

# 1 Balance Sheet Responses to Fed Funds Shocks: Full Sample

## 1.1 No Additional Filter

Table 1: Table VIII – Full Sample, No Additional Filter  
**Panel A: Liabilities and Funding**

	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)
$\Delta FF_t \times$ Bank HHI	-1.562*** (0.179)	0.026 (0.021)	-1.399*** (0.294)	-2.432*** (0.260)	2.793*** (1.042)	-1.352*** (0.173)
Observations	496,257	496,257	496,257	496,257	496,257	496,257
R <sup>2</sup>	0.131	0.308	0.070	0.134	0.034	0.139

**Panel B: Assets**

	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)
$\Delta FF_t \times$ Bank HHI	-1.240*** (0.157)	-2.148*** (0.732)	-1.084** (0.507)	-0.532*** (0.189)	-0.829*** (0.262)	-1.134*** (0.421)
Observations	496,257	496,257	496,257	496,257	496,257	496,257
R <sup>2</sup>	0.127	0.055	0.057	0.164	0.126	0.055

## 1.2 Authors' Filter (Growth Filter + Winsorization)

Table 2: Table VIII – Full Sample, Authors' Filter  
Panel A: Liabilities and Funding

	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)
$\Delta FF_t \times \text{Bank HHI}$	-1.488*** (0.145)	0.063*** (0.006)	-1.209*** (0.243)	-2.186*** (0.213)	2.637*** (0.954)	-1.285*** (0.139)
Observations	495,643	495,643	495,643	495,643	495,643	495,643
R <sup>2</sup>	0.172	0.757	0.085	0.166	0.034	0.185

Panel B: Assets

	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)
$\Delta FF_t \times \text{Bank HHI}$	-1.205*** (0.122)	-2.348*** (0.672)	-0.938*** (0.333)	-0.484*** (0.151)	-0.857*** (0.190)	-0.896*** (0.341)
Observations	495,643	495,643	495,643	495,643	495,643	495,643
R <sup>2</sup>	0.182	0.058	0.071	0.227	0.180	0.065

## 2 Balance Sheet Responses: Pre-2008 Sample (Through 2007Q4)

### 2.1 Authors' Filter (Growth + Winsorization)

## 3 Balance Sheet Responses: Top 25% of Banks by Average Assets

### 3.1 Authors' Filter (Growth + Winsorization)

Table 3: Table VIII – Pre-2008 Sample, Authors' Filter  
**Panel A: Liabilities and Funding**

	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)
$\Delta FF_t \times$ Bank HHI	-0.680*** (0.158)	0.065*** (0.008)	0.423 (0.274)	-2.129*** (0.257)	4.980*** (1.120)	-0.470*** (0.153)
Observations	417,534	417,534	417,534	417,534	417,534	417,534
R <sup>2</sup>	0.163	0.664	0.079	0.152	0.028	0.174

**Panel B: Assets**

	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)
$\Delta FF_t \times$ Bank HHI	-0.465*** (0.136)	-3.108*** (0.637)	0.156 (0.372)	0.217 (0.196)	0.127 (0.245)	-0.105 (0.417)
Observations	417,534	417,534	417,534	417,534	417,534	417,534
R <sup>2</sup>	0.173	0.057	0.059	0.205	0.158	0.051

Table 4: Table VIII – Top 25% Sample, Authors' Filter  
**Panel A: Liabilities and Funding**

	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)
$\Delta FF_t \times$ Bank HHI	-1.558*** (0.478)	0.043** (0.019)	-1.691** (0.702)	-2.581*** (0.625)	2.349 (1.908)	-1.263*** (0.436)
Observations	132,561	132,561	132,561	132,561	132,561	132,561
R <sup>2</sup>	0.166	0.643	0.081	0.158	0.037	0.184

**Panel B: Assets**

	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)
$\Delta FF_t \times$ Bank HHI	-1.238*** (0.385)	1.422 (1.559)	-2.160*** (0.825)	-0.561 (0.394)	-0.304 (0.470)	-0.171 (0.677)
Observations	132,561	132,561	132,561	132,561	132,561	132,561
R <sup>2</sup>	0.182	0.064	0.072	0.228	0.199	0.101

## 4 Balance Sheet Responses: Top 10% of Banks by Average Assets

### 4.1 Authors' Filter (Growth + Winsorization)

Table 5: Table VIII – Top 10% Sample, Authors' Filter  
**Panel A: Liabilities and Funding**

	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)
$\Delta FF_t \times$ Bank HHI	0.163 (0.716)	0.046 (0.044)	-0.221 (1.264)	-0.110 (1.110)	2.213 (3.165)	-0.163 (0.673)
Observations	48,211	48,211	48,211	48,211	48,211	48,211
R <sup>2</sup>	0.133	0.581	0.084	0.134	0.043	0.152

**Panel B: Assets**

	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)
$\Delta FF_t \times$ Bank HHI	-0.212 (0.643)	3.672 (2.847)	-1.319 (1.737)	0.595 (0.818)	0.846 (0.861)	-0.737 (1.397)
Observations	48,211	48,211	48,211	48,211	48,211	48,211
R <sup>2</sup>	0.145	0.080	0.075	0.181	0.165	0.114

Table 6: Balance Sheet Responses to Fed Funds Shocks – Full Sample, Composite Across Filters  
**Panel A: Liabilities and Funding**

Filter	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)	Obs.
$\Delta FF_t \times$ Bank HHI							
None	-1.562*** (0.179)	0.026 (0.021)	-1.399*** (0.294)	-2.432*** (0.260)	2.793*** (1.042)	-1.352*** (0.173)	496,257
Growth	-1.536*** (0.162)	0.029 (0.021)	-1.342*** (0.284)	-2.423*** (0.245)	2.766*** (1.036)	-1.334*** (0.154)	495,643
Winsor	-1.484*** (0.146)	0.063*** (0.006)	-1.201*** (0.245)	-2.179*** (0.215)	2.659*** (0.959)	-1.280*** (0.140)	496,257
Growth+ Winsor	-1.488*** (0.145)	0.063*** (0.006)	-1.209*** (0.243)	-2.186*** (0.213)	2.637*** (0.954)	-1.285*** (0.139)	495,643

**Panel B: Assets**

Filter	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)	Obs.
$\Delta FF_t \times$ Bank HHI							
None	-1.240*** (0.157)	-2.148*** (0.732)	-1.084** (0.507)	-0.532*** (0.189)	-0.829*** (0.262)	-1.134*** (0.421)	496,257
Growth	-1.235*** (0.136)	-2.145*** (0.728)	-1.046** (0.501)	-0.517*** (0.172)	-0.788*** (0.238)	-1.143*** (0.415)	495,643
Winsor	-1.198*** (0.124)	-2.331*** (0.673)	-0.937*** (0.335)	-0.476*** (0.153)	-0.853*** (0.194)	-0.886*** (0.343)	496,257
Growth+ Winsor	-1.205*** (0.122)	-2.348*** (0.672)	-0.938*** (0.333)	-0.484*** (0.151)	-0.857*** (0.190)	-0.896*** (0.341)	495,643

Table 7: Balance Sheet Responses to Fed Funds Shocks – Pre-2008 Sample (through 2007Q4), Composite Across Filters

<b>Panel A: Liabilities and Funding</b>							
Filter	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
None	-0.694*** (0.207)	0.062*** (0.017)	0.277 (0.331)	-2.145*** (0.308)	5.211*** (1.217)	-0.469** (0.204)	418,076
Growth	-0.674*** (0.176)	0.062*** (0.017)	0.352 (0.314)	-2.154*** (0.283)	5.100*** (1.206)	-0.464*** (0.170)	417,534
Winsor	-0.670*** (0.160)	0.066*** (0.008)	0.435 (0.277)	-2.112*** (0.261)	5.059*** (1.128)	-0.457*** (0.157)	418,076
Growth+ Winsor	-0.680*** (0.158)	0.065*** (0.008)	0.423 (0.274)	-2.129*** (0.257)	4.980*** (1.120)	-0.470*** (0.153)	417,534
<b>Panel B: Assets</b>							
Filter	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
None	-0.442** (0.188)	-3.195*** (0.685)	0.534 (0.594)	0.185 (0.251)	0.320 (0.344)	-0.407 (0.518)	418,076
Growth	-0.453*** (0.150)	-3.203*** (0.674)	0.583 (0.583)	0.190 (0.223)	0.368 (0.304)	-0.428 (0.507)	417,534
Winsor	-0.451*** (0.137)	-3.072*** (0.641)	0.161 (0.375)	0.234 (0.199)	0.139 (0.249)	-0.081 (0.420)	418,076
Growth+ Winsor	-0.465*** (0.136)	-3.108*** (0.637)	0.156 (0.372)	0.217 (0.196)	0.127 (0.245)	-0.105 (0.417)	417,534

Table 8: Balance Sheet Responses to Fed Funds Shocks – Top 25% of Banks by Average Assets, Composite Across Filters

<b>Panel A: Liabilities and Funding</b>							
Filter	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
None	-1.595** (0.679)	-0.001 (0.030)	-1.981** (0.938)	-3.021*** (0.932)	2.050 (2.189)	-1.432** (0.649)	132,928
Growth	-1.344*** (0.519)	0.004 (0.029)	-1.536* (0.831)	-2.909*** (0.813)	2.540 (2.121)	-1.140** (0.466)	132,561
Winsor	-1.562*** (0.505)	0.041** (0.019)	-1.719** (0.736)	-2.554*** (0.651)	2.089 (1.949)	-1.272*** (0.463)	132,928
Growth+ Winsor	-1.558*** (0.478)	0.043** (0.019)	-1.691** (0.702)	-2.581*** (0.625)	2.349 (1.908)	-1.263*** (0.436)	132,561
<b>Panel B: Assets</b>							
Filter	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
None	-1.430** (0.603)	2.205 (1.779)	-2.963** (1.153)	-0.614 (0.639)	-0.455 (0.873)	-0.017 (1.024)	132,928
Growth	-1.188*** (0.403)	2.668 (1.725)	-2.623** (1.060)	-0.325 (0.446)	0.001 (0.626)	0.228 (0.936)	132,561
Winsor	-1.233*** (0.407)	1.193 (1.579)	-2.255*** (0.845)	-0.578 (0.435)	-0.321 (0.509)	-0.212 (0.703)	132,928
Growth+ Winsor	-1.238*** (0.385)	1.422 (1.559)	-2.160*** (0.825)	-0.561 (0.394)	-0.304 (0.470)	-0.171 (0.677)	132,561

Table 9: Balance Sheet Responses to Fed Funds Shocks – Top 10% of Banks by Average Assets, Composite Across Filters

<b>Panel A: Liabilities and Funding</b>							
Filter	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
None	1.654 (1.232)	-0.002 (0.077)	1.895 (1.630)	0.288 (2.305)	3.040 (3.634)	0.888 (1.158)	48,425
Growth	0.667 (0.856)	0.032 (0.076)	0.850 (1.381)	-0.823 (2.095)	3.013 (3.500)	0.010 (0.734)	48,211
Winsor	0.472 (0.829)	0.039 (0.044)	0.255 (1.353)	0.273 (1.196)	2.179 (3.246)	0.096 (0.767)	48,425
Growth+ Winsor	0.163 (0.716)	0.046 (0.044)	-0.221 (1.264)	-0.110 (1.110)	2.213 (3.165)	-0.163 (0.673)	48,211
<b>Panel B: Assets</b>							
Filter	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
None	0.931 (1.133)	5.659* (3.273)	1.433 (2.397)	1.728 (1.353)	1.801 (1.716)	1.725 (2.431)	48,425
Growth	-0.108 (0.699)	4.805 (3.226)	0.041 (2.312)	0.862 (0.979)	1.019 (1.334)	0.632 (2.272)	48,211
Winsor	0.066 (0.725)	4.225 (2.876)	-0.892 (1.783)	0.875 (0.922)	1.144 (0.970)	-0.378 (1.469)	48,425
Growth+ Winsor	-0.212 (0.643)	3.672 (2.847)	-1.319 (1.737)	0.595 (0.818)	0.846 (0.861)	-0.737 (1.397)	48,211

## 5 Fixed-Effects Robustness

Table 10: Balance Sheet Responses to Fed Funds Shocks: Fixed-Effects Specifications

**Panel A: Liabilities / Funding**

Bank f.e.	Quarter f.e.	Bank $\times$ 2008 f.e.	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)
$\Delta FF_t \times$ Bank HHI								
Y	Y	Y	-1.488*** (0.145)	0.063*** (0.006)	-1.209*** (0.243)	-2.186*** (0.213)	2.637*** (0.954)	-1.285*** (0.139)
Y	Y		-1.141*** (0.144)	0.058*** (0.006)	-1.007*** (0.241)	-1.696*** (0.212)	3.488*** (0.959)	-0.909*** (0.138)
	Y	Y	-1.488*** (0.145)	0.063*** (0.006)	-1.209*** (0.243)	-2.186*** (0.213)	2.637*** (0.954)	-1.285*** (0.139)
Y		Y	-1.468*** (0.066)	2.555*** (0.025)	-5.147*** (0.127)	1.227*** (0.101)	8.451*** (0.465)	-1.196*** (0.063)
Y			-1.736*** (0.066)	2.573*** (0.025)	-5.158*** (0.127)	0.733*** (0.099)	6.990*** (0.467)	-1.525*** (0.063)
	Y		-0.599*** (0.151)	0.057*** (0.006)	-0.510** (0.239)	-1.106*** (0.224)	4.484*** (0.963)	-0.355** (0.147)

**Panel B: Assets**

Bank f.e.	Quarter f.e.	Bank $\times$ 2008 f.e.	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)
$\Delta FF_t \times$ Bank HHI								
Y	Y	Y	-1.205*** (0.122)	-2.348*** (0.672)	-0.938*** (0.333)	-0.484*** (0.151)	-0.857*** (0.190)	-0.896*** (0.341)
Y	Y		-0.907*** (0.121)	-2.351*** (0.679)	-0.697** (0.334)	-0.042 (0.151)	-0.385** (0.190)	-0.472 (0.339)
	Y	Y	-1.205*** (0.122)	-2.348*** (0.672)	-0.938*** (0.333)	-0.484*** (0.151)	-0.857*** (0.190)	-0.896*** (0.341)
Y		Y	-1.121*** (0.056)	-12.500*** (0.333)	0.032 (0.164)	1.938*** (0.073)	1.498*** (0.090)	1.779*** (0.157)
Y			-1.382*** (0.056)	-12.180*** (0.335)	-0.114 (0.164)	1.426*** (0.072)	0.963*** (0.088)	1.228*** (0.155)
	Y		-0.449*** (0.127)	-1.857*** (0.669)	-0.242 (0.337)	0.573*** (0.165)	0.275 (0.201)	0.061 (0.343)

Table 11: Robustness of Balance Sheet Responses to Fed Funds Shocks Across Samples  
**Panel A: Liabilities and Funding**

Sample	$\Delta$ Total deposits (1)	$\Delta$ Deposit spread (2)	$\Delta$ Savings deposits (3)	$\Delta$ Time deposits (4)	$\Delta$ Wholesale funding (5)	$\Delta$ Total liabilities (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
Full sample	-1.488*** (0.145)	0.063*** (0.006)	-1.209*** (0.243)	-2.186*** (0.213)	2.637*** (0.954)	-1.285*** (0.139)	495,643
Pre-2008	-0.680*** (0.158)	0.065*** (0.008)	0.423 (0.274)	-2.129*** (0.257)	4.980*** (1.120)	-0.470*** (0.153)	417,534
Top 25% assets	-1.558*** (0.478)	0.043** (0.019)	-1.691** (0.702)	-2.581*** (0.625)	2.349 (1.908)	-1.263*** (0.436)	132,561
Top 10% assets	0.163 (0.716)	0.046 (0.044)	-0.221 (1.264)	-0.110 (1.110)	2.213 (3.165)	-0.163 (0.673)	48,211

**Panel B: Assets**

Sample	$\Delta$ Total assets (1)	$\Delta$ Cash (2)	$\Delta$ Securities (3)	$\Delta$ Total loans (4)	$\Delta$ RE loans (5)	$\Delta$ C&I loans (6)	Obs.
$\Delta FF_t \times \text{Bank HHI}$							
Full sample	-1.205*** (0.122)	-2.348*** (0.672)	-0.938*** (0.333)	-0.484*** (0.151)	-0.857*** (0.190)	-0.896*** (0.341)	495,643
Pre-2008	-0.465*** (0.136)	-3.108*** (0.637)	0.156 (0.372)	0.217 (0.196)	0.127 (0.245)	-0.105 (0.417)	417,534
Top 25% assets	-1.238*** (0.385)	1.422 (1.559)	-2.160*** (0.825)	-0.561 (0.394)	-0.304 (0.470)	-0.171 (0.677)	132,561
Top 10% assets	-0.212 (0.643)	3.672 (2.847)	-1.319 (1.737)	0.595 (0.818)	0.846 (0.861)	-0.737 (1.397)	48,211

*Notes:* Each row corresponds to a different sample restriction: full sample, pre-2008 cutoff, top 25% and top 10% of banks by average assets. Entries report the coefficient on  $\Delta FF_t \times \text{Bank HHI}$  with clustered standard errors in parentheses. All specifications use the “both” filter (winsorization and exclusion of high-asset-growth banks) and the baseline fixed effects: bank, quarter, and bank  $\times$  post-2008 fixed effects.