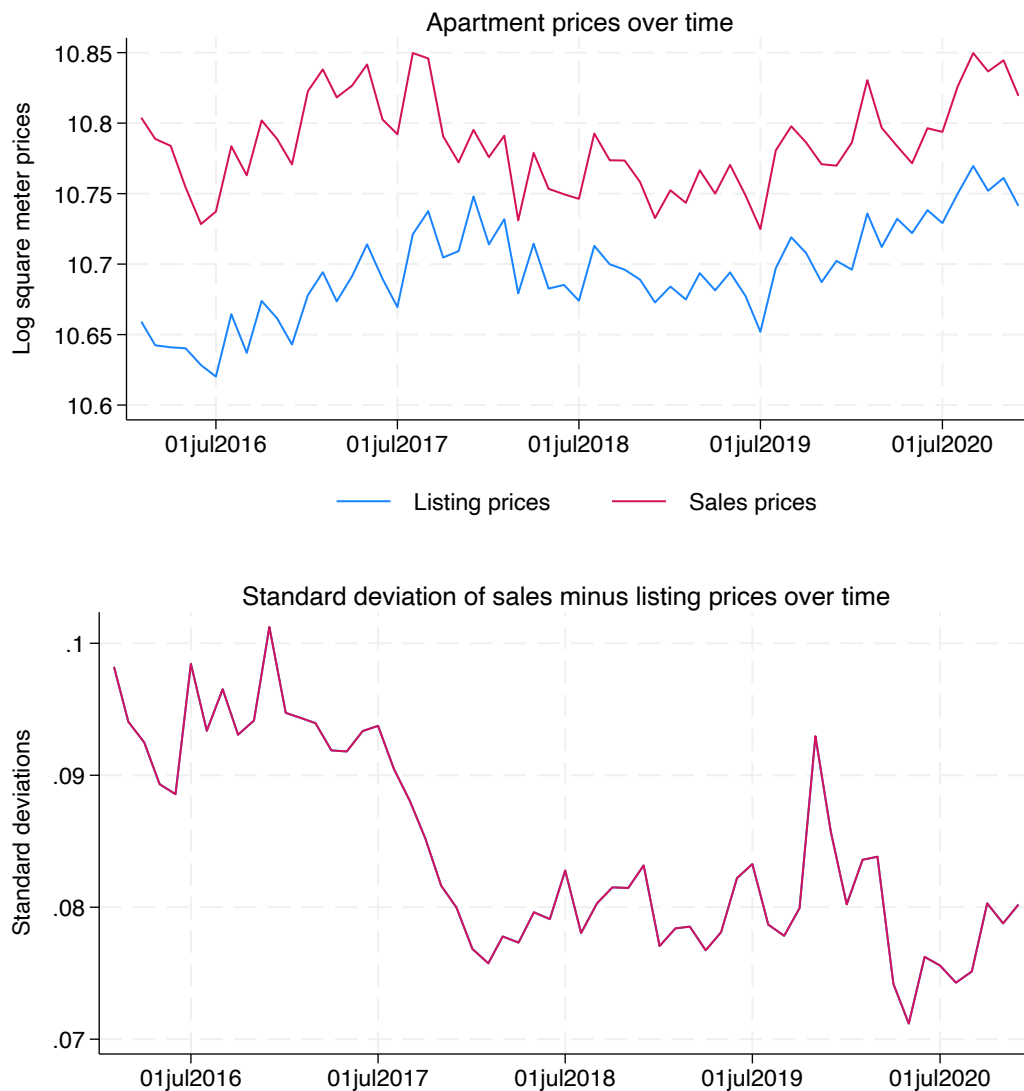# Online Appendix for "Can Ratings Mitigate Consumer Inattention? Evidence From the Swedish Housing Market" by Petter Berg

September 4, 2025

A   Further figures and tables

Figure A.1: Sales prices, listing prices, and premia over time

Notes: The first figure shows raw monthly average log square meter prices over time, from 2016 through 2020. The second figure shows the within-month standard deviation of the premium (i.e. the difference between sales and listing prices) over time.

Figure A.2: Mean, 25th and 75th percentile of co-op debt by deciles of co-op fees
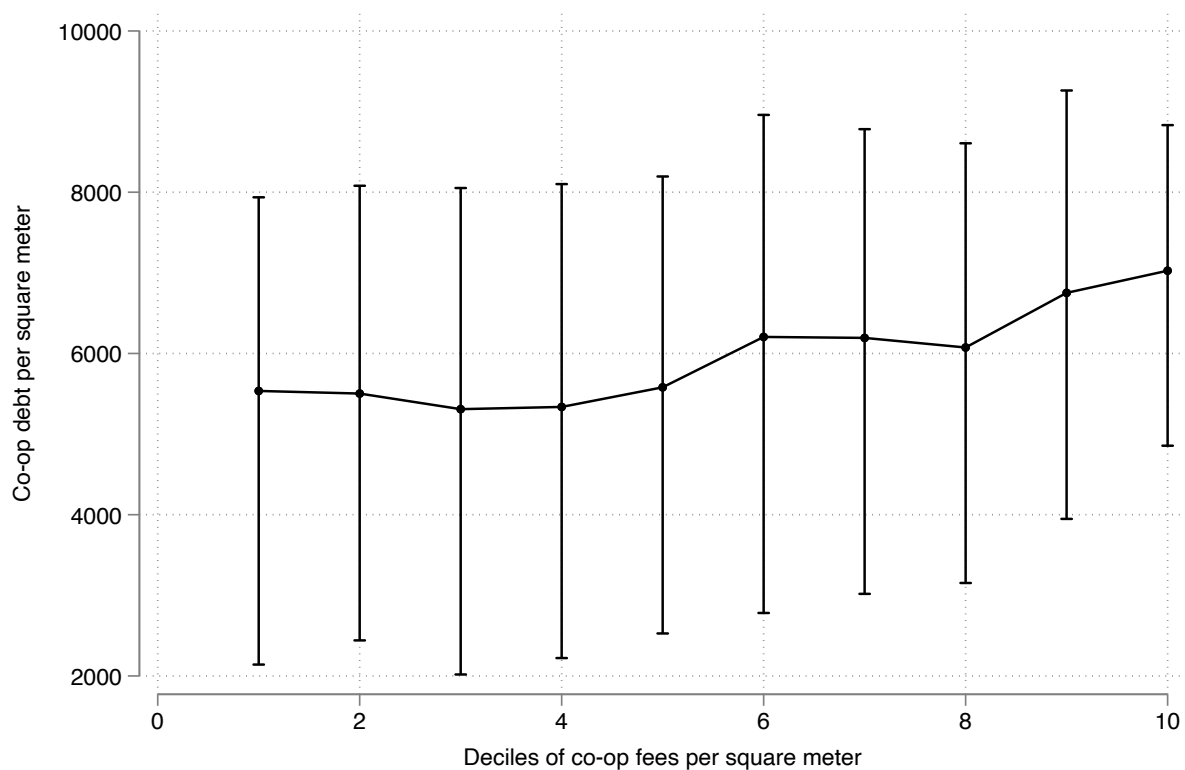
Notes: This figure shows the relationship between co-op debt and deciles of co-op membership fees, both measured per square meter. The black dots indicate the mean co-op debt within each decile of co-op fees, while error bars show 25th and 75th percentiles of the distribution, respectively.

Table A.1: Changes in fees for co-ops of different ratings between $t-1$ and t

	% change in fees
B in $t-1$	-0.55
	(0.86)
A in $t-1$	-1.30
	(0.86)
A+ in $t-1$	-1.83**
	(0.87)
A++ in $t-1$	-4.75***
	(1.16)
Average % change	0.99
Std. dev. % change	6.83

Notes: This table reports estimates from a regression of the percent change in co-op fees between two consecutive years on the rating obtained by the co-op in the previous year. The omitted, lagged rating is C. The regression controls for year fixed effects and the lagged level of co-op fees.

Table A.2: Average residualized sales prices by co-op rating

	Average sales prices	
	Raw	Residualized
Co-op rating		
C	50,588	45,834
B	50,400	49,076
A	52,363	52,209
A+	51,894	53,469
A++	55,437	56,267
Total	51,949	51,949

Notes: This table shows average sales prices for co-ops with different ratings. In the first column, raw means are shown. In the second column, sales prices are residualized on deciles of construction year, city dummies (Stockholm, Gothenburg and Malmö), and year-of-sale dummies.

Table A.3: Discontinuities between each consecutive step of the running variable

	Co-op debt	Co-op fees
Average size of discontinuity	-319.03	-13.04
Share with $p < 0.05$	0.36	0.31
Sample mean	5,949.19	642.07
N	39	39

Notes: This table shows summary statistics from 39 separate regressions for each of the three outcomes denoted in the columns. Each regression tests for mean differences in the outcome between two consecutive bins of the running variable (e.g. 1.6 vs 1.5, 1.7 vs 1.6, and so on for each bin between 1 to 5 in steps of 0.1). The first row reports the average mean difference across these regressions. The second shows the share of differences statistically significant at the 5% level. The third row shows the sample mean of the outcome for comparison.

Table A.4: Balance of baseline and fixed covariates without controls

| Outcomes	A vs. B			A+ vs. A		
	Estimate	*Mean*	*N*	*Estimate*	*Mean*	*N*
ln(Avg. baseline co-op prices)	0.032	10.64	90,957	0.014	10.65	95,910
	(0.020)			(0.031)		
Debt (2014)	-581.193**	6,132.20	39,110	96.820	4,761.81	43,200
	(294.672)			(184.043)		
Fees (2014)	-27.129***	658.01	39,110	22.212***	619.81	43,200
	(10.083)			(8.336)		
Other revenues (2014)	3.376	59.76	39,110	-7.304	59.03	43,200
	(8.330)			(6.779)		
Operating expenses (2014)	26.218	548.37	39,110	-8.396	537.89	43,200
	(16.701)			(11.315)		
Interest payments (2014)	-20.031**	190.23	39,110	3.492	146.45	43,200
	(9.649)			(5.875)		
Cash flows (2014)	-35.660**	119.90	39,110	5.936	105.43	43,200
	(15.687)			(11.760)		
Floor	0.149***	2.54	82,966	-0.057	2.58	87,475
	(0.054)			(0.067)		
Dist. from central station (km)	-0.217	7.43	90,980	0.546	7.49	95,927
	(0.332)			(0.488)		
Year of sale FE	No			No		
Locality FE	No			No		
Construction year decile FE	No			No		
Controls	No			No		

*Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The regressions are generated using a panel of co-op ratings and a number of fixed or baseline co-op characteristics. The main specification (equation 1) with full bandwidth, but without any of the additional controls, is used in all regressions. ln(Avg. baseline co-op prices) are the co-op level average log sales prices during 2015 prior to the launch of Allabrf. For the few co-ops (less than 10%) that had no sales during this period, I use average prices in the latest year prior to 2015 where sales occurred, or the neighborhood average for buildings of similar age, in that order. Co-op debt, fees, other revenues, operating expenses, interest payments and cash flows in 2014 measure the outcomes in SEK per square meter based on the annual report of 2014, e.g. before the rating system launched. Floor measure the number of floors of the apartment building. Dist. from centre measures the distance in kilometers of the sold apartment from the central station of the city it is located in.*

Table A.5: Balance of baseline and fixed covariates, bandwidth = 0.5

| Outcomes	A vs. B			A+ vs. A		
	Estimate	*Mean*	*N*	*Estimate*	*Mean*	*N*
ln(Avg. baseline co-op prices)	0.008	10.64	61,321	0.016	10.64	52,172
	(0.011)			(0.011)		
Debt (2014)	21.636	6,700.95	26,419	-202.282*	3,780.28	25,209
	(122.542)			(115.241)		
Fees (2014)	0.200	673.85	26,419	-0.455	600.12	25,209
	(5.522)			(5.073)		
Other revenues (2014)	-11.362	60.39	26,419	-4.450	56.98	25,209
	(8.206)			(7.605)		
Operating expenses (2014)	20.041	548.73	26,419	-28.512**	536.89	25,209
	(15.722)			(12.559)		
Interest payments (2014)	2.649	209.10	26,419	-7.609*	114.75	25,209
	(5.269)			(4.128)		
Cash flows (2014)	-16.778	127.67	26,419	25.205**	95.08	25,209
	(14.053)			(11.289)		
Floor	0.055	2.53	56,041	-0.005	2.56	47,685
	(0.064)			(0.070)		
Dist. from central station (km)	-0.037	7.40	61,336	0.072	7.50	52,176
	(0.096)			(0.106)		
Year of sale FE	Yes			Yes		
Locality FE	Yes			Yes		
Construction year decile FE	Yes			Yes		
Controls	Yes			Yes		

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The regressions are generated using a panel of co-op ratings and a number of fixed or baseline co-op characteristics. The main specification (equation 1) with a bandwidth of 0.5, instead of 1, is used in all regressions. *ln(Avg. baseline co-op prices)* are the co-op level average log sales prices during 2015 prior to the launch of *Allabrf*. For the few co-ops (less than 10%) that had no sales during this period, I use average prices in the latest year prior to 2015 where sales occurred, or the neighborhood average for buildings of similar age, in that order. *Co-op debt, fees, other revenues, operating expenses, interest payments and cash flows in 2014* measure the outcomes in SEK per square meter based on the annual report of 2014, e.g. before the rating system launched. *Floor* measure the number of floors of the apartment building. *Dist. from centre* measures the distance in kilometers of the sold apartment from the central station of the city it is located in.

Figure A.3: Pooled distribution of co-op ratings
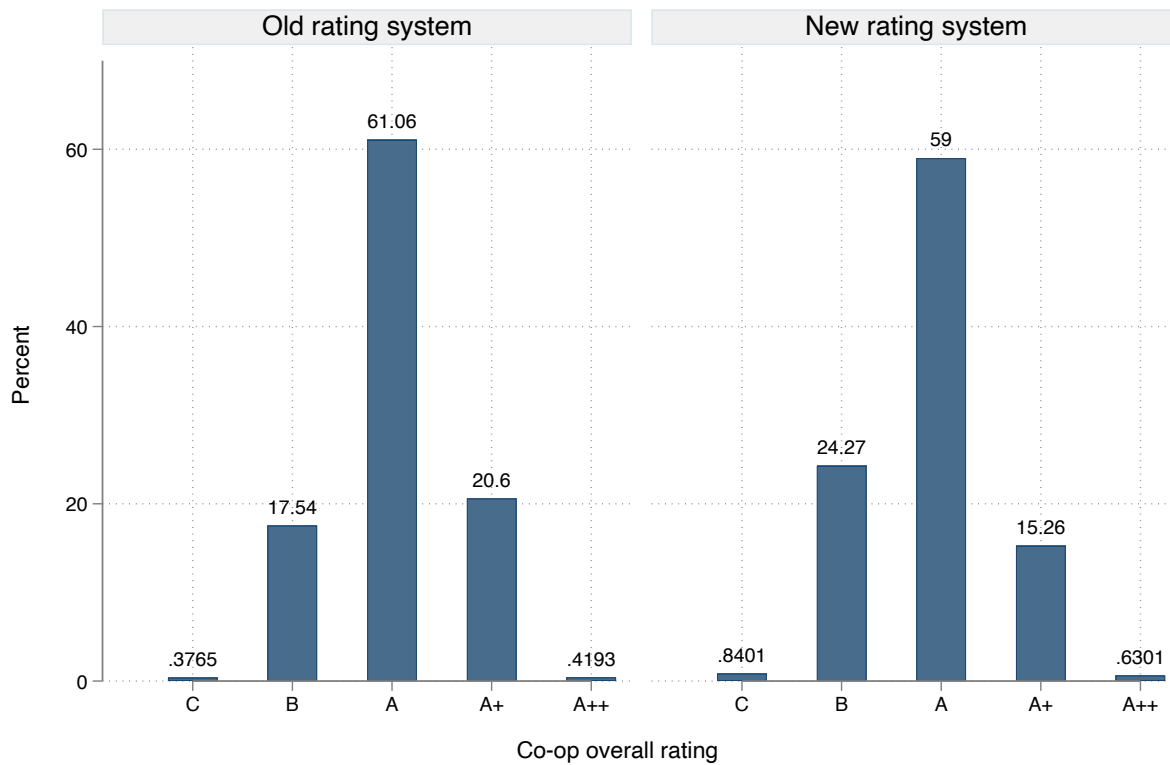
Notes: The figure shows the percentage of co-ops obtaining a given rating. The left panel shows the pooled distribution of co-op ratings from 2016 until February 2019, prior to the update of the rating system. The right panel shows the same distribution pooled over February 2019 until the end of 2020. The system change included adjusted cutoffs for the underlying annual report variables (debt, cash flow) as well as revamping of how interest rate sensitivity was measured. Also, the new rating caps co-ops that does not own their own plot of land to a maximum rating of *A*.

Figure A.4: Histogram of the difference between log sales and log listing price
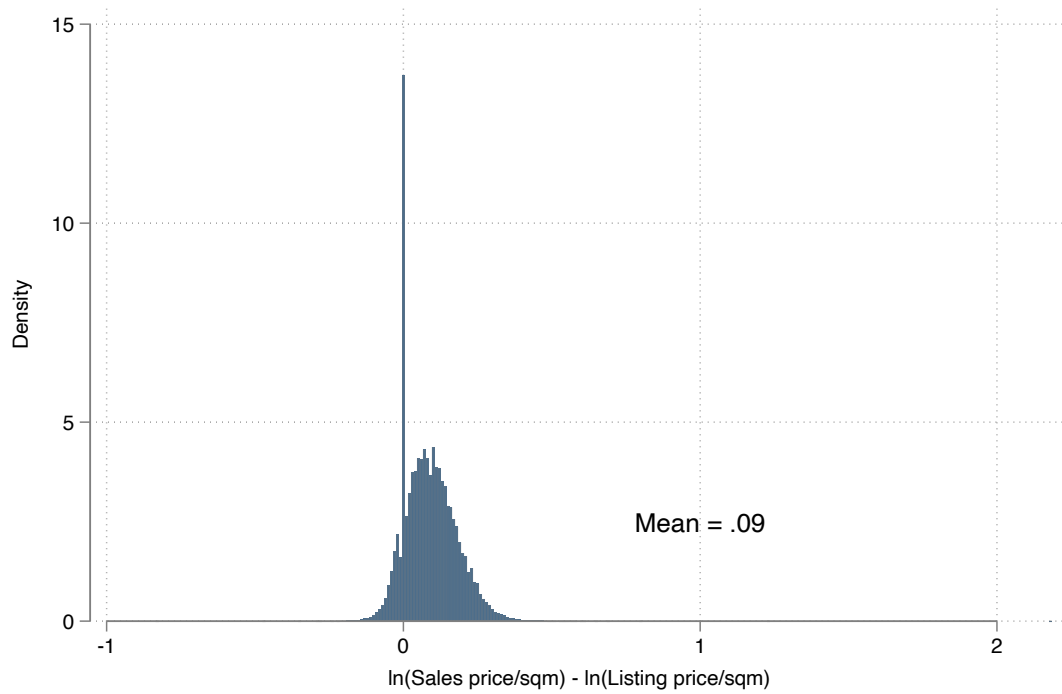
Notes: The figure shows the distribution of the difference in log sales and log listing apartment prices, interpreted as the percentage markup over the listing price of a given apartment sale. The data is pooled over the years 2016 to 2020. There is a large spike at zero, in which case an apartment was sold for its listing price. The typical such case is when there is only one bidder in the auction, or when the seller has explicitly specified that bids at the listing price will be accepted.

Figure A.5: Histogram of unique number of bidders, LF sample
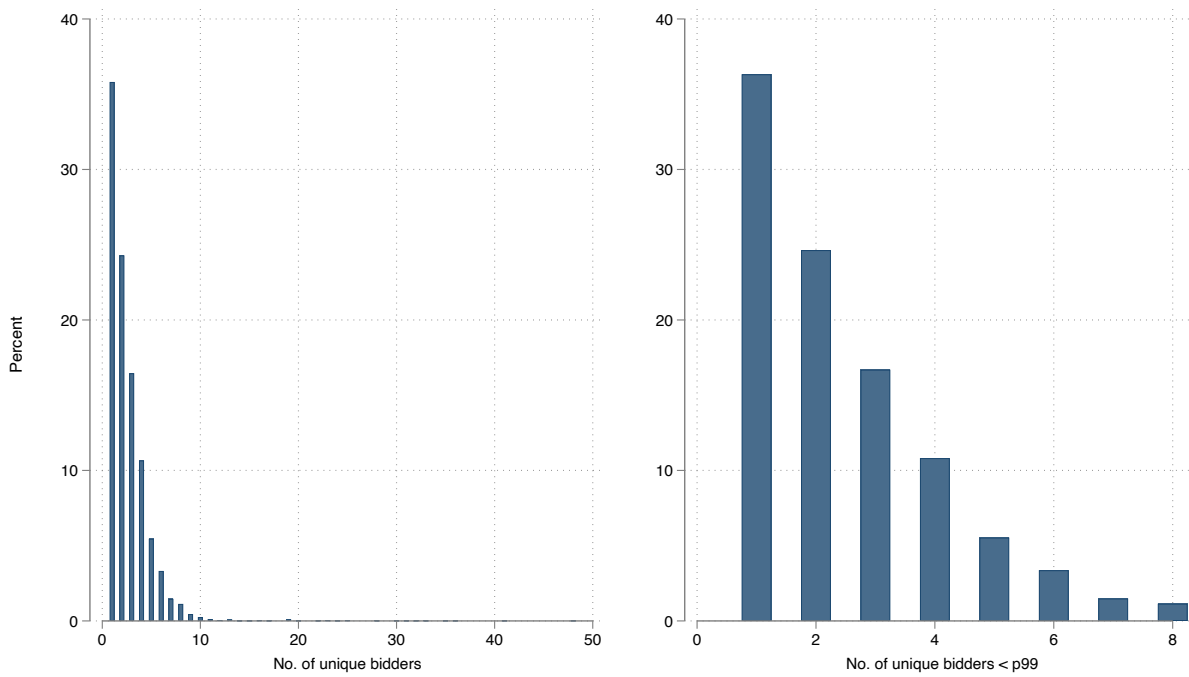
Notes: This figure shows histograms of the unique number of bidders in apartment auctions between 2016 and 2020. The sample is obtained from the real estate agency *Länsförsäkringar Fastighetsförmedling* and contains 5853 sales of their sales over the sample period. The left panel plots the entire distribution, while the right one excludes the sales at or exceeding the 99th percentile of unique bidders in the data (> 9 bidders).

Table A.6: Pooled effects of ratings on log apartment prices with multiple choices of bandwidth

		Sales price			Listing price		
Bandwidth:		*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B		0.023***	0.025***	0.018**	0.022**	0.024***	0.016**
		(0.009)	(0.008)	(0.007)	(0.008)	(0.008)	(0.007)
A+ vs. A		-0.002	0.003	-0.006	-0.003	0.002	-0.004
		(0.009)	(0.008)	(0.007)	(0.009)	(0.008)	(0.007)
Observations (B to A)		61336	74591	84890	61336	74591	84890
Mean (B to A)		10.79	10.80	10.79	10.71	10.71	10.71
Observations (A to A+)		52176	69718	90336	52176	69718	90336
Mean (A to A+)		10.78	10.78	10.79	10.69	10.70	10.71
Year of sale FE		Yes	Yes	Yes	Yes	Yes	Yes
Locality FE		Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE		Yes	Yes	Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff.

Table A.7: Effects of ratings on log apartment sales prices one year before/after the *Hemnet* collaboration, with multiple choices of bandwidth

	Before Hemnet			After Hemnet		
Bandwidth:	*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B	-0.006	0.006	0.009	0.037***	0.037***	0.026**
	(0.013)	(0.012)	(0.011)	(0.014)	(0.012)	(0.010)
A+ vs. A	0.014	0.016	0.003	-0.010	-0.004	-0.010
	(0.015)	(0.013)	(0.012)	(0.012)	(0.011)	(0.010)
Observations (B to A)	11243	14187	16530	15945	19078	21532
Mean (B to A)	10.78	10.78	10.78	10.76	10.77	10.76
Observations (A to A+)	10816	14595	18888	12976	17050	22081
Mean (A to A+)	10.77	10.77	10.78	10.75	10.76	10.77
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The regressions are estimated separately for time periods one year before and after 6 October 2018, respectively. The dependent variable is the log apartment sales prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff.

Table A.8: Effects of ratings on apartment prices, excluding ±30 days around *Hemnet* change

	Log prices/sqm		Sales price		Listing price	
	Sales price	*Listing price*	*Before Hemnet*	*After Hemnet*	*Before Hemnet*	*After Hemnet*
A vs. B	0.017**	0.016**	0.005	0.027**	0.010	0.024**
	(0.007)	(0.007)	(0.011)	(0.011)	(0.011)	(0.011)
A+ vs. A	-0.005	-0.004	0.005	-0.010	0.008	-0.007
	(0.007)	(0.007)	(0.012)	(0.010)	(0.012)	(0.010)
Observations (B to A)	81308	81308	14641	19839	14641	19839
Mean (B to A)	10.79	10.71	10.78	10.76	10.71	10.69
Observations (A to A+)	86250	86250	16745	20137	16745	20137
Mean (A to A+)	10.79	10.71	10.78	10.77	10.71	10.69
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. In the third and fourth columns, the main specification is estimated based on sales one year before and after the *Hemnet* change, respectively. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further include a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. All specifications use the "full" bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. In this table, I drop sales recorded within 30 days of 6 October 2018 (i.e. when ratings started being shown at *Hemnet*) to exclude sales that were *potentially* affected by the change in salience.

Table A.9: Effects of ratings on real estate agent sorting

	Real estate agent characteristic		
	No. sales	*Recommendations*	*Agent rating*
A vs. B	-0.721	-3.913*	-0.029
	(0.966)	(2.376)	(0.030)
A+ vs. A	-0.155	-0.451	0.042
	(1.113)	(2.433)	(0.031)
Observations (B to A)	84890	84890	84890
Mean (B to A)	43.12	91.96	4.209
Observations (A to A+)	90336	90336	90336
Mean (A to A+)	41.16	90.71	4.196
Year of sale FE	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. *No. of sales* refer to the total number of apartments previously sold by the agent at the time of a particular sale. *Recommendations* and *Agent rating* are the number of consumer recommendations and ratings of the real estate agent at the website *Hittamäklare.se*, run by the same company from which sales data is acquired. The dependent variables are measured for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. All specifications use the "full" bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff.

Table A.10: Differences in prices for above- vs. below-median agents

	Raw differences			With controls		
	Sales price price	*Listing price*	*Diff*	*Sales price*	*Listing price*	*Diff.*
Above-median agent	0.064***	0.057***	0.007***	0.015***	0.009***	0.007***
	(0.005)	(0.004)	(0.001)	(0.002)	(0.002)	(0.001)
Observations						
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	No	No	No	Yes	Yes	Yes
Construction year decile FE	No	No	No	Yes	Yes	Yes
Controls	No	No	No	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. This table unadjusted (cols 1–3) and adjusted (cols 4–6) differences in sales and listing prices, as well as the difference, among above- and below-median quality real estate agents. Agents are classified in above- or below-median bins using PCA based on the number of previous sales as well as recommendations and ratings on *Hittamäklare.se* ("Find a realtor").

Table A.11: Effect of co-op debt on sales prices within one year of the *Hemnet* collaboration

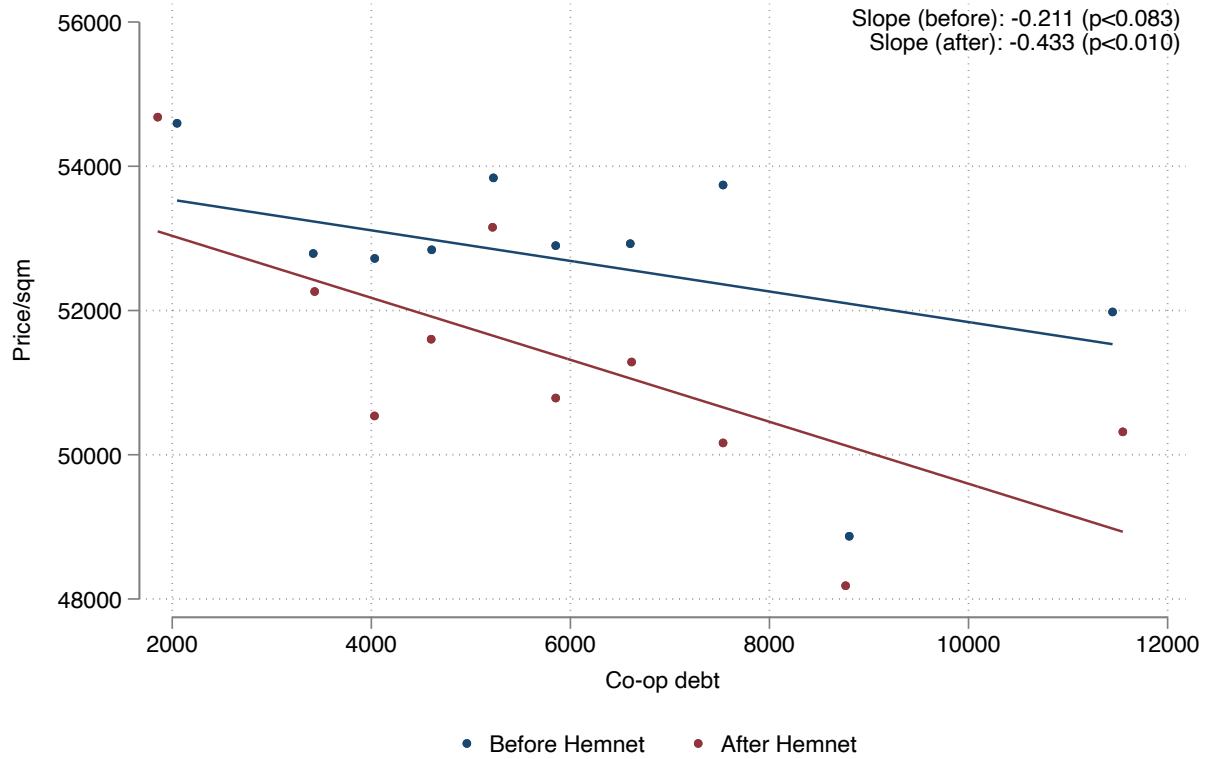|	Before Hemnet	After Hemnet	
	(1)	*(2)*	*(3)*
Debt per m^2	0.017	-0.198	-0.166
	(0.163)	(0.122)	(0.123)
Observations	22578	27875	27875
Dep. var. mean	50858	50466	50466
Mean debt	5783	6020	6020
Co-op FE	Yes	Yes	Yes
Month/year FE	Yes	Yes	Yes
Rating FE	No	No	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable in these regressions is the sales price per square meter of an apartment sale. The independent variables of interest are the debt per square meter of the co-op, as stated in the annual report available at the time of the sale. Hence, the estimated coefficients measure the effect on square meter prices of a one SEK increase in co-op debt per square meter. All regressions control for fixed effects at the co-op and month-of-sale level, as well as the co-op capital depreciation per square meter (also measured from annual report data). Rating fixed effects refer to the inclusion of indicator functions for having obtained a particular Allabrf rating. The sample is split around 6 October 2018, at which point the rating system was introduced at the Hemnet platform. Only sales that occurred within 365 days of this date are included in these regressions: Table 6 shows equivalent estimations when including all sales before/after this change.

Table A.12: Effect of co-op debt on sales prices within one year of the *Allabrf* launch

	Before launch	After launch
Debt per m^2	-0.010	0.073
	(0.224)	(0.246)
Observations	21897	22427
Dep. var. mean	45651	51095
Mean debt	5332	5618
Co-op FE	Yes	Yes
Month/year FE	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable in these regressions is the sales price per square meter of an apartment sale. The independent variables of interest are the debt per square meter of the co-op, as stated in the annual report available at the time of the sale. Hence, the estimated coefficients measure the effect on square meter prices of a one SEK increase in co-op debt per square meter. All regressions control for fixed effects at the co-op and month-of-sale level, as well as the co-op capital depreciation per square meter (also measured from annual report data). Rating fixed effects refer to the inclusion of indicator functions for having obtained a particular Allabrf rating. The sample is split around 1 September 2015, at which point the rating system was introduced by Allabrf and shown on their webpage. Only sales that occurred within 365 days of this date are included in these regressions.

Figure A.6: Relation between co-op debt and sales prices without co-op fixed effects

Notes: This figure shows binned scatter plots of the relationship between sales prices and co-op debt before and after the *Hemnet* change, only conditioning on capital depreciation and construction year deciles. Slopes of the corresponding linear fits are shown in the top left of the figure.

Figure A.7: Co-op debt and capital depreciation across ratings
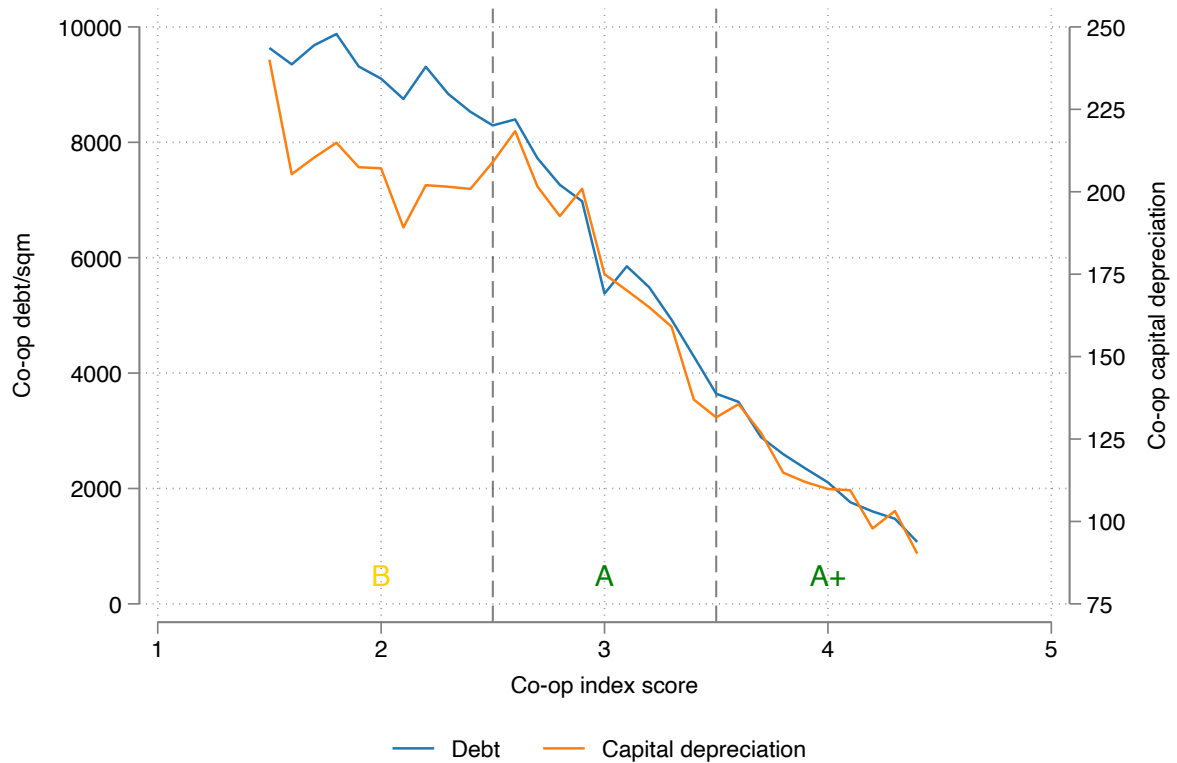
Notes: This figure shows the average co-op debt (left axis) and capital depreciation (right axis) for each value of the index score upon which the ratings are based. Both debt and capital depreciation decrease approximately linearly with the *Allabrf* index score for co-ops rated *A* and above. For *B*-rated co-ops, capital depreciation – proxying investments – is lower that would be expected given their debt level and the aforementioned linear relationship.

B Robustness to alternative sample restrictions

In the main sample used to produce the main results of Section 5, I make two sample restrictions that were brought up in Section 3. This section reproduces the main results of Table 3 when relaxing these sample restrictions. In the first restriction, I eliminate the long tails of the sales price distribution by dropping sales with prices outside of the 1-99 percentile range of the data. Table B.1 shows that the main results change extremely little when including these sales. In the second restriction, I merge sales to ratings that are a maximum of 365 days old to avoid basing my analysis on ratings that may be seen as outdated – there are cases in which a new rating was not produced for several years. Table B.2 and B.3 replicates the main results when allowing for a shorter (183 days) or longer (730 days) time-span. The point estimates are almost entirely unchanged when employing these alternative restrictions.

Table B.1: Main effects when not trimming sales prices outside of the 1st and 99th percentile

	Log square meter prices		Sales price	
	Sales price	*Listing price*	*Before Hemnet*	*After Hemnet*
A vs. B	0.016**	0.015**	0.009	0.025**
	(0.007)	(0.007)	(0.011)	(0.011)
A+ vs. A	-0.006	-0.005	0.004	-0.008
	(0.008)	(0.008)	(0.013)	(0.010)
Observations (B to A)	86492	86492	16809	21855
Mean (B to A)	10.79	10.70	10.77	10.76
Observations (A to A+)	92343	92343	19268	22441
Mean (A to A+)	10.79	10.70	10.77	10.76
Year of sale FE	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. In the third and fourth columns, the main specification is estimated based on sales one year before and after the *Hemnet* change, respectively. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further include a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. All specifications use the "full" bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. This table replicates the main results in Table 3, when including sales that had a price lower (greater) than the 1st (99th) percentile of sales prices.

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Table B.2: Main effects when allowing ratings to be "active" for 730 rather than 365 days

	Log square meter prices		Sales price	
	Sales price	*Listing price*	*Before Hemnet*	*After Hemnet*
A vs. B	0.016**	0.015**	0.008	0.026**
	(0.007)	(0.007)	(0.011)	(0.010)
A+ vs. A	-0.006	-0.005	0.002	-0.008
	(0.007)	(0.007)	(0.012)	(0.010)
Observations (B to A)	90785	90785	16865	22197
Mean (B to A)	10.79	10.71	10.78	10.76
Observations (A to A+)	96568	96568	19371	22835
Mean (A to A+)	10.79	10.71	10.78	10.77
Year of sale FE	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

*Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. In the third and fourth columns, the main specification is estimated based on sales one year before and after the *Hemnet* change, respectively. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further include a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. All specifications use the "full" bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. This table replicates the main results in Table 3, when allowing ratings to be active for up to two years after its creation, if no new rating for that co-op was produced. The main specification allows a time-span of up to one year.*

Table B.3: Main effects when allowing ratings to be "active" for 183 rather than 365 days

	Log square meter prices		Sales price	
	Sales price	*Listing price*	*Before Hemnet*	*After Hemnet*
A vs. B	0.018**	0.016**	0.008	0.026**
	(0.007)	(0.007)	(0.011)	(0.010)
A+ vs. A	-0.006	-0.004	0.003	-0.012
	(0.008)	(0.008)	(0.012)	(0.010)
Observations (B to A)	76644	76644	16358	20771
Mean (B to A)	10.79	10.70	10.78	10.76
Observations (A to A+)	82024	82024	18666	21257
Mean (A to A+)	10.79	10.70	10.78	10.77
Year of sale FE	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. In the third and fourth columns, the main specification is estimated based on sales one year before and after the Hemnet change, respectively. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from B to A and A to A+, estimated in separate regressions. The specifications further include a linear control for the running variable (the Allabrf *index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. All specifications use the "full" bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. This table replicates the main results in Table 3, when allowing ratings to be active for up to a half year after its creation, if no new rating for that co-op was produced. The main specification allows a time-span of up to one year.*

C Robustness to using a piece-wise quadratic instead of linear function of the running variable

In the main specification, I condition on a piece-wise linear function of the running variable, allowing slopes to vary on each side of the cutoffs. In this section, I investigate the stability of the point estimates when allowing this piece-wise function to be quadratic. Since the quadratic fit is allowed to vary on each side of the cutoff, this amounts to a quite flexible fit. The specification employed here denoted as "piece-wise quadratic" is given by:

$$
\begin{aligned}
\ln(Price)_{sbt} = {}& \beta_1 \mathbb{1}(index_{bt} \geq c_r) + \beta_2(index_{bt}) + \beta_3(index_{bt})^2 \\
& + \beta_3(index_{bt} \times \mathbb{1}(index_{bt} \geq c_r)) + \beta_4\big((index_{bt})^2 \times \mathbb{1}(index_{bt} \geq c_r)\big) \\
& + \alpha_y + \alpha_a + \alpha_c + \Gamma X_{bt} + \epsilon_{sbt}
\end{aligned}
\tag{1}
$$

For completeness, I also let the bandwidth vary between 0.5 and the "full" specification. The results are shown in Table C.1, and are largely consistent across the two specifications. While the precision suffers a bit under the piece-wise quadratic function when bandwidths are restricted, the magnitudes of the estimates are arguably quite stable. Hence, the main results do not appear to be driven by the choice of a particular functional form.

Table C.1: Effects of ratings on log sales prices with a piece-wise quadratic function of the running variable

	Piece-wise linear			Piece-wise quadratic		
Bandwidth:	*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B	0.023***	0.025***	0.018**	0.021	0.022*	0.030***
	(0.009)	(0.008)	(0.007)	(0.015)	(0.012)	(0.010)
A+ vs. A	-0.002	0.003	-0.006	-0.002	0.003	-0.006
	(0.009)	(0.008)	(0.007)	(0.009)	(0.008)	(0.007)
Observations (B to A)	61336	74591	84890	61336	74591	84890
Mean (B to A)	10.79	10.80	10.79	10.79	10.80	10.79
Observations (A to A+)	52176	69718	90336	52176	69718	90336
Mean (A to A+)	10.78	10.78	10.79	10.78	10.78	10.79
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment sales prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear/quadratic control for the running variable (the *Allabrf* index score) as well as an interaction between the linear/quadratic running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff.

D   Robustness to alternative covariate specifications

Table D.1 shows the main results, pooled across all years, on sales apartment prices for both cutoffs when including covariates successively. In the first column, only year fixed effects are included, which gives an inflated point estimate relative to the main results at the cutoff between B and A. This likely explained by the linear controls for the coarse running variable not sufficiently capturing all of the differences across A- and B-rated co-ops, as discussed in Section 4. The specifications in column (2) and (3) relaxes the smoothness assumption by comparing co-ops that 1) are located in the same areas and whose buildings are similar in age or 2) had approximately the same average sales prices prior to the launch of *Allabrf*. Adopting either of these approaches, both of which aims to compare only co-ops that are sufficiently similar, gives estimates that are very close to the main results. Additionally including controls for the fee and debt level of the co-op as well as the living area of the apartment – as in the main specification – has a negligible impact. So does adding the pre-*Allabrf* average prices to the list of covariates used in the main specification.

The same analysis is shown for the before- and after-*Hemnet* samples in Tables D.2 and D.2, respectively. Due to the greater importance of time trends when conducting this analysis, I further augment the specification by using month-by-year FEs instead of year FEs. The results are largely in line with those of the main analysis.

Table D.1: Effects of ratings on log apartment prices with different covariates

	Sales price					
	(1)	(2)	(3)	(4)	Main	Full
A vs. B	0.044**	0.015**	0.013*	0.015**	0.018**	0.016***
	(0.019)	(0.008)	(0.007)	(0.008)	(0.007)	(0.005)
A+ vs. A	-0.001	-0.002	-0.009	-0.000	-0.006	-0.010*
	(0.028)	(0.008)	(0.007)	(0.008)	(0.007)	(0.005)
Observations (B to A)	84897	84890	84879	84890	84890	84872
Mean (B to A)	10.79	10.79	10.79	10.79	10.79	10.79
Observations (A to A+)	90339	90336	90327	90336	90336	90324
Mean (A to A+)	10.79	10.79	10.79	10.79	10.79	10.79
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	No	Yes	No	Yes	Yes	Yes
Construction year decile FE	No	Yes	No	Yes	Yes	Yes
Avg. Baseline co-op prices	No	No	Yes	No	No	Yes
Fees, Debt	No	No	No	Yes	Yes	Yes
Living area	No	No	No	No	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. The full bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff, is used in all regressions.

Table D.2: Effects of ratings on log apartment prices with different covariates: before *Hemnet*

	Sales price					
	(1)	(2)	(3)	(4)	Main	Full
A vs. B	0.073**	0.008	0.005	0.008	0.008	0.002
	(0.032)	(0.012)	(0.012)	(0.012)	(0.011)	(0.009)
A+ vs. A	0.012	0.005	-0.010	0.008	0.002	-0.009
	(0.034)	(0.013)	(0.011)	(0.013)	(0.012)	(0.008)
Observations (B to A)	16532	16530	16532	16530	16530	16530
Mean (B to A)	10.78	10.78	10.78	10.78	10.78	10.78
Observations (A to A+)	18890	18888	18890	18888	18888	18888
Mean (A to A+)	10.78	10.78	10.78	10.78	10.78	10.78
Month × year FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	No	Yes	No	Yes	Yes	Yes
Construction year decile FE	No	Yes	No	Yes	Yes	Yes
Avg. Baseline co-op prices	No	No	Yes	No	No	Yes
Fees, Debt	No	No	No	Yes	Yes	Yes
Living area	No	No	No	No	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. The full bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff, is used in all regressions. The sample is restricted to sales within one year before the *Allabrf* and *Hemnet* collaboration.

Table D.3: Effects of ratings on log apartment prices with different covariates: after *Hemnet*

	Sales price					
	(1)	(2)	(3)	(4)	Main	Full
A vs. B	0.028	0.022**	0.009	0.022**	0.026**	0.015**
	(0.027)	(0.011)	(0.011)	(0.011)	(0.010)	(0.008)
A+ vs. A	-0.033	-0.010	-0.027***	-0.008	-0.009	-0.017**
	(0.038)	(0.010)	(0.010)	(0.010)	(0.010)	(0.008)
Observations (B to A)	21533	21532	21525	21532	21532	21523
Mean (B to A)	10.76	10.76	10.76	10.76	10.76	10.76
Observations (A to A+)	22081	22081	22075	22081	22081	22074
Mean (A to A+)	10.77	10.77	10.77	10.77	10.77	10.77
Month × year FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	No	Yes	No	Yes	Yes	Yes
Construction year decile FE	No	Yes	No	Yes	Yes	Yes
Avg. Baseline co-op prices	No	No	Yes	No	No	Yes
Fees, Debt	No	No	No	Yes	Yes	Yes
Living area	No	No	No	No	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. The full bandwidth, i.e. including all co-ops that have obtained either of the two grades adjacent to a given cutoff, is used in all regressions. The sample is restricted to sales within one year after the *Allabrf* and *Hemnet* collaboration.

E   Robustness to dropping heaped observations at $index = 3$

As shown in Figure 5, the new rating system caps co-ops that leases their land at an index score of 3, leading to a sharp spike at this value. In the main results, this is addressed by controlling for plot ownership. In Table E.1, shown below, I instead drop all observations with such a score in the new rating system, removing the heap entirely. The main results are entirely robust to this alternative strategy.

Table E.1: Effects of ratings on log apartment prices, dropping heap at $index = 3$

	Sales price			Listing price		
Bandwidth:	*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B	0.024***	0.026***	0.019***	0.024***	0.025***	0.018***
	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)	(0.006)
A+ vs. A	-0.003	0.002	-0.004	-0.003	0.002	-0.003
	(0.009)	(0.008)	(0.007)	(0.009)	(0.008)	(0.007)
Observations (B to A)	57176	71326	82480	57176	71326	82480
Mean (B to A)	10.80	10.80	10.80	10.71	10.72	10.71
Observations (A to A+)	46625	65377	87435	46625	65377	87435
Mean (A to A+)	10.79	10.79	10.80	10.70	10.70	10.71
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. Sales after February 2019 that has an index score of 3 are dropped in all regressions.

Table E.2: Effects of ratings on log apartment prices, dropping co-ops leasing their land

	Sales price			Listing price		
Bandwidth:	*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B	0.029***	0.031***	0.023***	0.030***	0.031***	0.023***
	(0.009)	(0.008)	(0.007)	(0.009)	(0.008)	(0.007)
A+ vs. A	-0.003	-0.001	-0.009	-0.004	-0.001	-0.007
	(0.010)	(0.008)	(0.008)	(0.010)	(0.008)	(0.008)
Observations (B to A)	45820	56762	65608	45820	56762	65608
Mean (B to A)	10.81	10.82	10.81	10.73	10.74	10.73
Observations (A to A+)	38580	52910	69761	38580	52910	69761
Mean (A to A+)	10.81	10.81	10.82	10.73	10.73	10.73
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. Sales belonging to a co-op that does not own it's land are dropped in all regressions.

F Robustness to dropping observations at the cutoff (donut RD)

Although the discrete nature of the *Allabrf* index score naturally leads to heaping (e.g. at numbers with whole first decimals), the histograms shown in Figure 5 could possibly raise worries about non-random heaping at the particular cutoff values. In this section, I address this by estimating the main pooled specification while dropping observations 1) exactly at the two cutoffs of 2.5 and 3.5 and 2) within 0.1 points around each cutoff. The first of these two estimations is shown in Table F.1: if anything, the point estimates of the discontinuity at *A* vs. *B* seem to increase slightly compared to the main results. In the more demanding donut specification, shown in Table F.2, point estimates are somewhat smaller but in the same ballpark as the main results, albeit less precisely estimated which is expected since this specification reduces the sample size significantly. In particular, it excludes a disproportionally large part of the variation below the *B*-cutoff, where sample size decreases quickly with lower index scores. In general, though, the relative stability of the results under these donut specifications provides evidence against any pattern of heaping being driven by unobservable co-op characteristics that determine sales prices, and for the validity of the main results.

Table F.1: Effects of ratings on log prices, donutizing at cutoffs

		Sales price			Listing price		
Bandwidth:		*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B		0.024**	0.028***	0.021***	0.023**	0.027***	0.019**
		(0.010)	(0.009)	(0.008)	(0.010)	(0.009)	(0.008)
A+ vs. A		0.003	0.006	-0.002	0.003	0.005	-0.000
		(0.010)	(0.009)	(0.008)	(0.010)	(0.009)	(0.008)
Observations (B to A)		55415	68670	78969	55415	68670	78969
Mean (B to A)		10.79	10.79	10.79	10.70	10.71	10.70
Observations (A to A+)		47443	64985	79682	47443	64985	79682
Mean (A to A+)		10.78	10.79	10.79	10.69	10.70	10.71
Year of sale FE		Yes	Yes	Yes	Yes	Yes	Yes
Locality FE		Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE		Yes	Yes	Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment sales prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. Observations with an index score placing them exactly at the cutoffs are excluded.

Table F.2: Effects of ratings on log prices, donutizing within ±0.1 of cutoffs

	Bandwidth:	Sales price			Listing price		
		0.5	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B		0.018	0.026**	0.013	0.018	0.024*	0.011
		(0.017)	(0.013)	(0.011)	(0.017)	(0.013)	(0.011)
A+ vs. A		-0.019	-0.006	-0.014	-0.020	-0.008	-0.014
		(0.017)	(0.012)	(0.011)	(0.017)	(0.012)	(0.011)
Observations (B to A)		44865	58120	64222	44865	58120	64222
Mean (B to A)		10.78	10.79	10.79	10.70	10.70	10.70
Observations (A to A+)		39484	57026	65054	39484	57026	65054
Mean (A to A+)		10.78	10.79	10.79	10.69	10.70	10.70
Year of sale FE		Yes	Yes	Yes	Yes	Yes	Yes
Locality FE		Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE		Yes	Yes	Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment sales prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of passing the cutoff from the rating below, e.g. from B to A and A to $A+$, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff. Observations with an index score within ±0.1 of the respective cutoffs are excluded.

G   Robustness to manipulation of the running variable

In this section, I present results following an approach that aims to control for possible manipulation of the running variable around the cutoffs as described in the end of Section 4.4. In short, I run the main specification using the same bandwidths as in the main analysis, but now restricting the sample to only include sales that took place after the rating system update as well as conditioning on the "simulated rating" that the co-op would have had under the old rating system (equation 2). Hence, by conditioning on these old ratings, I am effectively running the main specification on the part of the variation that *could not* have been manipulated since the specifics of the update was entirely unknown to the public.

Table G.1 shows the results from these regressions. As we can see, the results are if anything larger than those shown in the pooled main analysis. However, this is expected: this analysis restricts the sample to sales occurring only from February 2019 and onward, at which point the *Allabrf* ratings were more salient and the effect has been shown to be stronger.

Given this analysis, in conjunction with the likelihood of manipulation actually occurring in this setting being rather small due to the proprietary nature of the *Allabrf* rating system, I conclude that the main results are unlikely to be driven by manipulation around the relevant cutoffs on part of co-ops.

Table G.1: Effects of ratings on log prices, robust to manipulation

	Sales price			Listing price		
Bandwidth:	*0.5*	*0.75*	*Full*	*0.5*	*0.75*	*Full*
A vs. B	0.042***	0.031***	0.021**	0.039***	0.028**	0.019*
	(0.014)	(0.012)	(0.010)	(0.013)	(0.011)	(0.010)
A+ vs. A	-0.006	-0.003	-0.018*	-0.004	-0.001	-0.013
	(0.015)	(0.012)	(0.011)	(0.014)	(0.012)	(0.011)
Observations (B to A)	28025	32483	35835	28025	32483	35835
Mean (B to A)	10.79	10.80	10.79	10.71	10.72	10.72
Observations (A to A+)	19654	26005	34232	19654	26005	34232
Mean (A to A+)	10.78	10.79	10.80	10.70	10.71	10.72
Year of sale FE	Yes	Yes	Yes	Yes	Yes	Yes
Locality FE	Yes	Yes	Yes	Yes	Yes	Yes
Construction year decile FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Simulated rating FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The sample is restricted to sales after the *Allabrf* rating update in February 2019. The dependent variable is the log apartment prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The coefficient on *A* and *A+* captures the effect of passing the cutoff from the rating below, e.g. from *B* to *A* and *A* to *A+*, estimated in separate regressions. The specifications further includes a linear control for the running variable (the *Allabrf* index score) as well as an interaction between the running variable and a dummy for passing the threshold, allowing for different slopes on different sides of the cutoff. Fixed effects for year of sale, building construction year deciles and locality (e.g. neighborhood) are included, as well as a dummy for the co-op land ownership status and linear controls for co-op debt, membership fees, and living area of the apartment. Further, I include fixed effects for a co-ops simulated rating, which is the rating it would have obtained had the old rating system still been in place. The bandwidth refers to the range of the running variable around each cutoff that the sample is restricted to. Full refers to no restriction, e.g. including all co-ops that have obtained either of the two grades adjacent to a given cutoff.

H   Results using two-way fixed effects estimation

In this section, I show the results of estimating the effect of ratings using the simplest possible difference-in-differences approach, comparing the sales prices of apartments within co-ops over time. In particular, I employ the following two-way fixed effects specification:

$$Y_{sbt} = \beta_1 (Rating = A)_{bt} + \beta_2 (Rating = A+)_{bt} + \gamma_b + \gamma_t + \epsilon_{sbt} \tag{2}$$

where $Rating = X$ is a dummy for the co-op b obtaining a particular $Rating \in \{A, A+\}$ and γ_b, γ_t are co-op and time fixed effects, respectively. For the latter I use month-by-year indicators, but daily fixed effects give the same results. I report estimates of β_1 (the effect of going from a B to an A) and $\beta_2 - \beta_1$ (going from A to $A+$) such that interpretation is consistent with the regression discontinuity results.

Before discussing results, note that this exercise should be seen as a simple, additional check on the raw data and not an alternative (and equally robust) identification strategy vis-à-vis the regression discontinuity design. In particular, the simple two-way fixed effects specification identifies the effect of rating on basis of "switchers", i.e. co-ops that change ratings over time. However, switching likely happens endogenously and the direction of bias is not clear a priori.[1] What this specification eliminates, though, is the potential endogeneity stemming from unobserved co-op-level differences that are constant over time. Since many features of apartments relate to fixed characteristics, such as architecture and location, I argue that this source of endogeneity is particularly important to consider. Hence, showing that general patterns persist when eliminating them lends evidence to the validity of the main results.

Table H.1 shows estimates of β_1 and $\beta_2 - \beta_1$ on sales and listing prices, as well as sales prices before and after the *Hemnet* change (i.e. the same exposition as the main results in Table 3). While the effects on prices are a bit smaller than in the main analysis, the general conclusion remains intact: the effect of obtaining an *A* rather than a *B* on sales prices is positive, highly significant but completely explained by an almost identical effect on listing prices. The last two columns show the effects of ratings on prices one year before vs. after the introduction of *Allabrf* ratings in *Hemnet* ads. As in the main analysis, we see a clear break at this period: the positive effects of the ratings found in the pooled analysis seem to be entirely driven by time periods after the *Hemnet* collaboration.

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[1]For example, a reduction in co-op fees is associated with an improvement in the *Allabrf* rating. On the one hand, this might also be associated with increased sales prices, since it becomes cheaper to live in the apartment. On the other, however, it might also decrease sales prices if consumers believe that the fee is "too low", in the sense that the co-op might have to increase fees in the future to restore fiscal balances.

Table H.1: Effects of ratings on apartment prices using two-way fixed effects

	Log square meter prices		Sales price	
	Sales price	*Listing price*	*Before Hemnet*	*After Hemnet*
A vs. B	0.009***	0.007***	0.003	0.012**
	(0.002)	(0.002)	(0.013)	(0.005)
A+ vs. A	0.003	0.004	0.002	0.002
	(0.003)	(0.003)	(0.009)	(0.005)
Observations	114445	114445	22461	27597
Dep. var. mean	10.788	10.701	10.769	10.760
Co-op FE	Yes	Yes	Yes	Yes
Month/year FE	Yes	Yes	Yes	Yes

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the log apartment sales prices for sales realized during the time at which a given co-op rating was active, e.g. from its creation until it was replaced by a new rating. The reported coefficients capture the effects of obtaining a rating as compared to the one below, e.g. from from *B* to *A* and *A* to *A*. All regressions include fixed effects at the co-op and month/year levels. In columns 3 and 4, the sample is split around 6 October 2018, at which point the rating system was introduced at the *Hemnet* platform. Only sales that occurred within 365 days of this date are included in these two regressions.

I   Number and timing of sales and co-op ratings

In this section, I investigate whether the extent and timing of sales is affected by co-ops switching ratings. In particular, individuals in co-ops expecting to obtain a better rating may postpone a sale until a new annual report is released and (subsequently) a new rating is generated. To investigate this, I investigate if the number of sales in a particular co-op increases or decreases once they switch to a new rating. I define a two-way fixed effects regression in the following way:

$$S_{btp} = \beta_1 (Rating = A)_{btp} + \beta_2 (Rating = A+)_{btp} \alpha_b + \alpha_t + \Gamma X_{btp} + \epsilon_{bpt}$$

where b refers to a co-op, t the month at which the given rating was created, and $p = 1$ (as in post) for sales realized X days after the rating was created, and $p = 0$ for sales realized X days before. S_{btp} records the number of sales in a given co-op before ($p = 0$) and after ($p = 1$) the new rating came into effect. Conditioning on co-op and rating creation month FEs, this effectively compares the average number of sales in a window (X) before and after a rating update within each co-op. X_{btp} includes controls for co-op debt and fees, to ensure that I compare co-ops that switch ratings due to minor differences in their underlying financial status. As in Appendix H.1, I reparametrize this regression to yield estimates corresponding to obtaining an A vs. B, and an $A+$ vs. an A.

Results are shown in Table I.1. There are two, main take-aways. First, there is a clear increase in the number of sales of obtaining an A vs. a B, but only after ratings were introduced on the *Hemnet* platform. Using a thirty day window around rating assignment, the number of sales increase by 0.24, or 14% relative to the sample mean, when co-ops switch from B to A. I find no evidence of any effect going from an A to $A+$.

Second, this effect dissipates as I increase the window around the rating assignment. Comparing the number of sales within two months of rating assignment, the effect of obtaining an A vs. B is reduced in half.

These results suggest that prospective sellers are somewhat strategic about ratings when deciding when to sell their apartment. However, people move for many reasons beyond financial gains, such as family or job changes, so ratings are unlikely to significantly affect timing over longer periods. This is reflected in the second finding.

Table I.1: Effects of ratings on number of sales

	±30 days		±45 days		±60 days	
	Before Hemnet	*After Hemnet*	*Before Hemnet*	*After Hemnet*	*Before Hemnet*	*After Hemnet*
A vs. B	0.00	0.23***	0.02	0.18**	0.08	0.12
	(0.09)	(0.08)	(0.09)	(0.09)	(0.10)	(0.08)
A+ vs. A	0.06	-0.05	0.01	-0.04	-0.12	-0.10
	(0.10)	(0.10)	(0.10)	(0.09)	(0.11)	(0.09)
Co-op x rating x window cells	2640	3894	3552	5181	4352	6325
Dep. var. mean	1.58	1.68	1.80	1.89	2.01	2.10

Notes: $p < 0.01$ = ***, $p < 0.05$ = **, $p < 0.1$ = *. Robust standard errors, clustered at the co-op level, in parentheses. The dependent variable is the number of sales within a given co-op, separately calculated before and after 30/45/60 days of a new rating being published. Fixed effects at the co-op and month-by-year level are included, as well as linear controls for co-op debt and membership fees.