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Insolvency in French Soccer

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Abstract:

This paper examines insolvency at the highest levels of French soccer. Between 1970 and 2014 we observed 72 cases of insolvency arising from participation in the top two or three (since 1993) divisions. We find that demand (attendance) shocks can account for insolvency to a significant degree. We also find that insolvency can be explained by ownership structure, with the tradition Association form being more likely to lead to insolvency. We also examine the post-insolvency performance of soccer clubs and find that the adverse consequences of insolvency are long lasting.

Keywords: insolvency, French soccer, attendance, demand shocks, ownership.

JEL codes: Z2, L83, G33, G38.

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Introduction

Insolvency is a systematic problem in the world of European soccer. In 2012 UEFA, the governing body of European soccer reported that 56% of clubs failed to meet at least one of the following criteria: no negative net equity, no qualification by the auditors as to whether the business was a going concern and no overdues payable (UEFA (2012), see also Szymanski, 2015, chapter 8). This paper examines insolvency at the highest levels of French soccer. Between 1970 and 2014 we observed 72 cases of insolvency arising from participation in the top two or three (since 1993) divisions, a population of 56 to 78 clubs.¹

In this paper, our objective is to explain the causes and consequences of insolvencies in French soccer. Szymanski (2012) examined data for English soccer clubs in the top four divisions (92 clubs) and found a similar incidence of insolvency (67 cases between 1982 and 2010). His results suggested that insolvency could be explained by negative productivity shocks (underperformance of the players) or negative demand shocks (revenues falling below expected levels). We also find that demand shocks can account for insolvency to a significant degree. We also examine the post-insolvency performance of soccer clubs and find that the adverse consequences of insolvency are long lasting.

Our paper is structured as follows. First we review the literature on insolvencies in European soccer. Section 3 explains the evolution of French insolvency law and section 4 examines the organization of professional soccer in France. Section 5 describes our data on insolvency and section 6 reports our regression results. The last section concludes.

Literature review of insolvencies in European soccer

There is now a substantial literature on the financial problems of European soccer clubs (see e.g. the Special Issue by Journal of Sports Economics introduced by Lago, Simmons and Szymanski, 2006) but, as yet, few studies on the topic of insolvencies. Buraimo, Simmons and Szymanski (2006) in their discussion of the financial problems of English clubs do not deal with specifically on insolvencies but refer to them. They note that the usual reasons cited to explain why clubs amass high levels of indebtedness are an inability to sell players as assets through the transfer market, a loss of revenues consequent on relegation, an inability to align costs and revenues following relegation, an inability to maintain loan payments on capital expenditure such as a new stadium, and a failure to realize expected revenues from TV broadcasting deals.

Beech, Horsman and Magraw (2008, 2010) identify five types of insolvencies in English soccer:

1. clubs that have failed to cope with relegation;
2. clubs that have failed to pay monies due to the government;
3. clubs that have seen ‘soft’ debt become ‘hard’ debt;
4. clubs that have lost the ownership of their stadium;
5. ‘repeat offenders’.

As the authors indicate, these types are not mutually exclusive. Szymanski (2012) uses a unique database of financial accounts for English soccer clubs between 1973/74 and 2009/10 to examine the causes of insolvency. Two hypotheses (also not mutually exclusive) are considered. The first is “irrational exuberance”, meaning that owners attempt to achieve a significant improvement in league position which is not affordable, leading to financial crisis. The second is that club finances are subject to negative shocks – either to productivity (on the field) or to demand – and that a series of such shocks can lead to insolvency. His empirical model provides evidence in support of the negative shocks hypothesis.

Barajas and Rodríguez (2010) use a logistic regression to explain why some clubs are under administration in Spanish soccer. They rely on a sample of 35 clubs in 2008, of which six were in the legal insolvency process of administration in that year. Their selected explanatory variables are mainly financial ones: financing rate (the ratio of short term debt to current assets), indebtedness (Total Debts / Total Assets), the ratio of total revenues to debt, the ratio of staff expenses to operating revenues and the ratio short-term to long-term debt. They also include the division that a given club belongs to. They find no significant impact of their explanatory variables on the likelihood that a club has entered the administration process.

Barajas and Rodríguez (2014) analyze Spanish clubs during the period from 2007 until 2011, using Altman's models to classify clubs according to their Z-score values (Altman, 1968, 2000; Altman, Haldeman & Narayanan, 1977). They note that Spanish soccer is in very poor financial condition with most of clubs being at risk of going bankrupt. The authors identify a number of steps required to restore financial stability including raising equity from the capital markets or club members, revenue enhancement, wage cuts and working to reduce current liabilities.

Insolvency laws in France

Under French law any debtor unable to meet its obligations is liable to enter a “collective insolvency proceeding” (Bayle, 2009). A major landmark in the development of this process was the law 67-563 of 13 July 1967 which was intended to protect debtors from their creditors while preparing a recovery plan (Stankiewicz Murphy, 2011).²

In line with developments in insolvency laws in the US and other European countries, the legal treatment of insolvency shifted in favor of debtor companies in 1980s (Stankiewicz

Murphy, 2011). Tetley and Bayle (2009) summarize the sequence of relevant laws from 1984 to 2005:

- **1984:** The law 84-148 of 1st March 1984 introduced early warning procedures, which obliged managers to report signs of financial weakness and draw up a recovery plan. A court-supervised procedure to reach a compromise with creditors was also introduced.
- **1985:** The law 85-98 of 25 January 1985 favored company reorganization over winding-up proceedings. Reorganization became the guiding principle, making liquidation proceedings a last resort.
- **1994:** The law 94-475 of 10 June 1994 distinguished two types of collective insolvency proceedings: judicial reorganization and judicial liquidation. In particular, the court was given the ability to order liquidation of a company immediately without necessarily having to go through the court supervised reorganization phase.
- **2005:** The law 2005-845 of 26 July 2005 introduced four types of proceedings: conciliation, safeguard, judicial reorganization, and liquidation. Conciliation involves only limited judicial supervision, whereas the three other proceedings are more involved and require the court to nominate those required to carry out the work of reorganization or liquidation.

The organization of professional soccer in France

We have data on insolvencies in French soccer clubs over the period 1970-2014. We now document the structural changes in the organization of the competitive hierarchy.

Prior to 1970 there were professional clubs participating in two divisions connected by promotion and relegation, and amateur clubs also operating in promotion/relegation

hierarchy, but no automatic promotion/relegation link between the amateur and professional divisions. Beginning in 1970 the two systems have been fully integrated into a single hierarchy linked by promotion and relegation. Since 1970 there have been four further restructurings of the divisions, as set out in Table 1. Since 1993 some professional clubs belong to the third division as well as the top two divisions.

The legal definition of soccer clubs has also changed several times in recent decades. Until around 1990, most of clubs were member associations and supported by local authorities through direct subsidies. Some clubs were defined as mixed economy companies (“sociétés d’économie mixte”, SEM), meaning that they were controlled jointly by a members’ club and a local government authority. A third organizational structure that some clubs adopted was the limited liability company with sporting object (“sociétés anonymes à objet sportif”, SAOS). Until 1992, the shares of such companies had to be mainly held by the association, but after 1992, a private partner could be the main shareholder (the association minority interest was still not allowed to fall below 34%). Dividend payments were not permitted under any of these organizational structures.

Table 1

In 1999 the “loi Buffet” introduced a new ownership form: professional sport limited company (“sociétés anonymes sportives professionnelles”, SASP). This form allows a private partner to own the entire capital of a club and receive dividends. By 2013/14, almost all clubs in the top two divisions had adopted the SASP structure (LFP/DNCG, 2014). Over the entire period the role of local government has decreased and reliance on commercial revenue streams has increased.³

These institutional reforms reflected changes in the commercial structure of soccer as TV revenues became more important, as well as a declining willingness of government to fund professional sport. Reform was also driven by desire to put clubs on a better financial footing, given the persistence of liquidity and insolvency problems. By the late 1980s insolvency was perceived to be a threat the stability of the championship system and this led to the creation in 1990 of the “Direction Nationale du Contrôle de Gestion” (DNCG) to regulate the financial decisions of soccer clubs (Dermit-Richard, 2004).⁴

The powers of the DNCG include prohibiting the recruitment of players, auditing club payrolls and, as a last resort, imposing relegation independently of sporting performance; see Gouguet & Primault, 2006. They argue that the DNCG has allowed French soccer to avoid the financial crisis encountered by the other major European leagues (England, Germany, Italy and Spain). Andreff (2007), however, claims that the DNCG has not been able to effectively control the financial problems of French clubs, mainly because of the lack of transparency and disclosure. We consider the effect that the DNCG has had on declared insolvencies below.

Descriptive statistics

Our dataset consists of all clubs participating in the top two divisions from 1970/71 to 1992/93 and top three divisions since 1993/94 (divisions with professional clubs). Over the period 1970-2014, we identified 72 cases in total.⁵ In eight of these cases the club became insolvent during the season and because of this were officially ranked last, a position not necessarily representative of their sporting performance when they became insolvent.⁶ There are another five cases (included in the 72 cases) where the club became insolvent at a lower level competition but during the season immediately following participation in one of the top

two or three divisions.⁷ Figure 1 shows the incidence of insolvency by year. While insolvencies appear to have been most frequent in the 1990s, there are plenty of examples at all times throughout the four decades.

Figure 1

Table 2 summarizes the 72 cases where clubs became insolvent while participating or as a consequence of participation in the top three divisions. As noted by Szymanski (2012), insolvency at the highest level of competition is rare. Only four clubs became insolvent while in the 1st division: Rouen (1977-1978), Reims (1978-1979), Bordeaux and Nice (both 1990-1991). In seven cases clubs became insolvent after having been relegated from the first division in the previous season.⁸

Table 2

Pre-insolvency performance

We now examine two indicators of team performance in the twelve years leading up to an insolvency event: league rank and attendance. In each division each club achieves a league position based on points and, if necessary, goal difference. To account for the different levels in the league hierarchy we convert league position into league rank in the following way:

- teams with positions 1-20 in the first division are given ranks 1 to 20,
- teams with positions 1-20 in the second division are given ranks 21 and 40,
- teams with positions 1-20 in the third division are given ranks 41 and 60⁹.

Figure 2 illustrates the average change in league rank leading up to the insolvency event (season t). It shows that on average, insolvent clubs improved their rank from t-11 (44.9) to t-2 (33.0) before experiencing a decline in t-1 (35.0) and a larger decrease in season t (38.6).

Figure 2

Figure 3 illustrates the change in average attendance leading up to an insolvency event. It shows that on average attendance was over 4500 per game up to three years before the insolvency event and as high as 5224 three seasons before the event (t-3), falling to 4428 in t-2, 3973 in t-1 and 2888 in t.¹⁰

Figure 3

It is striking that attendance start to decline for clubs about to become insolvent earlier than the decline in league rank. One interpretation is that insolvency is driven by falling revenues (in essence, a demand shock), rather than underperformance on the field. Figure 4 represents the average ratio between attendance and (81 - league rank). It suggests that clubs of a given rank generate lower attendance as they approach insolvency, a finding also consistent with the idea that insolvency is driven by demand shocks.

Figure 4

Post insolvency performance

The consequences of insolvency are illustrated in Figure 5. It shows that the average team position fell from 38.6 in t (the season of the insolvency event) to 66.2 in t+1 and never rose

above 60 in the 12 years after the insolvency event (t+12). This decline is roughly equivalent to playing a full division lower following the insolvency event without any tendency to recover. This result contrasts with Szymanski (2012) who finds that in English soccer there is a strong tendency for performance to recover to pre-insolvency level within a few years.

Figure 5

Table 3 shows what happened to all relegated clubs in our population, whether insolvent or not. It reports the percentage of relegated clubs that are promoted back within five and ten years, depending on the division from which they were relegated.¹¹ As a whole, it is more difficult to regain previous level within a given period of time after an insolvency compared to all relegations.

Table 3

Regression analysis

The descriptive statistics suggest that shocks to demand -declining attendance for a given level of team performance – are associated with insolvencies. We now develop a regression model to test if there is a causal relationship. Our regression strategy is to estimate a relationship between league performance and attendance (which we take to be a proxy for revenues¹²) and then to use the residuals from this regression as explanatory variables in a probit regression for insolvency.

Following Leach (2006) we adopt an error correction framework; our performance/attendance regression model is defined as:

$$\Delta \text{relatt}_{it} = \gamma_0 + \gamma_1 \ln \text{relatt}_{it-1} + \gamma_2 \Delta \ln \text{relatt}_{it-1} + \gamma_3 \ln p_{it-1} + \gamma_4 \Delta \ln p_{it} + \gamma_5 \ln \text{relpop} + \text{main club dummy} + \text{promotion/relegation dummies} + \text{division/tier dummies} + \text{performance/tier interaction dummies} + \eta_{it} \quad (1)$$

Where relatt is the average attendance of the club divided by the sum of all clubs' average attendances in that season, $\ln p$ is league rank, relpop is the population of the club urban area¹³ divided by the sum of all urban areas with at least one club, and "main club" is a dummy variable equal to 1 if the club is the main club in its urban area and 0 otherwise. Since we are using (1) to obtain best linear unbiased predictors of attendance (revenue), rather than estimates of the structural parameters, we do not need to assume the exogeneity of the right hand side variables.

Table 4 presents the results of the regressions for attendance. The results are intuitive: higher attendances are associated with clubs with higher league positions, participating in higher league divisions and playing in urban areas with larger populations. Promoted clubs enjoy a significant boost to attendance while relegated teams lose support.¹⁴ Besides, we find similar signs and significances compared to Szymanski (2012) for English soccer.

Table 4

The main focus of interest here is the residuals from (1). We chose to use the residuals from the fixed effects specification in Table 4 to estimate the probability of insolvency (Table 5). In addition we included variables indicating (i) legal status (company or association), (ii) divisional status (first, second or third) (iii) the presence of the DNCG or amateur control regulatory regimes.

Table 5

Columns 1-6 of Table 5 differ according to the number of residuals used. Thus column 1 uses residuals in t , column 2 adds residuals in $t-1$, and so on until $t-5$. This captures the idea that insolvency can be triggered by a sequence of negative shocks. The residuals are of the right sign (negative) and significant for each regression from t to $t:t-3$. Note that although the coefficient is larger when only the more recent shocks are included, a longer history also means a greater cumulative effect.

Association (meaning the organizational structure) has a positive sign and is significant for each regression. Note that Associations tend to have a broader membership base than other organizational forms, and so the results may suggest that more concentrated ownership forms are less prone to financial distress. Not surprisingly, clubs in lower divisions are more likely to enter insolvency. However, the regulatory organizations- the DNCG and Amateur club control body do not appear to have had any impact on insolvencies, consistent with the views of Andreff (2007).

Conclusion

In this paper, our objective was to examine the causes of insolvency in French soccer over the period 1970-2014. Our dataset included all professional soccer clubs operating during this period.

We estimate the impact of demand shocks, calculated by estimating the difference between actual and expected attendance levels, based on team performance, club fixed effects and other relevant variables. Our results show that negative demand shocks significantly increase the likelihood of insolvency. The cumulative effect of these shocks can extend up to three seasons prior to the insolvency event. These findings are very similar to those of Szymanski

(2012), whose data covered a similar period and who used a similar methodology for the case English professional soccer.

Indeed, although the regulatory regimes are quite different, insolvency seems to present itself in a similar way in both soccer league systems. Over the period 1970-2014, 72 insolvencies occurred in French professional soccer, more than in English professional soccer (Szymanski, 2012). Because there are fewer professional clubs in France, there are fewer club-years in our data – 2634 versus 3404 in the English professional soccer dataset. This means that the frequency of insolvencies per club-year was 2.7% in France compared to 2.0% in England. These figures appear broadly similar.

We also find that insolvency can be explained by ownership structure, with the tradition Association form being more likely to lead to insolvency. The Association model usually entails less concentrated ownership, and often a lesser degree of financial backing, which may help to explain this result.

Our results have important policy implications. First, the idea of giving fans more power through ownership is a popular one at the moment, while our results suggest that this might increase financial instability. Second, while insolvency is often attributed to overambitious expansion by the club management, it may be that simple bad luck plays a more important role. Considering post insolvency events, we find that clubs frequently struggle to achieve the same level of competition again, mainly because of the difference of level between t and $t+1$. This raises the question of whether penalties by the French soccer authorities are justified or not. If not, there is an important concern given that they can prevent a club from regaining its previous level, with the negative economic and social consequences associated to this.

Notes

¹ Football clubs play in leagues that are connected through the system of promotion and relegation which enables clubs to move to a higher level based on sporting merit, replacing those that perform poorly (this is in sharp contrast to the American model in which teams do not move between different levels of competition). Given this pyramid structure, there is a large number of clubs operating below this level and many of these have also become insolvent, but these cases are harder to document.

² This procedure was limited to entities that could prove (a) the financial situation was not irreparable (b) there would be a full and speedy recovery prospects and (c) liquidation would be damaging to either the regional or the national economy. In practice the law did little to preserve insolvent businesses.

³ Until the end of the 1980s clubs obtained about 50% of the revenues from gate receipts, 30% from sponsorship and 20% from local government subsidies. TV revenues were negligible. Since then the contribution of TV rights has risen to around 50% of the total, gate revenues has fallen to as little as 10%, and public subsidies have almost disappeared (see Andreff (2012) and LFP/DNCG (2012, 2014)).

⁴ Between 1990/91 and 1992/93, the DNCG regulated clubs in the top two divisions (56 clubs); from 1993/94 to 1995/96, clubs in the top three divisions (78 clubs); from 1996/97, clubs for the top two divisions (38 to 42 clubs) whereas clubs in third division have been regulated by the control committee for federal (amateur) championships (Dermitt-Richard, 2004).

⁵ We identified insolvent clubs using several sources: <http://fr.wikipedia.org/>, <http://footballefrance.fr/>, <http://www.savoie-foot.com/savoiefoot/CFA/>, <http://www.rsssf.com/players/trainers-fran-clubs.html>, a document from the French football league entitled "Rapport moral saison 1990-1991" (Pukan, 1991) and a PhD by Durand (1994). We found their divisions on <http://footballefrance.fr/>. A data appendix listing all the clubs and the events surrounding insolvency is available from page 26.

⁶ For these clubs, we chose to use data in our analysis from the previous season. For example, AC Ajaccio became insolvent after three games during the season 1974-1975. In our analysis, we consider this insolvency as having occurred at the end of 1973-1974. The only exception is Saint-Brieuc in 1996-1997 as this is the only club that became insolvent in-season for which we could find both their sporting performance and their attendance when they became insolvent. This is also the only club that got promoted the previous season.

⁷ (i) Reims which became insolvent in 1991-1992 when being in 3rd division and after having been relegated from 2nd division for financial difficulties (ii) Tours and Gap which became insolvent respectively in 1993-1994 and 2011-2012 when being in 4th division and after having been relegated from 3rd division for financial

difficulties, (iii) Uzès which became insolvent in 2014-2015 when being in 5th division and after having been relegated from 3rd division both for sporting and financial reasons (iv) Cassis-Carnoux which became insolvent in 2010-2011 when being in 7th division and after having been relegated from 3rd division both for sporting and financial reasons.

⁸ Rennes in 1977-1978, Troyes in 1978-1979, Marseille in 1980-1981 and 1994-1995 (relegated for administrative reasons in 1993-1994), Angers in 1981-1982, Valenciennes in 1982-1983 and Brest in 1991-1992 (relegated for financial difficulties in 1990-1991). Ajaccio (relegated from the first division in 1972-1973) became insolvent in 1974-1975 after having played only three games.

⁹ The appendix describes the normalization in more detail.

¹⁰ We were not able to obtain a complete attendance record for all of the clubs. Out of the 72 cases of insolvency, we found 48, 49 or 50 attendances from t-12 to t-9, 53 in t-8, 56 in t-7 and t-6, 59 in t-5 and t-4, 60 in t-3, 64 in t-2, 65 in t-1 and 68 in t. For the latter, the four missing cases correspond to two insolvent clubs excluded in-season (Nevers in 1993-1994 and Roubaix in 1995-1996), Pau in 1994-1995 and Quimper in 1996-1997. If we look at attendance for those clubs for which we have a complete record over six seasons (51 cases), the pattern is confirmed: on average attendance was 5442 in t-6, 5622 in t-5, 5363 in t-4, 5841 in t-3, 5050 in t-2, 4611 in t-1 and 3341 in t.

¹¹ Only 50 cases of insolvencies are included here. Of the remaining insolvency cases 13 clubs were not relegated, one disappeared (Nevers in 1994) and eight clubs have had not sufficient time to regain their previous level (i.e. these clubs were relegated by more divisions than the number of seasons since played). When extending to 10 years, four other cases are excluded as they can still regain their previous level within 10 years at the time of writing this paper.

¹² Unlike English clubs, accounting data for wages and revenues are unavailable for French football clubs across all seasons. Hence we use average annual attendance figures as a proxy for revenue data. Attendance is one of the principal factors determining revenues, both directly through money received at the gate and for merchandise, and also indirectly since broadcasters and sponsors will pay more for rights to popular clubs (see e.g. Buraimo, Paramio and Campos, 2010).

¹³ We use the words urban area to refer to the French concept of “*unité urbaine*”.

¹⁴ The results are very similar in sign and significance to those found by Szymanski (2012) for English football.

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Tables

Table 1 Number of clubs (and groups) in the French soccer divisions from the first to the best regional over the period 1969-2014

	1969-1970	1970-1972	1972-1978	1978-1993	1993-1997	1997-2014
1st division (D1)	18	20	20	20	20	18 until 2001-2002 then 20
2nd division (D2)	16	48 (3*16)	36 (2*18)	36 (2*18)	22	22 in 1997-1998 then 20
3rd division (D3)	72 (6*12)	75 in 1970-1971, 81 in 1971-1972 (6 groups)	96 (6*16)	96 (6*16)	36 (2*18)	20, 18 in 2013-2014
4th division (D4)	240 (20*12)	240 (20*12)	240 until 1973-1974 then 260 (20 groups)	112 (8*14)	72 (4*18)	72 (4*18), 62 in 2013-2014 (2*15 and 2*16)
5th division (D5)	-	-	-	260 until 1979-1980 (20 groups), 273 in 1980-1981 (21 groups) then 286 (22 groups)	112 (8*14)	128 (8*16), 112 from 2012-2013 (8*14)
6th division (D6)	-	-	-	-	286 (22*13)	308 (22*14)
Total number of clubs	346	383 in 1970-1971, 389 in 1971-1972	392 until 1973-1974 then 412	524 until 1979-1980, 537 in 1981-1982 then 550	548	568 in 1997-1998, 566 until 2001-2002, 568 again until 2011-2012, 552 in 2012-2013, 540 in 2013-2014

Table 2 Number of insolvencies per period and level in French soccer clubs over the period 1970-2014

	1st division	2nd division	3rd division (1993-2014)	Total
Entire period	5	41	26	72
1970-1981	2	7	-	9
1981-1992	3	23	-	26
1992-2003	0	8	14	22
2003-2014	0	3	12	15

Table 3 Consequences of relegation for all cases and cases of insolvency

		5 years		10 years	
		All relegations	Insolvencies	All relegations	Insolvencies
All divisions	Number of cases	426	50	397	46
	Regaining previous level	200	13	238	15
	%	46.9%	26%	59.9%	32.6%
1 st division	Number of cases	119	5	112	5
	Regaining previous level	77	3	86	3
	%	64.7%	60%	76.8%	60%
2 nd division	Number of cases	203	26	201	25
	Regaining previous level	85	5	104	5
	%	41.9%	19.2%	51.7%	20%
3 rd division	Number of cases	104	19	84	16
	Regaining previous level	38	5	48	7
	%	36.5%	26.3%	57.1%	43.75%

Table 4 Regressions explaining attendance variation in season t

	Attendance only	Attendance and position	Attendance and position and position/tier interaction	Fixed effects
$\ln(\text{Attendance}/\sum\text{Attendances}) (t-1)$	-0.153*** (0.0175)	-0.196*** (0.0163)	-0.195*** (0.0159)	-0.404*** (0.0258)
$\Delta \ln(\text{Attendance}/\sum\text{Attendances}) (t-1)$	-0.134*** (0.0221)	-0.102*** (0.0194)	-0.102*** (0.0191)	-0.0465*** (0.0181)
$\ln(\text{Population}/\sum\text{Populations}) (t)$	0.0480*** (0.00663)	0.0387*** (0.00582)	0.0399*** (0.00563)	0.0192 (0.0634)
Main club	0.268*** (0.0418)	0.265*** (0.0362)	0.274*** (0.0352)	0.221* (0.132)
Promotion (t-1)	0.438*** (0.0204)	0.330*** (0.0215)	0.328*** (0.0220)	0.250*** (0.0234)
Relegation (t-1)	-0.365*** (0.0334)	-0.309*** (0.0302)	-0.329*** (0.0306)	-0.213*** (0.0306)
Second tier	-0.153*** (0.0224)	-0.0147 (0.0215)	-0.0681*** (0.0215)	-0.190*** (0.0266)
Third tier	-0.350*** (0.0441)	-0.176*** (0.0392)	-0.0627 (0.0557)	-0.307*** (0.0666)
P (t-1)		0.0890*** (0.00748)	0.0445*** (0.00805)	0.0474*** (0.0104)
$\Delta P (t)$		0.175*** (0.00778)	0.107*** (0.00802)	0.101*** (0.00845)
P (t-1) * T2			0.0596*** (0.0118)	0.0635*** (0.0148)
$\Delta P (t) * T2$			0.100*** (0.0140)	0.0993*** (0.0142)
P (t-1) * T3			0.148*** (0.0261)	0.188*** (0.0313)
$\Delta P (t) * T3$			0.144*** (0.0246)	0.167*** (0.0272)
Constant	-0.611*** (0.0781)	-0.922*** (0.0782)	-0.855*** (0.0757)	-2.228*** (0.494)
Observations	2360	2360	2360	2360
R-squared	0.407	0.541	0.557	0.618
Number of clubs				176

*, ** and *** mean respectively significant at the 10, 5 and 1% levels.

Table 5 Probit regressions explaining insolvencies

	T	t:t-1	t:t-2	t:t-3	t:t-4	t:t-5
Association	0.280* (0.169)	0.475*** (0.184)	0.525*** (0.190)	0.567*** (0.198)	0.540** (0.214)	0.557** (0.221)
Second tier	0.669*** (0.171)	0.650*** (0.174)	0.683*** (0.174)	0.699*** (0.176)	0.683*** (0.177)	0.699*** (0.179)
Third tier	0.910*** (0.325)	0.912*** (0.338)	1.198*** (0.350)	1.542*** (0.382)	1.697*** (0.395)	1.661*** (0.436)
DNCG	0.0813 (0.197)	0.122 (0.204)	0.0703 (0.210)	0.0535 (0.217)	-0.0281 (0.234)	-0.0750 (0.240)
Amateur control	0.144 (0.360)	0.160 (0.397)	-0.0661 (0.418)	-0.304 (0.454)	-0.489 (0.483)	-0.406 (0.520)
Residual t	-0.597** (0.236)					
Residual t:t-1		-0.594*** (0.177)				
Residual t:t-2			-0.428*** (0.157)			
Residual t:t-3				-0.297** (0.141)		
Residual t:t-4					-0.205 (0.128)	
Residual t:t-5						-0.122 (0.120)
Constant	-2.759*** (0.216)	-2.904*** (0.236)	-2.892*** (0.232)	-2.900*** (0.239)	-2.823*** (0.244)	-2.800*** (0.243)
Observations	2360	2130	1942	1786	1650	1539
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo-R ²	0.077	0.098	0.111	0.122	0.127	0.128

*, ** and *** mean respectively significant at the 10, 5 and 1% levels.

Figures

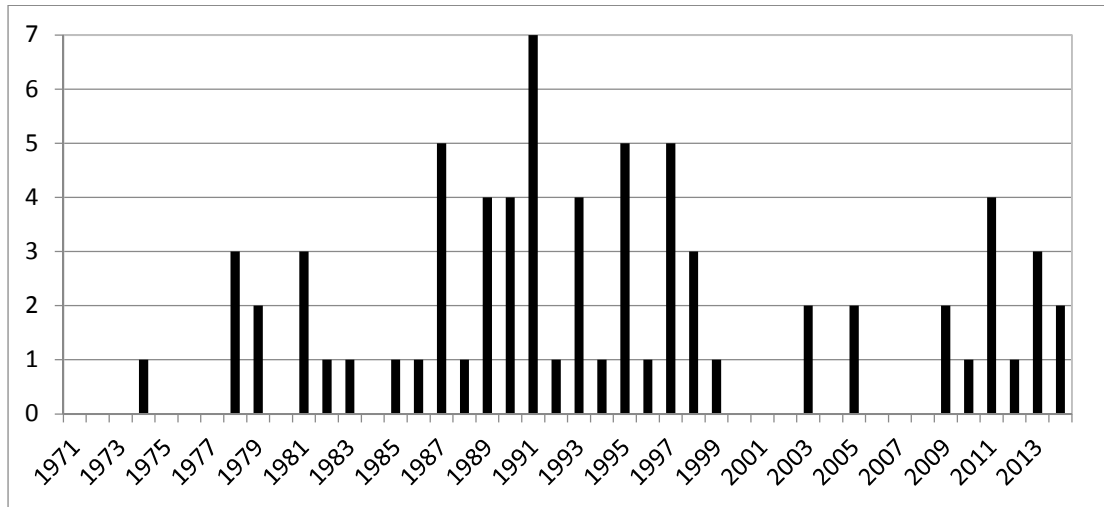


Figure 1 The frequency of insolvencies per season in French soccer clubs, 1970-2014



Figure 2 Average team rank from year t-12 to year of insolvency (year t)

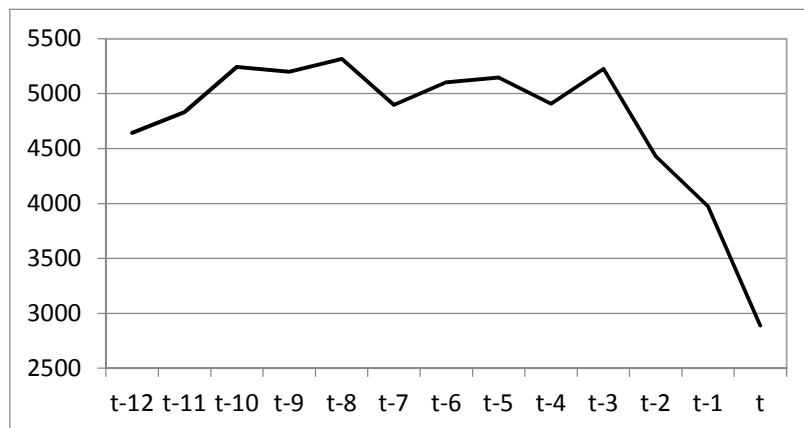


Figure 3 Average team attendance from year t-12 to year of insolvency

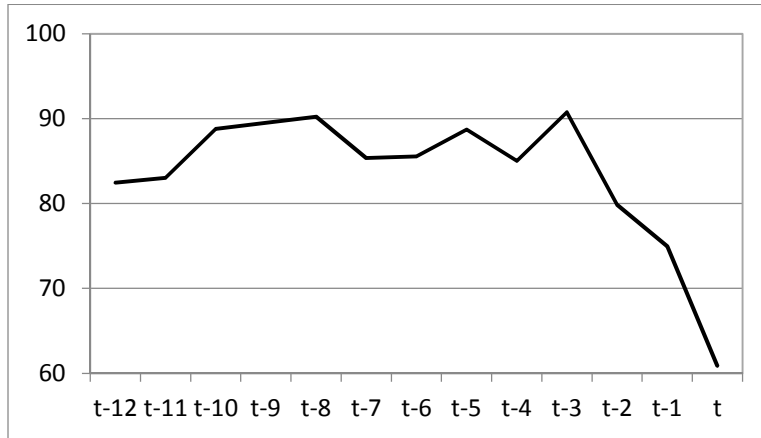


Figure 4 Average team ratio between attendance and (81 - league rank) from t-12 to year of insolvency



Figure 5 Average team position from year t-12 before to year t+12 after insolvency

Appendices

Appendix 1 Position “normalisation”

Actual ranking	22 teams	21 teams	19 teams	18 teams	17 teams	16 teams	15 teams	14 teams	13 teams	12 teams	11 teams	10 teams	9 teams	8 teams
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	3	3	3	4
3	3	3	3	3	3	3	3	3	3	4	5	5	6	7
4	4	4	4	4	4	4	4	4	5	6	7	8	8	10
5	5	5	5	5	5	5	5	6	7	8	9	10	10.5	11
6	6	6	6	6	6	6	7	8	9	10	10.5	11	13	14
7	7	7	7	7	7	8	9	10	10.5	11	12	13	15	17
8	8	8	8	8	9	10	10.5	11	12	13	14	16	18	20
9	9	9	9	10	10.5	11	12	13	14	15	16	18	20	
10	9.5	10	10.5	11	12	13	14	15	16	17	18	20		
11	10	10.5	12	13	14	15	16	17	18	19	20			
12	11	11	13	14	15	16	17	18	19	20				
13	11.5	12	14	15	16	17	18	19	20					
14	12	13	15	16	17	18	19	20						
15	13	14	16	17	18	19	20							
16	14	15	17	18	19	20								
17	15	16	18	19	20									
18	16	17	19	20										
19	17	18	20											
20	18	19												
21	19	20												
22	20													

Data Appendix 1: Information related to causes of insolvencies in French football over the period 1970-2014 for each case

	Club	Season	Ownership form	“Normalised” sporting position (actual into brackets if different)	Potential in terms of attendance based on best attendance position t-12/t	Local / departmental ¹ competitor(s) (“normalised” position into brackets if football, actual position if other sports)	Evolution of “normalised” sporting position t-12/t-1	Attendance shock or not according to regressions (residuals ≤ -0.2, t-5/t)
1	AC Ajaccio	1975	Association	40 (56) withdraw	23 in t-4	GFCO Ajaccio (42 in t-1 and t; D2 in t+1)	Between 61 and 65 t-12/t-10, 36 in t-9, 21 in t-8, 9 in t-7, 18 in t-6 and t-5, 6 in t-4, 13 in t-3, 20 in t-2, 27 in t-1	Shock in t-1 (-0.32)
2	Rouen	1978	Association	20	9 in t	-	Between 4 and 16 t-12/t-8 (4 in t-9, financial difficulties in t-8, 14) Between 22 and 30 t-7/t-1	No shock
3	Red Star 93	1978	Association	23 (25)	15 in t-3	Paris SG (11 vs. 9 in t-1) Paris FC (22 vs. 34 in t-1)	20 in t-12, 38 in t-11 (fusion with Toulouse) Between 13 and 19 t-10/t-5 21 in t-4, 20 in t-3,	Shock in t-2 (-0.28) and t-1 (-0.44)

							22 in t-2, 30 in t-1	
4	Rennes	1978	Association	34 (43)	9 in t-4	-	Between 6 and 19 t-12/t-3 21 in t-2, 20 in t-1	Shock in t-1 (-0.24) and t (-0.44)
5	Reims	1979	Association	20	6 in t-5	-	19 in t-12, 23 in t-11, 28 in t-10, 24 in t-9 Between 5 and 15 t-8/t-1 (5 in t-3, 11 in t-2, 15 in t-1)	Shock in t (-0.28)
6	Troyes	1979	Association	39 (53)	11 in t-5	-	75 at best t-12/t-9 35 in t-8, 22 in t-7, 21 in t-6 Between 15 and 19 t-5/t-1	Shock in t-1 (-0.20)
7	Marseille	1981	Association	26 (31)	1 in t-10	-	Between 1 and 19 t-12/t-1	Shock in t-4 (-0.32), t-2 (-0.38) and t (-0.36)
8	Thionville	1981	Association	26 (31)	27.5 in t-1	Metz (9 vs. 17 in t-1)	61 at best t-12/t-4, 45 in t-3, 43 in t-2, 33 in t-1	Data not available (decrease in attendance between t-1 and t despite a better sporting position)
9	Dunkerque	1981	Association	38 (51)	22.5 in t-8	Lille (17 vs. 13 in t-1)	Between 23 and 38 t-12/t-1, 24 in t-8 and t-3, 23 in t-2, 31 in t-1	Shock in t-2 (-0.32) and t-1 (-0.37)

10	Angers	1982	Association	28 (35)	13 in t-8	-	Between 4 and 21 t-12/t-1 (21 in t-6 and t-4)	Shock in t-1 (-0.36) and t (-0.29)
11	Valenciennes	1983	Association	23 (25)	13 in t-7	-	19 in t-12, 21 in t-11, 18 in t-10, 22 in t-9, 21 in t-8, 12 in t-7, 17 in t-6, 14 in t-5, 18 in t-4, 8 in t-3, 11 in t-2, 18 in t-1	Shock in t-2 (-0.25)
12	Stade Français	1985	Association	35 (45)	39.5 in t-3	Paris SG (13 vs. 4 in t-1) Basket (4 in t-1 and t)	Beyond 81 t-12/t-7, 81 in t-6, 61 in t-5, 41 in t-4, 33 in t-3, 37 in t-2, 30 in t-1	Shock in t (-0.49)
13	Besançon	1986	Association	36 (47)	20 in t-8	Sochaux (15 vs. 8 in t-1)	Between 22 and 36 t-12/t-1, 22 and 25 t-8/t-5, 31 in t-4, 33 in t-3, 36 in t-2, 27 in t-1	Shock in t-3 (-0.34) and t-1 (-0.47)
14	Limoges	1987	Association	27 (33)	22.5 in t-3	Basket (2 vs. 3 in t-1)	48 in t-12, 55 in t-11, 41 in t-10, between 24 and 37 t-9/t-1 (24 in t-3, 35 in t-2, 31 in t-1)	Shock in t (-0.29)
15	Dunkerque	1987	Association	28 (35)	27 in t-9	Lille (14 vs. 10 in t-1)	Insolvency in t-6 (38), 34 in t-5, 25 in t-4, 35 in t-3, 36 in t-2, 35 in t-1	Shock in t-3 (-0.31) (-0.19 in t-2 and t)
16	Valenciennes	1987	Association	35	13 in t-11	-	Insolvency in t-4	Shock in t-3 (-0.39) and t-1

				(45)			(23), 25 in t-3, 26 in t-2, 34 in t-1	(-0.44)
17	Thonon	1987	Association	38 (51)	24 in t-7	Annecy (48, 42 in t+1 then D2)	Between 61 and 73 t-12/t-9, 42 in t-8, between 22 and 35 t-7/t-1 (24 in t-7, 22 in t-5, 25 in t-2, 35 in t-1)	Shock in t (-0.52)
18	Amiens	1987	Association	39 (53)	24 in t-11	-	28 in t-12, 25 in t-11, between 39 and 46 t-10/t-2, 42 in t-1	No shock in t, no data from t-1 to t-5
19	Bastia	1988	Association	28 (35)	21.5 in t-9	-	Between 3 and 20 t-12/t-2, 25 in t-1	Shock in t-3 (-0.81), t-2 (-0.51) and t (-0.28)
20	Mulhouse	1989	Mixed economy company	21	18 in t-6	-	Between 35 and 44 t-12/t-8, 22 in t-7, 20 in t-6, 27 in t-5, 22/23 t-4/t-1	No shock
21	Orléans	1989	Association	31 (39)	27.5 in t-4	-	46 in t-12, 41 in t-11, between 24 and 33 t-10/t-1 (24 in t-4, 27 in t-3, 33 in t-2, 25 in t-1)	Shock in t-3 (-0.43) and t-1 (-0.57)
22	Beauvais	1989	Association	36 (47)	30 in t-3	-	Between 57 and 71 t-12/t-6, 46 in t-5, 41 in t-4, 33 in t-3, 26 in t-2, 35 in t-1	Shock in t-2 (-0.43)
23	Sète	1989	Association	37	31 in t-2	Montpellier	40 in t-12, between 45 and 53 t-11/t-7,	Shock in t-1 (-0.49)

				(49)		(9 vs. 3 in t-1) Volley (5 vs. 2 in t-1)	41 in t-6, between 24 and 34 t-5/t-1 (24 in t-3, 34 in t-1)	
24	Grenoble	1990	Association	38 (51)	26 in t-6	Hockey (2 vs. 5 in t-1) Rugby (5 in t-1 and t) Volley (6 vs. 2 in t-1)	Between 43 and 46 t-12/t-10, 27 and 34 t-9/t-5, 40 in t-4, 42 in t-3, 30 in t-2, 33 in t-1	Shock in t (-0.48)
25	Lorient	1990	Association	38 (51)	21 in t-4	-	58 in t-12 (insolvency), 79 in t-11, 95 in t-10, 101 in t-9, 95 in t-8, 81 in t-7, 61 in t-6, between 38 and 41 t-5/t-1 (41 in t-5, 38 in t-4, 41 in t-3, 40 in t-2, 41 in t-1)	No shock in t (-0.18), no data from t-1 to t-5
26	Abbeville	1990	Association	39 (53)	23 in t-9	Amiens (62, 41 in t+1)	62 in t-12, 61 in t- 11, 41 in t-10, between 30 and 37 t-9/t-1	No shock
27	Quimper	1990	Association	40 (55)	26 in t-1	Brest (10, 8 in t-3)	Between 34 and 40 t-12/t-8, 43 in t-7, between 24 and 37 t-6/t-1 (25 in t-3, 36	Shock in t-3 (-0.71)

							in t-2, 24 in t-1)	
28	Bordeaux	1991	Association	10	2 in t-1	Rugby (1 vs. 9 in t-1) Volley (2 vs. 5 in t-1) Handball (3) Hockey (3 vs. 5 in t-1)	10 in t-12, between 1 and 6 t-11/t-3 (1 in t-7 and t-6, 3 in t-5, 1 in t-4), 13 in t-2, 2 in t-1	No shock
29	Nice	1991	Association	14	10 in t-5	Cannes (4 vs. 11 in t-1)	Between 15 and 19 t-12/t-9, 23 in t-8, 22 in t-7, 21 in t-6, 8 in t-5, 11 in t-4, 16 in t-3, 6 in t-2, 18 in t-1	No shock
30	Niort	1991	Association	37 (49)	11 in t-3	-	58 at best t-12/t-7, 41 in t-6, 25 in t-5, 21 in t-4, 18 in t-3, 36 in t-2, 27 in t-1	No shock (-0.19 in t-1)
31	Chaumont	1991	Association	37 (49)	31 in t-5	-	31 in t-12, 40 in t-11, between 43 and 50 t-10/t-7, 41 in t-6, 39 in t-5, 42 in t-4, 50 in t-3, 41 in t-2, 37 in t-1	No shock in t, t-1 and t-5, other data not available
32	Dijon	1991	Association	40	24.5 in t-3	Basket (6)	63 at best t-12/t-10, 56 in t-9, 57 in t-8,	No shock from t to t-3, data not available for t-4 and t-5

				(55)			46 in t-7, 57 in t-6 and t-5, 41 in t-4, 37 in t-3, 26 in t-2, 31 in t-1	
33	Orléans	1992	Association	39 (53)	27.5 in t-7	-	Insolvency in t-3 (31), 34 in t-2, 38 in t-1	Shock in t-4 (-0.57), t-2 (-0.24) and t (-0.35)
34	Brest	1992	Association	40 (56) withdraw	10 in t-10	-	20 in t-12, 21 in t-11, between 8 and 17 t-10/t-5, 19 in t-4, 21 in t-3, 10 in t-2, 11 in t-1	Shock in t-2 (-0.32) (-0.19 in t-4)
35	Reims	1992	Association	46 (87)	14 in t-9	Basket (15 in t vs. 12 in t-1) Hockey (5 in t-1 and t)	Between 22 and 34 t-12/t-1 (34 in t-7, 24 in t-6 and t-5, 27 in t-4, 30 in t-3, 27 in t-2, 26 in t-1, financial difficulties)	Shock in t-4 (-0.23) and t-3 (-0.24)
36	Rodez	1993	Association	36 (47)	28 in t-4	-	101 in t-12, 81 in t-11, 75 in t-10, 61 in t-9, 46 in t-8, 45 in t-7, 44 in t-6, 41 in t-5, 38 in t-4, 41 in t-3, 28 in t-2, 26 in t-1	No shock in t, other data not available
37	La Roche	1994	Limited company (minority blocking rights for the	47 (55)	30 in t-10	-	44 in t-12, 42 in t-11, 39 in t-10 and t-9, 42 in t-8, between 36 and 38 t-7/t-4, 34 in t-3, 36	Shock in t-2 (-0.34), t-1 (-0.28) and t (-0.92)

			supportive association)				in t-2, 38 in t-1	
38	Annecy	1994	Limited company (minority blocking rights for the supportive association)	60 (77) withdraw	25 in t-5	-	64 in t-12, 63 in t-11, 61 in t-10, between 42 and 48 t-9/t-6, 34 in t-5, 36 in t-4, 30 in t-3, 37 in t-2, 39 in t-1	Shock in t-3 (-0.24)
39	Nevers	1994	Association	60 (77) withdraw	26.5 in t-20 (no data t-12/t)	Formula 1 (Magny-Cours, 1991/2008)	71 at best t-12/t-7, 61 in t-6, 55 in t-5, 44 in t-4 and t-3, 56 in t-2, 43 in t-1	Data not available
40	Tours	1994	Association	74 (123)	7 in t-12	-	11 in t-12, 18 in t-11, 21 in t-10, 19 in t-9, 30 in t-8, 27 in t-7, 39 in t-6, 41 in t-5, 36 in t-4, 30 in t-3 and t-2, 37 in t-1 (financial difficulties)	Shock in t-4 (-0.24) and t-3 (-0.27)
41	Marseille	1995	Limited company (minority blocking rights for the supportive association)	21	1 in t-5	Marseille Vitrolles Handball (2 vs. 1 in t-1)	24 in t-12, 21 in t-11, 17 in t-10, 12 in t-9, 2 in t-8, 6 in t-7, 1 t-6/t-2, 2 in t-1	No shock
42	Rouen	1995	Association	46	6 in t-12	Hockey	16 in t-12, 14 in t-11, 18 in t-10, 39 in	Shock in t (-0.73)

				(53)		(1 in t-1 and t)	t-9, 42 in t-8, 24 in t-6, 33 in t-5, between 23 and 27 t-5/t-2, 37 in t-1	
43	Bourges	1995	Mixed economy company	47 (55)	24 in t-3	Women's basket (1 vs. 5 in t-1)	58 in t-12, 55 in t-11, 56 in t-10, between 39 and 42 t-9/t-5, 35 in t-4, 28 in t-3, 27 in t-2, 39 in t-1	Shock in t (-0.42)
44	Pau	1995	Association	54 (65)	No data t-12/t	Basket (3 vs. 4 in t-1)	62 in t-12, between 43 and 53 t-11/t-6, 55 in t-5, 58 in t-4, 51 in t-3, 41 in t-2, 48 in t-1	Data not available
45	Valenciennes	1996	Association	43 (47)	9 in t-3	-	Insolvency in t-9 (35), between 22 and 29 t-8/t-5, 21 in t-4, 18 in t-3, 38 in t-2, 57 in t-1	No shock
46	Roubaix	1996	Association	60 (78) withdraw	39 in t-12	Lille (14 in t-1)	40 in t-12, 55 in t-11, 57 in t-10, 59 in t-9, between 63 and 77 t-8/t-5, 61 in t-4, 45 in t-3, 54 in t-2, 59 in t-1	Data not available
47	Perpignan	1997	Association	34 (36)	25 in t-5	Rugby (5 vs. 9 in t-1)	81 in t-12, 61 in t-11, between 42 and 46 t-10/t-7, 41 in t-6, 27 in t-5, 37 in t-4, 42 in t-3, 34 in t-	No shock in t, other data not available

							2, 28 in t-1	
48	Saint-Brieuc	1997	Association	40 (42) withdraw 33 (35) when insolvent	24 in t-2	Guingamp (12 vs. 10 in t-1)	63 in t-12, 79 at best t-11/t-7, 61 in t-6, 46 in t-5, 41 in t-4, 26 in t-3, 37 in t-2, 41 in t-1	Data not available
49	Quimper	1997	Association	53 (63)	26 in t-8	Brest (57)	Insolvency in t-7 (40), 45 in t-6, 55 in t-5, 45 in t-4, 55 in t-3, 58 in t-2, 51 in t-1	Data not available
50	Toulon	1998	Association	38	14 in t-12	Rugby (15 vs. 13 in t-1) Basket (27 vs. 24 in t-1)	Between 5 and 16 t- 12/t-6, 19 in t-5 (financial difficulties), 44 in t- 4, 58 in t-3, 41 in t- 2, 34 in t-1	Data not available
51	Poitiers	1998	Association	47	31.5 in t-2	Volley (4 vs. 5 in t-1)	51 at best t-12/t-4, 43 in t-3, 37 in t-2, 43 in t-1	Data not available
52	Epinal	1998	Association	56	38 in t-2	-	44 at best t-12/t-9, 41 in t-8, 35 in t-7 and t-6, 38 in t-5, 53 in t-4, 41 in t-3, 36 in t-2, 39 in t-1	Shock in t-5 (-0.30) and t (- 0.20)
53	Charleville	1998	Association	60 withdraw	30 in t-5	Sedan (42 vs. 46 in t-1)	Between 48 and 56 t-12/t-8, 43 in t-7, 41 in t-6, 30 in t-5, 29 in t-4, 30 in t-3,	No shock in t, t-1 and t-2, other data not available

							35 in t-2, 37 in t-1 (financial difficulties)	
54	Bourges	1998	Mixed economy company	60 withdraw	24 in t-6	Women's basket (1 in t-1 and t)	Insolvency in t-3 (47), 61 in t-2, 48 in t-1	Shock in t-3 (-0.42) and t-1 (-0.36)
55	Mulhouse	1999	Mixed economy company	55 (53)	21 in t-9	Women's volley (2 in t-1 and t)	Insolvency in t-10 (21), 20 in t-9, 31 in t-8, 33 in t-7 and t- 6, 32 in t-5, t-4 and t-3, 31 in t-2, 40 in t-1	Shock in t-5 (-0.31) and t (- 0.89)
56	Martigues	2003	Mixed economy company	45	28 in t-8	Marseille (3 vs. 9 in t-1)	33 in t-12, 36 in t- 11, 21 in t-10, 18 in t-9, 11 in t-8, 20 in t-7, 23 in t-6, 39 in t-5, 51 in t-4, 42 in t-3, 38 in t-2, 40 in t-1	Shock in t-4 (-0.59), t-2 (- 0.32) and t (-0.23)
57	Alès	2003	Mixed economy company	55	30.5 in t-12	Nîmes (50 vs. 39 in t-1)	Between 24 and 40 t-12/t-7, 54 and 68 t-6/t-3, 51 in t-2, 48 in t-1	No shock in t, other data not available
58	Valence	2005	Limited company	42	28 in t-7	-	Between 25 and 33 t-12/t-7, 38 in t-6, 39 in t-5, 50 in t-4, 43 in t-3, 33 in t-2, 38 in t-1	Shock in t-4 (-0.24), t-2 (- 0.24) and t-1 (-0.26)
59	Racing Paris	2005	Limited	46	55 in t-5	Paris-Saint-	Between 50 and 73 t-12/t-7, 44 in t-6,	Shock in t-4 (-0.67) and t-3

			company			<p>Germain (9 vs. 2 in t-1)</p> <p>Stade Français Rugby (2 vs. 1 in t-1)</p> <p>Basket (5 vs. 13 in t-1)</p> <p>Handball (2 vs. 5 in t-1)</p> <p>Volley (5 vs. 4 in t-1)</p>	49 in t-5, 47 in t-4, financial difficulties in t-3 (54), 63 in t-2, 61 in t-1	(-0.26)
60	Sète	2009	Mixed economy company	47	46 in t-3	<p>Montpellier (22 in t vs. 28 in t-1)</p> <p>Volley (9 vs. 8 in t-1)</p>	50 in t-12, 64 in t-11, 66 in t-10, 74 in t-9, 61 in t-8, 52 in t-7, 49 in t-6, 48 in t-5, 43 in t-4, 40 in t-3, 47 in t-2, 46 in t-1	Shock in t-2 (-0.33) and t (-0.35)
61	Libourne-Saint-Seurin	2009	Limited company	52	44 in t-1	<p>Bordeaux (1 vs. 2 in t-1)</p>	Between 65 and 85 t-12/t-7, 61 in t-6, 49 in t-5, 52 in t-4, 43 in t-3, 37 in t-2, 39 in t-1	Shock in t-2 (-0.28)
62	Grenoble	2011	Limited company	40	13 in t-2	Rugby (16, D2 vs. 20 in t-1)	61 in t-12, 44 in t-11, 41 in t-10, between 25 and 36	Shock in t (-0.20)

						Hockey (7 vs. 3 in t-1)	t-9/t-4, 23 in t-3, 13 in t-2, 20 in t-1	
63	RC Strasbourg	2011	Limited company	44	9 in t-11	Basket (11 vs. 14 in t-1) Hockey (2 vs. 5 in t-1)	14 in t-12, 10 in t-11, 20 in t-10, 22 in t-9, 13 in t-8 and t-7, 11 in t-6, 19 in t-5, 23 in t-4, 19 in t-3, 24 in t-2, 39 in t-1	Shock in t-3 (-0.20)
64	Gueugnon	2011	Limited company	60 (61)	39 in t-5	-	Between 25 and 36 t-12/t-4, 40 in t-3, 51 in t-2, 56 in t-1	Shock in t-4 (-0.24)
65	Cassis-Carnoux	2011	Association	140 (>569) withdraw	60 in t-2	Marseille (2 vs. 1 in t-1)	Beyond 121 t-12/t-10, 111 in t-9, 107 in t-8, 102 in t-7, 81 in t-6, 64 in t-5, 70 in t-4, 61 in t-3, 54 in t-2, 58 in t-1	Data not available
66	Besançon	2012	Limited company	59	38 in t-8	Sochaux (14 vs. 5 in t-1)	48 in t-12, 52 in t-11, 50 in t-10, 41 in t-9, 39 in t-8, 57 in t-7, 75 in t-6, 62 in t-5 and t-4, 61 in t-3 (financial difficulties), 64 in t-2, 61 in t-1	No shock in t, other data not available
67	Gap	2012	Association	80 (129)	57 in t-5	Hockey (5 in t-1 and t)	102 in t-12, 101 in t-11, 95 in t-10, 81 in t-9, between 64 and 70 t-8/t-5, 62 in t-4, 77 in t-3, 61 in	No shock in t-1, other data not available

							t-2, 56 in t-1 (financial difficulties)	
68	Le Mans	2013	Limited company	38	16 in t-9	Basket (5 vs. 2 in t-1)	34 in t-12, 25 in t-11, 22 in t-10, 19 in t-9, 22 in t-8, 11 in t-7, 12 in t-6, 9 in t-5, 16 in t-4, 18 in t-3, 24 in t-2, 37 in t-1	No shock
69	Sedan	2013	Limited company	39	11 in t-11	-	5 in t-12, 16 in t-11, 19 in t-10, 25 in t-9, 26 in t-8, 22 in t-7, 19 in t-6, 24 in t-5, 29 in t-4, 32 in t-3, 25 in t-2, 24 in t-1	Shock in t (-0.22)
70	Rouen	2013	Limited company	45	30 in t-9	Hockey (1 in t-1 and t) Basket (25 vs. 30 in t-1)	71 in t-12, 64 in t-11, 43 in t-10, 40 in t-9, 59 in t-8, 63 in t-7, 66 in t-6, 62 in t-5, 61 in t-4, 52 in t-3, 48 in t-2, 46 in t-1	No shock (-0.19 in t)
71	Vannes	2014	Limited company	59	39 in t-4	Lorient (8 in t-1 and t)	65 in t-12, 75 in t-11, 66 in t-10, 61 in t-9, 52 in t-8, 55 in t-7, 41 in t-6, 30 in t-5, 34 in t-4, 38 in t-3, 44 in t-2, 50 in t-1	Shock in t-5 (-0.42)

72	Uzès	2014	Association	60	58 in t-1	Nîmes (35 vs. 28 in t-1)	121 at best t-12/t-9, 113 in t-8, 101 in t-7, 88 in t-6, 84 in t-5, 82 in t-4, 75 in t-3, 61 in t-2, 56 in t-1	Shock in t-1 (-0.20)
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¹ Local = same urban unity vs. departmental = not same urban unity but same department and better potential.

Data Appendix 2: Information related to consequences of insolvencies in French football over the period 1970-2014 for each case

	Club	Season	Ownership form when and after the event occurred	“Normalised” sporting position (actual into brackets if different)	Population 2012 ranking (urban unity) ¹	Local / departmental ² competitor(s)	“Normalised” position in t+1 (and difference of levels compared to t)	Able to regain the previous level (Yes/No) and time to do so
1	AC Ajaccio	1975	Association	40 (56) withdraw	98	GFCO Ajaccio	75 (2)	Yes 23 years
2	Rouen	1978	Association	20	12	-	25 (1)	Yes 4 years
3	Red Star 93	1978	Association	23 (25)	1	-	86 (3)	Yes 4 years
4	Rennes	1978	Association	34 (43)	20	-	28 (0)	-
5	Reims	1979	Association	20	31	-	26 (1)	Yes 33 years
6	Troyes	1979	Association	39 (53)	50	-	97 (3)	Yes 17 years
7	Marseille	1981	Association	26	3	-	23	-

				(31)			(0)	
8	Thionville	1981	Association	26 (31)	51	Metz	70 (2)	No
9	Dunkerque	1981	Association	38 (51)	38	Lille	34 (0)	-
10	Angers	1982	Association	28 (35)	30	-	34 (0)	-
11	Valenciennes	1983	Association	23 (25)	19	-	25 (0)	-
12	Stade Français	1985	Association	35 (45)	1	Paris-Saint-Germain Stade Français Basket	> 101 (at least 4)	No
13	Besançon	1986	Association	36 (47)	49	Sochaux	79 (2)	Yes 17 years
14	Limoges	1987	Association	27 (33)	37	Basket	66 (2)	No
15	Dunkerque	1987	Association	28 (35)	38	Lille	28 (0)	-
16	Valenciennes	1987	Association	35	19	-	29	-

				(45)			(0)	
17	Thonon	1987	Association	38 (51)	87	Annecy	77 (2)	No
18	Amiens	1987	Association	39 (53)	45	-	58 (1)	Yes 4 years
19	Bastia	1988	Association	28 (35)	96	-	25 (0)	-
20	Mulhouse	1989	Mixed economy company	21	26	-	20 (-1)	-
21	Orléans	1989	Association	31 (39)	23	-	34 (0)	-
22	Beauvais	1989	Association	36 (47)	113	-	26 (0)	-
23	Sète	1989	Association	37 (49)	68	Montpellier Volley	44 (1)	Yes 16 years
24	Grenoble	1990	Association	38 (51)	11	Hockey Rugby Volley	42 (1)	Yes 1 year
25	Lorient	1990	Association	38	57	-	44	Yes

				(51)			(1)	2 years
26	Abbeville	1990	Association	39 (53)	205	Amiens	100 (3)	No
27	Quimper	1990	Association	40 (55)	80	Brest	45 (1)	No
28	Bordeaux	1991	Association	10	7	Rugby Volley Handball Hockey	21 (1)	Yes 1 year
29	Nice	1991	Association	14	5	Cannes	30 (1)	Yes 3 years
30	Niort	1991	Association	37 (49)	91	-	41 (1)	Yes 1 year
31	Chaumont	1991	Association	39 (53)	236	-	93 (3)	No
32	Dijon	1991	Association	40 (55)	27	Basket	61 (2)	Yes 13 years
33	Orléans	1992	Association	39 (53)	23	-	93 (3)	Yes 22 years

34	Brest	1992	Association	40 (56) withdraw	33	-	43 (1)	Yes 12 years
35	Reims	1992	Association	46 (87)	31	Basket Hockey	93 (2)	Yes 7 years
36	Rodez	1993	Association	36 (47)	130	-	63 (2)	No
37	La Roche	1994	Limited company (minority blocking rights for the supportive association)	47 (55)	124	-	46 (0)	-
38	Annecy	1994	Limited company (minority blocking rights for the supportive association)	60 (77)	46	-	> 121 (4)	No
39	Nevers	1994	Association	60 (77)	108	Formula 1 (Magny-Cours)	Disappearance	-
40	Tours	1994	Association	74 (123)	18	Volley	76 (0)	-

41	Marseille	1995	Limited company (minority blocking rights for the supportive association)	21	3	Marseille Vitrolles Handball	22 (0)	-
42	Rouen	1995	Association	46 (53)	12	Hockey	68 (1)	Yes 7 years
43	Bourges	1995	Mixed economy company	47 (55)	76	Women's Basket	61 (1)	Yes 1 year
44	Pau	1995	Association	54 (65)	35	Basket	67 (1)	Yes 3 years
45	Valenciennes	1996	Association	43 (47)	19	-	65 (1)	Yes 2 years
46	Roubaix	1996	Association	60 (78) withdraw	4	Lille	>121 (at least 4)	No
47	Perpignan	1997	Association	34 (36)	36	Rugby	119 (4)	No
48	Saint-Brieuc	1997	Association	40 (42)	63	Guingamp	97 (3)	No

49	Quimper	1997	Association	53 (63)	80	Brest	121 (4)	No
50	Toulon	1998	Association	38	9	Rugby Basket	113 (4)	No
51	Poitiers	1998	Association	47	52	Volley	80 (1)	No
52	Epinal	1998	Association	56	104	-	108 (3)	Yes 13 years
53	Charleville	1998	Association	60 withdraw	105	Sedan	108 (3)	No
54	Bourges	1998	Mixed economy company	60 withdraw	76	Women's Basket	101 (3)	No
55	Mulhouse	1999	Mixed economy company	55 (53)	26	Women's Volley	71 (1)	No
56	Martigues	2003	Mixed economy company	45	3	Marseille	63 (1)	Yes 3 years
57	Alès	2003	Mixed economy company	55	64	Nîmes	104 (3)	No
58	Valence	2005	Limited	42	53	-	104	No

			company				(3)	
59	Racing Paris	2005	Limited company	46	1	Paris-Saint-Germain Stade Français Rugby Basket Handball Volley	78 (1)	No
60	Sète	2009	Mixed economy company	47	68	Montpellier Volley	104 (3)	No
61	Libourne-Saint-Seurin	2009	Limited company	52	115	Bordeaux	70 (1)	No
62	Grenoble	2011	Limited company	40	11	Rugby Hockey	81 (3)	No
63	RC Strasbourg	2011	Limited company	44	13	Basket Hockey	81 (2)	Yes 2 years
64	Gueugnon	2011	Limited company	60 (61)	>272	-	110 (3)	No
65	Cassis-Carnoux	2011	Association	140 (>569)	158	Marseille	>181 (3)	Yes (Carnoux) 4 years

66	Besançon	2012	Limited company	59	49	Sochaux	121 (4)	Not possible
67	Gap	2012	Association	80 (129)	148	Hockey	161 (5)	Not possible
68	Le Mans	2013	Limited company	38	32	Basket	101 (4)	Not possible
69	Sedan	2013	Limited company	39	204	-	82 (3)	Not possible
70	Rouen	2013	Limited company	45	12	Hockey Basket	108 (3)	Not possible
71	Vannes	2014	Limited company	59	83	Lorient	121 (4)	Not possible
72	Uzès	2014	Association	60	183	Nîmes	100 (2)	Not possible

¹ Only population 2012 ranking is reported here even if this is not the most appropriate in cases when a club regained or could have regained its previous level before 2012. However, population 2012 ranking still provides a good idea of the range where a population lies at any time over the period 1970-2014.

² Local = same urban area vs. departmental = not same urban area but same department and better potential.