

# Discussion of Kotidis and van Horen (2018)

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# Motivation

- Lots of post-crisis regulatory reforms
  - Enhanced capital requirements
  - Stress testing
  - Liquidity rules
  - Resolution planning
  - Margin and clearing requirements for derivatives
  - Volcker Rule
  - ...
- Possible unintended consequences of regulation
  - Does not necessarily mean that we do not regulate.
  - But important to balance costs and benefits.
  - This paper is focused on a cost.

# Multiple Capital Ratios

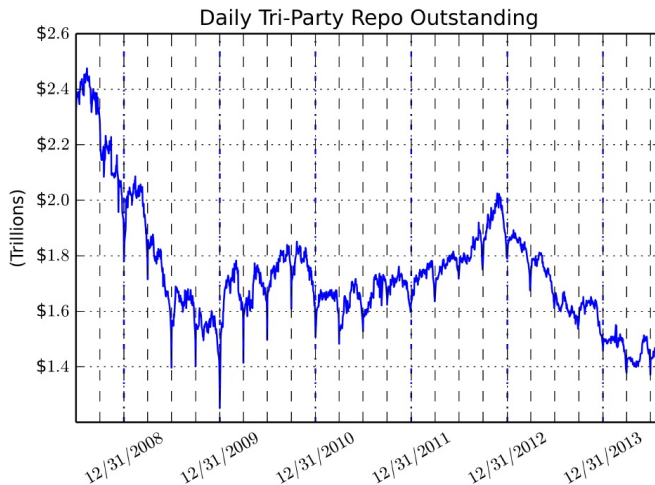
Greenwood, Hanson, Stein, and Sunderam (2017):

“Crucially, however, we show that the same economic logic does not support having *multiple independent constraints* on bank equity ratios—as is the case when, for example, banks must separately satisfy minimum values for their risk-based capital ratios, their leverage ratios, and their poststress capital ratios.”

# This Paper

- Focused on the effect of the leverage ratio on repo activity.
- Uses an interesting way to achieve identification: window-dressing.
- Window-dressing
  - Banks could report average of month-end values.
  - Led to large declines in balances at month-ends. Could have high repo balances during the month, but essentially record smaller balances for regulatory reporting.
  - Forced to switch to daily averaging. No longer an incentive to window-dress.
  - Essentially, regulatory constraints become more binding.

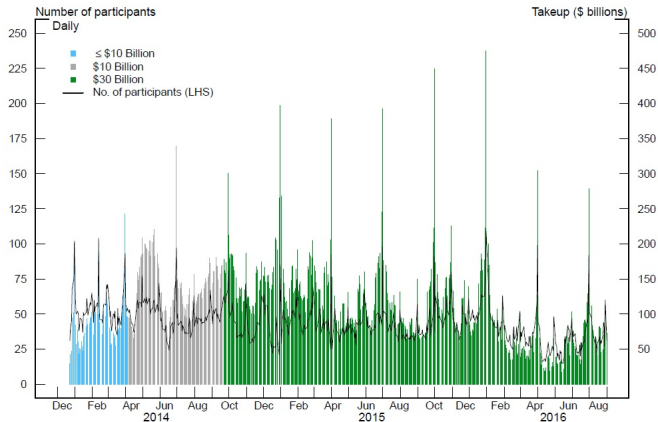
# Window Dressing



Source: Munyan (2017)

# Window Dressing

Figure 5: RRP Facility Usage



Source: Anbil and Senyuz (2017)

# Main Results #1

**Table 1. Leverage Ratio and Repo**

	$\Delta \log(\text{Volume})$			
	[1]	[2]	[3]	[4]
<b>Affected Dealer</b>	-0.404**	-0.431**	-0.446*	-0.664*
	0.179	0.174	0.231	0.312
<b>Relationship</b>		-0.767	-1.074	-1.705
		0.993	1.056	1.276
<b>Constant</b>	0.137	0.159		
	0.113	0.108		
<b>Client's Sector FE</b>	no	no	yes	no
<b>Client FE</b>	no	no	no	yes
<b>N</b>	126	126	126	126
<b>R<sup>2</sup></b>	0.027	0.031	0.065	0.333

Significance Levels: .01\*\*\*, .05\*\*, .1\*

# Main Results #2

**Table 2. Heterogeneous Effects: Small versus Large**

	$\Delta \log(\text{Volume})$				
	[1]	[2]	[3]	[4]	[5]
<b>Affected Dealer * Small</b>	-0.900*** 0.228	-0.880*** 0.228	-0.829* 0.397	-1.415** 0.514	-1.345*** 0.433
<b>Affected Dealer</b>	-0.139 0.207	-0.159 0.2	-0.196 0.233	-0.305 0.278	
<b>Small</b>	0.490** 0.19	0.446* 0.204	0.506** 0.195		
<b>Relationship</b>		-0.487 1.071	-0.575 1.091	-1.217 1.328	-1.101 1.547
<b>Constant</b>	0.017 0.138	0.042 0.133			
<b>Client's Sector FE</b>	no	no	yes	no	no
<b>Client FE</b>	no	no	no	yes	yes
<b>Dealer FE</b>	no	no	no	no	yes
<b>N</b>	126	126	126	126	126
<b>R<sup>2</sup></b>	0.057	0.058	0.089	0.378	0.463

Significance Levels: .01\*\*\*; .05\*\*; .1\*



# How binding are leverage ratios?

- As noted by Greenwood, Hanson, Stein, and Sunderam (2017), lots of different capital ratios.
  - See also Duffie (2017a, 2017b, 2018).
- Allarakha, Cetina, and Munyan (2016) show that in triparty repo markets, results are driven by banks that are more constrained.
  - Would be useful to show something similar here.
- Might argue that non-binding leverage ratio constraints would bias against finding results.
  - But potential correlation with other regulatory ratios.

# Bilateral vs. Triparty Repo

- Allarakha, Cetina, and Munyan (2016) find a similar effect for the supplementary leverage ratio on triparty repo markets in the U.S.
- Bilateral market potentially interesting in its own right, but need to explain in what dimensions.

## U.S. Repo Market Estimates

Billions of dollars

	Total Repo		Tri-Party Repo		GCF Repo®		Bilateral Repo	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
U.S. Treasury securities including STRIPS	2,347	60.49	644	41.34	204	48.11	1,499	79.02
All other assets	1,533	39.51	914	58.66	220	51.89	398	20.98
Total	3,880		1,558		424		1,897	

Sources: For total repo, Federal Reserve Form FR2004; for tri-party repo and GCF Repo®, Federal Reserve Bank of New York.

Notes: Total repo estimates are based on Federal Reserve 2004 data as of October 8, 2014. Tri-party repo and GCF Repo® data are as of October 9, 2014. Bilateral repo estimates are a residual amount, equal to total repo minus tri-party repo minus GCF Repo®.

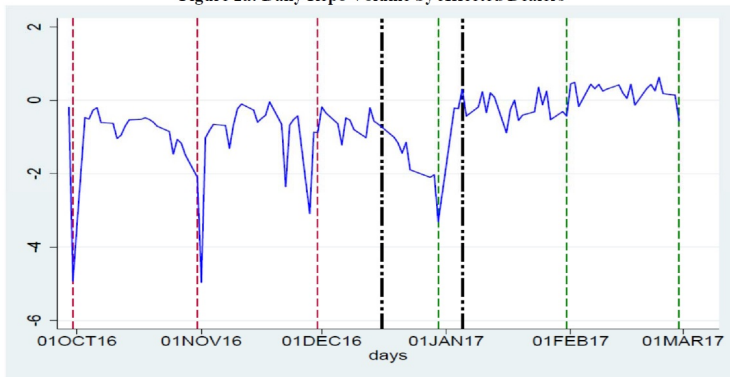
Source: NY Fed

# Size dominates

- Results driven by repo with smaller participants in repo market.
  - Interactions with large clients are more frequent.
  - Ancillary business
  - Possibility of netting out repo.
- “Summarizing, the defining client characteristic which determines whether a dealer faced with an intensification of the leverage ratio adjusts its repo intermediation seems to be the size of the client in the market.”
- Missing piece: So what characteristic is size proxying for?

# Sample selection and visual econometrics

Figure 2a: Daily Repo Volume by Affected Dealers



- The change in window dressing appears to be visually true.
- Decline in repo volume of affected dealers is less clear.

# Sample selection and visual econometrics

- Only dealer-client pairs that have volume both pre- and post-rule change are included.
- But the ending of relationships (and the start of new ones) is relevant and interesting!
  - Some client-level regressions in Table 9 for new repo relationships, but would be interesting to see more.
- Include data on zero volume for such dealer-client pairs.

# Conclusion

- Interesting paper.
- Relevant for both academics and policymakers.
- Main suggestion: Flesh out the story a bit more.
  - Show that leverage ratio is binding (or close to binding) for treated banks.
  - Explain what makes bilateral repo different.
  - Dig a bit more into what size might be proxying for.
  - Consider the ending of repo relationships and more on the start of new relationships.