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ABSTRACT

A Rating Agency for Europe – A good idea?*

This paper compares the sovereign rating performance of a large European based rating agency with the Big Three. Using monthly ratings for 56 advanced and emerging economies from June 1999 to October 2012, we explore if Feri behaves differently with respect to rating levels, propensity of down- or upgrade and volatility. In addition, we test for herding behaviour among agencies and "neighbourhood bias" using a gravity model. We find that Feri tends to have a negative "neighbourhood bias", i.e it was tougher on European countries than its anglo-saxon competitors before the crisis and downgraded them more swiftly and aggressively during the crisis. Also, Feri's sovereign ratings tend to be more volatile than the ones of the Big Three though less prone to herding.

JEL Classification: E62 and F34
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1 Introduction

It is a tough competition for the title of the biggest villain in the recent series of financial crises but certainly rating agencies are among the candidates. They have been showered with public anger for causing or at least amplifying the financial crisis in general and the sovereign debt crisis in particular. In the wake of serial downgrades of European countries some observers suspected a conspiracy of US based rating agencies and fretted that entire countries were helplessly at the mercy of the mischief of some private rating agency. Even more cool-headed observers mulled over the danger of speculative attacks and self-fulfilling prophesies triggered by hasty, uninformed rating changes. Jean-Claude Juncker, then head of the Eurogroup, called "for us to set up our own European credit rating agency in Europe itself so that we have reliable and robust data from Europe itself for rating purposes".[1] The sentiment that US based rating agencies were either misinformed or outright treacherous when it came to rating European countries was widely shared.[2] Setting up a European rating agency, at least for sovereign ratings, seemed like a good idea.[3]

Then again, there already *are* European credit rating agencies. In fact, the European Securities and Markets Authority (ESMA) lists 17 (excluding the regional branches of the Big Three) registered and certified European rating agencies (ERA). They are not as large and as well known as the Big Three but two of them do produce sovereign ratings from a European base.[4] Feri EuroRating Services AG, for instance is a German rating agency, which has published sovereign ratings for 60 countries since 1991. Therefore the hypothesis that

[1]German Bankers Association (2011): Do we really need a European credit rating agency?

[2]see Handelsblatt (17.01.2012): "The myth of the U.S. conspiracy"

[3]see the proposal by the European Council and the European Parliament asking the Commission to formulate a proposal for an independent European rating agency: *(32a) On the basis of the evolution in the market, the Commission should submit a report to the European Parliament and the Council exploring the appropriateness and ways to support a European public credit rating agency, dedicated to assessing the creditworthiness of Members States' sovereign debt, and/or a European Credit Rating Foundation for all other ratings. The report may be followed by appropriate legislative proposals* (http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P7-TA-2013-12).

[4]see ESMA (2013): http://www.esma.europa.eu/page/List-registered-and-certified-CRAs. Sovereign Ratings are provided by the Japan Credit Rating Agency Ltd, Feri EuroRating Services AG (Germany), DBRS Ratings Limited (Canada) and Capital Intelligence Ltd. (Cyprus)

European based rating agencies behave differently from US based ones can actually be tested with existing data. This is the purpose of this paper.

The literature on credit rating agencies is large, critical studies have been fashionable after every major crisis. The obvious question always was: Why did they get it so wrong? Three different possibilities have been discussed in the literature: Flawed models, bad incentives and concentrated market structure.

The first possibility is that rating agencies did not understand or adequately model the economic fundamentals. Following the sovereign debt crisis of the 1990s several studies tested whether sovereign credit ratings could be explained by economic fundamentals.[5] The evidence is mixed: Cantor and Packer (1996) find that a few macroeconomic variables explain much of the variation in ratings, whereas Sy (2004) and Ferri, Liu, and Stiglitz (1999) find that rating agencies have often failed to predict crises. Also Morgan (2002) discusses rating model uncertainty based on differences in ratings (rating splits), which tend to be frequent for more complex and opaque issuers. Some papers have focused on exploring the causality between bond yields and rating changes and tend to find that ratings do have an influence on bond prices.[6] Therefore the conclusion would be that rating agencies are quite influential but frequently wrong.

The second strand of the literature explores structural reasons for systematic misjudgements with conflicts of interest. For instance, rating agencies may have incentives to overrate a product if they are cross selling lucrative consultancy services on how to structure said product (de Haan and Amtenbrink (2011)). More generally, rating agencies are suspected of inflating valuations in an attempt to attract issuers and increase fee revenues. This may be the unintended consequence of the "issuer-pays" model, whereby the bond issuer pays the rating agency whereas the investor receives the information for free.[7] The countervailing force

[5] Cantor and Packer (1996), Perrelli and Mulder (2001), Sy (2004) and Afonso, Gomes, and Rother (2007))

[6] Afonso, Furceri, and Gomes (2012), Alsakka and ap Gwilym (2010), Candelon, Sy, and Arezki (2011)

[7] For instance, Mathis, McAndrews, and Rochet (2009) find that rating agencies inflate ratings as a consequence of competition for issuers. Issuers on the other hand make use of their bargaining power by shopping for the best rating (Bolton, Freixas, and Shapiro (2012)). Hau, Langfield, and Marques-Ibanez (2013) find that

is competition between rating agencies and their fear of losing reputation if they get it wrong.[8]

The "issuer pays" bias is likely to be more pronounced for corporate issuers than for sovereigns. Sovereign ratings are mostly unsolicited, thus, sovereigns do not pay any fee and shopping for the best rating is not possible (de Haan and Amtenbrink (2011)).[9] Also, sovereign ratings are based on macroeconomic data which is publicly available and scrutinized by a large number of actors including international surveillance institutions such as the IMF. On the other hand the higher public attention should bias rating agencies towards risk adverse behaviour, which could mean that they minimize deviations from each other.[10]

A third rationale for systematic misjudgement of credit rating agencies could be the oligopolistic market structure. The rating market is dominated by three players, which among them have a 95 percent market share. Moody's and Standard & Poor's each have 40 percent and Fitch Ratings has 15 percent of the market.[11] In many cases regulators have sealed the dominance of the Big Three by incorporating their ratings into the regulations, as for instance is the case of capital requirements (Eijffinger (2012)). In principle, these are ideal conditions for collusive behaviour. Add to this the observation that the Big Three are all US based with their headquarters in New York and you can be forgiven for suspecting that European countries may not be given equal treatment when compared to the United States or their English speaking kin.

In this paper we show that you would be wrong, though. We compare the sovereign ratings

better ratings are assigned to those banks that are relatively large and likely to provide additional services (i.e. securities or other structured products).

[8]Covitz and Harrison (2003) show that the incentives provided by this reputation effect may be strong. In particular, they test whether rating agencies are more lenient with their big clients and they find the contrary: ratings of big clients (which tend to be under more public observation) are downgraded more quickly than the ones of smaller more obscure clients. They interpret this behaviour as proof of rating agencies' concern to maintain a reputation as impartial information providers.

[9]Developing Countries often have to pay a fee for being rated but we only consider emerging markets and advanced economies.

[10]Further evidence for a more reluctant stance is provided by Cornaggia and Cornaggia (2012) who distinguish between issuer-paid and subscriber-funded ratings. They find that Moody's has changed its corporate credit ratings less frequently than the smaller subscriber-funded competitor called Rapid Ratings.

[11]German Bankers Association (2011): Do we really need a European credit rating agency?, www.germanbanks.org/defacto

behaviour of Feri with the Big Three and find that Feri tends to have a negative "neighbourhood bias", i.e it was tougher on European countries than its anglo-saxon competitors by downgrading them more swiftly and aggressively during the crisis. Overall, Feri's sovereign ratings tend to be more volatile than the ones of the Big Three and more benign on emerging market economies.

Therefore the findings of this paper do not support a thesis that a European rating agency would make life for European countries easier. To the contrary, it might make life even tougher for European politicians. We are of course assuming that the European rating agency would be like Feri, an independent institution dedicated to impartial information provision and concerned about its good reputation in doing so.

The paper is organized as follows: Section 2 presents the data. Section 3 shows the results for the differences among agencies with respect to rating level, rating changes and in particular transitions between investment grade and junk grade, follower-leader behaviour, herding and neighbourhood biases. Section 4 concludes.

2 The dataset

We obtained monthly sovereign ratings from Feri AG, Germany's largest non-bank advisor/asset manager for private and institutional assets.[12] It is located in the vicinity of Frankfurt and offers financial advice, asset management, economic research and rating services. Since 2011, the firm is owned by MLP AG, an independent financial consultancy located in Germany. MLP AG is owned by insurance companies (Swiss Life, Allianz, Barmenia, AXA, HDI) and various institutional investors, each having less than 10% shareholding. Feri has two decades of experience in producing sovereign ratings for developed countries and for selected emerging market economies. The rating is developed by using a quantitative forecasting model of the cyclical and structural development of a country. The model is constructed with a standardized rating algorithm for all countries to ensure comparability. Country credit ratings are

[12] see homepage of Feri AG at http://www.feri.de/en/company/portrait/

unsolicited and only publicly available information is used. Ratings are sold to investors on a monthly basis together with a detailed analysis of the country's macroeconomic and political environment.

We compare the sovereign ratings of Feri with those of Standard & Poor's (S&P's), Moody's and Fitch Ratings. We obtain a sample of 56 countries with monthly rating actions ranging from June 1999 to October 2012. The sample comprises 24 industrial countries and 32 emerging market economies and the total number of observations is 9,016.[13] During our sample period of 13 years, we observe between 169 (Moody's) and 393 (Feri) rating changes. For robustness checks, we also consider watch and outlook decisions by the Big Three.

In order to compare the rating behaviour across the agencies, we use a rating transformation by mapping the alphabetical notches into numerical values.[14] A 1 stands for the best rating (AAA or AAa) and a 17 for the worst (D/D/C). Therefore, higher values indicate a higher default probability. The Big Three ratings have 22 notches when using a linear scale ranging from AAA (1) to Default (17).[15] Feri uses 11 notches and provides a translation table for comparison with the Big Three. We apply this transformation.[16] The dividing line between investment grade and speculative grade on Feri's scale is between C and D, for S&P and Fitch the dividing line is between BBB- and BB+ and at Moody's it runs between the Baa3 and Ba1. Identifying this line correctly is of particular interest (due to regulatory reasons non linear effects are expected in the transition between investment grade and junk).

In addition to rating data we use GDP data from the World Economic Outlook and a measure of distance between capitals as regressors in the gravity model.[17]

Table 1 shows some summary statistics on the average ratings for three periods, distin-

[13]see list of countries in table 10 of the appendix

[14]see table 11 in the appendix

[15]We follow Güttler and Wahrenburg (2007) and Afonso, Gomes, and Rother (2007) in restricting the scale to 17 values since there are few observations in the lowest range

[16]see Feri press release on country ratings: http://frr.feri.de/files/documents/fer/press/2010-06-07_FER_PM_0.pdf

[17]see for the GDP data on http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/index.aspx and for the distance variable on http://www.luftlinie.org/

guishing between industrialized and emerging economies. On average advanced countries have enjoyed ratings close to the best possible grades, emerging markets' average ratings have ranged close to the speculative grade. When looking at sub periods the following pattern emerges: advanced counties improve their ratings during the Great Moderation while the ratings of emerging economies as a group deteriorate somewhat. During the crisis this reverses: creditworthiness for industrialized countries drops by 0.6 notches on average while creditworthiness of the emerging world improves by 0.5.[18]

Table 1: Average Ratings

Country Group	(1) All Countries	(2) Industrialized Countries	(3) Emerging Economies
World Average	6.24	2.26	9.22
(1999 – 2012)	(B+/A/A2)	(AA/AA+/Aa1)	(C/BBB/Baa2)
Great Moderation	6.26	2.05	9.41
(1999 – 2007)	(B+/A/A2)	(AA/AA+/Aa1)	(C/BBB/Baa2)
Crisis Period	6.19	2.62	8.87
(2007 – 2012)	(B+/A/A2)	(AA/AA/Aa2)	(C/BBB/Baa2)

Mean rating of the four rating agencies based on the transformation in Table 11

3 Empirical Results

3.1 Differences in level

We start by comparing rating levels across agencies and country groups. Table 2 shows the difference between the ratings of Feri and the Big Three. A positive value means that Feri gives a lower rating, i.e. is more pessimistic than the comparator agency.

Overall, over the 13 year period Feri seems to have been slightly more optimistic compared to S&P's and Moody's. This seems to have been mainly due to different judgements on emerging markets: Feri tended to rate these countries better than S&P's and Moody's. We

[18]These changes are statistically significant on a 1 percent confidence interval.

do not observe a considerable difference with respect to Fitch. Especially during the Great Moderation Feri is the most optimistic rating agency. Instead, during the crisis, this is reversed: Now, Feri is clearly the most pessimistic rating agency with ratings ranging between 0.3-1.0 notches below its competitors' assessments.

Next, we ask if Feri is more dovish on Europe and in particular on the Euro area. Table 3 shows differences for all Euro area countries, for the GIIPS and the core countries (non GIIPS).[19] Our results indicate that Feri was rather more pessimistic towards the countries of the currency union than the Big Three agencies in the entire sample (the average difference is between 0.5-1.0 notches). During the boom from 1999-2007, the ratings of Feri are broadly in line with those of competitors but in the crisis period Feri is clearly the most pessimistic of all (between 1-2.6 notches below the others). Note that this is true for the GIIPS and for the Non-GIIPs. Hence, our findings indicate that an independent European rating agency would have assessed the creditworthiness of the currency area even more harshly than the Big Three did. Furthermore, Feri was not only the toughest on the periphery and also punished core countries more for their involvement in the crisis.

3.2 First movers and followers

We now turn to analyse the sequence of moves (mostly downgrades in crisis periods) between the different agencies. Following Hill and Faff (2010)) we consider an event to be a first move if no other rating agency has yet changed its rating to the same or more extreme value in the preceding 12 months. An event is considered as a follower event if a rating agency changed its rating after a preceding change in the same direction and to the same or higher level by another agency. We first look at emerging market crises and then at the Euro crisis.

Table 4 (upper panel) shows rating changes during the crisis of Argentina (2001), Brazil (2002), Turkey (2001) and Egypt (2011-12). In most of these crises S&P and Moody's acted as

[19] The periphery consists of Greece, Ireland, Italy, Portugal and Spain. The non-GIPPS are Belgium, Estonia, Finland, France, Germany, Netherlands, Slovakia and Slovenia.

Table 2: Absolute Rating Difference to Feri

Country Group	(1) Feri - S&P	(2) Feri - Moody's	(3) Feri - Fitch	Observations
1999-2012				
All Countries	-0.64***	-0.54***	-0.03	9016
	(0.03)	(0.03)	(0.03)	
Industrialized Countries	0.04**	0.2***	0.08***	3864
	(0.02)	(0.02)	(0.02)	
Emerging Economies	-1.14***	-1.07***	-0.11**	5152
	(0.04)	(0.05)	(0.05)	
Great Moderation (1999-2007)				
All Countries	-1.19***	-1.12***	-0.54***	5768
	(0.04)	(0.04)	(0.04)	
Industrialized Countries	-0.18***	-0.11***	-0.3***	2472
	(0.02)	(0.02)	(0.02)	
Emerging Economies	-1.95***	-1.89***	-0.72***	3296
	(0.06)	(0.07)	(0.07)	
Crisis period (2008-2012)				
All Countries	0.35***	0.49***	0.88***	3248
	(0.04)	(0.05)	(0.04)	
Advanced Countries	0.42***	0.63***	0.76***	1392
	(0.04)	(0.04)	(0.04)	
Emerging Economies	0.30***	0.39***	0.97***	1856
	(0.07)	(0.07)	(0.07)	

Differences of the ratings are based on the transformation in Table 11; Positive coefficients indicate a better rating average compared to Feri; Significance levels of T-test are given as ***, **, and * representing 1%, 5%, and 10% respectively; Standard errors in brackets

Table 3: Mean difference of ratings in the Euro Area

Rating Agencies	(1) Feri - S&P	(2) Feri - Moody's	(3) Feri - Fitch	Observations
1999-2012				
Euro area	0.54***	0.73***	0.66***	1729
	(0.03)	(0.03)	(0.03)	
GIIPS	0.60***	1.00***	0.98***	786
	(0.04)	(0.03)	(0.04)	
No GIIPS	0.49***	0.50***	0.39***	943
	(0.04)	(0.04)	(0.05)	
Great Moderation (1999-2007)				
Euro area	-0.07**	0.10***	-0.04	1023
	(0.03)	(0.03)	(0.03)	
GIIPS	-0.16***	0.11***	0.07	496
	(0.04)	(0.06)	(0.04)	
No GIIPS	0.02	0.09**	-0.14***	527
	(0.03)	(0.03)	(0.05)	
Crisis period (2008-2012)				
Euro area	1.42***	1.64***	1.68***	706
	(0.06)	(0.06)	(0.06)	
GIIPS	1.89***	2.52***	2.55***	290
	(0.09)	(0.07)	(0.09)	
No GIIPS	1.08***	1.02***	1.08***	416
	(0.08)	(0.07)	(0.07)	

Differences of the ratings are based on the transformation in Table 11; Positive coefficients indicate a better rating average compared to Feri; Significance levels of T-test are given as ***, **, and * representing 1%, 5%, and 10% respectively; Standard errors in brackets

first movers, initiating the cycle of downgrades. Feri was seldom in the lead but has a higher number of follower events as indicated by a low leader/follower ratio.

The situation looks very different when we turn to the Euro crisis (Table 4 lower panel). In this case Feri was, by far, the most aggressive in downgrading. It has the highest number of first mover events for Ireland, Greece, Portugal and Spain. Feri has three times more first mover events than any of the Big Three. For instance, we see that Feri started to downgrade Ireland already in early 2009 and subsequently again in 2010 before the Big Three also decided to downgrade the country.[20] The same is true for Portugal (Figure 4) and Spain (Figure 5).

We conducted a number of robustness tests. In particular, we checked whether outlook or credit watch decisions by the Big Three would change our results. But neither of the Big Three agencies has taken action before the initial downgrades by Feri and most outlook/credit watch decisions afterwards have been assigned simultaneously with rating changes. This is confirmed when we include those decisions in the rating figures by adding 0.25 notches to a negative outlook and 0.5 notches to a negative credit watch.

We also check whether size of the agency matters. Being embedded into the regulatory framework of central banks and financial regulation (namely Basel III), the Big Three might be more hesitant to rating changes than a small agency. Hence, we used the sovereign ratings of a second small rating agency called DBRS to control for size.[21] They only provide sovereign ratings for euro area economies and another six selected countries. For the euro events (excluding Greece), we observe that DBRS has always been following the other agencies and it has been even more optimistic compared to competitors (about one notch during the crisis). This result indicates that small agencies do not always front run and that agency size is probably not the reason for the difference in observed behaviour.

[20]see Figure 2 in the appendix

[21]DBRS Limited is a Canadian rating agency and provides ratings for short-term money market bonds as well as for corporate and sovereign bonds since the late 1970s. They are certified and registered by the ESMA and the SEC.

Table 4: Leader-Follower-Events

Rating Agency	(1) Feri	(2) S&P	(3) Moody's	(4) Fitch
Analysis of emerging market crises				
No. of first mover rating changes				
Argentina (2001)	0	2	2	0
Brazil (2002)	0	0	1	1
Turkey (2001)	1	2	0	0
Egypt (2011 − 12)	0	0	4	0
SUM	1	4	7	1
No. of follower events				
Argentina (2001)	2	2	1	3
Brazil (2002)	0	1	1	1
Turkey (2001)	1	0	0	2
Egypt (2011 − 12)	2	4	0	3
SUM	5	7	2	6
Leader − Follower − Ratio	**0.2**	**0.57**	**3.5**	**0.17**
Analysis of the Euro crisis				
No. of first mover rating changes				
Ireland (2009 − 11)	4	2	2	0
Italy (2011 − 12)	1	1	1	0
Greece (2009 − 12)	3	2	0	0
Portugal (2009 − 12)	5	0	1	1
Spain (2009 − 12)	3	0	1	0
SUM	16	5	5	1
No. of follower events				
Ireland (2009 − 11)	0	6	3	4
Italy (2011 − 12)	0	1	2	2
Greece (2009 − 12)	1	3	6	8
Portugal (2009 − 12)	0	4	5	5
Spain (2009 − 12)	0	5	4	4
SUM	1	19	20	23
Leader − Follower − Ratio	**16**	**0.26**	**0.25**	**0.04**

A rating change is considered as "first mover" if no other rating agency has yet changed its rating to the same or more extreme value in the 12 month-period before. An event is considered as a follower event if a rating agency changed its rating after a preceding change in the same direction and to the same or higher level by another agency (see definition by Hill and Faff (2010)).

3.3 Transitions between investment and non-investment grade

In principle rating agencies should "see through" the cycle, that is they should provide judgements on an issuer's fundamental capacity to service his obligations and not vary with temporary ups and downs of the market. Thus, ratings should be rather stable. Serial downgrades followed by sudden reversals should not be observed frequently. A high volatility of ratings could indicate that the rating agency is following the market, which would put in doubt the value added of ratings. Alternatively, and more worryingly, nervous rating behaviour may be causing large market fluctuations and possibly even self-fulfilling crises.

This danger is particularly pronounced at a very special transition line in the rating scale, the transition between investment and non-investment grade. An issuer that is downgraded to speculative grade faces major consequences. Many institutional investors will be forced to sell their positions which can lead to a sudden sell-off and a price drop. Such cliff effects should be more pronounced for the Big Three since their ratings have been incorporated in regulatory frameworks as, e.g. the Basel rules for capital requirements. Therefore, the big rating agencies may be expected to be reluctant to move between investment and speculative grade.

Table 5 compares the total number of transitions between investment grade and speculative grade and conversely for the entire sample across the 4 agencies. It shows that Feri is much more aggressive, both in upgrading and downgrading at the speculative grade transition. Overall, Feri made 42 downgrades to speculative grade and reversed itself 6 times (in the subsequent 12 months). By comparison, Moody's made only 12 downgrades and had no reversals within the sample period. Feri is also less reluctant to upgrade a country from speculative to investment grade, it did so 36 times but then reversed the decision 7 times.

The pattern for the Euro area is similar. Again, Feri was the most active rating agency assigning junk status to Portugal and Greece in the first place (here in the same month as S&P) whereas Moody's has been the only agency to assign speculative grade status to Ireland, however with no followers (see figures 1 to 5 in the appendix).

The difference in the overall behaviour between Feri and the Big Three can be interpreted

in two ways. The first possibility is that Feri is more independent than the Big Three since it does not carry the weight of "regulatory" responsibility and thus the ratings would be more accurate. On the other hand the frequent reversals of Feri could be interpreted as a sign that Feri does not to see through cycles but rather follows the market. At any rate, in terms of our main question, whether European countries are treated differently by a European agency, the answer is yes. They face higher rating volatility and more early downgrades to junk status.

Table 5: Analysis of transition between investment and speculative grade

Rating Agency	(1) Feri	(2) S&P	(3) Moody's	(4) Fitch
All countries				
Upgrades to investment grade				
all	42	11	12	15
first mover	15	0	0	4
withfollowers	1	5	0	7
reversals	6	0	0	0
Downgrades to speculative grade				
all	36	7	5	6
first mover	16	0	1	0
withfollowers	2	2	5	1
reversals	7	0	0	0
Euro Area				
Upgrades to investment grade				
all	1	0	0	0
first mover	0	0	0	0
with followers	0	0	0	0
reversals	0	0	0	0
Downgrades to speculative grade				
all	3	2	3	2
first mover	2	0	1	0
with followers	2	2	3	1
reversals	0	0	0	0

A first mover event is attributed to the first rating agency that changes the rating class. This event is also a follower event if at least one other agency follows the decision during the subsequent 12 months. It is a reversal event if the rating agency decides to reverse the rating class again within the subsequent 12 months. Additional tests for 6 months and 24 month lags reveal similar differences between the Big Three and Feri.

3.4 Herding

Although the number of follower events give some information about the degree of interaction among rating agencies, we are able to check in more detail if rating agencies follow their competitors. By using a probit model we test whether rating agencies systematically react to rating changes by their competitors. If one of the Big Three agencies decides to change the rating to speculative grade status, this has obvious consequences for the sovereign as refinancing costs will increase when investors begin to sell their positions. This in turn might lead to subsequent downgrades by other agencies as the change to speculative grade status increases sovereign risk by itself due to regulatory provisions such as the Basel capital regulation. In the following probit analysis we compute the probability of a negative change in the rating within three months following the assignment of speculative grade status by the first agency (*Spec-Jump 1*). Additionally, we test for the probability of a downgrade if the second and third rating agency changes the status to speculative grade (*Spec-Jump 2 and 3*). The sample has been restricted to those 23 countries that actually experienced a status change. We observe 11 transitions by a first agency, 5 transitions by a second agency and another 3 transition events by the third agency.

The results for Feri are presented in column (1) of table 6. We find no significant negative reaction on Feri ratings to speculative grade status changes by either of the Big Three companies. On the other hand, the downgrade probability among the Big Three increases significantly if the first has changed the status during the three preceding months (probability increase of more than 10 percent). For Fitch, we observe a downgrade probability of 35 percent if the second agency has changed the rating status. This probability increases again to more than 80 percent for S&P's and Moody's when the third agency has switched to speculative grade status. Table 7 shows the findings for the transition from speculative grade status to investment grade. Here, we find 11 transition events by a first agency, 10 transitions by a second agency and 15 transitions by a third agency. Again, we observe no significant response by Feri to status changes of the Big Three. For the anglo-saxon agencies, we find again a

Table 6: Interaction with Junk bonds transition

	(1) Feri	(2) S&P	(3) Moody's	(4) Fitch
main				
Spec-Jump 1	0.222	0.960***	1.433***	0.805**
	(0.62)	(3.61)	(5.68)	(2.84)
Spec-Jump 2	0.127	0.759*	0.0339	0.941**
	(0.24)	(2.05)	(0.07)	(2.65)
Spec-Jump 3	0.541	1.410***	1.756***	1.119*
	(1.03)	(3.42)	(4.29)	(2.55)
Constant	-1.943***	-2.235***	-2.437***	-2.256***
	(-44.53)	(-39.60)	(-35.15)	(-39.16)
Observations	3703	3703	3703	3703

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We perform a probit analysis where "Spec-Jump" is equal to one when a downgrade to speculative grade by the first (Spec-Jump 1), second (Spec-Jump 2) or third (Spec-Jump 3) Big Three agency occurs. It remains equal to one in the three subsequent months. The dependent variable in columns (1) to (4) is equal to 1 if the respective agency downgrades a country by at least one notch in that month.

significant interaction between status changes and upgrades in the subsequent three months. The relationship is less strong compared to negative transitions, but still the upgrade probability ranges between 25-35 percent after a second agency has assigned investment grade status and increases to 50-60 percent after the third agency decided to assign the higher rating class. These findings point to a high degree of interaction among the Big Three agencies. On the other hand we observe rather independent rating decisions by Feri.

Table 7: Interaction with investment grade transition

	(1) Feri	(2) S&P	(3) Moody's	(4) Fitch
main				
Inv-Jump 1	-0.0904	0.420	0.721*	0.959***
	(-0.21)	(1.41)	(2.57)	(3.83)
Inv-Jump 2	-0.0824	0.993***	0.769**	0.986***
	(-0.19)	(4.09)	(2.82)	(3.85)
Inv-Jump 3	0.262	0.681**	0.924***	0.268
	(0.94)	(2.94)	(4.16)	(0.83)
Constant	-1.901***	-2.083***	-2.200***	-2.226***
	(-44.62)	(-42.07)	(-39.98)	(-39.43)
Observations	3703	3703	3703	3703

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

We perform a probit analysis where "Inv-Jump" is equal to one when an upgrade to investment grade by the first (Inv-Jump 1), second (Inv-Jump 2) or third (Inv-Jump 3) Big Three agency occurs. It remains equal to one in the three subsequent months. The dependent variable in columns (1) to (4) is equal to 1 if the respective agency upgrades a country by at least one notch in that month.

3.5 Neighbourhood bias and gravity

The citation by Jean-Claude Junker in the introduction expressed the expectation that a European rating agency would be better informed about European countries than rating agencies with headquarters in the US. Conversely, one might expect that the US based agencies are better informed about their immediate neighbours. We test for such a potential bias by looking at ratings of immediate neighbours.

Table 8 shows the rating difference between different agencies. Indeed, over the entire period, Feri was somewhat more pessimistic on the United States, Canada and Mexico than the Big Three. Therefore, here we might detect a neighbourhood bias of the Big Three. On the other hand, Feri is also more pessimistic on the creditworthiness of some of Germany's immediate neighbours, in particular France, the Czech Republic, and the Netherlands.

Finally, we estimate a gravity model, in which we relate rating levels to the distance from the home country and a size variable (Anderson (1979)). The variable distance is measured by distance from the capital of a country to the capital of the rating agency's home country (Berlin for Feri and Washington D.C. for the Big Three). The real GDP in dollars serves as a proxy for the size of the bond market. The model is estimated with a pooled regression by taking the average of all variables across the overall sample.

Table 9 shows the results for Feri in column (1). We find that the effect of distance is statistically insignificant whereas country size has a negative and significant impact on sovereign ratings. Thus, Feri assigns better ratings to large economically important countries. For the US agencies (columns 2-4), neither distance nor size are significant. Thus, being close to Washingtion D.C. has no impact on ratings. To test whether the results changed over time, we carried out robustness checks by repeating the analysis for different time periods. We find no evidence for time-varying coefficients.

Table 8: Testing for Neighbourhood Bias

Rating Agencies	(1) Feri - S&P	(2) Feri - Moody's	(3) Feri - Fitch	Observations
Home/ Neighbour Bias Big Three				
Canada	0.73*** (0.05)	0.67*** (0.04)	0.96*** (0.07)	161
Mexico	0.96*** (0.12)	1.57*** (0.13)	2.07*** (0.15)	161
United States	0.02* (0.01)	0.11*** (0.02)	0.11*** (0.02)	161
Home/ Neighbour Bias Feri				
Austria	0.17*** (0.04)	-0.77*** (0.03)	0.23*** (0.03)	161
Belgium	-0.72*** (0.04)	-0.78*** (0.04)	-1.45*** (0.09)	161
Czech Republic	0.48*** (0.17)	1.15*** (0.22)	1.93*** (0.20)	161
Denmark	0.73*** (0.04)	0.84*** (0.03)	0.85*** (0.03)	161
France	0.13*** (0.03)	0.19** (0.03)	0.19*** (0.03)	161
Italy	-0.89*** (0.13)	-0.16 (0.16)	-0.20 (0.14)	161
Netherlands	0.13*** (0.03)	0.13*** (0.03)	0.13*** (0.03)	161

Differences of the ratings are based on the transformation in Table 11; Positive coefficients indicate a better rating average compared to Feri; Significance levels of T-test are given as ***, **, and * representing 1%, 5%, and 10% respectively; Standard errors in brackets

Table 9: Ratings in a "Gravity" model

	(1)	(2)	(3)	(4)
	Feri	S&P	Moody's	Fitch
Distance to Feri	0.162			
	(1.68)			
Country Size	-0.312**	-0.0933	-0.111	-0.0745
	(-3.39)	(-0.88)	(-1.05)	(-0.69)
Distance to Big3		0.353	0.339	0.276
		(1.36)	(1.31)	(1.05)
Constant	2.057*	-1.061	-0.857	-0.632
	(2.64)	(-0.44)	(-0.36)	(-0.26)
Observations	55	55	55	55

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4 Conclusions

In this paper we asked whether the view that a European rating agency would have had better information and fewer incentive problems than the US based ones is justified. In particular, we ask if an existing European Rating Agency performed differently than the US based Big Three during the Euro crisis. We analyse the rating performance of Feri, the largest German rating agency and find that Feri was more aggressive both in terms of a lower level and a higher propensity to quickly downgrade Euro area problem countries than the Big Three. Feri has made larger downgrades to core members of the currency area. In general, Feri was quicker to downgrade countries from investment to speculative grade, however, it also shows a larger number of reversals. Feri appears to be less stable but also less subject to herding than the Big Three. Finally, we do not find evidence for a positive neighbourhood bias nor a positive effect of geographic closeness or economic size.

Overall, the evidence from Feri's ratings suggests that European countries would have received an even tougher treatment from a European rating agency than from the US based

ones. Now, Feri may not be what politicians had in mind when they called for a European rating agency. Feri is clearly a private, small and completely independent player. Its main concern has to be for client's satisfaction and good reputation. Regulatory issues or political pressure are not likely to be of concern and therefore the ratings of Feri can be considered an unbiased European view. If this is what politicians were asking for, they have got an answer but probably not the one they expected.

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A Tables

Table 10: Country Table 1999-2012

Country Group	(1) *Advanced Countries*	(2) *Emerging Countries*
	Australia	Argentina
	Austria	Brazil
	Belgium	Bulgaria
	Canada	Chile
	Denmark	China
	Finland	Colombia
	France	Croatia
	Germany	Czech Republic
	Greece	Egypt
	Ireland	Estonia
	Italy	Hong Kong
	Japan	Hungary
	Netherlands	India
	New Zealand	Indonesia
	Norway	Israel
	Portugal	Latvia
	Singapore	Lithuania
	South Korea	Malaysia
	Spain	Mexico
	Sweden	Peru
	Switzerland	Philippines
	Taiwan	Poland
	U.K.	Romania
	U.S.	Russia
		Slovakia
		Slovenia
		South Africa
		Thailand
		Turkey
		Ukraine
		Venezuela
		Vietnam

classification according to the IMF definition

Table 11: Rating Transformation

(1) *Rating Notation*	(2) *Feri*	(3) *S&P/Fitch*	(4) *Moody's*
AAA/AAA/AAa	1	1	1
AA/AA+/Aa1	2	2	2
AA/AA/Aa2	2	3	3
A/AA-/Aa3	4.5	4	4
B+/A+/A1	6	5	5
B+/A/A2	6	6	6
B/A-/A3	7.5	7	7
C/BBB+/Baa1	9	8	8
C/BBB/Baa2	9	9	9
C/BBB-/Baa3	9	10	10
D/BB+/Ba1	11	11	11
D/BB/Ba2	11	12	12
D/BB-/Ba3	11	13	13
D-/B+/B1	14	14	14
D-/B/B2	14	15	15
D-/B-/B3	14	16	16
E/CCC+/Caa1	17	17	17
E/CCC/Caa2	17	17	17
E/CCC-/Caa3	17	17	17
E-/CC/Ca	17	17	17
E-/C/Ca	17	17	17
Default/Default/C	17	17	17

Rating transformation based on the Feri translation table

Sources: Feri Rating GmbH, Standard & Poor's, Moody's, Fitch

B Figures

Figure 1: Credit Ratings Greece

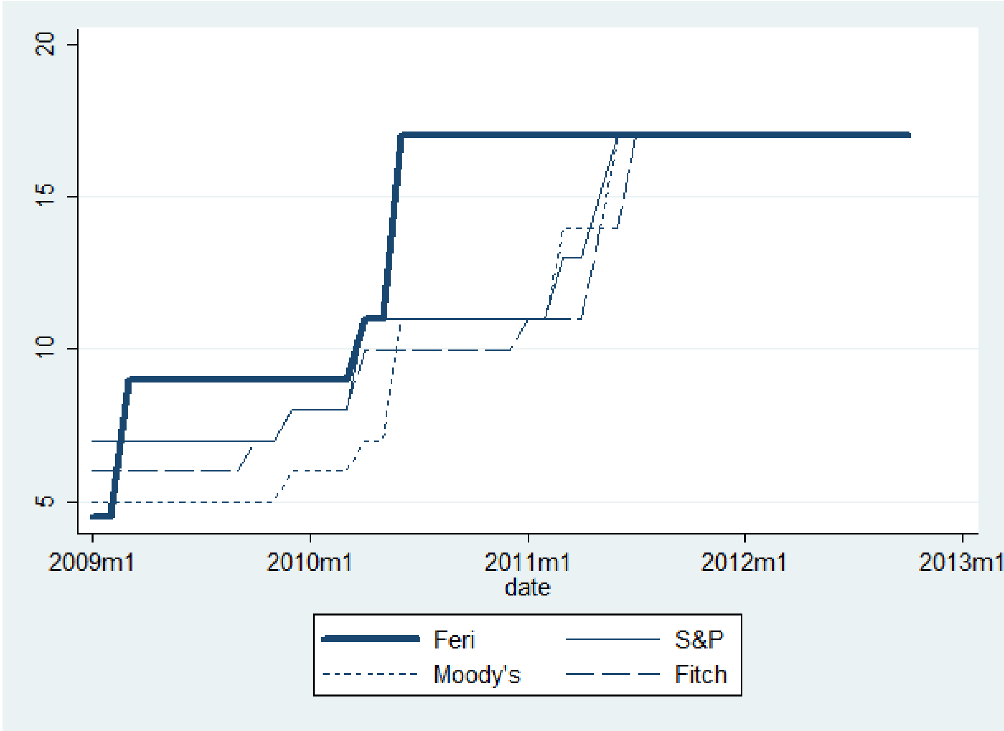

Figure 2: Credit Ratings Ireland

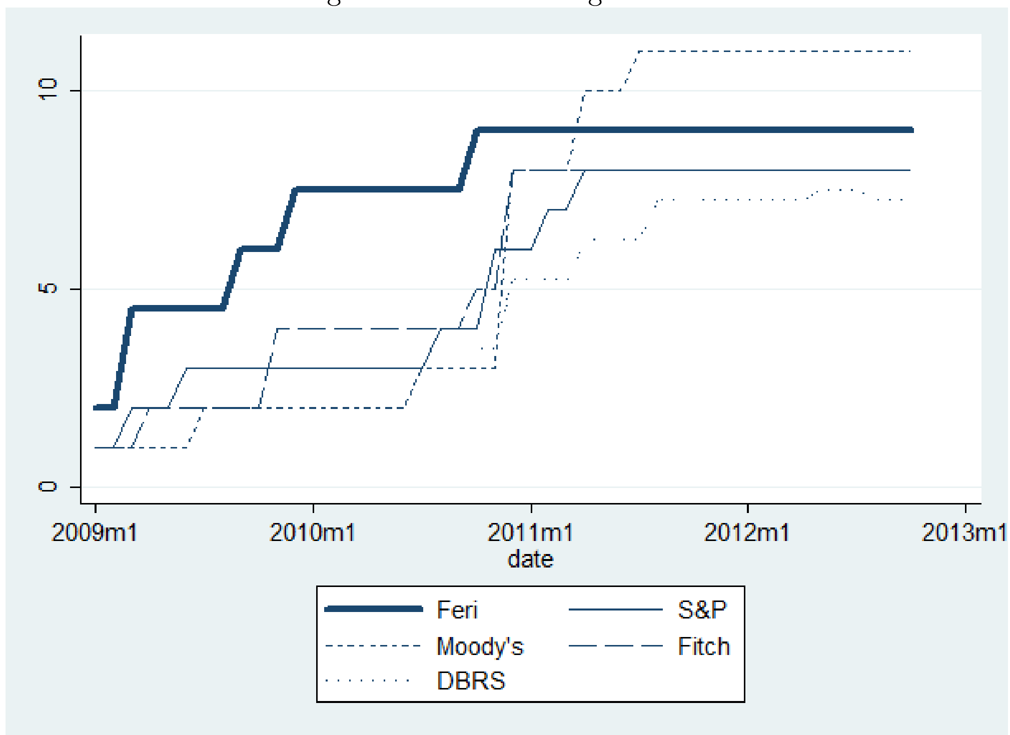

Figure 3: Credit Ratings Italy

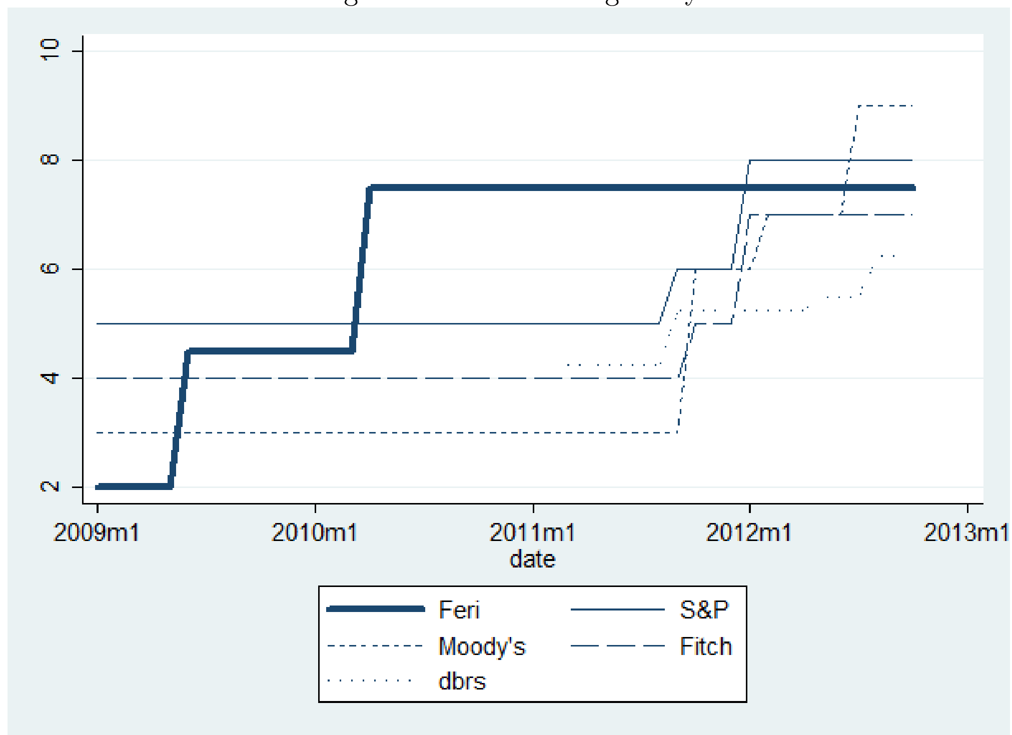

Figure 4: Credit Ratings Portugal

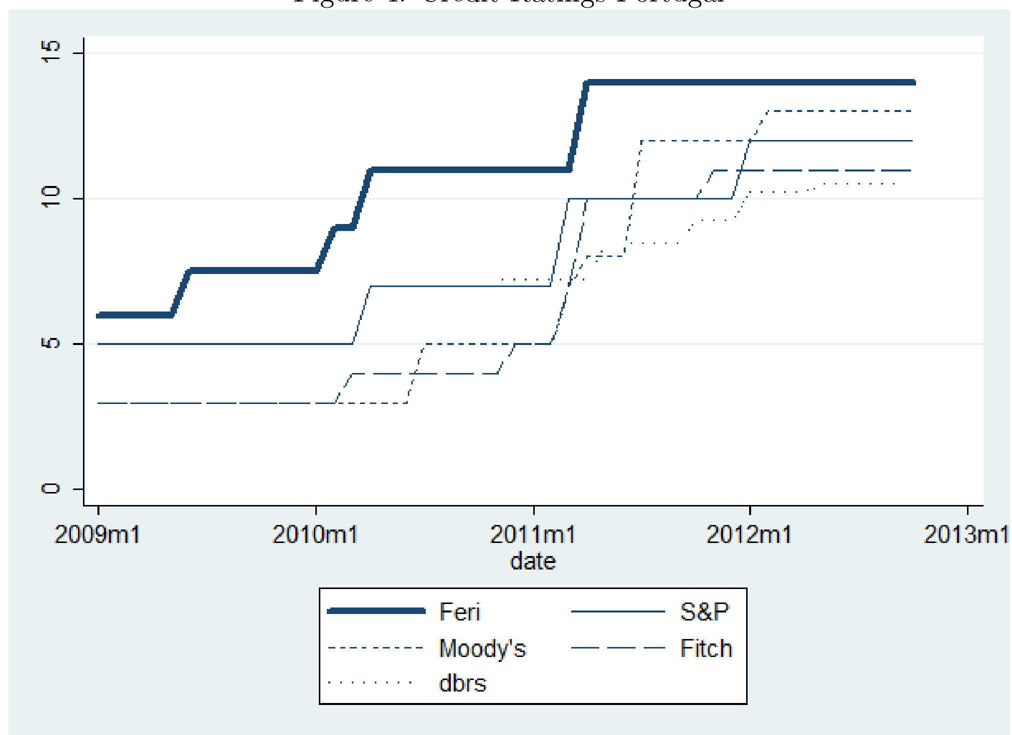

Figure 5: Credit Ratings Spain