

Insolvencies in Professional Sports: Evidence from German Football

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- **European football clubs are generally linked with financial instabilities**

(Andreff, 2007; Baroncelli & Lago, 2006; Boscá et al., 2008; Franck, 2014; Franck, E., & Müller, 2000; Frick & Prinz, 2006; Müller et al., 2012; Nielsen and Storm, 2012; Peeters and Szymanski; Storm & Nielsen, 2012)

- “Winner-takes-all-market” → Rat Races
- Money Injections by outside investors → less incentive to economic efficiency
- Soft Budget Constraint → High possibility to “bail out”
- Relegation → External shocks on income
- Even Sloane (1971, p. 122) stated: “majority of league clubs operate at a loss and only remain solvent through income derived from non-footballing activities”

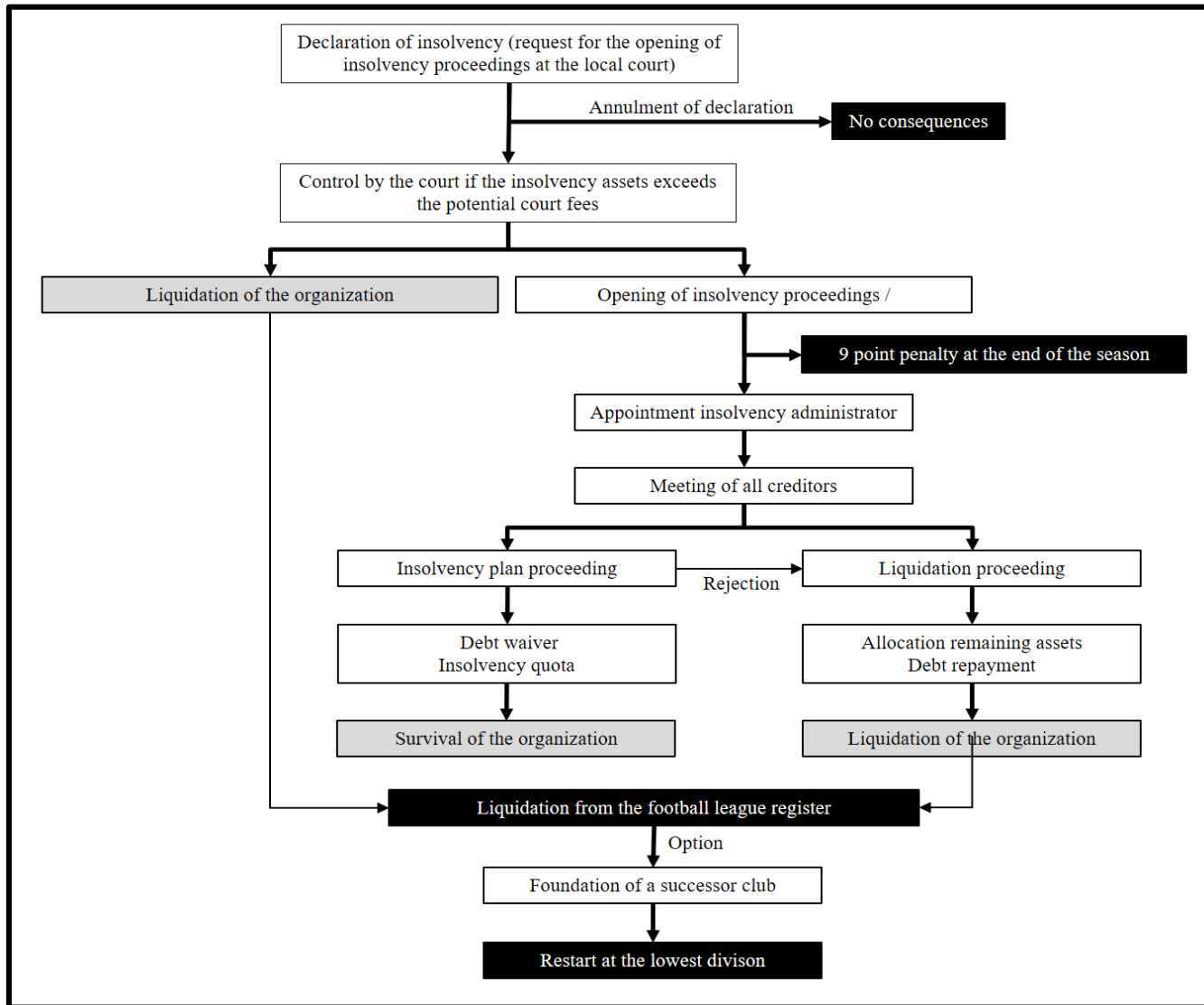
- **Germany perceived as being financially more stable**

(Brand et al., 2013; Franck, 2010; Frick & Prinz, 2006; Morrow, 2013; Storm & Nielsen, 2012; Weimar & Fox, 2012; Wilkesmann et al., 2011)

- Main reason: License Requirements by the DFL
- 50+1 Rule → less inefficient money injection's
- “Parachute”-option by the DFL

- **Drawbacks of research on financial performance of German football teams**
 - Disclosure of financial information except for a few cases
- **Insolvencies as proxy of financial performance in Germany**
 - Measurement due to official statements and press interest
- **Existing research**
 - Very recent research on insolvencies in Europe by Beech et al. (2010) and Szymanski (2017) in English football and Scelles et al. (2016) in French football
- **Research Questions**
 - Do German football club's financial performances differ from those of other European top league-clubs?
 - What drives insolvencies in German football?

Insolvency procedure in German football



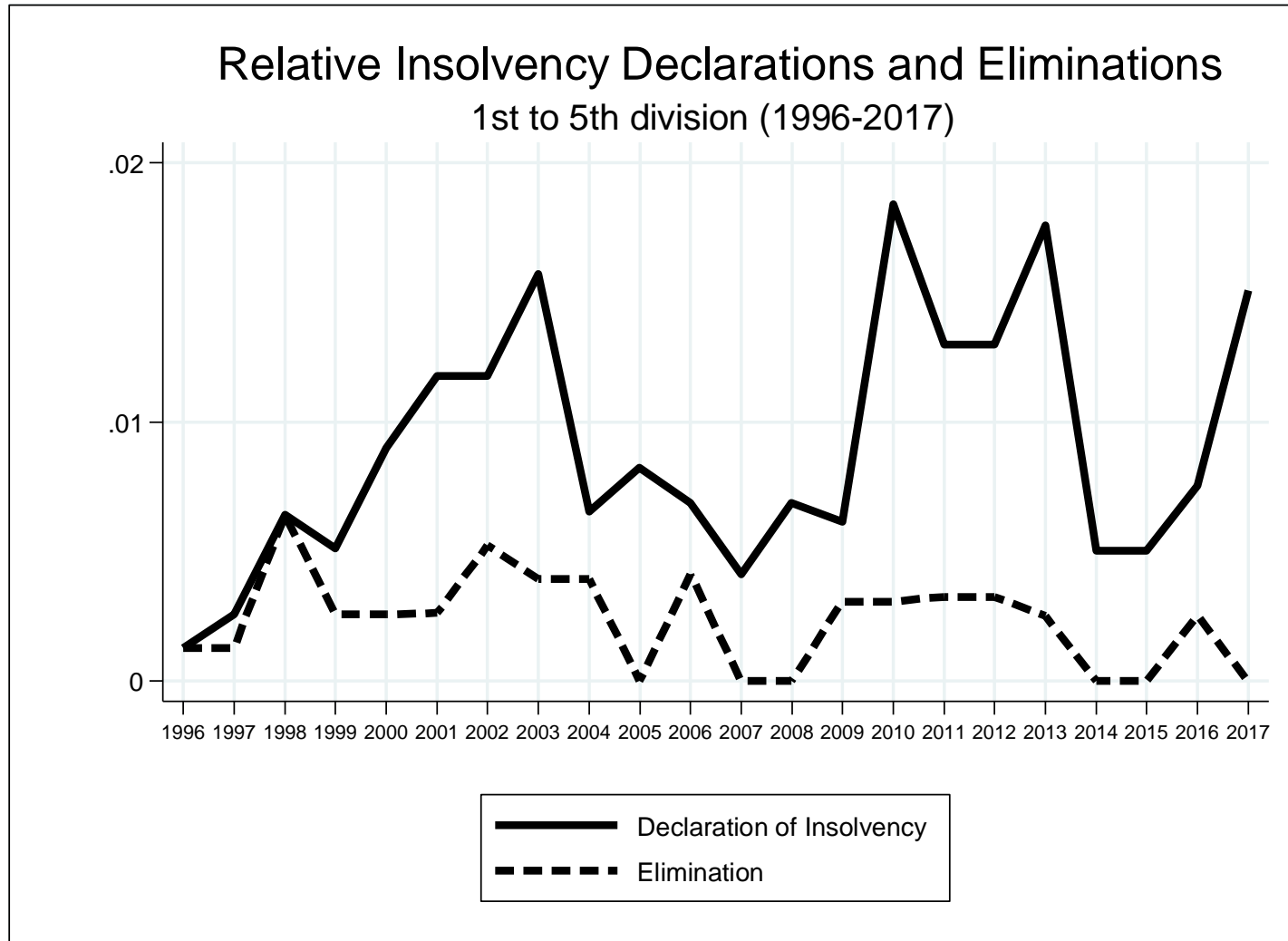
Insolvency statistic of German top tier football clubs (1995/1996 to 2016/2017)

Division	Declaration	Annulled	Plan	Liquidation (Successor)
2	2	0	2	0 (0)
3	26	3	21	1 (1)
4	55	10	23	19 (14)
5	26	6	7	12 (6)
Sum	109	19	55	32 (21)

Ongoing proceedings: 5

3x Declaration: KFC Uerdingen, SC Fortuna Köln, SSV Ulm 1846

2x Declaration: TuS Celle FC , VfB Leipzig, Alemannia Aachen, VfB Lübeck Borussia Neunkirchen, VfR Neumünster 1910, FC Sachsen Leipzig, FC Eschborn, Wegberg-Beeck 1920, FC Eintracht Bamberg, FSV Zwickau, Sportfreunde Siegen, Kickers Offenbach



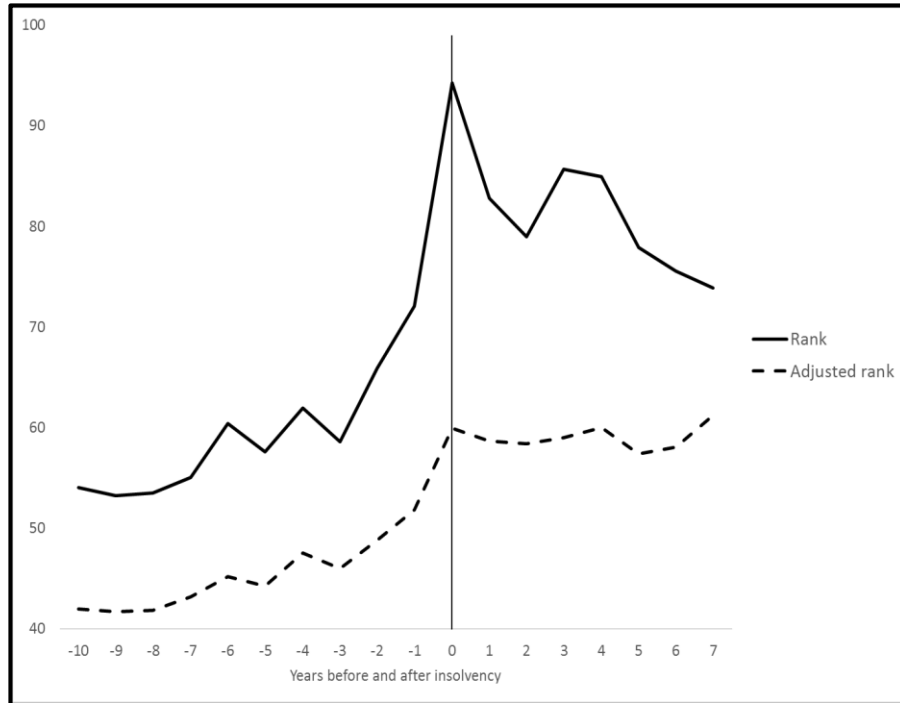
2001: Insolvency of the Kinowelt AG | 2008: Installation of the 3. Liga | 2015: Change of the DFB Insolvency Punishments

Insolvency in European football – a comparison

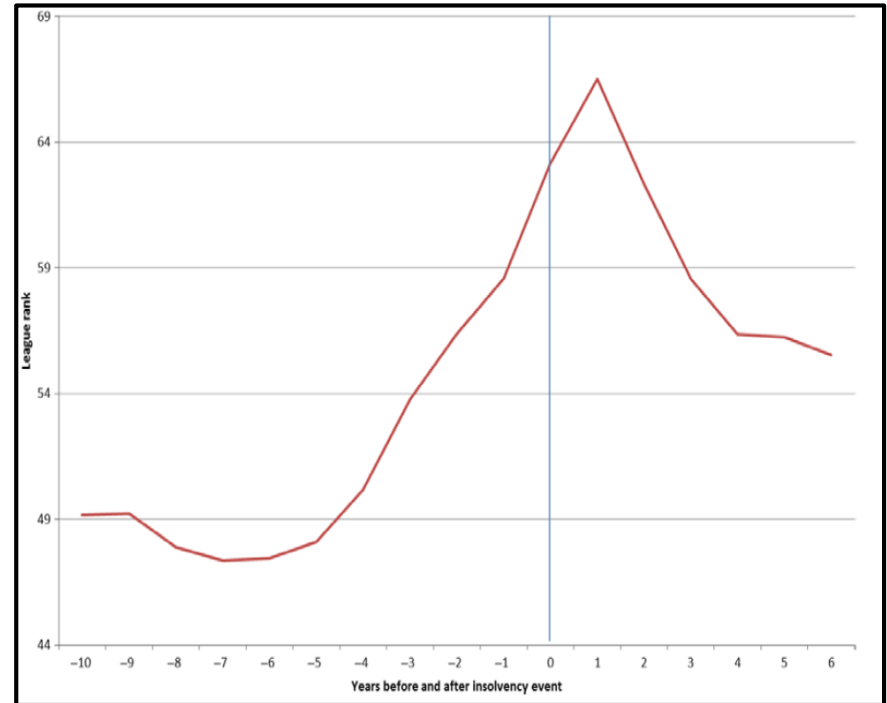
	Tier					Sum (1-3)	Sum
	1	2	3	4	5		
Germany							
1992 - 2002	0	2	20	24	9	22	55
2003 - 2014	0	0	8	29	14	8	51
England (Szymanski et al., 2017)							
1992 - 2002	0	8	11	19	6	19	44
2003 - 2014	2	10	13	10	18	25	53
France (Scelles et al, 2016)							
1992 - 2002	2	6	16	no Data	no Data	24	24
2003 - 2014	1	3	12	no Data	no Data	16	16

Performance before and after insolvency

Germany



England



Szymanski (2017, p. 14)

- **Measuring the importance of negative shocks on the probability of insolvency**
- **Empirical model by Szymanski (2017)**
 - Testing whether the sum of residuals (shocks) from two seasons prior to insolvency increases the probability of an insolvency
 - 1st – 4th tier from 1995-2016
 - First stage: demand-performance relationship
 - Dependent variable: negative log odds of league rank (Szymanski & Smith, 1997; Buraimo et al., 2007)
 - Attendance as proxy of demand
 - Predicting residuals as approximation of a shock (derivation from expectation [t-1])
 - Negative residual implies that the club achieved a lower league position than it might have expected → lower level of revenue than expected → financial stress
 - Second stage
 - Using residuals from first stage estimation (Model 5)
 - Dependent Variable: Insolvency (1/0)
 - Linear probability model

Performance-Demand Regression (1995/1996-2014/2015)

<i>Log Odds of rank</i>	OLS	FE
Log Odds of rank _{t-1}	0.561 (10.63)***	0.272 (7.24)***
Annual attendance _{t-1}	0.095 (8.81)***	-0.01 (-0.38)
Promotion _{t-1}	0.243 (5.31)***	0.092 (2.16)**
Relegation _{t-1}	-0.301 (-6.27)***	-0.091 (-2.22)**
Division		
1.division	Ref.	Ref.
2.division	-0.572 (-7.19)***	-0.68 (-10.48)***
3.division	-0.876 (-7.18)***	-1.242 (-11.9)***
4.division	-1.406 (-7.63)***	-2.05 (-13.87)***
Constant	-0.318 (-1.81)*	1.064 (3.09)***
Observations	2,641	2,641
R-squared	0.89	0.91

Note: t-values in parentheses; standard errors are clustered at club level

Insolvency probability regression

<i>Insolvency (0/1)</i>	LPM FE 1	LPM FE 2
Residuals FE	-0.017 (-2.00)**	-0.004 (-0.51)
Promotion _{t-1}		-0.003 (-0.44)
Promotion _t		0.001 (0.09)
Relegation _{t-1}		0.06 (3.28)***
Relegation _{t1}		0.023 (1.54)
Division Fe	Incl.	Incl.
Constant	0.031 (3.49)***	-0.006 (-0.38)
R-squared	0.14	0.17

Note: t-values in parentheses; standard errors are clustered at club level

→ Negative shocks and relegation are roughly equivalents and the probability of insolvency is increased when these events are observed

- **Insolvency patterns are very similar between Germany, England and France**
 - German clubs are financially more stable in the top two divisions
 - German license system only prevents the two top divisions from financial collapses
 - The financial collapses are shifted towards fourth and fifth division
- **High rates of annulled declarations of insolvencies**
 - 17% in football vs. 4% outside sports industries (2016 in Duisburg)
 - Proof for the soft budget constraint assumptions in football (bail out)
- **Clubs enter a perennial downward spiral before an insolvency, which often collapses after a relegation (as a shock)**
- **Limitations**
 - Limited club data before 2000
 - No financial and wage information (e.g. Szymanski, 2017)

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