

Monetary Policy and Bank Profitability

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Motivation

- Profitability influences banks' ability to build capital internally:
 - Withstand adverse shocks
 - Provide credit
- Due to key role for banks' capital, it is important for
 - Transmission of monetary policy (Peek and Rosengren, 2013)
 - Financial stability (Dell'Araccia et al., 2017)

Research Questions

- What are the effects of **monetary policy** changes on banks' profitability?
 - MP: short-term interest rate, slope of the yield curve
 - Profitability: ROA and its components
- What is the role of **bank-specific characteristics** in the transmission?
 - Business model, charter (home or foreign)
 - Capital, lending activity, reliance on deposits, efficiency, loan performance

Effects of MP on Banks' Profitability

- Theoretically, effect of MP on bank profitability is ambiguous
 - (-) Loose financial conditions → Higher ROA
 - (+) Lower net interest margin → Lower ROA

Effects of MP on Banks' Profitability

- Theoretically, effect of MP on bank profitability is ambiguous
 - (-) Loose financial conditions → Higher ROA
 - (+) Lower net interest margin → Lower ROA
- Mixed evidence on the effects of MP on bank profitability
 - Negative effect (-): English et al. (2018)
 - Positive effect (+): Claessens et al. (2018) -especially at low interest rates-
 - Reversal effect (-, +): Ampudia and Van den Heuvel (2018), Yuan (2019)
 - No effect: Altavilla et al. (2018), Drechsler et al. (2018)

Why Mexico?

- Granularity of bank-level data
- Frequency of data: monthly vs quarterly (or even yearly)
- ‘Easy’ to classify banks by business model
- Domestic and foreign banks subject to the same regulation
 - Foreign banks operate through subsidiaries (branches not allowed)
- Not constrained by the zero lower bound (ZLB)

Baseline Model

$$Y_{i,t} = \alpha_i + \beta_1 Lvl_t + \beta_2 Slp_t + \Omega X_t + \Phi Z_{i,t-1} + \varepsilon_{i,t}$$

- Y : Return on assets (ROA), and its **components**
- α_i : Bank fixed effect
- Lvl_t : Monetary policy rate proxy (Cetes 28D)
- Slp_t : Term spread (10-year minus 3-month), and its **components**
- X_t : Macroeconomic variables
- $Z_{i,t-1}$: Bank-specific variables

ROA Components

- Income
 - Net interest margin (NIM)
 - Interest income (II)
 - Interest expense (IE)
 - Non-interest income (NNI)
- Provisions (PROV)
- Operating costs (OC)

Controls

- Macroeconomic controls:
 - Global: Volatility index (VIX)
 - Domestic: inflation, growth in IGAE, exchange rate (MXN per USD)
 - Current and 1-year ahead expectations ▶ 1Y Expectations
- Bank-specific controls:
 - Loans-to-assets, equity-to-assets, deposits-to-liabilities, costs-to-income, non-performing loans (NPL)

Data

- Monthly data from January 2001 to May 2019
- CNBV (Base Pública): ROA, components and bank-specific controls
- Inegi: Inflation, IGAE
- Banxico: Cetes 28D, Survey of Professional Forecasters (EEEEESP)
- Bloomberg:
 - VIX, FX
 - Term spread (10Y-3M) and components: Own calculations

ROA

	(1)	(2)	(3)	(4)	(5)
ROA Lagged	0.963*** (0.004)	0.963*** (0.004)	0.963*** (0.004)	0.953*** (0.004)	0.953*** (0.004)
Short-term Rate	0.001 (0.021)	0.009 (0.023)	0.004 (0.026)	0.002 (0.026)	0.001 (0.025)
Slope	0.022 (0.027)	0.020 (0.027)	0.010 (0.029)	0.005 (0.033)	0.005 (0.032)
VIX		0.002 (0.004)	0.001 (0.004)	0.002 (0.004)	0.001 (0.004)
IGAE Annual Growth		0.011 (0.010)	0.004 (0.015)	0.009 (0.016)	
Inflation		-0.022 (0.027)	-0.021 (0.031)	-0.011 (0.028)	
RFX		-0.002 (0.006)	-0.005 (0.007)	-0.001 (0.009)	
Expected Real GDP Growth			0.021 (0.038)	0.016 (0.039)	0.035 (0.023)
Expected Inflation			0.051 (0.093)	0.043 (0.099)	0.026 (0.094)
Expected RFX			0.010 (0.014)	0.007 (0.012)	0.008 (0.011)
Equity-to-Assets Ratio				-0.003 (0.003)	-0.003 (0.003)
Loans-to-Assets Ratio				0.000 (0.002)	0.000 (0.002)
Deposits-to-Liabilities Ratio				0.001 (0.002)	0.001 (0.002)
Costs-to-Income Ratio				0.000 (0.000)	0.000 (0.000)
NPL Ratio				-0.012** (0.005)	-0.012** (0.005)
Observations	6,339	6,339	6,339	5,687	5,687
Number of Banks	50	50	50	47	47
Bank FE	Yes	Yes	Yes	Yes	Yes

Dep. variable: ROA.

Bootstrapped standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

ROA Components

	ROA	NIM	NNI	PROV	OC
Y Lagged	0.953*** (0.004)	0.396*** (0.010)	0.268*** (0.011)	0.314*** (0.011)	0.671*** (0.009)
Short-term Rate	0.002 (0.026)	0.038 (0.057)	0.131 (0.080)	0.026 (0.071)	0.076 (0.088)
Slope	0.005 (0.033)	-0.069 (0.089)	0.172 (0.127)	-0.007 (0.113)	-0.002 (0.135)
VIX	0.002 (0.004)	0.019* (0.011)	0.039** (0.016)	0.044*** (0.014)	0.017 (0.017)
IGAE Annual Growth	0.009 (0.016)	-0.047 (0.045)	0.112* (0.063)	-0.091 (0.057)	0.024 (0.067)
Inflation	-0.011 (0.028)	0.002 (0.079)	-0.038 (0.111)	0.132 (0.100)	0.068 (0.119)
RFX	-0.001 (0.009)	-0.005 (0.022)	0.015 (0.032)	-0.019 (0.028)	0.013 (0.034)
Expected Real GDP Growth	0.016 (0.039)	0.184* (0.099)	-0.218 (0.140)	0.090 (0.125)	-0.051 (0.150)
Expected Inflation	0.043 (0.099)	-0.130 (0.294)	0.331 (0.416)	-0.041 (0.372)	0.071 (0.449)
Expected RFX	0.007 (0.012)	-0.077** (0.036)	0.009 (0.051)	0.001 (0.046)	0.024 (0.055)
Equity-to-Assets Ratio	-0.003 (0.003)	0.021*** (0.007)	0.045*** (0.009)	0.009 (0.008)	0.089*** (0.010)
Loans-to-Assets Ratio	0.000 (0.002)	0.049*** (0.006)	0.033*** (0.008)	0.045*** (0.007)	-0.008 (0.008)
Deposits-to-Liabilities Ratio	0.001 (0.002)	-0.004 (0.004)	-0.036*** (0.006)	-0.007 (0.006)	-0.022*** (0.007)
Costs-to-Income Ratio	0.000 (0.000)	-0.000 (0.000)	-0.001** (0.001)	-0.000 (0.000)	0.005*** (0.001)
NPL Ratio	-0.012** (0.005)	0.010 (0.013)	0.120*** (0.019)	0.038** (0.017)	0.041** (0.020)
Observations	5,687	5,924	5,924	5,924	5,924
Number of Banks	47	47	47	47	47
Bank FE	Yes	Yes	Yes	Yes	Yes

Bootstrapped errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

NIM Components

	NIM	II	IE
Y Lagged	0.396*** (0.010)	0.114*** (0.011)	0.056*** (0.012)
Short-term Rate	0.038 (0.057)	0.514*** (0.117)	0.459*** (0.134)
Slope	-0.069 (0.089)	-0.041 (0.186)	0.018 (0.213)
VIX	0.019* (0.011)	0.049** (0.023)	0.021 (0.026)
IGAE Annual Growth	-0.047 (0.045)	-0.181* (0.093)	-0.067 (0.107)
Inflation	0.002 (0.079)	0.154 (0.163)	0.128 (0.187)
RFX	-0.005 (0.022)	0.024 (0.046)	0.036 (0.053)
Expected Real GDP Growth	0.184* (0.099)	0.633*** (0.205)	0.285 (0.234)
Expected Inflation	-0.130 (0.294)	-0.823 (0.607)	-0.443 (0.696)
Expected RFX	-0.077** (0.036)	0.162** (0.075)	0.224*** (0.086)
Equity-to-Assets Ratio	0.021*** (0.007)	-0.028** (0.014)	-0.064*** (0.016)
Loans-to-Assets Ratio	0.049*** (0.006)	0.077*** (0.012)	0.002 (0.013)
Deposits-to-Liabilities Ratio	-0.004 (0.004)	-0.008 (0.009)	-0.003 (0.011)
Costs-to-Income Ratio	-0.000 (0.000)	-0.000 (0.001)	-0.000 (0.001)
NPL Ratio	0.010 (0.013)	-0.019 (0.027)	-0.029 (0.031)
Observations	5,924	5,924	5,924
Number of Banks	47	47	47
Bank FE	Yes	Yes	Yes

Bootstrapped errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

Yield Curve Components

- Risk-free zero-coupon yields can be decomposed into:
 - Expected short-term interest rate ▸ 1Y Expectation
 - Term premium
- Therefore, the slope (10Y-3M) can be decomposed into:
 - Spread in the expectation for the short-term interest rate
 - Spread in the term premium

NIM Components and YC Components

	NIM	II	IE
Y Lagged	0.396*** (0.010)	0.115*** (0.011)	0.056*** (0.012)
Short-term Rate	-0.008 (0.112)	0.628*** (0.231)	0.622** (0.270)
Slope-Expectation	-0.168 (0.242)	0.208 (0.498)	0.364 (0.581)
Slope-Term Premium	-0.048 (0.103)	-0.052 (0.212)	-0.014 (0.248)
Observations	5,924	5,924	5,924
Number of Banks	47	47	47
Macro Controls	Yes	Yes	Yes
BSC Controls	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes

Bootstrapped standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Deposits Channel of MP

- Proposed by Drechsler, Savov & Schnabl (2017), tested by DSS (2018)
- Banks unexposed to interest rate risk
 - Market power over deposits lowers sensitivity of banks' expenses
- Maturity transformation *hedges* banks' interest rate risk
 - Banks invest in long-term assets to hedge their deposit franchise
- DC might be behind (Stein, 2018):
 - Bank-lending *and* risk-taking channels of MP

Testing the Deposits Channel: Cross-Section

- Following Drechsler et al. (2018):

$$\Delta Y_{i,t} = \delta_i + \sum_{\tau=0}^{11} \beta_{i,\tau}^Y \Delta Cetes28_{i,t-\tau} + \nu_{i,t}$$

where $\beta_i^Y = \sum_{\tau=0}^{11} \beta_{i,\tau}^Y$ is the interest rate sensitivity of variable Y of bank i

$$\beta_i^Y = c + \gamma \beta_i^{IE} + u_i$$

- DC theory implies that $\gamma = 1$ when Y refers to Π , otherwise $\gamma = 0$

Deposits Channel: Cross-Sectional Evidence

	β^{ROA}	β^{II}	β^{NIM}	β^{NNI}	β^{PROV}	β^{OC}
H_0	$\gamma = 0$	$\gamma = 1$	$\gamma = 0$	$\gamma = 0$	$\gamma = 0$	$\gamma = 0$
β^{IE}	-0.050 (0.071)	0.857** (0.067)	-0.143** (0.067)	-0.260 (0.511)	-0.095 (0.079)	-0.308 (0.387)
Observations	50	50	50	50	50	50
R-squared	0.001	0.608	0.041	0.013	0.006	0.010

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Testing the Deposits Channel: Panel

- Following Drechsler et al. (2018):

$$\Delta IE_{i,t} = \alpha_i + \eta_t + \sum_{\tau=0}^{11} \beta_{i,\tau}^Y \Delta Cetes28_{i,t-\tau} + \xi_{i,t}$$

$$\Delta II_{i,t} = \lambda_i + \theta_t + \gamma \widehat{\Delta IE_{i,t}} + \omega_{i,t}$$

- DC theory implies that $\gamma = 1$

Deposits Channel: Panel Evidence

	$\Delta ROA_{i,t}$	$\Delta II_{i,t}$
H_0	$\gamma = 0$	$\gamma = 1$
$\Delta \widehat{IE}_{i,t}$	0.407 (0.374)	3.559** (1.203)
Observations	6,974	7,307
R-squared	0.034	0.029
Number of Banks	50	50
Bank FE	Yes	Yes
Time FE	Yes	Yes

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

CNBV Classification

- G7: Largest banks (C - consolidated, U - unconsolidated)
- FX: Foreign exchange-oriented banks
- INV: Investment-oriented banks
- MED: Medium-sized banks
- SML: Small-sized banks
- HH: Household-oriented banks

Deposits Channel per Business Model: ROA

	$\Delta ROA_{i,t}$						
	G7-C	G7-U	FX	INV	MED	SML	HH
$\Delta \widehat{IE}_{i,t}$	-0.156 (0.329)	-0.315 (0.242)	-0.096** (0.027)	0.349 (0.186)	-0.000 (0.029)	2.091 (1.793)	-0.802 (5.810)
Observations	704	1,463	546	1,512	971	1,211	1,189
R-squared	0.559	0.141	0.865	0.149	0.226	0.164	0.162
Number of Banks	7	7	4	8	5	9	9
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

$H_0 : \gamma = 0$.

Robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Does Matching Depend on the Business Model?

	$\Delta II_{i,t}$						
	G7-C	G7-U	FX	INV	MED	SML	HH
$\Delta \widehat{IE}_{i,t}$	1.543** (0.163)	1.556 (0.441)	-21.200* (8.541)	16.410 (17.926)	1.339 (0.244)	-22.201*** (4.920)	7.366*** (0.270)
Observations	766	1,477	578	1,552	989	1,277	1,272
R-squared	0.478	0.275	0.252	0.110	0.381	0.185	0.193
Number of Banks	7	7	4	8	5	9	9
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

$H_0 : \gamma = 1.$

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Deposits Channel per Charter (Home or Foreign)

- Extend the DSS two-stage framework as follows:

$$\Delta IE_{i,t} = \alpha_i + \eta_t + \sum_{\tau=0}^{11} \beta_{i,\tau}^Y \Delta Cetes28_{i,t-\tau} + \xi_{i,t}$$

$$\Delta II_{i,t} = \lambda_i + \theta_t + \gamma_1 \widehat{\Delta IE}_{i,t} + \gamma_2 \widehat{\Delta IE}_{i,t} * F + \omega_{i,t}$$

- If subsidiaries are no different from domestic banks, $\gamma_2 = 0$

Deposits Channel per Charter: ROA

	$\Delta ROA_{i,t}$				
	G7-C	G7-U	INV	SML	HH
$\Delta \widehat{IE}_{i,t}$	-0.093 (0.326)	-0.340 (0.251)	0.344 (0.187)	2.079 (1.796)	-1.006 (5.767)
$\Delta \widehat{IE}_{i,t} * F$	-0.079** (0.030)	0.036 (0.030)	0.009 (0.009)	0.041 (0.067)	0.106 (0.109)
Observations	704	1,463	1,512	1,211	1,189
R-squared	0.560	0.142	0.152	0.164	0.163
Number of Banks	7	7	8	9	9
Bank FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes

$H_0 : \gamma_1 = 0, H_0 : \gamma_2 = 0.$

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Does Matching Depend on the Charter?

	$\Delta II_{i,t}$				
	G7-C	G7-U	INV	SML	HH
$\Delta \widehat{IE}_{i,t}$	2.574*** (0.318)	2.081* (0.446)	15.382 (18.063)	-21.499*** (5.361)	7.687*** (0.513)
$\Delta \widehat{IE}_{i,t} * F$	-1.076*** (0.181)	-0.735*** (0.182)	1.639 (1.186)	-1.247*** (0.312)	-0.339 (0.540)
Observations	766	1,477	1,552	1,277	1,272
R-squared	0.498	0.286	0.200	0.205	0.193
Number of Banks	7	7	8	9	9
Bank FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes

$H_0 : \gamma_1 = 1, H_0 : \gamma_2 = 0.$

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Future Work

- More direct identification of MP shocks (MX, US)
- Why domestic G7 banks don't match their interest income and expenses?
- Maturity gap can provide further insights into the analysis
- Effects of yield curve components on credit growth

Conclusions

- Away from the ZLB, banks insulate ROA from MP changes
- Strategies to insulate ROA can **coexist** in a banking system. Banks:
 1. Match interest income and interest expenses so NIM not affected by MP
 2. Adjust non-interest income, provisions and/or costs to offset MP effects on NIM
- First test of the deposits channel in **emerging markets**
- Effects of MP depend on:
 - **Business model, country of origin**, bank-specific characteristics

Appendix

Summary Statistics

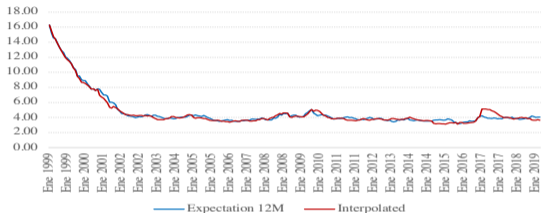
	Obs	Mean	SD	Min	Max
Cetes 28D	222	6.16	2.54	2.67	17.89
Slope (10Y-3M)	183	1.56	1.16	-0.49	3.63
VIX	222	19.45	8.08	9.51	59.89
IGAE Growth	221	1.95	2.46	-8.28	7.53
Inflation	222	4.39	1.13	2.13	8.96
FX Return	221	0.32	3.07	-7.36	15.92
Expected Real GDP Growth	222	2.93	1.08	-2.13	4.61
Expected Inflation	222	4.06	0.73	3.19	7.81
Expected FX Return	221	0.30	1.79	-4.84	11.54

◀ Data

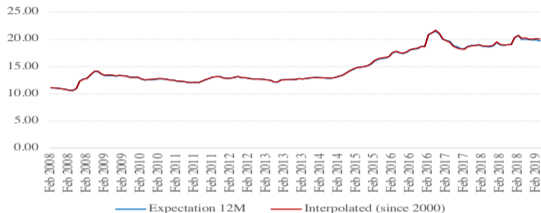
1-Year Ahead Expectations

◀ Controls

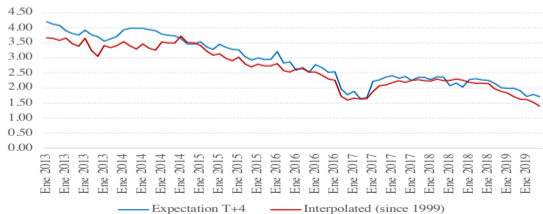
Expected Inflation



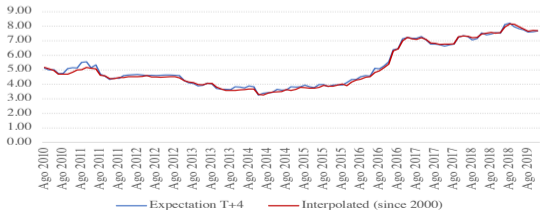
Expected FX



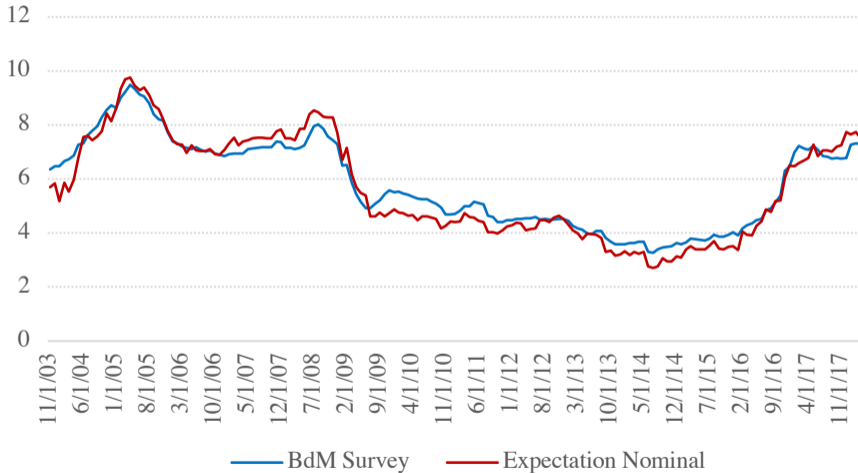
Expected Real GDP Growth



Expected Cetes 28D



1Y Ahead Expectation of Short-Term Rate



◀ Main

Estimation

- Micro panels: large N , small T
 - FE estimator inconsistent for large- N /finite- T dynamic panels (Nickell, 1981)
 - IV-GMM: Anderson-Hsiao (1982), Arellano-Bond (1991), Blundell-Bond (1998)
- Macro panels: small N , large T
 - Bias-corrected FE: Kiviet (1995, 1999), Bun-Kiviet (2003), Bruno (2005)
 - Monte Carlo evidence ($T = 20, 40$) supports the bias-corrected FE estimator

Does Matching Depend on the Charter?

$$Y_{i,t} = \alpha_i + \beta_1 Lvl_t + \beta_2 Slp_t + \Omega X_t + \Phi Z_{i,t-1} + [\beta'_1 Lvl_t + \beta'_2 Slp_t + \Phi' Z_{i,t-1}] * F + \varepsilon_{i,t}$$

- Y : NIM, and its **components**
- F : Dummy variable for subsidiaries of foreign banks

	NIM	II	IE	OC
Y lagged	0.418*** (0.036)	0.319*** (0.035)	0.576*** (0.031)	0.250*** (0.038)
Short-term Rate	0.282*** (0.108)	0.687*** (0.125)	0.240*** (0.064)	0.098 (0.145)
Slope	0.193 (0.172)	0.297 (0.192)	0.084 (0.097)	0.037 (0.250)
(Short-term Rate)x(F)	-0.221* (0.113)	-0.340*** (0.124)	-0.070 (0.066)	-0.072 (0.157)
(Slope)x(F)	-0.159 (0.180)	-0.262 (0.201)	-0.088 (0.102)	0.023 (0.262)
Equity-to-Assets Ratio	0.006 (0.054)	-0.051 (0.060)	-0.061** (0.030)	0.024 (0.079)
Loans-to-Assets Ratio	-0.014 (0.021)	0.008 (0.023)	0.007 (0.012)	-0.004 (0.030)
Deposits-to-Liabilities Ratio	-0.004 (0.018)	-0.020 (0.020)	-0.011 (0.011)	-0.002 (0.027)
Costs-to-Income Ratio	-0.001 (0.003)	-0.004 (0.003)	-0.002 (0.002)	0.001 (0.004)
NPL Ratio	-0.206 (0.178)	-0.310 (0.198)	-0.081 (0.101)	-0.096 (0.260)
(Equity-to-Assets Ratio)x(F)	-0.021 (0.070)	0.048 (0.077)	0.052 (0.039)	-0.040 (0.103)
(Loans-to-Assets Ratio)x(F)	0.028 (0.025)	0.013 (0.027)	-0.002 (0.014)	-0.005 (0.035)
(Deposits-to-Liabilities Ratio)x(F)	0.039* (0.020)	0.052** (0.023)	0.002 (0.012)	0.069** (0.030)
(Costs-to-Income Ratio)x(F)	-0.015* (0.008)	-0.008 (0.009)	0.009* (0.005)	0.002 (0.012)
(NPL Ratio)x(F)	0.210 (0.173)	0.355* (0.193)	0.103 (0.098)	0.144 (0.253)
Observations	714	714	714	714
Number of Banks	7	7	7	7
Macro controls	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes

Bootstrapped standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Does Transmission Depend on Bank-Specific Characteristics?

$$Y_{i,t} = \alpha_i + \beta_1 Lvl_t + \beta_2 Slp_t + \Omega X_t + \Phi Z_{i,t-1} + \Gamma_1 (Lvl_t * Z_{i,t-1}) + \Gamma_2 (Slp_t * Z_{i,t-1}) + \varepsilon_{i,t}$$

$$Y_{i,t} = \alpha_i + \beta_1 Lvl_t + \beta_2 Slp_t + \Omega X_t + \Phi Z_{i,t-1} + \Gamma_1 (Lvl_t * Z_{i,t-1}) + \Gamma_2 (Slp_t * Z_{i,t-1}) \\ + \left[\beta'_1 Lvl_t + \beta'_2 Slp_t + \Phi' Z_{i,t-1} + \Gamma'_1 (Lvl_t * Z_{i,t-1}) + \Gamma'_2 (Slp_t * Z_{i,t-1}) \right] * F + \varepsilon_{i,t}$$

Does Transmission Depend on Bank-Specific Characteristics?

- MP effects on profitability depend on BSC, especially for non-G7 banks ▶ BSC
 - **Example:** MP easing increases NIM of G-7 banks with low NPL ratio, due to II
- For non-G7 banks, MP effects on profitability depend on BSC *and* whether a bank is a subsidiary ▶ BSC*F
 - **Example:** MP influences all ROA components of subsidiaries with low NPL ratio. With MP easing:
 - NIM, PROV and OC increase while NNI decreases

	ROA	NIM	NNI	PROV	OC
(Short-term Rate)x(Equity-to-Assets Ratio)	0.004** (0.002)	0.012** (0.005)	-0.005 (0.008)	0.001 (0.006)	0.010 (0.007)
(Short-term Rate)x(Loans-to-Assets Ratio)	-0.002** (0.001)	-0.001 (0.003)	-0.006* (0.004)	0.009*** (0.003)	-0.002 (0.003)
(Short-term Rate)x(Deposits-to-Liabilities Ratio)	0.001 (0.001)	-0.002 (0.003)	-0.003 (0.004)	-0.004 (0.003)	0.003 (0.003)
(Short-term Rate)x(Costs-to-Income Ratio)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.003*** (0.000)
(Short-term Rate)x(NPL Ratio)	-0.006* (0.003)	-0.014 (0.012)	0.041** (0.017)	0.028** (0.013)	-0.000 (0.014)
(Slope)x(Equity-to-Assets Ratio)	0.006** (0.003)	0.004 (0.009)	0.018 (0.013)	-0.005 (0.010)	0.025** (0.011)
(Slope)x(Loans-to-Assets Ratio)	-0.003** (0.001)	-0.001 (0.004)	-0.014** (0.006)	0.007 (0.004)	-0.005 (0.005)
(Slope)x(Deposits-to-Liabilities Ratio)	0.001 (0.001)	-0.002 (0.004)	0.003 (0.006)	-0.004 (0.005)	0.007 (0.005)
(Slope)x(Costs-to-Income Ratio)	0.000 (0.000)	0.000 (0.001)	-0.001 (0.001)	0.001 (0.001)	-0.002*** (0.001)
(Slope)x(NPL Ratio)	-0.000 (0.005)	-0.021 (0.021)	-0.002 (0.030)	0.032 (0.023)	-0.020 (0.026)
Observations	5,687	5,924	5,924	5,924	5,924
Number of Banks	47	47	47	47	47
Macro Controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes

Bootstrapped errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

	ROA	NIM	NNI	PROV	OC
(Short-term Rate)x(Equity-to-Assets Ratio)	-0.003 (0.011)	0.018 (0.011)	0.054 (0.056)	-0.012 (0.031)	0.029* (0.016)
(Short-term Rate)x(Loans-to-Assets Ratio)	0.003 (0.005)	-0.001 (0.006)	0.003 (0.033)	-0.002 (0.019)	-0.005 (0.009)
(Short-term Rate)x(Deposits-to-Liabilities Ratio)	-0.003 (0.005)	0.009 (0.006)	0.015 (0.029)	0.011 (0.016)	0.007 (0.008)
(Short-term Rate)x(Costs-to-Income Ratio)	-0.001 (0.003)	-0.004 (0.005)	0.005 (0.026)	-0.010 (0.014)	0.005 (0.007)
(Short-term Rate)x(NPL Ratio)	0.029 (0.026)	0.096*** (0.035)	0.029 (0.179)	0.153 (0.101)	0.052 (0.052)
(Slope)x(Equity-to-Assets Ratio)	-0.002 (0.017)	0.018 (0.018)	0.088 (0.093)	0.003 (0.052)	0.013 (0.027)
(Slope)x(Loans-to-Assets Ratio)	0.008 (0.007)	-0.009 (0.007)	0.010 (0.040)	-0.039* (0.023)	0.002 (0.011)
(Slope)x(Deposits-to-Liabilities Ratio)	-0.007 (0.007)	0.007 (0.009)	0.008 (0.049)	0.018 (0.028)	-0.003 (0.014)
(Slope)x(Costs-to-Income Ratio)	0.000 (0.005)	-0.007 (0.007)	0.007 (0.036)	-0.014 (0.020)	0.007 (0.010)
(Slope)x(NPL Ratio)	0.051 (0.035)	0.059 (0.053)	-0.034 (0.281)	-0.005 (0.159)	0.045 (0.080)
Observations	654	714	714	714	714
Number of Banks	7	7	7	7	7
Macro Controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes

Bootstrapped standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

	NIM	II	IE
(Short-term Rate)x(Equity-to-Assets Ratio)	0.018 (0.011)	0.035** (0.013)	0.009 (0.007)
(Short-term Rate)x(Loans-to-Assets Ratio)	-0.001 (0.006)	0.002 (0.008)	0.005 (0.004)
(Short-term Rate)x(Deposits-to-Liabilities Ratio)	0.009 (0.006)	0.008 (0.007)	-0.005 (0.003)
(Short-term Rate)x(Costs-to-Income Ratio)	-0.004 (0.005)	0.002 (0.006)	0.006* (0.003)
(Short-term Rate)x(NPL Ratio)	0.096*** (0.035)	0.093** (0.042)	-0.002 (0.021)
(Slope)x(Equity-to-Assets Ratio)	0.018 (0.018)	0.041* (0.021)	0.016 (0.010)
(Slope)x(Loans-to-Assets Ratio)	-0.009 (0.007)	-0.004 (0.009)	0.004 (0.004)
(Slope)x(Deposits-to-Liabilities Ratio)	0.007 (0.009)	0.003 (0.011)	-0.005 (0.005)
(Slope)x(Costs-to-Income Ratio)	-0.007 (0.007)	0.002 (0.008)	0.007* (0.004)
(Slope)x(NPL Ratio)	0.059 (0.053)	0.058 (0.064)	0.001 (0.031)
Observations	714	714	714
Number of Banks	7	7	7
Macro Controls	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes

Bootstrapped standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

	ROA	NIM	NNI	PROV	OC
(Short-term Rate)x(Equity-to-Assets Ratio)	-0.003 (0.011)	0.018 (0.011)	0.054 (0.056)	-0.012 (0.031)	0.029* (0.016)
(Short-term Rate)x(Loans-to-Assets Ratio)	0.003 (0.005)	-0.001 (0.006)	0.003 (0.033)	-0.002 (0.019)	-0.005 (0.009)
(Short-term Rate)x(Deposits-to-Liabilities Ratio)	-0.003 (0.005)	0.009 (0.006)	0.015 (0.029)	0.011 (0.016)	0.007 (0.008)
(Short-term Rate)x(Costs-to-Income Ratio)	-0.001 (0.003)	-0.004 (0.005)	0.005 (0.026)	-0.010 (0.014)	0.005 (0.007)
(Short-term Rate)x(NPL Ratio)	0.029 (0.026)	0.096*** (0.035)	0.029 (0.179)	0.153 (0.101)	0.052 (0.052)
(Slope)x(Equity-to-Assets Ratio)	-0.002 (0.017)	0.018 (0.018)	0.088 (0.093)	0.003 (0.052)	0.013 (0.027)
(Slope)x(Loans-to-Assets Ratio)	0.008 (0.007)	-0.009 (0.007)	0.010 (0.040)	-0.039* (0.023)	0.002 (0.011)
(Slope)x(Deposits-to-Liabilities Ratio)	-0.007 (0.007)	0.007 (0.009)	0.008 (0.049)	0.018 (0.028)	-0.003 (0.014)
(Slope)x(Costs-to-Income Ratio)	0.000 (0.005)	-0.007 (0.007)	0.007 (0.036)	-0.014 (0.020)	0.007 (0.010)
(Slope)x(NPL Ratio)	0.051 (0.035)	0.059 (0.053)	-0.034 (0.281)	-0.005 (0.159)	0.045 (0.080)
Observations	654	714	714	714	714
Number of Banks	7	7	7	7	7
Macro Controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes

Bootstrapped standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Table 1: G7: ROA Components, Monetary Policy and Bank-Specific Characteristics.

	ROA	NIM	NNI	PROV	OC
(Short-term Rate)x(Equity-to-Assets Ratio)x(F)	0.041 (0.044)	0.007 (0.051)	0.118 (0.205)	0.137 (0.120)	-0.002 (0.074)
(Short-term Rate)x(Loans-to-Assets Ratio)x(F)	-0.022 (0.024)	-0.019 (0.031)	-0.119 (0.126)	-0.014 (0.074)	-0.002 (0.045)
(Short-term Rate)x(Deposits-to-Liabilities Ratio)x(F)	0.016 (0.019)	0.024 (0.027)	0.050 (0.112)	0.068 (0.065)	-0.000 (0.040)
(Short-term Rate)x(Costs-to-Income Ratio)x(F)	0.007 (0.010)	-0.009 (0.015)	0.072 (0.061)	0.004 (0.036)	-0.001 (0.022)
(Short-term Rate)x(NPL Ratio)x(F)	0.228 (0.225)	0.243 (0.311)	1.444 (1.270)	0.222 (0.744)	0.045 (0.454)
(Slope)x(Equity-to-Assets Ratio)x(F)	0.066 (0.066)	0.033 (0.079)	0.033 (0.323)	0.022 (0.189)	-0.057 (0.116)
(Slope)x(Loans-to-Assets Ratio)x(F)	-0.042 (0.031)	-0.023 (0.046)	-0.082 (0.188)	0.094 (0.111)	0.002 (0.068)
(Slope)x(Deposits-to-Liabilities Ratio)x(F)	0.020 (0.028)	0.013 (0.040)	0.002 (0.161)	-0.008 (0.095)	-0.017 (0.058)
(Slope)x(Costs-to-Income Ratio)x(F)	0.006 (0.013)	0.001 (0.021)	0.136 (0.087)	0.052 (0.051)	0.002 (0.031)
(Slope)x(NPL Ratio)x(F)	0.192 (0.297)	0.183 (0.426)	1.132 (1.730)	0.190 (1.014)	-0.010 (0.622)
Observations	654	714	714	714	714
Number of Banks	7	7	7	7	7
Macro Controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes

Bootstrapped standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.