencies by Exit Route and League Tier (2019/20 – 2022/23)

[71] . The highest earners in the 2020s are David de Gea, at £ 375,000 per week in 2019/20, Gareth Bale, at £ 560,000 per week in 2020/21, and Cristiano Ronaldo, at £ 480,000 per week in 2021/22.

From Chart 1.36, four clubs have gone into administration since the League's temporary suspension for the COVID-19 pandemic: Bury for the second time, Wigan Athletic twice, and Derby County for the second time.

The average indebtedness for these four clubs is £26.7 million, skewed by Derby County's debts of £71 million (see Appendix 1.16).

1.4 Discussion

Income Differential

The EPL is the world's most-watched sports league, with a TV audience of 3.2 billion people across 188 countries (See Appendix 1.3 for a comparison with TV rights in Europe).

The value of EPL broadcasting rights has escalated dramatically since the first broadcast deal in 1992. The latest TV deals for 2025/26 - 2028/29 value the domestic TV rights at £6.7 billion (£1.7 billion p.a.) for 267 live matches (Tiffen, 2023) and overseas rights at £5.3 billion (£1.8 billion p.a.) for 2022/23 – 2024/25 surpassed domestic rights for the first time in the latest overseas TV deal (Poindexter, 2022) In contrast, the EFL's broadcast deals have lagged considerably behind those of the EPL, whose latest deal was valued at £935m for 2024/25 – 2028/29 (£187m per season) (Derby County, 2023).[72]

Before the EPL, the EFL clubs that comprised the lower three tiers of English football received 50% of football's total Broadcast income. However, at the start of the EPL era in 1992/93, EFL's broadcast income was equal to 9% of total broadcast income (not including any redistributions from the EPL). During the last half of the 1990s, the EFL's share of broadcast income averaged 14.5% of football's total broadcast income. Briefly, in 2001/02, the only year of the ITV Digital deal before it collapsed, the EFL broadcast income rose to 18% of the total broadcast income. However, this fell to 5% of total broadcast income after the collapse of ITV Digital and has averaged 5% ever since.

There is a huge difference in broadcast income between the EPL and the EFL clubs in 2022/23:

- EPL teams received prize money between £84m and £150m based on their final league position, and every EPL club is guaranteed to receive £12 million for ten televised matches and £1.2 m for every subsequent game.
- The effective share of the EFL deal is approximately Championship 70%, League One 18% and League Two 12%. Each Championship team receives a flat income of £2.5m, and for every Championship match broadcast live on TV, the home team receives around £100k, and the away team receives £10k. The EFL Championship Prize money is allocated based on the final league position, with the winner picking up around £100,000, the second-placed team £50,000, and after that, dropping in equal increments for places 3 to 24, with the bottom team earning around £7,000 (Ambille, 2023).

[72] for 328 Sky Bet Championship matches, 248 Sky Bet League One matches, 248 Sky Bet League Two games, all 15 Play-Off matches, all 93 Carabao Cup matches, and all 127 EFL Trophy matches

The Premier League offers the greatest financial riches of any football competition in the world, which adds pressure to the clubs battling to escape relegation from the EPL and incentivises ambitious Championship clubs to achieve promotion at all costs.

Clubs relegated from the riches of the EPL teeter on the edge of a 'financial precipice' due to the steep drop in TV revenue and commercial income in the Championship while carrying a high-cost base related to player contracts hanging over from their stay in the EPL. The parachute payments were introduced to soften the blow and provide a financial safety net for the first few years after relegation as those clubs adjust to significantly lower revenues (The Daily Mail, 2020).

> "They allow clubs to invest in their teams, and wider operations, in the knowledge that should they be relegated they have provisions in place to re-adjust their finances."
>
> English Premier League

Since the beginning of the EPL in 1992/93, there have been 189 payments worth around £2.8 billion, an average of £14.7m per payment, paid to forty-four EFL clubs, an average of £63m per club. Norwich City has received the most parachute money, £204 million, with West Bromwich Albion second, with £194m (see Appendix 1.2 for more details).

There has been much discussion about the advantages and disadvantages of parachute payments:

Encouraged by the EPL, the EFL's FFP rules morphed into the P&S rules from the 2014/15 season in return for linking solidarity payments to future TV deals. These new rules resembled the EPL rules, with losses calculated over a rolling three-year reporting period.[73]

> EPL Spokesperson
> to the Digital, Culture, Media, and Sport (DCMS) Committee
> (The Guardian, 2020)
>
> "Premier League parachute payments may be seen as 'evil' – but they are vital to helping returning clubs stay competitive.."
>
> Karren Brady, Director of West Ham United
> (The Sun, 2021)
>
> "In theory, they should be an advantage, but the reality of the Premier League is that you have an extremely high wage bill, and even if you have relegation clauses with a 50 per cent cut written in, it is not enough [to balance the books] because the drop off in revenue is so great. If clubs did not receive parachute payments, they would not just be at a competitive disadvantage, it could tip them over the edge [into administration]."
>
> Lee Hoos, Burnley Chief Executive (2013).
> (The Independent, 2013)

[73] Combining the past two years of actual results with a forecast for the current year.

However, parachute payments are not universally supported:

> "They are an unfair advantage and a reward for failure. A long time ago, teams like Bradford and Barnsley overspent when they were in the Premier League, but it is not like that anymore. Teams don't need these payments. It angers me."
>
> Keith Hill, Manager, Barnsley Manager
> (The Independent, 2013)

> "Parachute payments are an evil that must be eradicated. We have six clubs in the Championship receiving parachute payments, which means, on average they get £40m per club; the other 18 get £4.5m each. So they're then struggling to try to keep up."
>
> EFL chief Rick Parry
> to the Digital, Culture, Media, and Sport (DCMS) Committee
> (The Guardian, 2020)

David Sullivan feels parachute payments are 'not big enough' to help support clubs who suffer relegation and says dropping out of the top flight would be 'horrendous' for West Ham after 12 successive seasons in the Premier League.

> "Whatever we give [the EPL] won't be enough for them [the EFL]. Tesco don't give the small supermarket chain a subsidy."
>
> David Sullivan
> West Ham owner
> (Stone & Jackson, 2024)

Solidarity payments made to clubs not receiving parachute payments were introduced in 2005/06, but while parachute payments were linked to future TV deals, solidarity payments were not.

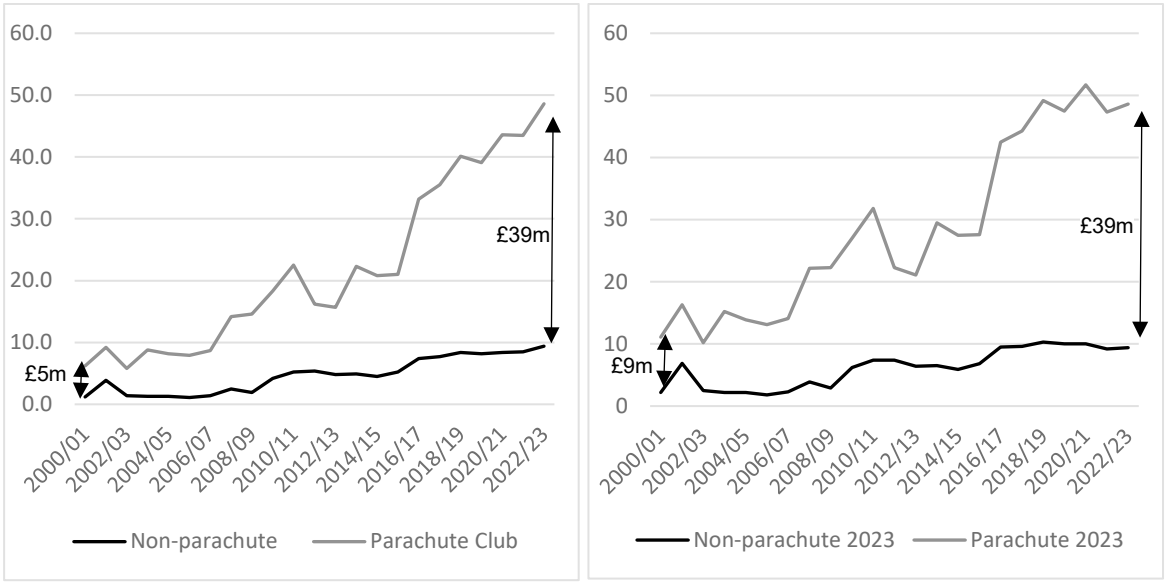

Chart 1.37 - Media Payments in (a) Nominal and (b) 2023 Value (2000 – 2023)

Although a change to solidarity payments from 2016/17 was made to link them to future television deals, it was too late to prevent a significant gap from emerging. From Chart 1.37,

the disparity between the average broadcast payments paid to parachute and non-parachute clubs is increasing in nominal and real terms. This demonstrates the significant increase in parachute payments over and above the rise in solidarity payments. The gap in broadcast income between the parachute and non-parachute clubs has grown from £5m in 2000/01 to £39m in 2022/23, or 30.9% per annum in monetary terms and from £9m to £39m in real terms at 2023 values or 15.2% per annum. Initially, there was little difference in media payments between the parachute and non-parachute clubs. However, a significant difference emerged after ITV Digital's collapse in 2002, and with the new parachute payments mechanism introduced in 2006/07, linking parachute payments to future EPL TV Rights values, this gap widened further and accelerated following the 2015/16 EPL TV Rights deal.

The English leagues are not unique in terms of making parachute payments. However, they dwarf the payments made to clubs relegated from the top divisions in the big five European leagues (KPMG Football Benchmark, 2019):

- Serie A (Italy) makes fixed payments (c€25m in 2022/23, €10m if only in Serie A for one year) (calcioefinanza, 2023),
- La Liga (Spain) payments are worked out based on results in the last five seasons and the size of their budget the season before relegation and are paid for one season (i.e. in 2022/23 for Valencia, it would be €40m, Celta Vigo €25m, Valladolid €11.5m), (Barlow, 2023)
- Ligue 1 (France) pays a fixed amount (€2m in 1st and then €1m in the 2nd) and a variable element based on the consecutive seasons in the top tier over the last ten years (c€4.9m in 2017/18).
- The Bundesliga (Germany) does not have parachute payments. Instead, its TV revenue is distributed across the top two divisions based on the average position over the last five years. This provides the highest share (23%) to the second tier and favours second-tier clubs that have been mostly in the top division in the last five years (c£14m in 2022/23).

Players Wages

The substantial increases in wages we see in English football are for players in the top tier, and the creation of the EPL has accelerated this increase. However, from Chart 1.38, the Championship players' wages have lagged somewhat, which reflects the difference in the growth in broadcast income we saw in Chart 1.37.

Chart 1.38 shows that for the first ten years of the EPL's existence, the EPL players' wages had grown by 71% per annum, from £77k to £567k. In comparison, the annual wages of

second-tier players had grown by 20% per annum, from £41 to £116k. They were now equivalent to 21% of the top-tier players' wages, whereas, before the EPL, they were 60%.

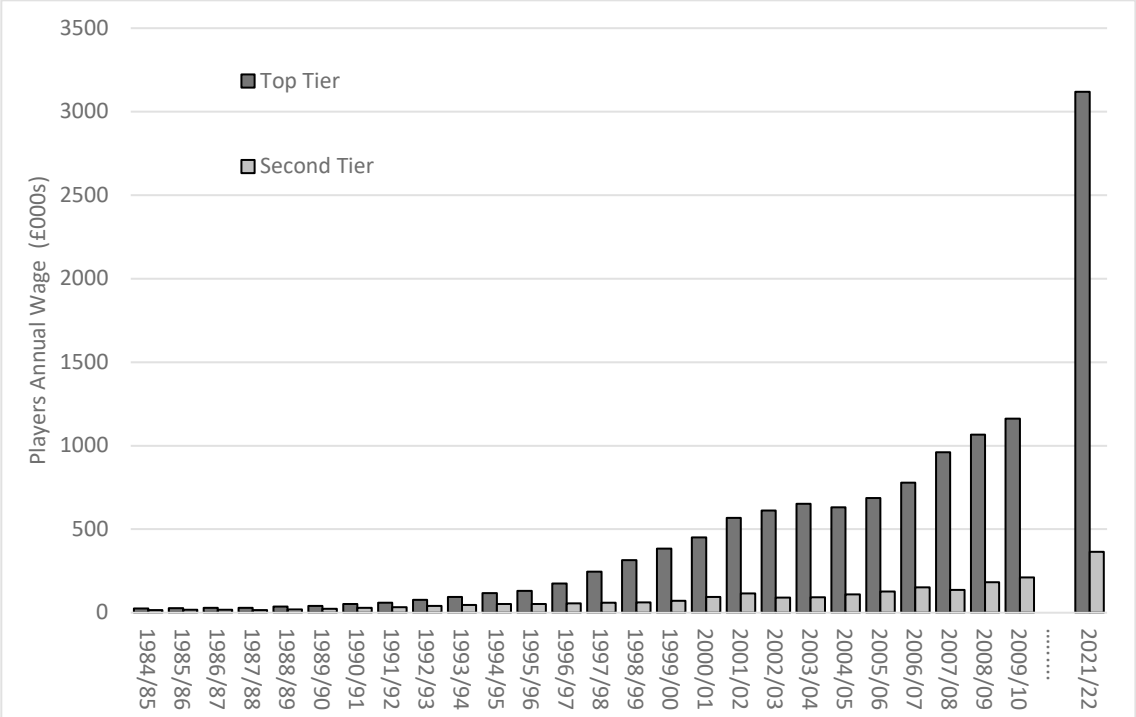

Chart 1.38 - Average Player Wages in the Top Two Tiers of English Football (1992/93 – 2021/22).

By the end of 2009/10, second-tier wages had grown by 10% annually, from £116k to £211k. However, EPL wages had grown by 13% from £567k to £1.2m, so second-tier players' wages were now equivalent to 18% (Miller & Harris, 2011). In the latest figures, EPL wages have grown by 14% per annum, from £1.16m to £3.12m, while the Championship average wage has increased by 6% per annum, from £211k to £364k (Mansion Bet, 2023). The average Championship wage was now equivalent to 12% of the EPL players' wages.

Chart 1.39 shows that average club spending on player transfers and wages in the Championship, in monetary and real terms, is increasing faster than the disparity in revenue we found in Chart 1.37.

The gap in average player spending between the parachute and other clubs rose from about £12m in 2001 to £49m by 2022/23, an increase of 9.1% per annum. In real terms, it rose from £21m in 2000/01 to £49m, or 3.7% per annum.

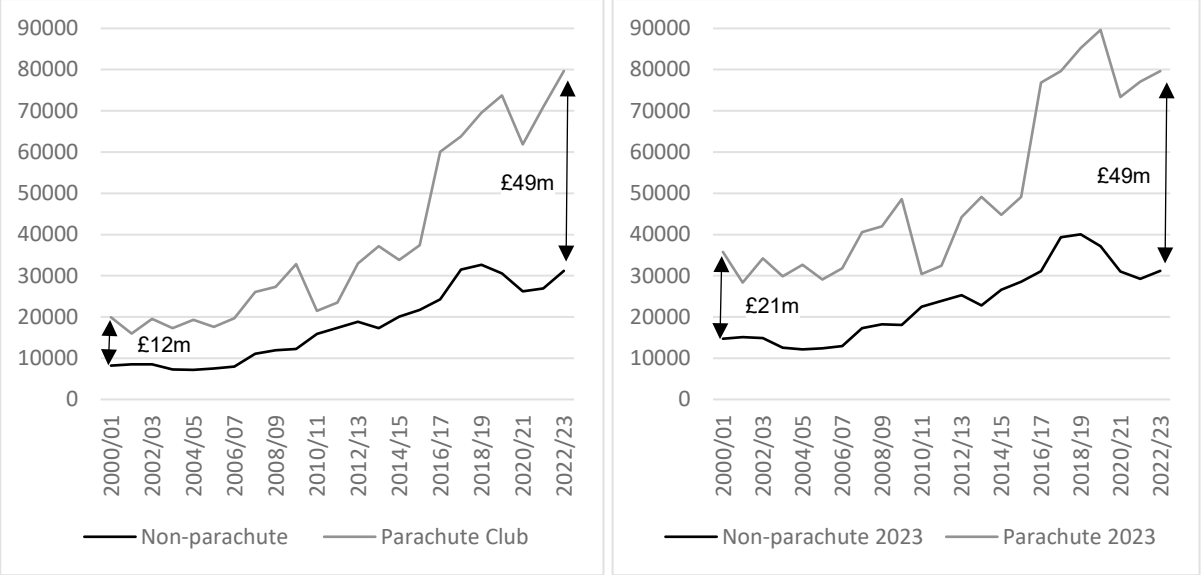

Chart 1.39 –Parachute and Non-parachute Wages in (a) nominal and (b) 2023 values (2000 – 2023)

With its substantially higher revenues (albeit with typically higher costs), the prospect of playing in the English Premier League (EPL) has become increasingly attractive in comparison to playing in the English Football League (EFL) Championship, just one level down the pyramid.

As we found in Chart 1.39, the gap between the parachute clubs' player costs and those of the non-parachute clubs is greater than the difference in media income we find in Chart 1.37. It is presumed that the non-parachute clubs would be making bigger losses than parachute clubs to compete with them regarding player costs. However, from Chart 1.40, the losses of non-parachute and parachute clubs are broadly similar, and the trend shows that they are increasing more slowly (-£0.54m) than those of the parachute clubs (-£0.67m).

This suggests that the parachute club's key objective is attaining sporting success, e.g., promotion from the EFL Championship, rather than maximising profitability, even with their income superiority. This is in stark contrast with the closed leagues of North America, where salaries are set at about 50% of total revenues, and both owners and players feel the benefit of any increase in revenue.

Furthermore, we do not see any loss reduction for the parachute or non-parachute clubs after implementing the P&S rules in 2014/15. Setting maximum losses at an average of £13m per year over a three-year reporting cycle does not appear to have constrained the clubs to date.

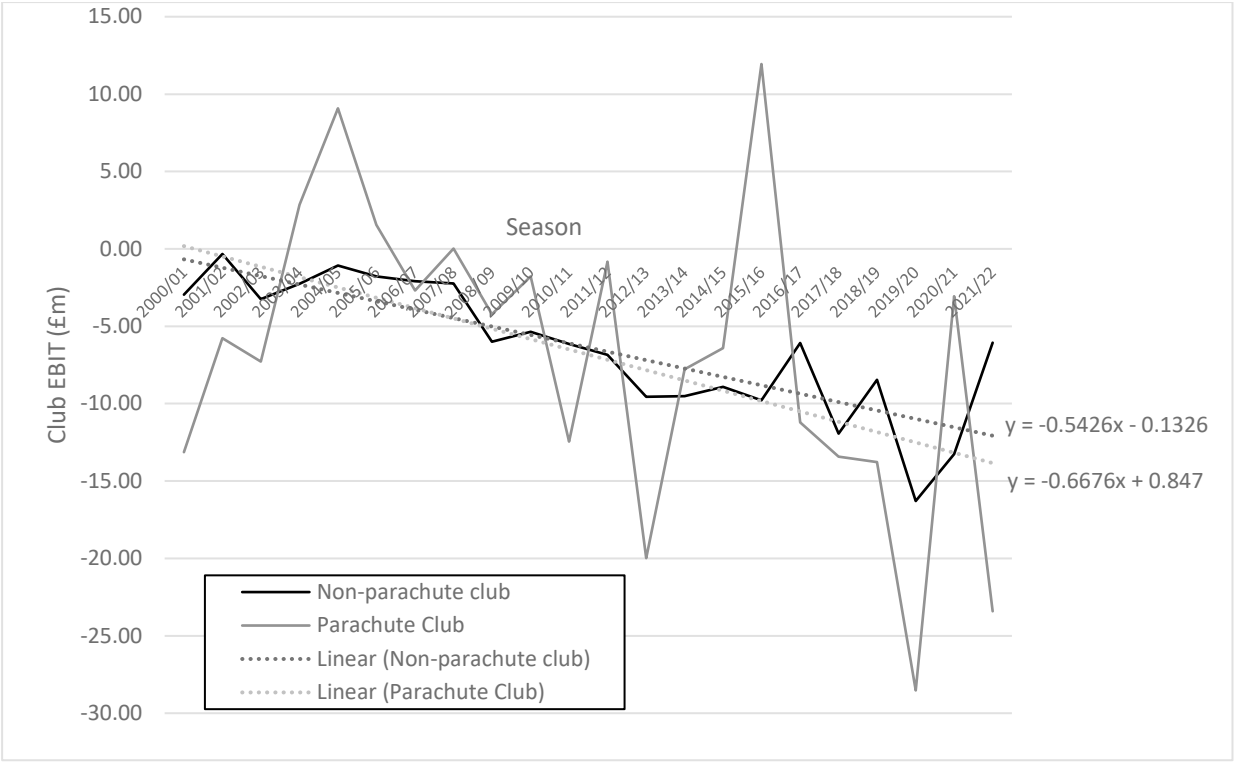

Chart 1.40 - Average EBIT (Losses) for Parachute and Non-parachute Clubs (2000/01 - 2021/22)

The EFL's Profitability and Sustainability Rules appear to have missed their goal of reducing losses and perhaps improving financial sustainability because of the increased loss limits imposed by P&S of £13m, compared to the previous FFP regime of £5m. This has provided the clubs with the headroom to increase losses rather than act as the constraint that the EFL intended.

Also, the higher loss thresholds provided by the EPL's P&S rules allow maximum losses of £39m in the club's three-year P&S calculation for the parachute clubs for the years whilst they had been in the EPL instead of £13m. This means that the parachute club losses, annualised over the three-year P&S reporting period, can be higher than the non-parachute club losses, especially if the parachute club's EBIT, whilst in the EPL, was close to breaking even.

Of the 42 clubs entering administration in the EPL era, thirteen were Championship clubs. Table 1.6 shows that all Championship clubs that have run into financial difficulty over the last twenty-one years have done so following relegation from the EPL.

Administration Year	Club	Relegation from EPL
1999	Crystal Palace	1998
2001	Queens Park Rangers	1996
2002	Bradford City Leicester City	2001 2002
2003	Derby County Ipswich Town Wimbledon	2001 2002 2000
2004	Bradford City *	2001
2007	Leeds United *	2004
2009	Southampton *	2005
2010	Crystal Palace	2005
2012	Portsmouth *	2010
2019	Bolton Wanderers	2012
2020	Wigan Athletic	2013
* The club went into administration again following relegation to Division One		

Table 1.6 -Table of Clubs in Administration (2000/01 - 2019/20)

Since the parachute payment mechanism changed in 2006, the EFL has been increasingly concerned that clubs have been gambling on achieving promotion with promotion to the EPL now estimated to be worth up to £200m (one-year prize money and up to three years of parachute payments).

> "The major issue and the reason to get promoted now is to get relegated….. if you can be in the Premiership with this new money, the gap between the relegated teams and the others in the Championship becomes huge."
>
> David Gold, Birmingham City Chairman
>
> (Guardian, The, 2006)
>
> "If clubs are short of a play-off position around Christmas time they will come under tremendous pressure…… to gamble £4m to £5m because there is £45m waiting…...and could lead clubs to being seduced ……and take risks that they could later regret."
>
> Joe McLean, football analyst Grant Thornton
>
> (Guardian, The, 2006)

Chart 1.41 shows the number of bankruptcies in the Championship only. There were no second-tier club insolvencies during the first century of the EFL's existence. After the 1986 Insolvency Act, we saw the first second-tier club enter administration. Crystal Palace went into administration during the 1998/99 season with debts of £17.7m in 2023 prices and exited under Simon Jordan's Chairmanship and a new company, Crystal Palace F.C. (2000) Ltd.

In the 2000s, insolvencies decreased to nine, with an average debt of £39m in 2023 prices. [74] Four clubs agreed to a CVA to settle their debts. Four were transferred to new companies, and one, Queens Park Rangers, refinanced its debts at a penal interest rate.

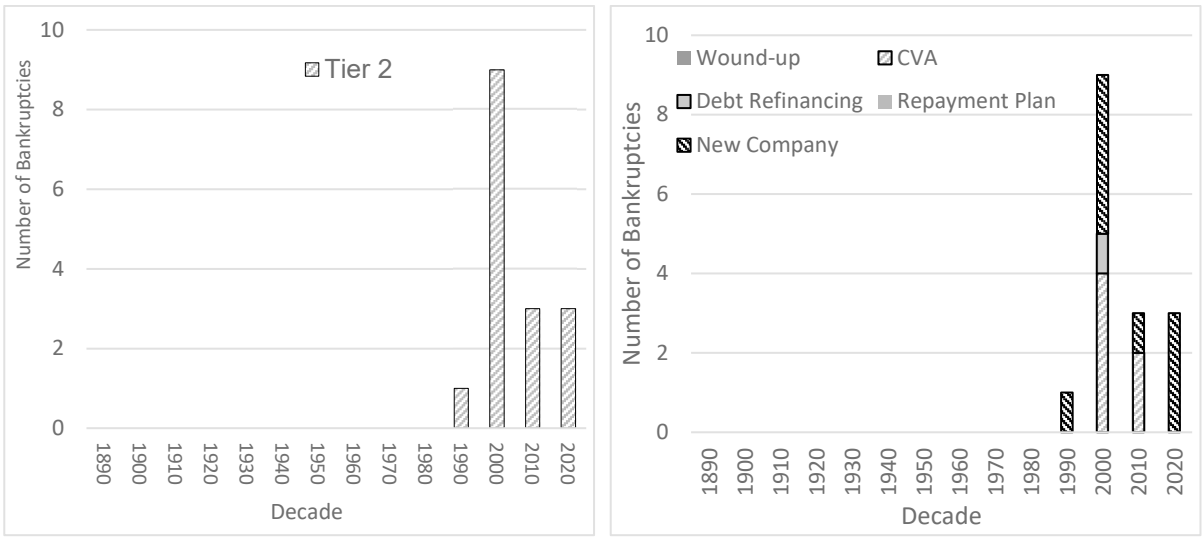

Chart 1.41 - Bankruptcies in the Second Tier of English Football (2000/01 - 2021/22)

It is argued that the moral hazard created by the lure of relative riches in the EPL has led football clubs to increase their risk exposure, which Speer (2022) shows, by a regression discontinuity approach, is worth approximately £200m over seven years.[75] Even if they underperform in the league and are not promoted, the 1986 Insolvency Act has made it easier for it to enter administration and write off substantial amounts of debt, emerging from administration with the football club intact. Even in the worst-case scenario, the club can liquidate and write off its debts completely and reform as a Phoenix club, adopting the club's colours and other aspects of the wound-up club's identity, albeit in non-league.

With the introduction of points deductions for entering administration and Financial Fair Play in the form of the Profitability and Sustainability rules by the EFL, the number of insolvent clubs in the 2010s dropped to two-thirds of the peak during the 2000s but now with an increased average debt of £48.5m in 2023 prices.[76] Two clubs agree to a CVA, and one is transferred to a new company.

---

[74] Queens Park Rangers £11.9m, Bradford City £23m, Leicester City £53.2m, Ipswich Town £95.8m, Wimbledon £0.9m, Derby County £53.2m, Bradford City n/a, Leeds United n/a Southampton £41.2m

[75] In economics, a moral hazard is a situation where an economic actor has an incentive to increase its exposure to risk because it does not bear the full costs of that risk.

[76] Crystal Palace £44.4m, Portsmouth £88.7m, Bolton Wanderers £12.3m

In the first four years of the 2020s, a period seriously impacted by the COVID-19 pandemic, we saw three Championship insolvencies: Derby County and Wigan Athletic (twice), with an average debt of £39.2m in 2023 prices. This time, all three clubs ended in new corporate ownership. [77]

To the best of our knowledge, the only previous academic paper to have considered the financial distress of football clubs, that is, clubs at a high risk of bankruptcy in the very near future, for the English Football League (EFL) Championship was that of Plumley, Serbera, & Wilson (2020).[78] Using Altman's Z_1 and Z_2 scores for seasons 2002-2019, they identified financial distress levels in English football's first and second tiers, specifically referring to the impact of football's Financial Fair Play (FFP) regulations. The z-score is an established method for identifying firms with a high bankruptcy risk in the next twelve months.

Competitive Balance

As Michie & Oughton (2004) have found a positive relationship between player costs and league performance. The player cost disparity funded by parachute payments may be harming competitive balance.

A simple way to look at the impact of parachute payments, financial fair play and the COVID-19 pandemic on competitive balance is to consider the difference in promotion outcomes between the parachute and non-parachute clubs before and after the imposition of the Profitability and Sustainability rules and during the COVID restrictions.

The average position of a parachute club is eleventh. Newcastle United has the highest average position achieved by a parachute club in the Championship (1st), i.e., promoted as champions in their only two appearances in the Championship, followed by Bournemouth, West Bromwich Albion and West Ham United with an average fourth position.

A parachute club has achieved promotion forty times (across twenty-three different teams); on average, 1.3 parachute teams get promoted each season. However, ten parachute teams have been relegated to League 1 (Wigan twice). The most promoted teams while receiving

---

[77] Wigan Athletic £7.4m, Derby County £71m, Wigan Athletic n/a

[78] Data was collected for 43 professional football clubs competing in the EPL and Championship for the financial year 2002-2019. Analysis was conducted using the z-score methodology, and additional statistical tests were conducted to measure differences between groups. Data was split into two periods to analyse club finances pre- and post-FFP. Overall, the financial situation in English football remains poor, which could be exacerbated by the economic crisis caused by COVID-19.

The paper recommends a re-distribution of broadcasting rights on a more equal basis and incentivised with cost-reduction targets. A hard salary cap at the league level is also recommended to control costs. Furthermore, FFP regulations should be revisited to deliver the original objectives of financial sustainability in European football. (Plumley, Serbera, & Wilson, 2020)

parachute payments are West Bromwich Albion, with four, and Sunderland and West Ham United, with three.

Chart 1.42 shows the twenty-seven teams that have bounced back at the first attempt and the average stay in the Championship of a parachute club, either promoted or relegated in a given season. It shows that the parachute clubs have sometimes struggled to get promoted back at the first or even second attempt despite their significant financial advantage:

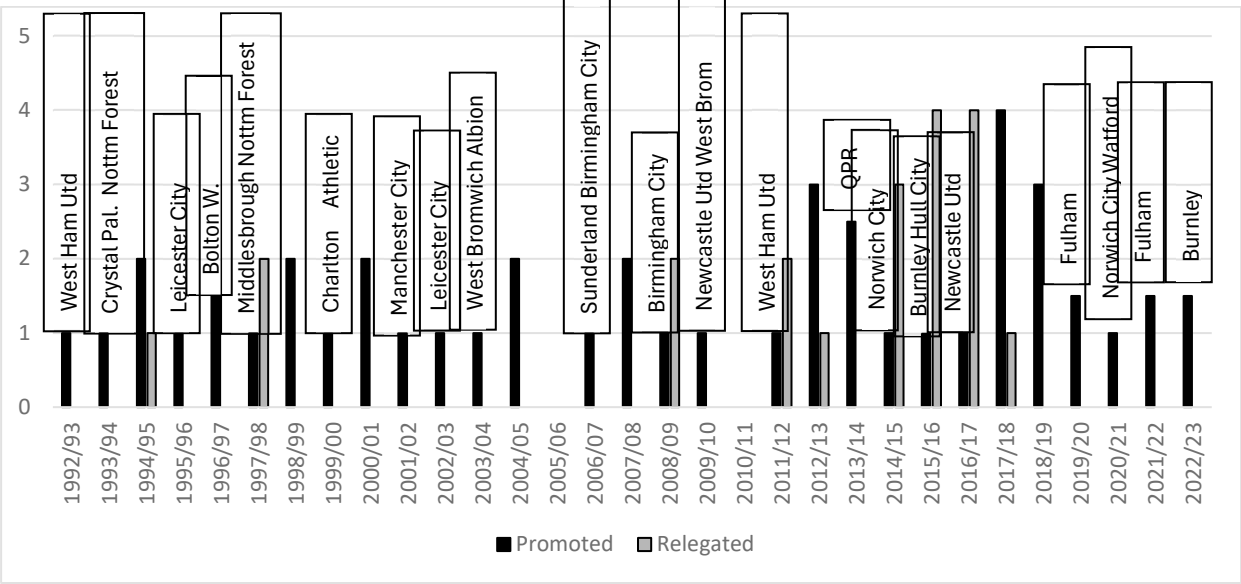

Chart 1.42 - Average tenure of Parachute Clubs

In 1992/93 and 1993/94, the average tenure of the promoted parachute clubs was one year, with West Ham United, Crystal Palace, and Nottingham Forest achieving promotion at the first attempt. In 1994/95, the promoted parachute club, Middlesbrough, was in the second and final year of parachute payments. In 1995/96, Leicester City was promoted after one year in the second tier. In 1996/97, the average tenure of the promoted parachute clubs rose to 1.5 because, along with Bolton Wanderers, which was promoted back at the first attempt, Crystal Palace was promoted whilst in the second year of receiving parachute payments. In 1997/98, Middlesbrough and Nottingham Forest were promoted back at the first attempt. In 1998/99, the promoted parachute club, Sunderland, was in the second and final year of parachute payments.

In 1999/00, Charlton Athletic was promoted back at the first attempt. In 2000/01, the average tenure of the promoted parachute club, Blackburn Rovers, was in the second and final year of parachute payments. Between 2001/02 and 2003/04, the promoted parachute clubs, Manchester City, Leicester City and West Brom, were all in the second tier for only one year. In 2004/05, no parachute clubs were promoted at the first attempt, and those promoted, Sunderland and West Ham, were in the second and last year of parachute payments. In 2006/07, 2008/09, and 2009/10, the promoted parachute clubs, Sunderland, Newcastle

United, West Bromwich Albion and Birmingham City (twice) , were all in the second tier for only one year. Parachute clubs were not promoted in 2005/06 and 2010/11. In 2011/12, parachute payments were extended to three years, but the promoted parachute club, West Ham, were in the Championship for only one year. In 2012/13 and 2013/14, the average parachute club took over 2.5 seasons to be promoted back to the EPL, although in 2013/14, QPR got promoted at the first attempt.

In the pre-P&S period of the EPL era (1992/93 – 2013/14), five parachute clubs were relegated to the third tier, i.e., an average relegation rate of 0.25 per annum. The parachute clubs relegated to third tier in 1997/98, 2008/09, and 2011/12 were all in their final year of parachute payments. However, in 1994/95 and 2012/13, the parachute clubs Swindon Town and Wolverhampton Wanderers were relegated while receiving their first parachute payment. No parachute clubs were relegated between 1992/93 to 1993/94, 1995/96 to 1996/97, 1998/99 to 2008/09, 2009/10 to 2010/11, and 2013/14.

After the imposition of the P&S rules (1014/15-2018/19), the parachute clubs, Norwich City, Burnley, Hull City, and Newcastle United, were all promoted back to EPL at the first attempt between the 2014/15 and 2016/17 seasons. In seasons 2017/18 and 2018/19, the promoted parachute clubs, Fulham, Cardiff City, and Aston Villa, were in the final year of receiving parachute payments.

Four clubs were relegated to Division One in the five years after the imposition of the P&S rules, i.e. an average relegation rate of 0.8 per annum. The parachute clubs relegated to the third tier in 2015/16 and 2016/17 were in their fourth year of parachute payments. In 2014/15, two parachute clubs were relegated, Blackpool was in the fourth year of parachute payments, and Wigan Athletic had received its second of four parachute payments. However, in 2017/18, the parachute club Sunderland was relegated while receiving its first parachute payment. Only in the 2018/19 season was there no Parachute club relegated.

During the COVID-affected seasons, in 2019/20 and between 2021/22 to 2022/23, parachute clubs Burnley and Fulham (twice) were all promoted at the first attempt along with at least one other parachute club, which resulted in an average tenure of 1.5 seasons. In 2020/21, Norwich City and Watford were both promoted at the first attempt.

No Parachute clubs were relegated between 2019/20 to 2022/23.

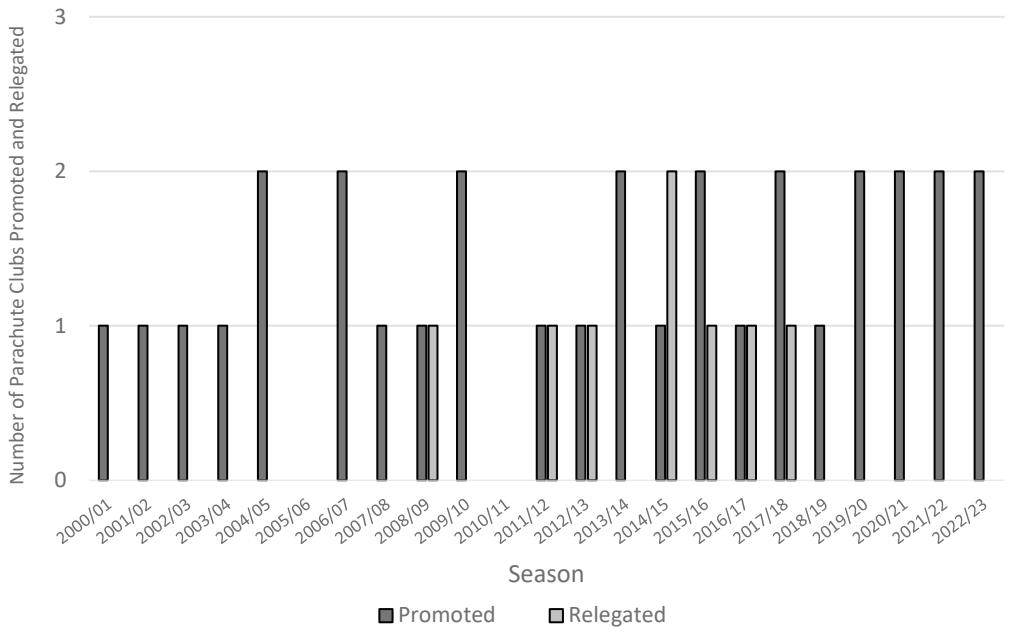

Chart 1.43 - The Number of Parachute Clubs Promoted or Relegated (2000-2023)

Chart 1.43 shows that two parachute clubs have been promoted each year in four out of five seasons since 2018/19, compared to just eight times in the previous twenty-six years. No parachute clubs were relegated between 1992/93 to 1993/94, 1995/96 to 1996/97 and 1998/99 to 2007/08. In contrast, on average, one parachute club was relegated every season in the next ten years, from 2008/09 to 2017/18. No parachute club has been relegated to League One in the five years since 2018/19.

Table 1.7 shows the clubs relegated since 2010/11, how many parachute payments each received, and their current status. For example, Birmingham City received four parachute payments after relegation in 2010/11 and is currently in the Championship. Twelve clubs are still in the Championship, of which three, West Brom, Norwich City, and Watford, are still receiving parachute payments. Of the seven clubs relegated while receiving parachute payments, one is in the EPL, two are in the Championship, and four are still in League One.

In more recent seasons since the COVID pandemic, there may have been a paradigm shift in promotion prospects. In the 2020/21 season, Norwich City and Watford were promoted back to the EPL at the first attempt, and Bournemouth and Swansea City, both parachute clubs, made the playoffs. In 2021/22, Fulham bounced back at the first attempt, whilst Bournemouth made it at their second attempt, and parachute clubs Sheffield United and Huddersfield Town both made the playoffs. In 2022/23, Burnley bounced back at the first attempt, and Sheffield United achieved promotion at their second attempt, but no parachute clubs made the playoffs.

Relegation Season	Club	Status
2010/11	Birmingham City Blackpool West Ham United	Relegated 2023/24 [4] Relegated 2014/15 [4] Promoted 2011/12 [1]
2011/12	Blackburn Rovers Bolton Wanderers Wolverhampton Wanderers	Championship [4] Relegated 2015/16 [4] Relegated to L1 2012/13 [1] Promoted to Championship 2013/14 [1] Promoted to EPL 2017/18 [2]
2012/13	Queens Park Rangers Reading Wigan Athletic	Promoted 2013/14 [1] Relegated 2022/23 [4] Relegated 2014/15 [2]
2013/14	Cardiff City Fulham Norwich City	Promoted 2017/18 [4] Promoted 2017/18 [4] Promoted 2014/15 [1]
2014/15	Burnley Hull City Queens Park Rangers	Promoted 2015/16 [1] Promoted 2015/16 [1] Championship [3]
2015/16	Newcastle United Norwich City Aston Villa	Promoted 2016/17 [1] Promoted 2018/19 [3] Promoted 2018/19 [3]
2016/17	Hull City Middlesbrough Sunderland	Relegated 2019/20 [3] Promoted to Championship 2020/21 [3] Championship [2] Relegated to L1 2017/18 [1] Promoted to Championship 2021/22 [2]
2017/18	West Brom Stoke City Swansea City	Promoted 2019/20 [2] Championship [3] Championship [3]
2018/19	Cardiff City Fulham Huddersfield Town	Championship [2] Promoted 2019/20 [1] Relegated 2023/24 [3]
2019/20	Bournemouth Norwich City Watford	Promoted 2021/22[2] Promoted 2020/21 [1] Promoted 2020/21 [1]
2020/21	Fulham Sheffield United West Brom	Promoted 2021/22 [1] Promoted 2022/23 [2] Championship
2021/22	Burnley Norwich City Watford	Promoted 2022/23 [1] Championship Championship

Table 1.7 -Table of Relegated Clubs 2010/11 - 2021/22 and Current Status

However, the third promotion place in all three seasons was eventually taken by non-parachute clubs. Two of the smallest clubs in the Championship, Brentford (2020/21) and Luton Town (2022/23) were promoted to the EPL for the first time, and Nottingham Forest (2021/22) was promoted to the EPL for the first time since the 1998–99 season. This has helped to preserve the fans' perception of the Championship as one of the world's most competitive leagues.

These observations are consistent with the only academic research we have found into Competitive Balance in the EFL Championship, where Wilson, Ramchandani, and Plumley found that parachute clubs were twice as likely to be promoted to the EPL than non-parachute clubs (2017). Their updated findings for 2017 to 2021 showed that parachute clubs were now three times more likely to get promoted (Matt Hughes, 2022).

Football Regulator

This research is important as it coincides with the creation of an independent regulator for UK football and could provide some insights into future policy. The independent regulator can intervene if the EPL and the EFL fail to agree on a fairer distribution of EPL TV money to the lower leagues, especially as regards the controversial issue of parachute payments.

The football authorities response to an Independent Regulator has been mixed:

> "We don't think that parachute payments are the right mechanism. They obviously indicate there's a problem, but they tackle the symptoms. We don't want clubs facing financial catastrophe - either on the way up or on the way down. What we've always said is we want to address the cliff edge - the gap between the Premier League and the Championship. For the non-parachute clubs, that £100m-plus. That's the gap that is unbridgeable and challenging. We've always said we think that gap should be halved, and if we halve that, then we don't need the parachute payments."
>
> Rick Parry
> EFL Chair
> (Dalleres, 2024)

> "A gap has built up. What I think we are trying to address is to close that gap, specifically between parachute and non-parachute clubs in the Championship, [removing parachute payments] would create significant difficulties for promoted clubs. It would affect the competitive balance of the Premier League."
>
> Richard Masters
> Premier League chief executive
> Presentation to MPs March 2023
> (Short, 2023)

So far, the two parties have failed to agree on any 'new deal', and the regulator will have new backstop powers to resolve that issue. The UK government's position has long been that football creates enough revenues for it to be sustainable, and this was particularly true during the COVID pandemic when, despite requests for exceptional support, none was forthcoming from the government other than the standard furlough payments for staff retention.

> “Whatever we give won’t be enough for them [the EFL]. Tesco don't give the small supermarket chain a subsidy.”
>
> David Sullivan

West Ham owner
(Stone & Jackson, 2024)

David Sullivan feels parachute payments are ‘not big enough’ to help support clubs who suffer relegation and says dropping out of the top flight would be ‘horrendous’ for West Ham after 12 successive seasons in the Premier League.

In response to the European Superleague proposals, twenty-two leading football and media personalities, including former players Micah Richards, Gary Lineker, Jamie Redknapp, and Gary Neville, launched a parliamentary petition to support the creation of an independent regulator for English football (MacInnes, ‘Time to act’: Former players demand independent regulator for football, 2021).

> “As football fans, we were appalled by the attempt to set up a European Super League. It was a direct threat to the integrity of the game…... Now we must make sure this never happens again. Without swift and direct intervention, the return of a European Super League will be a constant threat. We welcome the fan-led Government review of the game ……. It is time to act. We support Government legislation to block any Premier League clubs attempting to abandon the country’s football pyramid [and] the appointment of an Independent Football Regulator.”
>
> Gary Neville
> Former Footballer
> Open Letter to support Parliamentary petition (Neville, 2021)

The Football Supporters Association has warmly welcomed it after an alarming increase in club mismanagement and fan exploitation over the last two decades.

> "The FSA warmly welcomes the tabling of the Football Governance Bill arising from the 2021 fan-led review, and particularly its central proposal to introduce statutory independent regulation of the game. The regulator must be given the power to impose a financial settlement in the interests of the sustainability of the game as a whole. It is far too important to be left to the squabbling between the vested interests of the richest club owners."
>
> Kevin Miles
> Chief Executive of the Football Supporters Association
> (BBC, 2024)
>
> "The regulator must be given the power to impose a financial settlement in the interests of the sustainability of the game as a whole. It is far too important to be left to the squabbling between the vested interests of the richest club owners. The need for a new football regulator is now indisputable. Football cannot continue in the same unsustainable way…… financial flows within the game needs an overhaul. However, redressing the balance cannot be left solely to the leagues themselves - the very organisations that have led us to where we are now……. too many clubs routinely spend way above recommended levels on players' wages. Owners should no longer be allowed to play Russian roulette with the history and traditions of football clubs."

Niall Couper, Director
The Fair Game group
(BBC, 2021)

Powers handed to the regulator will centre around three main objectives: (1) safeguarding English football's heritage with a proposed licensing system covering clubs from the National League to the Premier League. As part of their licence, clubs must consult their fans on key off-field decisions, such as club heritage and its strategic direction. (2) improving the financial sustainability of clubs, ensuring financial resilience across the leagues, and (3) new club owners and directors tests.

The proposed measures included:

- A new independent regulator to address issues most relevant to the risks to the game, especially financial regulation, corporate governance, and ownership.
- Further work was required to ensure greater fan engagement and influence at all levels of governance in the game.
- Suggested that at least 50 per cent of the FA board be composed of independent non-executive directors and other reforms of the EFL and Premier League.
- Give supporters the power of veto through a 'golden share' over important club ‘heritage’ attributes such as badges, location, competitions, and colours.
- Further investigation on revenue flows within the football pyramid, including 'parachute payments', describing it as ‘one of the most difficult issues’ and strongly urging the EPL and EFL to ‘work together to seek a viable, achievable solution’.
- Calls for a joined-up approach from the football authorities to improve player welfare, particularly for players released from the academy system.
- Allowing clubs to operate all-weather pitches in League Two would help generate revenue in lower leagues.
- Suggestion that the English Football League (EFL) enter discussions to absorb the National League top division into the EFL structure.
- A levy on transfer or agent fees could be imposed to support the development of grassroots, amateur, and women's games.
- A separate review into the future of women's football following ‘varied’ evidence on the best way forward.

The response to the proposed regulator has been mixed.

> "If delivered on the right terms, this landmark legislation can help fix the game's broken financial model by offering the independent input ultimately needed to help ensure that all clubs can survive and thrive in a fair and competitive environment."
>
> Rick Parry

EFL Chair
(BBC, 2024)

> "I don't think that the independent regulator is the answer to the question. I would defend the Premier League's role as regulator of its clubs over the past 30 years."

Richard Masters
Premier League chief executive
May 2021, (MacInnes, 'Time to act': Former players demand independent regulator for football, 2021)

> "You have two problems—what we give and who funds it? There is a big argument between the bottom 10, who want the top clubs to pay a lot more, and the top clubs, who want everyone to pay the same. "

David Sullivan
West Ham owner
(Stone & Jackson, 2024)

New club owners and directors will face stronger tests to help prevent the possibility of them putting clubs out of business, as was the case with Bury and Macclesfield, with the consequences for failure including bans and being forced to sell their stakes. The independent football regulator could find itself at loggerheads with the world governing body, FIFA, which explicitly bans government interference and insists that national bodies deal with all football matters if the regulator were to disqualify errant club owners. Such powers may also deter potential investors in English football:

> "This is truly unprecedented and means that football-related disputes would for the first time be heard in public rather than in private, as is generally the case now,….. the potential ability for the regulator to 'disqualify owners/officers'., on paper this could potentially amount to the [unlawful] nationalisation of a club by the regulator where it considers there has been 'persistent and wilful non-compliance'."

Simon Leaf,
a Partner and Head of Sport at Mishcon de Reya.
(Dalleres, 2024)

1.5 Additional Appendices and Tables

Appendix 1.1 - EPL and EFL TV deals for the period (1992/93-2024/25)

English Premier League [79]			English Football League [80]	
Seasons	Domestic	Overseas	Seasons	Domestic
1992/93 - 1996/97	£192m 5 years (£61m p.a.)	£40m 5 years (£8m p.a.)	1992/93 - 1995/96	£24m for 4 years (£6m p.a.)
1997/98 - 2000/01	£670m 4 years (£168m p.a.)	£98m for 4 years (£33m p.a.)	1996/97 - 2000/01	£125m for 5 years (£25m p.a.)
2001/02 - 2003/04	£1,200m 3 years (£400m p.a.)	£178m for 3 years (£59m p.a.)	2001/02 - 2003/04	£315m for 3 years [81] (£105m p.a.) paid £ 137m
2004/05 - 2006/07	£1,024m 3 years (£341m p.a.)	£325m for 3 years (£108m p.a.)	2002/03 - 2005/06	£95m for 4 years [82] (£24m p.a.)
2007/08 - 2009/10	£1,706m 3 years (£569m p.a.)	£650m for 3 years (£217m p.a.)	2006/07 - 2008/09	£110m for 3 years (£37m p.a.)
2010/11 - 2012/13	£1,782m 3 years (£591m p.a.)	£1,437m for 3 years (£479m p.a.)	2009/10 - 2011/12	£264m for 3 years [83] (£88m p.a.)
2013/14 - 2015/16	£3,018m 3 years (£1,016m p.a.)	£2,230m for 3 years (£743m p.a.)	2012/13 - 2014/15	£195m for 3 years [84] (£65m p.a.)
2016/17 - 2018/19	£5,136m 3 years (£1,712m p.a.)	£3,000m for 3 years (£1,033m p.a.)	2015/16 - 2018/19	£360m for 4 years [85] £90m p.a.
2019/20 - 2021/22	£5.1B for 3 years [86] (£1.7B p.a.)	£4.2B for 3 years [87] (£1.4b p.a.)	2019/20 - 2023/24	£595m for 5 years (£119m p.a.)
2022/23 - 2024/25	£5.1B for 3 years [88] (£1.7B p.a.)	TBC		

[79] TV Rights in Football - Premier League Analysis (Sports Business Institute Barcelona, n.d.)
[80] Why clubs may risk millions for riches at the end of the rainbow Stuart James (Guardian, The, 2006)
[81] ITV Digital goes broke (BBC, The, 2002)
[82] Earthquake: The Collapse of ITV Digital (Parkinson , 2022)
[83] FOOTBALL LEAGUE AGREES HISTORIC DEAL WITH SKY SPORTS AND BBC
https://web.archive.org/web/20071215071405/http://www.football-league.premiumtv.co.uk/page/NewsDetail/0%2C%2C10794~1160914%2C00.html
[84] Richard Scudamore takes a big stick to Championship over parachute money
www.theguardian.com/football/2013/may/16/premier-league-championship-parachute-payments
[85] EFL agrees new TV rights deal worth £595m with Sky Sports
www.independent.co.uk/sport/football/football-league/efl-new-tv-rights-deal-worth-ps595m-sky-sports-championship-English-football-league-a8641921.html
Sky Sports extends Football League deal for a further season
www.skysports.com/football/news/11688/9721439/sky-sports-extends-football-league-deal-for-further-season
[86] Premier League confirm new £5.1BILLION TV deal which continues Sky, BT, Amazon and BBC agreement for three more years www.thesun.co.uk/sport/football/14941650/premier-league-tv-deal-sky-bt-amazon-bbc
[87] Overseas deals see Premier League broadcast rights hit UK£9.2bn
www.sportspromedia.com/news/premier-league-tv-rights-value-domestic-international
[88] Premier League extends £5.1bn TV broadcast rights deal to 2025 www.news.sky.com/story/premier-league-extends-tv-broadcast-rights-deal-to-2025-12305022

Appendix 1.2 - Values of Parachute payments 1992/93 – 2022/23

Club | £million Position	**1992/93**	**1993/94**	**1994/95**	**1995/96**	**1996/97**	**1997/98**	**1998/99**	**1999/00**	**2000/01**	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**Total**
Aston Villa																									40.9 13th	34.0 4th	15.5↑ 5th					90.4 7th [1]
Barnsley							1.7 13th	3.7 4th																								5.4 8th
Birmingham City															7.5↑ 2nd		11.8↑ 2nd			15.5 4th	12.3 12th	9.5 21st	10.1 10th								66.7 9th [2]
Blackburn R.								3.7 11th	3↑ 2nd												15.6 17th	19.1 8th	10.1 9th	10.5 15th								62.0 10th [1]
Blackpool																				15.5 5th	12.3 15th	9.5 20th	10.1↓ 24th									47.4 16th
Bolton W.					1.0↑ 1st		1.7 6th	3.7 6th													15.6 7th	19.1 14th	10.1 18th	10.5↓ 24th								61.7 11th [1]
Bournemouth																												43.4 6th	37.9↑ 2nd			81.3 4th [1]
Bradford City										4 15th	5 19th																					9.0 17th
Burnley																			15.0 8th	12.2 13th	5.8 11th	9.5↑ 2nd		25.9↑ 1st							45.0↑ 1st	113.4 7th [2]
Cardiff City																							25.0 11th	20.8 8th	16.3 12th	16.6↑ 2nd		42.6 5th	35.5 8th			156.8 8th [1]
Charlton Athletic								3.7↑ 1st								11.4 11th	11.8↓ 24th															26.9 12th [1]
Coventry City										4 11th	5 20th																					9 15th
Crystal Palace		0.7↑ 1st		0.4 3rd	1.0↑ 6th		1.7 14th	3.7 15th						6.5 6th	7.5 12th																	21.5 8th [2]
Derby County											5 18th	5 20th					11.8 18th	12.4 14th														34.2 18th
Fulham																							25.0 17th	20.8 20th	16.3 6th	16.6↑ 3rd		42.6↑ 4th		44.4↑ 1st		165.7 9th [2]
Huddersfield T.																												42.6 18th	35.5 20th	16.1 3rd		94.2 13th
Hull City																			15.0 11th	12.2 8th	5.8↑ 2nd			25.9↑ 4th		41.6 18th	34.9 13th					135.4 9th [2]
Ipswich Town				0.4 7th	1.0 4th						5 7th	5 5th																				11.4 6th
Leeds Utd													6.5 14th	6.5 5th																		13 10th
Leicester City				0.4↑ 5th							5↑ 2nd		6.5 15th	6.5 16th																		18.4 10th [2]
Luton T.	0.7 20th	0.7 20th																														1.4 20th
Manchester City					1.0 14th	1.5↓ 22nd				4↑ 1st																						6.5 12th [1]
Middlesbrough		0.7 9th	0.4↑ 1st			1.5↑ 2nd												12.4 11th	15.0 12th	4.0 7th						41.6 5th	34.9 7th					110.5 7th [2]
Newcastle Utd.																		12.4↑ 1st							40.9↑ 1st							53.3 1st [2]
Norwich City				0.4 16th	1.0 13th									6.5 9th	7.5 16th								25.0↑ 3rd		40.9 8th37.9	34.0 14th				43.4↑ 1st		45.0 13th	203.7 9th [2]
Nottingham F.		0.7↑ 2nd				1.5↑ 1st		3.7 14th	3 11th																							8.9 7th [2]
Notts C.	0.7 17th	0.7 7th																														1.4 12th

Oldham A.			0.4 14th	0.4 18th																												0.8 16th
Portsmouth																			15.0 16th	12.2↓ 22	5.8 L1											33.0 19th
Queens Park R.					1.0 9th	1.5 21st																24.4↑ 4th		25.9 12th	31.2 18th	16.6 16th	17 19th					117.6 14th [1]
Reading																	11.8 4th	12.4 9th				24.4 7th	20.1 19th	10.5 17th	16.3 3rd						95.5 10th
Sheffield United			0.4 8th	0.4 9th												11.4 9th	11.8 3rd													44.4 5th	35.5↑ 2nd	103.9 6th [1]
Sheffield W.									3 17th	4 20th																						7.0 18th
Southampton														6.5 12th	7.5 6th																	14.0 9th
Stoke City																											42.6 16th	34.9 15th	15.8 14th			93.3 15th
Sunderland						1.5 3rd	1.7↑ 1st					5 3rd	6.5↑ 1st		7.5↑ 1st										41.6↓ 24th	34.9 L1	15.5 L1					114.2 13th [3]
Swansea City																										42.6 10th	34.9 6th	15.8 4th				93.3 6th
Swindon Tn.			0.4↓ 21st	0.4 D2																												0.8 21st
Watford									3 9th	4 14th						11.4 6th	11.8 13th												43.4↑ 2nd		45.0 11th	118.6 18th [1]
West Brom												5↑ 2nd			7.5 4th	11.4↑ 1st			12.4↑ 2nd							42.6 4th	34.9↑ 2		44.4 10th	35.5 9th	193.7 4th [4]
West Ham	0.7↑ 2nd											5 4th	6.5↑ 6th							15.5↑ 3rd												27.7 4th
Wigan Athletic																						24.4 5th	20.1↓ 23rd	10.5↑ L1	16.3↓ 23rd							71.3 19th
Wimbledon									3 8th	4 9th																						7 9th
Wolverhampton W													6.5 9th	6.5 7th							15.6↓ 23rd	19 L1	10.1 7th	10.5 14th								68.2 14th
Total Payments *No of teams*	2.1 3	3.5 5	1.6 4	2.8 7	6.0 6	7.5 5	6.8 4	22.2 6	15.0 5	24.0 6	25.0 5	25.0 5	32.5 5	39.0 6	45.0 6	45.6 4	70.8 6	62.0 5	60.0 4	87.1 7	88.8 8	158.9 9	165.7 10	171.8 10	219.1 8	242.6 8	265.0 8	248.0 7	232.8 7	187.2 5	206.0 5	2769.4 44
Source[89]	a.										b.					c.		d.		e.		f.	g.	h.	i.	j.	k.					

[89] a. (Simon De Montforte, 2012) b. (The Guardian, 2007) c. (Premier League Football, 2015) d. (Sporting Intelligence, 2010) e. (The Independent, 2013) f. (Pearson Blog, 2013) g. (Daniel Grey, 2015) h. (Backpage Football, 2016) i. (My London, 2017) j. (Leeds Live, 2018) k. (Wikipedia, 2021)

Appendix 1.3 - Comparison of Broadcasting Rights across Europe

League	Domestic					International Rights				
	Previous Deal	€m / season	Latest Deal	€m / season	% growth per game		€m / season	Latest Deal	€m / season	% growth
EPL	2016/19	2,034	2019/22	1,884	-22%				1,582	
La Liga	2016/19	883	2019/22	1,140	+29%	2016/19	690	2019/24	897	+30%
Bundesliga	2013/17	627	2017/21	1,160	+85%				240	
Serie A	2015/18	1,067	2018/21	973	-9%				371	
Ligue 1	2016/20	726	2021/24	1,153	+59%				80	

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1893/94	Bootle F.C.	-	Resigns and wound-up	1	Div. 2 (2)	1892/93
	Middlesbro. Ironopolis	Div. 2 (2)	Resigns and wound-up	-	-	-
1895/96	Accrington F.C.	Non-league	Resigns mid-season and wound up	3	Div. 1 (1)	1892/93
	Rotherham Town	Div. 2 (2)	Relegated and wound-up	-	-	-
1898/99	Darwen F.C.	Div. 2 (2)	Resigns and wound-up	-	-	-

Appendix 1.4 - Insolvency of Football Clubs for 1893/94 – 1898/99[90]

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1899/00	Loughborough F.C.	Div. 2 (2)	Relegated and wound-up	-	-	-
1900/01	New Brighton Tower	Div. 2 (2)	Resigns and wound-up	-	-	-

Appendix 1.5 - Insolvency of Football Clubs for 1899/00 – 1908/09[91]

[90] Bootle F.C entered the 1893/94 FA Cup but withdrew from the competition before their first qualifying tie with Stockport County was played when the club passed a resolution to liquidate in August 1893 (Liverpool Mercury, 1893). The club had formed a limited liability company to access debt to build new stands in the late 1880s. However, on joining the league in 1892/93, their crowds were lower than those achieved in non-league football, and in their only season in the Football League, their expenditure of £2,198, half of which was wages, exceeded the clubs' income of £1,355 and the club lost £843 (£90,000 today). Although the club had finished a credible eighth in the table at the end of the 1892/93 season, the club had chosen to resign from the Football League and did not apply to rejoin non-league football for the 1893/94 season (Liverpool Mercury, 1892).

Despite finishing a credible 11th (out of 15) in Division Two in their only season in the Football League, Middlesbrough Ironopolis resigned at the end of the 1893/94 season. The club needed help to cover player wages and the high travel costs from the northeast. Now homeless after being evicted from their home ground, at the end of the season (Darlington Northern Echo, 1894), the club decided not to rejoin non-league football, choosing to disband instead (Darlington Northern Echo, 1894).

For financial reasons, Accrington F.C. had to resign from the non-league Lancashire Combination midway through the 1895/96 season. In 1892/93, after finishing fifteenth and losing a play-off match with Sheffield United, Accrington resigned from the Football League rather than drop to the newly formed Division Two. When it did try to rejoin the Football League Division Two in 1894/95, the club failed to be re-elected. The club's debts soon became insurmountable in non-league football, and the club was liquidated shortly after resigning from the Lancashire Combination (Manchester Courier, 1895).

At the end of the 1895/96 season, Rotherham Town did not apply for re-election to the Football League after finishing bottom of Division Two. After not seeking re-election to the Football League and choosing not to return to non-league football, Rotherham Town was liquidated with debts of £77 (£8,500 today) (Sheffield and Rotherham Independent, 1896).

Darwen F.C resigned from the Football League at the end of the 1898/99 season. The club, the original pioneer of professional football, had been in the league from 1891/92. With mounting losses, the club became a limited company in 1896 (Blackburn Standard, 1896). Rather than rejoin non-league football, the club liquidated with debts of £1,192 (£121,000 today) instead (Blackburn Standard, 1899). A new club was formed (Blackburn Standard, 1899) and played in non-league football until the High Court winded it up in May 2009 (Lancashire Telegraph, 2009). A Phoenix club, AFC Darwen, now plays in the West Lancashire League (The Non-League Football Paper, 2012).

[91] Loughborough F.C. finished bottom of Football League Division 2 in the 1899/1900 season and failed to be re-elected. Although the club applied to rejoin the Midland League for the 1900/01 season, they failed to meet with the league and were declared defunct in June 1900. Loughborough F.C. conceded

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1914/15	Chesterfield Town	Non-league	Wound-up during wartime suspension	6	Div. 2 (2)	1908/09

Appendix 1.6 – Insolvency of Football Clubs for 1909/10 – 1918/19[92]

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1919/20	Leeds City	Div. 2 (2)	Expelled and wound-up	-	-	-

Appendix 1.7 – Insolvency of Football Clubs for 1919/20 – 1928/29[93]

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1931/32	Wigan Borough	Div 3N (3)	Resigns mid-season and wound up	-	-	-
	Thames AFC	Div 3S (3)	Relegated and wound-up	-	-	-

Appendix 1.8 – Insolvency of Football Clubs for 1929/30 – 1938/39[94]

100 goals, won only one match, and amassed just 8 points from 34 games, a record that remains and had debts of around £210 (£21,000 today) when they were declared defunct. Loughborough F.C. conceded 100 goals, won only one match, and amassed just 8 points from 34 games—a record that remains to this day.

At the end of the 1900/01 season, New Brighton Tower resigned from the Football League despite very respectable fourth and fifth finishes (out of 18) in Division Two (Runcorn Guardian, 1901). The club had formed in 1896 to occupy an existing stadium, won the Lancashire League in 1897/98 and was elected to the Football League in 1898/99; however, their low gates could not sustain the player's wages, which included some international players. The club chose not to rejoin the non-league Lancashire League and to liquidate (Ashbourne News, 1901)

[92] Chesterfield Town was not re-elected to the League at the end of the 1908/09 season after finishing at the bottom of the Division for the previous three seasons. The club chose to return to the Midland League, but due to wartime restrictions on organised football, the club was liquidated in 1915 with debts of £600 (£51,000 today) (Derby Evening Telegraph, 1915). A new Chesterfield FC was immediately formed and competed in the Midland Combination with 'guest players' from Football League clubs but was disbanded in 1917 following a scandal over illegal payments to 40 players.

[93] Leeds City was the first club to be expelled eight games into the 1919/20 season, with Port Vale assuming Leeds City's results to date and taking over their remaining fixtures (Birmingham Sports Argus, 1919). During the Great War, the club won the Football League (Midland Section) title twice in 1916/17 and 1917/18. However, after the war, the club was investigated for breaking the wartime ban on paying players. When the club's directors failed to cooperate with the F.A. inquiry, the club was dissolved in October 1919, and the club's assets and players were auctioned off (Nottingham Evening Post, 1919).

[94] During the 1931/32 season, Wigan Borough became the first club to resign from the Football League mid-season when the club could no longer pay the players wages due to the effects of the October 1929 Wall Street (Stock Market) Crash which caused the Great Depression (1929-1939) which saw British exports fall by half and unemployment rose to around 2.75 million people, with the coal, iron, steel, and

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1965/66	Accrington Stanley	Non-league	Resigns mid-season and wound up	4	Div. 4 (4)	1961/62

Appendix 1.9 – Insolvency of Football Clubs for 1959/60 – 1968/69 [95]

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1973/74	Bradford Park Avenue	Non-league	Wound-up	4	Div. 4 (4)	1969/70

Appendix 1.10 - Insolvency of Football Clubs for 1969/70 – 1978/79 [96]

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1983/84	Bradford City	Div. 3 (3)	Tax repayment plan	6	Div. 3 (3)	1977/78
	Charlton Athletic	Div. 3 (3)	New Company	4	Div. 2 (2)	1979/80
1985/86	Middlesbrough	Div. 3 (3)	New Company	4	Div. 2 (2)	1985/86
The 1986 Insolvency Act (1986/87)						
1986/87	Tranmere Rovers	Div. 4 (4)	New owner	8	Div. 3 (3)	1978/79
	Rotherham United	Div. 3 (3)	CVA	4	Div. 2 (2)	1982/83

Appendix 1.11 - Insolvency of Football Clubs for 1979/80 – 1988/89 [97]

shipbuilding industries the most affected. The club folded in October 1931 with debts of around £30,000 (£1.7m today) (Hull Daily Mail, 1931).

Thames AFC did not seek re-election after finishing bottom at the end of the 1931/32 season. The club had been formed in 1928 to occupy an existing greyhound stadium with a capacity of 120,000. After its election to the league in 1930/1931, the club finished 20th out of 22 but struggled to attract spectators. In December 1931, the players had to take a pay cut to prevent the club from folding mid-season (Northern Whig, 1931). Rather than rejoin the non-leagues, the club was liquidated instead.

[95] During the 1961/62 season, Accrington Stanley became only the second team to resign mid-season, owing £4,000 in unpaid transfer fees and £4,000 to the Inland Revenue (today £143,000). Although the club did carry on as a non-league club for a few years, it was eventually liquidated in 1966 (BBC, 2014). A phoenix club has since joined the Football League and competes in EFL's Division Two after being relegated from Division One in the 2022/23 season.

[96] In 1974, Bradford Park Avenue was liquidated with debts of just under £58,000 (£0.5m today) (Parker, 2010). The club had not recovered after relegation from League Division 4 in the 1969/70 season and was forced into selling the Park Avenue home in 1973. A Phoenix club now competes in the National League North.

[97] In the 1983/84 season, Bradford City went into administration owing HMRC £400,000 (£1.3m today). The club exited administration when a consortium led by former chairman Stafford Heginbotham agreed on a repayment plan with HMRC and received a £200,000 City Council grant (Manchester Evening News, 1983).

In March 1984, Charlton Athletic entered administration with debts of £1m (£3.2m today). A new company, Charlton 1984, (Company number 01788466) cleared the club's debts (Western Daily Press, 1984).

In May 1986, Middlesbrough had borrowed £30,000 from the Professional Footballers' Association (PFA) to pay wages, but on relegation to the third tier, the club called in the Receivers. A consortium including ICI, Newcastle Breweries, ex-director Steve Gibson and London Businessman Henry Moszkowicz (Sunday Mirror, 1986) raised £350,000 for the 1986–87 Football League registration, and

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
1991/92	Aldershot F.C.	Div. 4 (4)	Folds mid-season	16	Div. 3 (3)	1975/76
	Northampton Town	Div. 4 (4)	CVA	2	Div. 3 (3)	1989/90
1992/93 – English Premier League Is Created						
1992/93	Maidstone United	Div. 4 (4)	Resigns and folds	-	-	-
1993/94	Hartlepool United	Div. 3 (3)	CVA	25	Div. 3 (3)	1968/69
	Barnet F.C.	Div. 3 (3)	CVA	-	-	-
1994/95	Exeter City	Div. 3 (3)	CVA	10	Div. 2 (2)	1983/84
	Gillingham	Div. 4 (4)	CVA	6	Div. 3 (3)	1988/89
1996/97 - Bosman Ruling on Player Registrations						
1996/97	Millwall	Div. 3 (3)	CVA	1	Div. 1 (2)	1995/96
	Bournemouth	Div. 3 (3)	Community takeover	7	Div. 2 (2)	1989/90
	Doncaster Rovers	Div. 4 (4)	CVA and sold to New Co	9	Div. 3 (3)	1987/88
1998/99	Chester City	Div. 4 (4)	CVA and sold to New Co	4	Div. 2 (2)	1994/95
	Portsmouth	Div. 3 (3)	Sold to New Company	11	Div. 1 (1)	1987/88
	Crystal Palace	Div. 2 (2)	Sold to New Company	1	EPL (1)	1997/98

Appendix 1.12 - Table of Insolvent Football Clubs (1989/90 – 1998/99) [98]

a new company, Middlesbrough Football and Athletic Club (1986) Ltd. was formed to take over the club operations (Boro The Official Website, 2012).

In August 1986, Tranmere Rovers club went into administration after years of decline since relegation to Division Four in 1979. The club was saved when local businessman Peter Johnson took ownership (Tranmere Rovers, 2024) (Liverpool Echo, 1987).

In April 1987, Rotherham United went into administration and emerged from administration in July 1987 after a CVA was agreed (May 1987-December 1993), the first time we find of one used by a football club (Company number 00158654).

[98] In March 1992, Aldershot F.C. was liquidated after becoming the last to resign from the League mid-season, with 'staff and nine remaining players not having been paid for three months' (Liverpool Echo, 1992).

In April 1992, Northampton Town went into Administration with debts of around £1.6m (£3.4m today). The club exited administration after sacking ten players and agreed to a CVA (February 1994-July 1998) (Company number 00183917), and, for the first time provided a place on the board for the new supporter's trust (Guardian, 2015).

At the start of the 1992/93 season, Maidstone United had debts of £650,000 (£1.4m today) despite having sold most of their team. Following their eviction from their shared ground, the club could not fulfil its first fixtures with only two players and had to resign from the Football League (The Independent, 1992).

In May 1993/94 season, Hartlepool faced a winding-up order of £260,000 in debt (£525,000 today) (Darlington Northern Echo, 2009). Several players were released or sold, a CVA was agreed upon (May 1994-September 1997), and local businessman Harold Hornsey took over the club in 1994 (Company number 00098191).

In February of the 1993/94 season, Barnet F.C. owner Stan Fleshman retired as Chairman, leaving the players unpaid. The club avoided bankruptcy under new owners, and a CVA agreed (1994- 1997) (Company number 01239681).

In the November 1994/95 season, Exeter City entered administration with reported debts of £1.2m (£2.4m today) in March 1995. To relieve their financial situation, the club sold their stadium for £650,000 (Western Morning News, 2014). The club emerged from administration in July 1996 (Company number 00097808).

In January of the 1994/95 season, Gillingham went into voluntary administration to avoid expulsion from the EFL (Gillingham FC, 2009) after a £1 million (£2m today) rescue package did not materialise (Staffordshire Sentinel, 1995). However, Dubai-based businessman Paul Scally bought the club in June 1995, and a CVA was agreed upon (July 1995-February 1996) (Company number 00039175)

In January of the 1996/97 season, Millwall went into voluntary administration and suspended share trading following its relegation to the third tier at the end of the previous season (The Scotsman, 1997). In June 1998, Millwall F.C. came out of administration after a CVA was agreed (1997-2000) (Company number 01924222).

Bournemouth was forced into administration in January of the 1996/97 season when HMRC issued a winding-up petition. The club's debts were reported at £4.5 million; Lloyds Bank owed £2.1 million and HMRC £350,000 (Bournemouth Echo, 2022). The club made twelve staff redundant, and a CVA was agreed upon (April 1997- January 2010) (Company number 00137401). In June 1997, it became Europe's first community-owned club.

In June of the 1996/97 season, Doncaster Rovers faced an administrative order in June 1997 after owner Ken Richardson withdrew his financial backing. The club exited administration in October 1997 after the better players were either sold or left the club, and a CVA was agreed on in (October 1997-November 1998) (Company number 00170192). The Westferry Consortium took over the club for £4.5m (£8.6m today) in August 1998 (Belle Vue and Westferry/Dinard, 2012). Just weeks after Rovers were relegated, Richardson was found guilty of trying to set fire to the Rovers ground, apparently hoping to pay off the club's debts with the insurance money.

In the October 1998/99 season, Chester City went into voluntary administration, having already sold their Sealand Road ground in 1990 to clear debts. The club exited administration in May 2000 after a CVA was agreed upon (July 1999-June 2004) (Company number 02998020) and was bought by the ex-American football pro-Terry Smith in July 1999 (When Saturday Comes, 2000).

Portsmouth entered voluntary administration in December of the 1998/99 season. The club emerged from administration in May 1999 when Serbian-born US businessman Milan Mandarić's Portsmouth City Football Club Limited (Company number 03747237) bought it for £4.5m (The News, 2022).

In February 1998/99 season, Crystal Palace entered voluntary administration with debts of £8m (£17.7m today). New owner Mark Goldberg could no longer bankroll the club after relegation from the EPL the season before (BBC, 1999). Palace emerged from administration in July 2000 when Simon Jordan bought the club for around £10m (£18.2m today) (Red N Blue Army, 2017) and a new company, Crystal Palace F.C. (2000) Ltd. (Company number 03951645), took over football operations.

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
2000/01 - The Collapse of ITV Digital						
2000/01	Hull City (1)	Div. 4 (4)	New shareowner	5	Div. 2 (3)	1995/96
	Queens Park Rangers (1)	Div. 2 (2)	Debt refinancing	5	EPL (1)	1995/96
2001/02	Bury (1)	Div. 3 (3)	CVA	3	Div. 1 (2)	1998/99
	Halifax Town (1)	Div. 4 (4)	CVA	9	Div. 4 (4)	1992/93
	Bradford City (2)	Div. 2 (2)	CVA and new shareowner	1	EPL (1)	2000/01
2002/03	Notts County (1)	Div. 3 (3)	Sold to New Company	6	Div. 2 (3)	1996/97
	Barnsley (1)	Div. 3 (3)	Sold to New Company	1	Div. 1 (2)	2001/02
	Leicester City (1)	Div. 2 (2)	CVA and sold to New Co.	1	EPL (1)	2001/02
	Port Vale (1)	Div. 3 (3)	Sold to Fan Company	3	Div. 1 (2)	1999/00
	York City (1)	Div. 4 (4)	CVA and sold to Fan Co.	4	Div. 2 (3)	1998/09
	Ipswich Town (1)	Div. 2 (2)	CVA	1	EPL (1)	2001/02
	Wimbledon (1)	Div. 2 (2)	Sold to New Company	3	EPL (1)	1999/00
	Luton Town (1)	Div. 3 (3)	CVA and sold to New Co.	2	Div. 2 (3)	2000/01
2003/04	Oldham Athletic (1)	Div. 3 (3)	Sold to New Company	7	Div. 1 (2)	1996/97
	Derby County (1)	Div. 2 (2)	New Shareholder	2	EPL (1)	2001/02
	Darlington (1)	Div. 4 (4)	CVA and sold to New Co.	12	Div. 3 (3)	1991/92
	Bradford City (3)	Div. 2 (2)	Sold to New Company	3	EPL (1)	2000/01
	Exeter City (2)	Non-league	CVA	1	Div. 3 (3)	2002/03

Appendix 1.13 - Table of Insolvent Football Clubs (1999/00 – 2004/05) [99]

[99] In April of the 2000/01 season, Queens Park Rangers, listed on the Alternative Investment Market since 1991, entered voluntary administration with debts of £6.7m (£11.9m today) to former chairman Chris Wright. QPR exited administration in May 2002 (Company number 00060094) after receiving a £10m (£17.7m today) high-interest emergency loan from a 'mysterious Panamanian outfit called ABC', (The Independent, 2007) and Chris Wright, the former owner and main creditor, agreed to write off half of the £6.7m (£11.9m today) he was owed (QPR Report Message Board, 2009).

In February **2000/01** season, Hull City was locked out of Boothferry Park by bailiffs for rent arrears and went into administration when HMRC issued a High Court winding-up order with debts of £1.8m (£3.3m today) (The Guardian, 2008). Adam Pearson, former Leeds United Commercial Director, bought the club.

In April **2001/02** season, Halifax Town went into administration after relegation from the Football League. They came out of administration after a CVA was agreed upon (2003-2008) (Company number 00116844) with support from ten local businessmen and the club's supporters trust (Halifax Courier, 2018).)

In December **2002/03** season, *York City* entered voluntary administration with debts of £180,000 (£319,000 today) to HMRC (The York Press, 2002). They exited administration with a CVA, which saw HMRC accept a £100,000 (The York Press, 2003), and a new supporter's trust-owned company, York City Football Club Limited, took over club operations (Company number 04689338).

In December **2003/04** season, Darlington entered voluntary administration with debts of £20m (£35m today) to protect itself from some 30% interest rate loans used for a new stadium. *They* escaped administration with an agreed CVA, paying some creditors just 0.5p in the pound, and the Sterling Consortium bought the club for £2.5m. A new company, Darlington FC Ltd (Company number 05074229), took over club operations.

In March of the **2001/02** season, Bury went into voluntary administration with debts of £2.6m (£4.6m today). They came out of administration after a CVA was agreed (2002-2006) (Company number

00053268), and a supporters' campaign raised enough money to keep the club afloat (The Independent, 2002).

In May **2001/02** season, Bradford City went into administration for the second time with debts of £13m (£23m today). They exited administration in January 2003 after a CVA was agreed upon (2002-2007) (Company number 01732784), and the Rhodes family and chairman Gordon Gibb took over.

In June **2002/03** season, Notts County went into voluntary administration with debts of £6m (£10.6m today) (BBC, 2003). They exited the league's most prolonged period in administration (18 months) when Meadow Lane Ground was sold for £3m and leased back (The Independent, 2003). A new company, *Blenheim 1862 Limited* (Company number 04789632), took over club operations and the old company was dissolved.

In the 2002/03 season, Barnsley faced a similar financial predicament, entering voluntary administration with debts of £3.5m (£6.2m today) (Barnsley Chronicle, 2022). However, the club's fate took a different turn in November when Mayor Peter Doyle purchased it. Under the new ownership, a limited company, Barnsley Football Club 2002 Limited, was established to take over the club's operations (Company number 04573250).

In December **2002/03** season, Port Vale entered voluntary administration with debts of £2.4m (£4.3m today) (BBC, 2002). They exited administration (BBC, 2003) when a new supporters trust-owned company, Port Vale (Valiant 2001) Football Club Limited, took over club operations (Company number 04669703).

In July **2002/03** season, Luton Town was forced into administration by their supporter's trust to oust an unpopular owner with debts of £500,000 (£887,000 today) (The Guardian, 2003). In May 2004, they agreed to a CVA, and former general manager Bill Tomlins took over club operations through a new company, *Kenilworth Road Football Club Limited* (Company number 04977080).

In October **2002/03** season, Leicester City went into voluntary administration with debts of £30m (£53.2m today) (BBC, 2002). They came out of administration in April 2004 after a CVA was agreed (2003-2007), and football operations were transferred to a new Limited Company, *Leicester City Football Club PLC*. The old company was dissolved in April 2004.

In February of the **2002/03** season, Ipswich Town (The Independent, 2003) entered voluntary administration with debts of £54m (£95.8m today). They came out of administration after a player fire sale and a CVA was agreed (2003-2006) (Company number 00315421), which saw secured creditors receive 50p in the pound (The Guardian, 2003), and unsecured creditors 5p in the pound (East Anglian Daily Times, 2003).

In June of the **2002/03** season, Wimbledon went into voluntary administration with debts of £525,000 (£931,000 today) to HMRC (The Telegraph, 2003), a year after relocating to Milton Keynes, They came out of administration when Peter Winkelman paid £2.85m (£5.1m today) (The Guardian, 2004), became MK Dons and a new limited company, *Milton Keynes Dons Limited* took over club operations (Company number 04787003).

In August **2003/04** season, Oldham Athletic went into administration with debts of £1.2m (£2.1m today) when a winding-up order was issued by HMRC (The Guardian, 2003). In February 2004, the club was bought by Simon Blitz and partners (BBC, 2004), and a new company, *Oldham Athletic (2004) Association Football Club Limited*, took over club operations (Company number 04989487) and the old company was dissolved.

In October of the 2003/04 season, Derby County, £30m in total debt (£53.2m today), was temporarily forced into administration by The Co-operative Bank to recover the £27m owed to it. They exited administration within hours when the bank approved the sale of the club's shares for just £3 and a £15m loan at 10% interest (The Guardian, 2003) from the Panamanian ABC Corporation to settle the Bank's debt.

In October 2003/04 season, Exeter City faced administration for the second time, £4 million in debt (£7.0 m today). In September 2003, the Exeter City Supporters Trust bought a majority shareholding and agreed to a CVA (Company number 00097808), paying 10 pence in the pound over the next five years to save it from administration.

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
2004/05 - Point Deductions were Introduced for Going Into Administration						
2004/05	Wrexham (1)	Lge 1 (3)	CVA	3	Div. 2 (3)	2001/02
	Cambridge United (1)	Lge 2 (4)	CVA	3	Div. 2 (3)	2001/02
	Northwich Victoria (1)	Non-league	Sold to New Company	111	Div. 2 (2)	1893/94
2005/06	Rotherham United (2)	Lge 1 (3)	CVA and New Company	1	Champ (2)	2004/05
2006/07	Scarborough (1)	Non-league	Wound-up in non-league	7	Div. 3 (4)	1998/99
	Leeds United (1)	Champ. (2)	CVA and New Company	3	EPL (1)	2003/04
	Boston United (1)	Lge 2 (4)	CVA and New Owner	-	-	-
2007/08	Halifax Town (2)	Non-league	Wound-up in non-league	6	Div. 3 (4)	2001/02
	Luton Town (2)	Lge 1 (3)	Sold to Fan Backed Co.	1	Champ (2)	2006/07
	Bournemouth (2)	Lge 1 (3)	New Company	6	Div. 2 (3)	2001/02
	Rotherham United (3)	Lge 2 (4)	New Company	1	Lge 1 (3)	2006/07
2008/09	Darlington (2)	Lge 2 (4)	CVA and New Owner	17	Div. 3 (3)	1991/92
	Southampton (1)	Champ. (2)	Sold to New Company	4	EPL (1)	2004/05
	Stockport County (1)	Lge 1 (3)	CVA and New Company	4	Lge 1 (3)	2004/05
	Northwich Victoria (2)	Non-league	Wound-up in non-league	115	Div. 2 (2)	1893/94

Appendix 1.14 - Table of Insolvent Football Clubs (2004/05 – 2008/09) [100]

In December **2003/04** season, Darlington entered voluntary administration with debts of £20m (£35m today) to protect itself from some 30% interest rate loans used for a new stadium. *They* escaped administration with an agreed CVA, paying some creditors just 0.5p in the pound, and the Sterling Consortium bought the club for £2.5m. A new company, Darlington FC Ltd (Company number 05074229), took over club operations.

In February **2003/04** season, *Bradford City* went into voluntary administration for the third time when the owners defaulted on the 2002 CVA payments (BBC, 2004). They emerged from administration when Julian Rhodes took over sole control of the club. A new company, Bradford City Football Club Ltd. (Company number 05102915), took over the club's operations, and the old company was dissolved in 2015.

[100] At the end of the 2004/05 season, Northwich Victoria went into administration with around £500,000 owed to HMRC (£860,000 today), 112 years after they were relegated from the Football League. Club operations transferred to a new company, Northwich Victoria Football Club (2004) Limited (Company number 05193661). However, the club failed to meet the deadline for Conference registration and accepted a voluntary demotion to the Conference North rather than expulsion (Sports Lens, 2008).

Wrexham (1) - In December 2004 the club went into administration with the club £2.6 million in debt (£4.5m today), £ 800,000 of which was owed to HMRC (£1.4m today). The club was deducted ten points resulting in its relegation (The Times, 2005). They exited administration (Irish Independent, 2006) after a CVA was agreed (May 2006-May 2016) (Companies House).

In April 2005, Cambridge United went into administration on relegation to the Football Conference with debts of £900,000 (£1.6m today) (BBC, 2005) They sold their Abbey Stadium in November 2004 for £1.9 million (£3.3 million today). They exited administration after a CVA was agreed (July 2005-February 2006) (Company number 00482197).

Rotherham United (2) - During the **2005/06** season, *Rotherham United,* with a funding gap of £140,000 per month and having already sold their ground to clear £3m of debt, were rescued with new investment from local businessmen, transfer to a new company, Rotherham United FC Limited (Company number

05764000), and agreeing to a CVA (May 2006-September 2010) (Company number 00158654), for which the club was docked 10 points.

In May of the 2006/07 season, Leeds United entered voluntary administration and received a 10-point deduction that officially relegated the club to the third tier of English football for the first time. In 2005, Ken Bates had paid £10 million for a 50% controlling stake in the club but put the club into administration following relegation. The club exits administration after a CVA was agreed upon in June 2007 (Company number 00170600) and Ken Bates bought the entire club and formed a new company, Leeds United 2007 Limited (Company number 06233875), responsible for club operations. However, the terms of the CVA were agreed too late for the club to exit administration in time for the 2007/08 season, so the club received a further fifteen-point deduction in the new season. The old company was dissolved in May 2019.

During the 2006/07 season, Scarborough was wound up in the High Court with debts of £2.5 million (£4.0m today) (Yorkshire Post, 2007). The club had been relegated to the Conference in 1998/99, demoted to the Conference North after entering administration in 2005/06 and relegated to the Northern Premier League by the end of 2006/07.

In May of the 2006/07 season, Boston United avoided a winding up order when the club agreed on the terms of a CVA, which was completed in May 2008 (Company number 00303529) and a 75% share buyout of the holding company. However, because HMRC stipulated that football creditors would not be paid in full in the CVA, the FA demoted the club by two divisions to the Conference North division.

At the start of the 2007/08 season, Halifax Town was wound up when the club failed to agree on a CVA to tackle debts of around £2m (£3.1m today), and the appeal against Conference expulsion failed. This would have brought the club out of the administration. The club had been relegated from the Football League in 2001/02 but was expelled from the Conference for not being able to satisfy the Conference's financial requirements. (FC Halifax Town, 2008).

Bournemouth (2) - In February of the **2007/08** season*, Bournemouth* entered administration for the second time, £4 million in debt (£6.2 m today), and 10 points were deducted. The club exited administration in July 2008 under a new company, *AFC Bournemouth Limited* (Company number 06632170). The old company was dissolved in January 2012 (Company number 00137401). The club failed to exit administration in time for the 2008/09 and was deducted 17 points (Guardian, 2008).

In March of the 2007/08 season, Rotherham United entered administration for the third time. The club exited administration in February 2009 under a new company, Rotherham United Football Club (RUFC) Limited (Company number 06550400). The club failed to exit administration in time for 2008/09 and was deducted 17 points (Guardian, 2008). The old company was dissolved in December 2012.

In February of the 2008/09 season, Darlington entered administration for the second time, with the club in League Two's play-off places, but the 10-point deduction cost them their play-off place. The club agreed on a CVA in June 2009, completed in February 2012, and the current chairman, Raj Singh, completed a deal to take over the club in August 2009, which took the club out of administration in February 2010 (Company number 05074229).

In April of the 2008/09 season, the owner of Southampton F.C., Southampton Leisure Holdings PLC., entered administration £27 million in debt (2023: £41.2m) (Business Live, 2009). The parent company exited administration in February 2010 when Swiss-based, German-born entrepreneur Markus Liebherr bought the football club out of administration (Southampton FC, 2024) through a new holding Company, St Mary's Football Group Limited (Company number 06951765). A creditors' voluntary liquidation resulted in the dissolution of the old holding company in 2014 (Company number 02072250). Although the club had not gone into administration, the EFL confirmed that the docking of ten points would apply to the club, effectively relegating them to Division One (BBC, 2009).

At the end of the 2004/05 season, Northwich Victoria went into administration with around £500,000 owed to HMRC (£860,000 today), 112 years after they were relegated from the Football League. Club operations transferred to a new company, Northwich Victoria Football Club (2004) Limited (Company number 05193661). However, the club failed to meet the deadline for Conference registration and accepted a voluntary demotion to the Conference North rather than expulsion (Sports Lens, 2008).

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
2009/10	Chester City (2)	Non-league	Wound-up in non-league	1	Lge 2 (4)	2008/09
	Crystal Palace (2)	Champ. (2)	CVA and New Company	5	EPL (1)	2004/05
	Portsmouth (2)	EPL (1)	CVA and New Company	22	Div. 1 (1)	1987/88
2010/11	Plymouth Argyle (1)	Lge 1 (3)	New Company	1	Champ (2)	2009/10
2011/12	Rushden & Diamonds (1)	Non-league	Wound-up in non-league	6	Lge 2 (4)	2005/06
	Darlington (3)	Lge 2 (4)	Wound-up when CVA fails	20	Div. 3 (3)	1991/92
	Portsmouth (3)	Champ. (2)	Sold to Supporter Trust	2	EPL (1)	2009/10
	Port Vale (2)	Lge 2 (4)	CVA and New Company	4	Champ. (2)	2007/08
2012/13 - The FFP Rules were implemented						
2012/13	Coventry City (1)	Lge 1 (3)	New Company	1	Champ. (2)	2011/12
	Aldershot Town	Lge 2 (4)	CVA and New Owner	-	-	-
2018/19	Bolton Wanderers (1)	Champ. (2)	CVA and New Company	4	Champ. (2)	2014/15

Appendix 1.15 - Table of Insolvent Football Clubs (2009/10 – 2018/19)[101]

[101] During the 2009/10 season, Chester City, relegated from the Football League just one year earlier, was expelled from the Conference mid-season for failing to fulfil fixtures, and their results were expunged. The club was served with a winding up order by HMRC for £26,125 (£39,000 today) and was wound up in March 2010 with total debts of £200,000 (£296,000 today) (BBC, 2010) Chester City, originally formed back in 1885, had a previous spell in the league between 1931/32 and 1999/2000. With the official winding-up of Chester City, a new Phoenix club, Chester F.C., was established in May 2010.

In January of the 2009/10 season, Crystal Palace entered administration for the second time with debts of £30m (£44.4m today) (BBC, 2010). The club exited administration after making 29 staff redundant in May 2010. A CVA was agreed upon in June 2010 and completed in 2011 (Company number 03951645). Steve Parish's CPFC 2010 Limited (Company number 07270793) took ownership of the club's golden share and assumed complete control of the club's operations.

In February of the 2009/10 season, Portsmouth entered voluntary administration for the second time £60m in debt in anticipation of a compulsory winding up order being served in March (2023: £88.7m). The club became the first EPL club in administration, and the docked nine points guaranteed the club's relegation from the EPL (Guardian, 2010). The club exited administration in February 2011 after a CVA was agreed upon in June 2010, completed in February 2011 (Company number 03747237), and after it was sold to a consortium of Balram Chainrai, Levi Kushnir and Deepak Chainrai (Insider Media) under a new company, Portsmouth Football Club (2010) Limited (Company number 07264768), which took over football operations. The old company was finally liquidated in January 2020.

In December of the 2010/11 season, Plymouth Argyle faced a winding-up order from HMRC in court and received a 63-day adjournment to allow the club to pay the taxes they owed. However, in March 2011, the club elected to enter administration. Following a deal to sell the club to new owners and the sale of their Home Park stadium to Plymouth council for £1.6m, the club exited administration in October 2011. In February of the 2011/12 season, Port Vale was issued a winding-up petition by HMRC. When the players had been paid only 25% of their wages and had failed to pay creditors, the club entered administration for the second time in March 2012 (BBC, 2012). The club agreed to a CVA (April 2012-July 2013), and Paul Wildes completed his club takeover in November 2012 (BBC, 2012). The old Port Vale (Valiant 2001) Football Club Ltd was compulsorily liquidated in February 2020 (Company number 04669703).

During the 2011/12 season, Rushden & Diamonds, relegated from the Football League in 2005/06, could not prove they had sufficient funds to fulfil their fixtures and were expelled from the Conference in June. When faced with an HMRC winding-up order with reported debts of £750,000 (£1.1m today)

(Telegraph, 2011), the club entered administration and was dissolved. They were succeeded by Phoenix club AFC Rushden & Diamonds in the United Counties League Division One. (BBC, 2011).

In January of the 2011/12 season, Darlington entered administration for the third time in nine years due to ongoing losses (BBC, 2012) and the failure to fulfil the terms of the 2009 CVA. Darlington Football Club Rescue Group, formed by supporters and former club members, took over the club but failed to agree to the terms of a new CVA and the club was expelled from the Conference and dissolved in October 2012 (Company number 05074229), A Phoenix club was immediately formed and moved to Blackwell Meadows stadium under the name Darlington 1883 and competed in the Northern League Division One, the ninth tier of English football, for the 2012–13 season.

In February of the 2011/12 season, Portsmouth FC entered administration for the third time. The club entered a CVA (June 2012-May2016) (Company number 05102915). It exited administration under a new company, Portsmouth Community Football Club Limited (Company number 07940335), after the Pompey Supporters Trust purchased the club in 2013.

In March 2012/13 season, Coventry City's owners, Sisu, put the club into administration following years of losses and a rent dispute with the stadium owners. This rendered the club homeless, and it formally dissolved it in August 2013 (Company number 03056875). However, another Sisu company, Otium Entertainment, purchased the club's player registrations, other club assets, and the 'golden share' from the liquidators (Coventry Telegraph, 2015)

In May of the 2012/13 season, Aldershot Town was said to be 'haemorrhaging money' after the club was relegated from League Division Two and failed to pay the players' wages for April (BBC, 2013). The club went into administration in May 2013 and emerged a year later after a CVA was agreed upon in July 2013 to be completed in May 2019, and a new board was appointed.

In May of the 2018/19 season, Bolton Wanderers were forced into administration by the High Court due to £1.2m owed to HMRC (£1.5m today) (BBC, 2019) and in July 2019, it was declared that the players had not been paid by the owner, Ken Anderson, for 20 weeks. Faced with possible EFL expulsion and probable extinction, the club announced that it had been sold to Football Ventures (Whites) Limited in August and, within the two-year timeframe allowed by the EFL, the new club owners agreed upon a CVA for debts of more than £10m (£12.3 m today) (BBC, 2021) and the old company, The Bolton Wanderers Football & Athletic Company Limited commenced the formal winding-up process in January 2020.

Season	Club (number of admins)	Whilst in League (tier)	Outcome	Years since relegated	Last league (tier)	Season
2019/20 – EFL Programme Suspended or terminated for Covid 19 Pandemic						
2019/20	Bury (2)	Lge 1 (3)	Wound-up in non-league	2	Lge 1 (3)	2017/18
	Wigan Athletic (1)	Champ. (2)	New Company	4	Champ. (2)	2016/17
2021/22	Derby County (2)	Champ. (2)	New Company	14	EPL (1)	2007/08
2022/23	Wigan Athletic (2)	Champ (2)	New owner	3	Champ. (2)	2019/20

Appendix 1.16 - Table of Insolvent Football Clubs (2019/20 – 2022/23)[102]

[102] At the start of the 2019/20 season, Bury F.C. could not begin the season because of longstanding financial difficulties, with around £1.6m (£1.96 m today) required in May to cover unpaid wages, HMRC taxes and pension payments. The EFL were not satisfied with the proof that the club had sufficient funds to fulfil their fixtures or whether the proposed CVA the club had agreed with creditors was viable, so the club was expelled from the Football League on 27 August 2019 (BBC, 2019).

After the end of the 2019/20 season, Wigan Athletic went into administration on 1 July 2020, less than a month after a transfer of ownership to the Hong Kong-based Next Leader Fund, which reneged on the £6m (£7.4m) of promised funds (Financial Times, 2020), and players went unpaid. The players were offered for sale, and the administrators made half of the non-playing staff redundant in July 2020. The 12-point deduction relegated the club to Division One. The club was liquidated in May 2021 when the football operations became controlled by a new consortium, Phoenix 2021 Ltd, led by Bahrain businessmen Abdulrahman Al-Jasmi and Talal Mubarak al-Hammad. (Company number 13305364).

At the end of the 2022/23 season, HMRC served Wigan Athletic with a winding-up petition in June 2023 over unpaid tax (BBC, 2023). However, the club was saved when local billionaire and Wigan Warriors owner Mike Danson bought it out (BBC, 2023), which kept Wigan from entering administration for the second time.

In September of the 2021/22 Season, Derby County went into administration with debts of more than £60m (£71 m today) for the second time (BBC, 2021), and the EFL confirmed that the club would receive a 12-point deduction (BBC, 2021). Club owner Mel Morris had been seeking a buyer since June 2019, having invested 'in excess of £200m' in the club, has seen wages treble from £16m in 2014 to £47m by 2018 and the club is said to have lost around £20m in revenue as a result of the Covid pandemic and technically the company is still in administration. Football operations have since transferred to a new company, Derby County (The Rams) Limited, under the ownership of David Clowes (Company number 14190771).

2 Financial Sustainability in the EFL Championship

2.1 Background

This chapter examines whether the interventions of the football authorities have had their desired effect on the financial sustainability of football clubs in the EFL Championship.

The Championship is particularly interesting as it is heavily distorted by the first of our interventions by the football authorities we are interested in. In this case, the EPL provides substantial parachute payments for several years to clubs recently relegated from the English Premier League (EPL) whilst they adjust to lower income and are given time to offload costs carried over from the EPL.

Furthermore, we consider whether the introduction of the EFL's Profitability and Sustainability Rules has controlled overspending by clubs and, consequently, reduced their financial distress, as measured by Altman's z-score model.

In addition, the EFL and EPL football league programmes were disrupted after the 2018/19 season by the COVID-19 pandemic, which had a consequential impact on the finances of the football clubs. So much so that the EFL modified their P&S rules to include an allowance for lost revenues and additional costs in the P&S calculations for 2019/20, 2020/21 and 2021/22. So, our third consideration is whether the COVID-19 pandemic has had a bigger or lesser impact on financial distress than the EFL have anticipated in their relaxation of loss limits.

Although our research is based on the findings from previous academic research, our research is originally framed and posit new research questions concerning the EFL Championship. In particular, we focus on whether the P&S loss controls are an effective and robust tool for ensuring the financial sustainability of football clubs. If the rules have been effective, we expect our measure of financial distress, the Altman z-score, to be higher in the post-P&S period than in the pre-P&S period.

We use a sample of data from the 2000/01 season to the 2021/22 season. We commenced the research in 2000/01, as it marks the signing of the EFL's deal with ITV Digital. This deal kicked off a spending spree by EFL clubs that seriously affected club solvency when ITV Digital collapsed just 12 months into the contract. This led to a spike in clubs entering administration, thirteen of which were Championship clubs. It is also marked by a reduction in parachute payments from £3.7m to £3.0m in 2000/01 (Simon De Montforte, 2012).

Only one second-tier club had previously been in administration during the EPL era. Mark Goldberg had paid £23 million for the Crystal Palace EPL club, which even excluded the home ground from Ron Noades in June 1998. However, in less than 12 months, the club was relegated to the second tier. The club entered into administration due to the excessive

purchase price, the expected co-investors disappearing on relegation from the EFL, the failure to launch on the Alternative Investment Market (AIM) as was planned and after Goldberg personally lost £40 million (BBC, 1999). [103]

When the research commenced, the latest year in which most financial results were reported was 2018/19. We extended the research period as the annual accounts were reported. However, when this research was completed, only five club accounts were published for 2022/23.

We first establish the research context with a series of two sample differences in mean t-tests to test for significant changes in our measure of financial distress, i.e. Altman's z-score, which we lay out in section 2.3 below.

We test these t-test findings with a new econometric model, which, unlike t-tests, will allow us to control for both Parachute Payments, the implementation of the P&S rules, and the impact of the COVID-19 pandemic simultaneously. As we expect implementing the P&S rules and the COVID-19 pandemic to impact the clubs not receiving parachute payments disproportionately, we relax the standard assumption of independence between the control variables. So, our final regression analysis will include an interaction term for parachute payments in the post-P&S period and the COVID-affected seasons.

To capture the unobserved characteristics of the individual football clubs, we will use a Fixed Effects model, which effectively calculates an intercept per club (see Appendix Table 2.1). In turn, we will run several regressions of the same model with the different components of the z-score as the independent variable to explain our findings or to justify our conclusions.

In the final section of this chapter, we will discuss the possible implications for future EFL policy regarding P&S and future EPL policy regarding parachute payments.

2.2 Review of Related Research

2.2.1 Concept of Financial Distress

Financial distress is when a company or individual cannot generate sufficient revenues or income, making it unable to meet or pay its financial obligations. This is generally due to high fixed costs, many illiquid assets, or revenues sensitive to economic downturns.

Starting with Beaver's seminal work on insolvency prediction (1966), several academic descriptions of financial distress have been developed, with evidence of layoffs, restructurings, or missed dividend payments (Lau, 1987), a low-interest coverage ratio (Asquith et al., 1994),

[103] The London Stock Exchange's 'Junior' Stock Market for smaller companies

cash flow less than current maturities of long-term debt (Whitaker, 1999), the change in equity price or a negative EBIT (John, Lang, and Netter, 1992), and Negative net income before extraordinary items (Hofer, 1980).

Altman (1968) conducted the first study predicting bankruptcy using a selection of accounting ratios. Altman constructed a financial distress predictive model using Multi Discriminate Analysis (MDA) [104], which compared a set of bankrupt firms with a sample of surviving firms within the same industry and of approximately the same size in terms of assets. The resulting z-score was found to predict company bankruptcy one year out with 95% accuracy. [105]

Altman's benchmark z-score model is shown in Equation 1, where the z-score for $firm_i$ is:

$$Z_i = i_1Xi_1 + i_2Xi_2 + i_3Xi_3 + i_4Xi_4 + i_5Xi_5 \qquad (1)$$

Where: X_1 - Working Capital [106] /Total Assets (WC/TA)

The working capital/total assets ratio measures a company's net liquid assets relative to total capital, and it was the most valuable of the three liquidity ratios evaluated.

X_2 - Retained Earnings [107] /Total Assets (RE/TA)

The RE/TA ratio measures a company's leverage; the higher the RE/TA ratio, the more a company has financed its assets through retained profits instead of using debt [108].

X_3 - Earnings Before Interest and Taxes/Total Assets (EBIT/TA)

This ratio is an accurate measure of the productivity of company assets, free of tax or leverage considerations. Altman showed this ratio to outperform other profitability measures, including cash flow.

X_4 - Market Value of Equity/Book Value of Total Liabilities (MVE/TL) [109]

X_5 - Sales/Total Assets (S/TA) [110]

Sales are typically the firm's revenue.

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[104] Linear discriminant analysis (LDA) is a generalisation of Fisher's linear discriminant, a method used in statistics and other fields to find a linear combination of features that characterises or separates two or more classes of objects or events.

[105] Other types of models exist, e.g., Zmijewski (1984) estimated the probability of insolvency with a Probit model, demonstrating that this probability decreases according to the return on assets but increases with leverage.

[106] Working capital is the difference between current assets and current liabilities.

[107] Retained earnings are the sum of a company's reinvested profits minus losses since it began operating.

[108] In the real world, failure is much higher in a firm's earlier years. In 1993, approximately 50% of all failed firms did so in the first five years of their existence (Dun & Bradstreet, 1994).

[109] Equity is measured by the market value of preferred and equity shares, while liabilities include current and long-term. This ratio includes a market value element which previous failure studies did not. It shows how much a company's value, i.e. market value plus debt, can decline before liabilities exceed assets before it is bankrupt.

[110] The capital turnover ratio illustrates the sales-generating ability of the company's assets. Based on a univariate significance test, this ratio is the least significant, but because of its relationship to other variables, it ranks second in its contribution to the model.

i1-i5 are a series of weights,

These weights are defined values for calculating the z-score that all practitioners use when assessing private manufacturing companies.

Altman's Public Company z-score – Z

This first model was developed to measure the financial health of a public manufacturing firm and is given in Equation 2:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.999X_5 \qquad (2)$$

Companies are classified by their degree of financial distress, based on a set of solvency ratios that reflect their financial health, measured against a reference criterion. These criteria identify companies at a high risk of entering administration or becoming zombie firms [111] if management does not take immediate action to improve their financial health.

Public Company z-score value	Altman's Risk Rating
over 3	Safe zone – 'The business is free of bankruptcy risk.'
between 1.81 and 2.99	Grey zone – 'The risk of bankruptcy is moderate, but ongoing monitoring is recommended'
below 1.81	Distress zone – 'The bankruptcy risk is high'

Table 2.1 -z-scores and the Risk of Bankruptcy

Later, Altman ((1983), (1993)) altered the z-score formula to consider different business types, which led to different weightings attached to each X variable (e.g. values $i_1 – i_5$) and in specific scenarios, other variable definitions were altered, or components removed.

Altman's Private Company z-score – Z_1

For Altman's Private Company model (1983), the Book Value of Equity is used, as Market Value is not available for a company not traded freely on a recognised Stock Exchange and the weightings for all variables are altered to give Equation 3:

$$Z_1 = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5 \qquad (3)$$

where: X_4 = Book Value of Equity/Book Value of Total Liabilities

The Risk thresholds are amended as follows:

[111] Defined as a company that is unprofitable and unable to pay the interest payments due on their existing debts and continues only at the behest of a benevolent owner who continues to provide loans at beneficial rates and rollover or write off loans when they fall due to provide ongoing support operations, at least temporarily, or continue to be supported by their banks beyond the period during which it is usually expedient for them to do so.

Private Company Z_1 score value	Altman's Risk Rating
over 3	Safe zone - the business is free of bankruptcy risk.
Between 1.23 and 2.99	Grey zone - The risk of bankruptcy is moderate, but ongoing monitoring is recommended
below 1.23	Distress zone – The bankruptcy risk is high

Table 2.2 - Z_1-scores and the Revised Risk of Bankruptcy

Altman's Non-manufacturing Company z-score – Z_2

For Altman's non-manufacturing model (1993), X_5 was removed from the model. It was believed that the sales/total assets ratio would skew the z-score downwards where the firm is more people-centric and is not capital intensive, e.g. in the service sector, and this may suggest financial distress in error (Moneyweek, 2018).

The Non-manufacturing Company iteration of the Altman model, with its revised weightings, is given by:

$$Z_2 = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4 \quad (4)$$

Where: X_4 = Book Value of Equity/Book Value of Total Liabilities and X_5 is excluded

The risk thresholds are revised as follows:

Private Non-manufacturing Company Z_2 score value	Altman's Risk Rating
over 2.6	Safe zone - the business is free of bankruptcy risk.
Between 1.1 and 2.6	Grey zone - The risk of bankruptcy is moderate, but ongoing monitoring is recommended
below 1.1	Distress zone – The bankruptcy risk is high

Table 2.3 - Z_2-scores and the Revised Risk of Bankruptcy

The models have been widely adopted because of their simplicity (Barajas & Rodríguez, 2014), and it is claimed to be one of the most effective multi-discriminant analysis models for the past 40 years (Anjun, 2012). It has been used persistently by researchers, practitioners, banks and rating agencies in finance and accounting research (Cantoni, (2012); Charitou et al., (2004); Grice & Ingram; (2001)). The model ranks healthy companies well whilst accurately detecting the financial issues of companies one year prior to bankruptcy (Pitrová, 2011).

Just before the 2008 financial crisis, Altman's z-score had indicated that the companies' risks were increasing significantly in 2007, with the median Altman z-score of companies approaching 1.81, indicating a high probability of bankruptcy. This led Altman to believe corporate defaults were to be expected and triggered by the mortgage-backed securities banking crisis in 2008, the second-highest rate of corporation defaults in history, followed in 2009 (Kenton, 2022).

2.2.2 Financial Distress in Football

To the best of our knowledge, the only previous paper that considered financial distress for the EFL Championship was that of Plumley, Serbera, and Wilson (2020). [112] Using Altman's Z_1 and Z_2 scores for seasons 2002-2019, they identified financial distress levels in English football's first and second tiers, specifically referencing the impact of football's Financial Fair Play (FFP) regulations. Therefore, this will be explored in more detail in sections 2.2.3 and 2.3.1.

They found that nearly all but the biggest football clubs were 'at risk of bankruptcy within the next twelve months'. However, only Wigan Athletic (2019/20), Bury (2019/20), and Derby County (2021/22) have entered administration amongst the 92 EPL and EFL clubs since 2019/20, when that study was carried out. Football clubs have proven remarkably resilient despite finances that generally preclude the clubs from taking out finance via regular banks. Of the big six clubs, only Arsenal is genuinely financially resilient to economic downturns. Given that these are some of the largest and richest clubs in England and possibly the world, this further highlights the insecurities in the EFL (Cox & Philippou, 2022).

Whilst a total financial collapse could be imminent, one has not occurred despite poor financial management for over a century. Football clubs have even been described as safer than the 'Bank of England' (Szymanski S. , 2015). The big clubs get 'bailed out' because of the 'Too Big To Fail' effect. [113] In the past, Bayern Munich has acted in the Bundesliga's mutual interest by bailing out their rivals. [114] In 2016, the Spanish Authorities were found guilty of illegal State Aid for using taxpayer funds to subsidise numerous La Liga clubs (Duncan Wright, 2016) [115].

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[112] Data was collected for 43 professional football clubs competing in the EPL and Championship for the financial year 2002-2019. Analysis was conducted using the z-score methodology, and additional statistical tests were conducted to measure differences between groups. Data was split pre- and post-FFP. The paper recommended a re-distribution of broadcasting rights on a more equal basis and incentivised with cost-reduction targets and a hard salary cap. Furthermore, FFP regulations should be revisited. (Plumley, Serbera, & Wilson, 2020)

[113] 'Too Big to Fail' was first coined after the US commercial bank Continental Illinois collapsed in 1984 and was relevant during the Global Financial Crisis (GFC) of 2007-09 (Demirguc-Kunt & Huizinga, 2013). Some banks were so large and interconnected that their failure threatened the entire system (Cubillas, Fernandez, & Gonzalez, 2017).

[114] Borussia Dortmund from Germany, European Champions in 1997, were almost declared bankrupt in 2004 with debts exceeding 200 million euros after extravagant player spending and a plunge in share prices made them unable to pay the players wages. Only an interest-free loan from rivals Bayern Munich helped keep them afloat. Bayern Munich had also previously given handouts to the financially troubled 1860 Munich and FC St Pauli.

[115] In 2016, the Spanish Authorities were found to be using taxpayer funds, against EU State Aid rules, to benefit Barcelona, Real Madrid, Valencia, Athletic Bilbao, Atletico Osasuna, Elche and Hercules in LaLiga. For over 20 years, Real Madrid, Barcelona, Bilbao, and Osasuna have been paying tax at the lower tax rates of non-profit organisations. The state-owned bank was a guarantor for loans that secured funding for Valencia, Elche, and Hercules at a discounted rate when all three were cash-strapped. [116] As recently as the beginning of 2023, the Italian government announced a last-minute reprieve to the

Similarly, in 2023, the Italian Government deferred 500 million euros of outstanding tax on a payment plan until 2027 (forzaitalianfootball.com, 2022).[116]

This has bred a moral hazard as football clubs believe that they will not be allowed to become insolvent. Recently, FC Barcelona was declared technically bankrupt, with debts totalling over one billion euros (Forbes, 2023). The contagion effects from FC Barcelona are apparent, with the club owing 138 million euros to at least four European clubs for previous transfers. Therefore, this theory gives FC Barcelona little incentive to correct its financial situation.

In an alternative study, Alaminos and Fernandez (2019) created a model that predicted the financial distress of a football club for up to 3 years before insolvency.[117] Clubs in financial distress were identified with reference to the criterion used by Altman, Iwanicz-Drozdowska, Laitinen, & Suvas (2017), Geng, Bose & Chen (2015) and Platt & Platt (2008). They used a combination of corporate governance[118], on-pitch performance and financial variables. [119] For 2013-16, ninety-three clubs were found to be in financial distress out of 234 European clubs, whilst, in England, twenty-six out of forty-one were in financial distress, confirming Wilson et al.'s findings (2020). They found that clubs in financial distress are likely to have half the number of shareholders[120], will not be the leading club in their city, will have suffered a recent

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Serie A football clubs in dire straits due to the Covid-19 crisis. According to reports, the clubs would be allowed to spread the €500m of outstanding tax over 60 instalments between 2023 and 2027 with a 3 per cent interest rate attached. This decision, driven through by Lazio President and Government Senator Claudio Lotito, was met with opposition from Napoli and Fiorentina. They saw it as a reward for the clubs who had not tried to balance the books and continued to live beyond their means, highlighting the dire consequences of such financial practices.

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[117] The sample data was divided into three time periods to reflect one year prior (t-1), two years prior (t-2) and three years (t-3) prior to the club going into financial distress.

[118] Derived from research by Scarfato & Dimitropoulos (2018).

[119] Derived from research by Barajas & Rodríguez (2014), Wilson, Ramchandani, & Plumley (2018), Budzinski & Müller (2013), Nicoliello & Zampatti (2016), Scelles, Szymanski, & Dermit-Richard (2018), Galariotis, Germain C, & Zopounidis (2018), Ecer & Boyukaslan (2014) and Sakınç (2014).

[120] This is consistent with Müller, Lammert, & Hovemann (2014) and Drut & Raballand (2012).

relegation, will have a higher-than-average wage bill[121], will have a leverage [122] exceeding 90% and a return on assets ranging between -9.30% and -15.70%[123].

Further research into football club insolvency has outlined several reasons why clubs face financial problems. Beech, Horsman, and Magraw (2010) suggest the leading cause in English football is managers' failure to make provisions for low-income situations, whereas Szymanski (2017) and Buraimo et al. (2006) claim low productivity. In addition, Plumley et al. (2014) also found that a club's financial turnover and win ratio were key indicators in preventing bankruptcy in the EPL.

The factors impacting insolvency in European football were found to be different from those in English football. In Spain, the most significant factors for overcoming insolvency were a lower ratio of tangible assets, wage adjustments, and high-leverage (Bae, 2012). In addition, reduced salary spending, a club's division and revenue, and sporting performance further impacted financial distress. (Buraimo, Paramio, & Campos, 2010); (Barajas & Rodríguez , 2010); (Barajas & Rodríguez, 2014) ; (Rico & Puig, 2015).

In Germany, clubs tend to be financially distressed only when the team has performed much worse than expected, resulting in lower revenues (Symanski & Weimar, 2019). Whilst increasing debt is usually seen as unfavourable in football, the increase in debt in the Bundesliga has been attributed to just two clubs, Bayern Munich and Borussia Dortmund (Frick & Prinz, 2006). Given the size and prestige of these two clubs, they should be able to shoulder this debt burden as long as they perform to the levels expected. Dietl & Franck (2007) found that governance regulation in the form of excessively divided voting rights without consideration of the interests of each shareholder and proportional ownership and the low accounting standards of clubs have hidden potential insolvencies. Budzinski and Müller (2013) found that restricting new shareholders from taking over clubs and introducing the FFP has not solved the moral hazard problem of insolvency.

For Italian football, profitability was the leading cause of financial distress for the more prominent clubs. For smaller clubs, it was poor investment decisions (Baroncelli & Lago (2006) and Nicoliello & Zampatti (2016), and salaries and income from the sale of players were significant in the avoidance of distress (Nicoliello & Zampatti, 2016). In terms of governance, the presence of the family board was found to have a moderating effect on spending decisions (Scarfato & Dimitropoulos, 2018). This ties in with stewardship theory, which states that

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[121] This is different from the previous literature (Lin, 2009).

[122] Average Total Liabilities / Total Assets (F9)

[123] Non-distressed clubs range between +11.0% and +12.80%.

managers, left to their own devices, act as responsible stewards of the assets they control, primarily looking after the entity for future generations rather than as agents acting in their self-interest (Davis, Schoorman, & Donaldson, 1997).

French football clubs in financial distress are characterised by weak governance and soft budget constraints (Andreff, (2007), (2015)), where shareholders behave like not-for-profit investors. Abrupt changes in demand and a property structure with professional status are related to financial failure (Scelles, Szymanski, & Dermit-Richard, 2018). Meanwhile, more revenue generates sporting achievements, which, in turn, positively impacts the financial situation (Galariotis, Germain C, & Zopounidis, 2018). In Turkish football, low debt is the critical variable in the football club's financial sustainability (Ecer & Boyukaslan (2014) and Sakınç (2014)).

The football industry is like no other, and while clubs are not immune to economic cycles, the impact of any downturn is likely to be limited. Even in the event of total financial collapse and administration, the clubs themselves rarely disappear. Even in the worst-case scenario, clubs in the UK have been reborn as Phoenix clubs (Szymanski S. , 2010). In Spain, the local authorities rescue the clubs as they are seen to be of great cultural and historical importance to the region (Ascari & Gagnepain, 2007).

Given that football clubs 'very rarely die', are private Companies, and are being rescued, in the UK at least, without state assistance, it is questionable why football needs financial regulation. We would suggest that regulation is desirable for political and sociological reasons and because badly run businesses surviving due to positive externalities must have an adverse effect in the long run.

Whilst debts within football from fees for transfers between football clubs are largely secured, as the league requires football creditors to be paid first out of any distributions, this ignores the externalities of debt-ridden clubs walking away from their debts and starting again.

In the event of an administration or a CVA, only a proportion of the debt is usually recovered. The tax man recovers only a proportion of what it is owed to the detriment of the population as a whole. The local support businesses often recover as little as 10-25% of what they are owed for goods or services they have supplied to the club. This damages their businesses and can have a knock-on effect on the local economy.

Better-run clubs are being held back from locating into the space that should have been vacated by the bankrupt club, which, in the long run, would have improved the financial security of the league overall.

2.2.3 Plumley, Serbera, & Wilson (2020)

This chapter examines the EFL Championship in English football. The focus of our research is based on the study of Plumley et al. (2020). We build on their research by isolating the impact of parachute payments and Financial Fair Play, as defined by the updated P&S rules, on the financial stability of clubs in the EFL Championship, a section within English football found by Plumley et al. (2020) to be exceptionally financially distressed.

Our study is primarily interested in evaluating the efficacy of the EFL's regulations in improving financial stability generally and whether parachute payments are doing what they are designed to do in improving the financial distress of the clubs that face a financial hangover of costs from their time in the EPL following relegation to the Championship.

Using two-sample t-tests and Altman's Z_1 and Z_2-score for EPL and EFL Championship clubs, Plumley et al. found that far more clubs in the Championship were in the Distress zone, i.e. 'The bankruptcy risk is high' category than clubs in the EPL [124]. Specifically, nearly all clubs in the Championship are in the distress zone, whilst only clubs that were perennially in the bottom half of the EPL, were small in size compared to the big six clubs [125] or had frequently yo-yoed between the EPL and Championship in recent seasons, e.g., Norwich City and West Bromwich Albion were at a high risk of bankruptcy.

They found no significant difference in z-score between the pre-and post-FFP periods in the EPL. However, the average z-score falls for the Championship, indicating increased financial distress. They concluded that introducing the FFP regulations had, at best, resulted in no reduction in financial distress for the EPL and had increased financial distress in the Championship, an unexpected outcome given the purpose of FFP.

The Big Six clubs in the Premier League were subjected to 'Too Big To Fail' (TBTF) testing [126] and they found that these clubs, due to their size, were more financially secure than the rest of the EPL. They could find no evidence that the Big Six clubs behaved as if they were TBTF.

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[124] This is to be expected given that the average EPL club revenue, fuelled by increasing TV Rights deals, has grown from £46.1m in 2001/02 to £220.8m in 2018/19, whilst in the Championship it has increased from £15.3m to just £70.9m.

[125], For example, a Burnley compared with a Manchester City

[126] Their test for this too-big-to-fail effect was to measure the correlation between size (as measured by revenue) and the Z_2 score which they found to be moderate to strong for the big 6 clubs (mean =0.541) whilst the rest of the EPL it was only weakly correlated (mean = 0.14), which rejects the presence of any too-big-to-fail effect.

Our research builds on Plumley et al. (2020) by considering the impact parachute payments and Financial Fair Play regulations have on losses and, in turn, on financial sustainability in the EFL Championship:

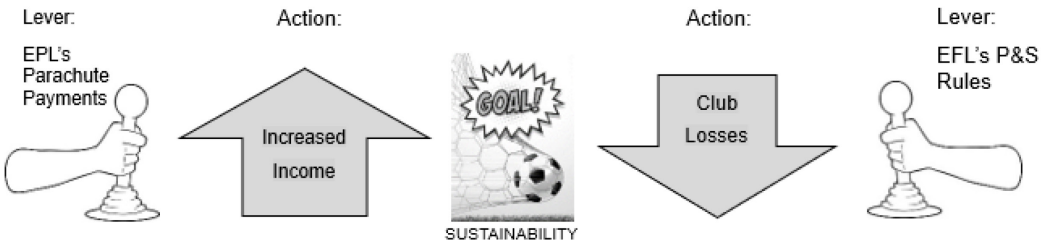

Figure 2.1 - Regulatory Levers in the EFL Championship for Financial Sustainability

Since the very inception of the EPL, clubs that are relegated from the top tier have received additional income in the form of parachute payments from the EPL for the first few years after relegation to enable them to reduce their costs gradually over time and reduce the financial distress, the clubs would otherwise face on relegation. If Parachute Payments provide financial security to the relegated clubs, then we expect them to be less financially distressed than non-parachute clubs. As our sample financial data covers only the clubs when they are in the Championship, and some of the clubs were there only briefly, it is reasonable to assume some of the z-score benefits that the Plumley study had identified for the EPL clubs compared to the Championship clubs will be carried over while they are in the Championship. Therefore, it is reasonable to expect that large clubs like Manchester City, Aston Villa, and Newcastle United will be reducing the financial distress of the average parachute club, whilst, at the same time, the smaller clubs that are promoted from the lower divisions, such as Rotherham, Burton Albion, and Walsall, could be making the non-parachute clubs appear to be more financially fragile.

The P&S, which the EFL has implemented, was intended to reduce financial distress by acting directly on club losses. The maximum loss limit is set at £13m (if financed by equity) and £5m (if financed by debt). In that case, we expect the imposition of loss limits by the EFL's Profitability & Sustainability (P&S) regulations to result in higher z-scores in the post-P&S period compared to the pre-P&S period. Furthermore, because of the extra EPL income the parachute clubs are receiving compared to the non-parachute clubs, i.e. Parachute Payments of £100m over the first three years after relegation compared to solidarity payments of £6m per annum, we expect the non-parachute clubs to be making greater losses in order to compete with the parachute clubs in terms of player costs. Therefore, the non-parachute clubs should be the most impacted by the imposition of maximum loss controls.

Furthermore, we would expect the COVID-19 pandemic to reduce EBIT when the 2019/20 season was suspended and finished off in June and July behind closed doors; the 2020/21

season was entirely played behind closed doors and the 2021/22 season where the first few games were played behind closed doors. This expected impact on EBIT is reflected by the EFL's decision to introduce COVID add-backs for lost revenues or exceptional costs directly relating to the pandemic into the P&S calculation of up to £5m for seasons 2019/20 and 2020/21 and up to £2.5m for the reporting period 2021/22 despite a return to full-capacity stadiums (EFL, 2022). We would expect these increases in losses allowed within the P&S calculation to have the opposite effect on financial distress to the original implementation of the P&S, which limited losses at a lower value. Again, due to the differences in guaranteed broadcast income from the EPL, e.g., parachute payments and solidarity payments, we expect the non-parachute clubs to be most adversely affected by the loss of matchday income due to ground closures.

2.3 Data and Methods

2.3.1 Data

Although each season has 24 teams, the participating clubs change from season to season due to promotion and relegation, which is common in open competitions. Given the coronavirus pandemic that has heavily impacted the football league in the 2019/20 season, we choose to split our post-P&S period between those seasons that were COVID-affected and those that were not.

The financial data for this study was collected from the football club's published accounts, held in a repository at Companies House, accessible via the find-and-update.company-information.service on the GOV.UK web portal. Over five hundred sets of accounts have been directly used in calculating the Football Club z-scores. In this study, we also collected accounts from the start of the EPL era. We used the additional information stored at Companies House covering insolvency events, which show clubs entering and exiting Administration and the Company Voluntary Agreements entered into, which provided the historical background in Chapter 1. When this research was completed, only six clubs had completed their annual accounts, so we chose to ignore 2022/23 in our z-score analysis.

Over the 22 seasons of our study, we would expect 528 observations. However, we had to drop certain observations where a z-score could not be calculated because some clubs took advantage of the Small Company Exemption and submitted only abbreviated accounts, clubs whilst in administration do not submit accounts and some clubs' accounts were prepared for a period other than 12 months, which again may cause bias.

The resulting database is an unbalanced panel of 500 observations and 61 football clubs that have appeared in the Championship at least once in the 22 seasons from 2000/01 to 2021/22.

Our Financial Distress Measure

As most football clubs are in private ownership and the club's shares are not traded on the stock market, we have chosen to apply Altman's Private Manufacturing Company z-score Model for estimating financial distress. Whilst professional football clubs do not fit the typical definition of a manufacturing company, Altman's non-manufacturing variant excludes the Sales/Total Asset ratio. As parachute payments are a significant component of the sales figure included in the sales/assets ratio, we expect a significant difference between the parachute and non-parachute clubs. Therefore, we depart from Plumley et al. in adopting only the private manufacturing company variant of the z-score model (Z_1) in our analysis [127].

Private Company Z score value	Altman's Risk Rating	Observations	Mean z-score
over 3	Safe zone - the business is free of bankruptcy risk.	12	5.57
between 1.23 and 2.99	Grey zone - The risk of bankruptcy is moderate, but ongoing monitoring is recommended	46	1.91
below 1.23	Distress zone – The bankruptcy risk is high	449	-2.61

Table 2.4 - Number of z-score observations by the risk of financial distress

Although the Alaminos and Fernandez (2019) 3-year model has its merits for predicting bankruptcy three years before their collapse, we find an overall mean Z_1-score of -2.00. As 87% of our observations for clubs in the Championship have z-scores in the 'bankruptcy risk is high' category, we feel that a measure that predicts bankruptcy up to three years out would add little to our analysis. Hence, we proceed with the Altman Z_1-score to measure financial distress in our analysis.

Choice of FFP Regulations

As our sample is composed entirely of clubs whilst in the EFL Championship, the regulations of interest should be the EFL's P&S rules, which were implemented from the 2014/15 season and came with a threat of point deductions for violating them. We believe this should make clubs change their behaviour by reducing losses. Therefore, we choose the end of season 2013/14 as our pre- and post-regulation cutover point when assessing the impact on financial distress.

This is distinct from the Plumley et al. study, which chose to implement their FFP period from 2010/11. This is logical given that their sample contained EPL clubs also involved in UEFA

[127] This is different from the research of Plumley et al. (2020), as they also use the non-manufacturing variant (Z_2) in their analysis.

competition. Therefore, these clubs would have been subject to UEFA's FFP rules, which were approved at the end of season 2009/10.

League Standings

As our sample financial data covers only the clubs when they are in the Championship, and some of the clubs were there only briefly, it is reasonable to assume some of the z-score benefits that the Plumley study had identified for the EPL clubs compared to the Championship clubs will be carried over while they are in the Championship. Therefore, it is reasonable to expect that large clubs like Manchester City, Aston Villa, and Newcastle United will be reducing the financial distress of the average parachute club, whilst, at the same time, the smaller clubs that are promoted from the lower divisions, such as Rotherham, Burton Albion, and Walsall, could be making the non-parachute clubs appear to be more financially fragile. Therefore, the impact of parachute payments and the P&S rules on z-scores may differ depending on a club's traditional standing.

To control for this, like the method Plumley et al. used, the clubs in our analysis will be similarly split between the EPL, Championship, and an additional grouping for the EFL leagues below the Championship. These groups will be labelled Traditional EPL, Championship, and EFL clubs, respectively, with the clubs allocated based on which league they have spent most seasons in. The clubs that have no majority in a single league are omitted [128].

2.3.2 Methodology

Econometric Model

Unlike the t-tests used in previous research used in previous research, we will use econometric modelling of the Z_1-score, allowing us to control for more than one intervention at a time.

Our model will measure the impact on the Z_1-score of P*,* a dummy denoting the receipt of a parachute payment; F, a dummy denoting whether the P&S rules are in operation for that season; and C, a dummy denoting if the season is COVID-affected.

We will partially relax the assumption of the independence of Parachute payments and P&S Rules, as well as parachute payments and COVID, by fitting an interaction between variables P and F and P and C. This will, in effect, allow the impact of the parachute payments to differ in the post-P&S period and during the COVID-affected seasons.

A fixed-effects estimator will be used to correct omitted variable bias by introducing an entity-level dummy variable. This controls for the unobserved characteristics (e.g., time-invariant

[128] Swansea City and Wigan Athletic

club-specific effects, such as historical prestige, size and status, which are assumed to remain constant over time), which may impact the club's ability to raise commercial revenues and attract a larger fan base. Arguably, these things do change over time. For example, in 2000/01, Bolton Wanderers would have been an established EPL club but now find themselves in Division One. Bournemouth was in the lower reaches of the EFL but now would count themselves as an established EPL team, along with Brentford. For this reason, we split the data model between the leagues the clubs have spent most seasons in to test if our results are robust for clubs of a similar league standing.

The model can be stated as follows:

$$Y_i = \alpha_i + \beta_1 P_i + \beta_2 F_i + \beta_3 C_i + \beta_4 (P_i * F_i) + \beta_5 (P_i * C_i) + \varepsilon \qquad (5)$$

Where *Y* denotes the dependent variable, z-score, *P* is a dummy equal to one if the club does not receive a parachute payment, F is a dummy equal to one if P&S rules are in operation for that season, C is equal to one for seasons affected by COVID-19, ($P_i * F_i$) is the parachute and P&S interaction term and ($P_i * C_i$) is the parachute and COVID interaction term. The subscript *i* represents each club whilst α represents the constant, ε the error term, and β_1, β_2, β_3, β_4 *and* β_5 are the estimated parameters.

A significant and negative coefficient for variable P will confirm that non-parachute clubs are generally disadvantaged regarding the z-score. A significant and positive coefficient for variable F will confirm that financial distress has generally been reduced by implementing the P&S rules. A significant and positive coefficient for the interaction term (P*F) will confirm that the non-parachute club's z-score has increased more than the parachute club's z-score post-P&S.

A significant and negative coefficient for variable C will confirm that financial distress, measured by a decrease in the all-club average z-score, generally increased during the COVID-affected seasons. A significant and negative coefficient for the interaction term (P*C) will confirm that the non-parachute club's financial distress has increased relative to the parachute clubs as measured by a bigger decrease in z-score in the COVID-affected seasons.

Descriptive Statistics

Table 2.5 shows the summary statistics:

Variable	Seasons 2000/01 – 2021/22				
	Obs	Mean	Standard Deviation	Minimum	Maximum
1. Z-Score	500	-1.996	3.894	-23.511	+12.214
2. Non-parachute Flag (P)	528	0.737	0.441	0.000	1.000
3. Post-P&S Period (F)	528	0.364	0.482	0.000	1.000
4. COVID affected season (C)	528	0.136	0.343	0.000	1.000

5. Interaction term P*F	528	0.250	0.433	0.000	1.000
6. Interaction term P*C	528	0.102	0.303	0.000	1.000

Table 2.5 - Descriptive Statistics for the Multivariate Variables

Table 2.5 shows the mean value of the z-score is -1.996 +/- 3.894, suggesting that the average Championship club is in Altman's 'at risk of bankruptcy' category. The mean non-parachute dummy value is 0.737 +/- 0.441, which means 74% of observations were for clubs whilst not receiving parachute payments (and 26% were receiving parachute payments). The mean P&S rules dummy value is 0.364 +/- 0.482, which means 36% of observations were in the post-P&S period. The mean COVID dummy value is 0.136 +/- 0.343, which means 14% of observations were in the COVID-affected seasons. The mean P * F interaction term is 0.250 +/- 0.433, meaning 25.0% of all observations were for clubs not receiving a parachute payment in the post-P&S period. The mean P * C interaction term is 0.102 +/- 0.303, meaning 10% of all observations were for clubs not receiving a parachute payment in the COVID-affected seasons.

Variable	**1. z-score**	**2. Non-parachute flag**	**3. P&S Rules**	**4. COVID Affected**
1. z-score	1.000			
2. Non-parachute flag	-0.113	1.000		
3. P&S rules	-0.093	-0.100	1.000	
4. COVID-Affected	-0.135	-0.001	0.516	1.000

Table 2.6 - Correlation Between Variables Matrix

Table 2.6 shows the correlation between our chosen variables. All our covariates are negatively correlated with z-score. The most highly correlated variable with z-score is the COVID-Affected season dummy, negatively correlated at -0.135. This is intuitively correct; we would expect all clubs to be less financially secure during the COVID-affected seasons when the normal league programme was suspended and, after that, played out behind closed doors.

The non-parachute dummy negatively correlates with the z-scores (-0.113), as we would expect the clubs not receiving parachute payments to be more financially distressed as measured by a lower z-score. The P&S rules are negatively correlated with the z-score when we would expect the opposite to be true, given the intention of the P&S rules.

The non-parachute flag is negatively correlated with the post-P&S dummy (-0.100) and the COVID-19 dummy (-0.001), but the correlation is appropriately small.

However, there is a high correlation between the post-P&S dummy and the COVID-affected season dummy. This risks multicollinearity between them, which may impact the standard error

and, therefore, the estimated precision of the variables. However, as all of the COVID-affected seasons are during the P&S period, we would expect a high degree of correlation between the two variables. This is less of a concern as they are just control variables. The key is that these variables are not highly correlated with our main variable of interest parachute payments. One solution to avoid multicollinearity from the controls is to remove the variables that are highly correlated with one another. However, this may result in omitted variable bias, and we are happy to trade off multicollinearity in the controls to ensure unconfoundedness in the parachute payments estimate.

2.4 Results

2.4.1 Initial Observations

Earnings Before Interest and Tax (EBIT)

As the data fluctuates, we use a polynomial trendline to examine what happened to Earnings Before Interest and Tax (EBIT) over our research period and compare this with our expectations.

From Chart 2.1, the non-parachute club's EBIT has declined consistently over the research period. This trend continued even after implementing the P&S rules, albeit slightly slower when we expected a significant increase in EBIT.

Meanwhile, the parachute club's EBIT rose until the 2008/09 season before falling faster than the non-parachute clubs until the 2012/13 season. After implementing the P&S rules, the fall in the parachute clubs' EBIT accelerated even further, well beyond the rate of decline for the non-parachute clubs.

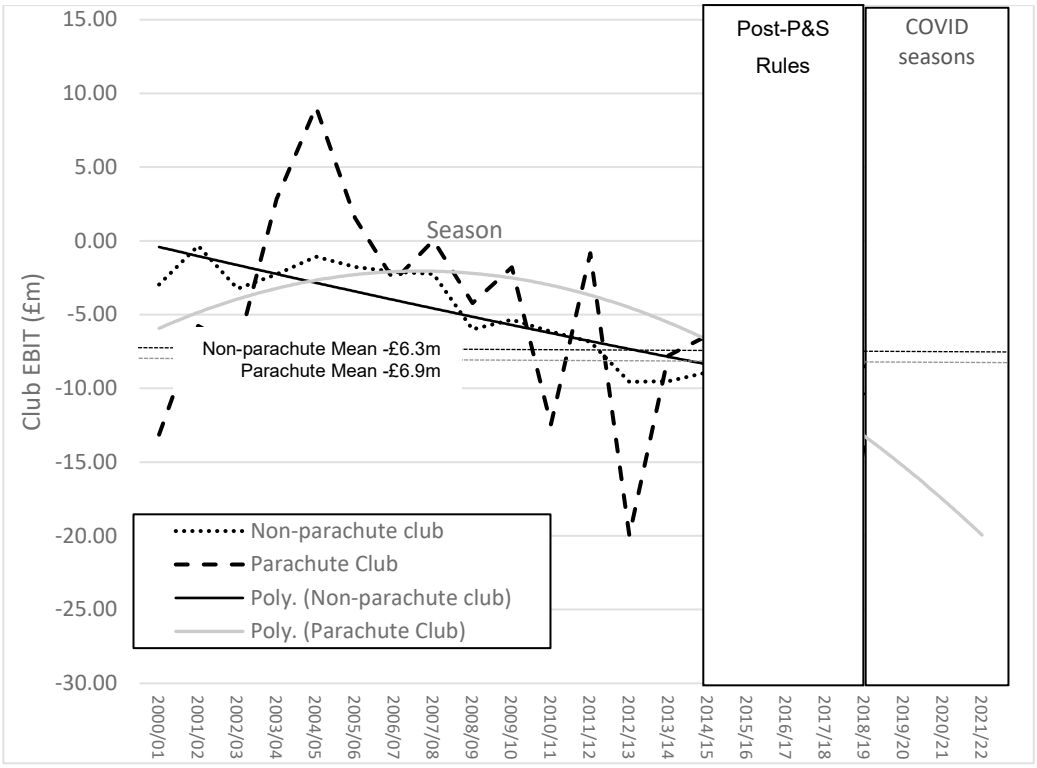

Chart 2.1 - Parachute and Non-parachute Club EBIT for the Seasons 2000/01 – 2021/22

Assuming the P&S loss controls are an effective and robust tool for providing financial sustainability for football clubs, the movements we identified EBIT above in Chart 2.1 should be directly reflected by movements in z-scores.

Z-scores

As the data fluctuates in Chart 2.2 (a), we use a polynomial equation to estimate a trendline. This trendline in Chart 2.2 (b) visually shows what has happened to z-scores over our research period, against which our expectations are tested.

Chart 2.2 (b) shows the trend in the decline of the all-club z-score in the pre-P&S period, which accelerates after implementing the P&S rules. However, this is contrary to what we were expecting. Given the P&S rules' intention, we would expect an increase in z-scores. During the COVID-affected seasons, the all-club z-score declines even faster, which is expected.

Apart from the first two years, the trendline in the parachute club's z-scores is above that of the non-parachute club's trendline throughout the pre-P&S period. During the pre-P&S period, the non-parachute club's z-score trend declined through 2009/10, when it plateaued at around -2.2 units of z-score until the implementation of the P&S rules from 2014/15. Meanwhile, the parachute clubs' z-scores rose through 2005/06 before falling until the implementation of the P&S rules.

As the parachute payments significantly increased in value after 2006/07, this suggests that the parachute clubs were spending more than their parachute payments and gambling on a lucrative return to the EPL.

After implementing the P&S rules, the non-parachute clubs' z-scores began to decline sharply, while the parachute clubs' z-scores increased yearly up to the start of the COVID-affected seasons. This contradicts our expectation of an increase in the non-parachute clubs' z-scores relative to the non-parachute clubs' z-scores. The opposite is true; the parachute clubs' z-score trendline is increasing post-P&S relative to the non-parachute club's z-score trend. The trend in the non-parachute club z-score is declining in the post-P&S period. Throughout the post-P&S period seasons, the average z-score of the parachute clubs is above that of the non-parachute clubs, as expected.

During the COVID-affected seasons, the declining trend in the z-scores of the non-parachute clubs accelerates further, while the z-scores of the parachute clubs now also decline, but at a slower rate than the non-parachute clubs. This supports our expectation that the negative impact of COVID-19 on the parachute clubs' z-score is less than the impact on the non-parachute clubs. Throughout the COVID-affected seasons, the average z-score of the parachute clubs is above that of the non-parachute clubs.

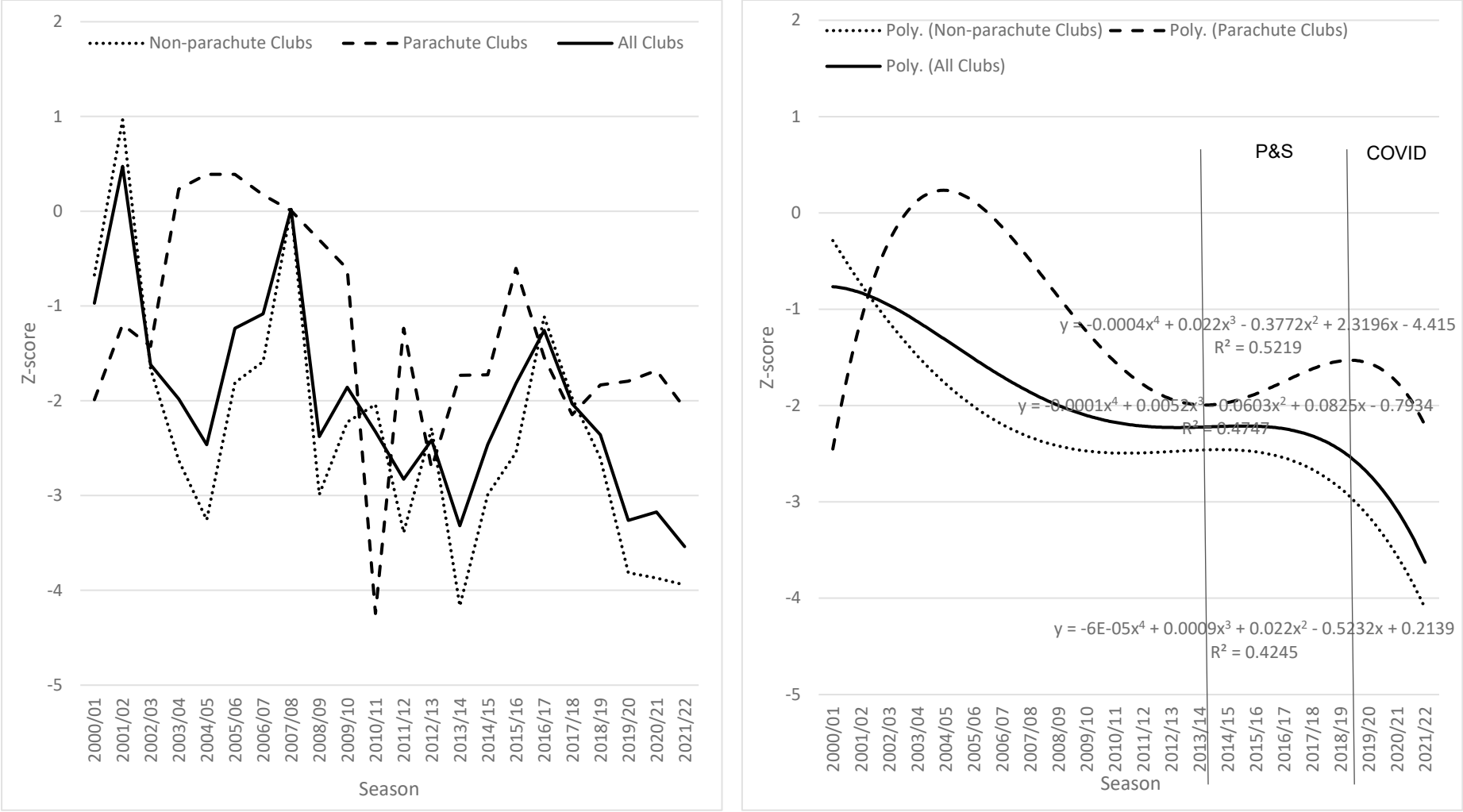

Chart 2.2 – (a) Average Parachute and Non-parachute Club z-scores and (b) polynomial trend line for Parachute and Non-parachute Club z-scores for Seasons 2000/01 – 2021/22

X_1 (Ratio of Working Capital to Total Assets).

Working Capital

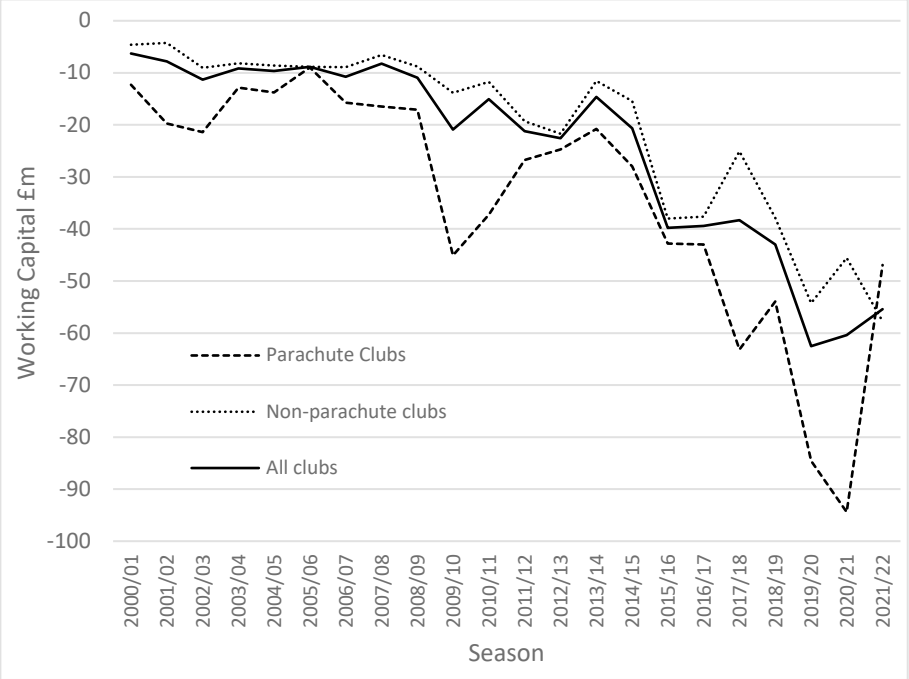

Chart 2.3 –Average Parachute and Non-parachute Club Working Capital (£m) (2000/01 – 2021/22)

From Chart 2.3, the average working capital was relatively stable between -£10m and -£20m in the Pre-P&S period, except for 2012/13, when the parachute clubs' working capital declined sharply to around -£45m, before recovering to around -£21m at the start of the first P&S reporting period.

After implementing the P&S rules, the working capital of the parachute and non-parachute clubs declined, but perhaps surprisingly, the parachute clubs' working capital declined the most. The average working capital improved in the COVID-affected seasons, particularly due to the increase in the parachute clubs' working capital from -85m to -£70m, whilst the non-parachute clubs' working capital remained around -£50m. In isolation, a decline in working capital will reduce the z-score.

Total Assets

From Chart 2.4, the average total assets slowly rose from around £20m to £36m in the pre-P&S period. Before the 2010/11 season, the average parachute club was roughly twice the size of the non-parachute club in total assets when the clubs became more comparable. However, after implementing the P&S rules, the parachute clubs grew, with total assets rising to around £120m when COVID restrictions came in in 2019/20. At the same time, the non-parachute clubs rose to just £50m.

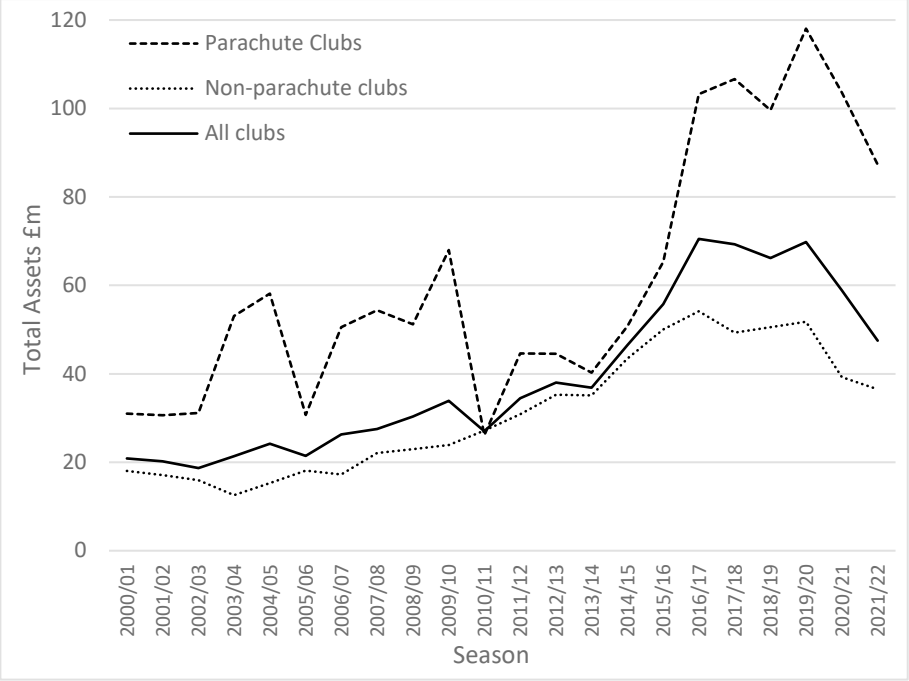

Chart 2.4–Average Parachute and Non-parachute Club total assets for 2000/01 – 2021/22

The parachute and non-parachute clubs declined in size during the COVID-affected seasons, but the parachute clubs' decline was the sharpest, i.e. down £31m compared to the non-parachute clubs, down £15m.

X_1 value

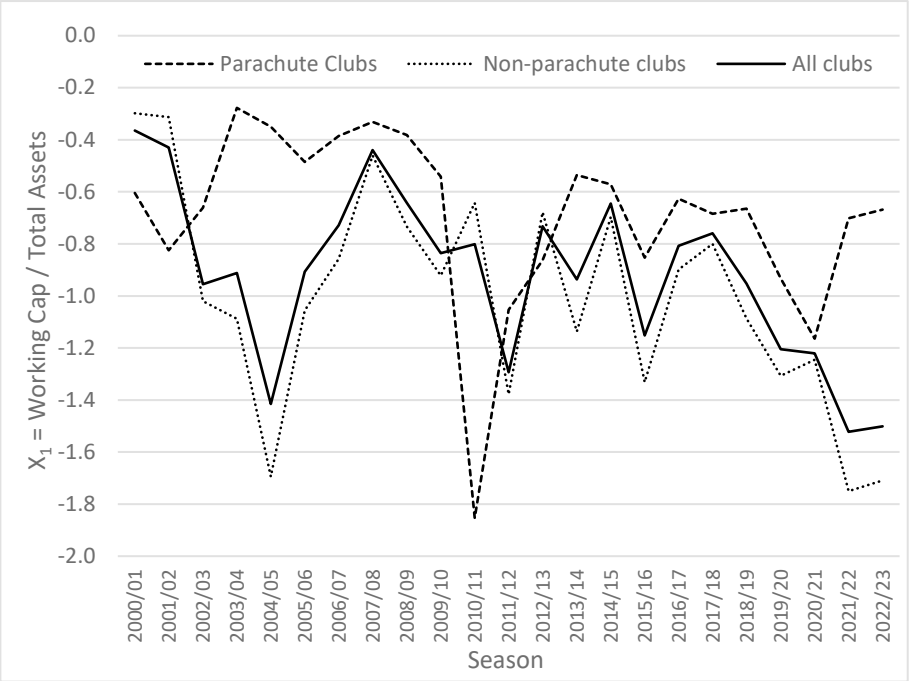

Chart 2.5 – X1 ratio(Working Capital / Total Assets for Seasons 2000/01 – 2021/22

From Chart 2.5, the non-parachute club's X_1 value was lower than that of the parachute clubs in the pre-P&S period, except for a blip in 2010/11, when the parachute club's working capital declined sharply, coinciding with a sharp decline in the parachute clubs' asset value at the same time. Apart from this blip the X_1 advantage is due to the parachute clubs' higher asset value than the non-parachute clubs, for a similar level of working capital between the parachute and non-parachute clubs. We will test whether this contributes to the average parachute club's higher z-score than the non-parachute club's z-score. After implementing the P&S rules, the non-parachute clubs' X_1 decreased by 0.13, whilst the parachute clubs declined by only 0.03, despite a greater fall in working capital. The greater decrease in the parachute club's working capital is diluted by the greater increase in total assets of the parachute club compared to the non-parachute club.

X_2 (Ratio of Retained Earnings to Total Assets)

Retained Earnings

From Chart 2.6, the average retained earnings for all parachute and non-parachute clubs were relatively consistent between -£10m and -£20m. However, in 2009/10, the parachute clubs' retained earnings sharply declined to -£50m. By the time of implementation of the P&S rules, the non-parachute retained earnings had fallen to -£54m, and the parachute clubs had fallen to -£75m. in the Pre-P&S period

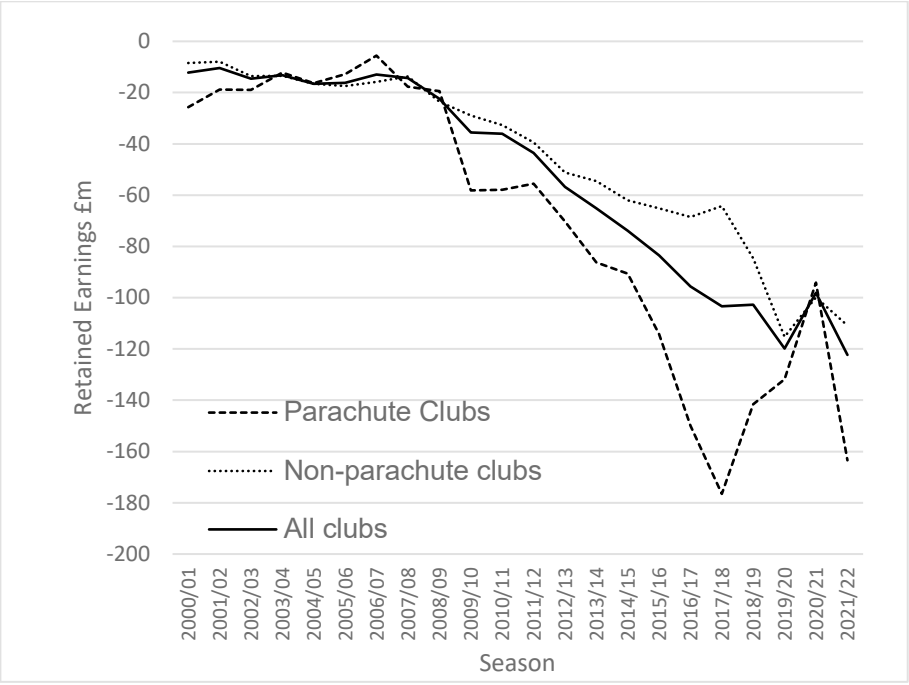

Chart 2.6 –Parachute and Non-parachute Club Retained Earnings (£m) (2000/01 – 2021/22)

After the P&S rules implementation, the retained earnings of the non-parachute clubs stabilised around the -£60m mark whilst the parachute clubs continued to decline to -£176m before increasing to -£143m just before COVID-19 restrictions were enforced.

During the COVID-affected seasons, the retained earnings of the non-parachute clubs declined by about £40m on average compared to the other post-P&S seasons, whilst the parachute clubs improved by £5m on average. However, this average change includes a big increase in retained earnings of £47m followed by a sharp fall of £32m during the COVID-affected seasons for the parachute clubs.

Total Assets

The fixed assets movements are the same as described for X_1.

X_2 value

In Chart 2.7, the average X_2 value declined over the pre-P&S period from -0.48 to -2.26 by 2004/05 before rising again to -0.87 by 2007/08. It declined again to -2.60 by 2011/12. A quick upturn to -1.96 happened in 2012/13 before declining again to -2.80 in 2013/14, the year before P&S was implemented. Through this period, the parachute clubs' X2 value was largely higher than that of the non-parachute clubs despite similar retained earnings.

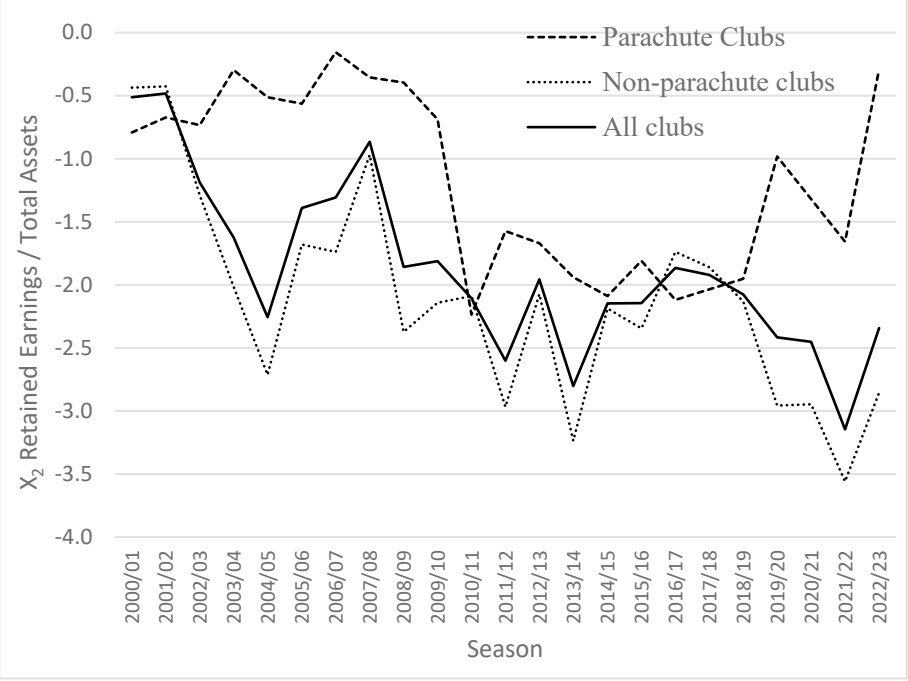

Chart 2.7 – X_2 Ratio (Working Capital / Total Assets for Seasons 2000/01 – 2021/22

Only with the sharp decline in retained earnings in 2009/10 and the sharp decline in fixed assets in 2010/11 did the parachute clubs' X_2 value fall to a similar value to the non-parachute clubs. In the post-P&S period, the X_2 is relatively stable, around -2.0 +/- 0.25 for all clubs and

the parachute and the non-parachute clubs. However, these values are lower than the average for the pre-P&S X_2 values, which suggests that whilst the P&S has not improved this element of the z-score, it may have at least arrested the decline in X_2.

X_3 (Ratio of EBIT to Total Assets)

Earnings Before Interest and Tax (EBIT)

From Chart 2.8, the average EBIT for all clubs and the parachute and non-parachute clubs were relatively consistent between £0m and -£5m in the pre-P&S period. However, in 2010/11, the parachute club's EBIT sharply declined to -£12.5m, whilst the non-parachute club's EBIT was around -£6m. In 2011/12, the EBIT of the parachute clubs increased to near break-even, while the non-parachute teams' EBIT remained around the -£5m mark. In 2012/13, the parachute and non-parachute clubs' EBIT fell to -£20m and -£13m, respectively. By the time of implementation of the P&S rules, the non-parachute clubs' EBIT remains around -£10m, whilst the parachute clubs' EBIT has increased to +£10m, a turnaround in EBIT of £32m in the previous three years. After implementing the P&S rules, the EBIT of the non-parachute clubs initially fell to £16m before rising back to £6m over the last two COVID-affected seasons. Meanwhile, the parachute clubs' EBIT initially falls to -£29m for the parachute clubs, which is greater than that suffered by the non-parachute clubs. In the second year of the COVID-19 restrictions, the parachute clubs' EBIT recovers to -£3m before a £20m decline in the third year to -£23m.

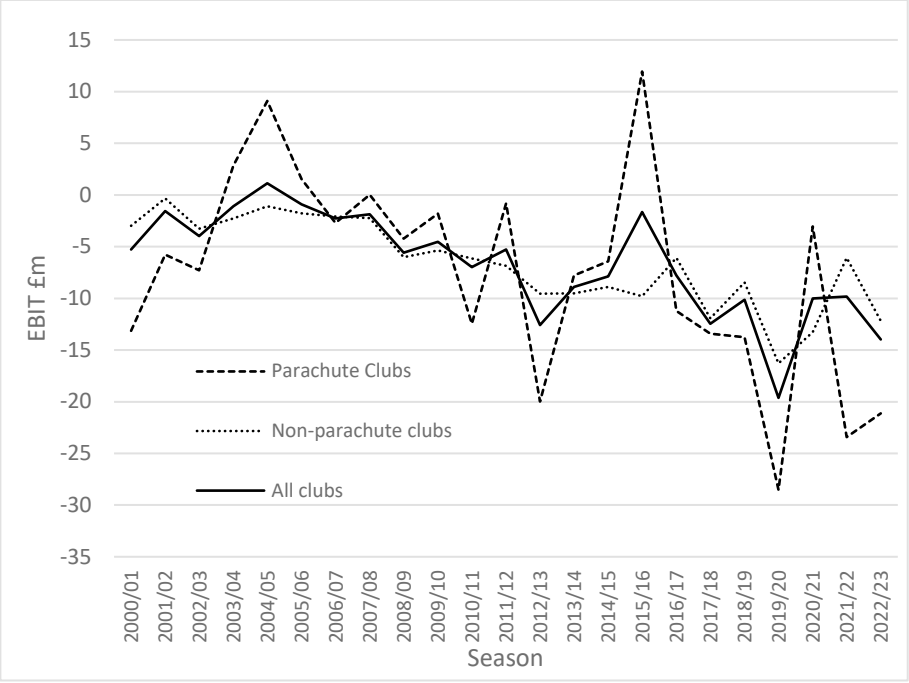

Chart 2.8 – Average Parachute and Non-parachute Club EBIT (£m) (2000/01 – 2021/22)

Total Assets

The fixed assets movements are the same as described for X_1.

X_3 value

In Chart 2.9, the average X_3 value for all clubs declined over the pre-P&S period from -0.3 to -0.4 by 2013/14. The X_3 value peaks at 0.01 in 2001/02 and -0.03 in 2004/05; otherwise, it is on a steady downward trend. Despite similar EBIT, the parachute clubs' X_3 value is higher than the non-parachute clubs through most of the period. Only with the sharp decline in fixed assets in 2010/11 and the sharp decline in EBIT in 2012/13 did the parachute clubs' X_3 value fall below that of the non-parachute clubs.

In the initial years of the post-P&S period, the X_3 increased for all clubs, the parachute clubs, and the non-parachute clubs, to the point that the parachute clubs' X_3 turned positive (+2.4) in 2015/16.

However, the X_3 fell after that to the point where the non-parachute and parachute clubs X_3 were similar by the start of the COVID-19 restrictions. In the COVID-affected seasons, the parachute club X_3 value rises and then falls, whilst the opposite is true for the parachute clubs.

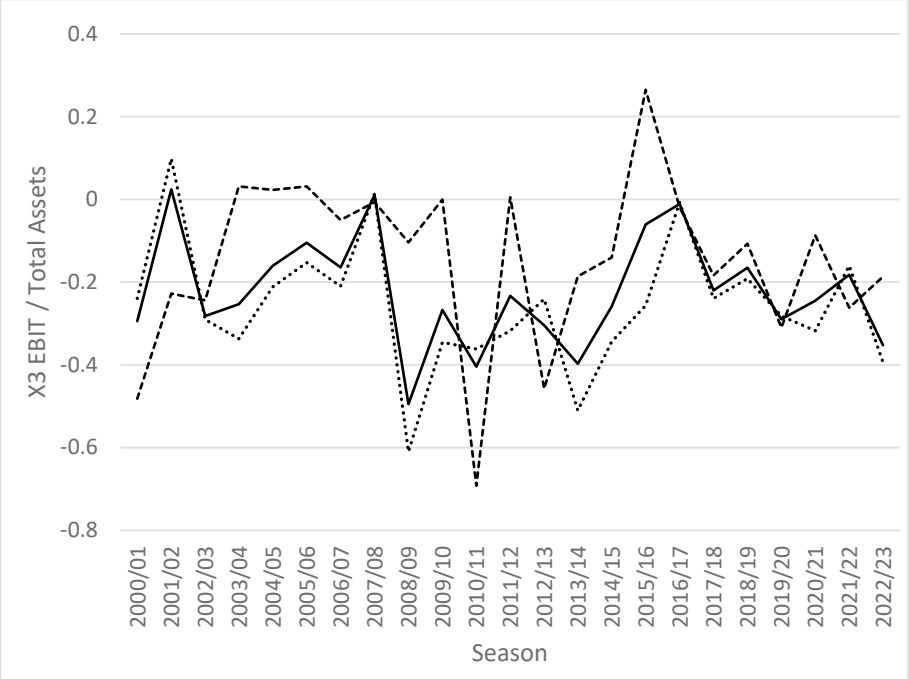

Chart 2.9 – X_3 ratio (EBIT / Total Assets for Seasons 2000/01 – 2021/22

X_4 (Ratio of Equity to Debt).

Equity

In Chart 2.10, the average Equity for all clubs was relatively stable between £0m and -£10m up until 2009/10. However, from 2010/11, the all-club average Equity Book Value sharply

declined to -£26m by 2013/14. During this period, the parachute club's Equity fell initially before reaching a peak of +£20.6m in 2004/05. It fell steadily to -£39.2m by 2010/11. There followed a brief upturn in 2011/12 to -£23.5m before declining again to -£45.7m by the year before the implementation of the P&S rules.

Meanwhile, the non-parachute club's Equity had fluctuated between -£1m and -£10m up until 2009/10, when the non-parachute club's Equity also began to decline, reaching a low of around -£20m from 2012/13. From implementing the P&S rules, the all-club average equity and the parachute and non-parachute clubs' equity all rose to a peak by 2017/18, with the non-parachute club's equity at +£30.0m, the all-club average equity at +£3.2m, and the non-parachute club's equity at -£10.0m.

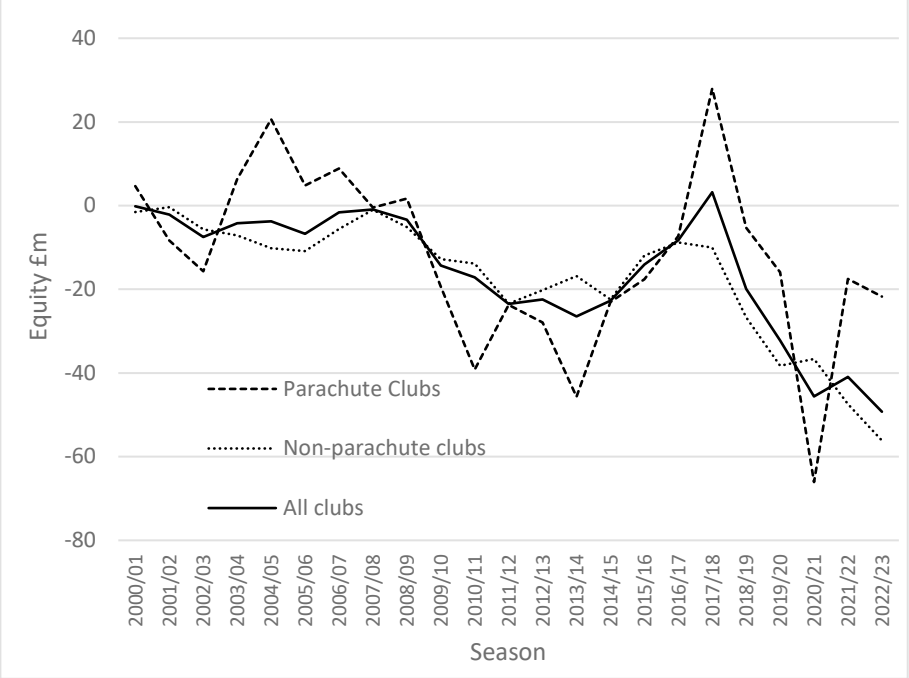

Chart 2.10 – Average Parachute and Non-parachute Club Equity (£m) (2000/01 – 2021/22)

Through 2018/19 and into the COVID-affected seasons, the average Equity values for all clubs and the parachute and non-parachute clubs had declined, with the greatest decline being in the equity of the parachute clubs. However, it did recover in the last year of the COVID restrictions.

Club Debt

From Chart 2.11, the average club debt increased consistently over the research period from £20.8m to £56.1m by the time the P&S rules were implemented. During this time, the parachute club's debt was consistently above that of the non-parachute club's debt, rising from £26.3m to £86.0m, whilst the non-parachute club's debt rose from £20.8m to £41.1m. After

implementing the P&S rules, debt continued to rise even though the P&S rules limited losses to £5m if funded by debt.

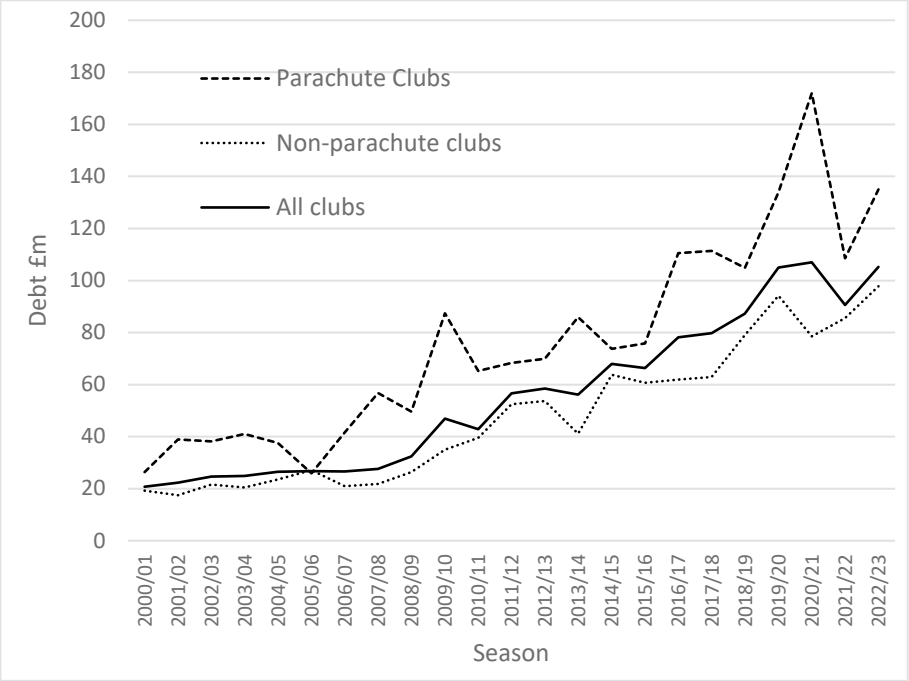

Chart 2.11 – Average Parachute and Non-parachute Club Debt (2000/01 – 2021/22)

The average all-club debt rose from £56.1m to £87.2m, parachute club debt rose from £86.0m to £104.9m, and non-parachute debt rose from £41.1m to £79.0m between 2014/15 to 2018/19. As a result of the COVID-19 restrictions, the average all-club debt rose from £87.2m to peak at £107.0m, and the parachute club debt rose from £104.9m to peak at £172.0m by 2020/21, whilst the non-parachute club's debt rose from £41.1m to peak at £94.1m by 2019/20.

X_4 value

In Chart 2.12, the average X_4 value declined over the pre-P&S period from +0.18 to -0.38 by 2011/12 before rising to -0.09 by the time the P&S rules were implemented at the beginning of 2014/15. The parachute clubs X_4 fell initially but rose quickly to a peak of +0.67 by 2004/05 before falling to -0.55 by 2010/11, before rising again to -0.09 by 2013/14, the last year before implementing the P&S rules.

The non-parachute clubs X_4 rose initially but fell to -0.2 by 2005/06. It fluctuated between 0 and -0.2 until 2011/12, when it fell sharply to -0.46 but recovered to -0.1 by the time of the implementation of the P&S rules. Following an initial drop in X_4 in the first year of the P&S rules, there followed a period of sustained growth to 0.62 by 2017/18. The all-clubs average X_4 value, and the parachute and non-parachute clubs' x_4 value declined from 208/19 to the end of the COVID-19 restrictions. X_4 continued to rise post-P&S from -0.09 to a peak of +0.53

by 2017/18 due to an increasing equity value in the same period, although an increasing amount of debt was diluting the full impact of this increase in equity.

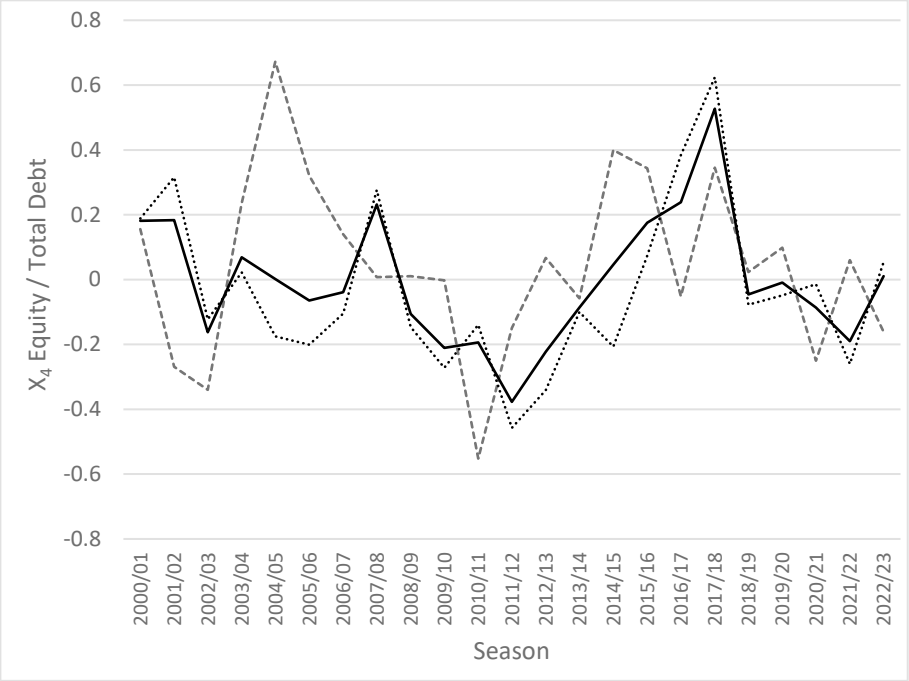

Chart 2.12 – X_4 ratio (Total Equity / Total Debt) for Seasons 2000/01 – 2021/22

X_5 (Ratio of Total Sales to Total Assets)

Total Sales

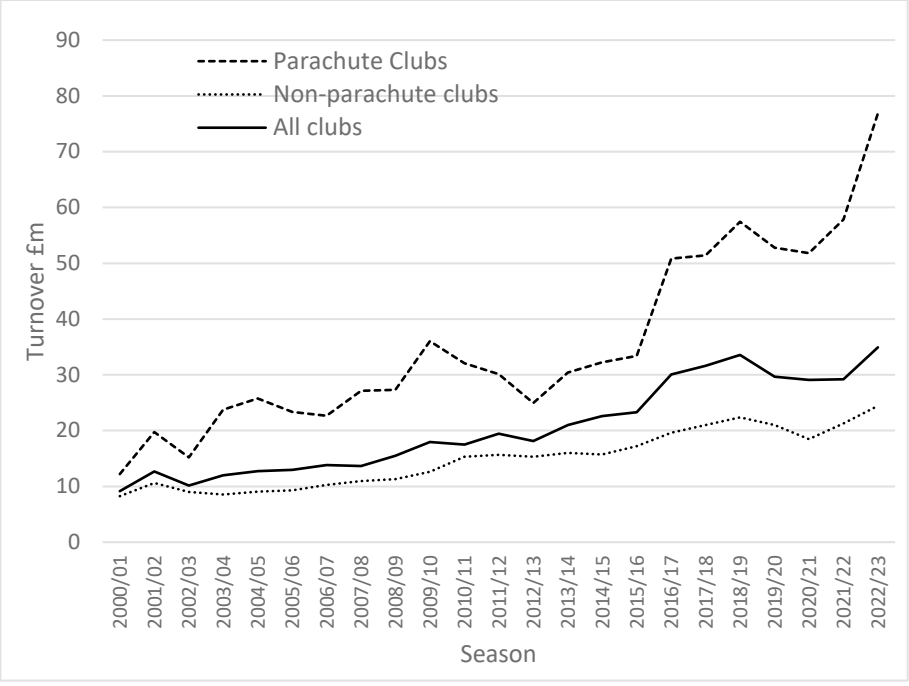

Chart 2.13 –Average Parachute and Non-parachute Sales (£m) (2000/01 – 2021/22)

In Chart 2.13, the average sales for all clubs and the parachute and non-parachute clubs individually steadily rose., However, in 2009/10, the parachute club's sales began to drop sharply from £36m to £25m by 2012/13 but had grown to £30m by the end of 2013/14. The non-parachute income rose much slower than the parachute clubs, rising from £9m in 2000/01 to £16m at the point of implementation of the P&S rules. In the post-P&S period, the parachute club sales grew rapidly, jumping from £33m to £51m in 2016/17, and peaked at £57m in 2018/19, whilst in the same period, non-parachute club sales rose from £16m to £22m. With the COVID-19 restrictions and the loss of matchday income, parachute and non-parachute club sales fell.

Total Assets

The fixed assets movements are the same as described for X_1.

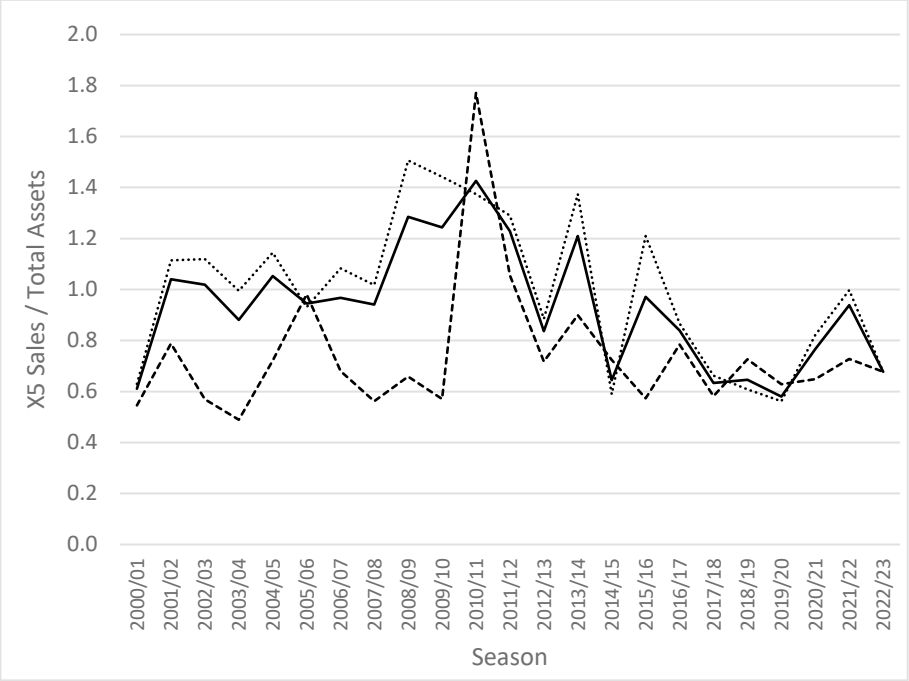

Chart 2.14 - X_5 ratio(Total Sales / Total Assets (2000/01 – 2021/22).

In Chart 2.14, the average X_5 value for all clubs steadily rose over the pre-P&S period from 0.6 to a peak of 1.43 by 2010/11, which coincided with a significant fall in the asset value, primarily the parachute clubs. The X_5 declines to 0.83 by 2012/13 before rising to 1.2 at the point of implementation of the P&S rules. With the growth in assets exceeding the growth in sales, the X5 value declines over the post-P&S period. Following a sharper decline in total assets than sales during the COVID-affected seasons, the X_5 ratio rises to 0.93.

2.4.2 Statistical Testing

We will use a series of two-sample differences in means t-tests to test differences between pre-and post-P&S periods, COVID and non-COVID seasons and parachute and non-

parachute clubs. This is analogous to a univariate Ordinary Least Squares regression where EBIT is the dependent variable, and the non-parachute dummy is one or zero for all seasons or just the pre-and post-P&S periods and the COVID-affected seasons. Alternatively, the P&S or COVID flag was one or zero for all clubs or just the parachute or non-parachute clubs.

Earnings Before Interest and Tax

Results of t-tts:		Pre-P&S Mean EBIT (Obs.)	Post P&S Mean EBIT (Obs.)	Diff in mean EBIT (p-value)	COVID-Years Mean EBIT (Obs.)	Diff in mean EBIT (p-value)	All Seasons
Row	Column	1	2	Col 1-Col 2	3	Col 2-Col 3	4
1	Parachute Clubs (Observations)	-4.66 (74)	-5.96 (42)	**1.30 (0.381)**	-17.20 (18)	**11.24 (0.110)**	-6.75 (134)
2	Non parachute (Observations)	-4.20 (242)	-8.99 (75)	**4.79*** (0.000)**	-11.61 (49)	**2.61 (0.217)**	-6.17 (366)
3	Difference (R1-R2) (p-value)	**-0.46 (0.663)**	**3.04 (0.756)**		**-5.59 (0.203)**		**-0.58 (0.358)**
4	All Clubs	-4.31 (316)	-7.91 (117)	**3.60*** (0.008)**	-13.11 (67)	**5.20* (0.072)**	

Table 2.7 - EBIT t-test results between non-parachute and parachute clubs, pre and post-P&S, and the COVID-affected seasons.

Pre-and Post-P&S Period

From Table 2.7, row 4, columns 1 and 2, we find a difference in the mean all-club EBIT of £3.60m between the pre-P&S EBIT of -£4.31m and the post-P&S EBIT of -£7.91m, with a p-value of 0.008. This means the average EBIT for all clubs has significantly fallen after the EFL implemented the P&S rules. This is opposite to what was intended by the P&S rules.

In row 1, columns 1 and 2, we find a difference in the parachute clubs' EBIT of £1.30m between the pre-P&S EBIT of -£4.66m and the post-P&S EBIT of -£5.96m with a p-value of 0.381. The observed decrease in the parachute clubs' EBIT could have arisen by chance.

In row 2, columns 1 and 2, we find a difference in non-parachute clubs' EBIT of £4.79m between the pre-P&S EBIT of -£4.20m and the post-P&S EBIT of -£8.99m with a p-value of 0.000. The non-parachute clubs' EBIT significantly fell after the EFL implemented the P&S rules.

Post-P&S and COVID-affected seasons

In row 4, columns 2 and 3, we find a difference in the average EBIT for all clubs of £5.20m between the P&S period of -£7.91m and -£13.11m in the COVID-affected seasons with a p-value of 0.072. The all-club average EBIT is significantly less in the COVID-affected seasons.

In row 1, columns 2 and 3, we find a difference in the parachute clubs' EBIT of £11.24m between the post-P&S EBIT of -£5.96m and -£17.20m in the COVID-affected seasons with a p-value of 0.110. The observed decrease in the parachute clubs' EBIT is not significant.

Meanwhile, in row 2, columns 2 and 3, we find a difference in the non-parachute clubs' EBIT of £2.61m between the P&S EBIT of -£8.99m and mean EBIT in the COVID-affected seasons

of -£11.61m with a p-value of 0.217. The observed decrease in the non-parachute clubs' EBIT is not significant.

Parachute and non-parachute clubs

From Column 4, we find a difference of -£0.58m in the EBIT for all seasons between the parachute club's EBIT of -£6.75m and the non-parachute clubs' EBIT of -£6.17m with a p-value of 0.358. The observed difference in the mean EBIT between the parachute and non-parachute clubs for all seasons may be due to chance.

In row 3, column 1, we find a difference in EBIT in the pre-P&S period of -£0.46m between the parachute clubs' EBIT of -£4.66m and the non-parachute clubs' EBIT of -£4.20m with a p-value of 0.663. The observed difference in parachute clubs' EBIT and the non-parachute clubs' could be due to chance.

In row 3, column 2, we find a difference in EBIT in the post-P&S period of £3.04m between the parachute clubs' EBIT of -£5.96m and the non-parachute clubs' EBIT of -£8.99 with a p-value of 0.756. The observed difference in the EBIT between the parachute and non-parachute clubs in the post-P&S period could again have arisen purely by chance.

In row 3, column 3, we find a difference in EBIT in the COVID-affected seasons of -£5.59m between the parachute clubs of -£17.20m and non-parachute clubs -£11.61m with a p-value of 0.203. Therefore, the observed difference in the EBIT of the parachute clubs and the non-parachute clubs during the COVID-affected seasons may again have arisen spuriously and may not be due to whether the club is receiving parachute payments.

Z-scores

We will now confirm our visual observations with a series of t-tests. This is analogous to a univariate Ordinary Least Squares regression where the z-score is the dependent variable, and the non-parachute dummy is one or zero for all seasons or just the pre-and post-P&S periods and the COVID-affected seasons. Alternatively, the P&S flag or the COVID flag was one or zero for all clubs, or the parachute or non-parachute clubs individually.

Results of t-tests:		Pre-P&S Mean z-score (Obs.)	Post P&S Mean z-score (Obs.)	Difference in mean z-score (p-value)	COVID-Years Mean z-score (Obs.)	Difference in mean z-score (p-value)	All Seasons z-score
Row	Column	1	2	Col 1-Col 2	3	Col 2-Col 3	4
1	Parachute Clubs (Observations)	-0.94 (74)	-1.48 (42)	**0.54 (0.150)**	-1.80 (18)	**0.32 (0.367)**	-1.23 (134)
2	Non parachute (Observations)	-1.94 (242)	-2.20 (75)	**0.26 (0.316)**	-3.85 (49)	**1.65** (0.016)**	-2.25 (366)
3	Difference (R1-R2) (p-value)	**1.00** (0.024)**	**0.72 (0.152)**		**2.05** (0.047)**		**1.02*** (0.005)**
4	All Clubs	-1.71 (316)	-1.94 (117)	**0.23 (0.283)**	-3.30 (67)	**1.36** (0.013)**	

Table 2.8 – Z-score t-test results between non-parachute and parachute clubs, pre and post-P&S, and the COVID-affected seasons.

Pre-and post-P&S

From Table 2.8, row 4, column 3, we find a difference in the mean all-club z-score of 0.23 units between the pre-P&S z-score of -1.71 units and the post-P&S z-score of -1.94, with a p-value of 0.283. The observed fall in the all-club average z-score after the EFL implemented the P&S rules is not significant and may be due to chance.

In row 1, column 3, we find a difference in the parachute clubs' z-score of 0.54 units between the pre-P&S z-score of -0.94 units and the post-P&S z-score of -1.48 units with a p-value of 0.150. In row 2, column 3, we find a difference in non-parachute clubs' z-score of 0.26 units between the pre-P&S z-score of -1.94 and the post-P&S z-score of -2.20 with a p-value of 0.316. The observed decrease in the parachute and non-parachute club's z-score is not statistically significant. Therefore, the non-parachute club's z-score has not increased more than the parachute club's post-P&S score.

Post-P&S and COVID-affected seasons

In row 4, columns 2 and 3, we find a difference in the average all-club's z-score of -1.36 units between the post-P&S period of -1.94 units and -3.30 units in the COVID-affected seasons with a p-value of 0.013. The all-club average z-score is lower in the COVID-affected seasons.

In row 1, columns 2 and 3, we find a difference in the average parachute club's z-score of +0.32 between the post-P&S z-score of -1.48 units and -1.80 units in the COVID-affected seasons with a p-value of 0.367. Meanwhile, in row 2, columns 2 and 3, we find a difference in the average non-parachute club's z-score of +1.65 between the z-score of -2.20 units in the P&S period and -3.85 units in the COVID-affected seasons with a p-value of 0.016. The average non-parachute club's financial distress has increased more than that of the average parachute club. The observed decrease in the parachute club's z-score is not statistically significant, but the non-parachute club's decrease in z-score is.

Parachute and non-parachute clubs

In row 3, Column 4, we find a difference in the average z-score for all seasons of +1.02 between the parachute club's z-score of -1.23 units and the non-parachute clubs' z-score of -2.25 units with a p-value of 0.005. The average non-parachute club's z-score is significantly less than the average parachute club's z-score for all seasons.

In row 3, column 1, we find a difference of +1.00 units of z-score between the parachute z-score of -0.94 and the non-parachute z-score of -1.94 for the pre-P&S period (p=0.024). The average non-parachute club's z-score is significantly less than the average parachute club's z-score for the pre-P&S period.

In row 3, column 2, we find a difference of +0.72 units of z-score between the parachute club z-score of -1.48 and the non-parachute club z-score of -2.20, but the difference is no longer significant (p=0.152). The observed difference between the average non-parachute club's z-score and the parachute club's z-score is not statistically significant.

In row 3, column 4, we find a difference of +2.05 z-score units between the parachute club z-score of -1.80 and the non-parachute club z-score of -3.85 (p=0.047). The average non-parachute club's z-score was significantly less than the average parachute club's z-score.

Conclusion

The two-sample t-test results are compared to our initial visual observations in Chart 2.2(b). Our observations suggested that the non-parachute clubs were more financially distressed than the parachute club, as measured by lower z-score, for the pre-and post-P&S period and the COVID-affected seasons. The t-test results confirm that the parachute clubs z-scores are statistically higher than the non-parachute clubs for the pre-P&S period, the COVID-affected seasons and all seasons, but not for the post-P&S period.

Chart 2.2 (b) observations suggested that the all-club z-score declines in the post-P&S period and further declines in the COVID-affected seasons. This decline is partially confirmed by the t-test results, which show that the all-club average z-score had fallen by 1.3 z-score units in the COVID-affected seasons. However, the observed fall in the all-club z-score post-P&S is not confirmed by a statistically significant fall in the t-test results.

We are now looking at the discriminatory impact of the P&S rules and the COVID-19 pandemic on the non-parachute clubs compared to the parachute clubs. In Chart 2.2 (b), we observed a fall in the non-parachute club z-scores in the post-P&S period, while the z-scores increased for the parachute clubs. The t-test results contradict the observed increase in the z-scores for the parachute clubs. It shows a fall instead, but the fall is not statistically significant. Meanwhile, the t-test results show a fall in the z-score for the non-parachute clubs in the post-P&S period, but the fall is not statistically significant.

In Chart 2.2 (b), we observed a fall in the parachute and non-parachute club z-scores in the COVID-affected seasons. The t-test results confirm the observed fall in the z-scores for the parachute clubs; however, the fall is not statistically significant. Meanwhile, the t-test results confirm the observed fall in the z-score for the non-parachute clubs in the COVID-affected seasons, and the fall is statistically significant.

We conclude that the P&S rules have not reduced financial distress as measured by a general increase in z-scores and have not disproportionately impacted the non-parachute clubs as measured by a greater increase in z-scores relative to the parachute clubs. Furthermore, we

conclude that whilst the all-club average z-score has declined in the COVID-affected seasons, only the non-parachute clubs have been impacted by the COVID-19 restrictions on attendance.

The average EBIT for all clubs has fallen after the EFL implemented the P&S rules, but only for the non-parachute clubs. The parachute clubs are statistically unchanged. Meanwhile, the observed falls in z-score between the pre-and post-P&S periods for all clubs, the parachute clubs, and the non-parachute clubs could all be due to chance. There is no consistency between our EBIT and z-score findings.

As expected, the average EBIT for all clubs is lower in the COVID-affected seasons than in the other post-P&S seasons. This would justify the EFL's decision to introduce COVID add-backs into the P&S calculation for seasons 2019/20, 2020/21 and 2021/22 (EFL, 2022). However, the observed decreases in EBIT for either the parachute or non-parachute clubs are not significant. Meanwhile, observed decreases in the average z-score for all clubs and the non-parachute clubs in the COVID-affected seasons are significant. In contrast, the observed decrease in the parachute clubs' z-score is not significant. Whilst the decrease in z-score for all clubs is consistent with the fall in EBIT, the significant decrease in z-score for non-parachute clubs is not mirrored by a significant fall in EBIT.

The observed difference in the mean EBIT between the parachute and non-parachute clubs for all seasons, the pre-P&S period, the post-P&S period, and the COVID-affected seasons is not significant.

Meanwhile, the observed lower levels of distress (i.e., higher z-score) of the parachute clubs compared to the non-parachute clubs for all seasons, the Pre-P&S period, and the COVID-affected seasons are significant; the non-parachute clubs are more distressed than the parachute clubs. The observed difference in distress in the post-P&S period could be due to chance. The parachute clubs' advantage in z-score for all seasons and in the pre-P&S period is inconsistent with the observed difference in EBIT between the parachute and non-parachute clubs, which may be due to chance. However, the advantage in z-score post-P&S is consistent with the advantage in EBIT because they both may be due to chance.

We conclude that the increase in losses suggests that the EFL's aim to make clubs more sustainable by setting maximum limits to control losses has been ineffectual at best. Little correlation was found between EBIT and z-scores. In only one case, we see a significant difference in EBIT leading to a difference in z-score, i.e., the decrease in z-score in the COVID-affected seasons is matched by a decrease in EBIT. This suggests that promoting sustainability through loss controls may be a rather blunt tool.

Also, the guaranteed income provided through parachute payments made the parachute clubs more financially resilient to the loss of matchday income than the non-parachute clubs during the COVID-affected seasons of 2019/20, 2020/21, and 2021/22. Perhaps the COVID add-backs into the P&S calculation for seasons 2019/20, 2020/21, and 2021/22 would have been better applied to the non-parachute clubs only. The EFL may have inadvertently given the parachute clubs a further competitive advantage by providing unnecessary headroom within the P&S calculation.

We conclude that club EBIT has reduced in the post-P&S period, driven by the decline in EBIT of the non-parachute clubs, while the parachute clubs have not declined. This reflects the non-parachute clubs' attempt to compete with the parachute clubs in player acquisition by increasing club losses. However, the losses have not yet become constrained by the P&S loss limits

2.4.3 Regression Results

Regression of z-scores

Our initial research findings for z-scores are reported in Table 2.9:

Regressions All Championship Clubs Seasons: 2000/01 – 2022/23	**Univariate Fixed Effects**	**Univariate Fixed Effects**	**Univariate Fixed Effects**	**Club Fixed Effects**	**Club Fixed Effects with interaction**
Column	1	2	3	4	5
Intercept P=	-0.26 (0.740)	-1.30** (0.031)	-2.58*** (0.001)	-0.26 (0.740)	**-0.395 (0.633)**
Non-parachute flag β_1 (p)	-1.32** (0.018)			-1.32** (0.018)	**-1.22* (0.075)**
P&S flag β_2 (p)		-0.68 (0.427)		-0.84 (0.312)	-0.43 (0.728)
Covid Seasons β_3 (p)			-0.52 (0.631)	-1.05 (0.298)	-1.15 (0.417)
Non-parachute # P&S β_4 (p)					-0.59 (0.525)
Non-parachute # Covid β_5 (p)					+0.19 (0.897)
R^2	0.072	0.047	0.30	0.072	0.071
Observations	500	433	184	500	500
Non-parachute clubs %age	73%	73%	67%	73%	73%
Total Clubs	61	60	42	61	61

Table 2.9 - Regression Results of z-score on Non-parachute, P&S and COVID dummies

Where:

Column 1 is a Univariate Club Fixed-Effects regression for all seasons, with the non-parachute flag equal to one if the club is not a parachute club.

Column 2 is a Univariate Club Fixed-Effects regression for pre-COVID affected seasons where the P&S flag equals one if the season is in the post-P&S period.

Column 3 is a Univariate Club Fixed-Effects regression for the post-P&S seasons where the COVID flag equals one if the COVID pandemic disrupts the season (seasons 2019/20, 2020/21 and 2021/22 (EFL, 2022)).

Column 4 is a Multivariate Club Fixed-Effects regression for all seasons where the non-parachute flag is one if the club is not a parachute club, the P&S flag is one if the season is in the post-P&S

period, and the COVID flag is one when the COVID Pandemic disrupted the league schedule (seasons 2019/20 and 2020/21)

Column 5 is the same as column 4 but includes the interactions between P&S, COVID-19, and parachute payments.

When our independent variables are controlled for separately, we find the β_1 coefficient in column 1 predicts that the average non-parachute club's z-score is 1.32 units less than the z-scores of the parachute clubs. The coefficient is statistically significant at a 5% significance level (p=0.018). The non-parachute clubs are significantly more financially distressed than the parachute clubs, even when we control for club-fixed effects.

The β_2 coefficient in column 2 predicts that the z-score falls by 0.68 units in the post-P&S period, but the coefficient is not statistically significant (p=0.427). The P&S rules have not significantly reduced financial distress.

The β_3 coefficient in column 3 predicts that z-scores will decrease by 0.52 units in the seasons disrupted by the COVID-19 pandemic. The coefficient is not statistically significant (p=0.631). Financial distress has not increased during the COVID-affected seasons.

In column 4, we control for the β_1, β_2 and β_3 variables simultaneously. We find that the β_1 coefficient predicts that the z-scores of the non-parachute clubs are 1.32 units lower than the parachute clubs and is statistically significant at a 5% significance level (p=0.018). However, the β_2 coefficient of -0.84 units (p= 0.312) and the β_3 coefficient of -1.05 (p=0.298) are not statistically significant. The non-parachute clubs are significantly more financially distressed than the parachute clubs; the P&S rules have not significantly reduced financial distress and financial distress has not increased during the COVID-affected seasons.

In column 5, we relax the independence assumption between parachute payments and the P&S rules by including in our multivariate Fixed Effects model the variables β_4, the interaction between the non-parachute and post-P&S dummy variables and β_5, the interaction between the non-parachute and COVID-affected season dummy variables.

The β_1 coefficient now predicts that the z-scores of the non-parachute clubs are 1.22 units lower than those of the parachute clubs. However, it is now only significant at a 10% significance level (p=0.075). The z-scores of the non-parachute clubs are lower than those of the parachute clubs. The β_2 coefficient of -0.43 units is not statistically significant (p=0.728). Therefore, financial distress has not decreased, as expected, because of the implementation of the P&S rules. The β_3 coefficient of -1.15 is also not statistically significant (p=0.417); financial distress has not increased in the COVID-affected seasons.

The interaction variable β_4 of -0.59 is unexpectedly negative when we expect positive, but it is not statistically significant (p=0.525). The z-scores of the average non-parachute club have not increased more than those of the average parachute club post-P&S.

The interaction variable β_5 of +0.19 units is unexpectedly positive when we expect a negative coefficient, but it is also not statistically significant (p=0.897); the z-score of the average non-parachute club has not decreased more than that of the average parachute club in the COVID-affected seasons. The parachute and non-parachute clubs have been equally resilient regarding z-score in playing matches behind closed doors, probably due to the government furlough payments.

> "The shutdown created some instability which resulted in most staff put on the government furlough scheme."
>
> Sheffield Wednesday
> ANNUAL REPORT AND FINANCIAL STATEMENTS
> FOR THE YEAR ENDED 31 JULY 2020

> "Grants of a revenue nature are recognised in other operating income within profit or loss in the same period as the related expenditure. This includes the Government Coronavirus Job Retention Scheme ('Furlough')."
>
> Birmingham City
> Audited Financial Statements
> For the Year Ended 30 June 2021

From Table 2.10, the β_1 coefficient of -1.22 is consistent with our t-test result of +1.02; both reflect a higher z-score for the parachute clubs over the non-parachute clubs. This supports our expectation that the non-parachute clubs will be significantly more financially distressed than the parachute clubs, even when we control for club-fixed effects and the interactions between parachute payments with the P&S rules and the COVID-affected seasons.

The β_2 coefficient of -0.43 is consistent with the t-test result of +0.23 as they both suggest a fall in z-score post-P&S. However, neither is statistically significant. This is not consistent with our expectation that the average club's z-score is higher in the post-P&S period than before implementing P&S.

The β_3 coefficient of -1.15 is consistent with our t-test result of +1.36, which reflects a lower z-score during the COVID-affected seasons. However, the coefficient is not statistically significant (p=0.417), whilst the t-test result is significant (p=0.013). The increase in financial distress during the COVID-affected seasons, observed by the t-test, disappears when we include the interaction between the non-parachute flag and the COVID-affected season's dummy in our club fixed effects regression model.

The interaction variable coefficient β_4 of -0.59 is not statistically significant (p=0.525). This is consistent with our t-test result, where there was no significant increase in the z-score for the parachute or non-parachute clubs when we were expecting a greater increase in the z-score for the latter. Therefore, neither the t-test nor regression results support our expectation that

the z-scores of the average non-parachute club will increase more than that of the average parachute club post-P&S.

Z-score expectation	t-test supports expectation		Multivariate Regression supports the expectation
The average club's z-score is higher in the post-P&S period than before implementing P&S. Units of z-score (p-value)	No +0.23 (0.283)		No β_2= -0.43 (0.699)
The average club's z-score is less in the COVID-affected seasons than in the other post-PPS seasons. Units of z-score (p-value)	Yes +1.36** p=0.013		No β_3= -1.15 (0.417)
The average non-parachute club's z-score is lower than the average parachute club. Units of z-score (p-value)	Yes +1.02*** (0.005)		Yes β_1 = -1.22* (0.075)
The average non-parachute club's financial distress falls more than the average parachute club's post-P&S Units of z-score (p-value)	No Parachute clubs Non-parachute clubs	+0.54 (0.150) +0.26 (0.316)	No β_4 = -0.59 (0.525)
The average non-parachute club's financial distress increases more than the average parachute club in the COVID-affected seasons. Units of z-score (p-value)	Yes Parachute clubs Non-parachute clubs	+0.32 (0.367) +1.65** (0.016)	No B_5 = +0.19 (0.897)

Table 2.10 – Summary Table of T-test and Regression Results

The interaction variable coefficient β_5 of +0.19 is also not statistically significant (p=0.897). This is inconsistent with our t-test result, where there is a significant decline in the z-score for the non-parachute clubs, whilst the parachute clubs' z-score is statistically unchanged in the COVID-affected seasons. While the t-test result is consistent with our expectations, this disappears when we control the interaction between parachute payments and the dummy for COVID-affected seasons in our club fixed effects regression model. The regression coefficient is inconsistent with our expectation that the z-score of the average non-parachute club will decrease more than that of the average parachute club in the COVID-affected seasons.

Regression Analysis of the Components of z-score

To examine the impact of our controls on the z-score components, we now substitute the X_n components of the z-score and the financial variables that make up each X_n ratio as the dependent variable in our regression model. For example, we repeat the regressions beginning with X_1, followed by Working Capital and Total Assets, through X_5, ending with Sales and Total Assets.

From Table 2.11, the only X variable for which we find a significant β_1 non-parachute coefficient is X_2, i.e. the ratio of Retained Losses to Total Assets. In column 4, Table 2.11, we find a significant non-parachute coefficient β_1 value of -0.72 for the X_2 component of the z-score, i.e. the ratio of Retained Losses and Total Assets multiplied by the Altman factor 0.847 (p=0.059). This compares with the overall deficit in z-scores between the non-parachute and parachute clubs of -1.22.

The β_1 value for Retained Earnings from column 5 is insignificant (p=0.509), meaning the non-parachute club's Retained Earnings are not statistically less than the parachute clubs. However, the β_1 value from column 6 for Total Assets of -10.38 estimates the non-parachute clubs to be £10.38m smaller in terms of assets than the parachute clubs.

As the average retained earnings are negative (intercept -£38.03m) and are the same for parachute and non-parachute clubs, the smaller denominator in the ratio for non-parachute clubs results in a greater negative X_2 value. For Example:

X_2 ratio for parachute club = -38.03 / 30.88 = -1.23

X_2 ratio for non-parachute club = -38.03 / (30.88 – 10.38) = -1.85

This disadvantage in terms of assets may be felt across the other components of the z-score, which includes Total Assets in their definitions, i.e. X_1, X_3 and X_5.

For X_1, we find the coefficient β_1 from column 1 is not significant (p=0.585), and the non-parachute coefficient β_1 from column 2 is also not significant for Working Capital (p=0.378). Therefore, by inference, the disadvantage in Total Assets from column 3 of -£10.38m is insufficient to produce a significant disadvantage in terms of X_1.

Similarly, for X_3, we find the non-parachute coefficient β_1 from column 7 is not significant (p=0.112) and the non-parachute coefficient β_1 from column 8 shows that the non-parachute clubs are not disadvantaged in EBIT (p=0.656). Again, the disadvantage in Total Assets of -£10.38m is insufficient to produce a significant β_1 value for X_3.

For X_4, we find in column 11 a significant β_2 P&S coefficient for Equity of 79.20, estimates that the clubs have increased their equity in the post-P&S period (p=0.006). In column 12, a significant β_2 P&S coefficient for Liabilities (debt) of 57.11 estimates that the clubs are £57.11m

more indebted after the P&S rules were implemented (p=0.000). However, the β_2 P&S coefficient for X_4 is not significant in column 10. We conclude that the £79.20m increase in equity is being nullified by the increase in debt of £57.11m when combined in the X_4 ratio.

In column 13, we find the β_2 P&S coefficient to be not significant for X5 (p=0.342). In column 14, we find a significant β_2 P&S coefficient for Total Sales of 29.86, meaning the clubs' sales are £29.86m more after the P&S rules were implemented (p=0.000). We conclude that the £29.86m increase in sales is being nullified by the increase in total assets of £46.93m when combined in the X_5 ratio. For X_5, we find the non-parachute coefficient β_1 from column 13 to be not significant (p=0.683). However, the non-parachute coefficient β_1 from column 14 shows the non-parachute clubs to be significantly disadvantaged in terms of Total Sales by £10.59m (p=0.000). We conclude that the deficit in Total Sales of -£10.59m is nullified by the disadvantage in Total Assets of £10.38m in the X_5 ratio.

For X_4, we find from the non-parachute coefficient β_1 from column 11 that the non-parachute and parachute clubs are not statistically different in equity (p=0.872). However, the non-parachute coefficient β_1 of -11.63 in column 12 means the non-parachute clubs are less indebted by £11.63m. As the X_4 coefficient is not significant, then again, by inference, we conclude that given the same level of equity, the non-parachute clubs' lower Liabilities are insufficient to move the X_4 ratio significantly.

The only X variable we find a significant β_2 P&S Rules coefficient for is X_2, i.e., the ratio of retained earnings and Total Assets. In column 4, we find a significant P&S rules coefficient β_2 value of -1.48 for the X_2 component of the z-score, i.e. the ratio of Retained Losses and Total Assets multiplied by the Altman factor 0.847 (p=0.054). In column 5, we find the retained earnings decline by £35.36m in the post-P&S period (p=0.053), and in Column 6 [129], as part of the X_2 ratio, we find the average club to be £46.93m bigger in the post-P&S period compared to their pre-P&S size (p=0.000). As there is no requirement in the existing P&S rules concerning assets, we should not imply that there is a causal relationship between the P&S rules and club size. As the β_2 coefficient for the z-score is not significant, therefore we conclude that the X_2 coefficient is insufficient to impact the z-score overall.

For X_1, we find in column 2 a β_2 coefficient of -30.53 (p=0.034), signifying a fall in Working Capital. We conclude that, as the β_2 value for X_1 is not significant, the fall in working capital is also nullified by the increase in Total Assets of £46.9m (p=0.000).

[129] And repeated in columns 3, 9 and 15 for the X_2, X_3 and X_5 ratios.

Dependent Variable:	X_1 Coeffic.	Working Capital	Total Assets	X_2 Coeffic.	Retain. Earn.	Total Assets	X_3 Coeffic.	EBIT	Total Assets	X_4 Coeffic.	Equity	Debt	X_5 Coeffic.	Sales	Total Assets
Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2000/01 – 2018/19	Units	£m	£m	Units	£m	£m	Units	£m	£m	Units	£m	£m	Units	£m	£m
Intercept	-0.42	-13.72	30.88***	-0.09***	-38.03***	30.88***	-0.23*	-4.91	30.88***	+0.13	-0.39	35.98***	0.66***	17.91***	30.88***
(p=)	(0.148)	(0.104)	(0.000)	(0.859)	(0.000)	(0.000)	(0.054)	(0.137)	(0.000)	(0.608)	(0.982)	(0.000)	(0.000)	(0.000)	(0.000)
Non-parachute P	-0.14	+5.00	-10.38***	-0.72**	5.65	-10.38***	-0.13	-0.90	-10.38***	-0.14	-0.79	-11.63*	0.05	-10.59***	-10.38***
(p=)	(0.585)	(0.378)	(0.002)	(0.039)	(0.509)	(0.002)	(0.112)	(0.656)	(0.002)	(0.270)	(0.872)	(0.061)	(0.683)	(0.000)	(0.002)
P&S flag F	-0.36	-30.53**	46.93***	-1.48*	-35.36**	46.93***	0.28	3.15	46.93***	+0.04	79.20***	57.11*	+0.20	29.86***	46.93***
(p=)	(0.336)	(0.034)	(0.000)	(0.081)	(0.053)	(0.000)	(0.124)	(0.641)	(0.000)	(0.921)	(0.006)	(0.000)	(0.342)	(0.000)	(0.000)
COVID C	-0.46	-29.61	+16.80**	-0.26	-49.09	+16.80**	-0.19	-10.53	+16.80**	-0.31	9.32	42.56*	+0.12	7.38	+16.80**
(p=)	(0.345)	(0.222)	(0.040)	(0.810)	(0.116)	(0.040)	(0.194)	(0.117)	(0.040)	(0.142)	(0.825)	(0.048)	(0.456)	(0.197)	(0.040)
Interaction P*F	-0.15	-1.37	6.91	0.12	6.54	6.91	-0.12	-9.09	6.91	+0.05	8.64	-1.09	-0.24	-11.78***	6.91
(p=)	(0.710)	(0.908)	(0.420)	(0.835)	(0.706)	(0.420)	(0.400)	(0.107)	(0.420)	(0.871)	(0.626)	(0.923)	(0.360)	(0.000)	(0.420)
Interaction P*C	0.06	+21.25	-34.27*	-0.68	17.60	-34.27*	0.23	13.37	-34.27*	0.10	-2.09	-41.09**	-0.03	-9.00*	-34.27*
(p=)	(0.897)	(0.342)	(0.069)	(0.405)	(0.559)	(0.069)	(0.402)	(0.218)	(0.069)	(0.696)	(0.953)	(0.056)	(0.876)	(0.059)	(0.069)
R^2	0.044	0.209	0.308	0.091	0.216	0.308	0.069	0.082	0.308	0.038	0.191	0.315	0.028	0.70.2	0.308
Observations	500	507	507	500	507	507	500	500	507	500	507	507	500	501	507
Non-parachute clubs %age	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%
Total Clubs	61	63	63	61	63	63	61	61	63	61	63	63	61	61	63

Table 2.11 - Multiple Regression Results for Components of z-score by non-parachute and P&S dummies.

Now, we turn to the impact of loss controls on EBIT. We find in Column 7 that the β_2 P&S coefficient for X_3, the ratio of EBIT /Total Assets, is not significant even at a 10% significance level (p=0.124). In column 8, we find the β_2 P&S coefficient for EBIT to be not significant (p=0.641), which means clubs have not significantly increased their losses in the post-P&S period after we control for the unobserved characteristics of the individual clubs. This suggests that the reduction in EBIT we observed in Chart 2.1 and confirmed in Table 2.7 by t-test is due to unobserved differences in club characteristics and a change in the mix of clubs in the Championship. As the EBIT is negative, we conclude that the increase in Total Assets from column 9 of +£46.93m is insufficient to produce a significant increase in terms of X_3.

Generally, this asset increase may have significant consequences for our z-score, as assets are the denominator in four out of five of our X_n components. The effect of an increase in the denominator will dilute the impact of any increase or decrease in the numerator. Therefore, the impact of favourable movements in the underlying financials since P&S was implemented, such as reduced losses, would be significantly lessened by this increase in assets to the point where any profitability improvements arising from the P&S rules have been diluted completely.

We do not find a significant β_3 COVID coefficient for any X_n variable. Significant β_3 COVID coefficients were only found in columns 3,6,9, and 15 for Total Assets of 16.80 (p=0.040) and in column 12 for Debt of 42.56 (p=0.048). This means the clubs had continued to grow in terms of Assets by £16.80m despite COVID-19, but club debt is estimated to have increased by £42.56m during the COVID-affected seasons (p=0.001). These increases would all have the effect of increasing the denominator in all of our X ratios. However, given that none of the β_3 coefficients are significant for the X variables, we conclude that the total assets and debt increases are insufficient to result in a significant coefficient for any X_n component of the z-score and the z-score overall.

No significance is found for the β_4 coefficient, which measures the impact of the interaction of parachute payments and P&S Rules, for any of the X_n variables, which means the P&S rules do not disproportionately impact non-parachute clubs. This even includes the X variables where we expected the non-parachute clubs to be the most restricted in terms of overspending with P&S, e.g., X_2 and X_3.

The only significant β_4 interaction coefficient for the financial variables we find is in column 14 for Sales of -11.78 (p=0.000), which estimates that in the post-P&S period, the non-parachute clubs had £11.78m less in Sales than the parachute clubs. The P&S rules themselves do not act on sales but on EBIT, so this reflects the increasing gap in media payments during the post-P&S period we saw in Chart 1.8. However, even with no difference in total assets found

in column 15 (p=0.420), the difference in sales is insufficient to result in a significant β_4 coefficient for X_5 (p=0.360) and z-score overall.

There is no significance for the β_5 coefficient, which measures the impact of the interaction of parachute payments and COVID, for any of the X_n variables. This means the COVID restrictions have not disproportionately impacted the non-parachute clubs' z-score. This even includes the X variables where we expected the non-parachute clubs to be the most impacted by the loss of matchday income, e.g., X_3 and X_5.

The only significant β_5 coefficient for the financial variables we find is in column 12 for Indebtedness of -41.09 (p=0.056), in column 14 for Sales of -9.00 (p=0.059) and columns 3,6,9 and15 for Total Assets of -34.27 (p=0.069). These estimate that in the COVID-affected seasons, the non-parachute clubs were £41.09m less in debt, received £9.00m less in Sales and were £34.27m smaller by asset size than the parachute clubs. When combined with equity, the difference in debt was insufficient to result in a significant β_5 interaction coefficient for X_4 (p=0.696). When combined with working capital, retained earnings and EBIT, the difference in Total Assets was insufficient to result in a significant β_5 interaction coefficient for X_1 (p=0.897), X_2(p=0.405), and X_3 (p=0.402). The impact of the deficit in sales between the non-parachute and parachute clubs is nullified by the deficit in total assets to result in a β_5 interaction coefficient for X_5 that is not significant (p=0.876).

Impact of Usual League Standing

Given the importance of club size in determining the disadvantage of being a non-parachute club in terms of z-score, we think club size may be an inherited characteristic that is a function of the league in which a club has spent most seasons. It may be helpful to see whether the difference in z-score is due more to these inherited characteristics than the parachute payments themselves. We will test this by splitting the clubs in our sample between the leagues in which the club has spent most of its time.

From Table 2.12, we see that the clubs that have spent most of their years in the EPL are 80% bigger in terms of mean asset size than those that have mainly been in the Championship. Meanwhile, the clubs that have mainly been in the lower reaches of the EFL are half the size of the clubs that have been mainly in the Championship and a third of the size of a club that is usually in the EPL.

When we stratify the sample by a club's usual league, we find in columns 2-4 that the non-parachute coefficient now disappears for z-scores across the league standings, and the P&S flag and interaction term is still not significant in any of the league standings.

However, we find the β_3 coefficient for the COVID dummy significant for the first time, but only for the clubs that have been mainly in the EFL's lower leagues. The β_3 coefficient predicts all the lower EFL clubs' z-scores will be 2.28 units less in the COVID-affected seasons than in the other post-P&S periods. However, the COVID parachute payment interaction coefficient β_5 is not significant in any league.

Z-score	**All Clubs**	Usual League Standing		
Multivariate with interactions		EPL	Champ.	Lower EFL
Seasons: 2000/01 – 2021/22	units	units	units	units
Columns	1	2	3	4
Mean asset size	39.83	71.93	40.06	20.24
Intercept p=	-1.01 0.044	-1.53 (0.198)	-1.52** (0.014)	2.44 (0.178)
Non-parachute flag (1=non) β_1 p=	-1.05* (0.085)	-1.06 (0.506)	-0.60 (0.349)	-3.47 (0.102)
P&S flag (1=post P&S period) β_2 p=	0.32 (0.692)	0.30 (0.869)	-0.10 (0.924)	1.25 (0.241)
COVID flag (1=COVID affected year) β_3 p=	-1.34 (0.290)	-3.56 (0.228)	-0.23 (0.773)	-2.28* (0.060)
Non-parachute Flag # P&S Flag β_4 p=	-0.60 (0.506)	-0.70 (0.771)	-0.18 (0.882)	-1.44 (0.324)
Non-parachute Flag # COVID Flag β_5 p=	0.18 (0.903)	5.18 (0.265)	-1.62 (0.142)	2.79 (0.132)
R^2	0.030	0.032	0.063	0.005
Observations	500	59	337	91
Mean of non-parachute flag	0.73	0.32	0.77	0.87
Total Clubs	61	11	24	24

Table 2.12 - Multivariate Results of z-score on Non-parachute and P&S dummies by the league a club has spent the majority of its time

It seems that clubs of similar standing do not receive any advantage in terms of z-scores from parachute payments after all. Therefore, the difference is not just due to the parachute payment itself but a combination of parachute payments and the club's usual league standing. When we compare clubs of similar standing, the z-score disadvantage between parachute and non-parachute clubs disappears altogether (see Appendix Table 2.2). We conclude that it is not the parachute payments themselves that give the parachute clubs a higher z-score than the non-parachute clubs but that we are comparing large EPL clubs with a parachute payment to smaller EFL and Championship clubs without parachute payments, which exaggerates the impact of parachute payments on the financial sustainability of clubs.

The EFL's P&S rules have missed their goal of reducing losses and perhaps improving financial sustainability because of the increased loss limits imposed by P&S of £13m, compared to the previous FFP regime of £5m. This has provided the average non-parachute club with the headroom to increase losses rather than act as the constraint on losses that the EFL intended (EFL, 2024).

Furthermore, the EPL P&S rules provide higher loss thresholds. This allows maximum losses of £39m in the club's three-year P&S calculation for the parachute clubs for the years they were in the EPL instead of the £13m, which means that the parachute club losses, annualised over the three-year P&S reporting period, can be higher than the non-parachute club losses.

This is illustrated by Chart 2.1, which suggests that the average parachute club's EBIT sharply fell after the P&S rules were implemented. In contrast, the average non-parachute club continued its downward trend despite P&S.

We find no statistical difference in the EBIT between the parachute and non-parachute clubs for all seasons, the pre-or post-P&S period, nor the COVID-affected seasons, which suggests there should be no difference in financial distress between the parachute and non-parachute clubs. Perhaps now that the parachute club's EBIT approaches the minimum level set of -£13m, we expect to see the P&S rules act as a brake on the non-parachute club overspending. At the same time, the higher P&S limits for the years spent in the EPL and the parachute payments will provide a significant capacity for the parachute clubs to spend more on players than non-parachute clubs, which is likely to harm competitive balance, which is examined in Chapter 3.

Based on these findings, the assumed causal relationship between EBIT and z-scores could be more robust. Given the inappropriate loss limits set by the EFL[130] failing to improve club profitability generally and parachute payments not improving the EBIT of parachute clubs, we examine how adequate the EFL's loss controls and the provision of parachute payments can be in enhancing financial sustainability as measured by an increase in z-scores if it is not by increasing club profitability.

When we considered the impact of parachute payments on z-scores, we found that the non-parachute clubs are more distressed than the parachute clubs as their z-score is lower. However, there was no statistical difference between them in terms of EBIT. Therefore, we suggest that the disadvantage of the non-parachute club in terms of Z-score must be due to factors other than EBIT. [131]

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[130] Increasing to £13m under P&S from £5m under FFP

[131] The Xn components of Altman's z-score are X_1 = Working capital/total assets, X_2 = Retained earnings/total assets, X_3 = EBIT/total assets, X_4 = Equity (book value)/total liabilities and X_5 = Sales/total assets. As not all of the X variables include losses in their definitions, we expect P&S loss controls to impact X_3 directly and possibly X_2 indirectly but not X_1, X_4 and X_5 and parachute payments may impact X_2 and X_3 and possibly X_5 due to higher sales and lower losses for the parachute clubs, but not X_1 and X_4.

2.5 Discussion and Conclusion

We started this research with a presumption that the parachute clubs would have higher z-scores and, therefore, be less financially distressed than those not receiving parachute payments. We look to our empirical model, where the non-parachute clubs are significantly more financially distressed than parachute clubs, as predicted by the established theory.

However, it is not due to the parachute clubs using the parachute payments to improve financial performance, as is their intention. Instead, we find no significance for the P&S coefficient in the X_3 component of the z-score, i.e. the ratio of EBIT over Total Assets, despite an advantage in terms of income of £10m [132]. .

Instead, we find that the advantage in z-scores comes from only the X_2 component of Altman's z-score model, i.e. the ratio of Retained Earnings / Total Assets. As no significant difference is found for Retained Earnings between the non-parachute and parachute clubs, the significant disadvantage for the non-parachute clubs in terms of Total Assets of £10.38m, therefore, is responsible for the disadvantage of the non-parachute clubs we find in terms of z-score, i.e., -1.22.

When we compute the regression coefficient for the parachute flag on a like-for-like basis by splitting the sample clubs based on the league they have spent the most seasons in during our research period, the parachute coefficient in terms of z-score disappears for clubs with a similar league history. We conclude that the clubs that have spent most of their time in the same league are more equally matched in infrastructure and, hence, z-score, irrespective of whether they receive a parachute payment.

This feels intuitive; for example, if a traditional EPL club is in the Championship for a season or two beyond the end of the receipt of parachute payments, then, on the basis that they are making similar losses to those of a traditional EPL club receiving parachute payments, they should have a similar z-score to their parachute counterpart as their fixed asset base does not necessarily decline immediately just because the parachute payments have come to an end.

We find from our econometric model that there is no significance in terms of z-scores between the pre-and post-P&S period, so we conclude that the P&S rules have not had the intended improvement in financial distress. When we control for club Fixed Effects and include an interaction between parachute payments and the P&S rules with EBIT as the dependent variable, we find no difference in EBIT between the pre-and post-P&S periods either. If the

[132]. This results from a regression of total revenue on non-parachute and P&S dummies with club Fixed Effects and the interaction term, which is reported in column 14 of Table 2.14.

P&S rules were improving financial distress, we were expecting, at the very least, a positive coefficient for P&S in the EBIT regression.

Furthermore, it was thought that the non-parachute clubs competed only with the parachute clubs because of increased losses. Therefore, maximum loss controls imposed by the P&S rules should disproportionately impact them as they would be the most constrained. However, we find no significance for the interaction coefficient in the EBIT model, which only shows that the P&S Rules have not impacted the non-parachute clubs.

At first glance, the headline average losses have increased post P&S to £7.91m, and in particular, the non-parachute club losses have increased to circa £8.99m per annum. At this point, we would have concluded that the EFL's P&S rules have missed their goal of reducing losses and improving financial sustainability because losses have increased. Furthermore, these loss controls were always likely to fail to constrain overspending and improve financial sustainability as measured by z-score, given that the new loss limits of £13m imposed by the P&S rules were higher than the £5m under the previous FFP controls.

Also, the non-parachute clubs in the pre-P&S period did not experience significantly greater losses than the parachute clubs. Their losses have significantly increased by £4.79m and remain statistically the same as the parachute clubs' losses. Therefore, the P&S rules have not had the predicted disproportionate negative impact on the non-parachute clubs.

However, these increases in losses, we observed by t-test, disappear in the econometric model. We conclude that the EBIT of individual clubs has not significantly decreased per se between the pre-and post-PPS periods. However, any reduction in losses post-P&S would have been negated anyway by the increase in the post-P&S asset values, resulting in little to no impact on the z-scores. This suggests that any policy based purely on loss targets may be a crude tool in reducing financial distress and would have failed, even if losses had fallen as intended. Therefore, we may question if the Altman Z-Score formula requires modification to be better suited to examining the financial health of professional football clubs or choose an alternative measure altogether. We leave this issue to be addressed for future research.

We find both working capital and retained earnings to be increasingly negative for parachute and non-parachute clubs in the Championship between the pre-and post-P&S period, and the interaction term for both shows that there is no disproportionate change for the non-parachute clubs. This should make the parachute and non-parachute clubs more financially vulnerable. However, the harmful effect is diluted by the significant increases in total assets, which masks the problem. If working capital and retained earnings were to increase equally across all clubs in the Championship, we would find that the non-parachute recipients would benefit from their smaller size, and their z-scores would increase relative to clubs with more considerable assets.

Similarly, sales significantly increased after the P&S rules were introduced, which is better for Championship football clubs. The interaction term was not significant, meaning the non-parachute clubs have kept pace with the parachute clubs in terms of sales. However, the increase in sales in the post-P&S period has had a minimal impact on the Altman Z-Score. When combined in the X_5 ratio, the increase in Total Assets has diluted the positive impact of any increase in sales. As a result, the P&S coefficient on X_5 is not significant.

As the P&S rules allow for differing losses depending on the funding source, the clubs have increased equity investment (£79.2m) by almost one and half times as much as debt £57.11m in the post-P&S period. This suggests that the losses are increasingly being funded from equity rather than debt, as EFL's P&S rules intended, which could be seen as a partial success for the current rules. However, the P&S coefficient for X_4 is not significant. This suggests that the mix change between debt and equity has been insufficient to increase the X_4 component and the z-score significantly.

In response to COVID-19 restrictions placed on football, the EFL relaxed the P&S loss limits, introducing COVID add-backs into the P&S calculation of up to £5m for seasons 2019/20 and 2020/21 and up to £2.5m for 2021/22. These increased loss limits should be reflected in a worsening of the z-score. However, the COVID regression coefficient is not significant for the z-score, nor is the coefficient for the interaction of COVID and parachute payments.

Drilling down into the components of the z-score, we find that the only COVID coefficients on the financial variables predict an increase in total assets of £16.80m and an increase in club debt of £42.56m during the COVID-affected seasons. As denominators in our Xn ratios, both movements would dilute any changes in working capital, retained earnings, EBIT, Equity and Sales. However, no significance is found in the COVID coefficients for X_1, X_2, X_3, X_4 or X_5 or the z-score.

When we examine the z-score components for the interaction of COVID and parachute payments, we find that the non-parachute clubs have received £9.00m less in sales than the parachute clubs in the COVID-affected seasons. However, this is offset in the X_5 ratio by a difference in asset value compared to the parachute clubs of -£34.27m, resulting in a coefficient for the interaction of COVID and parachute payments on X_5 that is not significant.

Contrary to their intention, the imposition of loss targets has not reduced financial distress in the Championship. However, parachute payments make the parachute clubs less financially distressed than the non-parachute clubs, i.e. their z-score is higher.

When we control for both observable and unobservable characteristics in a multiple regression model with z-score as the dependent variable, the P&S rules do not result in a general improvement in z-scores when we had expected them to do so with the imposition of loss

targets. Furthermore, by the significance of the interaction coefficient, we find there is also no difference found for the parachute payments in the post-P&S period, when we thought the non-parachute clubs would feel the impact of loss limits more than the parachute clubs would as their overspending would be constrained more. However, the most significant finding is that the clubs not receiving parachute payments have a lower z-score by -1.22 units.

In terms of losses, it would appear that instead of going down, the average club losses have increased in the post-P&S era, especially the average losses made by the non-parachute clubs, which have risen from the former FFP limit of £5m towards the current P&S limit of £13m. However, no deterioration in financial distress was observed.

This calls into question whether loss controls alone can improve financial distress or whether the z-score in its present form is an appropriate measure to measure the efficacy of loss controls. However, this observed increase in average losses by t-test disappears when we control for both observable and unobservable characteristics in a multiple regression model with EBIT as the dependent variable. So, we conclude that club losses have not increased per se, and the average increase in losses is due more to the mix of clubs, with differing loss levels, changing between the pre-and post-P&S periods.

Despite the expectation of increased financial distress caused by COVID, we have found Championship football to have been remarkably resilient in terms of the z-score. Not even the non-parachute clubs have seen a significant reduction in their z-score when it was expected that they were the most likely to.

Whilst the clubs not in receipt of parachute payments are disadvantaged in terms of z-score by -1.22 units, we find this is not due to differences in EBIT, as we would have expected given the extra income the parachute clubs get in parachute payments (c£100m over three years) compared to the standard solidarity payment that the other clubs get (c£6m per season). Instead, we find that the difference between the parachute and the non-parachute clubs in terms of z-score is entirely due to the difference in Total Assets between the parachute and non-parachute clubs of £10.38m acting on the X_2 component of the z-score, which also includes retained earnings in its calculation, where retained earnings are found to be statistically the same for both the parachute and non-parachute clubs.

However, when the Parachute club coefficient is calculated on a like-for-like basis with clubs of a similar heritage and traditional league standing, the benefit of parachute payments on z-scores disappears completely. Therefore, the observed benefit from receiving parachute payments is more down to the size of clubs receiving them than the receipt of the parachute payment itself.

2.6 Additional Tables and Appendices

Appendix 2.1 - Club Fixed Effects. Traditional Leagues, Seasons in the Championship and Average z-scores by Club.

Football Club	Traditional League	Base z-score	Champ. Seasons	Average z-score	Football Club	Traditional League	Base z-score	Champ. Seasons	Average z-score
Aston Villa	EPL	-1.97	3	-2.66	Manchester City	EPL	+0.16	1	-0.85
Barnsley	Champ	3.83	12	+1.36	Middlesbrough	Champ	-1.54	12	3.52
Birmingham City	Champ	+0.22	15	-1.76	Millwall	Champ	-1.88	15	-4.29
Blackburn Rovers	EPL	-4.48	10	-6.44	Milton Keynes Dons	EFL	-1.56	1	-3.91
Blackpool	EFL	1.51	8	-0.16	Newcastle United	EPL	-0.41	2	-1.26
Bolton Wanderers	EPL	+0.54	5	-0.55	Norwich City	Champ	+2.09	14	+0.46
Bournemouth	EFL	-1.76	4	-3.86	Nottingham Forest	Champ	-6.66	19	-8.97
Bradford City	EFL	-1.15	1	-2.16	Peterborough United	EFL	+2.07	4	-0.35
Brentford	EFL	2.09	7	-0.58	Plymouth Argyle	EFL	+2.89	5	0.82
Brighton & Hove Albion	Champ	-2.43	9	-4.58	Portsmouth	EFL	-0.62	3	-2.69
Bristol City	Champ	-0.54	13	-3.02	Preston North End	Champ	2.32	18	-0.04
Burnley	Champ	+0.48	14	-1.19	Queens Park Ran.	Champ	-1.70	16	-3.62
Burton Albion	EFL	+5.43	2	+3.08	Reading	Champ	-0.40	17	-2.32
Cardiff City	Champ	-1.18	17	-3.01	Rotherham United	EFL	+3.90	8	+1.53
Charlton Athletic	EFL	+1.22	6	-1.00	Scunthorpe United	EFL	+4.58	3	+2.51
Colchester United	EFL	+4.91	2	+2.85	Sheffield United	Champ	1.11	13	-0.83
Coventry City	Champ	-5.20	13	-7.32	Sheffield Wed.	Champ	+0.45	17	-1.74
Crewe Alexandra	EFL	+4.20	5	+2.13	Southampton	EPL	-0.59	5	-2.23
Crystal Palace	Champ	+0.88	10	-0.98	Southend United	EFL	+3.59	1	+1.52
Derby County	Champ	+1.21	15	-0.65	Stockport County	EFL	+3.02	2	+0.96
Doncaster Rovers	EFL	-8.20	5	-10.27	Stoke City	EPL	-0.01	10	-2.07
Fulham	EPL	-1.57	7	-2.84	Sunderland	EPL	+1.49	4	+0.55
Gillingham	EFL	+2.38	5	0.31	Tranmere Rovers	EFL	2.32	1	+0.25
Grimsby Town	EFL	+2.96	3	+0.90	Walsall	EFL	+3.41	3	+1.34
Huddersfield Town	EFL	-0.08	8	-2.24	Watford	Champ	+1.44	15	-0.36
Hull City	Champ	-0.57	11	-2.23	West Bromwich Alb.	EPL	+2.25	9	0.82
Ipswich Town	Champ	+0.24	17	-1.79	West Ham United	EPL	+0.81	3	-0.20
Leeds United	Champ	+1.52	12	-0.60	Wimbledon	EFL	-1.22	1	-2.23
Leicester City	Champ	0.41	10	-1.34	Wolverhampton W.	Champ	+1.68	13	0.03

Appendix 2.2 - Regression Results for z-Score Retained Earnings and Total Asset Values for Our Non-Parachute and P&S Dummies, All Clubs and by Traditional Leagues.

Dependent Variable	**z-score**				**Retained Earnings**				**Total Asset Value**			
Sample: All Clubs	All Clubs	EPL Clubs	Champ. Clubs	Lower EFL Clubs	All Clubs	EPL Clubs	Champ. Clubs	Lower EFL Clubs	All Clubs	EPL Clubs	Champ. Clubs	Lower EFL Clubs
Seasons: 2000/01 – 2018/19	units	units	units	units	£m	£m	£m	£m	£m	£m	£m	£m
Intercept P=	-1.01 0.044	-1.53 (0.198)	-1.52** (0.014)	2.44 (0.178)	-38.03*** (0.000)	.-113.96*** (0.000)	-35.21*** (0.000)	-2.44 (0.717)	36.99*** (0.000)	67.14*** (0.000)	35.72*** (0.000)	32.49*** (0.031)
Non-parachute(1=non) P=	-1.05* (0.085)	-1.06 (0.506)	-0.60 (0.349)	-3.47 (0.102)	5.65 (0.509)	55.03 (0.144)	2.63 (0.762)	-27.58 (0.355)	-10.94*** (0.004)	-24.13 (0.076)	-7.73* (0.055)	-19.10 (0.222)
P&S flag (1=post P&S) P=	0.32 (0.692)	0.30 (0.869)	-0.10 (0.924)	1.25 (0.241)	-35.36** (0.053)	-12.46 (0.692)	-51.31* (0.069)	14.88** (0.001)	27.45*** (0.001)	20.38 (0.311)	30.63*** (0.002)	20.30** (0.025)
COVID flag (1=COVID affected year) β_3 p=	-1.34 (0.290)	-3.56 (0.228)	-0.23 (0.773)	-2.28* (0.060)	-49.09 (0.116)	-103.75* (0.071)	-25.68 (0.467)	-62.41 (0.066)	40.07** (0.040)	32.18 (0.364)	78.16** (0.019)	-73.66 (0.947)
Non-parachute # P&S P=	-0.60 (0.506)	-0.70 (0.771)	-0.18 (0.882)	-1.44 (0.324)	6.54 (0.706)	-107.45** (0.031)	9.57 (0.717)	-28.55*** (0.002)	-4.51 (0.628)	-2.56 (0.904)	-5.38 (0.624)	-17.64* (0.064)
Non-parachute Flag # COVID Flag β_5 p=	0.18 (0.903)	5.18 (0.265)	-1.62 (0.142)	2.79 (0.132)	17.60 (0.559)	69.28 (0.242)	-11.16 (0.730)	64.01 (0.082)	-39.03** (0.040)	-28.97 (0.372)	-79.80 (0.024)	16.76 (0.451)
R^2	0.030	0.032	0.063	0.005	0.216	0.276	0.303	0.446	0.281	0.338	0.309	0.312
Observations	500	59	337	91	507	59	339	96	507	59	339	96
Mean of non-parachute flag	0.73	0.32	0.77	0.87	73%	0.32	0.77	0.87	73%	0.32	0.77	0.87
Total Clubs	61	11	24	24	63	11	24	26	63	11	24	26

3 Competitive Balance at league/season level

3.1 Background

Given that we are looking at the impact of parachute payments, P&S Rules, and the COVID-19 pandemic and have shown in Chapter 2 how these have impacted (or otherwise) club financial stability, it makes sense to then think about their fundamental impact on demand for the sport. Have these regulatory measures helped (as intended) or harmed the product? The first level to look at is at the league/seasonal level.

In the previous chapter, we found that when we split our sample between clubs of similar heritage and traditional league standing, i.e., whether they have spent nine years or more in the EPL, Championship, and the lower EFL leagues, respectively, the increase in z-scores from parachute payments disappears. Thus, we no longer find any significance for the non-parachute coefficient for clubs with a similar recent history in terms of league standing.

However, we find a significant difference in Total Assets and squad values, particularly between the traditional leagues. This shows that the clubs traditionally in the EPL have playing squads three times the size of the traditional Championship Clubs and nearly ten times that of the traditional lower EFL teams.

Given that, 69% of the observations for the traditional EPL teams are seasons where parachute payments were received, compared to 24% for the traditional Championship teams and just 8% for the lower EFL teams. It is much more likely that a parachute club will be bigger in terms of squad values brought over from their time in EPL. This new evidence motivates a re-examination of the established research that found a detrimental impact of parachute payments on competitive balance. If contradictory evidence is found in the data, particularly around the periods when the Profitability and Sustainability rules were introduced, it may have serious consequences for subsequent policy design.

The impact of parachute payments, the P&S Rules and the COVID-19 restrictions on our measure of Competitive Balance will again involve a linear regression model. Along with the original binary indicator of whether a parachute payment is received, our model will include additional covariates, which may influence Competitive Balance. Parachute payments and the P&S rules will again be analysed using a linear regression model to determine their impact on our measure of competitive balance. Our model will include additional covariates that may influence competitive balance and the original binary indicator of whether a parachute payment is received.

The covariates include non-parachute revenue, which may impact performance as clubs will have more to spend on player talent. Total assets measure club size, and we saw in Chapter

2 that size is probably closely correlated with, but independent of, our parachute payment indicator. So, we need to isolate the impact of one from the other to see the actual effect of parachute payments on Competitive Balance, distinct from the impact of simply being a bigger club.

Years in the league are used to proxy for league experience, and a square term provides for non-linearity, as we believe that after a certain point, league know-how increases at a diminishing rate.

Player costs represent the amount the clubs spend on playing talent, as opposed to non-parachute income above, representing the capacity clubs have to spend on players. In order to prevent the double counting of the wages paid for by parachute payments and the parachute indicator, we will strip out the effect of parachute payments on wage spend by using a variation of the method Gomanee, Morrissey, Mosley, & Verschoor (2005, pp. 360-361) used to remove any double counting of the impact of foreign aid from pro-public government expenditure.

Total debt and change in debt reflect the club's operational gearing and the extent to which club assets are financed by debt and operating losses are financed by a change in debt. As far as we know, there have been no studies into the impact of overall gearing or annual increases in club debt on competitive balance. In light of the constraints on debt arising from implementing the P&S rules, this may be increasingly important in the post-P&S era. Also, change in debt differs from net operating losses because losses could be funded by equity injections by club owners or debt could be used to pay for non-operating costs, e.g. purchase of players, so although they may be strongly correlated, they are different enough for both variables to be included in our analysis to prevent omitted variable bias.

Finally, net income, where clubs with high revenues may choose to spend it on talent, or they could save that revenue and maximise profits, etc., is a parameter, along with a change in debt, that is acted upon directly by P&S.

3.2 Review of Related Research

The sports market differs from the ‘traditional’ market in that a joint nature of production exists between suppliers, where one team relies on the other teams' quality to produce the ‘good’, i.e. the match (Leach & Szymanski, 2015).

Furthermore, Neale (1964) introduced the concept of a 'product joint' or 'inverted joint product', whereby two firms combine to produce output using identical production technology (e.g., eleven players) at the same production plant (e.g., the stadium). [133]

Competitive Balance

Uncertainty of Outcome

Rottenburg (1956) is acknowledged as being the first to link this joint nature of production to the unpredictability of match outcomes with sports attendance. The greater the league's competitive balance, the more unpredictable the result of games is and the more attractive the league becomes for fans. Competitive Balance is a theoretical concept that refers to either the uncertainty of predicting results or the balance in capabilities between sports teams and their possibilities to win any game. It can be measured, as in the Wilson et al. study (2017), using the HICB, although there are many other alternatives.

Similarly, Neale (1964) identified the 'league standing effect', in which each team benefits from 'free advertising' the more the league standings are close and change frequently.[134] The stronger the competition and the uncertainty, the more the spectator demand will increase (Wilson, Plumley, & Barratt, 2015).[135]

It is claimed that sports fans like to see a sporting contest where both teams have an equal chance of winning (e.g. the chance of a win is near 50:50) (Levin, 2009), and this is important to sports fans:

> "One of the key ingredients of the demand by fans for team sports is the excitement generated because of uncertainty of outcome of league games. ... In order to maintain fan interest, a sports league has to ensure that teams do not get too strong or too weak relative to one another so that uncertainty of outcome is preserved."

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[133] This is distinct from a joint product which is two or more products are produced in a single process by a single firm

[134] The paper presents the case for professional sports promoters and team owners to receive special treatment regarding monopoly and anti-modern-day slavery legislation, in that a 'firm' in professional sports is in a peculiar position concerning the accepted notion of a competitive market firm. (Neale, 1964)

[135] The Rugby Super League was formed in 1975 to increase the uncertainty of outcome, leading to higher attendances and enhanced club revenues, ultimately transforming rugby league from a minority northern sport into an international sport; however, twenty years later, the Super League is failing in its objectives. The paper analysed the financial health of Super League clubs alongside trends in attendance and participation and found that all three performance indicators are poor in relation to the objectives set. It would suggest that unless the league authorities can produce a sustainable business model, a bleak future for both the clubs and the sport is predicted (Wilson et al. (2015).

> "The uncertainty of outcome hypothesis proposes that the closer the competition between professional sports teams, the greater the likelihood of increased spectator attendance due to increased interest in the sport."
>
> (Sacheti, Gregory-Smith, & Paton, 2014).

There are two branches of research into Competitive Balance (Fort & Maxcy, 2003).

a) Uncertainty of Outcome (UOH)
b) Analysis of Competitive Balance (ACB)

UOH research concentrates on empirically testing the relationship between the uncertainty of outcome, as measured by the probability of a home or away win, and spectator attendance for a particular match. Meanwhile, ACB does not measure the uncertainty of outcome at a single point in time, e.g. matchday, but instead tracks changes in a suitable measure of competitive balance over time.

OUH is not considered in any further detail in this chapter except to note that if the league is becoming increasingly imbalanced over time, as reflected by an adverse movement in our measure of competitive balance, e.g. points per game, then the match outcomes by default must also be becoming more certain. Fan interest and, consequently, stadium attendance and TV audience figures may become negatively impacted as games become more one-sided ((Pawlowski T. , 2013) (Morrow, 2003))

Analysis of Competitive Balance

More important to our research in this chapter, though, is the second branch of competitive balance research.

There are several ways of analysing competitive balance, ranging from simple measures like how many different teams have won the league or made the playoffs, the average point spread between top and bottom clubs to the more scientific measures like the Noll-Scully metric for the US leagues, i.e. standard deviation of win percentages ((Scully, 1989), (Quirk & Fort, 1997), (Humphreys, 2002), (Zimbalist, 2002)). The positive relationship observed in Major League Baseball, the National Basketball Association, the National Football League and the National Ice Hockey League between Competitive Balance and higher league revenues, e.g. Maxcy & Mondello (2006) and Zimbalist (2002), have been used to justify the rules that favour Competitive Balance in U.S. sports leagues, e.g. the annual MLB player draft where the lowest ranked team gets the opportunity to pick first from a list of new talent (Pautler, 2010).

Research examining Competitive Balance in Europe's open football leagues has mainly concentrated on the so-called 'big five leagues' of England, France, Germany, Italy, and Spain. The same clubs have dominated these leagues for years.

For the European leagues, there is another match outcome, i.e. a draw, and new measures to what was used for North American sport were required to be developed to accommodate this. These include measures derived by Michie and Oughton, i.e. the C5 Index of Competitive Balance (C5CIB), the Herfindahl Index of Competitive Balance (HICB) and The Lorenz Seasonal Balance Curve (2004). Each measure has its respective strengths and weaknesses (Mills & Fort, 2014); (Owen & King, 2015); (Scelles, Francois, & Dermit-Richard, 2022); (Gasparetto, Mishchenko, & Zaitsev, 2023).

The Herfindahl Index

The Herfindahl Index is an industry-standard measure adapted from the Herfindahl-Hirschman Index (HHI). HICB scores are calculated using the formula:

$$\sum_{\text{team } 1}^{N} (HHI / (1/N)) \times 100 \qquad (6)$$

Where:

HHI is the sum of the squares of the points share for every club in a particular season

N is the number of teams in the Championship in that season.

For example, in the 2018/19 season, Aston Villa, a parachute club, scored 76 points out of a total of 1493 points in the league. So, Aston Villa's HHI was (76/1493)2 or 0.0026, and their Herfindahl index was 6.22, i.e. (0.0026/(1/24)*100). Whilst relegated, Rotherham's HHIn of $(40/1493)^2$ or 0.00072 gave a Herfindahl index of just 1.7.

For a perfectly balanced league of any size, the sum of the individual club indices 1 - N takes a value of 100. As the index rises, competitive balance declines.

Michie and Oughton had previously observed a significant decline in competitive balance, as measured by a rising trend in HICB from around 1.04 in the 1950s to over 1.08 in the top tier of English football. Virtually all of the increase has occurred since 1987, and this increase was mirrored in the Italian, German and Spanish leagues (2004). These findings have been confirmed by Goossens (2006), Groot (2008), and Montes, Sala-Garrido, and Usai (2014). Michie & Oughton (2004) concluded that this was due to the widening income disparity between clubs arising from substantial TV broadcast deals, and it is the way that this substantially increasing TV revenue is being shared that is most damaging to competitive balance and has resulted in financially dominant leagues and super clubs (Morrow, 2003).

However, contrary to these results, Brandes and Franck (2007) have found that despite the decline in competitive balance, matchday attendances in Germany and Italy have not been negatively impacted by the decline in competitive balance, whilst in France, they have been. UK attendance has also risen whilst competitive balance has declined, thus showcasing this

complex relationship. Promotion and relegation, which do not exist in US leagues, maintain fan interest long into the season (Brandes & Franck, 2007), and wages, as a measure of playing quality, were far more important to the TV viewer than competitive balance (Buraimo & Simmons, 2015). Television not only vastly increased the revenues of football clubs but also increased television exposure, which has led to growth in live attendance at matches, as well as other sources of commercial revenue (Noll, 2007).

However, it is counter-argued that the impact of the decline in Competitive Balance has yet to be noticed as it has been offset by unsatisfied demand at most EPL grounds and by a general increase in pay TV subscribers (Michie & Oughton, 2004). Using the FA Cup, Szymanski (2001) measured the impact of income inequality across all divisions, where relative wealth was most marked, and found attendance is falling relative to league matches, which is believed to be due to the Cup being an increasingly unbalanced competition.

Financial Fair Play

We are particularly interested in the impact the implementation of the P&S rules has had on competitive balance in the Championship. Our analysis of the impact of the EFL's P&S rules takes inspiration from a study by Freestone and Manoli into the impact of FFP on competitive balance in the EPL (2017). Their study of competitive balance for the past 21 seasons, from 1995/1996 to 2015/2016, used a combination of HICB, the standard deviation of points analysis and a Scully-Noll ratio analysis.

The results confirmed a gradual decrease in the competitive balance in the EPL over the decade preceding the introduction of FFP, which supported the literature (Goossens, 2006), but the authors could find little compelling evidence to support the criticisms against FFP.
The authors believed that an upward trend in the Herfindahl Index values would confirm a further decrease in competitive balance since the introduction of FFP. However, they found no compelling evidence to support this. The two seasons immediately following the introduction of FFP saw the EPL less competitively balanced. However, for only the second time in the EPL era, the league became more competitively balanced for two years in succession, in 2014/15 and 2015/16. The authors believe FFP may have made the league more competitively balanced by shifting competition dynamics from spending power to more natural forms of competition, which may have significant managerial implications.
At the time of their study, the EPL did indeed seem to be riding the crest of a competitive wave. Anecdotal evidence shows that four different teams had won the previous four EPL titles, an occurrence never previously experienced during the EPL era and Leicester City's EPL title in 2015/2016 made it only the sixth club to win the league title since the start of the EPL, and only the seventh different club to qualify for UEFA competitions in the previous four seasons.

By comparison, only six different clubs qualified for the UEFA competitions in the previous ten years, 2005/2006 and 2014/2015, and the authors point to this as an indicator of a shift in EPL competitiveness.

They acknowledge that competitive balance is conceptual and cannot be measured directly, so measures such as the Herfindahl Index, the standard deviation of points and the Scully-Noll ratio can only approximate it, and any viable alternative method might result in a different conclusion. It is also the case that FFP regulations had only been active for five seasons at the time of writing, and the full effects of the regulations were yet to be felt. Although their study confined its attention to the EPL, the authors felt it would be instructive to compare the results from different leagues across Europe, and we suggest that this is equally true for the Championship, especially because of the distortion caused by Parachute payments.

However, Birkhäuser, Kaserer, and Urban (2017) found that FFP had adversely affected competitive balance across Europe by creating barriers to entry for new investors, making European football leagues less equal and freezing the current hierarchies. They concluded that UEFA might want to reconsider its FFP rules to counter the long-term decline in competitive balance and legislate rules that foster competition among European football clubs while ensuring financial stability.

We feel this conundrum is mirrored by the EFL's own P&S rules, which are putting a brake on investor cash flows just as parachute payments are increasingly concentrating wealth in a select group of clubs; therefore, the EPL, through the EFL, might want to reconsider their distribution mechanism in the interests of Competitive Balance.

Parachute Payments

To our knowledge, the only study that examines the impact of parachute payments on competitiveness in the Championship is by Wilson, Ramchandani, and Plumley (2017), who analysed the competitive balance [136]. Using data between 2006/07 and 2016/17, their paper utilises the 'Herfindahl Index of Competitive Balance' (HICB), which is an industry-standard measure adapted from the Herfindahl-Hirschman Index (Michie & Oughton, 2004). This measure has been used in previous academic research focusing on football leagues, (Pawlowski, Breuer, & Hovemann, 2010); (Plumley, Ramchandani, & Wilson, 2018); (Freestone & Manoli, 2017).

[136] Competitive Balance is a theoretical concept that refers to either the uncertainty of predicting results or the balance in capabilities between sports teams and their possibilities to win any game. It can be measured, as in the Wilson et al. study (2017), using the HICB, although there are many other alternatives.

They found that a widening income disparity created by parachute payments negatively impacts the league's competitive balance. Numerically, their findings suggest that parachute clubs have a five-point head start on their non-parachute opponents and that parachute clubs, given these payments, are twice as likely to be promoted to the EPL. Furthermore, parachute payment recipients are less likely to suffer relegation to League 1 compared to non-parachute clubs.

Follow-up research by Wilson & Plumley looking into the impact of parachute payments on Championship clubs between 2017 and 2021 was commissioned by the EFL chairman Rick Parry to inform his discussions with the EPL about the possible reform of the parachute payment system. Their findings for the 2017 to 2021 period, reported in the Daily Mail (Matt Hughes, 2022), showed that parachute clubs were now three times more likely to get promoted compared to twice as likely between 2006 and 2017, the non-parachute clubs were now three times more likely to be relegated to League One than a parachute club, compared to one-and-half times more likely between 2006 and 2017 and the average points gap between parachute and non-parachute clubs had increased from +5 in 2017 to +8.6 between 2017 and 2021. The increasing impact of parachute payments on clubs in the Championship was attributed to their rise in value, with an average revenue for the parachute clubs of £53m, compared to £14.5m for the non-parachute clubs. It was suggested that competitiveness would be damaged unless the non-parachute clubs overspend on players to maintain parity with the parachute clubs, which could lead to financial instability and ultimately end in their Administration.

It is argued that by providing a competitive advantage for relegated EPL members, parachute payments maintain the status quo concerning EPL membership in the same way that the seeding and ranking system maintains the status quo in the UEFA Champions League (Plumley & Flint, 2015) and is, in effect, creating a monopoly that is detrimental to the Championship, (Dobson & Goddard, 2011).

Although the EPL is overseen by the English Football Association (FA), it is essentially self-regulated and effectively controlled by its members. It is not in the direct interests of EPL members to (1) support the general redistribution of broadcast income to the EFL or (2) change the parachute payment mechanism just in case they, too, should need it. In terms of its private costs and benefits, the EPL does not consider the social costs and benefits of its actions on football. In the short term, EPL clubs do not benefit from changes that would make the EFL more competitive, but in the longer term, the EPL relies on a competitive EFL to remain competitive itself.

At an individual club level, a team may strive to win every game and wish to be dominant and initially, the club may be rewarded with higher revenues. However, the social cost of this dominance is that interest in the league may be harmed, which may harm overall league interest and club revenues in the long term.

3.3 Data And Methods

3.3.1 Data

Points Per Game (PPG)

Points per game are the number of points achieved over a season divided by the number of fixtures, where 3 points were awarded for a win, 1 for a draw, and zero for a loss. We have chosen average points because we can use it to compare findings across different league sizes. We can still use it if a team is expelled in the future to allow for comparability and their points record is expunged, e.g., Bury or the season is curtailed early, as it was for Leagues One and Two in 2019/20 due to the COVID-19 pandemic.

Chart 3.1 shows the distribution curve for average points per game to be normally distributed about the mean, one of the prerequisites for regression.

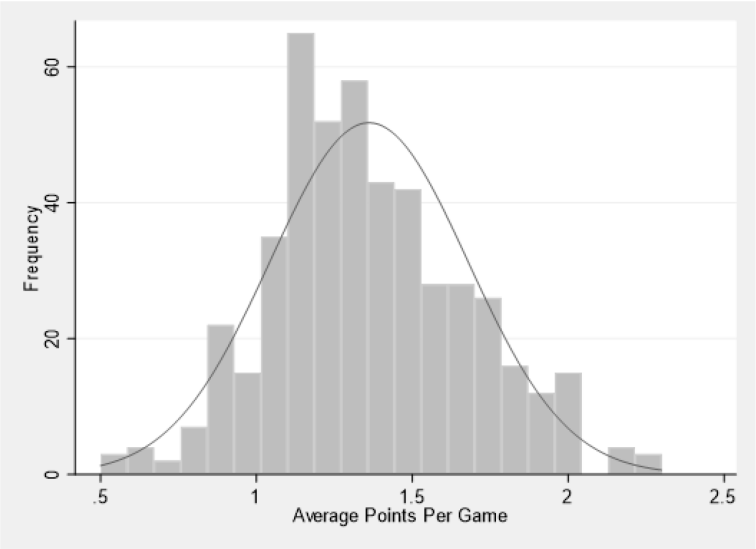

Chart 3.1 – The Distribution of Average Points Per Game

Data Integrity Test

We will use a two-sample t-test to determine the differences in means for points per game and examine whether our findings are consistent with those of Wilson et al. (2017) for the same period and, more importantly, whether it has remained unchanged.

In Table 3.1 we give the two-sample t-test results for the difference in points per game between the parachute and non-parachute clubs. In the first three columns, we show the results of Wilson et al. (2017), translated to points per game for comparison purposes.

In columns 4 - 6, we find for the same 11 years as the Wilson et al. study period (2006/07-2016/17) that the average points per game for a parachute club is 1.427 points per game +/- the standard deviation of 0.328, compared to a non-parachute club mean of 1.334 points per

game +/- 0.294 and a difference between the non-parachute and parachute clubs of -0.092 points per game. This can be compared to the Wilson et al. findings of 1.36 points per game +/- 0.30 for the non-parachute clubs and 1.43 points per game +/- 0.33 for the parachute clubs and a difference of -0.08 points per game between the parachute and non-parachute clubs.

Period	**Wilson et al. study**			**This Study**				
	2006/07-2016/17			Periods 2006/07 -2016/17				
Statistic	No of Obs.	Mean Pts	Std. Dev.	No of Obs.	Mean Pts per game	Std. Dev.	Between Sample Diff cols 2 -5	Between Sample t-stat Ha: mean != Col 2
Column	1	2	3	4	5	6	7	8
Non-Parachute	190	1.36	0.30	190	1.334	0.294	-0.089	Ha: mean < 1.36 0.114
Parachute Clubs	74	1.43	0.33	74	1.427	0.328	-0.003	Ha: mean < 1.43 0.465
Combined	264	1.38	0.31	264	1.360	0.307		
Difference		-0.08	-0.04		-0.092	-0.034		
t =			-2.36			-2.218		
Deg. of free.			262			262		
P= (Ha: diff != 0)			0.019			0.027		

Table 3.1 - Two Sample T-test results for differences in mean 2006/07-2016/17

The differences between the Wilson study points per game and our points per game for the non-parachute clubs, -0.089 points (t=0.114), and the parachute clubs, -0.003 points (t=0.465), are not statistically significant. Hence, we infer no statistical difference in total points per game between the Wilson study, -0.08, and our own, -0.092, for the same period.

Extended Data Test

Period:	**2006/07-2016/17**			**Periods 2000/01 -2022/23**				
Statistic	No of Obs.	Mean Pts per game	Std. Dev.	No of Obs.	Mean Pts per game	Std. Dev.	Between Sample Diff. cols 5 -8	Between Sample Pr
Column	4	5	6	7	8	9	10	11
Non-Parachute	190	**1.334**	0.294	408	**1.323**	0.015	-0.011	**Ha: mean < 1.334 0.240**
Parachute Clubs	74	**1.427**	0.328	144	**1.472**	0.027	0.045	**Ha: mean > 1.427 0.050**
Combined	264	**1.360**	0.307	552	**1.362**	0.013	0.002	**Ha: diff > 1.360 0.438**
Difference		**-0.092**	-0.034		**-0.149**	0.030		
P= (Ha: diff != 0)			0.027			0.000		

Table 3.2 -Two Sample T-test results for differences in mean 2006/07-2016/17 and 2000/01-2022/23

When the sample period is extended for all seasons in our study period (i.e. 2000/01-2022/23), we find in, Table 3.2 Columns 7 – 9, that the difference between our mean points per game for all clubs for seasons 2000/01-2022/23 of 1.362 is not statistically more than our mean for seasons 2006/07-2016/17 of 1.360 points per game (p=0.438) however the difference in points per game between the parachute clubs and the non-parachute clubs increases by 0.057 points per game from 0.092 to 0.149 (+2.62 points per season). The difference between our mean points per game for the non-parachute clubs for seasons 2000/01-2022/23 of 1.323 is not statistically less than our mean for seasons 2006/07-2016/17 of 1.334 points per game (p=0.240). However, the mean points per game for the parachute clubs for seasons 2000/01-2022/23 of 1.472 is statistically more than the mean for 2006/07-2016/17 of 1.427 points per game (p=0.050), confirming the gap between the parachute and non-parachute clubs is wider in the additional years.

From Table 3.3, the gap in points per game was wider in the years before and after the Wilson et al. period.

	2000/01-2005/06			**2017/18-2022/23**		
Statistic	No of Obs.	Mean PPG	Std. Dev.	No of Obs.	Mean PPG	Std. Dev.
Column				4	5	6
Non-Parachute	112	1.331	0.031	106	1.296	0.028
Parachute Clubs	32	1.474	0.053	38	1.558	0.054
Combined	144	1.363	0.028	144	1.365	0.027
Difference		-0.144	0.065		-0.261	0.057
Pr= (Ha: diff != 0)		0.029			0.000	

Table 3.3 - Two Sample T-test results for differences in mean for the seasons 2000/01-2005/06 2017/18-2022/23

Comparison with Wilson Et Al.

From Chart 3.2, the average HICB for the period is 105.4 (standard deviation = 1.30), ranging between 104.95 and 105.85. It is highly volatile, around the linear trend, growing moderately by 0.061 per annum since 2000/01 (competitive balance decreasing) (R^2 = 0.059).

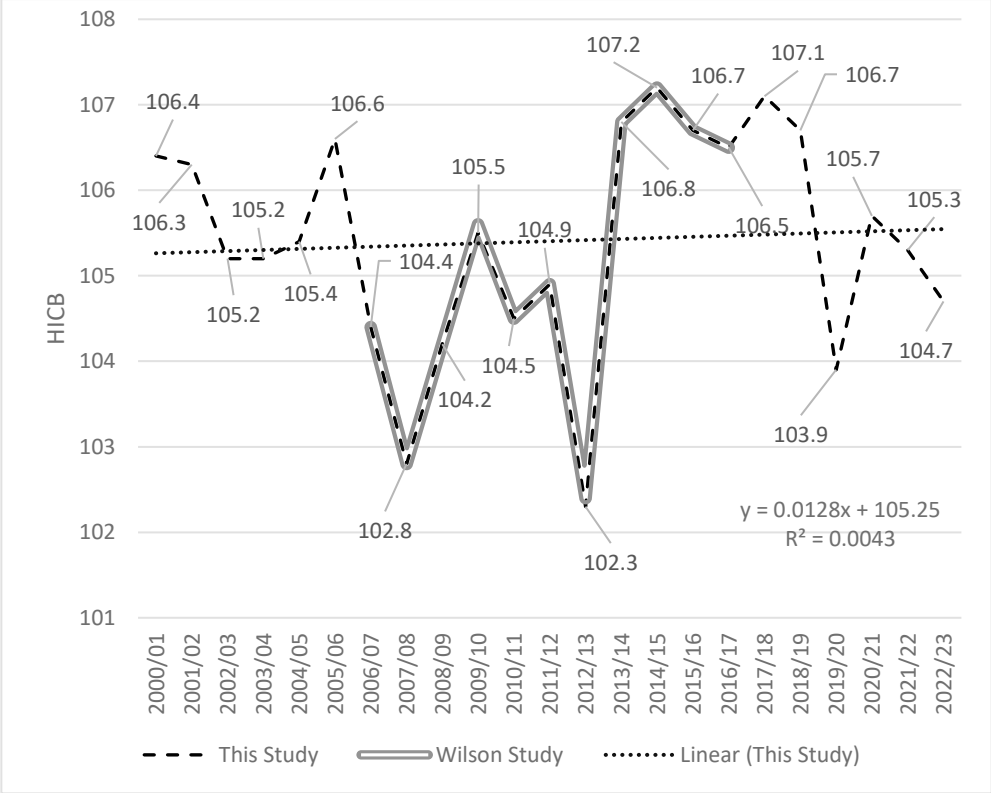

Chart 3.2 - HICB in the EFL Championship 2000/01 – 2022/23

For the first six years of our data (2000/01 – 2005/06), the HICB values are on or above the trend line, suggesting that competitive balance was worse in the period immediately before the EPL parachute payments were linked to growth in the EPL TV deal and solidarity payments were introduced.

From 2006/07, the start of the Wilson et al. (2017) study period, the parachute payments seem to have lowered the HICB scores below the trend line for the next seven years, suggesting that the initial increase in parachute payments had less of an impact than the payment of solidarity payments for the first time to non-parachute clubs (perhaps offsetting some of the losses arising from the collapse of ITV digital) and, as a result, improved competitive balance.

However, the value has been consistently above the trendline for the post-P&S years, coinciding with the exponential growth in parachute payments, suggesting that the implementation of P&S has harmed competitive balance. During the COVID-affected years, HICB has been largely below the trend line, suggesting that the COVID restrictions have been good for competitive balance in the Championship.

Given these jumps in 'segments', it is worth re-opening the investigation. It is possible that the Wilson et al. study was conducted when the competitive balance was different and has changed recently.

The HICB values were correlated against time (where 2000/01 = 1, etc.), the number of parachute clubs and the value of parachute payments using Pearson's correlation coefficient (r). By adding just a few years of data, before and after their study period, we find the correlation of HICB against time disappears (p>0.10) but still holds against the number of parachute clubs and parachute payments.

Except for parachute income against time (r=0.937), all the correlation coefficients have fallen considerably with the additional seasons. This is the motivation for extending the Wilson et al. study.

Variable	Correlated with	Wilson et al. period (2006/07-2016/17)		This Study (2000/01-2022/23)	
		Pearson Correlation Coefficient (r)	Significance (p)	Pearson Correlation Coefficient (r)	Significance (p)
Competitive Balance (HICB)	Time	0.65**	0.03	0.067	0.76
	No of Parachute Clubs	0.68**	0.02	0.531***	0.009
	Parachute Income	0.75***	< 0.01	0.284**	0.019
No of Parachute Clubs	Time	0.79***	< 0.01	0.396*	0.061
Parachute Income	Time	0.93***	0.000	0.937***	0.000

Where * p<0.10 ** p<0.05 *** p<0.01

Table 3.4 - Table of Correlation Results for 2006/07 – 2016/17 compared with 2000/01 – 2022/23

3.3.2 Methodology

Benchmarking

The benchmark estimation technique for our model is ordinary least squares (OLS). We have used points as our competitive measure as it is more easily understood, especially for policy dissemination. Points also permit us to compare our findings with headline figures reported in the press at the time regarding parachute payments, e.g., a five-point advantage for parachute clubs over non-parachute clubs.

Dependent Variable (Y)	Independent Variable (X)	α	β	R^2	p
Total Points per team	Parachute dummy where 1 = parachute payment received	61.51 *** (0.000)	5.29 *** (0.001)	0.027	0.854

Where * p<0.10 ** p<0.05 *** p<0.01

Table 3.5 - Simple regression results for 'points' on the Parachute flag

From Table 3.5, the parachute clubs get 5.29 points more per season than non-parachute clubs (β = 5.29 p=0.001), and non-parachute clubs get 61.5 points (p=0.00). This appears to support Wilson et al.'s 5-point head start.

In this first instance, we have used Wilson et al.'s (2017) total points as our competitive balance measure; however, from now on, we will use points per game (PPG) multiplied by 46.

Econometric Model

To estimate the impact of parachute payments on points per game, we use linear regression to measure competitiveness. Ordinary least squares (OLS) and fixed effects (FE) are two estimation techniques. The empirical model is shown in Equation 7. In this equation, (Y) represents our measure of competitiveness, e.g. points per game as the dependent variable:

$$Y_i = \alpha + \beta_1 P_i + \beta_2 F_i + \beta_3 C_i + \beta_4 (P_i * F_i) + \beta_5 (P_i * C_i) + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_n X_n + \varepsilon \quad (7)$$

Where:
α = the constant or intercept
P = dummy equal to one if the club does not receive a parachute payment,
F = dummy equal to one if P&S rules are in operation for that season,
C = dummy equal to one for seasons affected by COVID-19,
$(P_i * F_i)$ = the parachute and P&S interaction term
$(P_i * C_i)$ = the parachute and COVID interaction term.
β_n = the regression coefficient of the additional independent variables (6 to n)
x_n = The independent variables, (1 to n)
n = the number of independent variables in the regression
ε = the error of the equation, i.e. the difference between the 'true' value and the observed value

The data used in this analysis is freely available in the public domain. The data required for calculating points per game and league position was collected from the league tables for each season that are published on the EFL website. The club that wins the match receives three points, and the losing side gets zero points; if the match is tied on goals scored, the result is a draw, and the sides receive one point each. Clubs making the promotion playoffs through a top six place would be placed in a notional league placing for our analysis, i.e. the playoff winner would be placed third, the defeated play-off finalist would be placed fourth, the highest placed playoff semifinalist would be placed fifth, and the remaining playoff team would be placed sixth- After the imposition of points deductions for entering administration or for violating P&S regulations we make adjustments for any point deductions so that our points per game measure truly reflected the points gained. Similarly, the club's position was adjusted to the position the club would have made if the points had not been deducted.

Financial data required for additional covariates came from the same club accounts we acquired for the z-scores in Chapter 2. Details of parachute payments came from several sources, mainly newspaper articles, cross-referenced to the clubs' published accounts where possible. Due to the public nature of any data used, we do not believe there are any ethical issues to consider with this research, and any conclusions drawn are unlikely to breach anyone's confidentiality.

The data spans twenty-three Championship seasons from 2000/01 to 2022/23. The Championship consists of 24 teams each season, and relative performance is known (e.g., the league table). There have only been 63 teams over the entire research period.

It is the entirety of our social construct. The data required for calculating points per game was collected from the league tables for each season, and any point deductions were added back so that our points per game measure reflected the actual points gained. Thus, there is no possibility of a sampling error, and there are enough data points to interpolate and draw conclusions.

Therefore, our main variables of interest are the parachute flag, a binary indicator of whether a club receives a parachute payment, a P&S rules dummy, a binary indicator denoting whether the P&S rules are in operation for that season; and a COVID season dummy denoting if the season is COVID-affected, i.e., between 2019/20 and 2021/22.

We will partially relax the assumption of the independence of Parachute payments and P&S Rules, as well as parachute payments and COVID, by fitting an interaction between variables P and F and P and C. This will, in effect, allow the impact of the parachute payments to differ in the post-P&S period and during the COVID-affected seasons.

We will control for general seasonal differences with a dummy variable for each season to control for ‘across the board’ inflationary increases in the financial variables, e.g., log wages.

Where there are repeated values in the data that remain stable over time, e.g. the football club, these may be correlated with our observed variables over time. Therefore, the standard errors may also be correlated over time, violating an OLS condition. These unobserved heterogeneities may result in omitted variable bias in our regression estimates and, therefore, justify using Fixed Effects Regression. Fixed Effects Regression uses the ‘within estimator’ method (e.g. within the same club, over time) where time-demeaned variables allow the control of time-invariant unobserved individual characteristics that may be correlated with the observed independent variables and, therefore, panel or longitudinal regression is to be applied.

Using fixed effects in the regression corrects for Omitted Variable Bias by introducing an entity-level dummy variable. This controls for both entity-specific and time-invariant variation in the data without having to collect data on those variables. However, the more we can control for entity-specific but time-variant variables, e.g., club income, the more information we break out of the club Fixed Effect, and the more likely the coefficients are unbiased.

The full regression model includes ten new covariates and our three original interest regressors. These covariates are not part of our research question, but they are important

because, as independent variables, they may have a meaningful effect on the dependent variable. Omitting these variables could lead to Omitted Variable Bias in our estimates, where the error term is correlated with our independent variables, which may generate biased coefficients for our regressors of interest in the model.

Additional Covariates

a) Log Non-parachute revenue

Log of Income excluding parachute payments. Non-parachute revenue may impact performance as clubs will have more to spend on player talent.

From Chart 3.3, the average income (excluding parachute payments) for the parachute clubs exceeds that of the non-parachute clubs for most seasons, consistent with the findings of Wilson et al. (2017). This could be due to the size of clubs, generally considered long-term members of the EPL, who come down to the Championship for one or two years before returning to the EPL. e.g. Newcastle United, Aston Villa, etc. (permanent advantage) or due to commercial arrangements made during their, often short, stay in the EPL, which initially extends into the Championship but then disappear over time, e.g. Huddersfield Town, Bournemouth (temporary advantage). The early peaks of 2001/02 and 2004/05 are due to the only appearance in the Championship by Manchester City in 2001/02 and the first appearance of Leeds United in 2004/05.

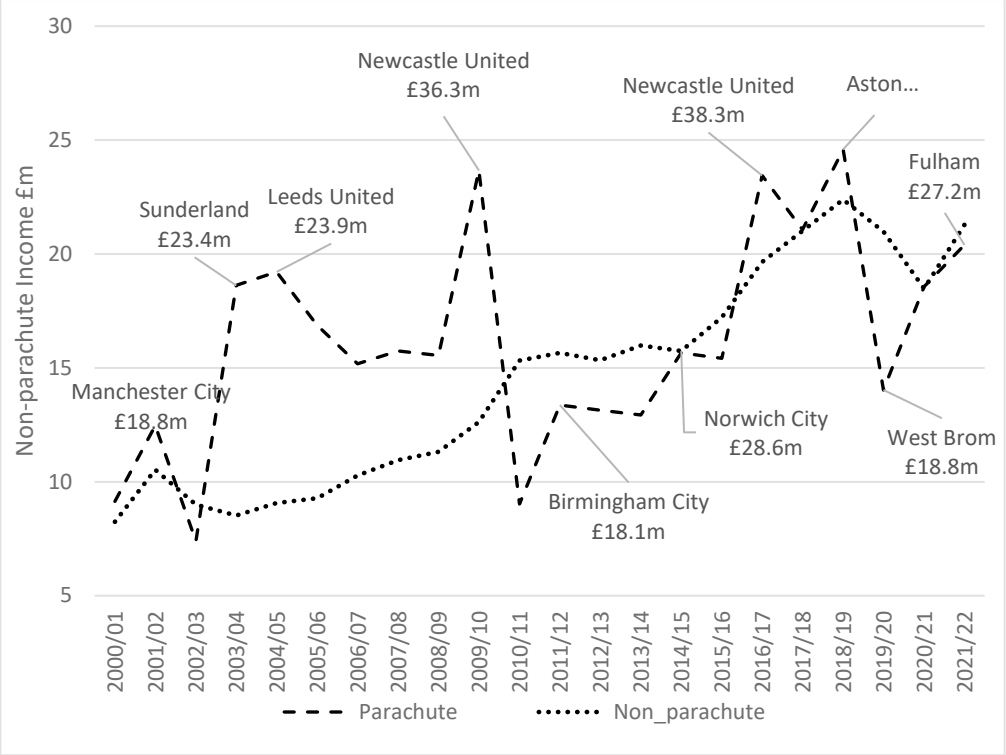

Chart 3.3 – Average and Highest Non-parachute Income (2000/01 - 2021/22)

b) Log total assets

This is included as a proxy for the size of the club ('prestige'), as they would have a bigger stadium, the most expensive facilities, and a bigger and more highly valued playing squad.

c) Years in the Championship

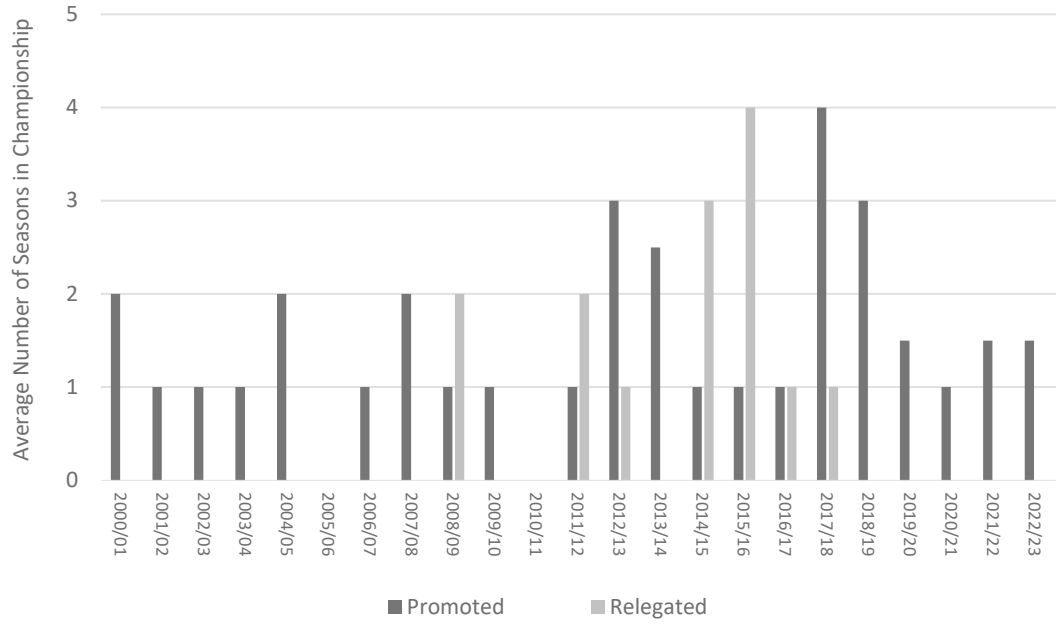

Chart 3.4 - Average Tenure of Parachute Clubs (2000/01 – 2022/23)

From Chart 3.4, the parachute clubs took longer to get promoted out of the Championship after 2010/11. Between 2008/09 and 2015/16, parachute clubs also took longer to fall through the trap door into League 1, but between 2001/02 and 2008/09, a Parachute club's relegation was unheard of.

The number of years in the league is a proxy for league experience. Our anecdotal evidence shows a nonlinear (polynomial) relationship with promotion prospects and, by inference, our competitive measure of points per game. The impact on points per game could be negative until, say, the third year and then positive as promotion prospects improve.

d) Years in the Championship Squared

Adding the square of the years in the Championship allows us to more accurately model the effect of time from relegation on the parachute clubs. A square term provides for non-linearity, as we believe that after a certain point, league know-how is increased at a diminishing rate

e) Log Player costs

Log Total Wage or Log wage residuals (i.e., Exc. Parachute Payments). Player costs represent the amount the clubs spend on playing talent, as opposed to non-parachute income above, which represents the capacity clubs have to spend on players.

Our player cost variable comprises 'Total Wage Cost' and 'Player Amortization, ' which is the systematic write-down of a player's transfer fee over the life of the player's contract. As shown in Figure 3.6 (a) below, the variable for wage and player amortisation cost is right-skewed, so we will use the natural log of the player costs (see Chart 3.5b).

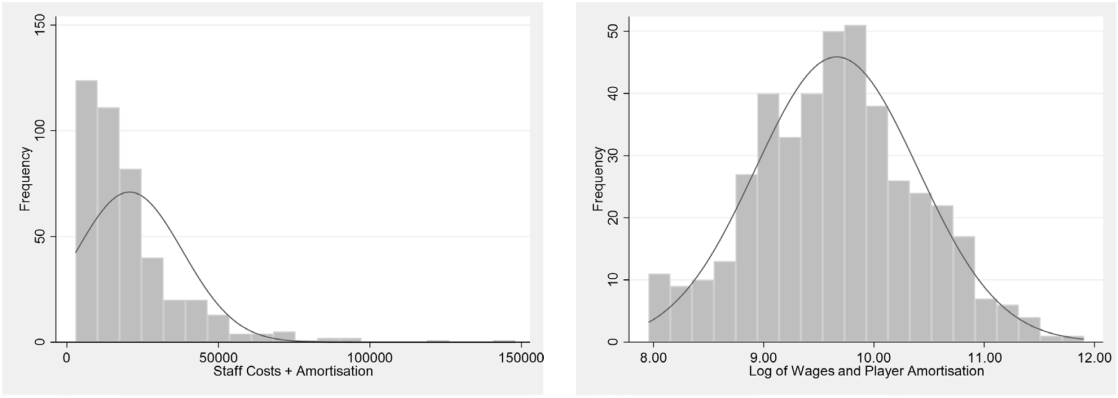

Chart 3.5 - (a) Distribution of staff costs (left) and (b) Distribution of wage log (right)

Given that disparity in both income and wage spending damages competitive balance (Michie & Oughton, 2004), and the income disparity caused by parachute payments facilitates additional player spending. We need to remove the effect of parachute payments from the player costs effect on points per game to avoid double-counting the effect of parachute payments. This is an important contribution of the work.

To extract the impact of parachute payments from our wage log variable, we will employ a variation of the method proposed by Gomanee, Morrissey, Mosley, and Verschoor (2005, pp. 360-361). We will similarly remove the effect of parachute payments on wage spending by generating a new variable called 'log wage excluding parachute payments' from the residuals of an OLS regression of log wages on parachute payments flag with robust estimates.

$$Y = \alpha + \beta X + \varepsilon \qquad (8)$$

Where α = intercept, X = Parachute Payments, Y = Log of player costs, β = Regression Coefficient (slope) and ε = residuals => 'log wage excluding parachute payments'

This gives us the value of the wages log that is not explained by the changes in the parachute payments and, therefore, represents the value of the wages log that is funded from sources other than parachute payments and can be used in conjunction with the parachute flag, free of any double counting.

The regression produced the following equation:

Log player costs = 9.54 + 0.044 x parachute payments + residuals

Where the residuals reflect the amounts that are not funded by parachute payments.

The residual explains the non-parachute clubs' spending over the log value of 9.54 or £13.9m. For the parachute clubs, it reflects whether they are spending more or less of their parachute payments on player costs than the regression predicted.

Player Costs 2021/22	Base Cost	Parachute payment £m	Predicted Outcome	Log Value	Predicted Cost £m	Non-parachute spend (£m)
Parachute Clubs Year 1	9.54	44.4	1.95	11.50	98.32	-
Parachute Clubs Year 2	9.54	37.9	1.67	11.21	73.82	-
Parachute Clubs Year 3	9.54	16.1	0.71	10.25	28.30	-
Non-parachute clubs	9.54	-	0.61	10.15	25.65	16.11

Table 3.6 - Predicted Player Costs for Season 2021/22 to Illustrate how the Residual adds to Non-parachute Player Spend.

We use 2021/22 here as an example. The predicted outcome column for the parachute clubs in Table 3.6 reflects the parachute payment multiplied by the coefficient of 0.044. The predicted outcome for the non-parachute clubs is the average residual of 0.61, which, when added to the intercept for log wages, yields a player spend of £25.65m. For illustration purposes only, we assume the parachute clubs are spending what is predicted, i.e. there is no residual for parachute clubs,

In reality, there would be a residual for the parachute clubs. For example, Huddersfield Town had a residual of -0.31, i.e., they spent less than predicted, whilst Fulham had a residual of +0.20, i.e., they spent more than predicted.

Table 3.7 shows that these residuals translate to a non-parachute spend of £21.05m for Fulham but a negative non-parachute spend of £7.56m for Huddersfield Town. They are ‘banking’ some parachute payments and spending less than the average non-parachute club.

Player Costs 2021/22	Base Cost	Parachute payment £m	Predicted Outcome	Log Value	Predicted Cost £m	Non-parachute spend (£m)
Fulham Year 1	9.54	44.4	1.95+0.20	11.69	119.37	21.05
Huddersfield Tn Year 3	9.54	16.1	0.71-0.31	9.94	20.74	-7.56

Table 3.7 - Predicted Player Costs for Season 2021/22 to Illustrate how the Residual adds to Parachute Payment Funded Player Spending.

f) Log total debt

Long-term indebtedness is the natural partner for total assets, as assets have probably been debt-financed, e.g., player transfer costs. This could directly reflect how owners respond to parachute payments by funding player investments, providing owner loans, or taking on external debt. Total debt reflects the club's operational gearing and the extent to which club assets are financed by debt.

g) Change in debt (£ mil)

Logic would dictate that debt may be the non-parachute club's only means of competing with the parachute teams' spending power. However, as it is now constrained by the P&S rules, which limit losses to be funded by increases in debt to £5m per year, this is likely to accentuate the impact of parachute payments. Change in debt reflects the extent to which a change in debt finances club operating losses.

h) Net income EBIT (Operating Loss)

Finally, net income, where clubs with high revenues may choose to spend it on talent, or they could save that revenue and maximise profits, etc., is a parameter, along with the change in debt, that is acted upon directly by P&S. Notably, we include this variable to test the theory of profit maximising versus win maximising. We would expect profit maximisers to have fewer points per game.

It is generally assumed that non-parachute clubs with wealthy owners will need to disproportionately overspend to remain competitive with the Parachute clubs. However, from Chart 3.6, there is little difference overall in the average owner contributions, as measured by negative EBIT, between the parachute and non-parachute clubs.

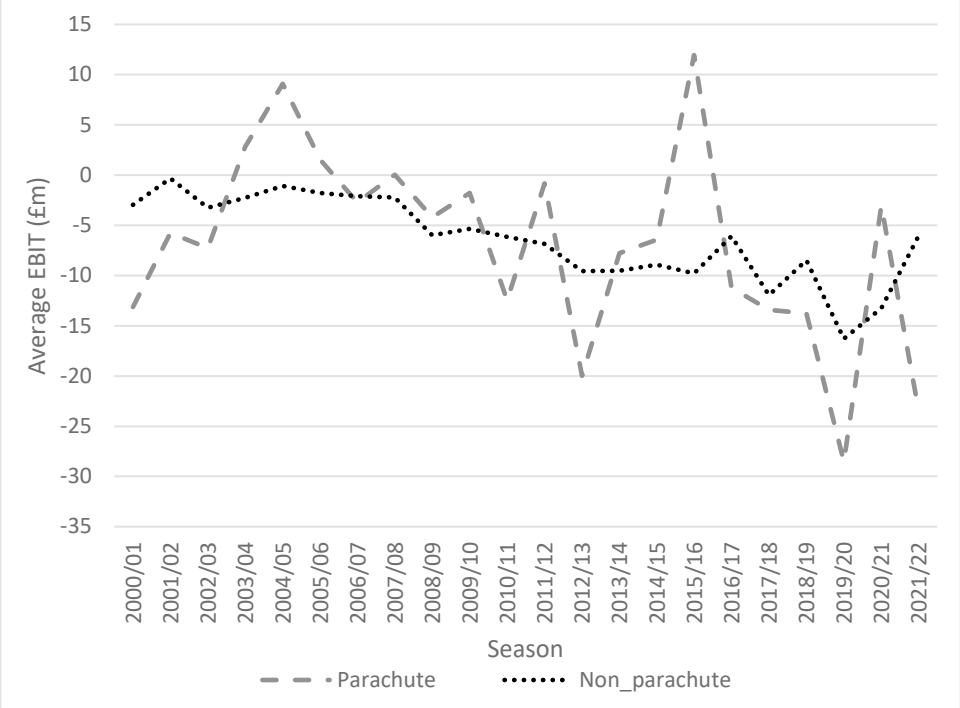

Chart 3.6 - Average Losses in the Championship 2000/01 - 2018/19

The parachute club's average operating losses have oscillated around the Other Clubs' average losses +/- £5m. Between 2006/07 and 2016/17, i.e. Wilson et al.'s study period, four out of eleven seasons, the parachute clubs make bigger losses than the others. We conclude that non-parachute club owners were, as we expected, overspending in order to compete with

parachute clubs. After the end of the first P&S rules reporting cycle in 2016/17, both Parachute and Non-Parachute clubs have been operating around the EFL's P&S limits. - As the three-year P&S calculation includes higher loss limits for the clubs' years whilst, in the EPL, the parachute clubs can make bigger losses, and we see the EBIT of the parachute clubs are consistently below that of the non-parachute clubs. During the COVID-affected seasons, the parachute clubs' EBIT went back above that of the non-parachute clubs when all matches were played behind closed doors in season 2020/21.

Descriptive Statistics

Table 3.8 shows that the mean number of points per game is 1.362 +/- SD of 0.317 points or 62.65 +/- 14.6 points over a 46-game season in the Championship. The mean parachute flag is 0.261 +/- 0.440, or 26.1% of teams have received parachute payments in 2000/01 – 2022/23. The mean value of the P&S rules is 0.391 +/- 0.488, or 39% of seasons have been in the post P&S period. The mean value of the COVID seasons is 0.130 +/- 0.337, or 13% of matches have been played during COVID-affected seasons.

The mean log revenue is 9.518 +/- 0.479 or £13.6m (or between £9.04m - £21.96m) in money terms. The mean of Log total assets is 10.096+/- 1.113 or £24.2m (£7.97m - £73.79m). The mean stay in the Championship is 3.880 years +/- 3.07 years.

The mean value of the residuals in wage costs is -0.000 +/- 0.629. The mean log of total debt is 10.402 +/- 1.107 or £32.93m and between £10.88m and £99.61m. The mean change in debt each season is £2.745m +/- £22.912m. The mean net loss per annum is £6.404m +/- £15.734m or put another way between a profit of £9.33m and a loss of £22.14m.

Table 3.3 below shows the correlation between our chosen variables. Multicollinearity is where there is a high correlation between two or more of the independent variables. It may impact the standard error and, therefore, the estimated precision of the variables.

However, as many of these variables are controls from financial statements, we would expect a high degree of correlation between the two variables (highlighted in bold). This is less of a concern as they are just control variables. The key is that these variables are not highly correlated with our variable of interest parachute payments. One solution to avoid multicollinearity from the controls is to remove a subset of the set of variables that are highly correlated with one another. However, this may result in omitted variable bias, and we are happy to trade off multicollinearity in the controls to ensure unconfoundness in the parachute payments estimate.

Variable	Seasons 2000/01 – 2022/23			
	Mean	Standard Deviation	Minimum	Maximum
1. Points per game	1.362	0.317	0.500	2.300
2. Parachute flag	0.261	0.440	0.000	1.000
3. P&S Rules	0.391	0.488	0.000	1.000
4. COVID affected seasons	0.130	0.337	0.000	1.000
5. Log revenue (exc Parachutes)	9.518	0.479	7.102	11.095
6. Log total assets	10.096	1.113	6.805	12.633
7. Years in the Championship	3.880	3.072	1.000	17.000
8. Residuals Wages (exc Parachutes)	-0.000	0.629	-1.510	1.597
9. Log total debt	10.402	1.107	6.1333	12.585
10. Change in debt (£ mil)	2.745	22.912	-201.695	115.650
11. Net income	-6.404	15.734	-88.425	164.358

Table 3.8 - Descriptive Statistics for the Multivariate Variables

All our independent variables positively correlate with points per game except net income, which seems logical. Clubs that choose to make a profit will spend less on players than they could have. Therefore, intuitively, higher profits should lead to fewer points.

	1	2	3	4	5	6	7	8	9	10	11
1. Points per game	1.00										
2. Parachute flag	0.18	1.00									
3. P&S Rules	-0.01	0.11	1.00								
4. COVID	0.01	0.01	0.50	1.00							
5. Log revenue (exc Parachute payments)	0.34	0.23	0.50	0.21	1.00						
6. Log total assets	0.43	0.39	0.40	0.20	0.69	1.00					
7. Years in the Championship	0.01	-0.42	0.08	0.06	0.11	0.04	1.00				
8. Wages (exc. Parachute Payments)	0.35	0.05	0.47	0.27	0.76	0.61	0.30	1.00			
9. Log total debt	0.33	0.30	0.39	0.25	0.63	0.73	0.12	0.69	1.00		
10. Debt Change (£m)	0.21	-0.19	-0.01	-0.01	0.05	0.06	0.13	0.22	0.15	1.00	
11. Net income	-0.21	-0.02	-0.17	-0.16	-0.22	-0.25	-0.10	-0.41	-0.34	-0.43	1.00

Table 3.9 - Correlation between variables Matrix

Correlation with parachute payment flag suggests that parachute clubs receive more in non-parachute revenue than non-parachute clubs, are the bigger clubs in terms of assets, spend more on wages than is explained by parachute payments, have more debt than non-parachute clubs whilst at the same time are paying down that debt each year (as measured by a negative correlation) are less likely to be making a profit (negative on net income) and spend fewer years in the Championship.

Log revenue is positively correlated with the size of the club as measured by log assets, years in the Championship, non-parachute wages, indebtedness, and change in debt but negatively correlated with net income. Likewise, Log assets, years in the Championship, wage residuals,

log debt and change in debt positively correlate with all variables other than net income. Net income is negatively correlated with all variables.

3.4 Results

3.4.1 Preliminary Observations

The change over time can probably be best illustrated with a chart:

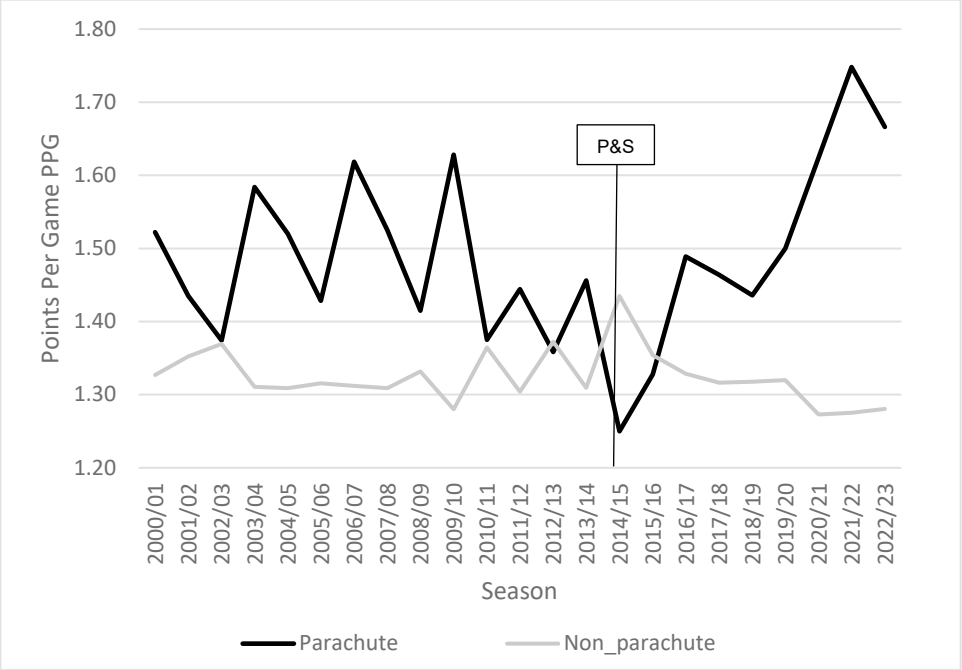

Chart 3.7 - Average Points per Game for Parachute and Non-parachute Clubs (2000/01-20022/23)

3.4.2 Statistical Testing

Profitability and Sustainability

We will estimate the impact of the implementation of the P&S rules by calculating the difference in the points per game between the parachute and non-parachute clubs for the period from the start of our study until the season before the implementation of the P&S rules (i.e. 2000/01-2013/14) compared with the difference in the points per game between the parachute and non-parachute clubs for the seasons after (i.e. 2014/15-2022/23).

Table 3.10 below shows the two-sample differences in means t-test results for the difference in the points per game for the parachute clubs compared to the non-parachute clubs with the sample split between the pre-P&S seasons and the post-P&S seasons:

Period:	Pre-P&S 2000/01 -2013/14			Post-P&S 2014/15 -22/23			Post P&S – Pre-P&S	
Statistic	No of Obs.	Mean PPG	Std. Dev.	No of Obs.	Mean PPG	Std. Dev.	Diff.	Pr = (Ha: diff != 0)
Column	1	2	3	4	5	6	7	8
Non-Parachute	257	**1.326**	**0.302**	151	**1.318**	**0.309**	+0.008	**0.802**
Parachute Clubs	79	**1.473**	**0.288**	65	**1.470**	**0.368**	+0.003	**0.954**
Combined	336	1.361	0.305	216	1.364	0.023	-0.003	**0.906**
Difference		**-0.147**	**0.014**		**-0.152**	**0.049**		
P= (Ha: diff != 0)			0.000			0.002		

Table 3.10 - Two Sample t-test results for differences in mean pre-and post-P&S implementation

In Columns 1-3, we report the findings for the pre-P&S period. The average points per game for a parachute club is 1.473 +/- the standard deviation of 0.288, compared to a non-parachute club mean of 1.326 +/- 0.302. This is a significant advantage to the parachute clubs of 0.147 points per game +/- 0.014 (p=0.000) or 6.9 points per season.

In Columns 4-6, we see that for the post-P&S period, the average points per game for parachute clubs is 1.470 +/- 0.368, compared to non-parachute clubs of 1.318 +/- 0.309, a significant advantage to the parachute clubs of 0.152 points per game +/- 0.049 (p=0.002) or 7.0 points per season.

Despite the parachute payments continuing to grow at an ever-increasing rate, thereby widening the income gap, we find the parachute clubs' points per game have fallen by 0.003 points per game post-P&S. However, the change is not significant (p=0.954). Similarly, the points per game for the non-parachute clubs has fallen, but not significantly (p=0.802). For all clubs, the points per game have increased in the post-P&S period, but the change is not significant (p=0.906).

COVID-19 Pandemic

During the post-P&S period, the football authorities imposed restrictions on the football clubs, first suspending the league programme and then completing fixtures behind closed doors, which affected seasons 2019/20, 2020/21, and 2021/21. With the loss of matchday income across the board, it is reasonable to assume that clubs receiving parachute payments would be better placed to maintain better-playing squads than the non-parachute clubs and, hence, win more points. We will test this with several t-tests.

For all clubs, the mean points per game in the COVID-affected seasons is not significantly different from the points per game in the other post-P&S seasons (p=0.821), nor is the difference for the non-parachute clubs (p=0.392). However, as was expected, the points per game won by the parachute clubs significantly increased by 0.203 during the COVID-affected seasons (p=0.045).

Period:	Non COVID Seasons			COVID Affected seasons			Post P&S – COVID affected seasons	
Statistic	No of Obs.	Mean PPG	Std. Dev.	No of Obs.	Mean PPG	Std. Dev.	Diff.	Pr = (Ha: diff != 0)
Column	1	2	3	4	5	6	7	8
Non-Parachute	97	1.335	0.331	54	1.289	0.266	+0.045	**0.392**
Parachute Clubs	47	1.414	0.378	18	1.617	0.301	**-0.203**	**0.045**
Combined	144	1.360	0.348	72	1.371	0.308	-0.011	**0.821**
Difference		-0.079	0.047		-0.328	0.035		
P= (Ha: diff != 0)			0.200			0.000		

Table 3.11 - Two Sample t-test results for differences in mean pre-and post-P&S implementation

In Columns 1-3, the average points per game for a parachute club is 1.414 +/- the standard deviation of 0.378, compared to a non-parachute club mean of 1.335 +/- 0.331. However, this advantage to the parachute clubs of 0.079 points per game +/- 0.006 or 5.9 points per season is not significant (p=0.200).

In Columns 4-6, we see that for the COVID-affected seasons, the average points per game for parachute clubs is 1.617 +/- 0.301, compared to non-parachute clubs of 1.289 +/- 0.266, a significant advantage to the parachute clubs of 0.328 points per game +/- 0.035 (p=0.000) or 16.7 points per season.

We conclude that the advantage in points per game to the parachute clubs we have observed in the post-P&S period exists only in the COVID-affected seasons. In the other post-P&S seasons, no difference is found in points per game between the parachute and non-parachute clubs.

3.4.3 Regression Results

Fixed Effects Regression

Our data set is an unbalanced panel because not all clubs have been ever-present in the Championship due to promotion and relegation. For example, there have been 63 clubs in the model but only 24 places in the league in any one season.

Having established that implementing the P&S rules and COVID has likely resulted in a change in the advantage from parachute payments on points per game, we will now regress Points Per Game with the Parachute Flag as the independent variable. This will enable us to control more than just parachute payments or the P&S rules simultaneously. Having identified the need to consider the fixed effects of individual clubs in the methodology section above, we will regress our variables in a model including club fixed effects and time series dummies.

Table 3.12 reports the regression results for points per game on the parachute payment flag in Column 1, the P&S rules dummy in Column 2, and the COVID-affected seasons dummy in Column 3.

In column 1, Table 3.12, the regression coefficient β_1 for the parachute flag is not statistically significant (p=0.317). For all clubs, the benefit in points per game shown in Table 3, column 5, disappears when club-fixed effects and time series dummies are included. The random effects model was proven consistent when performing a Hausman test (Prob > chi2 =. 0.000); there is a statistical difference between the Random and Fixed Effects models for the parachute flag.

Points per game		**Parachute Payments**	**P&S Rules**	**COVID Affected Seasons**	**Interaction**
Columns		1	2	3	4
R-squared		0.010	0.000	0.000	0.017
No. of observations		552	552	552	552
No. of groups		63	63	63	63
Constant		1.424*** (0.000)	1.430*** (0.000)	1.430*** (0.000)	+1.475*** (0.000)
Non-Parachute Flag (p)	β_1	0.035 (0.317)			-0.056 (0.186)
P&S Rules (p)	B_2		-0.099 (0.283)		-0.200* (0.092)
COVID seasons (p)	B_3			-0.082 (0.399)	+0.205* (0.081)
Non-Parachute # P&S (p)	B_4				+0.128* (0.071)
Non-Parachute # COVID (p)	B_5				-0.236** (0.021)
Hausman test (p)		0.000***	0.312	0.312	0.000***

Table 3.12 - Fixed Effects Regression results for Points Per Game by Parachute Payments, P&S Rules and COVID

In columns 2 and 3, the P&S and COVID coefficients, β_2 and β_3, are also not significant when we include club fixed effects and time series dummies. However, this is consistent with the all-club t-test finding in column 7 in Table 3.10 and Table 3.11When performing a Hausman test (Prob> chi2 = 0.312), the random effects model was proven to be inconsistent for both the P&S and COVID coefficients; there is no statistical difference between the Random and Fixed Effects models for the P&S and COVID season dummies. Despite the Hausman test suggesting we should not use fixed Effects, the Hausman test used in Stata is not based on robust estimates. Regardless of the Hausman test result, we believe the Fixed Effects estimator is the correct approach.

In column 4, we include our three variables of interest into a single club fixed-effects model as all three conditions act simultaneously. As the t-tests revealed a difference in the impact of the

P&S rules and COVID between the parachute and non-parachute clubs, we now relax the standard assumption of independence between the control variables. Therefore, we estimate two additional coefficients, β_4 and β_5, for the interaction between the P&S and the COVID season dummies with the parachute payment flag.

We find the β_1 coefficient for the parachute payment flag is still not significant; parachute payments do not, on their own, increase points per game (p=0.186). However, the P&S rules reduce the points per game by 0.200 (p=0.092), and the COVID restrictions have increased the points per game by 0.205 (p=0.081), which is not consistent with our all-clubs t-test results for P&S (p=0.906) from column 8 in Table 3.10 and COVID (p=0.821) from column 8 in Table 3.11, or the univariate regression results from columns 2 and 3 in Table 3.12.

The P&S rules have disproportionately impacted the non-parachute clubs; however, against expectations, the β_4 predicts the non-parachute clubs are gaining an extra 0.128 points per game or 5.9 points per season compared to the parachute clubs.

Meanwhile, the β_5 coefficient estimates the parachute clubs win 0.236 points per game more than the non-parachute clubs during the COVID seasons (10.9 points per season). This compares with 0.203 points per game found by t-test for parachute clubs reported in column 7 in Table 3.11.

When applying estimators to account for the panel structure of the data, the random effects model was proven to be consistent when a Hausman test is performed (Prob > chi2 =. 0.000); there is a statistical difference between the Random and Fixed Effects models.

Full Regression Model

From Table 3.13, Column 1, the significance of the Constant disappears for the first time with the inclusion of the additional covariates (p=0.582). The β_1 coefficient for the parachute flag is again not statistically significant (p=0.107). Against expectations, the parachute clubs were no better off than the non-parachute clubs in terms of points per game before the P&S rules were implemented or the COVID-19 pandemic restrictions were applied.

The β_2 coefficient for the P&S rules is significant and estimates that the points per game for all clubs have fallen by 0.378 points or 17.4 points per season (p=0.001) after implementing the P&S Rules. However, the β_4 coefficient for the interaction term between P&S and non-parachute flag no longer shows any discriminatory impact of the P&S rules on the non-parachute clubs (p=0.140). The parachute clubs no longer have a disadvantage in terms of points per game in the post-P&S period.

The β_3 coefficient for the COVID-affected seasons is +0.324 and significant (p=0.022), meaning the average points per game have generally increased by 14.9 points per season.

Meanwhile, the β_5 coefficient estimates that the non-parachute clubs achieved 0.357 fewer points per game than the non-parachute parachute clubs did during the COVID-affected seasons, a head start of 16.4 points per season (p=0.001).

Independent Variables		**1**	**Additional Covariates**		**2**
R-squared		0.451	Log revenue exc. Parachutes (p=)	β_6	+0.129** (0.056)
Number of obs.		501	Log total assets (p=)	β_7	+0.092*** (0.001)
Number of groups		61	Years in **the** league (p=)	β_8	-0.028** (0.025)
Hausman test (Prob > chi2)		0.690	Years in **the** league (squared) (p=)	β_9	+0.002** (0.033)
Constant (p=)	α	-0.371 (0.582)	Wages (exc. Parachutes) (p=)	β_{10}	+0.215*** (0.000)
Non-Parachute flag (p=)	β_1	+0.081 (0.107)	Log Creditors (p=)	β_{11}	-0.007 (0.813)
P&S Rules (p=)	β_2	-0.378*** (0.001)	Change in debt (£ mil) (p=)	β_{12}	+0.002** (0.016)
COVID (p=)	β_3	+0.324** (0.022)	Net income (EBIT) (p=)	β_{13}	-0.000 (0.928)
Non-Parachute # P&S Rules (p=)	β_4	-0.092 (0.140)	Manager changes (p=)	β_{14}	-0.099*** (0.000)
Non-Parachute # COVID (p=)	β_5	-0.357*** (0.001)	Player turnover (p=)	β_{15}	-0.004* (0.069)

Table 3.13 - Regression results for Points Per Game on the Independent Variables and Additional Covariates for seasons 2000/01-2022/23

In column 2, the β_6 coefficient predicts an increase of 0.129 points per game or 5.9 points per season for every unit increase in the Log of revenue exc. parachutes payments (p=0.056), the β_7 coefficient predicts an increase of 0.092 or 4.2 points per season for every unit increase in the Log of total assets (p=0.001), the β_9 coefficient predicts an increase of 0.002 or 0.1 points per season for each Year in the league (squared) (p=0.033), the β_{10} predicts an increase of 0.215 or 10 points per season for a unitary increase in the log of Wages (exc. Parachute payments) (p=0.000) and the β_{12} coefficient predicts an increase of 0.002 or 0.1 points per season for each £1m increase in debt (p=0.016).

However, the β_8 coefficient for Years in the league predicts a fall of 0.028 or 1.2 points per season for every year a club is in the Championship (p=0.025), the β_{14} coefficient predicts a fall of 0.099, or 4.5 points per season with every manager change (p=0.000) and the β_{15} coefficient predicts a fall of 0.004 or 0.2 points per season for each player a club turns over in the transfer windows (p=0.069). However, the β_{11} coefficient for Log Creditors (p=0.813) and the β_{13} coefficient for Net Income (EBIT) (p=0.928) are not significant.

The measure of model fit, R^2, increases from less than 2.0% to 45.1%, suggesting a much better fit with the additional covariates included. When performing a Hausman test (Prob> chi2 = 0.690), the random effects model was proven inconsistent; there is no statistical difference between the Random and Fixed Effects models for points per game. Despite the

The Hausman test suggests we should not use fixed Effects, but the Hausman test used in Stata is not based on robust estimates. Regardless of the Hausman test result, we believe the Fixed Effects estimator is the correct approach.

Robustness Testing

Previous research by Wilson et al. (2017) considered two other measures of competitive balance: the Herfindahl Index of Competitive Balance (HICB) and prospects for promotion. To test the robustness of our findings for points per game, we repeat our regression analysis with Promotion Prospects and HICB as the dependent variables.

In Table 3.14, column 1, we include the analysis from column 4 in Table 3.12, for comparison with columns 2 and 3, and in column 4, we include the analysis from columns 1 and 2 in Table 3.13, for comparison with columns 5 and 6. In Columns 2 and 5, we substitute 'Promotion This Year' for the dependent variable in the interaction models.

We opt for a linear probability model rather than a probit for several reasons. First, we wish to retain fixed effects to ensure our estimates are consistent and the fixed effects probit estimator does not exist. Similarly, the linear probability model provides the best linear approximation to the probit, and it provides good average partial effects, which is what we are interested in. Furthermore, the linear probability model allows us to compare our findings to when our dependent variable is points per game and is a simple and transparent estimator.

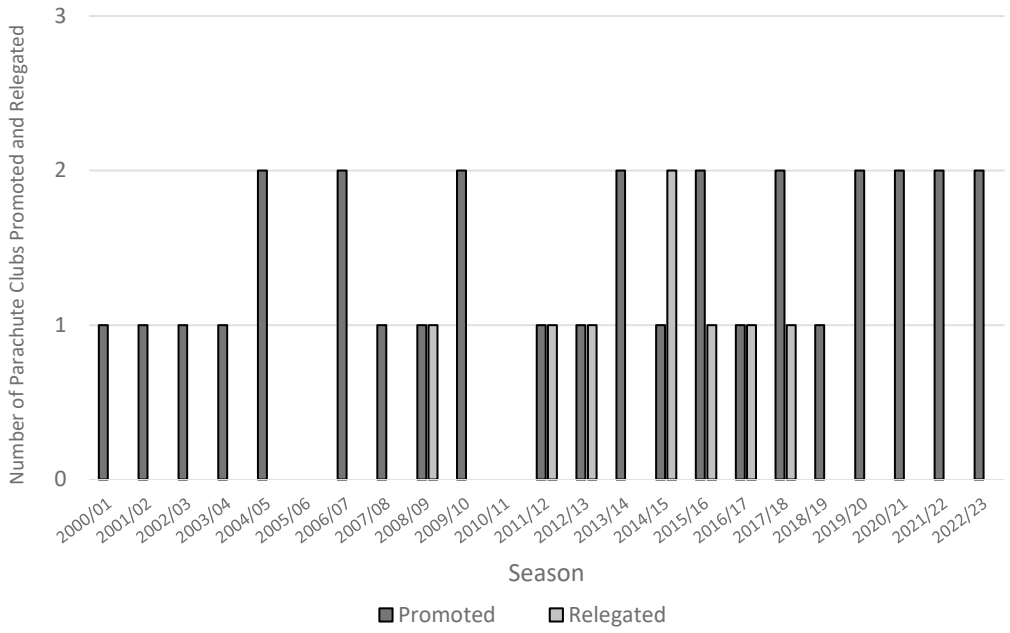

Chart 3.8 - Number of Promoted and Relegated Parachute Clubs 2000/01 - 2022/23

Chart 3.8 shows that two parachute clubs have been promoted each year in four out of five seasons since 2018/19, compared to just eight times in the previous twenty-six years. No

parachute clubs were relegated between 1992/93 to 1993/94, 1995/96 to 1996/97 and 1998/99 to 2007/08. In contrast, on average, one parachute club was relegated every season in the next ten years, from 2008/09 to 2017/18. No parachute club has been relegated to League One in the five years since 2018/19.

In columns 3 and 6, we substitute the 'HICB' value per club for the dependent variable in the interaction models. HICB is customarily used in the aggregate to monitor changes in the league's competitive balance over time. However, in a novel twist to the usual use of the HICB, we regress the parachute payments flag, the P&S rules dummy, and the COVID-affected seasons dummy on the individual club's HICB score.

For example, we expect the parachute clubs to receive a larger proportion of the total points in a season and, therefore, a higher HICB score.

$$(HHI / (1/N)) \times 100 \qquad (9)$$

where:

HHI is the sum of the squares of every club's share of points in a season, and N is the number of teams in the Championship. For example, in season 2018/19, Aston Villa, a parachute club, scored 76 points out of a total of 1493 points in the league, so the HHI for Aston Villa was $(76/1493)^2$ or 0.0026, and their Herfindahl index was 6.22, i.e. (0.0026/(1/24)*100). Relegated team Rotherham got 40 points and has an HHI of (40/1493)2 or 0.00072 and a Herfindahl index of just 1.7.

From Table 3.14, column 2, the intercept and coefficients for the non-parachute flag, the P&S rules dummy, and the COVID-affected season's dummy are not statistically significant when regressed against promotion prospects. The interaction coefficients β_4 and β_5 are also not significant. The R^2 is 0.000, and the Hausman test statistic is not calculable because no statistical significance was found for the regressors in the Fixed Effects model.

From column 3, the coefficients for the non-parachute flag, the P&S rules dummy, and the COVID-affected season's dummy are again not significant like the points per game model. The interaction between P&S and the parachute flag is no longer significant when regressed against HICB. However, significance is found for the intercept and the β_5 coefficient, which estimates that the non-parachute clubs have an average HICB of 1.557 units less than non-parachute clubs during the COVID-affected seasons. This means the parachute clubs get a larger proportion of the points total in the COVID-affected seasons. The R^2 is 0.015, and the Hausman test result shows that Prob > chi^2 = 0.000. Therefore, we should reject H_0; there is a significant difference between the Fixed Effects and Random Effects models, so we are justified in using the Fixed Effects specification.

Regression:		Multi-variate Fixed Effects					
Dependent Variable		Points Per Game	Promoted This Year	HICB	Points Per Game	Promoted This Year	HICB
Columns		1	2	3	4	5	6
R-squared		0.017	0.000	0.015	0.451	0.202	0.426
Number of obs.		552	552	552	501	501	501
No of groups		63	63	63	61	61	61
Constant (p=)	α	+1.475*** (0.000)	+0.090 (0.298)	+4.978*** (0.000)	-0.371 (0.582)	+0.604 (0.527)	-6.706 (0.157)
Non-Parachute flag (p=)	β_1	-0.056 (0.186)	+0.024 (0.618)	-0.269 (0.339)	+0.081 (0.107)	+0.170*** (0.008)	+0.602* (0.078)
P&S Rules (p=)	β_2	-0.200* (0.092)	-0.068 (0.665)	-1.162 (0.166)	-0.378*** (0.001)	-0.087 (0.591)	-2.556*** (0.001)
COVID (p=)	β_3	+0.205* (0.081)	+0.160 (0.370)	+1.310 (0.125)	+0.324** (0.022)	+0.214 (0.230)	+2.216*** (0.002)
Non-Parachute # P&S Rules (p=)	β_4	+0.128* (0.071)	+0.070 (0.443)	+0.744 (0.119)	-0.092 (0.140)	-0.315*** (0.000)	-0.707* (0.065)
Non-Parachute # COVID (p=)	β_5	-0.236** (0.021)	-0.191 (0.221)	-1.557** (0.033)	-0.357*** (0.001)	-0.331** (0.045)	-2.407*** (0.002)
Log revenue exc. Parachutes (p=)	β_6				+0.129** (0.056)	-0.125* (0.069)	+0.758* (0.089)
Log total assets (p=)	β_7				+0.092*** (0.001)	+0.056 (0.214)	+0.586*** (0.002)
Years in the league (p=)	β_8				-0.028** (0.025)	-0.043** (0.010)	-0.172* (0.024)
Years in the league (squared) (p=)	β_9				+0.002** (0.033)	+0.004*** (0.001)	+0.013** (0.018)
Wages (exc. Parachutes) (p=)	β_{10}				+0.215*** (0.000)	+0.493*** (0.000)	+1.563*** (0.000)
Log Creditors (p=)	β_{11}				-0.007 (0.813)	+0.026 (0.524)	+0.008 (0.968)
Change in debt (£ mil) (p=)	β_{12}				+0.002** (0.016)	+0.001 (0.177)	+0.010** (0.034)
Net income (EBIT) (p=)	β_{13}				-0.000 (0.928)	-0.001 (0.418)	-0.000 (0.985)
Manager changes (p=)	β_{14}				-0.099*** (0.000)	-0.054*** (0.000)	-0.611*** (0.000)
Player turnover (p=)	β_{15}				-0.004* (0.069)	-0.001 (0.733)	-0.022 (0.109)
Hausman test (Prob > chi2)		0.000***	-	0.000***	0.690	0.000***	0.462

Table 3.14 - Multivariate regression results for Alternative Measures of Competitive Balance

When comparing the HICB result with points per game, the intercept is positive in both cases, and the β_5 coefficient is negative in both cases; COVID has disproportionately harmed the non-parachute clubs in terms of points per game and the proportion of points measured by HICB compared to the parachute clubs. The β_4 coefficient is positive and significant for points per game only; the P&S rules have disproportionately harmed the parachute clubs in terms of points per game won but not in terms of HICB, i.e., the proportion of points won.

The R^2 of 1.5% for HICB compares with the 1.7% for points per game, and the Hausman test statistic is significant in both cases (p=0.000).

In column 5, we substituted 'Promotion This Year' for the dependent variable in the full econometric model with the additional covariates. The β_1 coefficient predicts a 17.0% reduction in the chance of promotion for the parachute clubs (p=0.008), whilst it was not significant in terms of points per game. The β_2 coefficient for P&S Rules predicts an 8.7% fall in promotion prospects for all clubs after the P&S rules are implemented, compared to -0.378 points per game, but is not significant (p=0.591). The β_4 coefficient predicts a 31.5% advantage in promotion prospects for the parachute clubs in the post-P&S period (p=0.000) compared to the non-parachute clubs, whilst β_4 was not significant for points per game (p=0.140).

The β_3 coefficient was not significant (p=0.230), like that for points per game, while the β_5 predicts an increased chance of promotion by 33.1% for the parachute clubs compared to the non-parachute clubs during the COVID-affected seasons (p=0.045). This compares with a 0.357 increase in points per game.

The β_9 coefficient predicts a 0.4% for each Year in the league (squared) (p=0.001), and the β_{10} coefficient predicts a 49.3% increase for a unitary increase in log Wages (exc. Parachute payments) (p=0.000). This suggests that the non-parachute clubs can only improve their chances of promotion if they maximise their spending on players subject to the P&S loss limits.

The β_6 coefficient predicts a decrease of 12.5% for every unit increase in the Log of revenue exc. parachutes payments (p=0.069). This is counterintuitive, as you would expect clubs with higher non-parachute income to have a better chance of promotion. It also contradicts the increase of 0.129 points per game or 5.9 points per season.

The β_8 coefficient for Years in the League predicts a 4.3% reduction in the chance of promotion for every year a club is in the Championship (p=0.010), and the β_{14} coefficient predicts a 5.4% reduction in the chance of promotion with every manager change (p=0.000). In the case of manager changes, it is not the manager change that necessarily causes a fall in points per game or the reduced likelihood of promotion but reflects that a manager is changed when a club is underperforming against expectations (Flint, Plumley, & Wilson, 2014).

The significance of the β_7 coefficient for Log total assets (p=0.214), the β_{12} coefficient for an increase in debt (p=0.177), and the β_{15} coefficient for player turnover (p=0.733) all disappear for promotion prospects. In contrast, the β_7 coefficient for Log total assets and the β_{12} coefficient for change in debt were significant and positive, and the β_{15} coefficient for player turnover was significant and negative for points per game.

However, the β_{11} coefficient for Log Creditors (p=0.524) and the β_{13} coefficient for Net Income (EBIT) (p=0.418) are not significant, the same as for points per game.

The R^2 measure of data fit is down to 20.2% compared to 45.1% for points per game. The Hausman test statistic for using Fixed Effects remains significant (p=0.000).

In column 6, we substituted 'HICB' for the dependent variable in the full econometric model with the additional covariates. The β_1 coefficient predicts a 0.602 reduction in HICB for the parachute clubs (p=0.078), whilst it was not significant in terms of points per game. The β_2 coefficient for P&S Rules predicts a 2.556 fall in HICB for all clubs after the P&S rules are implemented (p=0.001), compared to a fall of 0.378 points per game. The β_4 coefficient predicts a 0.707 decrease in HICB for the non-parachute clubs in the post-P&S period (p=0.065), which was not significant for points per game but was significant for promotion prospects.

The β_3 coefficient for HICB was significant at 2.216 (p=0.002), like points per game, whilst this was not significant for promotion prospects. However, the β_5 predicts a reduced HICB of 2.407 for the non-parachute clubs compared to the parachute clubs during the COVID-affected seasons (p=0.002). This is consistent with a reduction in points per game of 0.357.

The β_6 coefficient predicts an increase of 0.758 units of HICB for every unit increase in the Log of revenue exc. parachutes payments (p=0.089). This is consistent with an increase in points per game of 0.129 but contradicts the 12.5% fall in promotion prospects. The β_7 coefficient predicts an increase of 0.586 in units of HICB for every unit increase in the Log of total assets (p=0.002), which is consistent with the 0.092 points per game. The β_9 coefficient predicts an increase of 0.013 units of HICB for each Year in the league (squared) (p=0.018), consistent with an increase of 0.002 points per game and a 0.4% increase in the chance of promotion. The β_{10} coefficient predicts an increase of 1.563 units of HICB for a unitary increase in the log of Wages (exc. Parachute payments) (p=0.000), consistent with an increase of 0.215 points per game and a 49.3% increase in the chance of promotion. The β_{12} coefficient predicts an increase of 0.010 units of HICB for each £1m increase in debt (p=0.034), consistent with an increase of 0.002 points per game.

Meanwhile, the β_8 coefficient for Years in the league predicts a fall of 0.172 units of HICB season for every year a club is in the Championship (p=0.024), consistent with a 0.028 fall in points per game and a 4.3% reduction in the likelihood of promotion. The β_{14} coefficient predicts a fall of 0.611 units of HICB with every manager change (p=0.000), consistent with a fall in points per game of 0.099 and a 5.4% fall in the chance of promotion.

However, the β_{15} coefficient for player turnover is not significant (p=0.109). This is consistent with the likelihood of promotion (p=0.733) but not with a significant fall of 0.004 points per

game (p=0.069). The β_{11} coefficient for Log Creditors (p=0.968) and the β_{13} coefficient for Net Income (EBIT) (p=0.985) are also not significant, which is consistent with points per game and promotion prospects.

The measure of model fit, R^2, has a value of 42.6% compared to 45.1% for points per game. When performing a Hausman test (Prob> chi2 = 0.462), the random effects model was proven inconsistent; no statistical difference exists between the Random and Fixed Effects models for HICB. Again, despite the Hausman test suggesting we should not use fixed Effects, the Hausman test used in Stata is not based on robust estimates. Regardless of the Hausman test result, we believe the Fixed Effects estimator is the correct approach.

3.5 Discussion and Conclusions

This chapter investigates whether parachute payments have distorted the competitive balance in the EFL at a league level. It is understood that P&S was introduced to safeguard football finances, but previous research has found them to have inadvertently created a competitive imbalance. Constraints that limit losses act disproportionately on non-parachute clubs' ability to compete in terms of player costs, with the parachute clubs being artificially funded (subsidised) by parachute payments.

Given the positive link between income, wages and league performance (Michie & Oughton, 2004), this could lead to a significant decline in competitive balance and, in effect, result in the domination of relegated teams as relative 'super clubs' whilst they are in the Championship (Morrow, 2003). Parachute payments, in combination with the P&S restraints on internal funding, i.e. overspending by ambitious, wealthy owners, serve only to maintain the status quo in respect of EPL membership, in the same way that the seeding and ranking system maintains the status quo in the UEFA Champions League. Plumley and Flint (2015), using the Herfindahl-Hirschman Index (HHI) to examine competitive balance and one-way ANOVAs to explore the impact of the current seeding system on prospects for progression to the knock-out stages, found that clubs that are placed amongst the highest seeds historically tend to end up with more points and have a better opportunity to qualify to progress further in the competition. They suggest that these flaws in the ranking and seeding system used by UEFA show that the competition is competitively imbalanced at the group stage. If the parachute payments in conjunction with P&S are creating a similar bias, in that parachute payment clubs have a competitive advantage and that prospects for promotion are enhanced and, in effect, are creating a monopoly that is detrimental to the Championship (Dobson & Goddard, 2011).

We discuss our findings in the context that:

Context	Description
1	Parachute payments allow wages to be higher, reaffirming the findings of Szymanski and Kuper (2009) that spending on players' wages is a better predictor of football clubs' league position than net spending on transfers. Wage spending accounted for 89% of the variation in the league positions. There was an even stronger correlation between wages and league position in Italy.
2	Other clubs are trying to keep up and spend unsustainably on inflated players' wages because of (1) the Nash equilibrium in a prisoner's dilemma, e.g. where both agents in the 'economic game' are worse off even though they both select their optimal strategies,
3	Some psychological/behavioural traits that these relegated clubs will be better and so rival players respond with extra effort, or ex-premier league players underperform due to dissatisfaction with being retained by the relegated club when they wanted to stay in the EPL (even if wages have remained unchanged), e.g. cup final, grieving and loser effects.

Table 3.15 – Study Context

In Table 3.10, column 2, we found by t-test, that the receipt of a parachute payment adds 0.147 points per game, or 6.8 points per season, during the pre-P&S period (2000/01 – 2013/14) (p=0.000) and, from column 5, adds 0.152 points per game, or 7.0 points per season, for the post-P&S period (2014/15 – 2022/23). However, the increase between the pre-and post-P&S periods is not significant. Our pre-P&S result of +6.8 points compares with the +5 points identified in Wilson et al.'s initial study for 2006/07 to 2016/17 (2017), and our post-P&S result of +7.0 compares with Wilson et al.'s updated finding of an increase in the gap to 8.6 points for the period 2017 - 2021 (Matt Hughes, 2022).

The loss limits imposed by the P&S rules have not restricted the non-parachute club's ability to overspend to compete with the parachute clubs. Furthermore, we do not see a closing of the gap between the parachute and non-parachute clubs in terms of points per game despite the fall in the non-parachute clubs' EBIT from -£5m to -£9m we found in Chapter 2.

When we separate the COVID-affected seasons of 2019/20 – 2021/22 from the post-P&S period (2014/15-2022/23), the 7-point advantage disappears in the post-P&S period, not including the COVID-affected years. However, we find the parachute clubs have an advantage of 0.328 points per game or a head start of 15 points per season during the COVID-affected season.

Controlling for parachute payments, the P&S rules, and the COVID-affected seasons and their interaction simultaneously in a single econometric model with club Fixed Effects, we find the parachute payments coefficient β_1 is not significant in either the simple model or the full econometric model. This means the 6.8 points headstart for the parachute clubs in the pre-P&S period has disappeared when the club fixed effects and our additional covariates are

considered. We conclude that a club's success in accruing points per game is due to its unobserved characteristics such as heritage, stature, and traditional league standing and the effect of positive coefficients on differences between the parachute and non-parachute clubs for the other covariates, e.g. non-parachute income +0.129 and assets +0.092 rather than the parachute payment itself.

The β_2 coefficient for the P&S rules is significant and suggests a general fall in points per game of 0.378 or 17.4 points per season. However, the t-test did not detect this general fall in points per game between the pre-and post-P&S periods. Meanwhile, the β_4 coefficient is not significant for the interaction between parachute payments and P&S rules (p=0.140). This means there is no discriminatory impact of the P&S rules on the non-parachute clubs, i.e. both the parachute and non-parachute clubs see the same fall in points. This is consistent with our t-test result, where we found no statistical difference in the impact of the P&S rules between the parachute and non-parachute clubs. Contrary to our expectation from context number 2, we find that the non-parachute clubs have maintained parity with parachute clubs. This is consistent with our finding in Chapter 2, which showed that the losses of non-parachute clubs have not been constrained.

During the COVID seasons, we find a β_3 coefficient that predicts a general increase of 0.324 points per game during the COVID-affected seasons. However, the parachute clubs get an extra 0.357 points per game, or a 16.4-point head start compared to the non-parachute clubs. This means the parachute clubs' points per game have increased by 0.324 in the COVID-affected seasons, while the non-parachute clubs have declined by 0.033 points per game during COVID. This is consistent with the t-test finding of an advantage of 15 points per game in the COVID-affected seasons and is consistent with the significant increase in points per game for the parachute clubs of 0.203 or 9.4 points per season. Therefore, only in the COVID-affected seasons do we see the increase in points for the parachute clubs found in the Wilson et al. update (Matt Hughes, 2022).

So, in conclusion, using new econometric analysis, our findings do not support the established view of an advantage bestowed by parachute payments in terms of points per game. When we control for observable and unobservable characteristics in a multiple regression model, the clubs receiving parachute payments were no better off than non-parachute payment clubs before the P&S rules were implemented. This challenges the idea that parachute-receiving clubs had a five-point head start on their non-parachute competitors.

Even after implementing the P&S rules, we still do not get the expected positive relationship between points per game and parachute payments. Given that we expected the P&S rules to constrain the non-parachute clubs post-P&S, they look like they have maintained parity with

parachute clubs. This is consistent with our finding in Chapter 2 that showed the non-parachute clubs have not been constrained in terms of losses as was expected.

Following a series of robustness tests with promotion prospects and HICB as the dependent variable, we find that the non-parachute coefficient for both promotion prospects and HICB is positive, which suggests that the non-parachute clubs have an advantage against expectations. The coefficient of the parachute flag of 0.081 points per game was only just outside the 10% significance level (p=0.107), so it is not entirely inconsistent. This is consistent with our observation that the parachute clubs do not always get promotion at the first, second or even third attempt. This suggests that in the pre-P&S period, the parachute clubs get promoted despite parachute payments rather than because of them. The receipt of parachute payments bestowed no advantage to clubs in receipt of them, and clubs that bounced back to the EPL did so based on their size, non-parachute income, and player wages not funded by parachute payments.

To answer why there is a lack of any significance of the parachute in terms of points per game or there is a negative relationship between HICB and promotion prospects and parachute payments, we need to consider the 'big club' effect and the mentality 'we want to beat these big sides when in town'. These psychological/behavioural traits could be articulated as follows:

- 'Cup final effect', where non-parachute teams raise their game against the relegated 'big teams' and scrap out an unexpected result, but the effect diminishes over time as the big team's presence becomes the norm, the big-name players leave and are replaced by the better Championship players.
- 'Grieving effect', where it takes time to rebuild team spirit after a high turnover of players. The players left behind feel dissatisfied playing in the Championship and do not perform. The fans 'mourn' for their lost stars and are dissatisfied with the Championship players brought in. This was tested by including a player turnover variable in the robustness tests, which was found to be significant and negative in the pre-P&S period but significant and positive after the P&S rules were imposed. This possibly suggests that the parachute teams, principally, were before the P&S rules turning over players to shed player costs through a fire sale without too much thought to squad quality but are now more likely retaining and acquiring better players aimed at securing rapid promotion back to the EPL, all funded by their economic advantage provided by parachute payments.
- 'Loser effect', where a loser mindset carries over into the Championship, that is compounded if the club had a very poor last campaign in the EPL, e.g. 2/3rds of clubs relegated on 34 points or more make the playoffs in their first year whilst just a 1/3rd of those relegated with 33 points or less did

Post P&S, the parachute clubs did now receive an advantage in terms of promotion prospects (+31.5%) and HICB (+0.733), but this is not found for points per game. However, the significance of the interaction between the parachute flag and the P&S rules on points per game was reasonably close to the 10% significance level (p=0.140).

Only with the COVID restrictions do we see the expected advantage of parachute payments of 0.357 points per game or sixteen points per season. The psychological traits that held back clubs before COVID appear to weaken in the COVID-affected seasons, probably due to matches being played behind closed doors and the increased income disparity caused by the loss of matchday income. The interaction between parachute payments and COVID is equally consistent for promotion prospects (+33.1%) and the proportion of points (HICB) (+2.407).

Only now do we see parachute payments provide the expected competitive advantage. The increase in points per game, promotion prospects, and HICB bestowed by parachute payments is consistent with our observation in Chapter 1 that the parachute clubs have been promoted quicker in recent years and Wilson et al.'s updated findings for points received by the parachute clubs (Matt Hughes, 2022).

In the next chapter, we consider the impact of the P&S rules and COVID regulations on the phenomenon of 'home advantage', particularly the predictability of match results when matches are played behind closed doors. However, the wider impact of these psychological/behavioural aspects on competitive balance is left unanswered for future research.

3.6 Additional Tables and Appendices

Appendix 3.1 - Regression Results for Total Assets, Playing Squad Value, and Non-playing Assets for Our Non-Parachute and P&S Dummies, All Clubs and Traditional Leagues.

Dependent Variable	**Total Asset Value**				**Playing Squad Value**				**Non-Playing Assets**			
Sample: All Clubs	All Clubs	EPL Clubs	Champ. Clubs	Lower EFL Clubs	All Clubs	EPL Clubs	Champ. Clubs	Lower EFL Clubs	All Clubs	EPL Clubs	Champ. Clubs	Lower EFL Clubs
Seasons: 2000/01 – 2022/23	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Intercept	+20.45***	+22.26***	23.48***	13.83***	5.54***	3.97**	+3.91	+9.05**	33.05***	55.11***	31.06***	49.74***
P=	(0.000)	(0.000)	(0.000)	(0.012)	(0.000)	(0178)	(0.120)	(0.014)	(0.000)	(0.000)	(0.000)	(0.000)
Non-parachute (1=non)	+10.40***	+32.16**	7.81**	+18.73**	-2.10*	-8.87	+0.17	+2.27	-9.98***	-22.74	-7.19**	-39.88
P=	(0.002)	(0.028)	(0.035)	(0.040)	(0.090)	(0.417)	(0.973)	(0.583)	(0.003	(0.103)	(0.039)	(-)
P&S flag (1=post P&S)	33.81***	+46.07	36.29***	+28.28**	9.97**	14.31	+1.04	-0.67	17.85***	13.60	19.34***	8.45***
P=	(0.001)	(0.234)	(0.008)	(0.045)	(0.024)	(0.245)	(0.698)	(0.855)	(0.002)	(0.313)	(0.003)	(0.000)
	-11.22	-31.31	-12.81	-20.35			-0.366	-4.42				
	(0.222)	(0.377)	(0.340)	(0.000)			(0.873)	(0.211)				
Non-parachute # P&S	+7.91	74.52	28.52	+14.01	-2.25	-5.49	0-3.89	-2.02	-0.03	7.50	-0.54	-5.98***
P=	(0.354)	(0.000)	(0.416)	(0.109)	(0.631)	(0.658)	(0.494)	(0.577)	(0.997)	(0.633)	(0.947)	(0.000)
	+33.45	-38.20	74.35**	-9.86			+5.58	+4.56				
	(0.072)	(0.248)	(0.034)	(0.688)			(0.134)	0.239)				
R^2	0.311	0.378	0.340	0.024	0.246	0.257	0.048	0.329	0.223	0.400	0.142	0.125
Observations	512	60	342	97	411	49	313	96	411	49	294	68
Mean of non-parachute flag	0.730.74	0.37	0.78	0.85	0.73	0.37	0.78	0.85	0.73	0.31	0.76	0.92
Total Clubs	63	11	24	26	56	11	23	23	56	11	24	21

Appendix 3.2 - Club Fixed Effects. Traditional Leagues, Seasons in the Championship and Average points per game by Club.

Football Club	Traditional League	Club Fixed Effects	Champ. Seasons	Average PPG	Football Club	Traditional League	Club Fixed Effects	Champ. Seasons	Average PPG
Aston Villa	EPL	+0.113	3	+1.6	Manchester City	EPL	+0.505	1	+2.15
Barnsley	Champ	+0.008	15	+1.11	Middlesbrough	Champ	+0.084	13	+1.50
Birmingham City	Champ	-0.051	16	+1.35	Millwall	Champ	-0.014	16	+1.32
Blackburn Rovers	EPL	-0.020	11	+1.40	Milton Keynes Dons	EFL	-0.304	1	+0.85
Blackpool	EFL	+0.012	9	+1.18	Newcastle United	EPL	+0.438	2	+2.13
Bolton Wanderers	EPL	-0.091	7	+1.15	Norwich City	Champ	+0.033	15	+1.54
Bournemouth	EFL	+0.192	4	+1.74	Nottingham Forest	Champ	+0.001	19	+1.34
Bradford City	EFL	-0.145	3	+1.04	Peterborough United	EFL	-0.163	4	+1.20
Brentford	EFL	+0.112	7	+1.58	Plymouth Argyle	EFL	+0.015	6	+0.82
Brighton & Hove Albion	Champ	-0.057	9	+1.39	Portsmouth	EFL	+0.055	5	+1.34
Bristol City	Champ	-0.204	14	+1.27	Preston North End	Champ	+0.005	19	+1.42
Burnley	Champ	+0.109	15	+1.51	Queens Park Ran.	Champ	-0.004	17	+1.29
Burton Albion	EFL	-0.310	2	+1.01	Reading	Champ	+0.042	18	+1.45
Cardiff City	Champ	+0.048	18	+1.48	Rotherham United	EFL	-0.086	10	+0.97
Charlton Athletic	EFL	-0.171	7	+1.14	Scunthorpe United	EFL	-0.274	3	+1.01
Colchester United	EFL	-0.089	2	+1.17	Sheffield United	Champ	+0.036	14	+1.57
Coventry City	Champ	-0.030	14	+1.24	Sheffield Wed.	Champ	-0.138	17	+1.26
Crewe Alexandra	EFL	-0.155	5	+1.08	Southampton	EPL	-0.019	5	+1.39
Crystal Palace	Champ	+0.159	12	+1.36	Southend United	EFL	-0.289	1	+0.91
Derby County	Champ	-0.082	19	+1.39	Stockport County	EFL	-0.273	2	+0.84
Doncaster Rovers	EFL	-0.139	5	+1.07	Stoke City	EPL	-0.024	11	+1.33
Fulham	EPL	+0.155	7	+1.69	Sunderland	EPL	+0.293	5	+1.59
Gillingham	EFL	-0.048	5	+1.23	Swansea City	-	+0.149	8	+1.52
Grimsby Town	EFL	-0.016	3	+1.02	Tranmere Rovers	EFL	-0.266	1	+0.83
Huddersfield Town	EFL	-0.064	10	+1.26	Walsall	EFL	+0.143	3	+1.13
Hull City	Champ	+0.035	12	+1.33	Watford	Champ	+0.094	16	+1.45
Ipswich Town	Champ	-0.103	17	+1.38	West Bromwich Alb.	EPL	+0.282	10	+1.72
Leeds United	Champ	-0.010	13	+1.44	West Ham United	EPL	+0.005	3	+1.53
Leicester City	Champ	-0.046	10	+1.49	Wigan Athletic	-	+0.130	8	+1.27
Luton Town	EFL	+0.222	6	+1.39	Wimbledon	EFL	+0.052	4	+1.25
					Wolverhampton W.	Champ	-0.003	13	+1.56

4 Uncertainty of Outcome at Match level

4.1 Background

Over half a million football fans enjoyed a bumper opening weekend of football in the Sky Bet Championship, League One and League Two, with 543,168 supporters in the grounds up and down the country, making it the highest aggregate opening weekend attendance this century. That figure is over 90,000 more than the opening day of 2022/23, representing a 20.7% rise (English Football League, 2023). In the Sky Bet Championship, attendance increased by 44.2% compared to the opening weekend of 2022/23, with 317,272 supporters attending across 12 fixtures.

Broadcast figures also painted a positive picture. The opening weekend of the EFL Championship was the most-watched on Sky Sports, with an average of 631,000 viewers across all four matches, up 77% from last season.

This chapter examines whether policies introduced by the football authorities have influenced outcome uncertainty at the match level in the EFL Championship. Match-level analysis is important. By only looking at the seasonal level, some interesting variations in match uncertainty, which according to UOH is 'beneficial', within seasons may be missed. These policies are (i) payments to clubs relegated from the English Premier League and (ii) the introduction of the P&S rules that attempted to control overspending by clubs in the EFL. As far as we know, this is the first time that the impact of parachute payments and the P&S rules on uncertainty of outcome has been examined at an individual fixture level.

In unprecedented circumstances, the league programme was suspended and completed behind closed doors during this research period following the COVID-19 pandemic. We believe this research to be the first to consider the impact of COVID restrictions on the uncertainty of match outcomes.

The study challenges the a-priori expectation that parachute payments and the P&S rules, which have widened income disparity and distorted competitive balance, must, in turn, have reduced uncertainty of outcome for teams in the EFL Championship to the league's detriment.

With the inclusion of home club Fixed Effects in a regression model to accommodate home advantage and other unobserved characteristics, we aim to ensure that our findings are robust to any bias in bookmaker odds caused by club size or prestige, which inflate the odds throughout the season based on the number and value bets placed based on a fans emotional attachment to their team, rather than the likely match outcome.

The ‘weight of money’ indicates the volume of money being laid in a betting market. If the volume is weighted toward backing a team, then the odds are likely to shorten, and conversely, the odds are likely to lengthen.

Evidence that bookmakers account for bettor sentiment based on the popularity of certain clubs has been found in betting markets. Forrest and Simmons (2008) found that betting odds were shorter for the more popular teams in Spain and Scotland, as measured by the difference in average home attendance in the previous season. Franck, Verbeek, and Nüesch (2011) found evidence supporting the findings of Forrest and Simmons (2008) in English football. They also found that more favourable odds were offered on weekend matches as more casual bettors wagered on weekend games, diluting the identity-based bias. Feddersen, Humphreys, & Soebbing (2016) found evidence of price-insensitive punters with a sentimental bias, as measured by relatively more Facebook ‘Likes’, which causes the bookmakers to reduce the odds. Na, Su, & Kunkel (2019) found that individuals overestimate their favourite team to win, as well as overestimate wins and losses and underestimate draws, and these club-based biases negatively influence prediction accuracy

Including seasonal time dummies captures the general effects on the odds caused by unobserved characteristics affecting all clubs equally, e.g., betting technology or emerging betting channels. Within the season, time dummies for each month will capture the months where match results are generally more predictable throughout the season.

Whilst previous studies into the impact of managerial changes are largely inconclusive regarding the existence of that ‘new manager bounce,’ there is enough to make us believe that the cumulative number of manager changes the club has made in the season up to the game being played will impact the predictability of results just after the change is made. As changes in form may not be instantaneous following a change, we include individual controls for the first six games in our final model to see if fixtures after a managerial change are more unpredictable and how long it takes for the bookmakers to adjust their odds to the change in form.

As new clubs in the league, each season, the clubs recently promoted from League One and recently relegated from the EPL are an unknown quantity in the Championship. Therefore, their results may be more unpredictable. Hence, we include two dummy variables for both the home and away teams, four in total, with a value of one if the club was relegated from the EPL last year and one if the club was promoted from League One last year. However, we expect this impact to be transitory whilst form in the Championship is established and the bookmakers adjust their odds accordingly. To this end, in the final model, we will control individually for the first six matches of the season for both the home and away team to cover differences in

unpredictability whilst the current form is being established, another twenty-four covariates in total

A high turnover of players may affect team performance, especially during the open summer and winter transfer windows. As it may have implications on match outcome uncertainty, we include the cumulative number of players turned over up to the date of the match during the summer and winter transfer windows as two additional covariates for both the home and away teams, for a total of four covariates. We believe this effect will be transitory and disappear as we move away from the transfer window. Therefore, we only control the number of players transferred during the transfer windows. Once the window closes, the squad settles again, and there is little or no impact until the next window opens, and uncertainty may return.

Player costs represent the amount the clubs spend on playing talent, as opposed to non-parachute income above, representing the capacity clubs have to spend on players. To prevent the double counting of the wages paid for by parachute payments and the parachute indicator, we will strip out the effect of parachute payments on wage spend by using a variation of the method Gomanee, Morrissey, Mosley, & Verschoor used to remove any double counting of the impact of foreign aid from pro-public government expenditure (2005, pp. 360-361).

4.2 Review of Related Research

4.2.1 Uncertainty of Outcome

The Uncertainty of Outcome Hypothesis (UOH) is the other branch of Competitive Balance research to the Analysis of Competitive Balance (ACB) we have previously examined in Chapter 3 (Fort & Maxcy, 2003)[137]. UOH research differs from ACB research in that it empirically tests the relationship between the uncertainty of outcome, measured by the probability of a home or away win, and spectator attendance for a particular match. In contrast, ACB tracks change in a suitable measure of Competitive Balance over time rather than measure the uncertainty of outcome at a single point in time, e.g. matchday.

We care about UOH because unexpected outcomes are expected to drive fan interest, which should drive revenues. However, the empirical evidence suggests that fans do not care about UOH, at least to a certain degree.

[137] The authors point out that no single measurement of competitive balance is the correct measure, and these different measures have their uses and have proven quite insightful to date. If they are ignored, we forego an opportunity to explore competitive balance fully. (Fort & Maxcy, 2003)

The literature predominantly tests the relationship between the UOH and attendance demand, where the uncertainty of outcome is measured as the probability of a home or an away win in a particular match or the disparity in the odds between clubs for the final league standings.

There is plenty of research into UOH and attendance impact in the closed leagues of the U.S.

Sport	Outcome	Study
Major League Baseball (MLB)	For	(Rascher, 1999)
	Against	(Meehan, Nelson, & Richardson, 2007), (Lemke, Leonard, & Tihokwane, 2010), (Beckman, Cai, Esrock, & Lemke, 2011), (Mills & Fort, 2014)
	No Impact	MLB (Tainsky & Winfree, 2010)
National Basketball Association (NBA)	For	(Rascher & Solmes, 2007), (Mills & Fort, 2014)
National Football League (NFL)	For	(Paul, Wachsman, & Weinbach, 2010), (Mills & Fort, 2014), TV viewers (Paul & Weinbach, 2007) and national TV viewers (Tainsky, Xu, & Zhou, 2014)
	Against	(Coates & Humphreys, 2010) or
	No Impact	local TV viewers (Tainsky, Xu, & Zhou, 2014)
National Hockey League (NHL)	Against	(Coates & Humphreys, 2012), (Mills & Fort, 2014)

Table 4.1- Table of results for testing Uncertainty of Outcome in North American sports leagues

The empirical evidence only sometimes supports the UOH in U.S. sports. However, the characteristics of sports leagues in the U.S., e.g., no promotion or relegation, franchised teams, and no tied matches, are entirely different from those of open competitions in Europe.

Much more relevant to research into the Championship are the studies into the European football leagues, and the English Leagues in particular, and these are described here:

Dependency	Outcome	Study
FA Cup	Partial	(Szymanski S. , 2001)
Matchday Attendances	For	(Dobson & Goddard, 2011), (Forrest & Simmons, 2002), (Forrest, Simmons, & Buraimo, 2005)
	Against	(Peel & Thomas, 1988), (Peel & Thomas, 1992), (Kuypers, 1996), (Forrest, Beaumont, Goddard, & Simmons, 2005), (Leach S. A., 2006), (Cox, 2015)
TV Attendances	For	(Cox, 2015)
	Against	(Forrest, Simmons, & Buraimo, 2005)
	Partial	(Alavy, Gaskell, Leach, & Szymanski, 2010)

Table 4.2 - Table of results for the testing of Uncertainty of Outcome in the European Football Leagues

Again, the UOH's support needs to be more conclusive. However, this might be down to the uncertainty 'proxy' measure used, e.g., bookmaker bias in betting odds, and the empirical evidence being 'wrong' (Sacheti, Gregory-Smith, & Paton, 2014). Even if the empirical evidence is 'right', the variations in competitive balance may not have been significant enough yet to affect fan interest (Pawlowski T., 2013).[138] The unclear findings regarding UOH may be due to additional factors affecting consumer demand, like loss aversion and simply a preference to see a home win ((Coates et al., 2014) (Humphreys & Zhou, 2015)).

Also, home spectators appear indifferent to the Uncertainty of Outcome as they seem equally attracted by playing a vastly inferior team, although a 'big' win is much more certain (Buraimo & Simmons, 2008), [139] or playing a 'big name' team, e.g. Bayern Munich, where a win is much less likely (Pawlowski & Anders, 2012).[140]

The EPL has not reached a tipping point; match-day attendance has remained high, whilst competitive balance has been falling due to unsatiated demand (the EPL has a capacity utilisation of 95%). So far, the league has not become sufficiently unbalanced that it affects matchday attendance. Given that broadcasting rights values continue to grow, suggesting that football is still an attractive product to local and global markets. However, if broadcasting rights continue to rise, there can only be a further imbalance. If the competitive balance is a fundamental premise of league structure and competition, then the evidence suggests that a change in tactics may be required (Wilson, Ramchandani, & Plumley, 2017).[141]

The English football authorities have implemented specific interventionalist policies, namely the P&S rules and parachute payments, which we have examined in previous chapters. We now question whether it is possible that these two things, when combined, will adversely affect

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[138] Previous research based on revealed preferences cannot assess whether (increasingly imbalanced) football competitions might be at risk of moving into territory where consumer demand will fall off, as suggested by the uncertainty of outcome hypothesis. Therefore, this article examines the relationship between perceived balance (in several dimensions) and intention to consume based on a stated preference approach in Germany. The estimated demand functions reveal that around 70% of fans care about competitive balance in the German Bundesliga, but the league is not close to any tipping point (Pawlowski T. , 2013)**.**

[139] Using television viewing figures for eight seasons from the EPL, they found that UOH does not have the expected effect on television audience demand in later seasons. They conclude that TV audiences now prefer talent over uncertainty. (Buraimo & Simmons, 2008)

[140] Using data from 306 German Bundesliga matches, they found attendance positively impacted whether the home or away team can still win the championship; however, the possibility of qualifying for the UEFA Champions League has no similar effect. Furthermore, the brand strength of the away team boosts attendance figures in the Bundesliga. (Pawlowski & Anders, 2012)

[141] Using data from the EFL Championship for the 11 seasons between 2006/07 and 2016/17, they find that the increase in the number and value of the parachute payments has coincided with a reduction in competitive balance in the Championship, and parachute clubs are twice as likely to be promoted to the EPL (Wilson, Ramchandani, & Plumley, 2017)

the Uncertainty of Outcome. We expect the relegated clubs from the Premier League, or at least a subset of them, to be promoted back to the top division immediately. If so, this reduction in outcome uncertainty may lead to fans losing interest in the league.

In this chapter, we will use this branch of competitive balance research to consider whether parachute clubs that are consistently, and increasingly, getting more points per game than non-parachute clubs, then the match results between parachute and non-parachute clubs should be getting more predictable. If match outcomes become less uncertain as the league becomes increasingly imbalanced, then fan interest and, consequently, stadium attendance and TV audience figures may become negatively impacted as games become more one-sided (Pawlowski T. , 2013)[142] (Morrow, 2003).

4.2.2 Calculating Match Outcome Probabilities

Numerous methods are used to calculate match outcome probabilities.

In studies of the EPL, Forrest, Simmons, and Buraimo (2005) used the impact of the difference in points per game between the home team and the away team in the current season on TV audiences, whilst Kuypers (1996) used the difference in the maximum and minimum probabilities of home-win, draw and away-win on matchday attendance. For the three levels of the EFL, Forrest, Beaumont Goddard, and Simmons (2005) used the ratio of the probability of a home win to the probability of an away win/ proportion of wins, draws and losses on stadium attendance.

Away from English football, Mills and Fort (2014) measured the impact of the distribution of winning percentages on stadium attendance across the National Basketball Association (NBA), National Football League (NFL) and National Hockey League (NHL) in the US, whilst Coates & Humphreys (2010) measured both the impact of the winning percentages of home and away teams and the absolute point spread on stadium attendance in the NFL. Whitney measured the impact of the home team's winning percentages against stadium attendance in Major League Baseball (MLB) (1988).

However, forecast models using the betting market odds, either directly or indirectly, appear to be most common. In studies of English football, Peel & Thomas (1992) measured the impact of home team win probability derived from betting odds on stadium attendances in the EFL, Forrest & Simmons (2002) measured the impact of home and away win probabilities derived from betting odds on stadium attendances across all four tiers of English football and Buraimo

[142] This article examines the relationship between the perceived competitive balance and the intention to attend matches in the German Bundesliga. They found that about 70% of fans care about competitive balance, but the league is not presently close to a tipping point (Pawlowski T. , 2013)

& Simmons (2008) measured the impact of both the Theil index and the home team win probability, derived from betting odds on stadium attendances in the EPL. Aside from English football, Lemke, Leonard, and Tlhokwane (2010) measured the impact of home team win probabilities derived from betting odds. Rascher (1999) measured the impact of betting odds on stadium attendance in the MLB. Against stadium attendances in the German Bundesliga, Czarnitzki & Stadtmann (2002) used the impact of betting odds, Benz, Brandes, and Franck (2009) used a Theil index based on betting odds, and the home team winning probability derived from betting odds and Pawlowski & Anders (2012) used a Theil index based on betting odds. Coates & Humphreys (2012) measured home team win probabilities from betting odds against stadium attendance in the NHL. Coates, Humphreys, and Zhou (2014) similarly state that home team win probabilities, derived from betting odds, were measured against stadium attendance in the MLB. Pawlowski and Nalbantis (2015) measured the impact of a Theil index based on betting odds on stadium attendance in the Swiss and Austrian 1st division football leagues.

The inverse of the odds is an indication of the bookmaker's underlying probabilistic estimates (Štrumbelj, 2014). However, this does not account for the bookmaker's margin, so the sum of the inverse odds (also known as the 'booksum') will always be greater than one.

Most studies use basic normalisation or the 'Multiplicative Method' to remove the bookmaker's margin (dividing the inverse odds of a home win, draw or away win by the sum of the inverse odds). Although there are alternative methods available (Shin, 1993), (Smith, Paton, & Williams, 2009) the widespread use of basic normalisation can be attributed to its simplicity (Clarke, Kovalchik, & Ingram, 2017).

Therefore, the bookmaker odds are converted to win, draw or loss probabilities by dividing the inverse odds for each outcome, i.e. home win, draw or away win, by the sum of the inverse odds so that the probabilities sum to one.

$$\text{Prob Home Win} = \frac{1 / \text{home win odds}}{(\text{booksum})} \quad (10)$$

Where booksum = (1/Home win odds + 1/draw odds + 1/away win odds)

As a practical example, we will consider a game from March 2019, Birmingham City versus Aston Villa at St Andrew's, where the odds of a home win were 2.72, the odds of a draw were 3.28, and the odds of an away win were 2.67. This translates to a probability of a home win as:

$$\text{Prob Home Win} = \frac{1 / \text{home win odds}}{(1/\text{home win odds} + 1/\text{draw odds} + 1/\text{away win odds})} \quad (11)$$

$$\text{Prob Home Win} = \frac{1 / 2.72}{(1 / 2.72 + 1 / 3.28 + 1 / 2.67)}$$

$$\text{Prob Home Win} = 0.367 / (0.367+0.305+ 0.374)$$

$$= 0.367 / (1.045) = 0.351$$

The unadjusted bookmaker's probability is 0.367, and the normalised probability is 0.351.

In a practical experiment comparing alternative forecasting measures, David Sumpter, in his book 'Soccermatics, Mathematical Adventures in The Beautiful Game', (2017), used several alternative predictors, along with bookmaker odds, in a practical test to see if he could beat the bookies[143].

The alternative forecast methods he considered alongside betting odds were the Euro Club Index (ECI), an externally calculated index which involves the transfer of points between clubs based on match outcomes, and the Recent Performance Indicator, which calculates the match outcome based on 'expected goals' for and against [144] based on recent game performance converted into a probability using a Monte Carlo simulation based on a Poisson distribution and, finally, the predictions of the football pundit Joe Prince-Wright [145] converted to probabilistic predictions for a home win, draw or away win using a Poisson simulation.

Sumpter found that the Soccer Pundit approach performed poorly against Bookmaker's odds.[146] This confirms the studies by Andersson, Edman, and Ekman (2005) and Spann and Skiera (2009), who also concluded that pundits were not a reliable predictor of match

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[143] Sumpter identified a possible bias in the bookmaker's odds for the 2014/15 season of the EPL. Based on his findings, Sumpter adjusted his probabilities for a win if the gap between the win probabilities was greater than 40% or by betting on a draw if the difference was less than 15%.

[144] Where expected goals, from Sumpter's own Poisson regression:

$$\text{Home goals} = \exp(-0.7574 + 0.13\,p + 0.76 \log e)$$

$$\text{Away Goals} = \exp(-0.0784 + 0.5057\,g + 0.5527\,b)$$

Where p is the number of successful passes completed whilst in possession per minute by the home team, e is the expected goals of the home team, and g is the number of goals the home team is expected to concede. B is a team dummy, i.e., if the away team is one of the big six, i.e., Chelsea, Manchester City, Manchester United, Arsenal, Liverpool, and Spurs; otherwise, 0.

Expected goals = 0.034 x (shots outside area) + 0.124 x (penalty area shots) + 0.322 x (6-yard box shots)

[145] Lead writer and editor for NBC Sports' Pro Soccer Talk

[146] If the Soccer Pundit approach had been followed for the full 90 matches of the experiment, it would have turned his £100 stake money into just £3.

outcome.[147] The Euro Club index did well reflecting long-term patterns, but the odds presented by the index responded to recent team form more slowly than the bookmakers. While logistic regression showed the Recent Performance Indicator to be the best predictor of match outcomes, Sumpter found he could not make a betting surplus from a strategy based on it.[148] He concluded that only a strategy based on bookmaker odds would have provided a return on his initial stake money of £100, i.e. £140.

Researchers at University College Dublin (Maimone & Yasseri, 2021) analysed some 88,000 matches over 26 years for 11 European leagues, and the results from their models were compared with benchmark probabilities of a home win and an away win derived from betting odds provided by Bet365. [149] The following formulas give the probabilities of a home and an away win:

$$\text{Prob (home win)} = \frac{(1/h)}{(1/h) + (1/a)} \qquad (12)$$

$$\text{Prob (away win)} = \frac{(1/a)}{(1/h) + (1/a)} \qquad (13)$$

Where ‘h’ is the bookmaker odds for a home team win and ‘a’ is the odds for an away team win

They found that seven of the eleven leagues that were studied saw an increase in predictability over time, with richer leagues, such as the EPL and La Liga, becoming more predictable than poorer leagues, like the Belgian First Division, and this is believed to be due to the growth in inequality between the richest and poorest teams in terms of prize money and other revenues which have led to more significant spend on players. (Maimone & Yasseri (2021), The New Scientist (2021)). Although the Dublin model forecasts were found by t=test to be comparable

[147] Using data from three seasons of the German Bundesliga, prediction markets and betting odds provided equally good forecasts, and both significantly outperformed tipsters. (Spann & Skiera, 2009)

[148] Although returns were good in the 40-match theoretical phase, those gains would have been entirely wiped out over 90 matches, resulting in breakeven on Sumpter's £100 pot over the full 90 games.

[149] The Dublin study consisted of two models:

A simple dyadic model representing the fraction of points the team has earned during the machine training window to the maximum number of points that the team could win during that window to act as a proxy for relative team strength, and the difference is used to train a predictive model with the difference as an input.

This is a network-based model that uses a network science approach to quantify the predictability of football without the need for extensive datasets often used in past studies on the sport. The approach studies complex networks to identify trends and predictive theories about a given topic.

For simplicity and interpretability, the Dublin models didn’t count any drawn matches, which excluded between a quarter and a third of the total matches from their analysis.

at the 2% significance level to the probabilities derived from bookmaker odds for most year leagues, the probabilities from betting odds consistently performed better (Maimone & Yasseri, 2021).

4.2.3 Using Probabilities to Measure Unpredictability

> "The 2015-16 season saw some improbable events. The bookmakers were offering 5,000-1 on Leicester City winning the league, which they did against all odds……. the probability of Chelsea finishing ninth or lower in that final league table was around 0.2% or 500-1 (they finished tenth), while the probability of West Ham United beating Manchester City, Liverpool, and Arsenal (which they did), was calculated at around 1,200-1 at the start of the season."
>
> (McHale, 2016)

McHale examined how unpredictable the 2015/16 league season had been compared to previous seasons and the other major European leagues. He used an unpredictability index to measure the difference between each match's observed and expected results.

$$\text{Unpredictability index } Ui = (H-pH)^2 + (D-pD)^2 + (A-pA)^2 \qquad (14)$$

where H, D or A is equal to 1 in the event of either a home win, a draw, or an away win, respectively, otherwise = 0, and pH, pD and pA being the probabilities of a home win, a draw, and an away win, respectively.

The closer the index is to zero, the more the result is expected, and conversely, if the result is unexpected, the value will be closer to one.

Returning to our example, the probability of a home win was 0.351, the probability of a draw was 0.292, and the probability of an away win was 0.358. As the game ended in a one-nil win to Aston Villa, the UI is calculated in Equation 15 below:

$$(0-0.351)^2 + (0-0.292)^2 + (1-0.358)^2 = 0.123 + 0.085 + 0.412 = 0.62 \qquad (15)$$

The probabilities for each match outcome were calculated from historical bookmaker odds for every match and rescaled linearly so that the probabilities sum to one [150]. They then averaged the unpredictability indexes of all 380 games in the Premier League season to measure unpredictability for the whole season.

The standard definition of predictability in the statistics/econometrics literature is something that can be said to be predictable if it is simply not white noise, i.e. mean zero, constant variance. What is inferred by predictability using McHale's Unpredictability Index is the

[150] Probabilities derived purely from the odds would include the bookmakers margin and so add up to more than one

difference between the observed and expected results and not the classic statistical sense of predictability.

Whilst McHale found that the 2015/16 season had indeed been the most unpredictable since 2004, it remained within the 90% 'Confidence Intervals' of previous seasons. He concluded that, whilst the bookmakers had had more problems predicting some match outcomes in 2015/16, there had not been a fundamental shift in the Premier League's unpredictability.

McHale also compared the unpredictability index of the EPL with that of the top leagues in Germany, France, Italy, Netherlands, Scotland, and Spain, along with the English Championship for season 2015/16 and found the EPL to be the third most unpredictable league, behind the English Championship and the Scottish Premier League, whilst the least uncertain league is Spain's La Liga.

This supports our anecdotal evidence that fans regard the Championship as Europe's most unpredictable and competitive league. More statistical analysis of the uncertainty of the outcome of the Championship would be needed to support or refute this assertion. However, what has been done suggests that competitiveness is declining (Wilson, Ramchandani, & Plumley, 2017).

The Dublin model's observation that increased financial inequality increases predictability helps motivate our research into the financial inequality caused by parachute payments and implementing the P&S rules within the EFL Championship. Given that Sumpter and the Dublin models both found betting odds to be the most effective source for calculating match probabilities, we, too, will adopt betting odds as the basis of our match outcome probabilities to be used in the calculation of the Unpredictability Index for 19 years of fixtures in the EFL Championship.

4.2.4 Other Factors Impacting Match Predictability

The literature reveals other factors that may affect the predictability of results, in addition to income inequality caused by parachute payments and the imposition of the P&S rules.

Home Advantage

Numerous studies have investigated the phenomenon of 'home advantage' in professional sports, whereby the probability of a team winning increases when they play at home. Three reasons are cited: 1) familiarity with surroundings, 2) travel weariness of the away team and 3) partisan home crowds (Koppet, 1972).[151] It is found to exist in professional baseball,

[151] In basketball, the chance of a home win is 21.3% greater than the chance of an away win, a better than one chance in five, but unfamiliarity and travel are found to be minor factors (Koppet, 1972).

hockey, football, and basketball (Lefebvre and Passer [152] (1974), Schwartz and Barsky [153] (1977), Edwards and Archambault [154] (1979), Irving and Goldstein [155] (1990) and Adams and Kupper [156] (1994). Furthermore, it is beneficial for clubs to attempt to maximise home advantage by encouraging matchday attendance with subsidised ticket prices [157] (Arrondel, Gayant, & Laslier, 2023)

However, some studies have shown home advantage to be in decline (Smith,[158] (2017) and Maimone and Yasseri,[159] (2021) and was diminished during the Covid pandemic when matches were played behind closed doors (Wunderlich, Weigelt, Rein, & Memmert [160] (2021), Scoppa [161] (2021) and Bryson, Dolton, Reade, Schreyer, and Singleton [162] (2021). Forrest,

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[152] The frequency of yellow cards or penalty awards was analysed for the Belgian National Soccer League (240 games) of the 1973-1974 season. They found that more of these acts would be performed by away players, players in the 1st division, and players in a losing state (Lefebvre & Passer, 1974).

[153] Home advantage was more significant for the NHL and NBA than for the MBL and NFL, and average team quality and home support is more important than away team fatigue or lack of familiarity (Schwartz & Barsky, 1977)

[154] Home advantage is due to a mix of variables that depend on the sport, the most significant being familiarity with their surroundings, the strength of crowd support, and the players' physical and cognitive response. (Edwards & Archambault, 1979).

[155] Of 175 no-hitters pitched since 1900, 63% of the no-hitters occurred on the pitcher's home ground, and using a chi-square test, they find that home advantage exists in baseball. (Irving & Goldstein, 1990)

[156] This study extends the work of Irving and Goldstein in major league baseball. At the macro-level, home field advantage is shown to have an inverse relationship with performance as measured by won-lost percentage. At the micro-level, home-field advantage is not statistically significant for pitchers who demonstrated sustained superior performance either by pitching a subsequent no-hitter or by amassing a number of career wins. (Adams & Kupper, 1994)

[157] The authors consider the trade-off between maximising ticket prices and total revenue against maximising matchday attendance through low prices to increase home advantage, win more games, and maximise revenue from TV rights. They show that subsidising ticket prices maximises the '12th man' effect (Arrondel, Gayant, & Laslier, 2023) .

[158] This study checked league results since 1888 to bust the home advantage myth (Smith, A, 2017)

[159] The stronger and richer teams were more likely to win irrespective of where they play, e.g. In 1993, French home teams took about two-thirds of points, but about 58% in 2019. (Irish Sun, The, 2021).

[160] Using data from 40,000 league matches across Europe before and during the pandemic. They found referee bias against away teams in terms of fouls, yellow cards, and red cards disappearing, and home dominance in shots and shots on target decreases significantly without fans. However, the decrease in home advantage was not significant. (Wunderlich, Weigelt, Rein, & Memmert, 2021)

[161] Using ten years of data from the top two divisions of Germany, Spain, England, Italy, and Portugal before and during the pandemic. They found that home advantage in terms of performance, e.g. points, goals, shots, etc., almost halved, and the number of fouls, yellow cards, red cards, and penalties awarded by referees was much more balanced without the crowd. (Scoppa, 2021)

[162] Without a crowd fewer red and yellow cards were awarded to the away teams by referees. They conclude that this reflects reduced home advantage and the influence of a home crowd on the neutrality of decisions (Bryson, Dolton, Reade, Schreyer, & Singleton, 2021).

Beaumont, Goddard, and Simmons [163] (2005) found that measures to promote competitive balance and increase attendance, such as revenue sharing, could be counterproductive given home advantage.

Player Turnover

It is an oft-quoted cliché that new players need time to adapt, build 'on-field relationships', and get used to their new manager and new teammates' style of play. The time required to mould together a much-changed squad has an impact on a team's performance (Courtright et al., (2017) Bell, (2007) Bell et al. (2018)). Aubé and Rousseau (2005) and Porter (2005) found that a shared common goal leads to an increase in team performance, whilst player turnover disrupts communication within teams (Harris, McMahan, & Wright , 2012).

Nutt (2015) found that in nine seasons from 2005/06, Liverpool finished in the highest league positions when the player turnover was under 12, while the worst five seasons coincided with the highest turnover of players (14-16 senior players) .

Impact of Managerial Changes on Professional Football

Studies into the impact of managerial changes on performance have had mixed results. Audas, Dobson, and Goddard (2008), using match results and managerial changes between 1972 and 1993 for the EFL, found that poor recent form usually ends in managerial change, that manager turnover in the lower divisions was more frequent, and that managerial change significantly harms team performance immediately after the change and Flint, Plumley and Wilson (2014) found that for seasons 2003/04 to 2012/13 in the EPL, managerial changes may increase points per game but would not necessarily improve league position. However, they did find that clubs in the bottom half of the table improved their final league position, whilst clubs in the top half did not.

Dobson, Audas & Goddard (1999) estimated hazard functions for involuntary and voluntary managerial job termination in English football at match level from 1972-1997. For forced resignations, the team's performance in the nine preceding matches and the team's league standing when the coach took charge significantly impact the manager's dismissal probability. They also found no link between prior success as a player and performance as a coach.

[163] Pro-competitive balance measures, such as revenue sharing, may ignore the phenomenon of home advantage. However, if all teams have equal talent, then matches become heavily weighted in favour of the home team. In an analysis of the EFL, their simulation model predicts that team equality would lower aggregate attendances as the most uncertain games, where weak teams have home advantage over strong teams, would disappear. (Forrest, Beaumont, Goddard, & Simmons, 2005)

Using 38 years of English football manager changes, Peeters, Szymanski, and Terviö (2017), found that in around one-quarter of cases where a club hired an experienced manager, they had an estimated ability below the average of a recently qualified coach. They conclude that this is inefficient and depresses the average ability of the active coaching pool. Using Head Coach characteristics to identify determinants of quits and dismissals over the period 2002–2015, Bryson, Buraimo, & Farnell (2021), found that probabilities of dismissal are significantly lower when the team is performing above expectations, with a focus on recent games. However, they also found that the probability of a Head Coach quitting reduces if the club performs above expectations. Head Coach success in the past and Head Coach experience reduce the probability of being dismissed, meaning the team can perform poorly against expectations for a longer period, suggesting that Head Coach human capital has some 'protective' element in the dismissal hazard.

In the Dutch Eredivisie Koning (2003), using data for the Dutch Eredivisie for the five seasons from 1993/94 to 1997/98, found that team performance does not necessarily improve when a coach is changed, and the new coach may perform even worse. There is evidence that the team improves defensively after a new coach takes over, perhaps indicating a loss avoidance strategy to bring about a change in fortunes. Using data from the Dutch Eredivisie for 14 seasons, the authors found that managerial changes mid-season depend on recent match results compared to expectations determined by bookmaker odds. They find that although teams perform better after the manager has been replaced, the improvement is no better than that of a control group of clubs that did not change their manager. The authors conclude that replacing the manager does not improve team performance (van Ours & van Tuijl, 2016).

González-Gómez, Picazo-Tadeo, and García-Rubio (2011) used data for the Spanish La Liga and employed data envelopment analysis (DEA) techniques. They found that mid-season manager changes improve sporting performance. However, the improvement is not as good as that of teams that have not changed managers halfway through the season. They conclude that changing managers can be helpful when a football team is not performing well, but clubs should avoid changing managers through a season if possible.

Hope [164] (2003) developed a practical econometric solution to the problem of whether and when to sack the manager using EPL data for the six seasons from 1996/97 to 2001/02. Clubs

[164] The authors developed a practical econometric solution to the problem of if and when to sack the manager using EPL data for the six seasons from 1996/97 to 2001/02. Clubs should set a short honeymoon period of just eight games, much less than the actual shortest period of 12 games in the EPL at the time, set the managerial change trapdoor at 0.74 points per game, and to the weight the last five games to 47% of the total. This would result in 56.8 points per season compared to a Premiership average of 51.8 points (Hope, 2003).

should set a short honeymoon period of just eight games, much less than the actual shortest period of 12 games in the EPL. The managerial change trapdoor should be set at 0.74 points per game, and the last five games should be weighted at 47% of the total.

In a study of the impact of 525 instances of managerial change across 2,816 football matches in the four main English Football Leagues between 2000/01 and 2015/16, Wilson, Plumley and Flint (2019) found little statistical evidence for sacking a manager if the intention was to improve performance on the pitch after a managerial change—the only significant improvement in performance after the managerial change was in League One. In the EPL, teams in the top half of the table accumulate fewer Points Per Game after they make a managerial change than teams in the bottom half who make a change, and this has implications in a league where the financial consequences of relegation are massive and provides support for making a change citing the need to avoid relegation.

In summary, we find from the literature that home advantage may dilute the expected effects of increased financial inequality, player turnover may make team performance uncertain, especially in the early stages of a season and after the January transfer window, and managerial change will inevitably lead to uncertainty of match results due to the possibility of a 'new manager bounce'.

Therefore, we will separately control for the differential impact of parachute payments on the home and away teams, the number of players turned over each season, and the number of manager changes the club has made in the current season in our model.

4.3 Data and Methods

4.3.1 Data

The EFL Championship is a round-robin tournament with 24 teams playing one another, home and away. The participating clubs differ from season to season due to promotion and relegation, common in open competitions. Our sample is an unbalanced panel containing data from 2000/01 to 2022/23, and the hypothetical maximum number of observations is 12,696.

The individual match data was provided by www.football-data.co.uk, which included the result of individual matches plus the betting odds for a home win, away win and a draw offered by a basket of betting operators including Bet365, Blue Square, Bet&Win, Gamebookers, Interwetten, Ladbrokes, Pinnacle, Sporting Odds, Sportingbet, Stan James, Stanleybet, VC, William Hill. The different odds across the operators were averaged on a straight line basis to give a single set of odds for a home win, away win, and a draw, which was used then to derive a probability for each outcome. The information is downloaded season-by-season and consolidated into a single database. The manager changes, and numbers of players transferred during the transfer windows were obtained from Soccerbase, which was then

merged with fixture-level data from football-data.co.uk and matched with the home and away team names. The covariates included information from the club accounts used in Chapter 2.

However, our sample contains 12,693 observations and 63 different football clubs because, for three fixtures, the UI measures were not calculated as the odds were unavailable. [165]

See Appendix 4.2 for a list of clubs that have only received Parachute Payments whilst in the Championship, e.g. Newcastle United, Appendix 4.3 for a list of clubs that have never received Parachute Payments whilst in the Championship, e.g. Burton Albion and Appendix 4.4 for a list of clubs that have seasons in receipt of Parachute Payments and some seasons where they did not during their time in the Championship, e.g. Birmingham City.

4.3.2 Methodology

Outcome Probability Measure

An analysis of 'predictability' is difficult to do. Predictability according to whom? Furthermore, how do you measure predictability?

For our analysis, we will use the McHale Unpredictability Index with the probabilities for each match outcome calculated from a basket of historical bookmaker odds for every match, rescaled normally so that the probabilities sum to one.[166] Even with this measure, there are limitations. For example, the probabilities (pH, pD, pA) could vary much more in the COVID-affected seasons, yet the bookmakers adjust perfectly and immediately to this change. Therefore, the UI remains the same so that some effects may be missed.

We can test whether the bookmakers have adjusted correctly for changes in home advantage, as measured by home points gained, in the COVID-affected seasons. We find there is no significant reduction in home points (p=0.193). However, the bookmakers quickly adjusted their odds to reduce the probability (pH) of a home win (0.011, p=0.001). This meant the unpredictability index increased as the bookmakers had overestimated the fall in the probability of a home win. However, the change in the UI was not significant (p=0.270):

[165] All Season 2001/02 Rotherham Vs Sheffield United, Wimbledon Vs Portsmouth and Norwich Vs West Brom

[166] Probabilities derived purely from the odds would include the bookmakers margin and add up to more than one

Post P&S Seasons 2014/15 – 2022/23 t-test Results:		Non-COVID Seasons (Obs.)	COVID Seasons (Obs.)	Difference in Mean C1 – C2 (p-value)
Row	**Column**	**1**	**2**	**3**
1	Home Points (Observations)	1.565 (3,312)	1.531 (1,656)	**0.034** **(0.193)**
2	Probability of home win (Observations)	0.428 (3,312)	0.417 (1,656)	**0.011***** **(0.001)**
3	Unpredictability Index (Observation)	0.622 (3,312)	0.627 (1,656)	**-0.004** **(0.270)**

Table 4.3 – T-test results for Home Points and Probability of a home win in the Non-COVID and COVID-affected seasons

So, we choose to continue with the UI as our measure of unpredictability despite its limitation, as it is simple to calculate.

Sumpter had found a bias in the bookmaker odds in the EPL, suggesting that where there was a solid favourite to win, the odds tended to underestimate the likelihood of a win. However, if the odds were close, they tended to underestimate the probability of a draw. If the bookmaker odds are biased where there is likely to be a really strong favourite, e.g. a parachute club versus a non-parachute club, we would expect the Sumpter adjustment to improve the prediction and the UI value should be lower, whilst where it is unlikely that there is a strong favourite e.g. parachute clubs or non-parachute clubs play each other, we would expect the Sumpter adjustment to have no impact on the prediction and the UI value to be the same.

	H_1	H_2	H_3
Mean (H_0)	0.628	0.627	0.628
Observations (H_0)	10,485	4,165	6,320
Mean (H_a)	0.629	0.629	0.630
Observations (H_a)	10,485	4,165	6,320
t-statistic	-0.595	-0.374	-0.463
Pr(T > t)	0.72	0.65	0.68

Table 4.4 - Comparison of Predictions for Seasons 2000/01 – 2018/19

We will test these scenarios by an independent group t-test where group 0 is unadjusted odds for seasons 2000/01 – 2018/19, and group 1 is the Sumpter adjusted odds for the same seasons and where games are more predictable using the Sumpter Odds Bias adjustment for all games (H_1), for games between unmatched teams only (H_2), and for games between matched teams only (H_3)

For all fixtures, we find there is a small increase in the mean UI values for the bookmaker odds (0.628) and for Sumpters Biased Odds Adjusted predictions (0.629), but the difference is not significant (p-value 0.72). Similarly, for both unmatched fixtures and matched fixtures, the increase in UI between the bookmaker odds and Sumpter's adjusted odds is also not significant (t=-0.374 and t=-0.463, respectively)

In all cases, we should reject the alternate hypotheses; adjusting for possible bookmaker bias would add unpredictability compared to using unadjusted bookmaker odds, even for fixtures

where we would perhaps expect a strong favourite to be present. Therefore, we do not support using Sumpter's adjusted odds approach.

This is consistent with previous research showing no evidence that the betting markets were, on average, inefficient, e.g. Reade, Singleton & Williams [167] (2020) and Elaad, Reade & Singleton[168] (2020). Therefore, we proceed with probabilities derived from standard bookmaker odds in calculating the Unpredictability Index UI for each match.

A Priori Assumptions

Based on the findings from the Dublin model (Maimone & Yasseri, 2021), the higher the income disparity, the lower the UI will be. We would expect the UI for matches between parachute clubs (relatively wealthy) and non-parachute clubs (relatively poor) to be lower, i.e. more predictable, as one side has a competitive advantage provided by the parachute payment and should be expected to win. Where clubs are more equally matched, e.g. when Parachute clubs play each other or non-parachute clubs do the same. The outcome should be more unpredictable (UI is higher) as there is no financial advantage to just one of the clubs, i.e. they are equally matched.

Given our previous findings in Chapter 3 regarding the increase in points per game for the parachute clubs during the COVID-affected seasons between 2019/20 and 2021/22, it is reasonable to assume that matchday results should become more predictable.

Combining these two, it is reasonable to expect that unmatched games, i.e. games between a parachute club and a non-parachute club, should be easier to predict after P&S was implemented. It is assumed that parachute clubs benefit from increasingly significant payments from the EPL (getting relatively richer), whilst at the same time, the non-parachute clubs are being constrained in the amount they can overspend by the P&S rules (getting relatively poorer).

At the same time, it is assumed that games between matched sides, i.e. when two parachute clubs or two non-parachute clubs play each other, will not have become any more or less predictable since the implementation of the P&S rules.

Furthermore, due to the phenomenon of home advantage in English football, we would expect a difference in UI between fixtures where the home team is a parachute club against a non-

[167] Using betting odds for the 2016/17 and 2017/18 seasons of English Premier League football matches.

[168] Using data from the online betting market for 16,000 English professional football match results between 2010 and 2018.

parachute club, i.e. the result is more predictable compared to when the parachute club is the away team playing against a non-parachute club.

Econometric Model.

Our analysis with our measure of uncertainty as the object of interest and as the independent variable, either a dummy of 1 or 0 if the fixture is between a parachute and a non-parachute club, i.e., unmatched, a dummy of 0 or 1 for the pre-and post-P&S periods, and a dummy of 0 or 1 for the non-COVID and COVID-affected seasons.

To estimate the impact of parachute payments, P&S and COVID-19 on the Uncertainty Index, we use a multivariate regression, which allows us to control for parachute payments, P&S and COVID-affected seasons simultaneously. The empirical model is shown in Equation. In this equation, (Y) represents our measure of competitiveness, e.g., the Unpredictability Index (UI) as the dependent variable:

$$Y_i = \alpha + \beta_1 P_i + \beta_2 F_i + \beta_3 C_i + \beta_4 (P_i * F_i) + \beta_5 (P_i * C_i) + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_n X_n + \varepsilon \qquad (16)$$

Where:
α = the constant or intercept (i.e. The value of Y if x=0)
P = dummy equal to one if only one club in the match receives a parachute payment, i.e. unmatched fixture,
F = dummy equal to one if P&S rules are in operation for that match,
C = dummy equal to one for matches during a COVID-affected season,
$(P_i * F_i)$ = the parachute and P&S interaction term
$(P_i * C_i)$ = the parachute and COVID interaction term.
β_n = the regression coefficient of the additional independent variables (6 to n)
x_n = The independent variables, (1 to n)
n = the number of independent variables in the regression
ε = the error or residual of the equation

General effects on the odds caused by unobserved characteristics affecting all clubs equally, e.g. betting technology or emerging betting channels, will be accounted for by a dummy variable for each season and a dummy variable for each month of the season as team form should become established throughout the season which should make prediction more accurate.

In addition, we will include club Fixed Effects in our model to estimate the effect of the unobserved factors of individual clubs. This takes account of any bookmaker's bias for the size and emotional attachment to a particular club.

Using fixed effects in the regression corrects for omitted variable bias by introducing an entity-level dummy variable. This controls for both entity-specific and time-invariant variation in the data without having to collect data on those variables. However, the more we can control for

entity-specific but time-variant variables, e.g., club income, the more information we break out of the club Fixed Effect, and the more likely the coefficients are unbiased.

The full regression model includes fourteen new covariates and our three original interest regressors. These covariates are not part of our research question, but they are important because, as independent variables, they may have a meaningful effect on the dependent variable. Omitting these variables could lead to Omitted Variable Bias in our estimates, where the error term is correlated with our independent variables, which may generate biased coefficients for our regressors of interest in the model.

Additional Covariates

We then include the additional controls for the

a) Parachute Flag for the home and away team

A dummy of 1 or 0 if the home team receives a parachute payment, and a dummy of 1 or 0 if the away team receives a parachute payment; two variables in total.

b) Number of manager changes in the current season for the home and away team

The number of manager changes made since the start of the season up to the match date for the home and away teams; two variables in total.

c) Promoted from League One last year for the home and away team

A dummy of 1 or 0; two variables in total.

d) Relegated from the EPL last year for the home and away team

A dummy of 1 or 0; two variables in total

e) Player Turnover in the current transfer window for the home and away team

The cumulative number of players bought and sold during the summer or winter transfer windows for the home and away team; four variables in total.

f) Player Book Value for the home and away team

The notional book value of playing squads is based on three times the annual player amortisation charge. We choose this over the actual book value because, depending on the years remaining, the value of the original contracts will have been written down to different extents. We chose three years as a proxy for the average contract length; there are two variables in total.

g) Player costs, excluding parachute payments for the home and away team

Log wage residuals (i.e., Exc. Parachute Payments) for the home and away team; two variables in total. Player costs represent the amount the clubs spend on playing talent. To extract the impact of parachute payments from our wage log variable, we again employ a

variation of the method proposed by Gomanee, Morrissey, Mosley, and Verschoor (2005, pp. 360-361) to strip out the effect of parachute payments on wage spend by generating a new variable called 'log wage excluding parachute payments' from the residuals of an OLS regression of log wages on parachute payments flag with robust estimates.

Descriptive Statistics

Table 4.5 shows the summary statistics:

Variable	Seasons 2000/01 – 2022/23				
	Obs.	Mean	Standard Deviation	Minimum	Maximum
1. Unpredictability Index (UI)	12,693	0.628	0.223	0.057	1.390
2. Unmatched fixtures - one parachute club dummy	12,696	0.392	0.488	0.000	1.000
3. P&S Rules dummy	12,696	0.391	0.488	0.000	1.000
4. COVID season dummy	12,696	0.130	0.337	0.000	1.000
5. Number of Manager Changes - Home	12,696	0.559	0.825	0.000	5.000
6. Number of Manager Changes - Away	12,696	0.558	0.824	0.000	5.000
7. Promoted from League 1 Last Year - Home	12,697	0.054	0.475	0.000	6.000
8. Promoted from League 1 Last Year - Away	12,697	0.057	0.499	0.000	6.000
9. Relegated from EPL Last Year - Home	12,697	0.058	0.498	0.000	6.000
10. Relegated from EPL Last Year -	12,697	0.054	0.477	0.000	6.000
11. Summer Player Turnover - Home	12,696	1.572	4.586	0.000	42.000
12. Winter Player Turnover - Home	12,696	0.259	1.049	0.000	14.000
13. Summer Player Turnover - Away	12,696	1.579	4.605	0.000	38.000
14. Winter Player Turnover - Away	12,696	0.264	1.063	0.000	19.000
15. Player Costs exc. parachutes - Home	11,546	0.000	0.629	-1.657	1.843
16. Player Costs exc. parachutes –Away	11,546	0.000	0.629	-1.657	1.843

Table 4.5 - Descriptive Statistics for the Multivariate Variables

In Table 4.5, we see the correlation between our chosen variables. However, the only variables with high correlation are (5) Non-parachute Vs non-parachute with (2) Parachute Club Vs non-parachute and (3) Non-parachute Vs parachute, for (10) Relegated from EPL Last Year – Home with (2) Parachute Club Vs non-parachute and for (11) Relegated from EPL Last Year – Away with (3) Non-parachute Vs parachute. However, the key to avoiding multicollinearity is that these variables are not highly correlated with our variable of interest, Unpredictability Index UI.

Of our independent variables, the P&S Rules dummy, the COVID season dummy, the Number of Manager Changes – Away, the Promoted from League 1 Last Year – Home dummy, the Relegated from EPL Last Year – Away dummy, the Winter Player Turnover – Home, the Winter Window Player Turnover – Away and Player Costs exc. parachutes - Home are all negatively correlated with UI and make a result more predictable. Meanwhile, the number of Manager Changes – Home, the Relegated from EPL Last Year – Home dummy, the Summer Window Player Turnover – Home, and the Player Costs exc. parachutes –Away variables positively correlate with UI and make a result more unpredictable.

However, there is a high degree correlation between the post-P&S dummy and the COVID-affected season dummy (0.48), the Winter Player Turnover – Away with the Winter Player Turnover – Home (0.62) and the Summer Player Turnover – Home with the Summer Turnover - Away (0.83) and there is a risk of multicollinearity between them which may impact the standard error and, therefore, the estimated precision of the variables.

However, as all of the COVID-affected seasons are during the P&S period and player turnover home turnover must be the same as player turnover away as the clubs play each other home and away, then we would expect a high degree of correlation between these variables. This is less of a concern as P&S and COVID are control variables and are not highly correlated with our main variable of interest parachute payments, and the same team cannot be at home and away simultaneously. Removing these variables may result in omitted variable bias, and therefore, we are happy to trade off multicollinearity in the controls to ensure unconfoundness in the parachute payments estimate.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	
1. Unpredictability Index (UI)	1.00															
2. Unmatched fixtures - one parachute club dummy	0.00	1.00														
3. P&S Rules dummy	-0.02	0.08	1.00													
4. COVID season dummy	-0.01	0.01	0.48	1.00												
5. Number of Manager Changes - Home	0.02	0.04	0.09	0.02	1.00											
6. Number of Manager Changes - Away	-0.02	0.04	0.09	0.01	0.07	1.00										
7. Promoted from League 1 Last Year - Home	-0.02	0.01	-0.01	-0.03	0.00	0.01	1.00									
8. Promoted from League 1 Last Year - Away	0.00	0.02	0.00	-0.01	0.02	0.00	0.06	1.00								
9. Relegated from EPL Last Year - Home	0.01	0.02	0.00	-0.01	0.00	0.02	-0.01	0.10	1.00							
10. Relegated from EPL Last Year - Away	-0.01	0.00	0.01	-0.01	0.00	0.00	0.15	-0.01	0.08	1.00						
11. Summer Player Turnover - Home	0.01	0.01	0.07	0.06	-0.12	-0.12	-0.01	0.01	0.00	0.00	1.00					
12. Winter Player Turnover - Home	-0.01	0.00	0.07	0.12	0.06	0.01	-0.01	0.00	0.00	0.00	-0.08	1.00				
13. Summer Player Turnover - Away	0.00	0.01	0.07	0.06	-0.12	-0.11	-0.01	0.00	0.00	0.00	0.83	-0.08	1.00			
14. Winter Player Turnover - Away	-0.01	0.02	0.07	0.12	0.03	0.06	-0.01	0.01	0.01	-0.01	-0.09	0.62	-0.09	1.00		
15. Player Costs exc. parachutes - Home	-0.07	0.07	0.47	0.27	0.07	0.05	0.01	0.01	0.01	0.03	0.05	0.02	0.04	0.03	1.00	
16. Player Costs exc. parachutes –Away	0.06	0.07	0.47	0.27	0.05	0.07	0.00	0.00	0.00	0.00	0.04	0.03	0.04	0.03	0.32	1.00

Table 4.6 - Correlation between variables Matrix

4.4 Results

4.4.1 Preliminary Observations

We find the mean Unpredictability Index (UI) for the whole sample period is 0.631, compared to the McHale result for the Championship of 0.628 units of UI for season 2015/16 (McHale, 2016).

Repeating the method McHale used to identify his outlying seasons, we find the unpredictability index is mainly within the 90% confidence interval boundaries around the sample mean for most years.

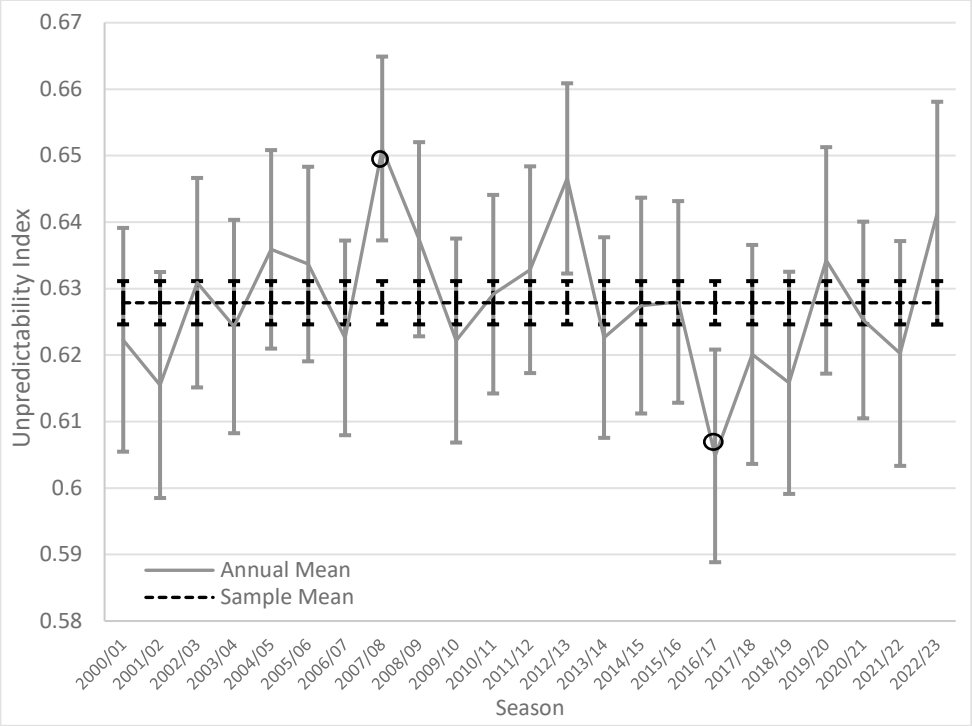

Chart 4.1 - Unpredictability of The English Championship (2000/01 - 2022/23)

Two years are outside these confidence limits: 2007/08 and 2016/17, respectively. These are one season after the introduction of solidarity payments in 2006/07 and one season after the first P&S rules three-year reporting period closed in 2016/17. This suggests that bookmakers initially faced shock after the changes but quickly responded.

Looking at changes in the unpredictability index (UI) over time. From Chart 4.2, the UI trend line has been declining very slowly (0.0001 units of UI per year). However, since implementing the P&S rules, the UI has been below the trendline for all but two out of the nine seasons, suggesting that the UI has fallen in the post-P&S period, which, according to UOH, would have been harmful to the Championship.

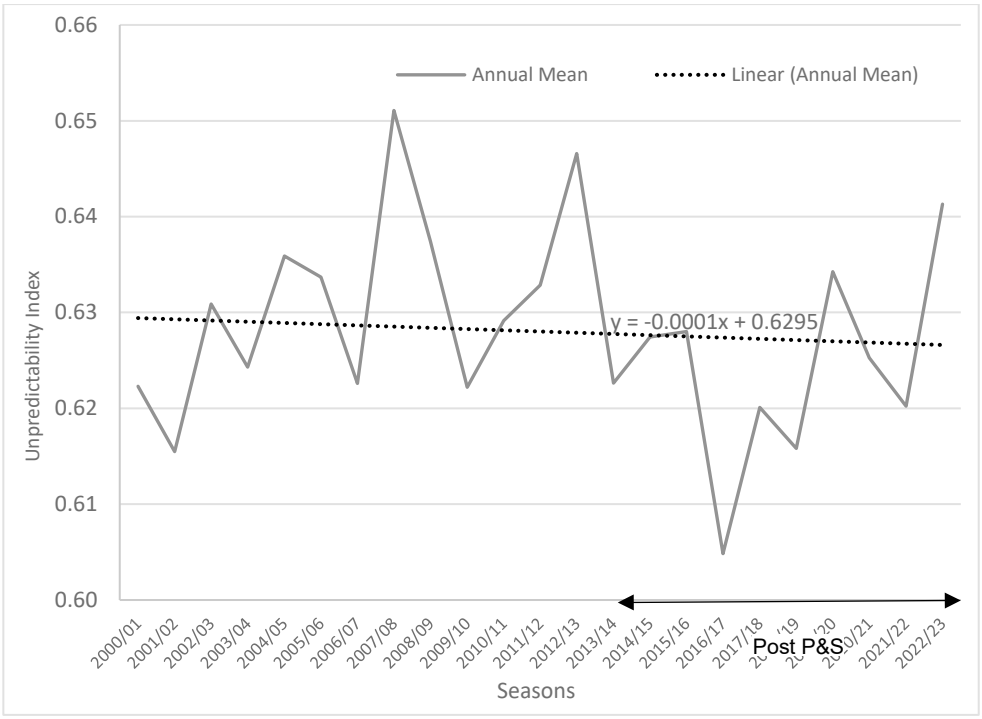

Chart 4.2 - Unpredictability of The English Championship for seasons 2000/01 - 2022/23

Parachute payments should provide a competitive advantage to the club that receives them over the non-parachute clubs that do not. Therefore, it is reasonable to expect the greatest impact of parachute payments on predictability for these unmatched fixtures between parachute and non-parachute clubs.

Conversely, matches between two non-parachute or two parachute clubs are matched in terms of income, and therefore, parachute payments are not expected to impact the fixtures UI.

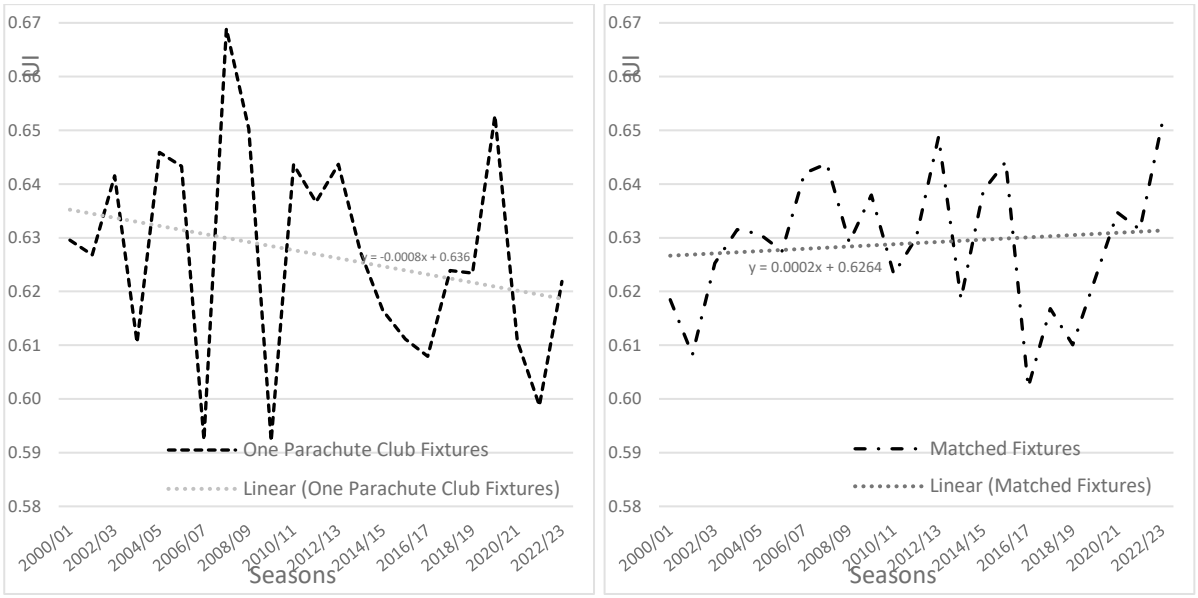

Chart 4.3 - Unpredictability Index for (a) unmatched fixtures and (b) matched fixtures (2000/01-2022/23)

Chart 4.3 (a) shows a declining trend in the UI value over the sample period for unmatched fixtures between a parachute club and a non-parachute club, while Chart 4.3 (b) shows a rising trend line for the matched fixtures between two non-parachute or two parachute clubs. Again, most UI values have been below the trendline for unmatched and matched fixtures, suggesting that the UI has fallen in the post-P&S period for unmatched and matched fixtures.

Empirical Testing

These observations will be tested with two sample differences in mean t-tests, and we believe that for the first time, we will isolate the effect of the COVID-19 restrictions on the post-P&S UI.

Table 4.7 Row 4 shows that the UI fell by 0.007 units from 0.631 to 0.624 (p=0.048) for all clubs after implementing the P&S rules. This is consistent with the observation made in Chart 4.2, and supports the view that P&S has harmed the Uncertainty of Outcome.

Seasons 2000/01 – 2022/23 t-test Results:		Pre-P&S Mean UI (Obs.)	Post P&S Mean UI (Obs.)	Difference Mean UI C1 - C2 (p-value)	Difference in Mean UI (All seasons)
Row	**Column**	**1**	**2**	**3**	**4**
1	Matched Fixtures (Observations)	0.630 (4,860)	0.628 (2,856)	**0.002 (0.345)**	0.629 (7,716)
2	Unmatched fixtures (Observations)	0.632 (2,865)	0.618 (2,112)	**0.013** (0.022)**	0.626 (4,977)
3	Difference (R1-R2) (p-value)	**-0.002 (0.342)**	**0.009* (0.080)**		**0.003 (0.243)**
4	All Clubs	0.631 (7,725)	0.624 (4,968)	**0.007** (0.048)**	

Table 4.7 – Mean UI for matched and unmatched fixtures pre-and post-P&S 2000/01 – 2022/23

The UI has fallen significantly in the post-P&S period for unmatched fixtures between a parachute and a non-parachute club by 0.013 from 0.632 to 0.618 (p=0.022), supporting the observation based on Chart 4.3 (a), that matches have become more predictable in the post-P&S period. However, for matched fixtures, we find that the P&S rules have not significantly impacted UI (p=0.345), whilst Chart 4.3 (b) suggested it may have done, unpredictability for matched fixtures has remained the same.

No statistical difference in unpredictability was found between matched and unmatched fixtures in the pre-P&S period (p=0.342). However, we did find that matched fixtures became more predictable by 0.009 units of UI in the post-P&S period (p=0.080).

In what, we believe, is the first research into the impact of the COVID-19 restriction on UOH, we now examine how COVID has impacted the UI in the post-P & S period.

Post P&S Seasons 2014/15 – 2022/23 t-test Results:		Non-COVID Seasons Mean UI (Obs.)	COVID Seasons Mean UI (Obs.)	Difference Mean UI C4 - C5 (p-value)	**Difference in** Mean UI from **Table 4.7**
Row	**Column**	**1**	**2**	**3**	**4**
1	Matched Fixtures (Observations)	0.627 (1,823)	0.630 (1,033)	**-0.003 (0.367)**	0.628 (2,856)
2	Unmatched fixtures (Observations)	0.617 (1,489)	0.622 (623)	**-0.005 (0.346)**	0.618 (2,112)
3	Difference (R1-R2) (p-value)	**0.009 (0.112)**	**0.008 (0.252)**		**0.009* (0.080)**
4	All Clubs	0.622 (3,312)	0.627 (1,656)	**-0.004 (0.270)**	

Table 4.8 – Mean UI for matched and unmatched fixtures for the COVID-affected seasons

From Table 4.7, the UI for unmatched fixtures at 0.618 is 0.009 lower than the UI of matched fixtures for the P&S period, meaning unmatched fixtures are more predictable than matched fixtures post-P&S. However, in Table 4.8, the difference disappears when we split the period between the COVID-affected seasons (p=0.112) and the other Post-P&S seasons (p=0.252). Also, the UI was statistically unchanged for all fixtures (p=0.270), for the matched fixtures (p=0.367) and the unmatched fixtures (p=0.346) in the COVID seasons compared to other post-P&S periods. This suggests that the bookmakers have quickly responded to the impact of having no attendance on home advantage.

4.4.2 Model Results

Simple Econometric Model

First, we consider the individual impact of parachute payments, the P&S rules and COVID-19 on the uncertainty of outcome as measured by the Unpredictability Index (UI) using a univariate fixed effects model. We include the club Fixed Effects to control entity-specific and time-invariant variation in the data without collecting data on those variables and time series dummies to capture annual and month-of-season factors that may affect the predictability of match results.

Individually, we estimate the β_1 coefficient, where a dummy variable equals one when the parachute club is playing against a non-parachute club and zero if the fixture is between two parachute clubs or two non-parachute clubs, i.e. matched fixtures. The β_2 coefficient is for a dummy variable that equals one after the P&S rules were implemented and zero for seasons before P&S. The β_3 coefficient is for a dummy variable that is equal to one for a COVID-affected season and zero if not COVID-affected. The constant predicts the UI of matched fixtures in the pre-P&S period.

In the t-tests and the univariate models, we estimated the individual impact of parachute payments, the P&S rules and COVID on UI in isolation. However, as all three act in tandem at some point in our research period, we must consider their combined impact in a single model.

We expect the P&S rules and the COVID-19 pandemic to disproportionately impact the uncertainty of fixtures between clubs receiving parachute payments and those that are not. Therefore, we relax the standard independence assumption between the control variables by including an interaction term for parachute payments in the post-P&S period and the COVID-affected seasons in the regression.

In Table 4.9, column 1, the significance of the β_1 coefficient shows that unmatched fixtures between a parachute and a non-parachute club are no more certain than (p=0.183) when the fixture is matched between two non-parachute clubs or two parachute clubs. (UI=0.624). However, we would have expected them to be more easily predicted due to income inequality caused by parachute payments.

Regression		Coefficient	Parachute + Club FE and month dummies	P&S Rules + Club FE and month dummies	COVID + Club FE and month dummies	Multivariate Club FE plus Interactions
			1	2	3	4
Observations	1		12,693	12,693	12,693	12,693
Clubs	2		63	63	63	63
R^2	3		0.003	0.003	0.003	0.003
Constant (matched teams)	4		0.624***	0.626***	0.639***	0.623***
(p)			(0.000)	(0.000)	(0.000)	(0.000)
One Parachute Club	5	β_1	0.005			0.010
(p)			(0.183)			(0.101)
P&S Rules	6	β_2		0.023		0.027*
(p)				(0.122)		(0.066)
COVID Seasons	7	β_3			0.004	-0.019
(p)					(0.792)	(0.141)
Parachute#P&SRules	8	β_4				-0.011
(p)						(0.228)
Parachute#COVID	9	β_5				0.000
(p)						(0.981)

Table 4.9 – Regression results for UI against parachute payments, P&S Rules and COVID (2000/01-2022/23).

Where:

Column 1 - Regression of one parachute club fixtures on Unpredictability Index (UI) for all seasons (2000/01 – 2022/23).

Column 2 - Regression of the P&S rules on UI for all seasons.

Column 3 - Regression of the COVID seasons on UI for all seasons.

Column 4 - Regression of one parachute club fixtures, the P&S rules and the COVID seasons on UI for all seasons, with interactions between the independent variables.

In column 2, the significance of the β_2 coefficient shows that the P&S rules have not impacted the unpredictability index (p=0.122). This contradicts the significant difference in mean UI we found by the t-test in column 3, Table 4.7. Which suggested a fall in the unpredictability index of 0.009 (p=0.080). According to UOH, this t-test result would have been bad for the Championship, but including club fixed effects and time dummies, the harmful effect of the P&S rules disappears.

In column 3, the significance of the β_3 coefficient shows that the COVID-19 restrictions imposed on football have also had no significant impact on the unpredictability index (p=0.792). However, we were expecting a reduction in home advantage and, consequently, expected a home result that would be more unpredictable with matches played behind closed doors.

In support of the regression and t-test finding, home advantage, as measured by home points gained, has not significantly reduced in the COVID-affected seasons (p=0.193). However, the bookmakers quickly adjusted their odds for the possibility of a reduced likelihood of a home win (0.011, p=0.001). This meant the unpredictability index increased as the bookmakers had overestimated the fall in the probability of a home win. However, the change in the UI was not significant (p=0.270):

Post P&S Seasons 2014/15 – 2022/23 t-test Results:		Non-COVID Seasons (Obs.)	COVID Seasons (Obs.)	Difference in Mean C1 – C2 (p-value)
Row	**Column**	**1**	**2**	**3**
1	Home Points (Observations)	1.565 (3,312)	1.531 (1,656)	**0.034 (0.193)**
2	Probability of home win (Observations)	0.428 (3,312)	0.417 (1,656)	**0.011*** (0.001)**
3	Unpredictability Index (Observation)	0.622 (3,312)	0.627 (1,656)	**-0.004 (0.270)**

Table 4.10 – T-test results for Home Points and Probability of a home win in the Non-COVID and COVID-affected seasons

Next, we consider the impact of our control variables simultaneously. In Table 4.9, column 4, only the β_2 coefficient for the P&S rules is significant (p=0.066), increasing the unpredictability index by 0.027 units of UI. According to OUH, this is good for the Championship. This is contrary to the 0.009 fall in UI found by the t-test for the P&S rules from Table 4.7, row 4 (p=0.048).

The β_1 coefficient for parachute payments is not quite significant at a 10% significance level (p=0.101), and the β_3 coefficient for the COVID-affected seasons is also not quite significant (p=0.141). Neither interaction term is significant, which shows that the P&S rules nor COVID restrictions have disproportionately impacted the unpredictability of unmatched fixtures.

Full Econometric Model

Information is extracted from the club Fixed Effects by adding covariates for the cumulative number of manager changes in the season to date, dummies for teams promoted last year from League 1 and relegated last year from the EPL, the cumulative player turnover in the summer and winter transfer windows whilst the windows are open, and net player costs excluding parachute payments for both the home and away team. This improves the estimated precision of the variables.

The effect on the club fixed effects of the additional covariates is shown in Appendix 4.1. For example, the club fixed effect of Manchester City is -0.245 units of UI in the simple model, but this increases to -0.237 with the additional covariates. Meanwhile, for Southend United, the club fixed effect is 0.072 units of UI in the simple model, but this decreases by 0.076 to -0.004 with the additional covariates. This means matched fixtures where Manchester City are playing at home have generally become less predictable with the covariates, whilst results for Southend United playing at home have generally become more predictable.

In column 1, Table 4.11, with the new covariates added, we find that the β_1 to β_3 coefficients are not significant, which means that the UI for unmatched fixtures is no higher (p=0.182) than matched fixtures (UI=0.594), the UI after implementing the P&S rules is not higher (p=0.314), and neither has it risen after the COVID restrictions have been imposed (p=0.594). There is also no significance found for the interaction of parachute payments with the P&S rules or the COVID-affected seasons, meaning there is no disproportionate impact of P&S on the UI of unmatched fixtures, and there is no disproportionate impact on the unmatched fixtures due to the COVID-19 restrictions.

However, the significance of the β_2 coefficient is not consistent with the 0.027 increase in UI from Table 4.9 Row 6 for the P&S rules in the simple interaction model (p=0.066), nor the general 0.007 fall in UI found by t-test for the P&S rules from Table 4.7, row 4 (p=0.048). Also, the β_4 is not consistent with the 0.013 increase in UI for the unmatched fixtures alone (p=0.022) from Table 4.7, row 2. Therefore, the significance of the P&S rules and the disproportionate impact of the P&S rules has disappeared with the inclusion of the additional covariates.

Regression	Coefficient	Multivariate Club FE & Interaction plus Covariates	Multivariate Club FE, Interaction & Covar. plus match dummies	Match 1 β n.1	Match 2 β n.2	Match 3 β n.3	Match 4 β n.4	Match 5 β n.5	Match 6 β n.6
		1	2	3	4	5	6	7	8
Observations		10,946	10,946						
Clubs		61	61						
R^2		0.018	0.021						
Constant (matched teams) (p)		0.594*** (0.000)	0.596*** (0.000)						
One Parachute Club (p)	β_1	0.010 (0.182)	0.009 (0.207)						
P&S Rules (p)	β_2	0.044 (0.314)	0.043 (0.325)						
COVID Seasons (p)	β_3	-0.022 (0.594)	-0.020 (0.633)						
Parachute#P&SRules (p)	β_4	-0.014 (0.175)	-0.014 (0.185)						
Parachute#COVID (p)	β_5	-0.006 (0.717)	-0.006 (0.731)						
Home Parachute Club (p)	β_6	+0.006 (0.422)	+0.006 (0.440)						
Away Parachute Club (p)	β_7	-0.005 (0.545)	-0.005 (0.534)						
Home team promoted last year. (p)	β_8	-0.013* (0.072)	-0.013* (0.074)	+0.003 (0.954)	-0.042 (0.362)	+0.059** (0.023)	-0.047 (0.311)	-0.049 (0.192)	-0.038 (0.405)
Away team promoted last year. (p)	β_9	-0.005 (0.405)	-0.005 (0.431)	+0.017 (0.645)	-0.040 (0.345)	-0.011 (0.718)	+0.025 (0.619)	-0.000 (0.993)	+0.027 (0.612)
Home team relegated last year. (p)	β_{10}	-0.016* (0.066)	-0.016* (0.067)	+0.026 (0.516)	+0.035 (0.478)	-0.038 (0.311)	+0.020 (0.607)	+0.053 (0.233)	-0.003 (0.936)
Away team relegated last year. (p)	β_{11}	+0.005 (0.483)	+0.005 (0.496)	+0.036 (0.415)	+0.015 (0.722)	-0.026 (0.529)	+0.015 (0.716)	-0.020 (0.603)	-0.041 (0.337)
Home team manager changes (p)	β_{12}	+0.008*** (0.005)	+0.008*** (0.005)	-0.003 (0.880)	+0.027 (0.214)	-0.022 (0.237)	-0.008 (0.710)	-0.041** (0.017)	+0.031 (0.157)
Away team manager changes (p)	β_{13}	-0.005* (0.077)	-0.005** (0.060)	-0.014 (0.475)	-0.024 (0.157)	-0.010 (0.612)	+0.011 (0.646)	+0.031* (0.081)	+0.013 (0.448)
Home team summer transfers (p)	β_{14}	+0.001 (0.536)	+0.001 (0.594)						
Home team winter transfers (p)	β_{15}	-0.000 (0.822)	-0.001 (0.793)						
Away team summer transfers (p)	β_{16}	-0.002** (0.013)	-0.002** (0.016)						
Away team winter transfers (p)	β_{17}	-0.002 (0.345)	-0.002 (0.356)						
Home Log Player Book Value (p)	β_{18}	-0.001 (0.840)	-0.001 (0.857)						
Away Log Player Book Value (p)	β_{19}	0.005 (0.117)	+0.006 (0.103)						
Home Log Player costs exc. Parachutes (p)	B_{20}	-0.041*** (0.000)	-0.041*** (0.000)						
Away Log Player costs exc. Parachutes (p)	B_{21}	+0.024*** (0.003)	+0.023*** (0.004)						

Table 4.11 – Multivariate regression results for UI against parachute payments in the pre and post-PPS Period

Where:

Column 1 - Regression of one parachute club, the P&S rules and the COVID seasons on UI for all seasons, with interactions between the independent variables in a model, including fixed effects for the home club and month and season dummies **plus**

Home parachute club, Away parachute club, Home team promoted last year, Away team promoted last year, the Home team relegated last year, Away team relegated last year, Home team manager changes, Away team manager changes, Home team summer transfers, Home team winter transfers, Away team summer transfers, Away team winter transfers, Home team book value, Away team book value, Home team player costs exc. Parachute payments, Away team player costs exc—parachute payments.

Column 2 is as per column 5 except for the inclusion of weekly dummy variables of one for the first six games after a club manager changes and one for the first six games of the season for clubs promoted from League One or relegated from the EPL at the end of the previous year, e.g., a dummy value of one for match one, one for match two, etc. The coefficients for matches 1 - 6 are included in columns 3 - 8.

Of our newly introduced covariates, the β_6 coefficient for the home team receiving a parachute payment is not significant (p=0.422), and the β_7 coefficient for the away team receiving a parachute payment is also not significant. (p=0.545). We find that the β_{12} coefficient for the cumulative number of manager changes made by the home team up to the date of the match increases the UI by 0.008 units (p=0.005), whilst the β_{13} coefficient for the cumulative number of manager changes made by the away team reduces the UI by 0.005 units (p=0.077).

When we compare differences in size between the two sides, we find that the β_{18} coefficient for the home log player book value is not significant (p=0.840), and neither is the β_{19} coefficient for the away log player book value. (p=0.117). The β_{20} coefficient for the home team log player costs, excluding parachute payments, reduces UI by 0.041 units (p=0.000), whilst the β_{21} coefficient for the away team log player costs, excluding parachute payments, increases the UI by 0.024 units.

Only the number of players transferred during the summer transfer window impacts UI and only for the away team, where the UI is estimated to fall by 0.002 units (p=0.013) for the cumulative number of players transferred whilst the summer transfer window is open.

We find no significance for the β_9 coefficient for away clubs that had been promoted from League One in the previous season (p=0.405) or for the β_{11} coefficient for away clubs relegated from EPL in the previous season (p=0.483). Meanwhile, the β_8 for the home team promoted from League One in the previous season decreases the UI by 0.013 units (p=0.072), and the β_{10} for the home team relegated from the EPL in the previous season decreases the UI by 0.016 units (p=0.066).

In column 2, with the weekly covariates added, we find that the β_1 to β_3 coefficients are still not significant, which means that the UI for unmatched fixtures is no greater (p=0.207) than

matched fixtures (UI=0.596), P&S rules have not reduced the UI (p=0.325), and neither has the COVID restrictions (p=0.633). No significance is found for the interaction with the P&S rules or the COVID-affected seasons either, which shows that there is no disproportionate impact of P&S on the uncertainty of unmatched fixtures (p=0.185), and there is no disproportionate impact on the unmatched fixtures due to the COVID restrictions (p=0.731).

Of the additional covariates, we find the β_6 coefficient for the home team receiving a parachute payment is not significant (p=0.440), and the β_7 coefficient for the away team receiving a parachute payment is also not significant. (p=0.534). The β_{18} coefficient for the home log player book value is insignificant (p=0.857), and the β_{19} coefficient for the away log player book value is also not significant (p=0.103). The β_{20} coefficient for the home team log player costs, excluding parachute payments, reduces the UI by 0.041 units of UI (p=0.000), whilst the β_{21} coefficient for the away team log player costs, excluding parachute payments, increases the UI by 0.023 units of UI (p=0.004).

The β_{16} coefficient for the number of players transferred during the summer transfer window by the away team estimates a fall in the UI of 0.002 units (p=0.016) for the cumulative number of players turned over while the window is open. Meanwhile, the β_{14}, β_{15}, and β_{17} coefficients for the home team in both the summer (p=0.594) and winter (p=0.793) transfer windows or the away team in the winter window (p=0.356) are not significant.

When we consider the number of matches the bookmakers may need to adjust following a promotion or relegation, we find no significance for the β_9 coefficient for away clubs that had been promoted from League One in the previous season (p=0.431) or for the β_{11} coefficient for away clubs that had been relegated from the EPL in the previous season (p=0.496). Meanwhile, the β_8 for the home team promoted from League One in the previous season decreases the UI by 0.013 units (p=0.074), and the β_{10} for the home team relegated from the EPL in the previous season decreases the UI by 0.016 units (p=0.067). For β_{10}, we find that in the first six games of the season, the UI is estimated to increase by 0.059 units, but only for the $\beta_{10.3}$ coefficient for the third match of the season (p=0.023). However, we find no significance for the $\beta_{8.1}$ - $\beta_{8.6}$, $\beta_{9.1}$ - $\beta_{9.6}$ and $\beta_{11.1}$ – $\beta_{11.6}$ coefficients for home clubs promoted from League One, away clubs that had been promoted from League One and away clubs that had been relegated from the EPL in the first six weeks of the season.

When we consider the number of matches taken to adjust to a manager change, we find that the β_{12} coefficient for each cumulative manager change made by the home team during the season estimates an increase in the UI of 0.008 units for the rest of the season (p=0.005). Meanwhile, the β_{13} coefficient for each cumulative manager change made by the away team

during the season estimates a fall in UI for the rest of the season of 0.005 (p=0.060). For β_{12}, we find in the first six games after the manager change, we find significance only for $\beta_{12.5}$ which means if their fifth game in charge is a home game, then the UI falls by 0.041 (p=0.017) for that fixture and from $\beta_{13.5}$ if their fifth game in charge is away then the UI increases by 0.031 (p=0.081).

4.5 Discussion and Conclusion

We started this analysis with the assumption that

- Given the income inequality between parachute and non-parachute clubs, the UI should be lower for unmatched games between a non-parachute and a parachute club.
- Add home advantage to income inequality, and we expected the UI to be lower still when the parachute club plays at home.
- With maximum loss controls imposed by the P&S rules limiting non-parachute clubs' ability to compete with parachute clubs, we expected the UI to be lower for the unmatched fixtures after the P&S rules were implemented.
- the loss of matchday income due to COVID restrictions would further limit the amount non-parachute clubs can spend on players' wages. Consequently, the UI would be lower for the unmatched fixtures during the COVID-affected seasons

We initially find that fixtures involving a parachute club and a non-parachute club, i.e. unmatched in terms of income, are similar in uncertainty to games where two parachute clubs or two non-parachute clubs play each other. The P&S rules have made results generally more predictable, which, according to UOH, is bad for the Championship. Although these findings are at least in line with part of our a-priori expectations, they disappear when additional controls are included.

Based on our observations of movements in UI over time and supported by t-test results, we find from Table 4.7 Row 4's UI for all fixtures generally fell post-P&S by 0.007 units, while Row 2's UI for unmatched fixtures fell by 0.013 units. This suggests that the P&S rules have lowered the UI overall and confirms that the UI for fixtures between the parachute and non-parachute clubs has fallen further, which, according to UOH, would have been bad for the EFL Championship. We find from the t-test results in Table 4.8, row 4, that the UI for all fixtures has not significantly changed in the COVID-affected seasons compared to the other post-P&S periods, and neither has the UI fallen for matched and unmatched fixtures.

Meanwhile, by t-test, we find no significant difference in UI between unmatched and matched fixtures in the pre-P&S and post-P&S periods (before COVID) or in the COVID-affected seasons. So, whilst the UI for the unmatched fixtures has fallen significantly by 0.013 units in

the post-P&S period, it has not fallen to the extent that there is a significant difference between matched and unmatched fixtures in the post-P&S period.

In the univariate fixed-effects model, when our three controls are considered in isolation, we find no significance for any of them. The β_1 confirms the t-test finding that no significant difference exists between matched and unmatched fixtures. The β_2 coefficient is not significant. Therefore, the difference found by the t-test has disappeared after including club effects and season and month-of-season dummies. The lack of significance for the β_3 coefficient confirms the t-test finding that no significant difference exists between the post-P&S period and the COVID-affected seasons.

When we combine them in a single model with interactions between unmatched fixtures and the P&S rules and unmatched fixtures with the COVID-affected seasons, we find the P&S rules have increased the UI. According to OUH, this is good for the Championship as it implies that matches have generally become more uncertain. However, nothing in the P&S rules and the imposition of maximum loss controls would explain a general increase in unpredictability. This is also contrary to the t-test result, which suggested that UI has fallen by 0.008.

When we included the fourteen new covariates to break more information out of the club Fixed Effect in our full regression model, all our controls, even the P&S rules, were no longer significant. This means the UI for unmatched fixtures is not significantly different than for matched fixtures, and the UI has not been affected by the P&S rules or the COVID-19 restrictions. Furthermore, the UI for unmatched fixtures has not fallen relative to matched fixtures with the implementation of the P&S rules or the matchday restrictions due to the COVID-19 pandemic. This contradicts our expectations and the t-test result for the impact of the P&S rules on unmatched fixtures of 0.013.

We conclude that the impact of the parachute payments on unmatched fixtures, the impact of the P&S rules and the COVID-affected seasons on UI and the interaction of unmatched fixtures with P&S rules and COVID-19 are all not significant.

We find that other covariates have more significance on the uncertainty of outcome. Beginning with the number of manager changes the home and away teams have made in the current season. As the manager approaches the sack, there is sometimes an unexpected change in form or an even more rapid decline as the manager ‘loses the dressing room’, adding to the unpredictability of results immediately before the sacking. The new manager will face more of the same regarding results or benefit from the ‘new manager bounce’, which adds more uncertainty when predicting results. The number of manager changes the home side has made in the season to date increases the UI, as the extent of any new manager bounce is unknown, whilst the number of manager changes the away side has made decreases the UI,

probably due to home advantage growing in significance with each manager change by the away team. This is intuitive, as manager changes usually only happen when the results do not align with expectations. These are the same expectations that will, at least for a time, be informing the betting odds, that is, until the bookmakers start adjusting those expectations for trends in results. However, when we consider the number of matches it takes for the bookmakers to adjust to the 'shock' of a manager change, it would appear that there is no immediate change in form, or the bookmakers are good at adjusting their odds for a manager change. We find no difference in UI in the first six games after a manager change, except for the manager's fifth game in charge, where the UI increases if the manager's fifth game is at home. However, if it is away, the UI will decrease.

The UI decreases with every player turned over by the away team during the summer transfer window. This may be because the away team has the more unsettled squad, which adds to the home advantage. However, the home side's player turnover does not impact the UI of matches, as the effect is too slight to harm home advantage.

We find the UI for fixtures increases as the log of Home Player Costs, excluding Parachute Payments, increases, whilst the UI falls as the away team's log player costs increase.

We can only conclude that parachute payments have not directly impacted uncertainty if the home or away teams receive a parachute payment. Parachute payments have no impact on the fixtures where we expected the income imbalance to have made the fixtures less uncertain. Actions taken by the EFL, i.e., the imposition of the P&S rules and the COVID restrictions, have not generally reduced the uncertainty of match results, as measured by UI, nor disproportionately on the unmatched fixtures between a parachute and a non-parachute club. Actions by the football authorities have not impacted UI, which, according to UOH, will maintain fan interest and ensure the league's long-term survival.

However, UI has been impacted by changes in variables like the playing strengths of the home and away teams, as measured by the log of the annual player costs, which are more important to UOH. The reduction of the UI due to home player costs (excluding parachute payments) is countered by the away player costs (excluding parachute payments).

During the season, the number of manager changes up to the match in question will increase the UI with each manager change the home team makes, and the UI falls the more the away team changes its manager. Only the players transferred during the summer transfer window impact the uncertainty of fixtures, and then only the number of players the away team transfers reduces uncertainty.

4.6 Additional Tables and Appendices

Appendix 4.1 – Home Club Fixed Effects. Seasons in the Championship and Average Unpredictability Index Home and Away

Football Club	Champ. Seasons	Average Home UI	Average Away UI	Base FE (UI)	Final FE UI	Change in FE	Football Club	Champ. Seasons	Average Home UI	Average Away UI	Base FE (UI)	Final FE UI	Change in FE
Aston Villa	3	0.576	0.618	-0.043	-0.020	-0.023	Middlesbrough	13	0.600	0.643	-0.030	-0.011	-0.019
Barnsley	15	0.654	0.575	0.028	0.006	0.022	Millwall	16	0.651	0.643	0.023	0.008	0.014
Birmingham City	16	0.632	0.643	0.005	0.014	-0.009	Milton Keynes Dons	1	0.627	0.612	-0.003	-0.027	0.020
Blackburn Rovers	11	0.609	0641	-0.018	0.001	-0.019	Newcastle United	2	0.471	0.618	-0.151	-0.108	-0.040
Blackpool	9	0.641	0.631	0.008	-0.026	0.034	Norwich City	15	0.599	0.615	-0.027	-0.025	-0.001
Bolton Wanderers	7	0.627	0.556	-0.000	0.014	-0.014	Nottingham Forest	19	0.625	0.652	-0.001	0.024	-0.023
Bournemouth	4	0.597	0.617	-0.026	-0.009	-0.017	Peterborough Utd	4	0.642	0.549	0.012	-0.026	0.033
Bradford City	3	0.641	0.596	0.015	-0.070	0.085	Plymouth Argyle	6	0.645	0.632	0.014	-0.023	0.034
Brentford	7	0.602	0.640	-0.023	-0.001	-0.022	Portsmouth	5	0.603	0.613	-0.023	-0.026	0.003
Brighton & H Albion	9	0.621	0.643	-0.008	-0.003	-0.005	Preston North End	19	0.639	0.641	0.013	0.009	0.003
Bristol City	14	0.633	0.628	0.004	0.025	-0.021	Queens Park Ran.	17	0.637	0.635	0.010	0.010	0.001
Burnley	15	0.615	0.639	-0.015	-0.011	-0.004	Reading	18	0.609	0.633	-0.018	-0.009	-0.008
Burton Albion	2	0.628	0.611	0.007	-0.020	0.027	Rotherham United	10	0.658	0.558	0.032	-0.010	0.038
Cardiff City	18	0.613	0.653	-0.016	-0.011	-0.005	Scunthorpe United	3	0.664	0.532	0.032	-0.003	0.029
Charlton Athletic	7	0.685	0.618	0.051	0.046	0.005	Sheffield United	14	0.602	0.639	-0.027	-0.005	-0.021
Colchester United	2	0.642	0.615	0.011	0.004	0.007	Sheffield Wed.	17	0.652	0.652	0.026	0.031	-0.004
Coventry City	14	0.654	0.604	0.025	0.024	0.001	Southampton	5	0.619	0.642	-0.014	0.003	-0.015
Crewe Alexandra	5	0.632	0.578	0.007	-0.040	0.047	Southend United	1	0.690	0.625	0.072	-0.013	0.080
Crystal Palace	12	0.638	0.646	0.009	-0.002	0.011	Stockport County	2	0.670	0.548	0.053	0.018	0.031
Derby County	19	0.626	0.628	-0.002	0.015	-0.017	Stoke City	11	0.651	0.649	0.022	0.014	0.007
Doncaster Rovers	5	0.662	0.569	0.035	0.010	0.025	Sunderland	5	0.596	0.648	-0.036	-0.029	-0.005
Fulham	7	0.576	0.618	-0.048	-0.036	-0.012	Swansea	8	0.621	0.642	-0.007	-0.017	0.009
Gillingham	5	0.638	0.620	0.014	-0.019	0.033	Tranmere Rovers	1	0.671	0.466	0.054	0.020	0.030
Grimsby Town	3	0.656	0.569	0.037	0.002	0.035	Walsall	3	0.625	0.564	0.003	-0.026	0.030
Huddersfield Town	10	0.642	0.622	0.016	0.002	0.014	Watford	16	0.634	0.644	0.004	0.000	0.004
Hull City	12	0.627	0.636	0.000	-0.014	0.014	West Bromwich Alb.	10	0.592	0.658	-0.036	-0.053	0.016
Ipswich Town	17	0.627	0.633	-0.001	0.005	-0.006	West Ham United	3	0.596	0.659	-0.040	-0.001	-0.035
Leeds United	13	0.624	0.634	-0.005	0.010	-0.015	Wigan	8	0.635	0.630	0.008	-0.002	0.008
Leicester City	10	0.619	0.648	-0.012	-0.005	-0.007	Wimbledon	4	0.641	0.636	0.019	0.101	-0.078
Luton Town	6	0.651	0.586	0.024	0.013	0.011	Wolverhampton W.	13	0.629	0.643	0.000	0.025	-0.023
Manchester City	1	0.377	0.634	-0.245	-0.237	-0.008	* Excludes Wycombe and Yeovil, as there is no final UI calculated						

Appendix 4.2 - Clubs That Have Only Received Parachute Payments During Their Time in The Championship (2000/01 – 2022/23)

Club	Traditional League	Non-Parachute Mean	Standard error	90% conf. interval	Club	Traditional League	Non-Parachute Mean	Standard error	90% conf. interval
Aston Villa	EPL	0	(omitted)		Newcastle United	EPL	0	(omitted)	
Manchester City	EPL	0	(omitted)		West Ham United	EPL	0	(omitted)	

Appendix 4.3 - Clubs That Have Never Received Parachute Payments During Their Time in The Championship (2000/01 – 2022/23)

Club	Traditional League	Non-Parachute Mean	Standard error	90% conf. interval	Club	Traditional League	Non-Parachute Mean	Standard error	90% conf. interval
Barnsley	Champ	1	(omitted)		Milton Keynes Dons	EFL	1	(omitted)	
Brentford	EFL	1	(omitted)		Peterborough Utd.	EFL	1	(omitted)	
Brighton & Hove Albion	Champ	1	(omitted)		Plymouth Argyle	EFL	1	(omitted)	
Bristol City	Champ	1	(omitted)		Preston North End	Champ	1	(omitted)	
Burton Albion	EFL	1	(omitted)		Rotherham United	EFL	1	(omitted)	
Colchester United	EFL	1	(omitted)		Scunthorpe United	EFL	1	(omitted)	
Crewe Alexandra	EFL	1	(omitted)		Southend United	EFL	1	(omitted)	
Doncaster Rovers	EFL	1	(omitted)		Stockport County	EFL	1	(omitted)	
Gillingham	EFL	1	(omitted)		Tranmere Rovers	EFL	1	(omitted)	
Grimsby Town	EFL	1	(omitted)		Walsall	EFL	1	(omitted)	
Luton Town	EFL	1	(omitted)		Yeovil Town	EFL	1	(omitted)	
Millwall	Champ	1	(omitted)		Wycombe Wanderers	EFL	1	(omitted)	

Appendix 4.4 - Clubs That Have Seasons in Receipt of Parachute Payments and Some Seasons Where They Did Not During Their Time in The Championship (2000/01 – 2022/23)

Club	Trad. League	Non-Parachute Mean	Standard error	90% conf. interval		Club	Trad. League	Non-Parachute Mean	Standard error	90% conf. interval	
Birmingham C	Champ	62.50%	12.50%	41.89%	83.11%	Leicester City	Champ	70.00%	15.28%	44.82%	95.18%
Blackburn R	EPL	54.55%	15.75%	28.27%	80.83%	Middlesbrough	Champ	61.54%	14.04%	38.38%	84.70%
Blackpool	EFL	55.55%	17.57%	26.41%	84.70%	Norwich City	Champ	53.33%	13.33%	31.34%	75.32%
Bolton W	EPL	42.86%	20.20%	9.14%	76.57%	Nottingham F.	Champ	94.74%	5.26%	86.06%	103.41%
Bournemouth	EFL	50.00%	28.87%	2.11%	97.89%	Portsmouth	EFL	60.00%	24.49%	19.36%	100.64%
Bradford C	EFL	33.33%	33.33%	-21.97%	88.63%	Queens Park R	Champ	70.59%	11.39%	51.80%	89.37%
Burnley	Champ	60.00%	13.09%	38.41%	81.59%	Reading	Champ	66.67%	11.43%	47.81%	85.52%
Cardiff City	Champ	66.67%	11.43%	47.81%	85.52%	Sheffield Utd.	Champ	71.42%	12.53%	50.77%	92.09%
Coventry C	Champ	85.71%	9.71%	69.71%	101.71%	Sheffield Wed.	Champ	88.24%	8.05%	74.95%	101.51%
Crystal Pal.	Champ	83.33%	11.24%	64.81%	101.86%	Southampton	EPL	60.00%	24.49%	19.12%	100.01%
Derby County	Champ	78.94%	9.61%	63.10%	94.79%	Sunderland	EPL	20.00%	20.00%	-13.38%	53.38%
Fulham	EPL	14.29%	14.29%	-9.56%	38.13%	Stoke City	EPL	72.72%	14.08%	49.22%	96.23%
Hull City	Champ	50.00%	15.28%	25.14%	74.86%	Watford	Champ	62.50%	12.50%	41.89%	83.11%
Huddersfield T.	EFL	70.00%	15.28%	44.66%	95.34%	West Brom. Alb.	EPL	20.00%	13.33%	-2.25%	42.25%
Ipswich T.	Champ	88.24%	8.05%	74.96%	101.51%	Wimbledon	EFL	50.00%	28.87%	2.11%	97.89%
Leeds United	Champ	84.61%	10.42%	67.44%	101.79%	Wolverhampton W.	Champ	61.54%	14.04%	38.39%	84.69%

5 Conclusions

Chapters 2, 3 and 4, relying on econometric techniques for their analysis, provide new insight into financial distress, competitive balance, and uncertainty of outcome in the second tier of English football. Each chapter has implications for the main stakeholders of English Football, which are the subject of the following chapter.

As discussed in Chapter 1, English football is experiencing a period of historically high revenues. However, it has never been in so much 'financial distress' as it is now, especially in the second tier. The football authorities have implemented policies to promote financial sustainability in the EFL Championship. Namely, parachute payments to clubs recently relegated from the English Premier League (EPL), the implementation of the Profitability and Sustainability Rules in 2014/15 and the restrictions imposed on football by the COVID-19 pandemic between 2019/20 and 2021/22.

Chapter 2 is believed to be the first study to evaluate the impact of the financial fair play rules in the form of the EFL's Profitability and Sustainability rules on the EFL Championship. Based on previous research into financial distress within the football industry, we selected a suitable measure, e.g. Altman's z-score, by which the financial distress of clubs in the second tier of English football could be assessed, and the efficacy of the football authorities' interventions could be tested. A club Fixed Effects model with a dependent variable of z-score was used to account for the unobserved characteristics of individual football clubs to reduce the risk of omitted variable bias.

Chapter 3 considered the impact of parachute payments, the P&S rules and the COVID-19 pandemic on an appropriate measure of competitive balance for the league. Using a club Fixed Effects model to reduce the risk of omitted variable bias, we regress a unique and original set of variables, in addition to the unitary indicators for receiving a parachute payment, the P&S Rules and the COVID-affected seasons, with points per game as the dependent variable. This result was compared with results for regressions with promotion prospects and the Herfindahl Index of Competitive Balance (HICB) as the dependent variable.

We believe Chapter 4 is the first study into the impact of parachute payments, P&S rules, and the COVID-affected seasons on the uncertainty of outcome at an individual fixture level. Using McHale's Uncertainty Index as our measure of uncertainty, we also take account of the unobserved characteristics of respective football clubs using Fixed Effects to reduce the risk of omitted variable bias, and we regress a unique and original set of variables in our regression model.

5.1 Football Authorities

The results of Chapter 2 may have implications for the new independent football regulator who has arbitration rights over the EPL and EFL league administrators' future policy regarding the continuing use of parachute payments and the setting of future P&S rules, especially in a problematic post-COVID environment.

The headline results confirm that the average Championship club is in 'financial distress' with an average z-score of -2.2, where anything below a z-score of +1.23 denotes the club would be in the 'bankruptcy risk is high' category, i.e. the club is highly likely to descend into bankruptcy in the next 12 months. Furthermore, nearly 90% of the observations in the data are for clubs whilst they are in the 'bankruptcy risk is high' category. However, football is unique in that the clubs can continue to operate whilst, in all other industries, they would have long since gone bust.

From Table 2.7, the average EBIT of the clubs not receiving parachute payments has significantly decreased to -£8.99m per annum in the post-P&S period, whilst the decrease in EBIT for the parachute clubs in the post-P&S period has been more modest, decreasing to just -£5.96m, despite the imposition of loss controls by the P&S rules. Meanwhile, the average EBIT for all clubs has significantly fallen to -£7.91m in the post-P&S period from -£4.31m pre-P&S. The loss controls would appear to have failed to effectively reduce losses because the value of the maximum loss set by P&S rules was greater than that set under the previous FFP regime. However, even with the decrease in EBIT of the non-parachute clubs relative to the parachute clubs in the post-P&S period, they are not significantly different from one another in either the pre-P&S or post-P&S period.

It is presumed that these observed decreases in EBIT between the pre-and post-P&S periods for all clubs and the non-parachute clubs should lead to a deterioration in the z-score. However, in Table 2.8, we find no such decline in z-score between the pre-and post-P&S periods for all or non-parachute clubs only.

When we controlled for the unobserved characteristics of the individual football clubs and the interaction between parachute payments and the P&S rules, we find the impact of the P&S rules on losses was not significant, even at a 10% significance level. This means the average club's EBIT has not significantly declined in the post-P&S period. We conclude that the EBIT of individual clubs has not significantly decreased per se between the pre-and post-P&S periods and that the observed headline decrease in EBIT was due more to the different mix of clubs that comprise the sample in the pre-and post-P&S periods. Furthermore, we conclude that the increase in permitted loss between the old FFP and the new P&S regimes has not caused a race towards the new loss limits as we had initially surmised.

Turning now to the difference in the z-scores between the parachute and non-parachute clubs, we find the non-parachute clubs are significantly disadvantaged in terms of z-scores compared to the parachute clubs. However, the difference in EBIT in both the pre-and post-P&S periods is found to be statistically no different than zero.

We find that the difference in z-score arises not from the X_3 component of the z-score, which includes EBIT, but from the X_2 component, which is the ratio of retained earnings over total assets.

Again, no statistical difference was found between the retained earnings of a parachute club and a non-parachute club. Therefore, we conclude that the difference in X2 is due to the difference in asset value between the parachute and non-parachute clubs, with the average parachute club being some £12m bigger than the average non-parachute club.

This is contrary to our expectations that the parachute payments should improve the club's EBIT due to the increase in sales caused by the difference in parachute payments compared with solidarity payments. We can only conclude that the extra money is being spent on player costs, and according to Michie and Oughton (2004), this may lead to competitive imbalance.

Furthermore, when we group the clubs by a shared recent history by allocating the clubs between the leagues in which they have spent the majority of their time in, we find that the difference in z-scores disappears across all these league groupings. This suggests that clubs that share a common recent history are more equally matched in terms of infrastructure and asset values, and hence, there is no difference in z-score. We conclude that parachute payments bestow no advantage on z-scores for clubs of a similar league standing, and the advantage identified in terms of z-score for all clubs is more a product of parachute payments and their recent league history rather than the parachute payments on their own. The observed advantage in the z-score from parachute payments found in Table 2.9 is because we are comparing a large traditional EPL club with a parachute payment with a small, lower EFL club without a parachute payment. However, the difference disappears once we control for this by splitting our sample.

Despite their best intentions, we conclude that parachute payments do not affect the financial sustainability of clubs of similar league standing in the pre-P&S period, and the interaction coefficient shows that the parachute payments do not increase the parachute club's z-score in the post-P&S period or the COVID-affected seasons either. Because the clubs are spending this extra income rather than using it to reduce financial distress, they may be damaging the competitive balance of the Championship for no apparent benefit to the financial distress of the parachute clubs. This is also confirmed by the lack of any statistical difference in Table 2.7

for EBIT between the parachute and non-parachute clubs in the pre-P&S, post-P&S periods or COVID-affected seasons.

Regarding policy advice, it is understood that the P&S rules were intended to promote financial health. This chapter, by reviewing the components of z-score, has shown that the EFL could be pulling many more levers to ensure an improvement in z-score rather than relying solely on the current loss controls, which have yet to prove very successful.

In Table 5.1, we present some sensitivity analysis in z-score for a £10m improvement in the underlying financial variables that form the ratios contained within Altman's z-score when the other variable in the ratio is held constant. Whilst we cannot be sure that the improvements laid out here are sufficient to move the z-score overall, as we had found previously for the P&S coefficient for X_4, these possible improvements in the z-score could still help inform the direction of travel for future limits and targets as part of any new P&S rules:

X Variable	Denominator (Left-Right)			Assets		Liabilities	
	Numerator (Up-Down)	Current Change		Current +£64.9m	Change +£10m	Current £76.4m	Change +£10m
			Row/Col	1	2	3	4
X_1	Working Capital	-£37.7m	1	-0.42	+0.06		
		+£10m	2	+0.11	+0.15		
X_2	Retained Earnings	-£66.5m	3	-0.87	+0.12		
		+£10m	4	+0.13	+0.23		
X_3	EBIT	-£5.7m	5	-0.27	+0.04		
		+£10m	6	+0.48	+0.45		
X_4	Equity	£76.9m	7			+0.42	+0.06
		+£10m	8			+0.05	+0.13
X_5	Total Sales	+£40.7m	9	+0.63	-0.08		
		+£10m	10	+0.15	+0.05		

Table 5.1 - Sensitivities in the Underlying Financial Variables

Table explanation:

X_1 - for a given average working capital of -£37.7m, a £10m increase in Total Assets would improve X_1 by 0.06 units of z-score (from row 1, Column 2); for a given average Asset value of £64.9m, a £10m increase in working capital would increase the X_1 value by 0.11 units of z-score from -0.42 (from row 2, Column 1). Because working capital starts as a negative value, a £10m increase in working capital and total assets would see an improvement in X_1 of 0.15 units of z-score (from row 2, column 2).

X_2 - for a given average Retained Earnings of -£66.5m, an asset increase of £10m would improve the X_2 value by 0.12 units of z-score from -0.87 (from row 3, Column 2). For a given asset value of £64.9m, a £10m increase in Retained Earnings would increase the X_2 by 0.13 units of z-score (from row 4, Column 1). Because retained earnings start as a negative value,

then a £10m increase in retained earnings and total assets would see an improvement in X_1 of 0.23 units of z-score (from row 4, column 2).

X_3 - for a given EBIT of -£5.7m, an increase in assets of £10m would improve the X_3 value by 0.04 units of z-score from -0.27 (from row 5, Column 2), for a given asset value of £64.9m, a £10m increase in EBIT would result in an increase in X_3 of 0.48 units of z-score (from row 6, Column 1) and a £10m increase in both EBIT and total assets would see an improvement in X_3 of 0.45 units of z-score (from row 6, Column 2). This alone would seem to support the use of loss controls in current P&S rules as a £10m improvement in EBIT creates potentially the most significant increase in z-score.

X_4—For a given Equity value of £76.9m, a £10m reduction in liabilities would increase the X4 value by 0.06 (from row 7, Column 4); for a given Liabilities value of £76.4m, a £10m increase in equity would increase the X4 value by 005 units of z-score (from row 8, Column 3); and a £10m increase in equity and a £10m fall in liabilities would see an improvement in X_4 of 0.13 units of z-score (from row 8, Column 4).

X_5 - for a given Sales amount of £40.7m, an increase in assets of £10m would reduce the X_5 value by -0.08 units of z-score from +0.63 (from row 9, Column 2). For a given asset value of £64.9m, a £10m increase in Sales would result in an increase in X_5 of 0.15 units of z-score (from row 10, Column 1), and a £10m increase in both Sales and total assets would see an improvement in X_5 of 0.05 units of z-score (from row 10, Column 2).

In conclusion, we suggest that the EFL policy designed to improve football clubs' financial distress should involve a ‘pick and mix’ selection from a package of targets rather than just a simple maximum loss target. For instance, clubs could be allowed to make a bigger loss if improvements are made to working capital or clubs invest in assets.

Because of the X_3 weighting in the z-score formula, the sensitivity analysis shows that EBIT has the biggest benefit in terms of the z-score received for a £10m improvement in the underlying financials. So the EFL were right to include loss controls in the current P&S rules, but a ‘one-size-fits-all’ target, as we have now in the present P&S rules, is certainly not fair to all clubs. For example, the current £13m loss limit to a big EPL team is worth -1.55 in terms of z-score, whilst to a lower EFL club, the same £13m loss is worth -3.67 in terms of z-score.

Therefore, we suggest the target package should be tailored based on the club's heritage and majority league standing, with different targets set for the ‘big’ traditional EPL clubs, the medium-sized traditional Championship clubs and the ‘small’ lower EFL clubs.

While we suggest this ‘Pick and Mix’ approach as a possible basis for future P&S rules, deriving a practical framework of limits and targets is beyond the scope of this research.

Regarding policy advice, it is understood that P&S came in to safeguard football finances but inadvertently may create a competitive imbalance. It could be argued that constraints that act disproportionately on one group of clubs because the other group is being artificially funded (subsidised) by the parachute payments cannot be good as it widens the gap in income between the parachute clubs and non-parachute clubs. Parachute payments, working in tandem with the P&S restrictions placed on overspending by ambitious, wealthy owners, serve only to maintain 'closed shop' in respect of EPL membership, in the same way that the seeding and ranking system maintains the status quo in the UEFA Champions League. Plumley and Flint, (2015)[169]

Left unchanged, the current legislation could lead to a significant decline in competitive balance and, in effect, result in the domination of relegated teams as relative 'super clubs' whilst they are in the Championship (Morrow, 2003). If the parachute payments in conjunction with P&S are creating a bias, in that parachute payment clubs have a competitive advantage and that prospects for promotion are enhanced, they are, in effect, creating an EPL monopoly that is detrimental to the Championship (Dobson & Goddard, 2011).

Whilst sensitivity analysis shows that loss controls still offer the best return in terms of z-score for a £10m change in EBIT, we suggest that the EFL could tailor future P&S policy so that it offers a 'pick and mix' approach to P&S compliance, with clubs free to choose from a range of alternative sustainability-led financial targets to suit their circumstances. For example, a club would be allowed to overspend on player costs if offset by increased working capital, allowing them to safely compete with the parachute clubs in a financially sustainable way and avoid the competitive imbalance issue.

5.2 Football Club Fans

Chapter 3 analyses trends in competitive balance at a league level, while Chapter 4 tests the Uncertainty of Outcome hypothesis (UOH) using bookmakers' odds to provide the probability of match outcomes. The two approaches seek to test the uncertainty of outcomes from opposite ends of the spectrum. Analysis of Competitive Balance (ACB) tracks changes in a suitable measure of Competitive Balance over time. UOH concentrates on the uncertainty of outcome at a single point in time, e.g., matchday.

From the previous research into ACB and UOH within the football industry, as discussed in detail in chapters 3 and 4, we selected a suitable measure of competitive balance, e.g. points

[169] Using the Herfindahl-Hirschman Index (HHI) to examine competitive balance and one way ANOVAs to examine the impact of the current seeding system on prospects for progression to the knock out stages found that clubs that are placed amongst highest seeds historically tend to end up with more points and have a better opportunity to qualify to progress further in the competition.

per game and unpredictability, e.g. McHale's Unpredictability Index (2016), by which the impacts of the interventions by the football authorities can be tested. We now discuss the results of Chapters 3 and 4, as regards competitive balance issues within the Championship, from the fan's perspective.

It is the established view from the literature that match uncertainty is significant to the average fan as matchday attendances increase with stronger competition and the greater the uncertainty of the result (Wilson, Plumley, & Barratt, 2015). Sports fans are believed to favour fixtures where both teams have an equal chance of winning (e.g. the possibility of a win is near 50:50), (Levin, 2009).

Whilst our analysis of the determinants of movements in competitive balance and UOH is interesting in its own right, fundamentally, it is their impact on a club's match attendance that is most important. For this purpose, we now choose the Herfindahl Index of Competitive Balance (HICB) over points per game as our measure of competitive balance. Whilst points per game was useful as a relative measure between the parachute and non-parachute clubs, it is not so useful as a measure of overall competitive balance for the league.

As we are looking at the average attendance for each club in a season, we need a measure of UI to compare against. It is assumed that a reasonable driver of home attendance would be the average UI of the home team per season. The seasonal UI is calculated for a team as the average of the individual match UI's where the team is the home team. The average of all teams then gives the average UI for the season.

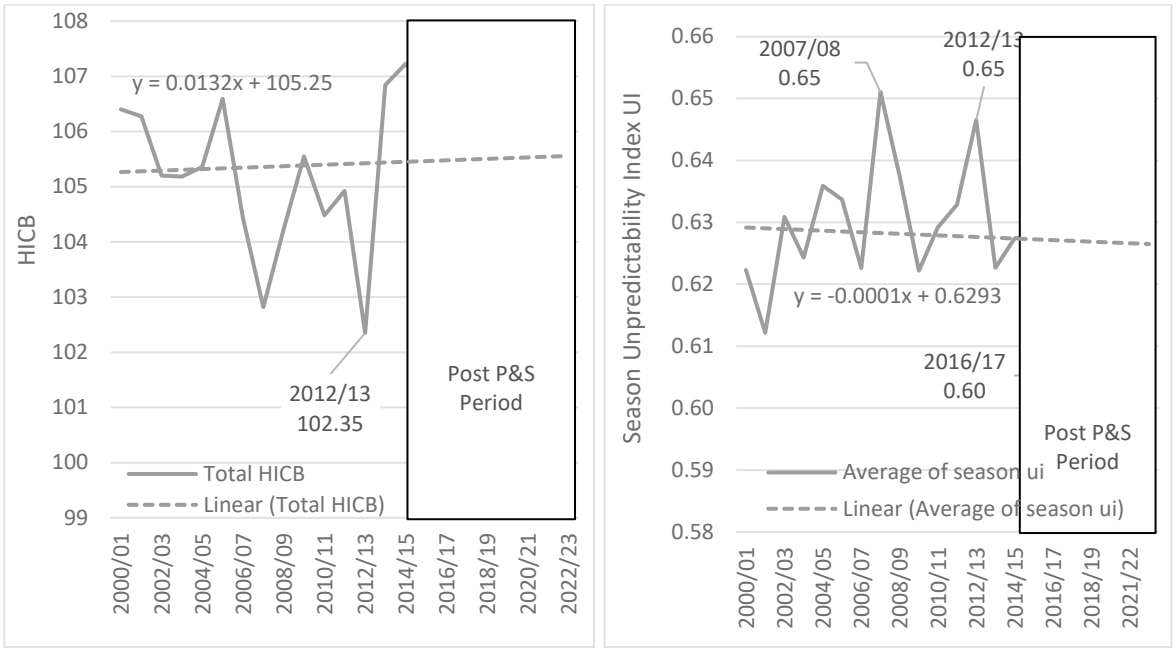

Chart 5.1- Championship HICB and UI (2000/01-2022/23)

According to Chart 5.1, the league HICB has been increasing by 0.0132 per year, and the average home team UI has been declining by 0.0001 per year. HICB was at its lowest in 1012/13 at 102.35 and peaked at 107.23 at the beginning of the P&S period (2014/15). It remained high until 2019/20, when it dropped to 103.88, coinciding with the first COVID-affected season. The average UI peaked at 0.65 in 2007/08 and 2012/13 and troughed at 0.60 in 2016/17.

The rising trend in HICB suggests a fall in competitive balance, which should harm Championship attendance. According to UOH, the fall in UI should also harm Championship attendance.

For demand, aggregate attendance is an obvious choice to measure fans' willingness to pay for football. However, due to promotion and relegation, the mix of clubs can cause attendance to go up purely because of its component teams, e.g., the inclusion of Newcastle United in 2009/10 and 2017/18. Stadium utilisation may be better, as this may fluctuate less due to the mix of clubs than aggregate attendance.

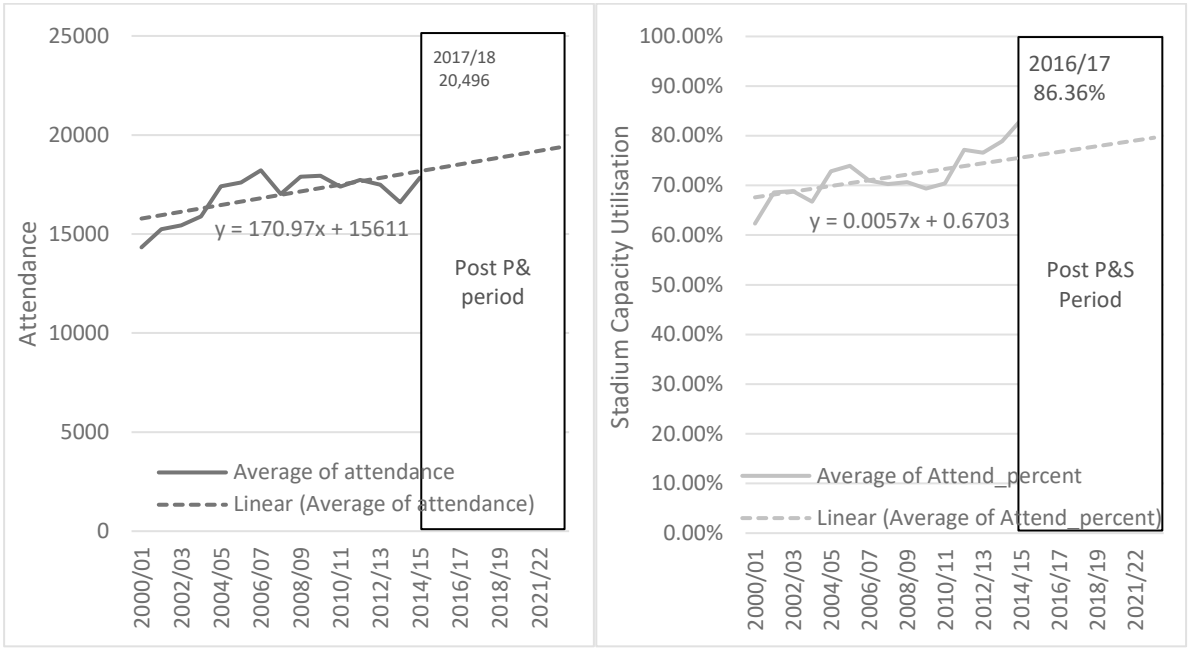

Chart 5.2- Championship Attendance and Stadium Utilisation (2000/01-2022/23)

According to Chart 5.2, the average attendance has grown by 171 per year, while utilisation has grown by 0.6% per annum. Average attendance peaked at 20,496 in 2017/18, when Newcastle United were in the Championship, and capacity utilisation peaked at 86.36% in 2016/17. There was no attendance in 2020/21, so that year is excluded from the charts. Meanwhile, competitive balance has declined in the Championship, as measured by an increasing HICB and a declining UI.

Using a club Fixed Effects model, we confirm that the relationship between UI and attendance is negative and between HICB and attendance is positive.

	Attendance	Stadium Utilisation	Attendance	Stadium Utilisation
Constant	25,694*** (0.000)	0.968*** 0.000	12,878*** 0.000	0.541*** 0.000
Season UI	-15,785* (0.000)	-0.432** (0.000)		
HICB			654*** 0.000	0.019*** 0.000
Parachute Club	1,920*** (0.000)	0.069*** (0.000)	1,610*** (0.000)	0.034** 0.014
P&S Rules	4,166*** (0.000)	0.151*** (0.000)	4,134*** (0.000)	0.060*** (0.001)
COVID	-2,460*** (0.000)	-0.096*** (0.000)	-2,090*** (0.000)	-0.085 (0.000)
Parachute club#P&S Rules	-1,018 (0.162)	-0.032 (0.199)	-675 (0.316)	-0.022 (0.357)
Parachute club#COVID	1,111 (0.338)	0.014 (0.711)	+490 (0.648)	-0.004 (0.907)
R^2	0.177	0.102	0.265	0.151
No of Observ.	528	528	528	528
No of Clubs	62	62	62	62

Table 5.2 – Regression Results for Attendance on HICB and UI (200/01-2022/23)

This negative relationship between UI and attendance, i.e., a fall in unpredictability, is increasing attendance, which, according to UOH, should be the opposite case.

Meanwhile, parachute payments add 1,920 paying customers and 6.9% to stadium utilisation. Post P&S, the matchday attendance has increased by 4,166, and stadium utilisation has increased by 15.1%. However, matchday attendance has fallen by 2,460 when allowed, and stadium utilisation has fallen by 9.6%.

The positive relationship with HICB indicates that attendance in the Championship has risen with less competitive balance, which, according to competitive balance theory, an increase in HICB should reduce attendance.

Meanwhile, parachute payments add 1,610 paying customers and 3.4% to stadium utilisation. Post P&S, the matchday attendance has increased by 4,134, and stadium utilisation has increased by 6.0%. However, matchday attendance has fallen by 2,090 when allowed, and stadium utilisation has fallen by 8.5%.

The interaction of parachute payments, the P&S rules, and parachute payments and COVID is not significant in any model; i.e., there has been no discriminatory impact of COVID and P&S on the non-parachute clubs.

The parachute payments have facilitated spend on players' wages and transfer fees. Player quality improvements, as represented by these increasing player wages and higher transfer

fees in the Championship, have been seen to boost TV audiences for Championship games (Buraimo & Simmons, 2015) and this increased TV exposure has been found to boost matchday attendance (Noll, 2007).

This could also explain the increase in attendance following the implementation of the P&S rules due to their inadvertent consequence of increased player costs funded by the increased losses we found in Chapter 2.

During the COVID-affected seasons, mass gatherings such as attending football matches were seen as pandemic breeding grounds (Reade, Yeo, & Olczak, 2020). Lingering health and safety concerns deterred some fans from returning to football stadiums instantly (BBC, 2021). Only in 2022/23 did attendance return to the pre-COVID trend.

Given that attendance remains very healthy in the Championship, it would appear, prime facie, that attendance seems to be higher if the result is more certain. A fall in competitive balance does not seem to deter attendance. This demonstrates that there exists a more complex relationship between fans and competitiveness and uncertainty, such as promotion and relegation, which maintain fan interest long into the season (Brandes & Franck, 2007).

Humphreys and Zhou (2015) found fans' have different preferences for attending matches over that of UOH, from a simple home-win preference to the impact of loss aversion. Their model includes the 'league standing effect', which refers to league-level uncertainty, as well as the home win probability.

Our findings seem to concur with those of Forrest et al.[170] (2005), who found that measures to promote competitive balance, such as revenue sharing or, in our case, the equalisation of parachute and solidarity payments, could have a counterproductive impact on attendance given home advantage and a preference to see a home win (Humphreys & Zhou, 2015).

An alternative to this simple approach would be to build upon the work of Humphreys and Zhou (2015) and consider attendance as a function of probabilities of outcomes and our other regressors. By including the home win probability and its square, as they do, we would be introducing uncertainty since the square of the probability achieves its highest value when the probability is at 0.5. In assuaging how good bookmakers were at predicting outcomes, say, after the P&S period, we suggest the methodology of Fischer and Haucap (2020), who looked

[170] Pro-competitive balance measures, such as revenue sharing may ignore the phenomenon of home advantage. However, if all teams have equal talent then matches become heavily weighted in favour of the home team. In an analysis of the EFL their simulation model predicts that team equality would lower aggregate attendances as the most uncertain games, where weak teams have home advantage over strong teams, would disappear. (Forrest, Beaumont, Goddard, & Simmons, 2005)

at the impact of ghost games during the COVID-19 pandemic on the accuracy of the bookmaker's predictions.

The method is to regress outcomes on bookmaker odds:

$$yijt = \alpha 0 + \alpha 1 \hat{y}ijt + \varepsilon ijt,\ \varepsilon ijt\ (0, \sigma 2). \qquad (1)$$

Here, if $\alpha 0 = 0$ and $\alpha 1 = 1$, then in expectation $E(yijt) = \hat{y}ijt$, hence on average, forecasts are correct. This implies that the forecast is efficient — nothing more is needed to predict outcomes since the error εijt is distributed with a mean of zero and a constant variance ($\sigma 2$). A common transformation of this is to subtract the forecast:

$$\hat{e}ijt = \beta 0 + \beta 1\ \hat{y}ijt + eijt, \qquad (2)$$

where $\beta 1 = \alpha 1 - 1$ and $\hat{e}ijt = yijt - \hat{y}ijt$ is the forecast error.

Additional variables can be added to the right-hand side of (2). Hence, this is not dissimilar to the specification we have already run with the McHale uncertainty (or surprise as per Buraimo et al. (2020)) where the index $((H - pH)^2 + (D - pD)^2 + (A - pA)^2)$ is similar to the forecast error.

The method in (1) and (2) is known as the Mincer-Zarnowitz regression test method (Mincer and Zarnowitz, 1969). Specifically, to check whether P&S changed predictability, you would add a dummy variable (P S) that is 1 for the seasons after the rules were introduced. We would suggest introducing that dummy and also interacting it with the outcome variable, hence:

$$\hat{e}ijt = \beta 0 + \hat{y}ijt + \gamma_0 PS + \gamma_1 PS \times \hat{y}ijt + eijt. \qquad (3)$$

The test that matches became more or less predictable would be whether $\gamma_0 = \gamma_1 = 0$. We would anticipate that bookmakers adjusted fairly quickly. So it may be interesting to test different specifications of P&S, for example, where the dummy value is one for the season after P&S, and a dummy of 1 for the first (say) three months of the first season after P&S.

5.3 Football Club Owners

In Chapter 2, we confirm that Championship clubs are in 'Financial Distress' with an average z-score of -2.2, where anything below a z-score of +1.23 denotes the club would be in the 'bankruptcy risk is high' category, i.e. the club is highly likely to descend into bankruptcy in the next 12 months. Furthermore, for nearly 90% of the observations, the Championship clubs are in the 'bankruptcy risk is high' category.

However, football is unique in that the clubs can continue to operate whilst, in all other industries, they would have long since gone bust due to benevolent owners. Club owners exhibit many 'Too Big To Fail' traits in their behaviour in their desire to achieve promotion up to the point when they either lose interest or the wherewithal to stay in the game, e.g. Mel

Morris at Derby County, whose tenure at the club saw overspending, debts amassed, problems with P&S, a points deduction, a transfer embargo and finally administration.

The parachute payments allow wages to be higher. As spending on players' salaries is strongly correlated with league performance, i.e. wage spending accounted for 89 per cent of the variation in league positions, parachute club owners are encouraged to spend their parachute windfall on playing staff in a bid to return to the EPL quickly. Our findings in Chapter 2 suggest that club owners use the additional income provided by parachute payments on players rather than improving financial sustainability.

In the pre-P&S period, the non-parachute clubs tried to keep up with inflated wages and transfer fees by overspending. Consequently, both parachute and non-parachute clubs ended up worse off financially [171].

Judging by the number of clubs entering administration before the points deduction for entering Administration was introduced in 2004/05 and to a lesser extent since, it is evident that the owners, left to their own devices, would happily risk long-term survival for short-term success and promotion to the EPL. Even with the P&S rules in place, clubs have still had points deducted for overspending or other financial irregularities: Birmingham City, Sheffield Wednesday, Reading (twice), and Derby County.

Our findings in Chapter 2 suggest that the owners of the smaller clubs are penalised by a blanket limit on losses if financial sustainability is to be measured by a ratio-led measure, which uses assets, i.e. club size as the denominator, as losses are magnified the smaller the club is. We can find no evidence to suggest in Chapter 2 that the current limits constrain non-parachute clubs disproportionately compared to parachute clubs. However, there will be a time soon, as parachute payments continue to rise faster than solidarity payments, when the non-parachute clubs become unable to compete with players by overspending more or if the EFL decides to lower the limit.

Club owners should campaign for the 'Pick and Mix' approach to future P&S rules as it would offer them a flexible approach to sustainability that suits their circumstances rather than forcing them into a 'one-size-fits-all' mechanism.

Nevertheless, whatever happens regarding legislation, the clubs have a responsibility to their local community to protect the club as an Asset of Community Value, which they are in charge of for a relatively short period. Perhaps putting fans on the Board, as legislated following the UK Government's Fan-Led Review of Governance Football (Crouch, T, 2021), before it

[171] the Nash equilibrium in prisoner's dilemma, e.g. where both agents in the 'economic game' are worse off even though they both select their optimal strategies

becomes mandatory would help boards act responsibly and could temper the overambitious calls from the terraces.

Our other research findings suggest that non-parachute clubs have opportunities to compete with parachute clubs; they need to maximise their non-parachute income, invest in assets, including players, and spend more on players' wages. However, from Chart 5.3, the returns diminish per million pounds of Non-parachute income, Player Costs excluding parachute payments, and Total Assets.

Turning to club strategy, the first opportunity available to non-parachute clubs is to maximise non-parachute income, as they start from a position of near parity with the parachute clubs and seem to offer the highest points return per £m.

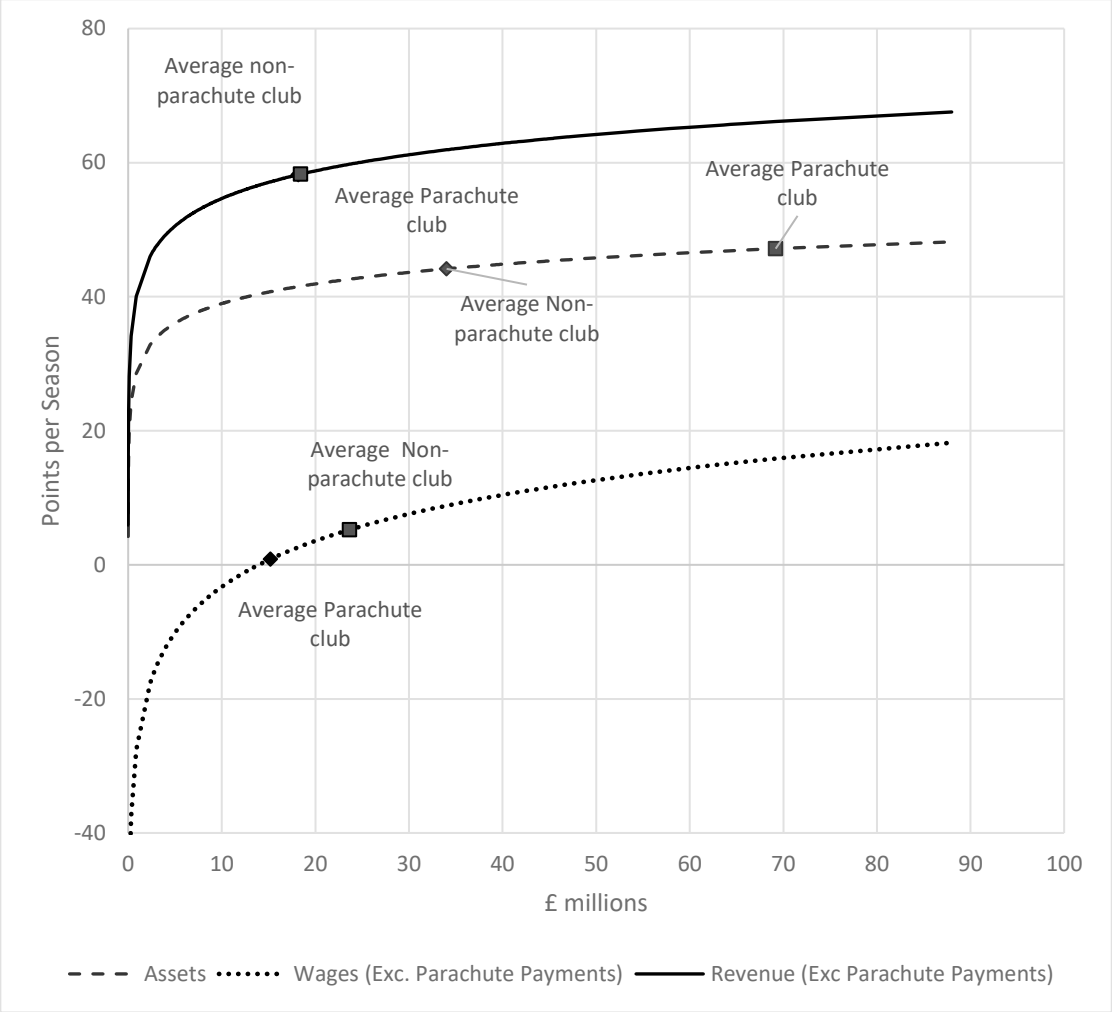

Chart 5.3 - Diminishing Returns of Points per Season per £million (2000/01-20022/23)

The average non-parachute revenue of £18.4m is similar to that of the average non-parachute club of £18.1m. From our regression analysis, this income would yield for the parachute and non-parachute clubs 58 points each. As the returns diminish, an increase of £10m in non-

parachute income for the non-parachute clubs relative to the parachute clubs would add 3.5 points.

New owners of Birmingham City have noted this as a strategic opportunity available to them:

> "Two years from now our revenue base will be competing right up against the parachute teams in the Championship. That's unheard of for a team in the Championship to be generating those kinds of revenues."
>
> Tom Wagner
> Birmingham City CEO
> (Wilding, 2024)

The player spending of non-parachute clubs (excluding parachute payments) at £23.7m is greater than that of the parachute clubs at £15.2m. We would expect this as they have to compete with the parachute clubs' player spending, funded by parachute payments. Our regression results suggest this gives the non-parachute clubs an advantage of 4.4 points. Because of diminishing returns, an additional £10m spent by the non-parachute clubs relative to the parachute clubs would add 3.3 points.

By virtue of years spent in the EPL, the parachute clubs have bigger Total Assets at £69.2m compared to the average non-parachute club of £34.6m. However, unless the investment in assets will provide more non-parachute income and facilitate more player spending, the investment provides a scant reward for one million pounds in investment. The gap in points is just 3 points for a difference in assets of £34.6m.

Other significant variables include years in the league, which shows the importance of getting out of the championship as soon as possible. Each year after relegation or promotion, the average points per game tally falls by 0.028 or 1.2 points per season. This is partially offset by years squared, our 'league experience' measure of 0.002 points per game or 0.1 points per season, but it would take 13 years before the positive impact of the years squared would exceed the negative of years in the league. Getting out of the league remains a priority for any club, especially those relegated from the EPL.

Clubs that have increased their debt have done marginally better in accruing points per game, +0.002 or 0.1 points per season, but the impact is too small to consider in a club's strategy, especially as the P&S rules limit the losses a club can make if it is funded by debt.

The EBIT coefficient is not significant, suggesting that clubs do not benefit in terms of points per game from increasing losses. This is an important finding, given that the P&S rules act directly on overspending by limiting the losses allowed. This implies that the maximum loss controls could be reduced without impacting points per game.

6 References

Adams, R., & Kupper, S. (1994). The Effect of Expertise on Peak Performance: The Case of Home-Field Advantage. *Journal of Sport Behaviour, 17*(2), 108-119.

Advanced Television. (2017, Sept 12). *Sky Sports Wins Live EFL Rights*. Retrieved from advanced-television.com: https://advanced-television.com/2017/09/12/sky-sports-wins-live-efl-rights/.

Alaminos, D., & Fernández, M. A. (2019). Why do football clubs fail financially? A financial distress prediction model for European professional football industry. *PLoS ONE, 14*(12).

Alavy, K., Gaskell, A., Leach, S., & Szymanski, S. (2010). On the edge of your seat: demand for football on television and the uncertainty of outcome hypothesis. *International Journal of Sport Finance, 5*(2), pp. 75-95.

Allison, P. (2009). *Fixed effects regression models* (Vol. 160). SAGE publications. doi:10.4135/9781412993869

Altman, E. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The journal of finance, 23*(4), 589-609.

Altman, E. I. (1983). *Corporate Financial Distress.* New York: Wiley Interscience.

Altman, E. I. (1993). *Corporate Financial Distress and Bankruptcy* (2nd ed.). New York: John Wiley & Sons.

Altman, E., Iwanicz-Drozdowska, M., Laitinen, E., & Suvas, A. (2017). Financial distress prediction in an International context: A review and empirical analysis of Altman's Z-Score model. *Journal of International Financial Management & Accounting, 28*(2), 131–171.

Ambille, I. (2023, January 05). *How the EFL Championship prize money works 2023/2024*. Retrieved April 05, 2024, from interestingfootball.com: https://interestingfootball.com/how-the-efl-championship-prize-money-works/

Andersson , P., Edman, J., & Ekman, M. (2005). Predicting The World Cup 2002 in Soccer Performance and Confidence of Experts and Non-Experts. *International Journal of Forecasting*, 565-576.

Andreff, W. (2007). French Football: A Financial Crisis Rooted in Weak Governance. *Journal of Sports Economics, 8*(6), 652–661.

Andreff, W. (2015). Club governance and budget constraints in European and French football. *Université Paris1 Panthéon-Sorbonne (Post-Print and Working Papers)*.

Anjun, S. (2012). Business bankruptcy prediction models: a significant study of the Altman's Z score model. *Asian Journal of Management Research, 3*(1), 212-219.

Antonioni, P., & Cubbin, J. (2000, March 1). The Bosman Ruling and the Emergence of a Single Market in Soccer Talent. *European Journal of Law and Economics*.

Arrondel, L., Gayant, J.-P., & Laslier, J.-F. (2023). Economic Analysis of the 12th Man: Should Fans Be Paid? *PSE Working Papers*(halshs-03962599).

Ascari, G., & Gagnepain, P. (2007). Evaluating Rent Dissipation in the Spanish Football Industry. *Journal of Sports Economics, 7*(1), 468–490.

Ashbourne News. (1901, September 6). *Current Sport*. Retrieved January 26, 2024, from Newspapers.com: https://www.newspapers.com/image/784172810/?terms=%22new%20brighton%20tower%22%20football&match=1

Aubé, C., & Rousseau, V. (2005). Team Goal Commitment and Team Effectiveness: The Role of Task Interdependence and Supportive Behaviors. *Group Dynamics: Theory, Research, and Practice, 9*(3), 189–204.

Audas, R., Dobson, S., & Goddard, J. (2008). Team performance and managerial change. *Economic Affairs, 17*(3), 30-36.

Backpage Football. (2016, May 24). *Premier League reveals payments made to clubs for 2015/16*. Retrieved from backpagefootball.com: https://backpagefootball.com/premier-league-reveals-payments-made-clubs-201516/108411/

Bae, J. K. (2012). Predicting financial distress of the South Korean manufacturing industries. *Expert Systems with Applications, 39*, 9159–9165.

Bailey, S. (2007). *Living Sports History: Football at Winchester, Eton and Harrow.* Winchester College. Retrieved from http://www.zen20110.zen.co.uk/SportHistWeb/SPORTS HISTORY/BSSH/The Sports Historian/TSH 15/bailey.html

Barajas, Á., & Rodríguez , P. (2010). Spanish football clubs' finances: Crisis and player salaries. *International Journal of Sport Finance, 5*, 52–66.

Barajas, A., & Rodríguez, P. (2014). Spanish football in need of financial therapy: Cut expenses and inject capital. *International Journal of Sport Finance, 9*(1), 73.

Barlow, R. (2023, May 19). *The cost of relegation for each of the seven clubs in the La Liga relegation battle*. Retrieved April 03, 2024, from www.football-espana.net: https://www.football-espana.net/2023/05/19/the-cost-of-relegation-for-each-of-the-seven-clubs-in-the-la-liga-relegation-battle

Barnsley Chronicle. (2022, October 21). *Two decades on from Barnsley FC entering administration*. Retrieved February 1, 2024, from barnsleychronicle.com: https://www.barnsleychronicle.com/article/23937/two-decades-on-from-barnsley-fc-entering-administration

BARNSLEY FOOTBALL CLUB LIMITED. (1999). *FINANCIAL STATEMENTS.*

Baroncelli, A., & Lago, U. (2006). Italian Football. *Journal of Sports Economics, 7*(1), 13–28.

BBC. (1993, April 26). *1993: Recession over - it's official*. Retrieved February 10, 2024, from news.bb.co.uk: http://news.bbc.co.uk/onthisday/hi/dates/stories/april/26/newsid_2503000/2503271.stm

BBC. (1999, March 3). *Business: The Company File*. Retrieved February 1, 2024, from new.bbc.co.uk: http://news.bbc.co.uk/1/hi/business/the_company_file/289590.stm

BBC. (1999, March 3). *Business: The Company File Palace on the rocks*. Retrieved February 13, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/1/hi/business/the_company_file/289590.stm

BBC. (2002, October 22). *Leicester City put into administration*. Retrieved February 1, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/1/hi/business/2349397.stm

BBC. (2002, December 16). *Vale go into administration*. Retrieved February 1, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/p/port_vale/2581571.stm

BBC. (2003, November 26). *Club faces court challenge*. Retrieved January 29, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/1/hi/england/devon/3240476.stm

BBC. (2003, January 29). *Two parties mull Magpies bid*. Retrieved February 2, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/n/notts_county/2707471.stm

BBC. (2003, April 7). *Vale fans to take control*. Retrieved February 1, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/p/port_vale/2904331.stm

BBC. (2004, December 1). *Abbey sale keeps Cambridge afloat*. Retrieved January 29, 2024, from bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/c/cambridge_utd/4058769.stm

BBC. (2004, February 27). *Bantams in administration*. Retrieved January 29, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/b/bradford_city/3513575.stm

BBC. (2004, June 1). *Inland revenue drops club claim*. Retrieved January 29, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/1/hi/england/devon/3766663.stm

BBC. (2004, February 3). *Latics takeover approved*. Retrieved February 2, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/o/oldham_athletic/3455161.stm

BBC. (2005, April 29). *Cambridge United file for administration.. is this the end of the U's?* Retrieved January 29, 2024, from bbc.co.uk: https://www.bbc.co.uk/cambridgeshire/content/articles/2005/04/29/cambridge_united_administration_feature.shtml

BBC. (2007, May 7). *Boston await news on League fate*. Retrieved from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/b/boston_united/6632541.stm

BBC. (2009, April 23). *Penalised Saints face relegation*. Retrieved February 8, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/s/southampton/8014811.stm

BBC. (2009, April 30). *Stockport go into administration*. Retrieved February 8, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/s/stockport/8027353.stm

BBC. (2009, January 23). *UK in recession as economy slides*. Retrieved February 10, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/1/hi/business/7846266.stm

BBC. (2010, January 27). *Championship side Crystal Palace go into administration*. Retrieved February 7, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/c/crystal_palace/8481549.stm

BBC. (2010, March 10). *Chester City wound up in High Court*. Retrieved January 28, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/teams/c/chester/8559704.stm

BBC. (2010, March 2). *Top clubs given extra time on financial fair play rules*. Retrieved February 13, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/8546561.stm

BBC. (2011, July 7). *Rushden & Diamonds enter administration*. Retrieved January 27, 2024, from BBC: https://www.bbc.co.uk/sport/football/14012770

BBC. (2012, January 3). *Darlington put in administration for third time*. Retrieved January 29, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/16395001

BBC. (2012, November 20). *Port Vale exit administration as Paul Wildes completes takeover*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/20415308

BBC. (2012, March 9). *Port Vale formally enter administration*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/17230886

BBC. (2013, May 1). *Aldershot Town: Relegated club fails to pay players for April*. Retrieved January 29, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/22368957

BBC. (2014, October 28). *Accrington Stanley.* Retrieved from www.bbc.co.uk: https://www.bbc.co.uk/lancashire/content/articles/2008/03/18/history_accrington_stanley_feature.shtml

BBC. (2019, May 8). *Bolton Wanderers given 14 days by High Court to appoint administrator*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/48199290

BBC. (2019, August 27). *Bury expelled by English Football League after takeover collapses*. Retrieved January 28, 2024, from www.bbc.co.uk: https://www.bbc.co.uk/sport/football/49451896

BBC. (2021, September 3). *Bolton Wanderers owners agree settlements with unsecured creditors*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/58435480

BBC. (2021, July 22). *Dangers to English football 'very real', says chair of fan-led review into game*. Retrieved April 04, 2024, from BBC Sport: https://www.bbc.co.uk/sport/football/57929695

BBC. (2021, November 20). *Derby County and connected firms owe £29m to HM Revenue and Customs*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/59358676

BBC. (2021, September 17). *Derby County: Championship club file notice to appoint administrators*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/58604851

BBC. (2023, June 12). *Wigan Athletic: HMRC lodges winding-up petition against League One club*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/65881568

BBC. (2023, June 14). *Wigan Athletic: Local businessman Mike Danson takes over at troubled club*. Retrieved January 30, 2024, from bbc.co.uk: https://www.bbc.co.uk/sport/football/65909639

BBC. (2024, March 19). *Football Governance Bill: Legislation for independent football regulator being introduced*. Retrieved April 05, 2024, from www.bbc.co.uk: https://www.bbc.co.uk/sport/football/68602074

BBC, The. (2002, March 27). *ITV Digital goes broke*. Retrieved 4 22, 2021, from news.bbc.co.uk: http://news.bbc.co.uk/2/hi/business/1896732.stm

BBC, The. (2011, April 4th). *Sky Sports and Football League agree £195m deal*. Retrieved from bbc.co.uk: https://www.bbc.co.uk/news/business-12965536

BBC, The. (2015, June 5). *Football League administration penalty raised to 12 points*. Retrieved from BBC Sport: https://www.bbc.co.uk/sport/football/33027933

Beaver, W. H. (1966). Financial ratios as predictors of failure. *Journal of Accounting Research, 4*(Empirical Research in Accounting: Selected Studies), 71–111.

Beckman, E. M., Cai, W., Esrock, R. M., & Lemke, R. J. (2011). Explaining game-to-game ticket sales for Major League Baseball games over time. *Journal of Sports Economics, 13*, pp. 536-553.

Beech, J. (2010). Finance in the football industry. In S. H. (Eds), *Managing Football: An International Perspective* (pp. 119-151). Oxford: Elsevier.

Beech, J. (2010). Finance in the football industry. In S. H. (Eds), *Managing Football: An International Perspective* (pp. 119-151). Oxford: Elsevier.

Beech, J., Horsman, S., & Magraw, J. (2010). Insolvency events among English football clubs. *International Journal of Sports Marketing and Sponsorship, 11*(3), 53–66.

Bell, S. T. (2007). Deep-level composition variables as predictors of team performance: A meta-analysis. *Journal of Applied Psychology, 92*(3), 595-615.

Bell, S. T., Brown, S. G., Colaneri, A., & Outland, N. (2018). Team composition and the ABCs of teamwork. *American Psychologist, 73*(4), 349–362.

Belle Vue and Westferry/Dinard. (2012, May 13). Retrieved February 1, 2024, from Viking Chat: https://www.drfc-vsc.co.uk/index.php?topic=233036.0

Benz, M.-a., Brandes , L., & Franck, E. (2009). DO SOCCER ASSOCIATIONS REALLY SPEND ON A GOOD THING? EMPIRICAL EVIDENCE ON HETEROGENEITY IN THE CONSUMER RESPONSE TO MATCH UNCERTAINTY OF OUTCOME. *Contemporary Economic Policy,, 27*(2), 216-235.

Birkhäuser, S., Kaserer, C., & Urban, D. (2017). Did UEFA's Financial Fair Play Harm Competition in European Football Leagues? In N. Blaikie, *Approaches to Social Enquiry.* Cambridge: Polity Press.

Birmingham Mail, The. (2019, May). *Aston Villa, West Brom, relegated clubs and parachute payments - a quick guide - Dean Rudge*. Retrieved from www.birminghammail.co.uk: https://www.birminghammail.co.uk/sport/football/football-news/aston-villa-west-brom-relegated-16274201

Birmingham Sports Argus. (1919, October 18). *The Awful Guilt and Big Punishment of Leeds City*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/806421695/?terms=%22Leeds%20City%22%20&match=1

BLACKBURN ROVERS FOOTBALL AND ATHLETIC PLC. (2002). *ANNUAL REPORT AND FINANCIAL STATEMENTS.*

Blackburn Standard. (1896, March 14). *Darwen Football Club - The Company Scheme*. Retrieved January 27, 2024, from British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/search/results/1896-03-14/1896-03-14?basicsearch=darwen%20football%20club&somesearch=darwen%20football%20club&county=lancashire%2c%20england&retrievecountrycounts=false&mostspecificlocation=lancashire%2c%20england

Blackburn Standard. (1899, May 20). *Darwen Football Club*. Retrieved January 26, 26, from www.newspapers.com: https://www.newspapers.com/image/394509755/?terms=%22Darwen%20FC%22%20&match=1

Blackburn Standard. (1899, May 6). *Football in the Peaceful Valley - a new club to be formed.* Retrieved January 27, 2024, from www.newspapers.com: https://www.newspapers.com/image/394508033/?terms=%22Football%20in%20the%20Peaceful%20Valley%22&match=1

Boro The Official Website. (2012, July 26). *Winners At Last! 1986 to present*. Retrieved January 27, 2024, from www.mfc.co.uk: http://www.mfc.co.uk/page/club/club-history/0%2C%2C1~352502%2C00.html

Bournemouth Echo. (2022, January 28). *The night that saved AFC Bournemouth at the Winter Gardens*. Retrieved February 1, 2024, from bournemouthecho.co.uk: https://www.bournemouthecho.co.uk/news/15044146.the-night-that-saved-the-cherries-afc-bournemouths-winter-gardens-meeting-1997/

BRADFORD CITY AFC (1983) LIMITED. (2002). *DIRECTORS' REPORT AND FINANCIAL STATEMENTS.*

Brand, G. (2015, December 15). *How the Bosman rule changed football - 20 years on*. Retrieved from www.skysports.com: https://www.skysports.com/football/news/11096/10100134/how-the-bosman-rule-changed-football-20-years-on

Brandes, L., & Franck, E. (2007). WHO MADE WHO? AN EMPIRICAL ANALYSIS OF COMPETITIVE BALANCE IN EUROPEAN SOCCER LEAGUES. *Eastern Economic Journal, 33*(3), 379-403.

Braybon, G. (1990). *Women Workers in the First World War: The British Experience.* London: Routledge. doi:10.4324/9780203104217

Brown, M. (2013, April 12). *Margaret Thatcher was the architect of controversial changes to TV and press*. Retrieved from The Guardian: https://www.theguardian.com/media/media-blog/2013/apr/12/margaret-thatcher-television-press

Brown, M. T., Rascher, D. A., Nagel, M. S., & McEvoy, C. D. (2021). *Financial Management in the Sport Industry* (3rd ed.). New York: Routledge. doi:doi.org/10.4324/9780429316746

Bryson, A., Buraimo, B., & Farnell, A. (2021, February). Time To Go? Head Coach Quits and Dismissals in Professional Football. *De Economist*, pp. 81–105. doi:doi.org/10.1007/s10645-020-09377-8

Bryson, A., Dolton, P., Reade, J. J., Schreyer, D., & Singleton, C. (2021, January). Causal effects of an absent crowd on performances and refereeing decisions during COVID-19. *Economics Letters, 198*(109664).

Budzinski, O., & Müller, A. (2013). Financial regulation and international competitiveness The case of the German Bundesliga. *Ilmenau Economics Discussion Papers,*(No. 82 echn).

Buraimo, B., & Simmons, R. (2008). Do sports fans really value uncertainty of outcome? Evidence from the English Premier League. *International Journal of Sport Finance, 3*(3), pp. 146-155.

Buraimo, B., & Simmons, R. (2009). A tale of two audiences: Spectators, television viewers and outcome uncertainty in Spanish football. *Journal of Economics and Business, 61*, 326–338.

Buraimo, B., & Simmons, R. (2015). Uncertainty of Outcome or Star Quality? Television. *International Journal of the Economics of Business,*. doi:10.1080/13571516.2015.1010282

Buraimo, B., Paramio, J. L., & Campos. (2010). The impact of televised football on stadium attendances in English and Spanish league football. *Soccer & Society, 11*(4), 461–474.

Buraimo, B., Simmons, R., & Szymanski, S. (2006). English Football. *Journal of Sports Economics, 7*(1), 29–46.

Business Live. (2009, April 3). *Southampton FC owners go into administration*. Retrieved February 8, 2024, from business-live.co.uk: https://www.business-live.co.uk/economic-development/southampton-fc-owners-go-administration-3946872

Butler, B. (1991). *The Official History of the Football Association.* Queen Anne Press.

calcioefinanza. (2023, May 25). *Serie A votes on the rule to save Samp: the parachute in advance*. Retrieved April 03, 2024, from www.calcioefinanza.it: https://www.calcioefinanza.it/2023/05/25/sampdoria-paracadute-in-anticipo/

Cannadine, D. (1992). *The Decline and Fall of the British Aristocracy.* London: Pan.

Cantoni, E. (2012). Financial statement analysis and insolvency forecast models: A proposal for local firms. *Economia Aziendale Online, 4*, 1-17.

Carter, & Mears. (2011). *A History of Britain: Liberal England World War and Slump 1901-1939.* London: Stacey Publishing Limited.

Charitou, A., Neophytou, E., & Charalambous, C. (2004). Predicting corporate failure: empirical evidence for the UK. *European Accounting Review, 13*(3), 465-497.

Clark, D. (2024, March 8). *The UK economy - Statistics & Facts*. Retrieved from www.statista.com: https://www.statista.com/topics/6500/the-british-economy/#topicOverview

Clarke, S., Kovalchik, S., & Ingram, M. (2017, December 25). Adjusting Bookmaker's Odds to Allow for Overround. *American Journal of Sports Science, 5*(6), 45-49. doi:10.11648/j.ajss.20170506.12

Coates, D., & Humphreys, B. R. (2010). Week to week attendance and competitive balance in the national football league. *International Journal of Sport Finance, 5*, pp. 239-252.

Coates, D., & Humphreys, B. R. (2012). Game attendance and outcome uncertainty in the National Hockey League. *Journal of Sports Economics, 13*, pp. 364-377.

Coates, D., Humphreys, B. R., & Zhou, L. (2014). Reference-dependent preferences, loss aversion, and live game attendance. *Economic Inquiry, 52*, 959–973.

Collins, T. (2015). Early Football and the Emergence of Modern Soccer, c. 1840–1880. *International Journal of the History of Sport, 32*(9), 1131–1132. doi:https://doi.org/10.1080%2F09523367.2015.1042868

Companies Acts. (1986). *"Insolvency Act 1986 (c. 45) – Part IV Winding Up of Companies Registered under the Companies Acts – Chapter VI Winding Up by the Court – Grounds and effect of winding-up petition"*. Retrieved January 31, 2024, from GOV.UK: https://www.legislation.gov.uk/ukpga/1986/45/section/123

Company number 00039175. (2024, January 28). *GILLINGHAM FOOTBALL CLUB LTD* . Retrieved from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00039175/insolvency

Company number 00039175. (2024, January 28). *GILLINGHAM FOOTBALL CLUB LTD* . Retrieved from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00039175/insolvency

Company number 00053268. (2006, May 15). *CCFB REALISATIONS 2022 LIMITED* . Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00053268/insolvency

Company number 00060094. (2002, May 27). *QUEENS PARK RANGERS FOOTBALL & ATHLETIC CLUB,LIMITED,(THE)*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00060094/insolvency

Company number 00097808. (2005, December 15). *EXETER CITY A.F.C. LIMITED*. Retrieved from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00097808/insolvency

Company number 00097808. (2005, December 15). *EXETER CITY A.F.C. LIMITED*. Retrieved from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00097808/insolvency

Company number 00098191. (1997, September 17). *HARTLEPOOL UNITED FOOTBALL CLUB LIMITED Company number 00098191*. Retrieved from gov.uk: https://find-and-update.company-information.service.gov.uk/company/00098191/insolvency

Company number 00098191. (1997, September 17). *HARTLEPOOL UNITED FOOTBALL CLUB LIMITED Company number 00098191*. Retrieved from gov.uk: https://find-and-update.company-information.service.gov.uk/company/00098191/insolvency

Company number 00099380. (2012, July 2). *STOCKPORT COUNTY ASSOCIATION FOOTBALL CLUB LIMITED(THE)*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00099380/insolvency

Company number 00116844. (2008, May 19). *HALIFAX TOWN ASSOCIATION FOOTBALL CLUB LIMITED*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00116844/insolvency

Company number 00124022. (2016, June 20). *WREXHAM ASSOCIATION FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00124022/insolvency

Company number 00137401. (2012, January 10). *BOURNEMOUTH & BOSCOMBE ATHLETIC FOOTBALL CLUB COMPANY LIMITED(THE)*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00137401/insolvency

Company number 00158654. (2010, September 30). *ROTHERHAM UNITED FOOTBALL CLUB LIMITED(THE)*. Retrieved February 6, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00158654/insolvency

Company number 00158654. (2010, September 30). *ROTHERHAM UNITED FOOTBALL CLUB LIMITED(THE)*. Retrieved February 6, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00158654/insolvency

Company number 00170192. (1998, November 10). *DONCASTER ROVERS FOOTBALL CLUB LIMITED*. Retrieved February 1, 2024, from gov.uk: https://find-and-update.company-information.service.gov.uk/company/00170192/insolvency

Company number 00170600. (2019, May 18). *LEEDS UNITED ASSOCIATION FOOTBALL CLUB LIMITED (THE)*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00170600

Company number 00183917. (1998, July 24). *NORTHAMPTON TOWN FOOTBALL CLUB LIMITED(THE)*. Retrieved from Gov.uk: https://find-and-update.company-information.service.gov.uk/company/00183917/insolvency

Company number 00303529. (2008, May 20). *BOSTON UNITED FOOTBALL CLUB LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00303529/insolvency

Company number 00315421. (2006, November 9). *IPSWICH TOWN FOOTBALL CLUB COMPANY LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00315421/insolvency

Company number 00482197. (2006, February 20). *CAMBRIDGE UNITED FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00482197/insolvency

Company number 00482197. (2006, February 20). *CAMBRIDGE UNITED FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/00482197/insolvency

Company number 01239681. (1997, February 24). *BARNET FOOTBALL CLUB LIMITED*. Retrieved from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/01239681/officers

Company number 01239681. (1997, February 24). *BARNET FOOTBALL CLUB LIMITED*. Retrieved from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/01239681/officers

Company number 01732784. (2007, November 30). *BRADFORD CITY AFC (1983) LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/01732784/insolvency

Company number 01732784. (2015, December 22). *BRADFORD CITY AFC (1983) LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/01732784/filing-history

Company number 01788466. (1984, February 2). *CHARLTON ATHLETIC FOOTBALL COMPANY LIMITED*. Retrieved February 9, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/01788466

Company number 01924222. (2000, December 1). *THE MILLWALL FOOTBALL AND ATHLETIC COMPANY (1985) LIMITED*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/01924222/insolvency

Company number 02072250. (2014, August 30). *SOUTHAMPTON LEISURE HOLDINGS PLC*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/02072250/insolvency

Company number 02998020. (2004, June 9). *CHESTER CITY FOOTBALL CLUB LIMITED*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/02998020/insolvency

Company number 03056875. (2015, August 14). *COVENTRY CITY FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/03056875/insolvency

Company number 03056875. (2015, August 14). *COVENTRY CITY FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/03056875/insolvency

Company number 03747237. (1999, April 7). *PORTSMOUTH CITY FOOTBALL CLUB LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/03747237

Company number 03951645. (2012, July 24). *CRYSTAL PALACE F.C. (2000) LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/03951645

Company number 04573250. (2002, October 25). *BARNSLEY FOOTBALL CLUB LIMITED*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04573250

Company number 04573250. (2002, October 25). *BARNSLEY FOOTBALL CLUB LIMITED Company number 04573250*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04573250

Company number 04669703. (2003, February 2003). *PORT VALE (VALIANT 2001) FOOTBALL CLUB LIMITED*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04669703

Company number 04669703. (2003, February 2003). *PORT VALE (VALIANT 2001) FOOTBALL CLUB LIMITED Company number 04669703*. Retrieved February 1, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04669703

Company number 04669703. (2020, February 6). *PORT VALE (VALIANT 2001) FOOTBALL CLUB LIMITED*. Retrieved January 30, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04669703/insolvency

Company number 04669703. (2020, February 6). *PORT VALE (VALIANT 2001) FOOTBALL CLUB LIMITED*. Retrieved January 30, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04669703/insolvency

Company number 04689338. (2003, March 6). *YORK CITY FOOTBALL CLUB LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04689338

Company number 04787003. (2003, June 4). *MILTON KEYNES DONS LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04787003

Company number 04789632. (2003, June 6). *NOTTS COUNTY FOOTBALL CLUB LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04789632

Company number 04977080. (2014, January 8). *LUTON TOWN FOOTBALL CLUB LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04977080

Company number 04989487. (2003, December 9). *OLDHAM ATHLETIC (2004) ASSOCIATION FOOTBALL CLUB LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04989487

Company number 04989487. (2003, December 9). *OLDHAM ATHLETIC (2004) ASSOCIATION FOOTBALL CLUB LIMITED*. Retrieved February 2, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/04989487

Company number 05074229. (2004, March 16). *DARLINGTON FC LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05074229/filing-history?page=3

Company number 05074229. (2012, February 24). *DARLINGTON FC LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05074229/insolvency

Company number 05074229. (2012, October 23). *DARLINGTON FC LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05074229

Company number 05074229. (2012, February 24). *DARLINGTON FC LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05074229/insolvency

Company number 05074229. (2012, October 23). *DARLINGTON FC LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05074229

Company number 05102915. (2004, April 15). *BRADFORD CITY FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05102915/filing-history?page=4

Company number 05102915. (2004, April 15). *BRADFORD CITY FOOTBALL CLUB LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05102915/filing-history?page=4

Company number 05193661. (2004, Jul 30). *NORTHWICH VICTORIA FOOTBALL CLUB (2004) LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05193661/filing-history?page=2

Company number 05193661. (2004, Jul 30). *NORTHWICH VICTORIA FOOTBALL CLUB (2004) LIMITED*. Retrieved January 29, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05193661/filing-history?page=2

Company number 05764000. (2012, December 3). *ROTHERHAM UNITED FC LIMITED*. Retrieved February 6, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/05764000

Company number 06133975. (2007, March 1). *LUTON TOWN FOOTBALL CLUB 2020 LTD*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/06133975

Company number 06233875. (2007, May 1). *LEEDS UNITED FOOTBALL CLUB LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/06233875

Company number 06550400. (2008, April 1). *ROTHERHAM UNITED FOOTBALL CLUB (RUFC) LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/06550400

Company number 06632170. (2008, June 27). *AFC BOURNEMOUTH LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/06632170

Company number 06951765. (2009, July 3). *ST MARY'S FOOTBALL GROUP LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/06951765

Company number 07254012. (2010, May 14). *STOCKPORT COUNTY 2010 LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/07254012

Company number 07264768. (2020, November 17). *PORTSMOUTH FOOTBALL CLUB (2010) LIMITED*. Retrieved February 7, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/07264768

Company number 07270793. (2010, June 1). *CPFC LIMITED*. Retrieved February 7, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/07270793

Company number 07940335. (2012, February 7). *PORTSMOUTH COMMUNITY FOOTBALL CLUB LIMITED*. Retrieved February 8, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/07940335

Company number 13305364. (2021, March 31). *WIGAN ATHLETIC A.F.C. LIMITED*. Retrieved January 30, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/13305364/persons-with-significant-control

Company number 13305364. (2021, March 31). *WIGAN ATHLETIC A.F.C. LIMITED*. Retrieved January 30, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/13305364/persons-with-significant-control

Company number 14190771. (2022, June 23). *DERBY COUNTY (THE RAMS) LIMITED*. Retrieved February 4, 2024, from GOV.UK: https://find-and-update.company-information.service.gov.uk/company/14190771

Courtright, S. H., McCormick, B. W., Mistry, S., & Wang, J. (2017). Quality charters or quality members? A control theory perspective on team charters and team performance. *Journal of Applied Psychology, 102*(10), 1462-1470.

Coventry Telegraph. (2015, August 18). *Coventry City Football Club Limited dissolved as conduct of former directors investigated*. (S. Gilbert, Editor) Retrieved January 29, 2024, from Coventry Live: https://www.coventrytelegraph.net/news/coventry-city-football-club-limited-9879034

Cox, A. (2015).

Cox, A., & Philippou, C. (2022). Measuring the Resilience of English Premier League Clubs to Economic Recessions. *Soccer & Society, 23*, 482-499.

Crouch, T. (2021). *Fan Led Review of Football Governance.* HM Government. Crown Copyright. Retrieved June 29, 2022, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1037648/Football_Fan_led_Governance_Review_v8Web_Accessible.pdf

Cubillas, E., Fernandez, A., & Gonzalez, F. (2017). How credible is a too-big-to-fail policy? International evidence from market discipline. *Journal of Financial Intermediation, 37*(3), pp. 46-67.

Czarnitzki, D., & Stadtmann, G. (2002). Uncertainty of outcome versus reputation: Empirical evidence for the first German football division. *Empirical Economics, 27*, 101-124.

Dalleres, F. (2024, March 19). *Football regulator could clash with Fifa and scare off would-be owners, experts warn*. Retrieved April 04, 2024, from www.cityam.com: https://www.cityam.com/football-regulator-could-clash-with-fifa-and-scare-off-would-be-owners-experts-warn/

Daniel Grey. (2015). *Premier League parachute payments explained*. Retrieved from www.danielgeey.com: https://www.danielgeey.com/post/premier-league-parachute-payments-explained/

Darlington Northern Echo. (1894, June 12). Retrieved January 26, 2024, from www.newspapers.com:

https://www.newspapers.com/image/391617392/?terms=%22Middlesbrough%20Ironopolis%22%20&match=1

Darlington Northern Echo. (2009, January 24). *How Pools Plunged From Glory to Despair*. Retrieved January 28, 2024, from www.thenorthernecho.co.uk: https://www.thenorthernecho.co.uk/sport/4073219.pools-plunged-glory-despair/

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). *Toward a stewardship theory of management.* (22 ed., Vol. 1). Academy of Management Review.

Davis, M. (2015, May 28). *Heysel: a tragedy waiting to happen*. Retrieved from www.euronews.com: https://www.euronews.com/2015/05/28/heysel-a-tragedy-waiting-to-happen

Dean Rudge & Phil Spencer. (2019, May). *The truth about parachute payments and how Fulham could benefit over the next two seasons*. Retrieved from www.football.london: https://www.football.london/fulham-fc/truth-parachute-payments-how-fulham-16274230

Deloitte & Touche. (2002). *Annual Review of Football Finance incorporating England's Premier Clubs.*

Deloitte. (2014). *Cumulative revenue of Europe's 'big five' leagues grew by 5% in 2012/13 to €9.8 billion*. Retrieved from deloitte.com: https://www2.deloitte.com/ba/en/pages/press/press-2014-06-05.html

Demirguc-Kunt, A., & Huizinga, A. (2013). Are banks too big to fail or too big to save? International evidence from equity prices and CDS spreads. *Journal of Banking and Finance, 37*(3), pp. 875-894.

Derby County. (2023, May 7). *EFL + SKY SPORTS BROADCAST RIGHTS AGREEMENT: QUESTIONS AND ANSWERS*. Retrieved April 3, 2024, from www.dcfc.co.uk/news/: https://www.dcfc.co.uk/news/2023/05/efl-sky-sports-broadcast-rights-agreement-questions-and-answers

Derby Evening Telegraph. (1915, August 7). *Chesterfield's Troubles*. Retrieved from Newspapers.com: https://www.newspapers.com/image/790866080/?terms=%22Chesterfield%20town%22&match=1

Dietl , H. M., & Franck, E. (2007). Governance Failure and Financial Crisis in German Football. *Journal of Sports Economics, 8*(6), 662–69.

Dobson, S., & Goddard, J. (2011). *The economics of football (2nd ed.).* Cambridge: University Press.

Dobson, S., Audas, R., & Goddard, J. (1999, February 1). Organisational performance and managerial turnover. *Managerial and Decision Economics, 20*(6), 305-318. doi:10.1002/(SICI)1099-1468(199909)20:63.0.CO;2-O

Drut, B., & Raballand, G. (2012). Why does financial regulation matter for European professional football clubs? *International Journal of Sport Management and Marketing, 11*(1/2), 73–88.

Dun & Bradstreet. (1994). The Failure Record.

Duncan Wright. (2016, July 4). *LA LIGA ROCKED Spanish government found guilty of providing state aid to Real Madrid, Barcelona and five other football clubs*. Retrieved from www.thesun.co.uk: https://www.thesun.co.uk/sport/football/1386832/spainish-government-found-guilty-of-providing-state-aid-to-real-madrid-barcelona-and-five-other-football-clubs/

East Anglian Daily Times. (2003, May 31). *Ipswich Town exit administration*. Retrieved February 2, 2024, from eadt.co.uk: https://www.eadt.co.uk/news/21320464.ipswich-town-exit-administration/

Ecer, F., & Boyukaslan, A. (2014). Measuring performances of football clubs using financial ratios: The gray relational analysis approach. *American Journal of Economics, 4*(1), 62–71.

Edwards, J., & Archambault, D. (1979). The home field advantage. In J. H. Goldstein, *Sports, games and play: Social and psychological viewpoints.* Hillsdale, N.J.: Lawrence Erlbaum Associates.

EFL. (2007, December 17). *FOOTBALL LEAGUE RECORDS: ATTENDANCES*. Retrieved February 6, 2024, from football-league.premiumtv.co.uk: http://www.football-league.premiumtv.co.uk/page/RecordAttendances/0%2C%2C10794%2C00.html

EFL. (2022, February). *Amendments to Profitability and Sustainability Rules (P&S)*. Retrieved February 20, 2024, from efl.com: https://www.efl.com/news/2022/february/meeting-of-efl-championship-clubs

EFL. (2024). *Financial Regulation*. Retrieved from www.efl.com: https://www.efl.com/governance/financial-regulation

Elaad, G., Reade, J., & Singleton, C. (2020). Information, prices and efficiency in an online betting market. *Finance Research Letters, 35*. doi:https://doi.org/10.1016/j.frl.2019.09.006

English Football League. (2023, 08 09). *Over half a million supporters attend bumper opening weekend in EFL*. Retrieved 08 09, 2023, from EFL.com: https://www.efl.com/news/2023/august/08/over-half-a-million-supporters-attend-bumper-opening-weekend-in-efl-/?fbclid=IwAR0m2cSoWNaXa471TJpfGNzMCPruD7IqdHuVAe3BWc6NkEIYiR-JYEyhcxU_aem_AbJ7uynhJ3ret20EQcg9dCLpCgkMRzLx7mkx-SbIUCd_mAhA2RqI_djNpB9WPPp1718

Ensor, R. (1936). *England 1870-1914.* Oxford: Clarendon Press.

Evening Standard, The. (2002, Aug). *Cost of clearing up Vialli's mess David Bond*. Retrieved from www.standard.co.uk: https://www.standard.co.uk/sport/cost-of-clearing-up-vialli-s-mess-6316898.html

Evening Standard, The. (2020, May). *Premier League defends parachute payments after EFL chairman calls them 'an evil which needs to be eradicated' - Dan Kilpatrick*. Retrieved from www.standard.co.uk: https://www.standard.co.uk/sport/football/premier-league-defends-parachute-payments-efl-chairman-rick-parry-evil-eradicated-a4433806.html

Farquhar, G. (2008, March 20). *Football administration*. Retrieved January 31, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/sport1/hi/football/7305998.stm

FC Halifax Town. (2008, August 16). *Halifax Town History*. Retrieved January 28, 2024, from www.halifaxafc.co.uk: http://www.halifaxafc.co.uk/page/HistoryDetail/0%2C%2C10437~395908%2C00.html

Feddersen, A., Humphreys, B. R., & Soebbing, B. P. (2016, September 30). Sentiment Bias and Asset Prices: Evidence from Sports Betting Markets and Social Media. *Economic Inquiry, 55*(2), 1119-1129. doi:doi.org/10.1111/ecin.12404

Fifield, D. (2022, November 18). *The EPPP 10 years on: Has it transformed English football for the better?* Retrieved April 03, 2024, from theathletic.com: https://theathletic.com/3904495/2022/11/18/eppp-england-academies-premier-league/?redirected=1

Financial Times. (2020, July 1). *Wigan Athletic falls into administration*. (A. Bounds, Editor) Retrieved January 30, 2024, from ft.com: https://www.ft.com/content/e2490e85-5b46-4d68-8e2b-9b2d9d6a9579

Flint, S. W., Plumley, D. J., & Wilson, R. J. (2014). You don't know what you're doing! The impact of managerial change on club performance in the English Premier League. *Managing Sport and Leisure, 19*(6), 390-399.

Football 365. (2016, December). *Promotion and relegation: Same as it ever was.. - Sarah Winterburn*. Retrieved from www.football365.com: https://www.football365.com/news/promotion-and-relegation-same-as-it-ever-was

Football Betting Sites. (2021, August 6). *How Have Football Player Wages Changed Over Time? Tracking The Astronomical Rise In Football Salaries*. Retrieved from www.footballbettingsites.org.uk: https://www.footballbettingsites.org.uk/blog/how-have-football-player-wages-changed-over-time/

Football in World War Two. (2024). Retrieved March 24, 2024, from englishfootballleaguetables.co.uk: https://www.englishfootballleaguetables.co.uk/Blog/ww2.html

Football League, The. (2007, December 15th). *FOOTBALL LEAGUE AGREES HISTORIC DEAL WITH SKY SPORTS AND BBC*. Retrieved from www.football-league.premiumtv.co.uk: https://web.archive.org/web/20071215071405/http://www.football-league.premiumtv.co.uk/page/NewsDetail/0%2C%2C10794~1160914%2C00.html

FootballHistory.org. (n.d.). *The history of football (soccer)*. Retrieved 01 21, 2024, from www.footballhistory.org: https://www.footballhistory.org/

Footy Stats. (2024, February 11). *Salary & Wage Data - England Premier League*. Retrieved 2024, from footystats.org: https://footystats.org/england/premier-league/salaries#

footystats.org. (2024, February 10). *Salary & Wage Data - England Premier League*. Retrieved from footystats.org: https://footystats.org/england/premier-league/salaries#

Forbes. (2023). *"FC Barcelona Declared "Technically Bankrupt" By Leading Catalan Journalist."* . Retrieved from Forbes.com:: https://www.forbes.com/sites/tomsanderson/2023/06/10/fc-barcelona-declared-technically-bankrupt-by-leading-catalan-journalist/?sh=9ed70a3152ef

Forrest, D., & Simmons, R. (2002). Outcome uncertainty and attendance demand: The case of English soccer. *Journal of the Royal Statistical Society, Series D (The Statistician), 51*, pp. 229–241.

Forrest, D., Beaumont, J., Goddard, J., & Simmons, R. (2005). Home advantage and the debate about competitive balance in professional sports leagues. *Journal of Sports Sciences, 23*, pp. 439–445.

Forrest, D., Simmons, R., & Buraimo, B. (2005). Outcome uncertainty and the couch potato audience. *Scottish Journal of Political Economy, 52*, pp. 641–661.

Fort, R., & Maxcy, J. (2003). Competitive balance in sports leagues: An introduction. *Journal of Sports Economics, 4*(2), 154-160. doi:10.1177/1527002503004002005

forzaitalianfootball.com. (2022, December 23). *Taxpayers Again Bail Out Serie A In Unexpected Government Move*. Retrieved from forzaitalianfootball.com: https://forzaitalianfootball.com/2022/12/taxpayers-again-bail-out-serie-a-in-unexpected-gov-move/

Freestone, C. J., & Manoli, A. E. (2017). Financial fair play and competitive balance in the Premier League. *Sport, Business, Management: an International Journal, 7*(2), 175-196.

Frick, B. (2007, June 6). THE FOOTBALL PLAYERS' LABOR MARKET: EMPIRICAL EVIDENCE FROM THE MAJOR EUROPEAN LEAGUES. *Scottish Journal of Political Economy*. doi:doi.org/10.1111/j.1467-9485.2007.00423.x

Frick, B. (2009). Globalization and factor mobility: The impact of “Bosman-ruling” on player migration in professional soccer. *Journal of Sports Economics, 10*(1), 88-106. doi:doi.org/10.1177/1527002508327399

Frick, B., & Prinz, J. (2006). Crisis? What Crisis? Football in Germany. *Journal of Sports Economics, 7*(1), 60–75.

Galariotis, E., Germain C, C., & Zopounidis, C. (2018). A combined methodology for the concurrent evaluation of the business, financial and sports performance of football clubs: the case of France. *Annals of Operations Research, 266*(1-2), 589–612.

Gasparetto, T., Mishchenko, D., & Zaitsev, E. (2023). Factors Influencing Competitive Balance Across European Football Top Tier Leagues. *Managerial and Decision Economics, 44*(4), 2068-2078.

Geng, R., Bose, I., & Chen, X. (2015). Prediction of financial distress: An empirical study of listed Chinese companies using data mining. *European Journal of Operational Research, 241*(1), 236–247.

Gillingham FC. (2009, Jun 5). *History of the Gills*. Retrieved January 28, 2024, from www.gillinghamfootballclub.com:

http://www.gillinghamfootballclub.com/page/ClubHistory/0%2C%2C10416%2C00.html

Goddard, J., Sloane, P., & Wilson, J. (2012). The Bosman Ruling and Labor Mobility in Football (soccer). In L. Kahane, & S. Shmanske, *The Oxford Handbook of Sports Economics.* (Vol. 1). Oxford: Oxford University Press.

Gomanee, K., Morrissey, O., Mosley, P., & Verschoor, A. (2005). Aid, Government Expenditure, and Aggregate Welfare. *World Development, 33(3)*, 355-370. doi:10.1016/j.worlddev.2004.09.005

González-Gómez, F., Picazo-Tadeo, A. J., & García-Rubio, M. A. (2011). The impact of a mid-season change of manager on sporting performance. *Sport, Business and Management: An International Journal. , 1*(1), 28-42.

Goossens, K. (2006). Competitive balance in European football: comparison by adapting measures: national measure of seasonal imbalance and top 3. *Rivista di Diritto ed Economia dello Sport, 2*(2), 77-122.

Gottfried Fuchs. (2014, March 10). *Gone but not forgotten- Rotherham Town*. Retrieved from gottfriedfuchs.blogspot.com: http://gottfriedfuchs.blogspot.com/2014/03/gone-but-not-forgotten-rotherham-town.html

Graham, M. (2023). *Premier League Big Six: How did the balance of power in English football evolve?* Retrieved from PlanetSport.com: https://www.planetsport.com/soccer/news/premier-league-big-six-balance-power-english-football-evolve

Graham, M. (2023). *Premier League Big Six: How did the balance of power in English football evolve?* Retrieved from https:www.planetsport.com: https://www.planetsport.com/soccer/news/premier-league-big-six-balance-power-english-football-evolve

Grant, P. (2008, November 23). *Football clubs owe tax millions*. Retrieved January 31, 2024, from news.bbc.co.uk: http://news.bbc.co.uk/1/hi/uk/7741859.stm

Grice, J. S., & Ingram, R. W. (2001). Tests of the generalizability of Altman's bankruptcy prediction model. *Journal of Business Research, 54*(1), 53-61.

Groot, L. F. (2008). *Economics, uncertainty and European football: trends in competitive balance.* Cheltenham: Edward Elgar.

Guardian. (2008, August 7). *Bournemouth hit by 17 point penalty*. Retrieved February 7, 2024, from theguardian.com: https://www.theguardian.com/football/2008/aug/07/bournemouth.leaguetwofootball

Guardian. (2010, February 26). *Portsmouth go into administration*. Retrieved February 7, 2024, from theguardian.com: https://www.theguardian.com/football/2010/feb/26/portsmouth-premierleague

Guardian. (2015, October 16). *What does the Northampton Town case teach us about fans' role in football clubs?* (R. Foster, Editor) Retrieved January 28, 2024, from www.theguardian.com: https://www.theguardian.com/football/the-agony-and-the-ecstasy/2015/oct/16/northampton-town-supporters-trusts-football-clubs

Guardian, The. (2006, May). *Rich clubs forced to give up a sliver of the TV pie, David Conn*. Retrieved from www.theguardian.com: https://www.theguardian.com/football/2006/may/10/sport.comment3

Guardian, The. (2006, August 5th). *Why clubs may risk millions for riches at the end of the rainbow*. Retrieved from The Guardian: https://www.theguardian.com/football/2006/aug/05/championship200607

Guardian, The. (2007, July 29). *What money can't buy*. Retrieved April 2, 2024, from theguardian.com/sport/: https://www.theguardian.com/sport/2007/jul/29/football.newsstory1

Guardian, The. (2008, May). *Promised land of promotion comes at a steep price David Conn*. Retrieved from www.theguardian.com: https://www.theguardian.com/football/2008/may/28/premierleague.championship

Guardian, The. (2015, June 2). *Parachute payments overhaul for Premier League's relegated clubs*. Retrieved 4 23, 2021, from https://www.theguardian.com/football/2015/jun/02/parachute-payments-clubs-relegated-premier-league

Halifax Courier. (2018, May 19). *10 years on from Halifax Town's last stand*. Retrieved February 1, 2024, from halifaxcourier.co.uk: https://www.halifaxcourier.co.uk/sport/football/10-years-on-from-halifax-towns-last-stand-1029390

Harding, J. (1991). *For the Good of the Game: The Official History of the Professional Footballers' Association.* Robson Books.

Harding, J. (2004). Meredith, William Henry [Billy] 1874-1958. In *Oxford Dictionary of National Biography.* Oxford University Press.

Harris, C. M., McMahan, G. C., & Wright, P. M. (2012). Talent and time together The impact of human capital and overlapping tenure on unit performance. *Personnel Review, 41*(4), 408.

Harris, N. (2011, January 20). *From £20 to £33,868 Per Week: A Quick History Of English Football's Top-Flight Wages*. Retrieved February 10, 2024, from sportingintelligence.com: https://www.sportingintelligence.com/wp-content/uploads/2011/01/Ave-wk-wage-since-61.jpg

Harris, N. (2011, 01 20). *FROM £20 TO £33,868 PER WEEK: A QUICK HISTORY OF ENGLISH FOOTBALL'S TOP-FLIGHT WAGES*. Retrieved 01 22, 2024, from www.sportingintelligence.com: https://www.sportingintelligence.com/2011/01/20/from-20-to-33868-per-week-a-quick-history-of-english-footballs-top-flight-wages-200101/

Harris, N. (2024, April 03). Direct Correspondence.

Historical Football Kits. (2024). *Loughborough*. Retrieved January 26, 2024, from www.historicalkits.co.uk: http://www.historicalkits.co.uk/Loughborough/Loughborough.htm

Historical Football Kits. (2024). *New Brighton Tower*. Retrieved 01 26, 2024, from www.historicalkits.co.uk: http://www.historicalkits.co.uk/New_Brighton_Tower/New_Brighton_Tower.htm

Historical Kits. (2024). *Chesterfield*. Retrieved January 26, 2024, from www.historicalkits.co.uk: http://www.historicalkits.co.uk/Chesterfield/Chesterfield.htm

Historical Kits. (2024). *Leeds City*. Retrieved January 26, 2024, from www.historicalkits.co.uk: http://www.historicalkits.co.uk/Leeds_City/Leeds_City.htm

Hope, C. (2003). When should you sack a football manager? Results from a simple model. *Journal of the Operational Research Society, 54*(11), 1167-1176.

How They Play. (2021, February 25th). *The Most Competitive Football Leagues in Europe*. Retrieved from howtheyplay.com: https://howtheyplay.com/team-sports/The-Most-Competitive-Football-Leagues-in-Europe

Hull Daily Mail. (1931, October 26). October. 10.

Humphreys. (2002). Alternative measures of competitive balance in sports. *Journal of Sports Economics, 3*(2), 133-148.

Humphreys, B., & Zhou, L. (2015, July 7). The Louis–Schmelling Paradox and the League Standing Effect Reconsidered. *Journal of Sports Economics, 16*, 835-852. doi:10.1177/1527002515587260

Independent, The. (2018, November 19th). *EFL agrees new TV rights deal worth £595m with Sky Sports*. Retrieved from The Independent: https://www.independent.co.uk/sport/football/football-league/efl-new-tv-rights-deal-worth-ps595m-sky-sports-championship-english-football-league-a8641921.html

Independent, The. (2018, March). *How parachute payments are completely distorting life below the Premier League*. Retrieved from www.independent.co.uk: https://www.independent.co.uk/sport/football/football-league/premier-league-parachute-payments-exclusive-study-football-league-finance-money-a8255976.html

Inglis, S. (1987). *The football grounds of Great Britain.* Willow Books. doi: ISBN 0-00-218249-1

Inglis, S. (1988). *League Football and the Men Who Made It.* London: HarperCollinsWillow.

Innocenti, A., Nannicini, T., & Ricciuti, R. (2012, Feb 6). The Importance of Betting Early. *LABSI Working Paper No. 37/2012*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1999459

Insider Media. (n.d.). *Portsmouth FC sold out of administration*. Retrieved from insidermedia.com: https://www.insidermedia.com/news/south-east/41045-portsmouth-fc-sold-out-administration

Investopedia. (2022, July 16). *AIM: What the Alternative Investment Market Is, How It Works*. Retrieved February 1, 2024, from investopedia.co.uk: https://www.investopedia.com/terms/a/alternative-investment-market.asp

Irish Independent. (2006, September 27). *Owen on 'long road back'*. Retrieved January 29, 2024, from The British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/bl/0001715/20060927/860/0072

Irish Sun, The. (2021, December 15). *EASY MATCH Football is becoming more predictable as money is removing surprise element of sport in top European leagues, study says*. Retrieved from thesun.ie: https://www.thesun.ie/sport/football/8073437/football-predictable-money-european-leagues-premier-league-ucd/

Irving, P. G., & Goldstein, S. R. (1990, March 1st). Effect of Home-Field Advantage on Peak Performance of Baseball Pitchers. *Journal of Sport Behavior, 13*(1).

Johnes, M., & Taylor, M. (2016, February 18). *Football Ticket Prices: Some Lessons from History*. Retrieved from www.historyandpolicy.org: https://www.historyandpolicy.org/opinion-articles/articles/football-ticket-prices-some-lessons-from-history

Jones, B. (2014, March 20). *Football By Decade: 1970S*. Retrieved from www.thefootballhistoryboys.com: https://www.thefootballhistoryboys.com/2014/03/football-by-decade-1970s.html

Kenton, W. (2022, June 21). *Altman Z-Score: What It Is, Formula, How to Interpret Results*. Retrieved from www.investopedia.com: https://www.investopedia.com/terms/a/altman.asp#:~:text=The%20Altman%20Z-score%2C%20a%20variation%20of%20the%20traditional,company%20has%20a%20high%20probability%20of%20becoming%20insolvent.

King, B. (2021, June 22). *How much is Covid costing the UK and how will we pay?* Retrieved from www.bbc.co.uk: https://www.bbc.co.uk/news/business-52663523

Koning, R. H. (2003). An econometric evaluation of the effect of firing a coach on team performance. *Applied Economics, 35*(5), 555-564.

Koppet, L. (1972, January 9). Home court: Winning edge. *The New York Times*.

Korr, C. P. (1987). *West Ham United: The Making of a Football Club (Sport and Society).* University of Illinois Press.

KPMG Football Benchmark. (2019, August 6). *Broadcasting revenue landscape – big money in the "big five" leagues*. Retrieved April 23, 2021, from footballbenchmark.com: https://www.footballbenchmark.com/library/broadcasting_revenue_landscape_big_money_in_the_big_five_leagues

Kuypers, T. J. (1996). *The beautiful game? An economic study of why people watch English football (Discussion Paper in Economics No. 96-1).* London: University of London.

Lancashire Telegraph. (2009, May 14). *Final bid to save Darwen FC fails after High Court hearing*. (C. Pye, Producer) Retrieved January 26, 2024, from www.lancashiretelegraph.co.uk: https://www.lancashiretelegraph.co.uk/news/4369285.final-bid-save-darwen-fc-fails-high-court-hearing/

Leach, S. A. (2006). Financial viability and competitive balance in English football. *Doctoral dissertation*. University of London.

Leach, S., & Szymanski, S. (2015). Making money out of football. *Scottish Journal of Political Economy, 62(1)*, 25-50. doi:10.1111/sjpe.12065

Leeds Live. (2018, June 6th). *What Aston Villa, Sunderland, Fulham and Cardiff earned from parachute payments this season*. Retrieved from Leeds Live: https://www.leeds-live.co.uk/sport/leeds-united/aston-villa-leeds-united-administration-14672066

Leeds, M., Von Allmen, P., & Matheson, V. (2022). *The Economics of Sports* (7th ed.). Routledge.

Lefebvre, L. M., & Passer, M. W. (1974). The effects of game location and importance on aggression in team sport. *International Journal of Sports Psychology, 5*, 102- 110.

Leicester Chronicle. (1900, Jul 7). *Loughborough Football Club - A Virtual Collapse*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/406092603/?terms=%22Loughborough%20football%22%20&match=1

Lemke, R., Leonard, M., & Tihokwane, K. (2010). Estimating attendance at Major League Baseball games for the 2007 season. *Journal of Sports Economics, 11*, p. 316.

Levin, M. (2009, October). The value of competition: competitive balance as a predictor of attendance in spectator sports. *International Journal of Sports Marketing and Sponsorship*.

LIMITED, Wolverhampton. Wanderers. (1990). (2005). *REPORT AND FINANCIAL STATEMENTS.* W. W. (1990) LIMITED.

Lin, T. (2009). A cross model study of corporate financial distress prediction in Taiwan: Multiple discriminant analysis, logit, probit and neural networks models. *Neurocomputing, 72*, 3507–3516.

Liverpool Echo. (1987, August 29). *Rovers Rising!* (I. Hargraves, Editor) Retrieved January 27, 2024, from The British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/BL/0000271/19870829/500/0036?browse=true

Liverpool Echo. (1992, March 18). *Aldershot Wound Up*. Retrieved January 27, 2024, from The British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/bl/0000271/19920318/556/0043

Liverpool Mercury. (1892, May 14). Bootle Football Club. Retrieved from https://en.wikipedia.org/wiki/Bootle_F.C._(1879)#cite_note-5

Liverpool Mercury. (1893, July 24). Bootle Football Club. Retrieved from https://en.wikipedia.org/wiki/Bootle_F.C._(1879)#cite_note-8

Liverpool Mercury. (1893, August 15). *Bootle Football Club*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/799187625/?terms=%22bootle%20football%22&match=1

MacInnes, P. (2021, May 17). *'Time to act': Former players demand independent regulator for football*. Retrieved April 05, 2024, from www.theguardian.com: https://www.theguardian.com/football/2021/may/17/time-to-act-former-players-demand-independent-regulator-for-football

MacInnes, P. (2023, December 4). *Premier League agrees new £6.7bn TV rights deal with Sky and TNT Sports*. Retrieved from www.theguardian.com: https://www.theguardian.com/football/2023/dec/04/premier-league-agrees-67bn-tv-rights-deal-with-sky-and-tnt-sports

Mackey, E. (2023, August 25). *How Premier League TV rights work and how they impact your costs and subscriptions*. Retrieved from theathletic.com: https://theathletic.com/4240951/2023/08/25/premier-league-tv-rights-how-work-cost/

Magoun, F. P. (1938). *History of football from the beginnings to 1871.* H. Pöppinghaus, o. h.-g.

Maimone, V. M., & Yasseri, T. (2021). Football is becoming more predictable; network analysis of 88 thousand matches in 11 major leagues. *R. Soc. Open Sci. 8: 210617*. Retrieved from https://royalsocietypublishing.org/doi/10.1098/rsos.210617

Manchester Courier. (1895, October 21). *Football Notes - Association*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/799884328/?terms=%22accrington%22%20lancashire%20combination&match=1

Manchester Evening News. (1983, August 6). *Liverpool make Robbo a top priority*. (P. Hince, Producer) Retrieved January 27, 2024, from The British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/bl/0004985/19830806/036/0036

Mansion Bet. (2023, January 18). *Average Salaries for Players in all Four Divisions of English Professional Football*. (I. Wilkerson, Editor) Retrieved February 10, 2024, from mansionbet.com: https://www.mansionbet.com/blog/sports/football/average-salaries-for-players-in-all-four-divisions-of-english-professional-football/

Marples, M. (1954). *A History of Football.* London: Secker and Warburg.

Matt Hughes. (2022, March 28). *Championship clubs boosted by parachute payments are THREE times more likely to be promoted to the Premier League... with a new report concluding the extra money fuels unsustainable losses among rivals*. Retrieved from www.dailymail.co.uk: https://www.dailymail.co.uk/sport/football/article-10661353/Championship-clubs-boosted-parachute-payments-THREE-times-likely-promoted.html?ns_mchannel=rss&ns_campaign=1490&ito=1490

Maxcy, J., & Mondello, M. (2006). The impact of free agency on competitive balance in North American professional team sports leagues. *Journal of Sports Management, 20*(3), 345-365. doi:10.1123/jsm.20.3.345

McHale, I. (2016, August). *Just how unpredictable is the Premier League? Scientists have done the maths*. Retrieved from theconversation.com: https://theconversation.com/just-how-unpredictable-is-the-premier-league-scientists-have-done-the-maths-59839

Meehan, J. W., Nelson, R. A., & Richardson, T. V. (2007). Competitive balance and game attendance in Major League Baseball. *8*, p. 563.

Michie, J., & Oughton, C. (2004). *Competitive Balance in football:Trends and effects.* Sports Nexus.

Miller, A., & Harris, N. (2011, October 30). *REVEALED: OFFICIAL ENGLISH FOOTBALL WAGE FIGURES FOR THE PAST 25 YEARS*. Retrieved April 03, 2024, from www.sportingintelligence.com: https://www.sportingintelligence.com/2011/10/30/revealed-official-english-football-wage-figures-for-the-past-25-years-301002/

Mills, B., & Fort, R. (2014). League-level attendanceand outcome uncertainty in U.S. pro sports leagues. *Economics Inquiry, 52*, pp. 205-218.

Mitchell, B. R. (1971). *Abstract of British Historical Statistics.* Cambridge: University Press.

Moneyweek. (2018, May 20). *Modified Altman Z score*. Retrieved from moneyweek.com: https://moneyweek.com/glossary/modified-altman-z-score

Montague, J. (2018). *The Billionaires Club - The unstoppable rise of football's super-rich owners.* London: Bloomsbury.

Montes, F., Sala-Garrido, R., & Usai, A. (2014). The lack of balance in the Spanish first division football league. *European Sport Management Quarterly, 14*(3), 282-298. doi:10.1080/16184742.2014.898678

Morgan, K. (2008). *The Oxford Illustrated History of Britain.* Oxford: Oxford University Press.

Morgan, K. (2008). *The Oxford Illustrated History of Britain.* Oxford: Oxford University Press.

Morgan, K. O. (2009). *The Oxford Illustrated History of Britain.* Oxford University Press.

Morrow, S. (2003). *The People's Game? Football, finance, and society.* Hampshire: Palgrave MacMillan.

Mulcaster, R. (1581). *Positions Wherein Those Primitive Circumstances Be Examined, Which Are Necessarie for the Training up of Children.* London: Thomas Chare. Retrieved 01 21, 2024, from https://web.archive.org/web/20060927134327/http://www.ucs.mun.ca/~wbarker/positions-txt.html

Müller, J. C., Lammert , J., & Hovemann, G. (2014). The Financial Fair Play Regulations of UEFA: An Adequate Concept to Ensure the Long-Term Viability and Sustainability of European Club Football? *International Journal of Sport Finance, 7*(2), 117–140.

My London. (2017, June 1st). *QPR and Fulham's 2016-17 parachute payment amounts confirmed*. Retrieved from MyLondon.com: https://www.mylondon.news/sport/football/football-news/qpr-fulhams-2016-17-parachute-13124525

Na, S., Su, Y., & Kunkel, T. (2019). Do not bet on your favourite football team: the influence of fan identity-based biases and sport context knowledge on game prediction accuracy. *European Sport Management Quarterly, 19*(3), pp. 396–418. doi:doi.org/10.1080/16184742.2018.1530689

Neale, W. (1964). The peculiar economics of professional sports: A contribution to the theory of the firm in sporting competition and market competition. *The Quarterly Journal of Economics, 78*, 1-14.

Neville, G. (2021, May 17). *An Open Letter*. Retrieved April 05, 2024, from gary-neville.medium.com: https://gary-neville.medium.com/an-open-letter-e5b4749fb50a

New Scientist, The. (2021, December 15). *Football matches in top European leagues are becoming more predictable*. Retrieved from newscientist.com: https://www.newscientist.com/article/2301537-football-matches-in-top-european-leagues-are-becoming-more-predictable/

Nicoliello, M., & Zampatti, D. (2016). Football clubs' profitability after the Financial Fair Play regulation: evidence from Italy. *Sport, Business and Management, 6*(4), 460–475.

Noll, R. G. (2007). Broadcasting and team sports. *Scottish Journal of Political Economy, 54*(3), 400-421. doi:10.1177/1527002503261487

Northern Whig. (1931, December 11). *Critical week for Thames AFC*. Retrieved January 26, 2024, from britishnewspaperarchive.co.uk: https://www.britishnewspaperarchive.co.uk/viewer/bl/0001542/19311211/058/0002

Nottingham Evening Post. (1919, October 16). *Leeds City Players - Clubs to Negotiate for the Transfer - Circular to Clubs*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/806327167/?terms=%22Leeds%20City%22%20&match=1

Nutt, S. (2015, September 5). *anfieldindex.com*. Retrieved from Too Much Change? How High Player Turnover Affects League Performance: https://anfieldindex.com/16763/much-change-soon-high-player-turnover-affects-league-performance.html

O'Brien, J. (2022, March 28). *Premier League's highest paid player each season from 1992 to 2022*. Retrieved from mirror.co.uk: https://www.mirror.co.uk/sport/football/news/premier-league-highest-paid-players-26572588

Owen, P. D., & King, N. (2015). Competitive balance measures in sports leagues: The effects of variation in season length. *Economic Inquiry, 53*(1), 731–744.

Pagels, J. (2014, August 19). *Are Salary Caps for Professional Athletes Fair?* Retrieved from priceonomics.com: https://priceonomics.com/are-salary-caps-for-professional-athletes-fair/

Parker, T. (2010, July 25). *Bradford Park Avenue History.* Retrieved from web.archive.org: https://web.archive.org/web/20120320161613/http://bpafc.com/wp-content/uploads/2010/07/Bradford-Park-Avenue-History-Long1.pdf

Parkinson, G. (2022, April 30). *"Everyone said, 'This sounds too good to be true'. It turned out to be exactly that." – Remembering the fall of ITV Digital, twenty years on*. Retrieved April 23, 2021, from www.fourfourtwo.com: https://www.fourfourtwo.com/features/everyone-said-this-sounds-too-good-to-be-true-it-turned-out-to-be-exactly-that-remembering-the-fall-of-itv-digital-twenty-years-on

Paul, R. J., & Weinbach, A. (2007). The uncertainty of outcome and scoring effects on Nielson ratings for Monday night football. *Journal of Economics and Business, 59*, pp. 199-211.

Paul, R. J., Wachsman, Y., & Weinbach, A. P. (2010). The role of uncertainty of outcome and scoring in the determination of fan satisfaction in the NFL. *12*, pp. 213-221.

Pautler, M. (2010). "The Relationship Between Competitive Balance and Revenue in America's Two Largest Sports Leagues. CMC Senior Theses. Retrieved from https://scholarship.claremont.edu/cmc_theses/86/

Pawlowski, T. (2013). Testing the uncertainty of outcome hypothesis in European professional football: A stated preference approach. *Journal of Sports Economics, 14*(4), pp. 341-367. doi:10.1177/1527002513496011

Pawlowski, T. (2013). Testing the uncertainty of outcome hypothesis in European professional: stated preference approach. *Journal of Sports Economics, 14*(4), 341-367. doi:10.1080/13504851.2011.639725

Pawlowski, T., & Anders, C. (2012). Stadium attendance in German professional football - Th (un)importance of uncertainty of outcome reconsidered. *Applied Economic Letters, 14*(4), pp. 1553-1556. doi:10.1080/13504851.2011.639725

Pawlowski, T., & Nalbantis, G. (2015). Competition format, championship uncertainty and stadium attendance in European football – a small league perspective. *Applied Economics, 11*(2), 186-202.

Pawlowski, T., Breuer, C., & Hovemann, A. (2010). Top clubs' performance and the competitive situation in European domestic football competitions. *Journal of Sports Economics, 11*(2), 186–202. doi:10.1177/1527002510363100

Pearson Blog. (2013). *Parachute payment problems for the English football league*. Retrieved from pearsonblog.campaignserver.co.uk: https://pearsonblog.campaignserver.co.uk/parachute-payment-problems-for-the-english-football-league/

Peel, D. A., & Thomas, D. A. (1988). Outcome uncertainty and the demand for football: An analysis of match attendances in the English Football League. *Scottish Journal of Political, 35*, 242–249.

Peel, D. A., & Thomas, D. A. (1992). The demand for football: Some evidence on outcome uncertainty. *Empirical Economics, 17*, 323–331.

Peeters, T., Szymanski , S., & Terviö, M. (2017). The inefficient advantage of experience in the market for football managers. *SSRN Electronic Journal*.

Pettinger, T. (2010, February 16). *Post-War Economic Britain*. Retrieved from econ.economicshelp.org: https://econ.economicshelp.org/2010/02/post-war-economic-britain.html

Pitrová, K. (2011). Possibilities of the Altman Zeta model application to Czech firms. *Ekonomika a Management, 3*, 66-76.

Plainer, A. (2010, January 11). *Paying by the rules*. Retrieved January 31, 2024, from thelawyer.com: http://www.thelawyer.com/paying-by-the-rules/1003055.article

Platt, H. D., & Platt, M. B. (2008). Financial distress comparison across three global regions. *Journal of Risk Financial Management, 1*(1), 129–162.

Plumley, D., & Flint, S. (2015). The UEFA Champions League; maintaining the status quo? *Team Performance Management, 21*(5/6), 247-258. doi:10.1108/TPM-01-2015-0003

Plumley, D., Ramchandani, G., & Wilson, R. (2018). Mind the gap: An analysis of competitive balance in the English Football League system. *International Journal of Sport Management and Marketing, 18*(5), 357-375. Retrieved from http://shura.shu.ac.uk/id/eprint/15424

Plumley, D., Serbera, & Wilson, R. (2020). Too big to fail? Accounting for predictions of financial distress in English professional football clubs. *Journal of Applied Accounting Research*.

Plumley, D., Serbera, J., & Wilson, R. (2020). Too Big To Fail - Accounting for Predictions of Financial Distress in English Professional Football Clubs. *Journal of Applied Accounting Research*.

Plumley, D., Wilson, R., & Ramchandani, G. (2014). Towards a model for measuring holistic performance of professional Football clubs. *Soccer & Society, 18*(1), 16–29.

Poindexter, O. (2022, February 15). *U.S. Deal Vaults Premier League Int'l Rights Over Domestic Rights*. Retrieved April 3, 2024, from frontofficesports.com: https://frontofficesports.com/u-s-deal-vaults-premier-league-intl-rights-over-domestic-rights/#:~:text=The%20Premier%20League%20remains%20immensely%20popular%20in%20the,domestic%20rights%20total%20%246.9%20billion%20in%20that%20period.

Porter, C. (2005). Goal Orientation: Effects on Backing Up Behavior, Performance, Efficacy, and Commitment in Teams. *Journal of Applied Psychology, 90*(4), 811–818.

Premier League Football. (2015). *Premier League.* Retrieved from premierleaguefootballengland.blogspot.com: https://premierleaguefootballengland.blogspot.com/p/big-four-dominance.html

Prosport Wealth. (2022, 11 14). *£20 a week to £3 million a year: how footballers' wages have changed over the last 150 years*. Retrieved 01 22, 2024, from prosportwealth.co.uk: https://prosportwealth.co.uk/20-a-week-to-3-million-a-year-how-footballers-wages-have-changed-over-the-last-150-years/

QPR Report Message Board. (2009, May 27). *Goodbye Administration. Welcome ABC Loan!* Retrieved February 2, 2024, from qprreport.proboards.com: https://qprreport.proboards.com/thread/3962/2002-flashback-qpr-exit-administration

Quirk, J., & Fort, R. D. (1997). *Pay dirt: The business of professional team sports.* Princeton N.J.: Princeton University Press.

Ramchandani, G., Millar, R., & Wilson, D. (2021). The relationship between team ability and home advantage in the English football league system. *German Journal of Exercise and Sport Research.*, 1-8.

Rascher, D. A. (1999). A test of the optimal positive production network externality in Major League Baseball. In J. Fizel, E. Gustafson, & L. Hadley (Eds.), *Sports Economics: Current Research* (pp. 27-45). Westport, CT: Praeger.

Rascher, D. A., & Solmes, J. P. (2007). Do fans want close contacts? A test of the uncertainty of outcome hypothesis in the National Basketball Association. *International Journal of Sport Finance, 2*, pp. 130-141.

Reade, J. J., Singleton, C., & Williams, L. V. (2020, March). Betting markets for English Premier League results and scorelines: evaluating a forecasting model. *Economic Issues, 25*(1), 85-106.

Reade, J., & van Ours, J. (2023). How sensitive are sports fans to unemployment? *Applied Economics Letters, 30*(3), 324–330. doi:doi.org/10.1080/13504851.2021.1985064

Red N Blue Army. (2017, July 5). *Back in the Day: July 5th - Simon Jordan Buys Crystal Palace Football Club*. Retrieved February 2, 2024, from rednbluearmy.co.uk: https://rednbluearmy.co.uk/articles/05-07-17-back-day-july-5th-simon-jordan-buys-crystal-palace-football-club#:~:text=On%20July%205th%202000%2C%20Simon%20Jordan%20rescued%20Crystal,paid%20just%20over%20%C2%A310m%20to%20purchase%20the%20Club.

Rewilak, J. (2023, March 23). Dictating play to the left wing: Does soccer make you more Democratic? *Frontiers in Sports and Active Living, 5*. doi:doi.org/10.3389/fspor.2023.1004695

Rico, M., & Puig, F. (2015). Why do Spanish football clubs succeed in their insolvency proceedings? *Universia Business Review, 48*(4), 52–85.

Robinson, T., & Simmons, R. (2009, June). Gate-sharing and Talent Distribution in the English Football League. *International Journal of the Economics of Business, 21*(3). doi:10.1080/13571516.2014.947705

Rottenberg, S. (1956). The baseball players' labor market. *The Journal of Political Economy, 64*, 242-258.

Runcorn Guardian. (1901, September 4). *Collapse of a Football Club*. Retrieved January 26, 2024, from Newspapers.com: https://www.newspapers.com/image/804250350/?terms=%22new%20brighton%20tower%20football&match=1

Ryan Kelly. (2019, May). *What are Premier League parachute payments & how much do teams get?* Retrieved from www.goal.com: https://www.goal.com/en-gb/news/what-premier-league-parachute-payments-how-much-teams-get/ndpbojgz6szj1ojgn3p7jlbuo

Sacheti, A., Gregory-Smith, I., & Paton, D. (2014). Uncertainty of outcome or strengths of teams: An economic analysis of attendance demand for international cricket. *Applied Economics, 43*, pp. 2034-2046.

Sakınç, I. (2014). Using grey relational analysis to determine the financial performance of Turkish football clubs. *Journal of Economics Library, 1*(1), 22–33.

Sandbrook, D. (2010, January 1). *Fifties Britain Never so good? Or too good to be true?* Retrieved from www.nationalarchives.gov.uk: https://www.nationalarchives.gov.uk/education/resources/fifties-britain/

Sargeaunt, S. (1898). *Annals of Westminster school.* London.

Scarfato, V., & Dimitropoulos, P. (2018). Human capital and financial performance in professional football: the role of governance mechanisms. *Corporate Governance: The international journal of business in society, 18*(2), 289–316.

Scelles, N., Dermit-Richard, N., & Haynes, R. (2019). A comparative analysis of the evolution of TV rights in English and French men’s football first divisions, 1980-2020. *Soccer & Society, 21*(5), 491-509. doi:10.1080/14660970.2019.1681406

Scelles, N., Francois, A., & Dermit-Richard, N. (2022). Determinants of Competitive Balance Across Countries: Insights from European Men's Football First Tiers, 2016-2018. *Managing Sport and Leisure, 27*(3), 267-284.

Scelles, N., Szymanski, S., & Dermit-Richard, N. (2018). Insolvency in French soccer: The case of payment failure. *Journal of Sport Economics, 19*(5), 603–624.

Schwartz, B., & Barsky, S. F. (1977). The home advantage. *Social forces*(55), 641-661.

Scoppa, V. (2021, January). Social pressure in the stadiums: Do agents change behavior without crowd support? *Journal of Economic Psychology, 82*. Retrieved from https://doi.org/10.1016/j.joep.2020.102344

Scott, P. (2000). Women, Other Fresh Workers, and the New Manufacturing Workforce of Interwar Britain. *International Review of Social History, 45*, 456.

Scully, G. (1989). *The Business of Major League Baseball.* Chicago: University of Chicago.

Shackleton, L. (2000). *Return of the Clown Prince.* GHKN Publishing Ltd.

Sheffield & Rotherham Independent. (1896, August 12). *Rotherham TownFootball and Athletic Limited - Annual Meeting - Lively Proceedings*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/410380515

Sheffield & Rotherham Independent. (1896, August 12). *Rotherham TownFootball and Athletic Limited - Annual Meeting - Lively Proceedings*. Retrieved January 26, 2024, from www.newspapers.com: https://www.newspapers.com/image/410380515

Shin, H. S. (1993). Measuring the incidence of insider trading in a market for state-contingent claims. *The Economic Journal, 103*(420), 1141-1153.

Short, M. (2023, April 19). *Premier League parachute payments gap 'a major concern' says EFL*. Retrieved April 05, 2024, from www.bbc.co.uk: https://www.bbc.co.uk/sport/football/65323385

Simkin, J. (2020, January). *Footballer wages*. Retrieved March 24, 2024, from Spartacus International: https://spartacus-educational.com/Fwages.htm

Simon De Montforte. (2012, Jun). *Parachute payments.* Retrieved from barnsleyfc.org.uk: https://barnsleyfc.org.uk/threads/parachute-payments.170295/

Simpson, P. (2014, April 14). *How Hillsborough changed football forever*. Retrieved from fourfourtwo.com: https://www.fourfourtwo.com/features/how-hillsborough-changed-football-forever

Sky Sports. (2024, April 8). *Sky Sports agrees new five-year EFL deal: Over 1000 matches per season!* Retrieved from www.skysports.com: https://www.skysports.com/amp/football/news/21564/12873679/sky-sports-agrees-new-five-year-efl-deal-over-1000-matches-per-season

Smith, A. (2017, July 20). *Sky Sports bust common football myths: Home advantage?* Retrieved from www.skysports.com: https://www.skysports.com/football/news/11096/10955089/sky-sports-bust-common-football-myths-home-advantage

Smith, M. A., Paton, D., & Williams, L. V. (2009). Do bookmakers possess superior skills to bettors in predicting outcomes? *Journal of Economic Behavior and Organization, 71*(2), 539-549.

Soar, P., & Tyler, M. (1983). *Encyclopedia of British Football.* Willow Books. Doi: ISBN 0-00-218049-9.

Southampton FC. (2024, February 8). *The Saints: An Introduction*. Retrieved February 8, 2024, from southamptonfc.com: https://www.southamptonfc.com/en/history

SOUTHAMPTON FOOTBALL CLUB. (2006). *ANNUAL REPORT AND FINANCIAL STATEMENTS.*

Spann, M., & Skiera, B. (2009). Sports Forecasting: A Comparison of the forecast accuracy of prediction markets, betting odds and tipsters. *Journal of Forecasting, 28(1)*, 55-72.

Sporting Intelligence. (2010, May). *THE PREMIER LEAGUE: WHERE THE MONEY WENT IN 2009-10*. Retrieved from sportingintelligence.com: http://www.sportingintelligence.com/2010/05/16/the-premier-league-where-the-money-went-in-2009-10/

Sports Business Institute Barcelona. (n.d.). *TV Rights in Football - Premier League Analysis*. Retrieved from sbibarcelona.com: https://www.sbibarcelona.com/newsdetails/index/403

Sports Lens. (2008, November 4). *Northwich Get That Sinking Sense Of Deja-Vu*. Retrieved January 29, 2024, from sportslens.com: https://sportslens.com/news/northwich-get-that-sinking-sense-of-deja-vu/

Staffordshire Sentinel. (1995, January 9). *Debt-Ridden Gills Go Bust*. Retrieved January 28, 2024, from The British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/bl/0000525/19950109/164/0022

Sterling, L. (2017, March 27). *Why did football league clubs suffer such a drop in attendance during the 1950s?* Retrieved March 27, 2024, from medium.com: https://medium.com/@liamsterling97/why-did-football-league-clubs-suffer-such-a-drop-in-attendance-during-the-1950s-836588c14e9c

Stockport takeover boost. (2010, May 15). Retrieved February 8, 2024, from manchestereveningnews.co.uk: https://www.manchestereveningnews.co.uk/sport/football/football-news/stockport-takeover-boost-889686

Stone, S., & Jackson, B. (2024, March 19). *David Sullivan: West Ham owner opposes introduction of independent football regulator*. Retrieved April 04, 2024, from BBC Sport: https://www.bbc.co.uk/sport/football/68610772

Storey, J. (2016, January 23). *Social Class and the Invention of Modern Football*. Retrieved January 19, 2024, from https://culturematters.org.uk/: https://culturematters.org.uk/index.php/culture/sport/item/2212-social-class-and-the-invention-of-modern-football

Štrumbelj, E. (2014). On determining probability forecasts from betting odds. *International Journal of Forecasting, 30*(4), 934-943. doi:https://doi.org/10.1016/j.ijforecast.2014.02.008

Sumpter, D. (2017). *Soccermatics: Mathematical Adventures in the Beautiful Game Pro-Edition* (Pro Edition ed.). London: Bloomsbury Sigma.

Sun, The. (2021, May 13). *Premier League confirm new £5.1BILLION TV deal which continues Sky, BT, Amazon and BBC agreement for three more years*. Retrieved from thesun.co.uk: https://www.thesun.co.uk/sport/football/14941650/premier-league-tv-deal-sky-bt-amazon-bbc/

Sunday Mirror. (1986, August 10). *Mystery Club*. Retrieved January 27, 2024, from THe British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/bl/0002137/19860810/576/0047

Sunderland PLC. (2004). *Annual Report.*

Symanski, S., & Weimar, D. (2019). Insolvencies in Professional Football: A German Special route? *International Journal of Sport Finance, 14*(4), 54–88.

Szymanski, S. (2001). Income inequality, competitive balance and the attractiveness of team sports: Some evidence and a natural experiment from English soccer. *The Economic Journal, 111*, pp. F69–F84.

Szymanski, S. (2010). The Financial Crisis and English Football: The Dog That Will Not Bark. *International Journal of Sport Finance, 5*(1), 28–40.

Szymanski, S. (2015). *Money and Football: A Soccernomics Guide.* Avalon Publishing Group.

Szymanski, S. (2017). Entry into exit: insolvency in English professional football. *Scottish Journal of Political Economy, 64*(4), 419–444.

Szymanski, S., & Kuper, S. (2009). *Soccernomics.* Nation Books.

Tainsky, S., & Winfree, J. (2010). Short-run demand and uncertainty of outcome in Major League Baseball. *Review of Industrial Organisation, 37*, pp. 197-214.

Tainsky, S., Xu, J., & Zhou, Y. (2014). Qualifying the game uncertainty effect: A game-level analysis of NFL postseason broadcast ratings. *Journal of Sports Economics, 15*, pp. 219-236.

talkSPORT. (2018, November 13th). *TV DEAL ISSUES 15 Championship clubs, including Leeds United, Aston Villa and Derby, threaten to break away from EFL over new TV deal*. Retrieved from talksport.com: https://talksport.com/football/efl/445009/championship-leeds-aston-villa-derby-breakaway-efl-football-league-tv-deal/amp/

Telegraph. (2011, June 11). *Rushden and Diamonds expelled from the Conference for finanical reasons*. (T. staff, Editor) Retrieved January 28, 2024, from Telegraph.co.uk: https://www.telegraph.co.uk/sport/football/news/8570021/Rushden-and-Diamonds-expelled-from-the-Conference-for-finanical-reasons.html

The Daily Mail. (2020, May). *'They are a vital mechanism to give relegated clubs financial support': Premier League backs use of parachute payments after EFL chief Rick Parry branded them 'an evil that needs to be eradicated'*. Retrieved from dailymail.co.uk: https://www.dailymail.co.uk/sport/football/article-8290867/Premier-League-backs-use-parachute-payments.html

The English FA. (n.d.). *What we do - History*. Retrieved 01 21, 2024, from thefa.com: https://www.thefa.com/about-football-association/what-we-do/history

The Guardian. (2003, April 16). *Creditors squeezed as Ipswich debts climb to £54m*. (D. Plummer, Editor) Retrieved February 2, 2024, from theguardian.com: https://www.theguardian.com/football/2003/apr/16/newsstory.sport

The Guardian. (2003, October 21). *Derby County sold for £15m*. (M. Tallentire, Editor) Retrieved February 2, 2024, from theguardian.com: https://www.theguardian.com/football/2003/oct/21/newsstory.sport4

The Guardian. (2003, August 19). *Oldham go into administration*. Retrieved January 2, 2024, from theguardian.com: https://www.theguardian.com/football/2003/aug/19/newsstory.sport9

The Guardian. (2003, August 9). *Survival is success for long-suffering Luton*. (D. McRae, Editor) Retrieved February 2, 2024, from theguardian.com: https://www.theguardian.com/football/2003/aug/09/sport.comment2

The Guardian. (2003, February 25). *Timeline: A history of TV football rights*. Retrieved from www.theguardian.com: https://www.theguardian.com/media/2003/feb/25/broadcasting3

The Guardian. (2004, June 21). *Wimbledon become MK Dons FC*. Retrieved February 2, 2024, from theguardian.com: https://www.theguardian.com/football/2004/jun/21/newsstory.mkdons

The Guardian. (2007, May 5). *Thirty million reasons not to get relegated this season Stuart James*. Retrieved from The Guardian: https://www.theguardian.com/football/2007/may/05/newsstory.premierleague200607

The Guardian. (2008, November 19). *The rise of a club beyond its history and dreams*. (D. Conn, Editor) Retrieved February 1, 2024, from theguardian.com: https://www.theguardian.com/football/2008/nov/19/premierleague-hullcity

The Guardian. (2012, November 27). *Peter Winkelman: 'I'm not proud of how football came to Milton Keynes'*. (D. Conn, Editor) Retrieved February 2, 2024, from theguardian.com: https://www.theguardian.com/football/blog/2012/nov/27/peter-winkelman-mk-dons-afc-wimbledon

The Guardian. (2020, May). *EFL chief says parachute payments are 'an evil that must be eradicated'*. Retrieved from theguardian.com: https://www.theguardian.com/football/2020/may/05/efl-chief-parachute-payments-evil-eradicated-football

The Independent. (1992, August 17). *Football: Maidstone resign from League as debts rise: Henry Winter on the demise of another football club, left without money or ground*. (H. Winter, Editor) Retrieved from www.independent.co.uk: https://www.independent.co.uk/sport/football-maidstone-resign-from-league-as-debts-

rise-henry-winter-on-the-demise-of-another-football-club-left-without-money-or-ground-1541125.html

The Independent. (2002, March 8). *Shakers putting their faith in buckets*. (D. Conn, Editor) Retrieved February 1, 2024, from independent.co.uk: https://www.independent.co.uk/sport/football/football-league/shakers-putting-their-faith-in-buckets-9167258.html

The Independent. (2003, December 6). *County leave world of deals and leases to breathe again*. (D. Conn, Editor) Retrieved February 1, 2024, from independent.co.uk: https://www.independent.co.uk/sport/football/news/david-conn-county-leave-world-of-deals-and-leases-to-breathe-again-81341.html

The Independent. (2003, January 11). *Football: Ipswich are forced into administration by debts*. Retrieved February 2, 2024, from theindependent.co.uk: http://www.highbeam.com/doc/1P2-1743234.html

The Independent. (2003, September 24). *Points threat to clubs choosing administration*. Retrieved from Independent Newspaper: http://www.independent.co.uk/sport/football/news-and-comment/points-threat-to-clubs-choosing-administration-580968.html

The Independent. (2007, February 15). *The crazy world of QPR: Loftus Road heads for meltdown*. (J. Gerard, Editor) Retrieved February 1, 2024, from sport.independent.co.uk: http://sport.independent.co.uk/football/coca_cola/article2271585.ece

The Independent. (2013, January 12). *The parachute payments to clubs relegated from the Premier League can be a lifesaver – but is it fair to all the other teams?* Retrieved from The Independent: https://www.independent.co.uk/sport/football/premier-league/the-parachute-payments-to-clubs-relegated-from-the-premier-league-can-be-a-lifesaver-but-is-it-fair-to-all-the-other-teams-8448748.html#r3z-addoor

The News. (2022, December 19). *'I still regret it': Milan Mandaric reveals why he never should have sold Portsmouth to become Leicester City owner*. (A. Neil, Editor) Retrieved February 1, 2024, from portsmouth.co.uk: https://www.portsmouth.co.uk/sport/football/portsmouth-fc/i-still-regret-it-milan-mandaric-reveals-why-he-never-should-have-sold-portsmouth-to-become-leicester-city-owner-3959233

The Non-League Football Paper. (2012, June 12). *Darwen days are here again*. (J. Lyons, Producer) Retrieved January 26, 2024, from www.thenonleaguefootballpaper.com:

https://www.thenonleaguefootballpaper.com/latest-news/425944/darwen-days-are-here-again/

The Scotsman. (1997, January 22). *Millwall Fight Against Closure*. (P. Casey, Editor) Retrieved February 1, 2024, from https://www.britishnewspaperarchive.co.uk/viewer/bl/0000540/19970122/592/0030

The Sun. (2021, May). *Premier League Parachute Payments Karren Brady*. Retrieved from thesun.co.uk: https://www.thesun.co.uk/sport/football/14887320/premier-league-parachute-payments-karren-brady-west-ham/

The Telegraph. (2003, June 6). *Wimbledon go into administration*. Retrieved February 2, 2024, from telegraph.co.uk: https://www.telegraph.co.uk/sport/2405494/Wimbledon-go-into-administration.html

The Times. (2005, May 4). *Wrexham relegated*. Retrieved January 29, 2024, from https://www.thetimes.co.uk/article/wrexham-relegated-x670vjshb5d

The York Press. (2002, December 18). *City get only 35 days to survive*. Retrieved February 2, 2024, from yorkpress.co.uk: https://www.yorkpress.co.uk/news/7916366.city-get-only-35-days-to-survive/

The York Press. (2003, March 26). *Trust inch toward takeover*. Retrieved February 2, 2024, from yorkpress.co.uk: https://www.yorkpress.co.uk/news/7910882.trust-inch-toward-takeover/

thefsa.org.uk. (2012, January 25). *The EPPP and why youth development matters*. Retrieved April 04, 2024, from thefsa.org.uk: https://thefsa.org.uk/news/the-eppp-and-why-youth-development-matters/

Tiffen, A. (2023, December 17). *New Premier League TV rights deal explained*. Retrieved April 03, 2024, from www.givemesport.com: https://www.givemesport.com/football-soccer-premier-league-tv-rights-deal-explained/

Tony Brown Soccer Data. (2007, December 17). *Record Attendances*. Retrieved from The Football League official website.: http://www.football-league.premiumtv.co.uk/page/RecordAttendances/0%2C%2C10794%2C00.html

Tranmere Rovers. (2024, January 27). *Club History - The 1980s*. Retrieved from www.tranmererovers.co.uk: https://www.tranmererovers.co.uk/club/history/

transfermarkt.co.uk. (2023, August 27). *Market Values*. Retrieved from transfermarkt.co.uk: https://www.transfermarkt.co.uk/championship/marktwerte/wettbewerb/GB2

Tucker, W. H. (1892). *Eton of Old, or Eighty Years since 1811-1822.* London: Griffith Farran Co.

Turner, G. (2003, August 20). *Darwen pray for Sunderland victory*. Retrieved from www.theguardian.com: https://www.theguardian.com/football/2003/aug/20/newsstory.sport16

van Ours, J. C., & van Tuijl, M. A. (2016). In-Season Head-Coach Dismissals and the Performance of Professional Football Teams. *Economic Inquiry, 54*(1), 591-604.

Varley, N. (2002). *Golden Boy: A Biography of Wilf Mannion.* Aurum Press.

Vidit Dhawan. (2021, April). *What Are Parachute Payments? Chelsea, Liverpool And Man Utd To Receive Slice Of £83M Boost*. Retrieved from republicworld.com: https://www.republicworld.com/sports-news/football-news/what-are-parachute-payments-chelsea-liverpool-and-man-utd-to-receive-slice-of-83m-boost.html

Viking Chat. (2012, May 13). *Belle Vue and Westferry/Dinard*. Retrieved February 1, 2024, from Viking Chat: https://www.drfc-vsc.co.uk/index.php?topic=233036.0

Wall, F. (2005). *50 Years of Football, 1884-1934.* Soccer Books Limited. doi: ISBN 1-86223-116-8

WATFORD ASSOCIATION FOOTBALL CLUB LIMITED. (2001). *92nd Annual Report and Financial Statements.*

WATO. (2023, July 5). *Premier League wages have doubled since 2010 with total wage cost of clubs now approaching £3billion*. (K. Maguire, Editor) Retrieved February 11, 2024, from whataretheodds.co.uk: https://www.whataretheodds.co.uk/premier-league-wages/

West Ham United Football Club Limited. (2012). *Report and Financial Statements.*

West Ham United Football Club PLC. (2005). *Report and Financial Statements.*

Western Daily Press. (1984, March 9). *The Valley of Ambition*. Retrieved January 27, 2024, from The British Newspaper Archive: https://www.britishnewspaperarchive.co.uk/viewer/bl/0004974/19840309/032/0032

Western Morning News. (2014, October 14). *120 years and counting: Football at Exeter's St James' Park*. (S. James, Editor) Retrieved January 28, 2024, from www.westernmorningnews.co.uk: http://www.westernmorningnews.co.uk/120-years-counting-Football-Exeter-s-St-James/story-23157240-detail/story.html

what this.com. (2020, May). *Premier League parachute and solidarity payments*. Retrieved from what-this.com: https://what-this.com/58247135/1/premier-league-parachute-and-solidarity-payments.html

When Saturday Comes. (2000, July 14). *Deva and out*. Retrieved February 2, 2024, from wsc.co.uk: https://www.wsc.co.uk/book-reviews/deva-and-out/

Whitney, J. D. (1988). Winning Games versus Winning Championships: The Economics of Fan Interest and Team Performance. *Economic Inquiry, 26*(4), 703-24.

Wikipedia. (2021, April 26th). *Premier League parachute and solidarity payments*. Retrieved from Wikipedia: https://en.wikipedia.org/wiki/Premier_League_parachute_and_solidarity_payments#cite_note-2017-18_Parachute_Payments-1

Wilding, T. (2024, April 10). *Birmingham City: Tom Wagner issues Aston Villa, Premier League prediction*. Retrieved April 12, 2024, from msn.com: https://www.msn.com/en-gb/sport/other/birmingham-city-tom-wagner-issues-aston-villa-premier-league-prediction/ar-BB1lpOkN

Wilson, R., Plumley, D., & Barratt, D. (2015). Staring into the abyss: The state of UK rugby's Super League. *Managing Sport and Leisure, 20*, 293-310.

Wilson, R., Plumley, D., & Flint, S. (2019). Making sense of the sack race: the impact of managerial changes in the English Football League. *Sport, Business and Management: An International Journal.*

Wilson, R., Plumley, D., Mondal, S., & Parnell, D. (2020). Challenging parachute payments and unmasking English football's finances. *Managing Sport and*. doi:10.1080/23750472.2020.1792745

Wilson, R., Ramchandani, G., & Plumley, D. (2017). Parachute Payments in English Football: Softening the landing or distorting the balance. *Journal of Global Sport Management*.

Wilson, R., Ramchandani, G., & Plumley, D. (2018). Parachute payments in English football: Softening the landing or distorting the balance? *Journal of Global Sport Management, 3*(4), 1–18.

worldfootball. (2019). *Championship 2018/2019 » Attendance » Home matches*. Retrieved from worldfootball.net: https://www.worldfootball.net/attendance/eng-championship-2018-2019/1/

Wunderlich, F., Weigelt, M., Rein, R., & Memmert, D. (2021, March 31). How does spectator presence affect football? Home advantage remains in European top-class football matches played without spectators during the COVID-19 pandemic. *PLoS ONE, 16*(3). Retrieved 2023, from https://doi.org/10.1371/journal.pone.0248590

Yorkshire Post. (2007, June 20). *Scarborough FC wound up after 128 years*. Retrieved January 27, 2024, from http://www.yorkshirepost.co.uk/football?articleid=2968819

Zimbalist, A. (2002). Competitive balance in sports leagues: An introduction. *Journal of Sports Economics, 3*(2), 111-121.

Zmijewski, M. E. (1984). Methodological issues related to the estimation of financial distress prediction model. *Journal of Accounting Research, 22*, 59–82.

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