Online Appenidx: Do Banks Take Unusual Risks When Interest Rates are Expected to Stay Low for a Long Time?

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Appendix A. An Empirical Measure of Banks' Loan-Portfolio Risk

We use borrowers' annual balance sheets and income statements to estimate a probability of default (PD) for each of the firms in our sample. We proxy the event of default, using the 533 bankruptcies observed within our unbalanced panel of 8,653 Austrian firms observed between 1993 and 2009. More precisely, to indicate the event that a firm declares insolvency within h years from year y, we define

$$INS^h_{f,y} = \begin{cases} 1 & \text{if firm } f \text{ declares bankruptcy} \\ & \text{in any of the years } \tilde{y} \in \{y, y+1, ..., y+h\} \\ 0 & \text{otherwise} \end{cases} \tag{A.1}$$

Further, we construct

$$LO_{f,y} = \gamma_0 + \gamma_1' \cdot AR_{f,y} + \gamma_2' \cdot LF_{f,y} + \gamma_3' \cdot IND_{f,y} + \gamma_4' \cdot Z_{f,y}, \tag{A.2}$$

where $AR_{f,y}$ is a $k_1 \times 1$ vector of accounting ratios derived from firms' annual balance sheets and income statements, $LF_{f,y}$ is a $k_2 \times 1$ vector of dummies for the firm's legal form, $IND_{f,y}$ is a $k_3 \times 1$ vector of industry dummies, and $Z_{f,y}$ represents a $k_4 \times 1$ vector of additional firm specific characteristics including the firm's age. The vector $\gamma = (\gamma_0, \gamma_1', ..., \gamma_4')' \in \mathbb{R}^K$ is a vector of coefficients with $K = 1 + \sum_{i=1}^{4} k_i$. The particular choice of accounting ratios in $AR_{f,y}$ is guided by results in Hayden's (2003) earlier work on predicting Austrian firms' PDs. Thus, based on the above definitions we estimate the logit models

$$p^h_{f,y^*} \equiv \Pr\left[\tilde{INS}^{h,y^*}_{f,y} = 1 \middle| AR_{f,y}, LF_{f,y}, IND_{f,y}, Z_{f,y}, y \leq y^*\right] = \frac{\exp(LO_{f,y})}{1 + \exp(LO_{f,y})}, \tag{A.3}$$

for the years $y^* \in \{2000, ..., 2009\}$, where

$$\tilde{INS}^{h,y^*}_{f,y} = \begin{cases} INS^h_{f,y} & \text{if firm } f \text{ declares bankruptcy before } y^*+1 \\ \text{undefined} & \text{otherwise.} \end{cases}$$

Table A.1: Logit Regressions for Predicting the Probability of Default

Dependent Variable: Insolvency within the next 3 years

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Accounting Ratios										
Liab./Assets	4.392***	3.697***	3.683***	3.405***	2.966***	3.280***	3.390***	3.545***	3.619***	3.697***
	(1.363)	(1.172)	(1.060)	(1.087)	(0.995)	(1.007)	(1.000)	(0.987)	(0.977)	(0.980)
Bank Liab./Assets	1.469	1.753	1.735*	1.472	1.701*	1.351	1.355*	1.306*	1.281*	1.275*
	(1.363)	(1.136)	(1.022)	(0.934)	(0.868)	(0.839)	(0.823)	(0.791)	(0.777)	(0.772)
Liab. Short/Assets	0.778	1.004	0.874	0.759	1.112	0.820	0.821	0.676	0.634	0.621
	(1.523)	(1.273)	(1.162)	(1.076)	(0.985)	(0.942)	(0.926)	(0.898)	(0.879)	(0.874)
Liq. Assets/Liab Short	0.051	0.038	0.053	0.048	0.079*	0.070	0.068	0.056	0.052	0.055
	(0.093)	(0.072)	(0.061)	(0.060)	(0.046)	(0.049)	(0.046)	(0.045)	(0.044)	(0.043)
Acc. Payab./Net Sales	1.988***	1.738***	2.136***	2.095***	2.084***	2.061***	2.058***	1.980***	2.015***	2.043***
	(0.569)	(0.551)	(0.487)	(0.433)	(0.385)	(0.372)	(0.354)	(0.348)	(0.340)	(0.336)
Gross Profit/Exp. Labor	-0.322**	-0.108	-0.139	-0.125	-0.126	-0.142	-0.155	-0.140	-0.149*	-0.150*
	(0.136)	(0.107)	(0.117)	(0.101)	(0.089)	(0.093)	(0.097)	(0.086)	(0.088)	(0.087)
Ord. Bus. Inc./Assets	-1.906	-3.091***	-3.015***	-3.023***	-3.113***	-3.090***	-2.997***	-2.943***	-2.883***	-2.790***
	(1.288)	(0.944)	(0.839)	(0.760)	(0.683)	(0.669)	(0.639)	(0.629)	(0.604)	(0.606)
Exp. Interest/Gross Debt	16.559***	14.346***	13.666***	14.596***	14.099***	14.583***	15.372***	14.936***	14.696***	14.359***
	(3.206)	(2.960)	(2.901)	(2.486)	(2.306)	(2.236)	(2.035)	(1.959)	(1.902)	(1.921)
Legal Form (relative to GmbH)										
AG	0.466	0.641*	0.620*	0.623*	0.534*	0.505	0.552*	0.609*	0.635**	0.618*
	(0.450)	(0.385)	(0.365)	(0.333)	(0.319)	(0.321)	(0.322)	(0.321)	(0.320)	(0.322)
KG	0.571*	0.485	0.520*	0.435	0.290	0.273	0.285	0.303	0.321	0.319
	(0.313)	(0.297)	(0.284)	(0.279)	(0.269)	(0.267)	(0.267)	(0.267)	(0.267)	(0.267)
Other	-0.040	-0.152	0.266	0.083	0.003	0.009	0.058	0.276	0.301	0.304
	(0.736)	(0.731)	(0.609)	(0.613)	(0.609)	(0.609)	(0.609)	(0.551)	(0.556)	(0.554)
Industry (relative to Manufacturing)										
Construction	-0.121	-0.110	-0.186	-0.223	-0.170	-0.254	-0.285	-0.286	-0.302	-0.314
	(0.553)	(0.528)	(0.527)	(0.513)	(0.442)	(0.441)	(0.435)	(0.429)	(0.427)	(0.427)
Wholesale & Trade	-0.509	-0.462	-0.234	-0.264	-0.386	-0.408	-0.414	-0.423	-0.434	-0.431
	(0.342)	(0.328)	(0.303)	(0.296)	(0.278)	(0.275)	(0.273)	(0.272)	(0.272)	(0.272)
Prof., Scient., & Tech.	0.108	-0.082	0.011	-0.141	-0.394	-0.518	-0.587	-0.721	-0.751*	-0.740*
	(0.487)	(0.476)	(0.429)	(0.421)	(0.417)	(0.424)	(0.427)	(0.445)	(0.441)	(0.438)
Admin. & Support	1.561*	1.518**	1.481**	1.306**	1.061*	0.902	0.812	0.672	0.630	0.642
	(0.821)	(0.621)	(0.625)	(0.619)	(0.596)	(0.587)	(0.584)	(0.590)	(0.585)	(0.582)
Other	0.035	0.064	0.067	0.040	-0.112	-0.174	-0.209	-0.254	-0.290	-0.287
	(0.339)	(0.307)	(0.299)	(0.285)	(0.274)	(0.272)	(0.271)	(0.270)	(0.271)	(0.271)
Transportation & Storage		-1.102	-1.185	-1.286	-1.504	-1.585	-1.631	-1.707*	-1.753*	-1.751*
		(1.029)	(1.030)	(1.027)	(1.019)	(1.020)	(1.019)	(1.021)	(1.021)	(1.021)
Age	-0.014	-0.011	-0.004	-0.025	-0.020	-0.025	-0.025	-0.025	-0.027	-0.029*
	(0.025)	(0.024)	(0.024)	(0.018)	(0.017)	(0.016)	(0.016)	(0.017)	(0.017)	(0.017)
Age^2	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-8.936***	-8.775***	-8.802***	-8.327***	-8.101***	-8.101***	-8.288***	-8.427***	-8.485***	-8.540***
	(0.937)	(0.897)	(0.846)	(0.796)	(0.715)	(0.717)	(0.724)	(0.726)	(0.731)	(0.737)
Obs.	15261	17692	19608	21794	24582	28027	32093	36294	40063	41380
Model p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUC Ex-Ante	0.757	0.756	0.774	0.768	0.756	0.832	0.797	0.873	.	.
AUC Ex-Post	0.806	0.809	0.809	0.818	0.823	0.828	0.834	0.838	0.841	0.842

Notes: The table reports the maximum likelihood estimates of coefficient vector γ in equation (A.2) based on logit models (A.3). Standard errors, reported in parentheses below each coefficient estimate, are corrected for serial correlation and clustered on firm. Coefficients that are significantly different from zero are indicated with *** for a p-value $p < 0.01$, ** for $p < 0.05$, and * for $p < 0.1$. The omitted legal form are limited liability companies (GmbH), AG stands for Aktiengesellschaft (equity firms), and KG refers to Kommanditgesellschaft (limited partnerships with at least one fully liable partner). The omitted industry is the manufacturing sector. Ex-ante AUC values for the years 2008 through 2009 could not be computed since we observe too few bankruptcies for those years within our sample of firms.

This means that, for example, our estimates for the probability of firm f's default within h years from the year 2000, $\hat{p}^h_{f,2000}$, employ balance sheet information from 1993 up until 2000. The estimates for 2001 use data from 1993 through 2001, etc. Table A.1 reports the estimates of the coefficient vector γ in equation (A.2) for each year between 2000 and 2009.

These estimates are not the particular focus of this study, yet they reveal information about the relative importance of the various firm specific characteristics' ability to predict bankruptcy. We find that, consistently across time periods, the relative magnitudes and signs of our coefficient estimates are consistent with the results found by Hayden (2003), who fits a similar model to a sample of Austrian firms between 1987 and 1997. In particular, our estimates indicate that the degree of leverage as well as activity ratios, such as the ratio of accounts payable to net sales, have a significantly positive impact on firms' default risk. On the other hand, the ratio of gross profits to expenditures on labor, measuring productivity, as well as ordinary business income as a fraction of assets, capturing firms' profitability, are significantly negatively related to the probability of default.

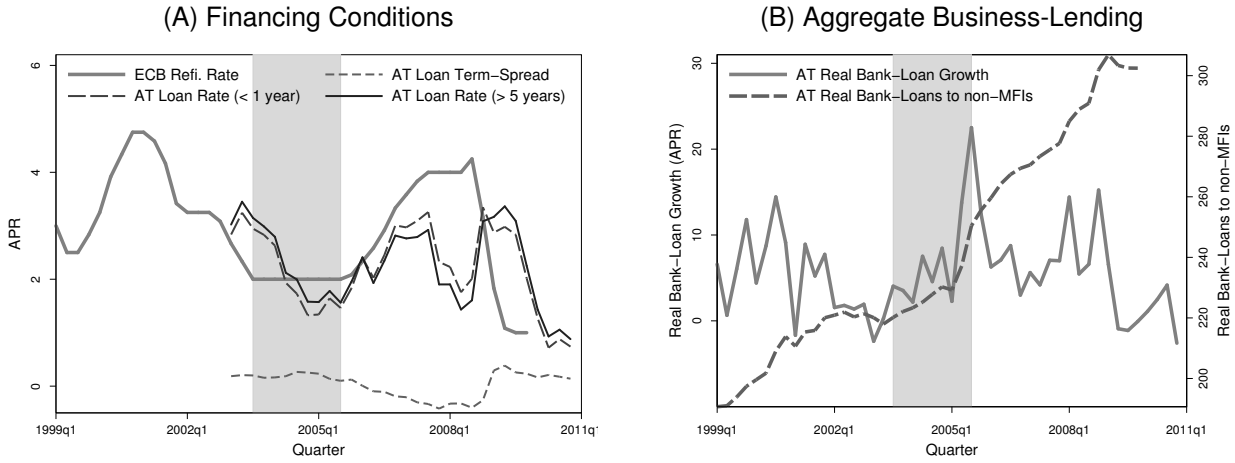
Most important for the purpose of this study, however, is the ability of these estimates to accurately predict the events of default and non-default. In order to assess the predictive ability of our estimates we employ the area under the receiver operating characteristic curve (AUC). Table A.1 reports two versions of this statistic for each year. The AUC for in-sample (ex-post) predictions varies between 0.806 and 0.842 while our out-of-sample (ex-ante) predictions result in AUC values between 0.756 and 0.873. These numbers reveal that our predictions are fairly accurate, both in terms of ex-ante as well as ex-post predictions. As a reference, the average (across studies) AUC for standard prostate cancer screening tests (PSA) lies around 0.7. Hence, we use the coefficient estimates discussed above, together with logit models (A.3), in order to compute ex-ante probabilities of default for every firm, f, and year between 2000 and 2009, $\left\{\hat{p}^h_{f,y}\right\}_{y=2000}^{2009}$.

Appendix B. The Most Recent Business-Lending Cycle in Austria

In order to facilitate the international comparability of our findings we briefly discuss the most recent business-lending cycle in Austria and point out several important observations.

First, panel (A) of Figure B.1 illustrates a significant decrease in real interest rates on debt of different maturity throughout the period of low and stable policy interest rates between 2003 and 2005. Looking at panel (B) of Figure B.1, one can observe that this significant drop in real interest rates goes hand in hand with a significant increase in business-lending throughout the same period. These two tendencies point toward traditional interest rate channels as well as the "broad credit channel" (Bernanke and Gertler, 1995) of monetary policy.

Figure B.1: The Most Recent Business-Lending Cycle in Austria (2000 - 2010)



Notes: Panel (A) illustrates nominal interest rates on the ECB's main refinancing facility as well as real interest rates for Austrian (AT) bank-credit of different maturity. Real rates are computed by subtracting AT HICP inflation. Further, we report the term-spread between loan rates for the two reported maturities. Panel (B) depicts levels and annualized quarterly growth rates of Austrian real bank-lending to non monetary and financial institutions (non-MFIs). A real series is constructed by dividing nominal bank-lending (in billions of Euros) by the AT GDP deflator (2005q1=100). All data are drawn from the ECB's statistical data warehouse (http://sdw.ecb.europa.eu). The gray areas indicate the period during which ECB refinancing rates were kept at 2%.

Second, Figure B.1 further hints at a channel recently emphasized by Woodford (2010). He argues that a strong amplification mechanism in the transmission of monetary policy is triggered whenever the spread between long-term and short-term interest rates decreases. This is motivated by the fact that investment decisions—and hence real activity—generally depend mostly on long-term rather than short-term financing conditions. One can see that the biggest spike in business-lending growth, during 2005, precisely coincides with the onset of a decline in the spread between loans of maturity greater than 5 years and loans with maturity less than 1 year.

Furthermore, it appears that these mechanisms were also likely to be at work at the end of 2007, in mid 2008, as well as in the year 2010. Thus, we argue that these channels are important features of the monetary transmission mechanism but do not seem to be phenomena that are restricted to periods of extremely low and stable policy interest rates.

Appendix C. Alternative Measures of Economic Conditions

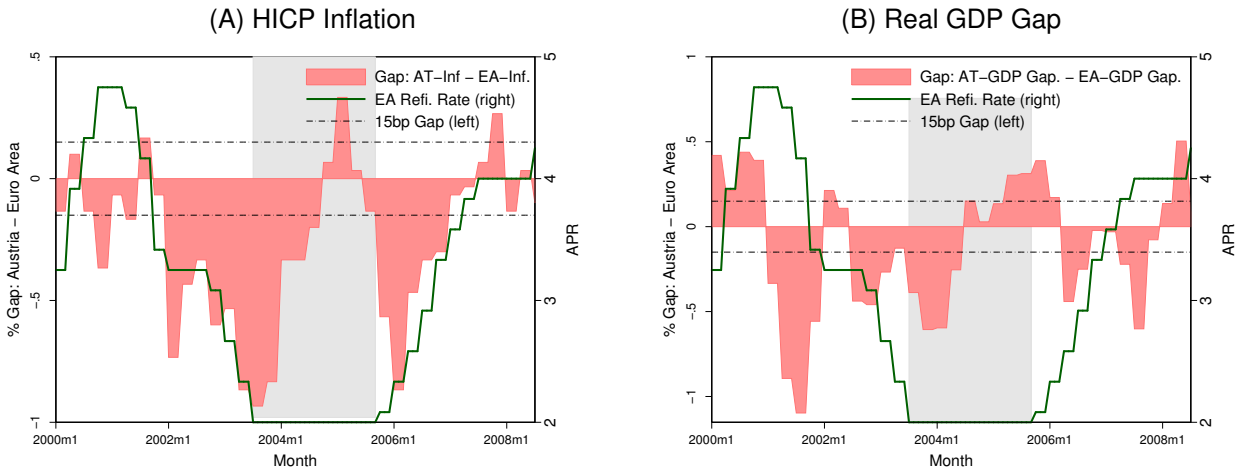
Figure C.2 illustrates the main thought experiment based on two alternative measures of the cycle: HICP inflation, and the real output gap. Since these two measures do not have a natural interpretation in terms of interest rates, it is not obvious what an appropriate value for μ is. Choosing $\mu = 0.15$ delivers a thought experiment that is very similar to our main specification. In fact, when using these two measures, the main regression results are qualitatively equivalent to those in our

Table C.2: Alternative Gap Measures ($\mu = 0.15$)

	A. Continuous Regressor (gap_t)			B. Discrete Regressor (GAP_t^{μ})		
	All	Bottom 99%	Bottom 95%	All	Bottom 99%	Bottom 95%
	(A.1)	(A.2)	(A.3)	(B.1)	(B.2)	(B.3)
A. Taylor Rule Gap ($\mu = 0.15$)						
TREAT	0.031	0.032	0.035	-0.056*	-0.057*	-0.062*
	(0.028)	(0.028)	(0.029)	(0.029)	(0.030)	(0.032)
gap	-0.027	-0.026	-0.028			
	(0.024)	(0.024)	(0.025)			
TREAT$\times$*gap*	0.12***	0.12***	0.13***			
	(0.031)	(0.031)	(0.033)			
GAP				-0.052***	-0.053***	-0.055***
				(0.017)	(0.017)	(0.018)
TREAT$\times$*GAP*				0.17***	0.18***	0.19***
				(0.041)	(0.042)	(0.044)
No. Banks	316	312	300	316	312	300
Obs.	27082	26670	25434	20305	19993	19057
B. Inflation Gap ($\mu = 0.15$)						
TREAT	0.12***	0.12***	0.13***	-0.068	-0.067	-0.069
	(0.035)	(0.036)	(0.037)	(0.051)	(0.052)	(0.054)
gap	-0.085***	-0.086***	-0.090***			
	(0.029)	(0.029)	(0.030)			
TREAT$\times$*gap*	0.22***	0.23***	0.24***			
	(0.043)	(0.043)	(0.045)			
GAP				-0.026	-0.027	-0.031
				(0.027)	(0.028)	(0.030)
TREAT$\times$*GAP*				0.13	0.13	0.14
				(0.085)	(0.087)	(0.092)
No. Banks	316	312	300	312	308	296
Obs.	27082	26670	25434	16549	16297	15541
C. GDP Gap ($\mu = 0.15$)						
TREAT	0.0036	0.0049	0.0064	-0.057	-0.057	-0.061
	(0.027)	(0.028)	(0.029)	(0.052)	(0.053)	(0.055)
gap	0.076***	0.077***	0.081***			
	(0.026)	(0.026)	(0.028)			
TREAT$\times$*gap*	0.12**	0.12**	0.12**			
	(0.044)	(0.045)	(0.048)			
GAP				0.047**	0.048**	0.051**
				(0.019)	(0.020)	(0.021)
TREAT$\times$*GAP*				0.060*	0.061*	0.065*
				(0.033)	(0.034)	(0.035)
Bank Controls	yes	yes	yes	yes	yes	yes
Bank FEs	yes	yes	yes	yes	yes	yes
AT Controls	yes	yes	yes	yes	yes	yes
Trend	yes	yes	yes	yes	yes	yes
No. Banks	316	312	300	316	312	300
Obs.	27082	26670	25434	20111	19799	18863

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. The table summarizes the main coefficients of interest. Detailed regression restuls are presented in Table E.9 in Appendix E. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Figure C.2: Economic Conditions: Austria vs. Euro Area



Notes: The figure displays the gap between a HICP inflation as well as the real output gap for Austria (AT) and the Euro Area (EA).

main specification. Table C.2 illustrates this result.

Appendix D. Alternative Taylor Rule Measures

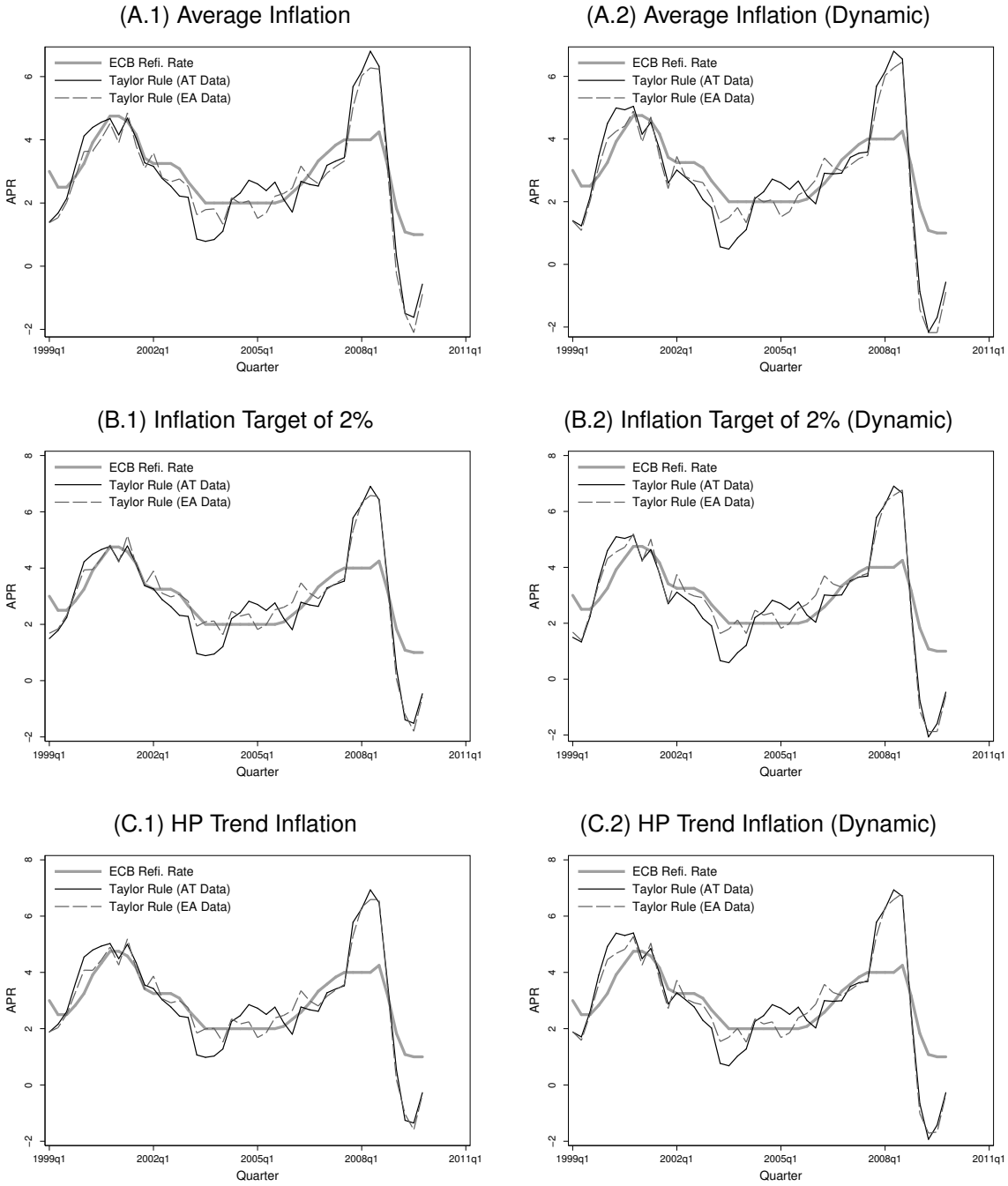
Inspired by Taylor (1993) we construct various weighted averages of inflation and output gaps, that have the dual interpretation of predicting nominal policy rates:

$$i_t^{j,TR} = \bar{r}_t^j + \bar{\pi}_t^j + (1+\phi_\pi)(\pi_t^j - \bar{\pi}_t^j) + \phi_y(y_t^j - \bar{y}_t^j) + \phi_i(i_t^{ECB} - i_{q-1}^{ECB}). \tag{D.1}$$

where i_t^{ECB} is the ECB refinancing rate, π_t^j and y_t^j represents HICP inflation and real GDP in region $j \in \{AT, EA\}$ in quarter q, respectively. $\bar{r}_t^j$, $\bar{y}_t^j$, and $\bar{\pi}_t^j$ denote equilibrium (or *target*) levels of real interest rates, real GDP, and inflation in regions j, respectively. Finally, ϕ_π, ϕ_y, and ϕ_i represent policy weights on inflation stabilization, output stabilization, and interest rate smoothing, respectively.

We consider six alternative specifications for each region in order to identify periods during which ECB monetary policy was likely to be exogenous to the Austrian economy. For each of these specifications we use Taylor's original suggestion of equal weights on on output and inflation stabilization, i.e. $\phi_\pi = \phi_y = 0.5$. Further, we approximate the equilibrium real interest rate as well as the natural level for each region j using the Hodrick-Prescott filter with a smoothing parameter of $\lambda = 1600$, i.e. $\bar{r}_t^j = \hat{\bar{r}}_t^{j,HP}$ and $\bar{y}_t^j = \hat{\bar{y}}_t^{j,HP}$. For the remaining parameters we choose the

Figure D.3: Alternative Taylor Rule Specifications



following six alternative specifications:

(A.1) We proxy the target inflation with average HICP inflation in Austria and the euro area, $\bar{\pi}_t^{AT} =$

2.23125 and $\bar{\pi}_t^{EA} = 2.6086905$, taken over the pre EMU period 1991-1998. Further, we assume the ECB does not care about interest rate smoothing, i.e. $\phi_i = 0$

(A.2) $\bar{\pi}_t^{AT} = 2.23125$, $\bar{\pi}_t^{EA} = 2.6086905$, and $\phi_i = 0.9$

(B.1) We set target inflation to 2%, i.e. $\bar{\pi}_t^{AT} = \bar{\pi}_t^{EA} = 2$, and $\phi_i = 0$

(B.2) $\bar{\pi}_t^{AT} = \bar{\pi}_t^{EA} = 2$, and $\phi_i = 0.9$

(C.1) We proxy equilibrium inflation in each region with an HP trend, i.e. $\bar{\pi}_t^{j} = \hat{\bar{r}}_t^{j,HP}$, and $\phi_i = 0$

(C.2) $\bar{\pi}_t^{j} = \hat{\bar{r}}_t^{j,HP}$, and $\phi_i = 0.9$

The alternative specifications highlight several important phenomena. First, Taylor's basic specification of $\phi_\pi = \phi_y = 0.5$ does fairly well in predicting ECB refinancing rates between 1999 and 2008. Second, interest smoothing motives, i.e. specifications with $\phi_i > 0$, do not seem to play a significant role for the purpose of our thought experiment. Finally, and most importantly for our analysis, the difference between the predictions for Austria and the euro area, $i_t^{AT,TR} - i_t^{EA,TR}$, is very robust across specifications.

Appendix E. Full Regression Tables

Table E.3: Average Effect of Lower Short Term Rate (Continuous Regressor, gap_t)

	Dependent Variable: Ex-Ante Expected Default Rate ($EDR_{b,t}$)				
	(1)	(2)	(3)	(4)	(5)
gap	-0.0087	-0.0066	-0.0031	0.033**	0.040***
	(0.019)	(0.018)	(0.020)	(0.016)	(0.015)
Bank Chash: 2		0.024	-0.0029	-0.0070	-0.0061
		(0.035)	(0.035)	(0.034)	(0.034)
Bank Chash: 3		0.069*	0.015	0.00094	0.0016
		(0.041)	(0.052)	(0.050)	(0.050)
Bank Size: 2		0.066*	-0.040	0.014	0.0069
		(0.040)	(0.060)	(0.058)	(0.058)
Bank Size: 3		0.050	-0.076	0.0057	-0.012
		(0.041)	(0.083)	(0.075)	(0.075)
Bank Capital: 2		0.043	0.017	0.012	0.0093
		(0.043)	(0.037)	(0.038)	(0.038)
Bank Capital: 3		0.070	-0.036	-0.025	-0.032
		(0.044)	(0.043)	(0.046)	(0.046)
Bank Capital: 4		0.087*	-0.023	0.0092	-0.0027
		(0.051)	(0.054)	(0.060)	(0.060)
Bank Capital: 5		0.039	-0.37	-0.30	-0.31
		(0.080)	(0.23)	(0.21)	(0.22)
AT: Real GDP Gap				-0.040***	-0.0098
				(0.014)	(0.020)
AT: HICP Inflation				0.022	0.025
				(0.016)	(0.019)
AT: 10-year yieald spread				0.032	0.037*
				(0.021)	(0.021)
Diff. 10-yr. spr. (AT vs. EA)				-0.37*	-0.011
				(0.22)	(0.15)
AT: Frac. Business Loans				0.014*	0.023**
				(0.0078)	(0.0099)
AT: GKE/Total AT Loans				-0.63	-0.86
				(0.62)	(0.63)
AT: loan growth				0.0061*	0.0038
				(0.0036)	(0.0041)
t					0.0070**
					(0.0029)
t^2					-0.000060**
					(0.000029)
Constant	0.52***	0.41***			
	(0.021)	(0.048)			
Bank FEs			yes	yes	yes
No. Banks	316	316	316	316	316
Obs.	27082	27082	27082	27082	27082

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.4: Average Effect of Lower Short Term Rate (Discrete Regressor, $GAP_t^{0.25}$)

	Dependent Variable: Ex-Ante Expected Default Rate ($EDR_{b,t}$)				
	(1)	(2)	(3)	(4)	(5)
GAP	-0.024	-0.021	-0.020	0.016	0.038
	(0.026)	(0.025)	(0.025)	(0.029)	(0.026)
Bank Chash: 2		0.019	-0.0088	-0.0022	-0.0017
		(0.039)	(0.043)	(0.043)	(0.043)
Bank Chash: 3		0.066	0.0032	0.0075	0.0083
		(0.048)	(0.059)	(0.058)	(0.058)
Bank Size: 2		0.088**	-0.0060	0.020	0.019
		(0.042)	(0.065)	(0.062)	(0.062)
Bank Size: 3		0.071	-0.029	-0.0076	-0.011
		(0.045)	(0.093)	(0.079)	(0.080)
Bank Capital: 2		0.050	0.034	0.018	0.018
		(0.040)	(0.038)	(0.038)	(0.038)
Bank Capital: 3		0.096**	-0.00063	-0.022	-0.024
		(0.042)	(0.042)	(0.046)	(0.047)
Bank Capital: 4		0.13**	0.044	0.012	0.010
		(0.050)	(0.053)	(0.058)	(0.058)
Bank Capital: 5		0.073	-0.31	-0.33	-0.33
		(0.079)	(0.25)	(0.24)	(0.24)
AT: Real GDP Gap				-0.097***	-0.056
				(0.022)	(0.056)
AT: HICP Inflation				0.070***	0.049**
				(0.026)	(0.019)
AT: 10-year yieald spread				0.0080	0.018
				(0.031)	(0.039)
Diff. 10-yr. spr. (AT vs. EA)				-0.27	-0.13
				(0.29)	(0.28)
AT: Frac. Business Loans				0.0036	0.014*
				(0.0094)	(0.0071)
AT: GKE/Total AT Loans				-2.95***	-2.76**
				(0.79)	(1.18)
AT: loan growth				0.0031	0.00072
				(0.0044)	(0.0037)
t					0.0052
					(0.0046)
t^2					-0.000045
					(0.000048)
Constant	0.56***	0.42***			
	(0.024)	(0.052)			
Bank FEs			yes	yes	yes
No. Banks	316	316	316	316	316
Obs.	15827	15827	15827	15827	15827

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficients and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.5: Split Sample: Pre/Treatment/Post

	A. Continuous Regressor (gap_t)			B. Discrete Regressor ($GAP_t^{0.25}$)		
	Pre	Treat	Post	Pre	Treat	Post
	(A.1)	(A.2)	(A.3)	(B.1)	(B.2)	(B.3)
gap	-0.024**	0.064**	0.050			
	(0.0093)	(0.024)	(0.040)			
GAP				-0.24**	0.19**	-0.46***
				(0.087)	(0.083)	(0.067)
Bank Chash: 2	-0.026	-0.043	-0.053*	0.084	-0.046	-0.066
	(0.082)	(0.083)	(0.027)	(0.089)	(0.073)	(0.040)
Bank Chash: 3	0.054	-0.13	-0.024	0.063	-0.11	-0.037
	(0.11)	(0.11)	(0.051)	(0.13)	(0.098)	(0.068)
Bank Size: 2	-0.073	-0.10	-0.0024	-0.12	-0.068	-0.033
	(0.076)	(0.074)	(0.077)	(0.093)	(0.075)	(0.086)
Bank Size: 3	-0.15	-0.23**	-0.057	-0.17	-0.22*	-0.076
	(0.10)	(0.10)	(0.082)	(0.12)	(0.12)	(0.087)
Bank Capital: 2	-0.022	0.060	0.071*	0.018	0.040	0.074
	(0.046)	(0.064)	(0.039)	(0.050)	(0.061)	(0.046)
Bank Capital: 3	-0.024	-0.032	0.014	0.011	-0.053	-0.00070
	(0.062)	(0.080)	(0.058)	(0.078)	(0.082)	(0.068)
Bank Capital: 4	-0.10	0.069	-0.040	0.016	0.013	-0.033
	(0.12)	(0.13)	(0.096)	(0.13)	(0.15)	(0.12)
Bank Capital: 5	-0.25*	-0.94	-0.18*		-0.89	-0.26*
	(0.14)	(0.74)	(0.10)		(0.67)	(0.13)
AT: Real GDP Gap	0.034	-0.024	-0.16***	0.019*	-0.12	-0.29
	(0.022)	(0.061)	(0.015)	(0.010)	(0.14)	(0.24)
AT: HICP Inflation	0.058***	-0.029	-0.0094	0.0052	-0.16	0.19*
	(0.017)	(0.044)	(0.041)	(0.028)	(0.16)	(0.10)
AT: 10-year yieald spread	0.071**	0.013	-0.15**	0.0082*	-0.056	-0.46
	(0.027)	(0.018)	(0.059)	(0.0043)	(0.084)	(0.33)
Diff. 10-yr. spr. (AT vs. EA)	0.81*	0.23	3.67***	0.21	-0.54	3.17
	(0.45)	(0.62)	(0.048)	(0.31)	(0.54)	(3.85)
AT: Frac. Business Loans	-0.0081	-0.020	0.012	0.0089	-0.015	-0.035***
	(0.0071)	(0.029)	(0.020)	(0.023)	(0.017)	(0.0098)
AT: GKE/Total AT Loans	0.64***	-0.84***	-2.52***	0.26***	-0.90***	-1.73
	(0.16)	(0.049)	(0.018)	(0.043)	(0.092)	(1.30)
AT: loan growth	-0.012**	0.0010	-0.018	0.0034	0.00011	0.0053
	(0.0046)	(0.0026)	(0.013)	(0.0024)	(0.0011)	(0.010)
t	0.0083	-0.028	-0.023	-0.0042***	0.0063	-0.047
	(0.0051)	(0.039)	(0.045)	(0.0014)	(0.012)	(0.030)
t^2	-0.000040	0.00028	0.00010	0.000039	-0.000011	0.00024
	(0.00014)	(0.00039)	(0.00027)	(0.00011)	(0.00012)	(0.00022)
Bank FEs	yes	yes	yes	yes	yes	yes
No. Banks	282	288	310	280	288	310
Obs.	9903	7186	9991	4950	5616	5260

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.6: Differential Treatment Effect (Continuous, gap_t)

	Dependent Variable: Ex-Ante Expected Default Rate ($EDR_{b,t}$)				
	(1)	(2)	(3)	(4)	(5)
TREAT	0.10***	0.10***	0.11***	0.054*	0.031
	(0.034)	(0.034)	(0.033)	(0.027)	(0.028)
gap	-0.097***	-0.089***	-0.11***	-0.055**	-0.027
	(0.026)	(0.026)	(0.025)	(0.025)	(0.024)
TREAT×*gap*	0.14***	0.13***	0.19***	0.12***	0.12***
	(0.029)	(0.031)	(0.027)	(0.028)	(0.031)
Bank Chash: 2		0.028	0.0064	-0.0062	-0.0052
		(0.035)	(0.035)	(0.034)	(0.034)
Bank Chash: 3		0.076*	0.032	0.0018	0.0026
		(0.041)	(0.050)	(0.049)	(0.051)
Bank Size: 2		0.067*	-0.042	0.0097	0.0029
		(0.039)	(0.059)	(0.058)	(0.058)
Bank Size: 3		0.044	-0.11	-0.0053	-0.022
		(0.041)	(0.074)	(0.074)	(0.075)
Bank Capital: 2		0.034	-0.0013	0.011	0.0083
		(0.044)	(0.038)	(0.038)	(0.038)
Bank Capital: 3		0.055	-0.069	-0.031	-0.038
		(0.044)	(0.045)	(0.046)	(0.047)
Bank Capital: 4		0.063	-0.075	-0.0024	-0.014
		(0.052)	(0.054)	(0.060)	(0.061)
Bank Capital: 5		0.019	-0.42*	-0.32	-0.33
		(0.082)	(0.23)	(0.22)	(0.22)
AT: Real GDP Gap				-0.021	-0.023
				(0.013)	(0.023)
AT: HICP Inflation				0.012	0.0027
				(0.015)	(0.025)
AT: 10-year yieald spread				0.027	0.037
				(0.019)	(0.024)
Diff. 10-yr. spr. (AT vs. EA)				-0.11	0.49***
				(0.17)	(0.15)
AT: Frac. Business Loans				0.015**	0.032***
				(0.0058)	(0.0069)
AT: GKE/Total AT Loans				-0.79	-1.03**
				(0.48)	(0.51)
AT: loan growth				0.0035	0.0014
				(0.0043)	(0.0044)
t					0.0034
					(0.0033)
t^2					-0.000013
					(0.000033)
Constant	0.49***	0.39***			
	(0.019)	(0.051)			
Bank FEs			yes	yes	yes
No. Banks	316	316	316	316	316
Obs.	27082	27082	27082	27082	27082

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.7: Separate Pre and Post Counterfcatuals

	A. Continuous Regressor (gap_t)			B. Discrete Regressor ($GAP_t^{0.25}$)		
	Pre-Treat	Treat-Post	Pre-Treat-Post	Pre-Treat	Treat-Post	Pre-Treat-Post
	(A.1)	(A.2)	(A.3)	(B.1)	(B.2)	(B.3)
gap	-0.027***	-0.023	-0.039***			
	(0.0079)	(0.053)	(0.010)			
TREAT	-0.051	-0.059	0.067*	-0.011	-0.31***	-0.059***
	(0.056)	(0.052)	(0.038)	(0.0071)	(0.091)	(0.015)
TREAT×*gap*	0.054**	0.098**	0.15***			
	(0.027)	(0.047)	(0.022)			
POST			0.092			0.16***
			(0.067)			(0.056)
POST×*gap*			0.022			
			(0.036)			
GAP				-0.28**	-0.18*	-0.15
				(0.13)	(0.10)	(0.091)
TREAT×*GAP*				0.33***	0.38***	0.35***
				(0.11)	(0.077)	(0.12)
POST×*GAP*						0.12
						(0.10)
Bank Chash: 2	0.028	-0.026	-0.0040	0.039	-0.042	0.0013
	(0.050)	(0.040)	(0.034)	(0.051)	(0.051)	(0.043)
Bank Chash: 3	-0.0041	-0.00076	0.0053	-0.0038	-0.014	0.013
	(0.077)	(0.069)	(0.050)	(0.080)	(0.068)	(0.058)
Bank Size: 2	-0.063	0.037	0.0031	-0.050	0.025	0.015
	(0.078)	(0.064)	(0.058)	(0.073)	(0.067)	(0.062)
Bank Size: 3	-0.068	0.091	-0.022	-0.062	0.047	-0.023
	(0.11)	(0.096)	(0.075)	(0.11)	(0.092)	(0.080)
Bank Capital: 2	-0.018	0.083**	0.0080	0.014	0.051	0.016
	(0.040)	(0.038)	(0.038)	(0.040)	(0.045)	(0.038)
Bank Capital: 3	-0.11*	0.060	-0.040	-0.082	0.028	-0.035
	(0.064)	(0.054)	(0.047)	(0.061)	(0.055)	(0.048)
Bank Capital: 4	0.027	0.11	-0.019	0.0097	0.070	-0.014
	(0.099)	(0.091)	(0.062)	(0.088)	(0.095)	(0.064)
Bank Capital: 5	-0.47**	-0.49	-0.34	-0.48	-0.52	-0.37
	(0.23)	(0.42)	(0.22)	(0.29)	(0.40)	(0.24)
AT: Real GDP Gap	0.0099	-0.085	-0.026	-0.027	-0.13*	-0.16**
	(0.033)	(0.060)	(0.022)	(0.027)	(0.069)	(0.070)
AT: HICP Inflation	0.0092	0.059**	0.0090	0.017**	0.091**	0.041*
	(0.033)	(0.022)	(0.025)	(0.0074)	(0.040)	(0.022)
AT: 10-year yieald spread	0.037	-0.064	0.035	-0.028	-0.15	-0.033
	(0.037)	(0.056)	(0.026)	(0.037)	(0.089)	(0.050)
Diff. 10-yr. spr. (AT vs. EA)	0.63***	1.42***	0.60***	0.27	2.43***	0.97***
	(0.16)	(0.10)	(0.15)	(0.20)	(0.75)	(0.29)
AT: Frac. Business Loans	0.012	0.016	0.031***	-0.0048	-0.021	0.0057
	(0.013)	(0.018)	(0.0085)	(0.013)	(0.028)	(0.012)
AT: GKE/Total AT Loans	-0.48	-2.83***	-0.85	-0.28***	-3.91***	-2.27**
	(0.58)	(0.17)	(0.54)	(0.011)	(0.89)	(1.00)
AT: loan growth	-0.0047***	-0.0048	0.0011	-0.00059	-0.0064*	-0.00022
	(0.0016)	(0.0068)	(0.0042)	(0.0017)	(0.0034)	(0.0044)
t	0.0047	0.0086	0.0028	-0.011	-0.0092	-0.011
	(0.0061)	(0.011)	(0.0032)	(0.0090)	(0.013)	(0.0082)
t^2	0.0000086	-0.000089	-0.000019	0.00012	0.0000050	0.000094
	(0.000088)	(0.000096)	(0.000033)	(0.00012)	(0.000087)	(0.000077)
Bank FEs	yes	yes	yes	yes	yes	yes
No. Banks	296	312	316	295	312	316
Obs.	17089	17178	27082	10566	10877	15827

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.8: Differential Treatment Effect (Discrete Regressor, $GAP_t^{0.25}$)

	Dependent Variable: Ex-Ante Expected Default Rate ($EDR_{b,t}$)				
	(1)	(2)	(3)	(4)	(5)
TREAT	-0.026	-0.014	-0.035*	-0.072***	-0.10***
	(0.022)	(0.025)	(0.021)	(0.021)	(0.032)
GAP	-0.12***	-0.11***	-0.13***	-0.071	-0.042
	(0.027)	(0.028)	(0.026)	(0.048)	(0.082)
TREAT × *GAP*	0.21***	0.19***	0.23***	0.16***	0.17**
	(0.035)	(0.036)	(0.037)	(0.051)	(0.085)
Bank Chash: 2		0.023	0.0029	-0.0011	-0.00038
		(0.039)	(0.043)	(0.043)	(0.043)
Bank Chash: 3		0.071	0.020	0.0086	0.0097
		(0.049)	(0.058)	(0.058)	(0.058)
Bank Size: 2		0.087**	-0.0080	0.017	0.014
		(0.042)	(0.061)	(0.062)	(0.062)
Bank Size: 3		0.060	-0.072	-0.018	-0.023
		(0.045)	(0.074)	(0.080)	(0.080)
Bank Capital: 2		0.041	0.012	0.017	0.017
		(0.041)	(0.038)	(0.038)	(0.038)
Bank Capital: 3		0.076*	-0.044	-0.028	-0.031
		(0.043)	(0.044)	(0.047)	(0.047)
Bank Capital: 4		0.094*	-0.024	0.00075	-0.0058
		(0.050)	(0.052)	(0.059)	(0.062)
Bank Capital: 5		0.044	-0.38	-0.35	-0.36
		(0.081)	(0.25)	(0.25)	(0.24)
AT: Real GDP Gap				-0.071**	-0.12**
				(0.028)	(0.059)
AT: HICP Inflation				0.042**	0.033
				(0.020)	(0.030)
AT: 10-year yieald spread				0.0099	0.0060
				(0.028)	(0.045)
Diff. 10-yr. spr. (AT vs. EA)				0.24	0.70***
				(0.25)	(0.26)
AT: Frac. Business Loans				-0.0096	0.0019
				(0.0093)	(0.0088)
AT: GKE/Total AT Loans				-1.79**	-2.56**
				(0.87)	(1.10)
AT: loan growth				0.0057	0.00081
				(0.0042)	(0.0039)
t					-0.0030
					(0.0068)
t^2					0.000049
					(0.000067)
Constant	0.56***	0.44***			
	(0.025)	(0.054)			
Bank FEs			yes	yes	yes
No. Banks	316	316	316	316	316
Obs.	15827	15827	15827	15827	15827

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.9: The Role of Firm Size (Market Share)

	A. Continuous Regressor (gap_t)			B. Discrete Regressor ($GAP_t^{0.25}$)		
	All	Bottom 99%	Bottom 95%	All	Bottom 99%	Bottom 95%
	(1)	(2)	(3)	(4)	(5)	(6)
TREAT	0.031	0.032	0.035	-0.10***	-0.11***	-0.11***
	(0.028)	(0.028)	(0.029)	(0.032)	(0.033)	(0.035)
gap	-0.027	-0.026	-0.028			
	(0.024)	(0.024)	(0.025)			
TREAT×*gap*	0.12***	0.12***	0.13***			
	(0.031)	(0.031)	(0.033)			
GAP				-0.042	-0.042	-0.048
				(0.082)	(0.084)	(0.089)
TREAT×*GAP*				0.17**	0.18**	0.20**
				(0.085)	(0.087)	(0.092)
Bank Chash: 2	-0.0052	-0.0044	-0.0034	-0.00038	0.00096	0.0029
	(0.034)	(0.035)	(0.036)	(0.043)	(0.043)	(0.044)
Bank Chash: 3	0.0026	0.0039	0.0064	0.0097	0.012	0.016
	(0.051)	(0.051)	(0.051)	(0.058)	(0.058)	(0.059)
Bank Size: 2	0.0029	0.0021	-0.00092	0.014	0.013	0.0087
	(0.058)	(0.058)	(0.059)	(0.062)	(0.062)	(0.062)
Bank Size: 3	-0.022	-0.023	-0.0012	-0.023	-0.026	-0.014
	(0.075)	(0.075)	(0.085)	(0.080)	(0.080)	(0.088)
Bank Capital: 2	0.0083	0.0082	0.0062	0.017	0.017	0.015
	(0.038)	(0.039)	(0.043)	(0.038)	(0.039)	(0.043)
Bank Capital: 3	-0.038	-0.038	-0.038	-0.031	-0.031	-0.032
	(0.047)	(0.048)	(0.051)	(0.047)	(0.048)	(0.050)
Bank Capital: 4	-0.014	-0.015	-0.019	-0.0058	-0.0079	-0.013
	(0.061)	(0.062)	(0.065)	(0.062)	(0.063)	(0.065)
Bank Capital: 5	-0.33	-0.34	-0.34	-0.36	-0.36	-0.37
	(0.22)	(0.22)	(0.22)	(0.24)	(0.24)	(0.24)
AT: Real GDP Gap	-0.023	-0.024	-0.025	-0.12**	-0.13**	-0.13**
	(0.023)	(0.023)	(0.025)	(0.059)	(0.060)	(0.063)
AT: HICP Inflation	0.0027	0.0023	0.00081	0.033	0.032	0.030
	(0.025)	(0.025)	(0.026)	(0.030)	(0.030)	(0.030)
AT: 10-year yieald spread	0.037	0.037	0.038	0.0060	0.0052	0.0039
	(0.024)	(0.025)	(0.026)	(0.045)	(0.046)	(0.048)
Diff. 10-yr. spr. (AT vs. EA)	0.49***	0.49***	0.50***	0.70***	0.71***	0.73**
	(0.15)	(0.15)	(0.16)	(0.26)	(0.27)	(0.28)
AT: Frac. Business Loans	0.032***	0.032***	0.034***	0.0019	0.0016	0.00098
	(0.0069)	(0.0070)	(0.0073)	(0.0088)	(0.0092)	(0.010)
AT: GKE/Total AT Loans	-1.03**	-1.05**	-1.13**	-2.56**	-2.62**	-2.75**
	(0.51)	(0.51)	(0.54)	(1.10)	(1.13)	(1.19)
AT: loan growth	0.0014	0.0017	0.0020	0.00081	0.00092	0.0013
	(0.0044)	(0.0045)	(0.0047)	(0.0039)	(0.0041)	(0.0045)
t	0.0034	0.0033	0.0032	-0.0030	-0.0034	-0.0041
	(0.0033)	(0.0034)	(0.0035)	(0.0068)	(0.0070)	(0.0073)
t^2	-0.000013	-0.000012	-0.0000082	0.000049	0.000053	0.000062
	(0.000033)	(0.000034)	(0.000036)	(0.000067)	(0.000069)	(0.000072)
Constant						
Bank FEs	yes	yes	yes	yes	yes	yes
No. Banks	316	312	300	316	312	300
Obs.	27082	26670	25434	15827	15587	14867

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.10: The Role of Capitalization

	A. Continuous Regressor (gap_t)			B. Discrete Regressor ($GAP_t^{0.25}$)		
	Low	Medium	High	Low	Medium	High
	(A.1)	(A.2)	(A.3)	(B.1)	(B.2)	(B.3)
Dependent Variable: Ex-Ante Expected Default Rate ($EDR_{b,t}$)						
TREAT	0.031	-0.010	0.032	-0.029	-0.060	-0.18*
	(0.035)	(0.042)	(0.068)	(0.027)	(0.060)	(0.092)
gap	-0.015	-0.051	0.046			
	(0.016)	(0.033)	(0.039)			
TREAT$\times$*gap*	0.11***	0.057	-0.021			
	(0.031)	(0.050)	(0.10)			
GAP				-0.12	-0.16	0.33
				(0.075)	(0.094)	(0.30)
TREAT$\times$*GAP*				0.25**	0.14	-0.11
				(0.094)	(0.11)	(0.23)
Bank Chash: 2	0.033	-0.048	0.0092	0.037	0.022	-0.016
	(0.061)	(0.057)	(0.055)	(0.067)	(0.066)	(0.073)
Bank Chash: 3	0.034	0.12	0.015	-0.027	0.17	0.013
	(0.081)	(0.11)	(0.068)	(0.082)	(0.12)	(0.088)
Bank Size: 2	0.058	-0.0095	-0.037	0.089	-0.033	0.060
	(0.083)	(0.070)	(0.22)	(0.081)	(0.082)	(0.20)
Bank Size: 3	0.036	-0.068	-0.087	0.060	-0.074	-0.0061
	(0.11)	(0.10)	(0.22)	(0.12)	(0.15)	(0.20)
AT: Real GDP Gap	-0.0089	0.0020	-0.050	-0.096**	-0.10	0.065
	(0.017)	(0.029)	(0.085)	(0.041)	(0.081)	(0.25)
AT: HICP Inflation	-0.028	-0.0029	0.054	-0.0042	0.032	0.048
	(0.019)	(0.020)	(0.067)	(0.034)	(0.039)	(0.051)
AT: 10-year yieald spread	0.025	0.021	0.092	-0.042	-0.018	0.24
	(0.020)	(0.034)	(0.12)	(0.026)	(0.045)	(0.26)
Diff. 10-yr. spr. (AT vs. EA)	0.63*	-0.61	1.26***	0.69*	-0.36	1.13
	(0.34)	(0.50)	(0.31)	(0.39)	(0.41)	(0.87)
AT: Frac. Business Loans	0.033***	0.0074	0.039**	0.026***	-0.036	0.065
	(0.012)	(0.011)	(0.017)	(0.0086)	(0.027)	(0.052)
AT: GKE/Total AT Loans	-1.04*	-0.86	-0.58	-2.74***	-1.87*	-0.19
	(0.56)	(0.66)	(1.47)	(0.80)	(1.04)	(2.92)
AT: loan growth	0.00086	0.0037	-0.0070	-0.0040	0.0063	-0.0030
	(0.0043)	(0.0057)	(0.010)	(0.0043)	(0.0098)	(0.0032)
t	0.0016	0.0051	0.011	-0.0095**	-0.0049	0.037
	(0.0026)	(0.0046)	(0.0092)	(0.0045)	(0.0067)	(0.030)
t^2	0.000011	-0.000054	-0.000057	0.00012**	0.000041	-0.00029
	(0.000022)	(0.000038)	(0.00010)	(0.000047)	(0.000072)	(0.00028)
Constant						
Bank FEs	yes	yes	yes	yes	yes	yes
No. Banks	202	235	211	189	230	211
Obs.	8792	9472	8817	4889	5420	5517

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.11: Alternative Gap Thresholds

	Dependent Variable: Ex-Ante Expected Default Rate ($EDR_{b,t}$)				
	(1)	(2)	(3)	(4)	(5)
A. Taylor Rule Gap: $\mu = 0.30$ *(*$GAP_t^{0.30}$*)*					
TREAT	-0.014	-0.0079	-0.027	-0.051**	-0.032
	(0.022)	(0.024)	(0.021)	(0.023)	(0.029)
GAP	-0.11***	-0.10***	-0.11***	-0.11**	-0.19**
	(0.028)	(0.028)	(0.025)	(0.041)	(0.088)
TREAT × *GAP*	0.20***	0.19***	0.24***	0.24***	0.31***
	(0.033)	(0.036)	(0.034)	(0.046)	(0.089)
No. Banks	316	316	316	316	316
Obs.	14215	14215	14215	14215	14215
B. Taylor Rule Gap: $\mu = 0.15$ *(*$GAP_t^{0.15}$*)*					
TREAT	0.0052	0.016	-0.0085	-0.036	-0.056*
	(0.032)	(0.036)	(0.030)	(0.026)	(0.029)
GAP	-0.081***	-0.070***	-0.098***	-0.072***	-0.052***
	(0.024)	(0.025)	(0.022)	(0.020)	(0.017)
TREAT × *GAP*	0.15***	0.12***	0.19***	0.17***	0.17***
	(0.028)	(0.034)	(0.027)	(0.025)	(0.041)
No. Banks	316	316	316	316	316
Obs.	20305	20305	20305	20305	20305
C. Taylor Rule Gap: $\mu = 0.10$ *(*$GAP_t^{0.10}$*)*					
TREAT	0.0044	0.012	-0.0091	-0.042	-0.066**
	(0.032)	(0.036)	(0.031)	(0.027)	(0.031)
GAP	-0.090***	-0.081***	-0.10***	-0.077***	-0.064***
	(0.023)	(0.023)	(0.021)	(0.018)	(0.015)
TREAT × *GAP*	0.15***	0.14***	0.20***	0.18***	0.19***
	(0.027)	(0.031)	(0.026)	(0.026)	(0.034)
Bank Controls		yes	yes	yes	yes
Bank FEs			yes	yes	yes
AT Controls				yes	yes
Trend					yes
No. Banks	316	316	316	316	316
Obs.	22884	22884	22884	22884	22884

Notes: The dependent variable is the ex-ante expected default rate ($EDR_{b,t}$) at the bank level. The table summarizes the main coefficients of interest. Detailed regression restuls are presented in Tables E.6 and E.8 in Appendix E. Standard errors are reported in parantheses below each coefficient and are two-way clustered on bank and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.12: Firm-Bank Level Estimates (Continuous Regressor, gap_t)

		Capitalization		
	All	Low Cap.	Med. Cap.	High Cap.
	(A.1)	(A.2)	(A.3)	(A.4)
TREAT	-0.0017	-0.00068	-0.0051	0.012
	(0.0015)	(0.00098)	(0.0047)	(0.021)
gap	0.0018	0.0010	-0.000045	-0.0075
	(0.0027)	(0.0011)	(0.0040)	(0.019)
TREAT×*gap*	0.0035**	0.0018*	0.0014	-0.00077
	(0.0015)	(0.00092)	(0.0045)	(0.016)
EA Real GDP Gap (HP)	-0.0023	-0.00056	-0.00052	-0.0067
	(0.0019)	(0.00062)	(0.0027)	(0.014)
AT - HICP Inflation	-0.0011	-0.0021	0.00058	0.020
	(0.0049)	(0.0018)	(0.0070)	(0.035)
AT Loans/Total Assets	0.00098*	0.00059**	0.0014	0.0062
	(0.00052)	(0.00027)	(0.00087)	(0.0044)
AT Loans Growth	-0.00029**	-0.000079	-0.00028	-0.0011
	(0.00014)	(0.00012)	(0.00048)	(0.00086)
AT: GKE/Total AT Loans	-0.013	-0.022	-0.057	0.019
	(0.032)	(0.020)	(0.086)	(0.31)
at_10y_spread	0.00078	-0.00021	-0.0012	0.010
	(0.0032)	(0.00095)	(0.0033)	(0.022)
at_ea_10y_spread	0.088***	0.025*	0.029	0.27
	(0.016)	(0.013)	(0.068)	(0.19)
Bank Chash: 2	-0.00060	0.00060	-0.0097	-0.0077
	(0.0045)	(0.0024)	(0.0091)	(0.011)
Bank Chash: 3	0.027**	0.023	0.045	-0.0074
	(0.012)	(0.015)	(0.029)	(0.014)
Bank Size: 2	-0.059***	-0.034*	-0.038	-0.028
	(0.016)	(0.019)	(0.024)	(0.031)
Bank Size: 3	-0.046**	-0.037*	-0.019	-0.052
	(0.018)	(0.020)	(0.029)	(0.034)
Bank Capital: 2	0.0069**			
	(0.0027)			
Bank Capital: 3	0.0080			
	(0.0057)			
Bank Capital: 4	0.0012			
	(0.013)			
Bank Capital: 5	-0.096			
	(0.065)			
t	-0.000082	-0.000036	-0.000042	-0.00058
	(0.00017)	(0.000095)	(0.00067)	(0.0014)
t^2	-0.00000034	0.00000026	-0.0000038	0.00000057
	(0.0000016)	(0.00000069)	(0.0000051)	(0.000012)
Bank FEs	yes	yes	yes	yes
Firm FEs	yes	yes	yes	yes
No. Banks	316	202	235	211
No. Firms	5396	4225	3607	2864
Obs.	551886	307212	155887	88688

Notes: The dependent variable is the ex-ante risk-weighted balance between borrower (firm) f and bank b ($RWB_{r,b,t}$) expressed as a fraction of bank b's total loan balance in month t. Standard errors are reported in parantheses below each coefficient and are multi-way clustered on bank, firm and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table E.13: Firm-Bank Level Estimates (Discrete Regressor, $GAP_t^{0.25}$)

		Capitalization		
	All	Low Cap.	Med. Cap.	High Cap.
	(A.1)	(A.2)	(A.3)	(A.4)
TREAT	-0.0028*	-0.0010	-0.0044	0.0096
	(0.0017)	(0.0014)	(0.0070)	(0.023)
GAP	-0.0026	-0.00056	0.00082	-0.017
	(0.0023)	(0.00090)	(0.0074)	(0.014)
TREAT$\times$*GAP*	0.0068***	0.0027**	0.0030	0.011
	(0.0021)	(0.0013)	(0.0063)	(0.019)
EA Real GDP Gap (HP)	-0.0026***	-0.00081*	-0.0031*	-0.0096
	(0.00070)	(0.00042)	(0.0019)	(0.0068)
AT - HICP Inflation	0.0028	-0.00033	-0.0013	0.016
	(0.0029)	(0.00086)	(0.0060)	(0.010)
AT Loans/Total Assets	0.0020**	0.00083**	0.0042**	0.010**
	(0.00079)	(0.00035)	(0.0020)	(0.0043)
AT Loans Growth	-0.000054	0.000049	-0.000068	-0.00026
	(0.00015)	(0.00012)	(0.00035)	(0.00089)
AT: GKE/Total AT Loans	0.029	-0.0019	0.096	0.42
	(0.023)	(0.020)	(0.10)	(0.31)
at_10y_spread	0.00088	-0.00032	-0.0045	0.0075
	(0.0023)	(0.00069)	(0.0030)	(0.018)
at_ea_10y_spread	0.073***	0.016	0.041	0.21
	(0.018)	(0.012)	(0.063)	(0.16)
Bank Chash: 2	0.00020	0.00051	-0.0092	-0.0063
	(0.0044)	(0.0025)	(0.0083)	(0.011)
Bank Chash: 3	0.023**	0.023*	0.040	-0.0057
	(0.012)	(0.014)	(0.025)	(0.015)
Bank Size: 2	-0.061***	-0.029*	-0.043*	-0.037
	(0.015)	(0.016)	(0.024)	(0.033)
Bank Size: 3	-0.045**	-0.031*	-0.021	-0.064*
	(0.017)	(0.017)	(0.028)	(0.036)
Bank Capital: 2	0.0073***			
	(0.0026)			
Bank Capital: 3	0.0092*			
	(0.0055)			
Bank Capital: 4	0.0056			
	(0.012)			
Bank Capital: 5	-0.10			
	(0.074)			
t	-0.00047**	-0.00020**	-0.00081	-0.0015
	(0.00019)	(0.000095)	(0.00058)	(0.0014)
t^2	0.0000032*	0.0000017**	0.0000043	0.000011
	(0.0000019)	(0.00000081)	(0.0000043)	(0.000013)
Bank FEs	yes	yes	yes	yes
Firm FEs	yes	yes	yes	yes
No. Banks	316	201	235	211
No. Firms	5383	4208	3591	2855
Obs.	445018	251556	116644	76714

Notes: The dependent variable is the ex-ante risk-weighted balance between borrower (firm) f and bank b ($RWB_{r,b,t}$) expressed as a fraction of bank b's total loan balance in month t. Standard errors are reported in parantheses below each coefficient and are multi-way clustered on bank, firm and year-month following Cameron et al. (2011). Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

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