Does the Stock Market react to Unsolicited Ratings?

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This paper investigates whether the stock market reacts to unsolicited ratings for a sample of S&P rated firms from January 1996 to July 2005. We first analyze the stock market reaction associated with the assignment of an initial unsolicited rating. We find evidence that the stock market reaction to initial unsolicited ratings is negative, and particularly more pronounced for Japanese firms. However, the stock market does not reaction at the transition from an unsolicited to a solicited rating. Comparison of the upgrades with a matched-sample of upgrades of solicited ratings further shows that the price reactions are not different. Though, abnormal returns are worse for unchanged ratings than upgrades for the unsolicited to solicited rating changes. Furthermore, we find that Japanese are less likely to receive an upgrade. Our findings suggest that unsolicited ratings might be biased downwards, that the capital market therefore expects upgrades of formerly unsolicted ratings, and punishes firms whose ratings remain unchanged. All these effects seem to be more pronounced for Japanese firms.

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1 Introduction

For considerable time there is a controversial discussion going on involving rating agencies and their business practices. In the center of this discussion stands the more or less uncontrolled power of the rating agencies which are hardly regulated nor subject to any disclosure requirements regarding their rating practices. This has let many market participants and observers to have a critical view on rating agencies and the opacity of the activities they unfold. The power of the rating agencies stems from the oligopolistic market structure of the rating market which is dominated by the so-called big three (Fitch Ratings, Moody's Investor Services and Standard & Poor's), and the strong influence rating agencies' judgments have on a company's cost of financing. In its March 26th 2005 issue, *The Economist* states that this oligopolistic market structure allows the agencies to extract very high profits which, in the case of Standard & Poor's (S&P), reached a stunning 41% of revenues in 2004.

One peculiarity associated with the rating agencies is the common practice to rate firms which have not requested a rating. While the agencies argue that these so-called unsolicited ratings are needed to broaden their own understanding of the market and to serve investors' needs, the unsolicitedly rated firms usually despise such practices. Critics argue that the agencies assign unsolicited ratings to force the firms to order a paid, i.e., solicited rating, which might be achieved by assigning an unsolicited rating that is worse than what the solicited rating ceteris paribus would be. This accusation is particularly pronounced for Japanese companies. For instance, the Japan Center for International Finance (JCIF (1999)) accused US rating agencies to damage the international standing of Japanese firms by issuing unsolicited ratings which are generally lower than the solicited ones of Japanese rating agencies.

Empirical evidence reveals that unsolicited ratings indeed seem to be lower than solicited ones, i.e., that they feature a downward bias. POON (2003) uses cross-sectional rating data from S&P for 265 firms in 15 countries from 1998 to 2000. She finds that unsolicited ratings tend to be lower. Whereas she observes that issuers who choose not to obtain rating services

from S&P have weaker financial profiles, the difference in ratings can not be explained by this self-selection bias for a sub-sample of Japanese firms. Thus, it seems that (these) Japanese firms bear a downward bias. POON and FIRTH (2004) employ a cross-sectional analysis of 829 solicited and 122 unsolicited Bank Individual Ratings from Fitch. They find that unsolicited ratings are lower on average even after controlling for differences in sovereign risk and key financial characteristics. VAN ROY (2005) compares the rating quality of Fitch rated Asian banks and finds that unsolicited ratings tend to be lower even after accounting for differences in financial and non-financial characteristics. He concludes that the reason for this is that unsolicited ratings are based on publicly available information only and are thus more conservative. Besides this empirical evidence, there is also theoretical work that argues in favor of the existence of a downward bias in unsolicited ratings (BYOUN and SHIN (2002), BANNIER and TYRELL (2005)). The latter paper argues that unsolicited ratings are strongly downward-biased for firms which believe they can disclose very optimistic private information to the rating agency as opposed to what has been expected by the market. Furthermore, those firms are likely to order a solicited rating that feel to be undervalued by the market relative to their true creditworthiness. Thus, one should expect positive stock market reactions for firms that order a solicited rating and considerably more upgrades than unchanged ratings or downgrades at the transition from unsolicited to solicited.

However, none of the empirical works has so far analyzed the direct effect of the assignment of an initial unsolicited rating and the effect of soliciting a rating. Thus, whether the rating agencies' practice to assign unsolicited ratings has any measurable impact on the rated company's market value is still an open question. Our paper addresses this issue by analyzing the stock market reaction to two different kinds of events. First, we look at the stock market reaction associated with the assignment of an initial unsolicited rating. As unsolicited ratings are based on public information only, we would not expect an abnormal stock market reaction associated with the rating announcement as long as the rating level is in line with stock market

expectations. Second, we analyze the stock market's reaction to changes from unsolicited to solicited ratings, therewith capturing the direct effect of a rating solicitation. We argue that it should only be beneficial for firms to obtain a solicited rating if this positively impacts the value of their equity. If the stock market neither reacts to the announcement of a company's initial unsolicited rating nor to the rating solicitation, why do many firms and, to some extent even the public view, despise the practice of assigning unsolicited ratings? In this case, one might raise the question whether – as often argued by the rating agencies – unsolicited ratings really convey less information than solicited ones? Otherwise, it would not be justified that firms complain about unsolicited ratings nor would they be willing to incur the high cost associated with ordering a solicited rating, thus, making the activities of the agencies futile. Using event study methodology this paper is the first to capture the direct effects of assigning an initial unsolicited rating and of soliciting a rating. Our findings shed more light on the business practices of rating agencies. They should be equally interesting for companies that are confronted with an unsolicited rating, investors, the rating agencies themselves and regulatory authorities.

We find a statistically significant negative stock market reaction surrounding the announcement of the initial unsolicited rating. Obviously, the rating announcement is bad news for the stock market. This might be explained by the downward bias hypothesis. We further find that this effect is particularly pronounced for Japanese firms. Apparently, Japanese firms are treated differently compared to firms from other countries. As we do not find any significant abnormal stock market reaction after a formerly unsolicitedly rated firm receives a rating upgrade, it seems that the capital market already anticipates a rating upgrade at the transition from an unsolicited to a solicited rating. Moreover, we compare the stock market reactions of our sample with a matching-sample including only solicited rating changes. The comparison does not show any significantly different reactions between both samples. Besides, we find differences in the stock market reactions between the upgraded companies in our sample and

the companies whose rating quality did not change after they solicited their rating. In this latter case it seems even more obscure why a solicited rating was ordered. Furthermore, we find that, after controlling for operative performance, market valuation and the magnitude of the rating change, this sort of odd rating request is more likely for Japanese firms.

The paper is arranged as follows. Section 2 describes the dataset and conducts the event study for the sample of firms with an initial unsolicited rating. Section 3 includes the descriptive analysis of the sample of firms with a rating transition from unsolicited to solicited and the matching sample, and conducts the event study for these firms. Section 4 contains concluding remarks.

2 The stock market reaction to the assignment of an initial unsolicited rating

2.1 Description of the data set and descriptive analysis of the sample

Generally, all big three rating agencies provide information whether a rating is solicited or not. In 1996, S&P started to mark unsolicited ratings with the acronym "pi" to indicate that the rating is based on publicly available information only. In 2000 Moody's started to declare in rating assignment press releases whether a rating is solicited or not (MOODY'S (1999)). Finally, Fitch began to disclose unsolicited ratings in rating action commentaries (FITCH (2005)) in 2001. The reason why we include only S&P rated firms is that the publicly available data sources (particularly our main rating data source Bloomberg) do not provide the necessary information for the other two rating agencies. Consequently, the sample includes only firms rated by S&P which received an initial unsolicited rating in the period January 1996 to July 2005. We detected 433 companies with such a rating. For 379 of those companies we were able to extract stock market data from Datastream. In order to exclude illiquid firms from the sample we applied a liquidity filter which required that there were not more than 10 zero returns in the event period of -15 days before and 30 days after the rating announcement. The last selection criterion was to control for confounding rating events from

S&P and Moody's in the event window. This was done to avoid overlapping events which could have an impact on the abnormal returns and therewith bias the results. The final sample consists of 229 firms. Table 1 includes the descriptive analysis of the sample.

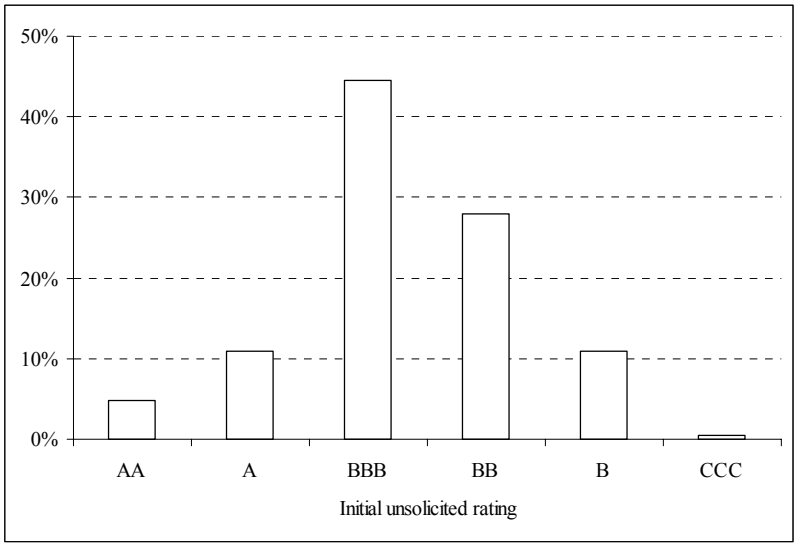
Table 1: Descriptive analysis

This table shows the descriptive analysis for 229 firms which were assigned an initial unsolicited rating from January 1996 to July 2005. The market value is shown in billion USD at the time of the rating change.

Market value	< .1	.1 to .5	.5 to 1	1 to 2.5	2.5 to 5	5 to 7.5	7.5 to 10	10 to 25	> 25
	2,18%	12,66%	16,59%	32,75%	16,16%	10,04%	6,11%	3,06%	0,44%
Country	Japan	Korea	Italy	South Africa	China	India	Hong Kong	Thailand	others
	69,87%	3,06%	2,62%	2,18%	2,18%	1,75%	1,75%	1,31%	15,28%
Year of rating change	1996	1997	1998	1999	2000	2001	2002	2003	2004
	1,31%	31,44%	20,52%	20,09%	17,03%	4,37%	0,44%	2,18%	2,62%
Business sector	Financial	Industrial	Basic Material	Retail service	Retail goods	Oil & Gas	Health	Utility	Technology
	42,79%	17,47%	12,23%	10,48%	10,48%	2,18%	2,18%	1,31%	0,87%

The largest bulk of the companies which were assigned an initial unsolicited rating between January 1996 and July 2005 comes from Japan.[1] 1997 was the most active year in which S&P assigned firms for the first time an unsolicited rating. The main part of the sample firms comes from the financial sector. Figure 1 shows the distribution of the rating quality. Apparently almost 40% of the initial unsolicited ratings are non investment grade.

Figure 1: Distribution of rating quality for the sample firms



[1] S&P also assigned initial unsolicited ratings to US companies in the period January 1996 to July 2005. However, in Bloomberg only companies from the financial sector are marked with pi in the US. As we did not find stock market data for any of those companies, we excluded them from the sample. This can be explained by the fact that all the US companies with an initial pi rating were part of a larger holding or a conglomerate at the time of the rating assignment.

2.2 Results of the event study

The methodology applied in this study is common event study methodology as described in MACKINLAY et al. (1997). For all firms in the sample we collect the total stock returns and the respective total returns of the country indices as a proxy for the respective market portfolio from Datastream. The daily return of each security is the natural log of every security's total return at time t divided by the security's total return at time t-1. Each security's daily abnormal return is calculated by subtracting the daily country index log-return from the respective stock log-return. Only for one Estonian firm, there we no country index available. Hence, we use Datastream's European banking index instead.

Table 2 contains the distribution of the price reactions for the sample firms.

Table 2: Distribution of the price reactions

This table shows the distribution of the price reactions for the sample of 229 firms, which were assigned an initial unsolicited rating from January 1996 to July 2005

	(-15, -1)	(0, +15)	(+16, +30)	(-15, +30)
Maximum	0,6184	0,5658	0,2889	0,6725
Median	0,0028	-0,0155	-0,0041	-0,0106
Minimum	-0,3513	-0,3291	-0,3039	-0,4511
Skewness	0,7118	1,4691	0,2888	0,5696
Kurtosis	10,1243	9,8828	4,0405	4,6229
Jarque-Bera p value	0,0000	0,0000	0,0012	0,0000

We next calculate the mean cumulated abnormal returns (CAR) for four sub-event windows by adding up daily abnormal stock returns over the respective event window for each company individually and calculating the mean values for the sample. To assess whether the abnormal returns in the event windows are significantly different from zero we test the hypothesis mean-CAR = 0 by applying a standard t-test. As it is sometimes argued that the unsolicited ratings of Japanese companies are downward biased (POON (2003), VAN ROY (2005)) we conduct the event study for the whole sample and for two sub-samples including only Japanese firms and the rest. The results are summarized in table 3.

Table 3: Stock market reactions to the assignment of an initial unsolicited rating

This table shows stock market reactions for the firms which were assigned an initial unsolicited rating from January 1996 to July 2005. Two-sided significance levels for the t-test are given as ***, **, and * representing 1%, 5%, and 10% significance respectively.

	Whole sample (n = 229)		Japan (n = 160)		Ex-Japan (n = 69)	
Event window	Mean(CAR)	t-value	Mean(CAR)	t-value	Mean(CAR)	t-value
(-15, -1)	0,0950%	0,1435	-0,4185%	-0,5466	1,2858%	0,9931
(0, +15)	-1.4152%*	-1,9117	-2.0711%**	-2,3553	0,1057%	0,0775
(+16, +30)	0,2350%	0,3839	0,4318%	0,6249	-0,2216%	-0,1765
(-15, +30)	-1,0852%	-0,9350	-2,0577%	-1,4672	1,1699%	0,5696

We find a slight positive reaction for the whole sample in the event window (-15, -1). In the first sub-event window after the rating announcement (0, +15) we detect a negative stock market reaction, and in the second sub-event window after the announcement (+16, +30) we find a positive stock market reaction. However, only the negative stock market reaction of -1.42% in the event window (0, +15) is significant on the 10%-level. It seems that the assignment of the first unsolicited rating is bad news for the stock market. This result is surprising as unsolicited ratings are said to be based on publicly available information only. Assuming rational investors, one would not expect a negative reaction. Furthermore, taking into account the well-documented positive effect of being assigned a rated (such as access to debt markets or increased financial flexibility), the negative stock market reaction seems even more astounding. The analysis of the two sub-samples suggests that Japanese companies are treated differently by the stock market compared to companies from other countries. For the subsample of Japanese firms we find a negative stock market reaction of -2.07% which is significant on the 5%-significance level for the event window (0, +15). For the companies from other countries we do not find any significant stock market reaction. We next test whether this finding is robust in a multivariate context. For each sub-event window we run OLS-regressions with the CARs as dependent and the following independent variables: the level of the initial unsolicited rating as a numeric value between 1 and 7 reflecting S&P's rating scale from AAA to CCC, a dummy variable that takes the value one if the firm had its headquarter in Japan (and zero otherwise), the natural log of the market value at the time of the rating an-

nouncement, a dummy that takes the value one a financial firm (and zero otherwise), and control variables for the year of the rating assignment from 1996 to 2004 (the year 1997 serves as the reference). Table 4 shows the results.

Table 4: Determinants of the CAR for four sub-event windows

This table shows the determinants of the CAR for a sample of 229 firms, which received an initial unsolicited rating from January 1996 to July 2005. Two-sided significance levels for the t-test are given as ***, **, * representing 1%-, 5%- and 10%-significance respectively. The year 1997 was taken as the reference year.

	CAR (-15;-1)		CAR (0;+15)		CAR (+16;+30)		CAR (-15,+30)	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Intercept	-0,1130	0,0793	-0,0217	0,0894	0,0202	0,0670	-0,1145	0,1369
Initial Rating	0,0094	0,0066	0,0028	0,0090	-0,0057	0,0064	0,0065	0,0134
Japan	-0,0163	0,0225	0,0295	0,0331	-0,0098	0,0186	0,0034	0,0456
LN(MV)	0,0092	0,0071	-0,0065	0,0074	0,0022	0,0066	0,0049	0,0117
Financial	0,0213	0,0212	0.0549*	0,0298	-0,0033	0,0156	0.0729*	0,0421
1996	0,2086	0,1728	-0,0333	0,0365	-0.1185***	0,0439	0,0568	0,1639
1998	0,0039	0,0163	0,0245	0,0234	-0,0043	0,0167	0,0240	0,0280
1999	-0.0320*	0,0179	-0,0257	0,0194	-0.0359*	0,0200	-0.0937**	0,0369
2000	0.0599***	0,0201	0,0016	0,0244	0.0529**	0,0216	0.1144***	0,0332
2001	0.0657**	0,0269	0,0003	0,0365	0,0100	0,0296	0,0760	0,0572
2002	-0.1615***	0,0217	0.1535***	0,0237	-0,0415	0,0287	-0,0495	0,0435
2003	-0.0506**	0,0223	0,0045	0,0240	-0,0040	0,0312	-0,0501	0,0405
2004	-0,0254	0,0247	-0,0379	0,0292	-0,0212	0,0215	-0.0845**	0,0412
Observations		229		229		229		229
Adj R^2		0,1196		0,0371		0,0661		0,1315

It can be seen from the results that the difference of the stock market reactions between Japanese and non-Japanese companies does not remain in a multivariate setting. The coefficient for Japan is not significant in any of the regressions. Therefore, one must be careful in not overestimating the results that emerged in the event study. At first sight, it appears that the assignment of the first initial unsolicited rating to Japanese companies strongly contradicts the expectations of the stock market, and that S&P treats Japanese firms differently from firms from other countries. However, further analysis revealed that this effect vanishes in a multivariate context. Therefore, so far this study does not deliver clear evidence whether Japanese firms are really discriminated by S&P, and whether the complaints often uttered by Japanese firms and officials about unsolicited ratings are justified.

3 The stock market reaction to changes of unsolicited ratings

3.1 Description of the data set and descriptive analysis of the sample

In this section we analyze the stock market reaction at the transition from an unsolicited to a solicited rating. We identified a sample of S&P rated firms which experienced at least one rating change in the period January 1996 to July 2005. The initial sample contained 238 companies that underwent a rating change from unsolicited to solicited. For 78 of these companies we found stock market data in Datastream. Of these 78 companies only 60 fulfilled our liquidity criterion (cf. section 2). After controlling for confounding events we obtained the final sample with 55 companies.

Some of our conclusions in this section are based on the comparison of a sub-sample of upgrades with a matching-sample that serves as the benchmark. This procedure is often employed in event studies about rating changes (e.g. GRIFFIN and SANVICENTE (1982), CZARNITZKI and KRAFT (2004)). The matching sample is constructed by selecting a matching company for each company in the sub-sample. The main matching criterion was the magnitude of the rating change. For instance, we matched firms in the sub-sample that underwent a change from AA to AAA with firms that underwent a change of their solicited rating of the same magnitude. We applied the same liquidity filter to the matching sample firms. When there was more than one matching firm left, we minimized the product of the number of zero returns in the event window and the absolute distance (measured in days) between the rating change of the upgraded firm and the respective matching firms. For 20 of the upgrades we precisely matched the magnitude of the rating change. However, we also had to allow five exceptions where we have different rating changes of one notch, since the upgrades in the sample were extraordinary strong; i.e. the upgrades of the matching sample are less strong than the upgrades of the sample with rating changes from unsolicited to solicited ratings.

The first part of the descriptive analysis of the sample is presented in Table 2. The largest bulk of the sample firms, totaling 74.55%, comes from Asia.[2] The predominant country of origin of the sample firms is Japan with a share of 60% of all firms. 60% of the sample firms are from the financial sector. Contrary to the sample, the matching sample consists mainly of industrial companies from the US. The rating agencies often claim that they use rating approaches which yield comparable ratings among sectors and countries. Thus, the regional and sectoral mismatch between the sample firms and the matching sample firms should not be an issue. Our sample is dominated by firms with market values of up to 10 billion USD, since mostly smaller firms receive an unsolicited rating. However, since we require liquid stock returns in our event period, we have only one really small firm in our sample with a market value of less than 100 million USD at the time of rating change.

Table 5: Descriptive analysis

This table shows the descriptive analysis for the 55 firms, which were assigned a solicited rating from January 1996 to July 2005 after having an unsolicited rating by S&P. The market value is shown in billion USD at the time of the rating change.

Panel I: Static view									
Market value	< .1	.1 to .5	.5 to 1	1 to 2.5	2.5 to 5	5 to 7.5	7.5 to 10	10 to 25	> 25
	1	7	4	13	12	6	6	5	1
Country	Japan	Italy	Korea	Germany	Greece	Singapore	Taiwan	Hong Kong	others
	60.00%	7.27%	5.45%	3.64%	3.64%	3.64%	3.64%	1.82%	10.91%
Year of rating change	1997	1998	1999	2000	2001	2002	2003	2004	2005
	3.64%	7.27%	9.09%	9.09%	10.91%	5.45%	1.82%	40.00%	12.73%

Panel II: Three-year average growth figures				
	ROE	Total Sales	Dividend Yield	Market Value
90% Quantile	49.29%	11.10%	27.65%	48.74%
75% Quantile	4.70%	5.54%	12.28%	25.93%
Median	-6.07%	3.16%	-1.14%	15.66%
25% Quantile	-137.37%	1.51%	-7.92%	5.93%
10% Quantile	-282.81%	-2.08%	-19.58%	-3.81%
Observations	55	55	55	55

Besides the event-study we run several regressions to further analyze the stock market reaction to the rating solicitation. Therefore, the second panel of table 2 provides accounting and market data which we included as control variables in the regressions. We utilized only overall and performance figures. This is justified by the fact that our sample contains financial

[2] Again we were not able to include firms from the US because for US companies S&P discloses whether a rating is a pi-rating or not only for financial service companies. However, stock market data was not available for

institutions and industrial companies, for which other indicators of creditworthiness such as leverage are not appropriate. The data was extracted from Datastream. As S&P assigns through-the-cycle ratings[3], which are based on multi-year ratios of creditworthiness, we calculated three-year average growth ratios of return of equity (ROE), total sales, dividend yield and market value.[4] Total sales and market value are denominated in USD. For three (two) companies with missing values for the ROE and total sales (dividend yield and market value), we used the median. To eliminate outliers, we winsorized the accounting data, i.e., the ROE and total sales at the 5th and 95th percentiles of their cross-sectional distributions. We assume that annual accounting information is known by market participants at the end of the first quarter. On average, we observe a decrease of the ROE and the dividend yield for our 55 firms. The total sales, on the other hand, increase on average. Almost all companies in our sample exhibit increasing average market values. Additionally, of these 55 firms, 20 hold an additional long-term rating by Moody's at the time of the rating change to a solicited rating.

Table 3 shows the rating transition of the sample firms. The sample is divided into 25 upgraded companies, 27 companies whose rating did not change and 3 downgraded companies. It is obvious that the number of upgrades dominates the number of downgrades. This stands in contrast to the results of BLUME et al. (1998) who found that, after controlling for key determinants of creditworthiness, the number of downgraded firms exceeds the number of upgrades. More recently, POSCH (2005) shows that the drift rate, defined as the number of upgrades minus the number of downgrades divided by the total rating changes, of ratings assigned by Moody's was on average -5.6% for the years 1980 to 2002.

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any of the financial service companies with a pi-rating in our initial sample.

[3] Through-the-cycle ratings disregard short-term fluctuations in default risk. By filtering out the temporary component of default risk, they measure only the permanent, long-term and structural component.

[4] Among others, BLUME et al. (1998) also use three-year averages.

Furthermore, we find that mainly Japanese firm account for the downgrades and unchanged ratings. Two of three (66.7%) downgrades and 22 of 27 (81.5%) unchanged ratings stem from Japanese companies. Hence, only 8 of 25 (32%) upgrades were found for Japanese firms. This adds to the findings of SHIN and MOORE (2003) and NICKELL et al. (2000) for a different assessment of Japanese companies. SHIN and MOORE (2003) find that ratings assigned by Moody's and S&P to Japanese firms are systematically lower than those assigned by the Japanese rating agencies R&I and JCR. In addition, NICKELL et al. (2000) observe that higher rated Japanese firms are more likely to be downgraded by credit rating agencies with headquarters in the US, and Japanese firms with low ratings are less likely than US firms to be upgraded by those agencies.[5] Table 6 contains the transition matrix from unsolicited to solicited ratings. It is interesting to note that the three downgrades in the sample were downgrades from BBB to BBB-.

Table 6: Overview of rating changes from unsolicited to solicited ratings

This table shows the rating changes for a sample of 55 firms, which were assigned a solicited rating from January 1996 to July 2005 after holding an unsolicited rating by S&P.

		Solicited rating														
		AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	Total
Unsolicited rating	AAA															0
	AA+															0
	AA	3		1												4
	AA-				4											4
	A+															0
	A					2	3									5
	A-							1								1
	BBB+								6							6
	BBB				1		2	6	3	6	3					21
	BBB-										1					1
	BB+											2				2
	BB							1		2	1	2	1			7
	BB-												1	1		2
	B+													1	1	2
	Total	3	0	1	5	2	5	8	9	8	5	4	2	2	1	55

[5] However, AMMER and PACKER (2000) find no evidence for different default rates between US and foreign firms for the period 1983 to 1998 after controlling for time and rating effects.

3.2 Results of the event study

We apply the same event study methodology as before. Table 7 contains the distribution of the price reactions for the upgrades, the unchanged ratings and the matching sample. Given samples sizes smaller than 30, we cannot use parametric test statistics assuming a normal distribution.

Table 7: Distribution of the price reaction

This table shows the distribution of the price reaction for a sample of 52 firms, which were assigned a solicited rating from January 1996 to July 2005 after holding an unsolicited rating by S&P. The sample is divided into 27 unchanged ratings and 25 upgrades. For the upgrades, the distribution of a matching sample is given, too.

	(-15, -1)	(0, +15)	(+16, +30)	(-15, +30)
Panel I: Sample, unchanged				
Maximum	0.1157	0.0812	0.0740	0.0978
Median	0.0023	-0.0082	-0.0022	-0.0057
Minimum	-0.0803	-0.1658	-0.1101	-0.2066
Skewness	0.3638	-0.7276	-0.3575	-0.7800
Kurtosis	2.7969	3.4688	2.6478	4.0500
Jarque-Bera p value	0.7254	0.2685	0.6996	0.1368
Panel II: Sample, upgrades				
Maximum	0.1471	0.1595	0.1247	0.2289
Median	0.0396	0.0198	-0.0194	0.0197
Minimum	-0.2833	-0.3096	-0.1222	-0.4865
Skewness	-1.8351	-1.4039	0.3187	-1.4186
Kurtosis	7.7244	5.7582	2.3248	5.3290
Jarque-Bera p value	0.0000	0.0003	0.6383	0.0009
Panel III: Matching sample, upgrades				
Maximum	0.1163	0.2081	0.1625	0.2206
Median	0.0129	0.0117	0.0045	0.0220
Minimum	-0.0860	-0.1359	-0.1157	-0.1335
Skewness	0.1741	0.5717	0.2117	0.1639
Kurtosis	3.0962	4.1865	2.7428	2.2001
Jarque-Bera p value	0.9343	0.2432	0.8800	0.6776

We calculate the median-CARs for our four sub-event windows by adding up daily abnormal stock returns over the respective event window for each company individually and calculating the median values for the three samples. To assess whether the abnormal returns in the event windows are significantly different from zero we test the hypothesis that the median-CAR equals zero by applying the nonparametric Wilcoxon signed ranks test which is well-suited for small sample sizes. The results are summarized in table 8.

Table 8: Price reactions to rating changes from unsolicited to solicited ratings

This table shows price reactions for the unchanged and upgraded firms, which were assigned a solicited rating from January 1996 to July 2005 after holding an unsolicited rating by S&P, and the price reactions of the matching sample. Two-sided significance levels for the Wilcoxon signed ranks test are given as ***, **, and * representing 1%, 5%, and 10% significance respectively.

	Unchanged (n = 27)		**Upgrades (n = 25)**		**Matching Sample (n = 25)**	
Event window	Median(CAR)	Wilcoxon p-value	Median(CAR)	Wilcoxon p-value	Median(CAR)	Wilcoxon p-value
(-15, -1)	0.2313%	0.5114	3.9561% **	0.0196	0.1523%	0.6854
(0, +15)	-0.8174%	0.1529	1.9832%	0.2972	1.1691%	0.6854
(+16, +30)	-0.2230%	0.7972	-1.9445%	0.1793	0.4526%	0.6285
(-15, +30)	-0.5735%	0.2880	1.9683%	0.2075	2.8451%	0.2176

In the sample of firms whose rating did not change at the transition from unsolicited to solicited we find positive abnormal returns before and negative abnormal returns after the event. However, none of the abnormal returns is significantly different from zero. In the sample of upgrades we find significantly positive abnormal returns on the 1%-level in the sub-event window before the rating announcement (-15,-1), and positive as well as negative abnormal returns in the two event windows after the rating announcement. Both median-CARs are not significantly different from zero. In the matching sample we find only positive abnormal returns. None of the returns is significantly different from zero.

We next analyze whether there are differences in the stock market reactions between the upgrades and the unchanged ratings in the sample as well as between the upgrades in the sample and the matching sample. We use the Wilcoxon signed ranks test for two samples to assess the statistical significance of these differences. Table 9 summarizes the results.

Table 9: Comparison of price reactions

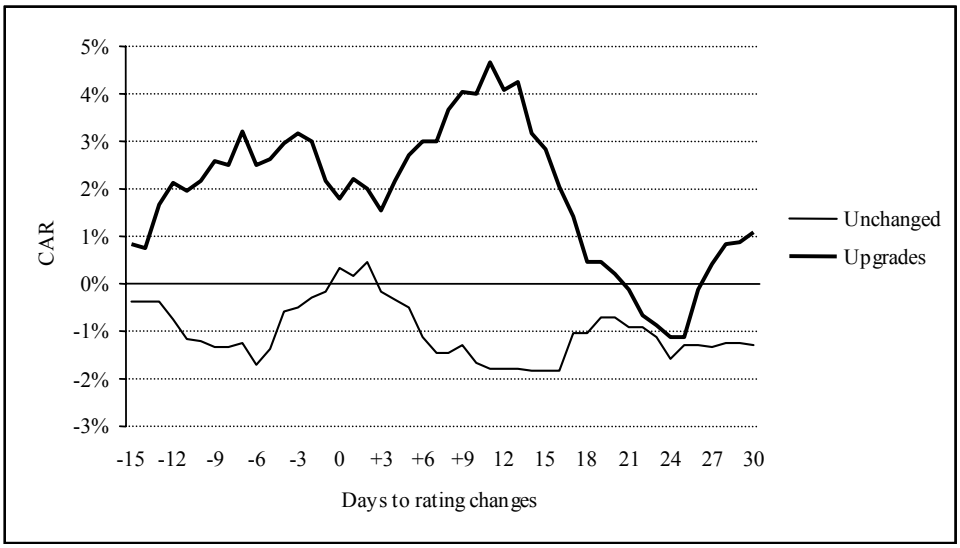
In the second and third columns, this table shows results of a comparison of price reactions of 25 upgrades with 27 unchanged ratings of these issuers, which were assigned a solicited rating from January 1996 to July 2005 after holding an unsolicited rating by S&P. In column four and five, these 25 upgrades are compared with a matching sample (n = 25) with solicited rating changes only. Two-sided significance levels for the Wilcoxon signed ranks test are given as ***, **, and * representing 1%, 5%, and 10% significance respectively.

	Δ (Median($CAR_{Upgrades}$) – Median($CAR_{Unchanged}$))		**Δ (Median($CAR_{Matching\ sample}$) – Median(CAR_{Sample}))**	
Event window	Δ(Median(CAR))	Wilcoxon p-value	Δ(Median(CAR))	Wilcoxon p-value
(-15, -1)	3.7248%*	0.0946	-2.6672%	0.1225
(0, +15)	2.8006%*	0.0701	-0.8141%	0.5894
(+16, +30)	-1.7216%	0.3099	2.3971%	0.1932
(-15, +30)	2.5418%	0.1054	0.2335%	0.9078

We find significantly different stock market reactions on the 1%-level between the upgrades and the unchanged ratings in the sample for two sub-event windows. In the sub-event window of the 15 days before the event we find that the abnormal returns for the upgrades are 3.72% higher and that this difference is significantly different from zero. In the first sub-event window after the rating announcement we find that the abnormal returns for the upgrades are 2.8% higher and statistically significant. Particularly the significant difference in the event window right after the rating announcement is interesting as it indicates that companies with an upgrade are rewarded by the stock market relative to the companies whose rating did not change.

Figure 1 plots the different courses of the CAR for the upgrades and the unchanged ratings. The difference of the CAR between both samples is with nearly 6.5% most remarkable between 9 and 12 days after the rating event.

Figure 2: Cumulative abnormal returns (CAR) for 25 upgrades and 27 unchanged ratings of the sample with rating changes from unsolicited to solicited ratings



These results are even more notable when comparing the upgrades in the sample with the matching sample. This comparison does not reveal any significant difference in the price reactions in any of the event-windows. We ran several OLS-regressions to test the robustness of

this result. In these OLS-regressions the dependent variables were the abnormal returns in the sub-event windows, the explanatory variables were the rating changes, a dummy for pi versus non-pi plus some additional control variables for company size, region, year of the rating change as well as a dummy for rating changes from investment grade to non-investment grade and vice versa. The pi-dummy was not significant in any of the regressions. This underlines our result from the event study, namely that the stock market does not react to upgrades from unsolicited to solicited ratings. Hence, it seems that the stock market treats upgraded companies the same way – no matter if the companies had an unsolicited or a solicited rating before. Assuming that a rating upgrade is good news for the stock market, investors obviously anticipate a rating upgrade and the good news are already reflected in share prices. This result at least challenges the widespread opinion, which is often uttered by the agencies themselves, that solicited ratings convey new information to the market. One might interpret this result rather as an enforcing argument for the downward bias theory. As stock market investors are rational they know of the downward bias and therefore do not reward the companies with a higher valuation for the publication of an upgraded solicited rating. On the flip side, this would imply that companies which received a solicited rating that was not different from the unsolicited one, should be punished by the capital market in form of significant negative abnormal returns. Table 8 shows indeed negative abnormal returns for those companies in both sub-event windows after the rating announcement and for the entire event period. However, none of these returns is significantly different from zero. Nonetheless, the comparison with the upgrades in the sample revealed that the stock market reaction is significantly worse for the unchanged ratings. This at least indicates that the stock market punishes the companies with an unchanged rating relative to the upgraded ones. Again, we might raise the question, why the unchanged companies went to order a solicited rating if they are not rewarded by the stock market? BANNIER and TYRELL (2005) argue that only those firms will request a solicited rating that think they are able to disclose more optimistic information about their qual-

ity than has been expected by the market. The authors classify such firms as not fairly treated by the market. Our findings do not support this argument. First, the upgraded companies are not rewarded by the stock market in terms of positive abnormal returns. Second, there are also companies with unchanged ratings that requested a solicited rating. Third, and probably most extraordinary, some of the companies requested a solicited rating and were downgraded. This is a puzzling result which needs further investigation.

3.3 Determinants of changes to a solicited rating

Given these results, we now try to discriminate between issuers, who got an unchanged or even downgraded rating and those who received a rating upgrade. We estimate a binary probit model which is formulated as follows:

$$\Delta R_i = \alpha + \sum_{k=1}^{K} \lambda_k X_{k,i} + \varepsilon_i \qquad (1)$$

ΔR_i denotes the change from an unsolicited to a solicited rating of issuer *i*. To fit the qualitative nature of credit ratings, we employ a binary probit model. We lump the three downgrades and the 27 unchanged ratings in one class of rating change ($\Delta R_i = 0$), and all upgrades in a second class of rating changes ($\Delta R_i = 1$). We split our regression analysis in two different models, with K = 4 for the first model and K = 9. The difference between both models is that the second model includes additional accounting variables. X_1 equals 1, if the company *i* has its headquarter in Japan, and zero if not; X_2 equals 1, if *i* is a financial institution, and zero if not; X_3 equals the natural log of the market value in million USD at the time of the rating change; X_4 equals the initial rating of *i*; X_5 equals 1, if the company had a long-term rating by Moody's at the time of the rating change; X_6 equals the average change in the ROE over the last three years before the rating change; X_7 equals the average change in total sales over the last three years before the rating change; X_8 equals the average change in the dividend yield

over the last three years before the rating change; X_9 equals the average change in the market value over the last three years before the rating change.

Table 10: Regression results of determinants of changes to a solicited rating

This table shows results of binary probit models with the change from an unsolicited to a solicited rating as dependent variable. We apply robust quasi-maximum likelihood standard errors. Two-sided significance levels are given as ***, **, and * representing 1%, 5%, and 10% respectively.

	Regression model I			Regression model II		
	Coefficient	Std. Error	Marg. effect	Coefficient	Std. Error	Marg. effect
Intercept	1.9738	2.2057		2.9326*	1.7385	
Japan	-1.8551***	0.4801	-0.3722	-2.2740***	0.5973	-0.3775
Financial institution	-0.7383	0.5403	-0.1858	-0.9288*	0.5531	-0.2009
In(Market value$_t$)	-0.1612	0.2028	-0.0443	-0.2284	0.1718	-0.0547
Initial rating	0.0945	0.0841	0.0260	0.0999	0.0770	0.0239
Rating by Moody's	-0.0042	0.5473	-0.0012	-0.0424	0.5603	-0.0101
Average Δ in ROE $_{t,t-3}$				1.4544***	0.5537	0.3486
Average Δ in sales $_{t,t-3}$				-1.4245	3.1624	-0.3414
Average Δ in dividend yield $_{t,t-3}$				1.0181	0.8867	0.2440
Average Δ in market value $_{t,t-3}$				-0.9592	1.1384	-0.2299
Observations			55			55
McFadden R^2			0.2868			0.3821

We find that the region of the companies headquarter matters. Japanese companies are more likely to receive a downgrade or an unchanged rating only. In terms of probability, the marginal effect of -0.3722 expresses that an upgrade at the transition from unsolicited to solicited is 37.22% less likely for companies from Japan than for companies from other countries. Hence, the tendency of the descriptive analysis seems to be robust in the multivariate analysis, after controlling for changes in operative performance, market valuation, size, and business sector. We find slight evidence in regression model II that financial institutions are also less likely to receive an upgrade of their rating. For the accounting variables, we only get robust results for the change in ROE. Firms with increasing ROE are more likely to receive a rating upgrade. This seems to be intuitive since profitability is an important determinant of credit ratings.

A major result here is that it seems hardly explainable why firms pay for a downgrade or unchanged rating if they already have that for free in form of an unsolicited rating. The regression analysis has shown that mainly Japanese firms account for this sort of odd rating request.

This finding might add to the accuses of the JCIF (1999) that US rating agencies damage the international standing of Japanese firms by issuing ratings which are generally lower than the (solicited) ones of Japanese rating agencies. Furthermore, it strengthens to some extent our findings from the previous chapter. Obviously, Japanese companies are treated differently from other companies by S&P. Not only does the stock market react negatively to the assignment of the first initial unsolicited rating to Japanese companies but they are also less likely to receive a better rating at the transition from unsolicited to solicited.

4 Conclusions

This study analyzes the stock market reaction to the announcement of a first initial unsolicited rating and to the changes from the former unsolicited to a solicited rating. We identify a sample of 229 firms which were assigned an initial unsolicited rating by S&P in the period January 1996 to July 2005. Using event study methodology we asses the stock market reactions to these rating announcements. We find a significant stock market reaction of -1.42% in the event window (0, +15). This is puzzling as one should not expect any stock market reaction to an unsolicited rating given the nature of unsolicited ratings. Unsolicited ratings are based on publicly available information only. Therefore the capital market should correctly anticipate the quality of the rating. Then we subdivide the sample in firms with a headquarter in Japan and firms from other countries. We find a significant abnormal return for Japanese companies of -2.07% for the first 15 days after the rating announcement. At first sight, it seems that Japanese firms are treated particularly badly by S&P. However, the effect vanishes in a multivariate context. For firms from other countries we do not find any significant stock market reaction.

We then analyze a sample of 55 firms that received a solicited rating after formerly having been unsolicitedly rated by S&P in the sample period. We again asses the stock market reactions to these rating changes for a sub-sample of upgraded firms and a sub-sample of firms

whose rating did not change. We only find significantly positive abnormal returns for the upgraded firms in a 15 day event window before the rating announcement. For the unchanged firms we do not find any significant stock market reaction. A comparison between both samples revealed, however, that the stock market reaction to the upgraded firms is significantly better than to the unchanged firms in the event window before the rating announcement and in the event window encompassing 15 days after the event took place. Thus, it seems that the stock market views the announcement of an unchanged rating as bad news. One explanation why firms order a solicited rating after having had an unsolicited rating before could be that the firms use the solicitation of their rating as a signaling device. Following this line of argumentation, upgraded firms would order a solicited rating to signal their better creditworthiness to the stock market. However, why firms with unchanged ratings, and, even more obscure, downgraded companies pay the rating agency to obtain a solicited rating is hardly explainable. Besides, we find that this odd sort of rating request is more likely for Japanese companies. Given our results, it seems not desirable for shareholders that the management of the company orders a solicited rating, especially if one takes into account the high direct and indirect costs associated with the rating process. It is puzzling to learn that those firms, leave alone the downgraded firms which have not been analyzed any further owing to their small number, still opted to order a paid rating. All in all, the results of our analyses raise doubts regarding the assertion that solicited ratings convey more information to the market than unsolicited ones. It rather seems that the stock market already incorporates this information and, thus, does not react to a change from an unsolicited to a solicited rating. The comparison of the upgrades in the sample with the matching sample emphasizes this argument. We did not find any significantly different stock market reaction for both samples.

Also, one might interpret these results in a different direction. The fact that the stock market does not react to the upgrades in the sample could be seen as a hint for the existence of a downward bias, which would be in line with recent empirical and theoretical work. Assuming

that unsolicited ratings tend to be lower on average, the stock market expects these firms to feature a higher creditworthiness than reflected in the unsolicited rating. Once the rating becomes solicited, the downward bias disappears (at least for the upgraded firms) but the stock market does not react to the rating change because it is already incorporated in the share price. This argument would be in line with our findings from the first event study where we detected a negative stock market reaction already at the time of the assignment of the initial unsolicited rating.

A few words of caution are, however, warranted with regard to the analysis of the rating solicitation. Even though we captured the entire publicly accessible S&P-universe of companies with unsolicited ratings, the samples are fairly small in size. With such small samples it is generally difficult to conduct robust statistical tests. Furthermore, the nature of the results we obtained with our study is not entirely clear, thus, some crucial questions posed in this paper were not clearly answered. Is it really justified that firms despise of being unsolicitedly rated? As the stock market reacts negatively to the initial unsolicited rating, we might answer this question with yes. Is this effect more pronounced for Japanese companies? At first sight, this seems so. However, deeper analysis raised doubts about this. Are unsolicited rating really downward biased? As the capital market reacts negatively to the announcement of the initial unsolicited rating, so it seems. Do solicited ratings really convey more information than unsolicited ones? So they should. However, as the stock market does not show any significant reaction at the transition from unsolicited to solicited there remains uncertainty whether they really do.

Even though this study is a first step in getting more insight about rating agencies' practice to rate companies on an unsolicited basis it raises a number of new questions. More research in this area is definitely needed to broaden our understanding of the activities that rating agencies unfold.

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