1 Response of SOFR and LIBOR to Gov't Borrowing

Panel A: Gov't debt outstanding as the measure of borrowing

	Dependent variable:			
	SOFR		LIBOR	
	(1)	(2)	(3)	(4)
Δlog debt	386.758***	381.218***	−34.675**	−33.695**
	(65.325)	(65.971)	(15.578)	(15.654)
SOFR(-1)		0.031		
		(0.025)		
LIBOR(-1)				−0.144***
				(0.026)
Constant	−0.241***	−0.236***	0.011	0.011
	(0.076)	(0.077)	(0.018)	(0.018)
Observations	1,526	1,520	1,489	1,464
R^2	0.022	0.023	0.003	0.024
Adjusted R^2	0.022	0.021	0.003	0.023
Residual Std. Error	2.929 (df = 1524)	2.933 (df = 1517)	0.689 (df = 1487)	0.686 (df = 1461)

Panel B: Treasuries outstanding as the measure of borrowing

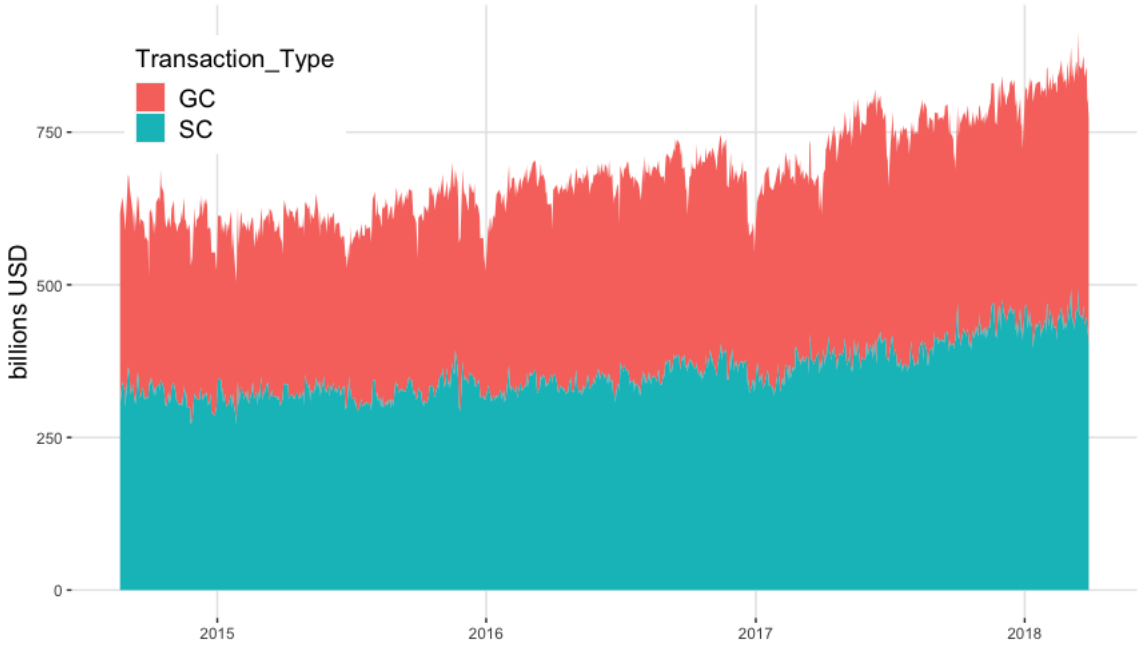
	Dependent variable:			
	SOFR		LIBOR	
	(1)	(2)	(3)	(4)
Δlog treasuries	995.000***	994.614***	−72.438***	−66.848***
	(90.566)	(88.833)	(19.771)	(19.647)
SOFR(-1)		0.177***		
		(0.028)		
LIBOR(-1)				−0.154***
				(0.030)
Constant	−0.358***	−0.314***	0.014	0.013
	(0.085)	(0.084)	(0.019)	(0.019)
Observations	1,134	1,129	1,100	1,079
R^2	0.096	0.129	0.012	0.036
Adjusted R^2	0.096	0.127	0.011	0.034
Residual Std. Error	2.826 (df = 1132)	2.770 (df = 1126)	0.613 (df = 1098)	0.608 (df = 1076)

Note: *p<0.1; **p<0.05; ***p<0.01

2 The Scarcity Value of Treasury Collateral

2.1 Segments of Markets Underlying SOFR

The transactions underlying SOFR comprises two segments: bilateral repo and tri-party repo. In a bilateral repo, the settlement is handled directly by the trading parties rather than by a third-party clearing bank as in a triparty repo. Tri-party transactions are secured by General Collateral (GC) pools of accepted Treasury securities, any of which can be delivered as collateral by the cash borrower. Unlike tri-pary transaction, bilateral transactions feature Specific Collateral (SC) as lenders and borrowers can designate specific securities as collateral. Therefore, the incentive for lenders entering the bilateral repo market can be to seek a specific security. A so-called collateral scarcity premium arises in bilateral transactions. [1]



2.2 Treasuries Outstanding and Scarcity Value

Intuitively, when the volume of outstanding Treasuries is larger, the Treasuries as collateral become less scarcity, so the rate spread between bilateral repo transactions and tri-party repo transactions increases.

[1] Infante and Saravay (2020) and D'Amico et al. (2018) provide empirical evidence for treasury collateral scarcity.

	Dependent variable:	
	SC repo rate - GC repo rate	
	(1)	(2)
Δlog treasuries	$1,280.301^{***}$	$1,321.397^{***}$
	(232.948)	(221.020)
Δlog GC volume		-46.675^{***}
		(4.473)
Δlog SC volume		6.483
		(4.377)
Constant	-0.236	-0.238
	(0.225)	(0.212)
Observations	899	899
R^2	0.033	0.138
Adjusted R^2	0.031	0.135
Residual Std. Error	6.591 (df = 897)	6.230 (df = 895)
Note:		*p<0.1; **p<0.05; ***p<0.01