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Flexible Repurchase Agreement Overview



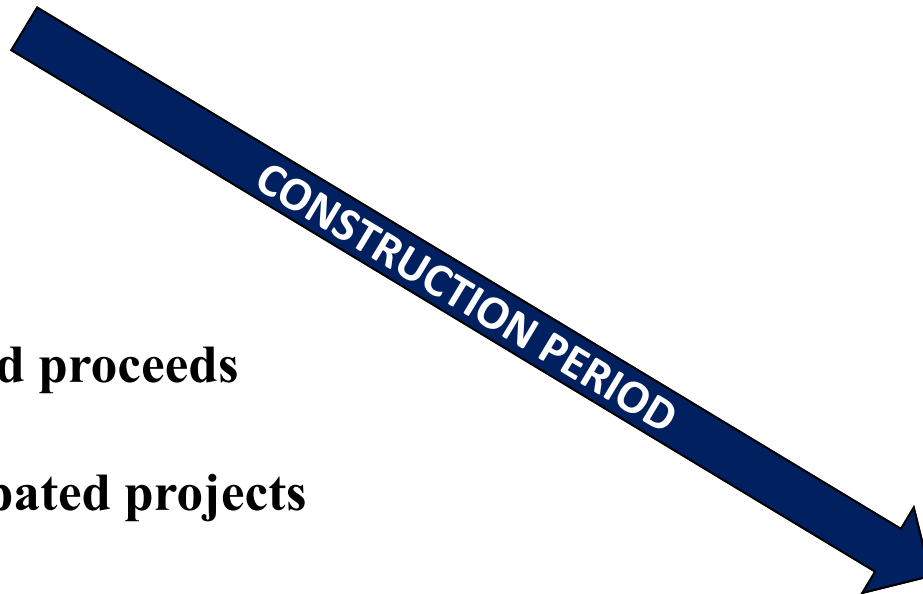
Structured Products Group

Investing During Construction

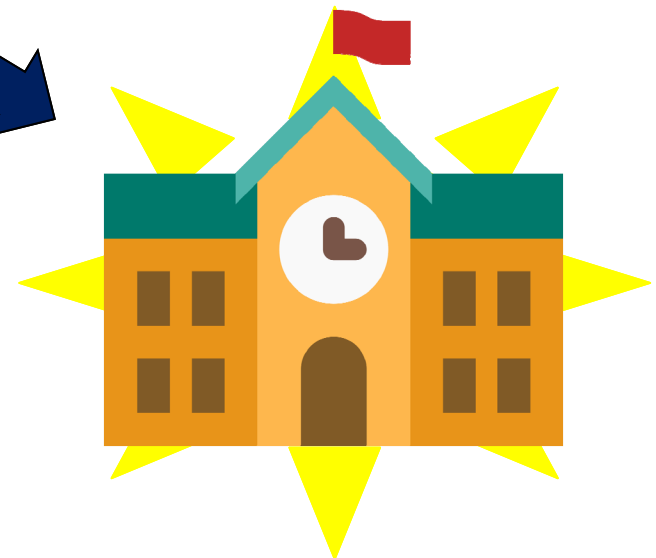


Considerations:

- Safety
- Liquidity
- Yield



- ✓ Sell bonds
- ✓ Receive bond proceeds
- ✓ Fund anticipated projects
- ✓ **Invest proceeds during construction period**
- ✓ Withdrawal money as needed
- ✓ Complete project according to expected timeline



Flexible Repurchase Agreements

Flexible repurchase agreements are authorized investments under Texas Government Code §2256.011 and have been in use since before the Texas Public Funds Investment Act's inception in 1987.

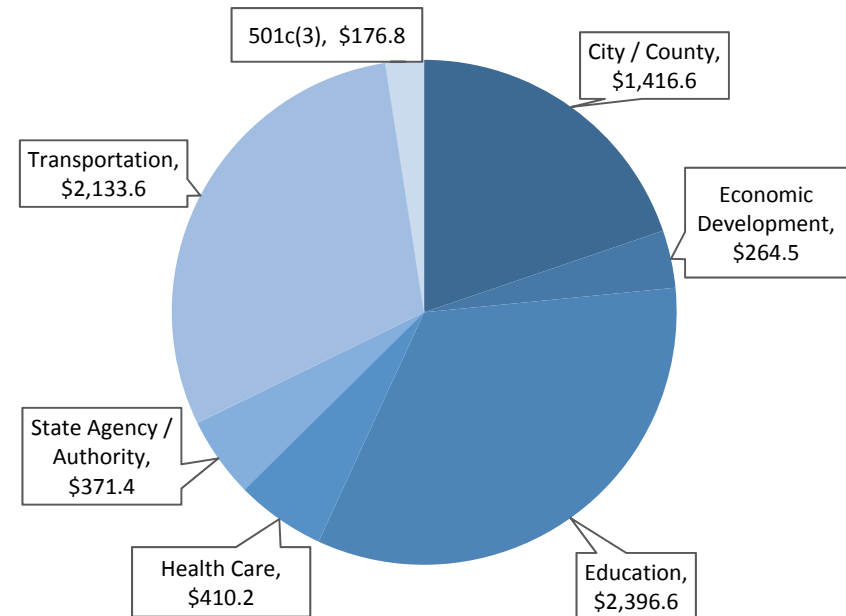


“Flex Repos” are **collateralized investment agreements**.

They offer the ability to:

- **fully collateralize deposits @ 103% with treasury & agency securities**
- **withdraw funds as needed**
- **earn a fixed rate of return**

**Hilltop Investment Agreements
For Five Year Period Ended 8/1/2018
(in Millions of \$)**



Hilltop has served as investment agreement bidding agent on approximately \$7.2 billion over the five year period ended 8/1/2018, **including \$2.4 billion for school districts and higher education.** Source: Hilltop internal data.

A Tri-Party Agreement

1. Issuer

- a. Sends the project fund proceeds to the custodian

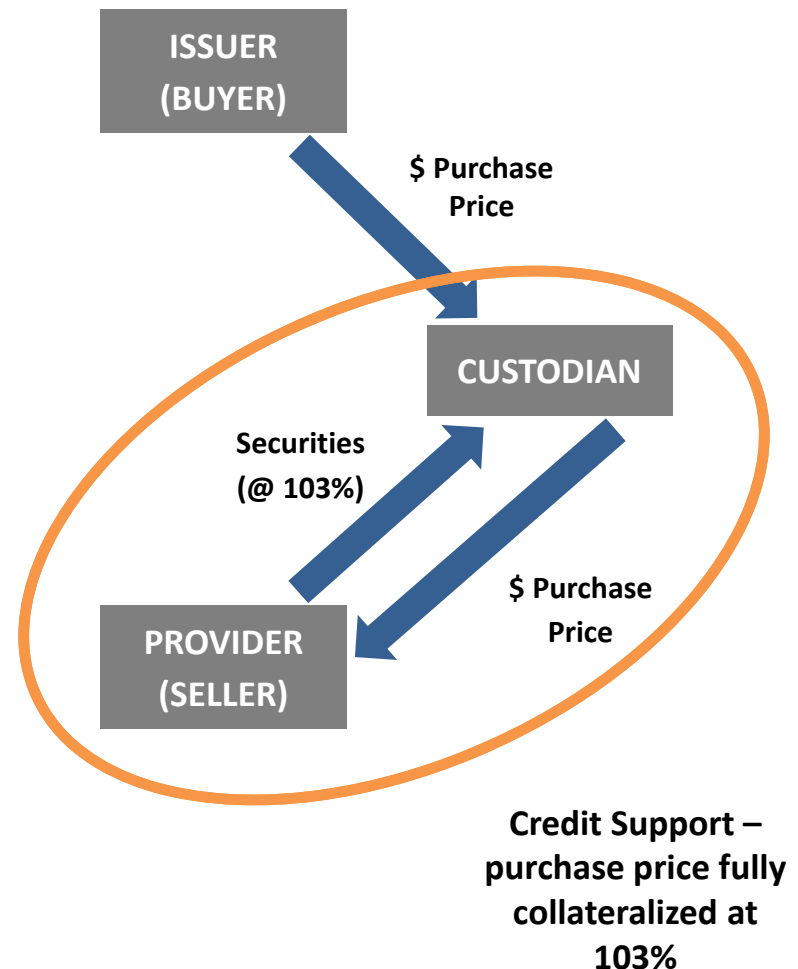
2. Third-Party Custodian

- a. Responsible for receiving funds from the issuer and exchanging funds for securities from the Provider @ 103%
- b. Party is a bank, usually Wells Fargo, Wilmington Trust, US Bank, among others

3. Provider

- a. Bank that will be posting collateral in exchange for the project fund proceeds
- b. Provider uses the proceeds to fund other services the Bank offers

Flex Repo Cash Flow Diagram

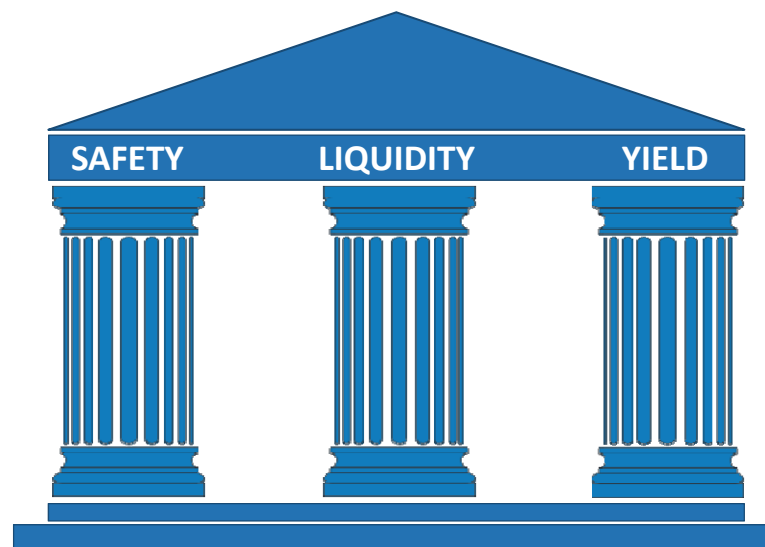


Investment Framework

Most state statutes and policies governing the investment of public funds provide a framework that focuses on three main principles: (1) safety (2) liquidity (3) yield.

Flexible Repurchase Agreements adhere to the following characteristics of a prudent investment framework:

- ✓ **Safety:** preservation and safety of capital
- ✓ **Liquidity:** degree to which a security can be quickly bought or sold in the market
- ✓ **Yield:** earning an appropriate rate of return



INVESTMENT FRAMEWORK			
	Safety of Capital	Liquidity	Return on Investment*
Flexible Repurchase Agreement	●	●	●
Investment Pools/Money Market Funds	●	●	●
Securities Portfolio	◐	◐	●

*Flexible Repurchase Agreements and Securities Portfolios are fixed rate investments. Investment Pools/Money Market Funds are floating rate investments

Denton ISD Anticipated Flexible Repurchase Agreement

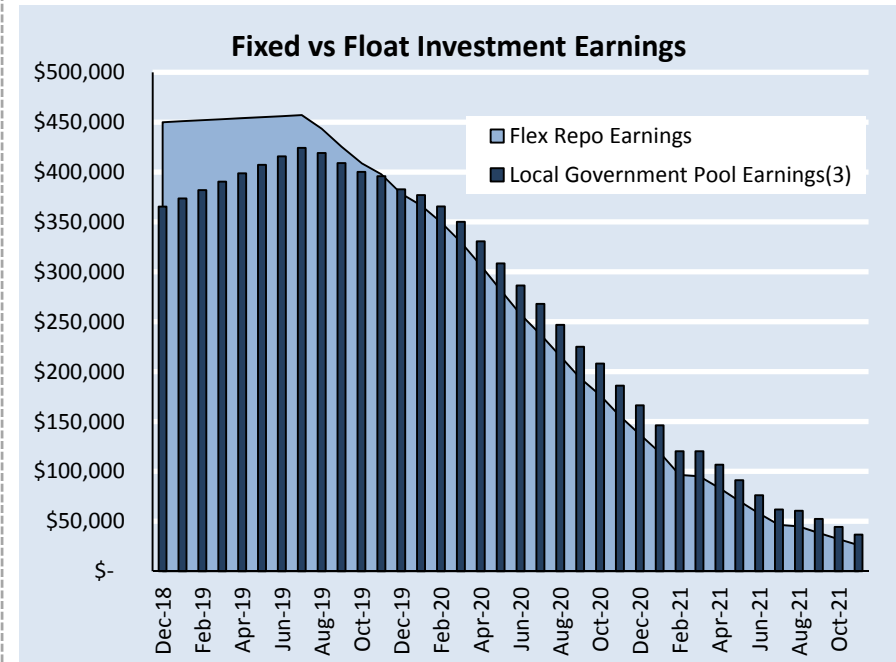
Amount	Drawdown Period	Projected Repo Yield
\$200,000,000	36 Months	2.70%

Current TexPool Yield
2.19%

36 Month Term – Breakeven Analysis

Hilltop ran a breakeven analysis to see how much investment pool rates would need to increase over the term of the agreement for the District to earn as much interest as the fixed flex repo.

Date	Flex Repo Earnings				Local Government Pool Earnings ⁽³⁾			
	Beginning Balance	Yield	Investment Earnings	Ending Balance	Beginning Balance	Yield	Investment Earnings	Ending Balance
12/1/2018	\$ 200,000,000	2.70%	\$ 450,000	\$ 200,450,000	\$ 200,000,000	2.193%	\$ 365,417	\$ 200,365,417
1/1/2019	\$ 200,450,000	2.70%	\$ 451,013	\$ 200,901,013	\$ 200,365,417	2.238%	\$ 373,702	\$ 200,739,118
2/1/2019	\$ 200,901,013	2.70%	\$ 452,027	\$ 201,353,040	\$ 200,739,118	2.284%	\$ 382,030	\$ 201,121,148
3/1/2019	\$ 201,353,040	2.70%	\$ 453,044	\$ 201,806,084	\$ 201,121,148	2.329%	\$ 390,403	\$ 201,511,552
4/1/2019	\$ 201,806,084	2.70%	\$ 454,064	\$ 202,260,148	\$ 201,511,552	2.375%	\$ 398,822	\$ 201,910,374
5/1/2019	\$ 202,260,148	2.70%	\$ 455,085	\$ 202,715,233	\$ 201,910,374	2.421%	\$ 407,287	\$ 202,317,661
6/1/2019	\$ 202,715,233	2.70%	\$ 456,109	\$ 203,171,342	\$ 202,317,661	2.466%	\$ 415,801	\$ 202,733,462
7/1/2019	\$ 203,171,342	2.70%	\$ 457,136	\$ 197,156,653	\$ 202,733,462	2.512%	\$ 424,362	\$ 196,685,999
8/1/2019	\$ 197,156,653	2.70%	\$ 443,602	\$ 189,106,481	\$ 196,685,999	2.557%	\$ 419,181	\$ 188,611,406
9/1/2019	\$ 189,106,481	2.70%	\$ 425,490	\$ 181,825,439	\$ 188,611,406	2.603%	\$ 409,143	\$ 181,314,017
10/1/2019	\$ 181,825,439	2.70%	\$ 409,107	\$ 176,828,684	\$ 181,314,017	2.649%	\$ 400,206	\$ 176,308,362
11/1/2019	\$ 176,828,684	2.70%	\$ 397,865	\$ 168,192,724	\$ 176,308,362	2.694%	\$ 395,860	\$ 167,670,397
12/1/2019	\$ 168,192,724	2.70%	\$ 378,434	\$ 162,957,175	\$ 167,670,397	2.740%	\$ 382,840	\$ 162,439,255
1/1/2020	\$ 162,957,175	2.70%	\$ 366,654	\$ 155,488,898	\$ 162,439,255	2.786%	\$ 377,071	\$ 154,981,396
2/1/2020	\$ 155,488,898	2.70%	\$ 349,850	\$ 146,608,238	\$ 154,981,396	2.831%	\$ 365,651	\$ 146,116,537
3/1/2020	\$ 146,608,238	2.70%	\$ 329,869	\$ 136,214,060	\$ 146,116,537	2.877%	\$ 350,291	\$ 135,742,782
4/1/2020	\$ 136,214,060	2.70%	\$ 306,482	\$ 125,203,175	\$ 135,742,782	2.922%	\$ 330,582	\$ 124,755,998
5/1/2020	\$ 125,203,175	2.70%	\$ 281,707	\$ 114,467,351	\$ 124,755,998	2.968%	\$ 308,568	\$ 114,047,035
6/1/2020	\$ 114,467,351	2.70%	\$ 257,552	\$ 105,525,351	\$ 114,047,035	3.014%	\$ 286,417	\$ 105,133,900
7/1/2020	\$ 105,525,351	2.70%	\$ 237,432	\$ 95,793,197	\$ 105,133,900	3.059%	\$ 268,029	\$ 95,432,344
8/1/2020	\$ 95,793,197	2.70%	\$ 215,535	\$ 86,012,658	\$ 95,432,344	3.105%	\$ 246,924	\$ 85,683,194
9/1/2020	\$ 86,012,658	2.70%	\$ 193,528	\$ 78,437,146	\$ 85,683,194	3.151%	\$ 224,956	\$ 78,139,110
10/1/2020	\$ 78,437,146	2.70%	\$ 176,484	\$ 69,105,017	\$ 78,139,110	3.196%	\$ 208,121	\$ 68,838,618
11/1/2020	\$ 69,105,017	2.70%	\$ 155,486	\$ 60,963,498	\$ 68,838,618	3.242%	\$ 185,966	\$ 60,727,579
12/1/2020	\$ 60,963,498	2.70%	\$ 137,168	\$ 52,882,188	\$ 60,727,579	3.287%	\$ 166,363	\$ 52,675,464
1/1/2021	\$ 52,882,188	2.70%	\$ 118,985	\$ 42,915,276	\$ 52,675,464	3.333%	\$ 146,307	\$ 42,735,874
2/1/2021	\$ 42,915,276	2.70%	\$ 96,559	\$ 42,283,609	\$ 42,735,874	3.379%	\$ 120,324	\$ 42,127,972
3/1/2021	\$ 42,283,609	2.70%	\$ 95,138	\$ 37,062,095	\$ 42,127,972	3.424%	\$ 120,214	\$ 36,931,534
4/1/2021	\$ 37,062,095	2.70%	\$ 83,390	\$ 31,279,074	\$ 36,931,534	3.470%	\$ 106,790	\$ 31,171,913
5/1/2021	\$ 31,279,074	2.70%	\$ 70,378	\$ 25,731,908	\$ 31,171,913	3.515%	\$ 91,321	\$ 25,645,690
6/1/2021	\$ 25,731,908	2.70%	\$ 57,897	\$ 20,647,019	\$ 25,645,690	3.561%	\$ 76,106	\$ 20,579,010
7/1/2021	\$ 20,647,019	2.70%	\$ 46,456	\$ 19,965,248	\$ 20,579,010	3.607%	\$ 61,853	\$ 19,912,636
8/1/2021	\$ 19,965,248	2.70%	\$ 44,922	\$ 17,036,355	\$ 19,912,636	3.652%	\$ 60,607	\$ 16,999,428
9/1/2021	\$ 17,036,355	2.70%	\$ 38,332	\$ 14,279,335	\$ 16,999,428	3.698%	\$ 52,386	\$ 14,256,462
10/1/2021	\$ 14,279,335	2.70%	\$ 32,129	\$ 11,632,720	\$ 14,256,462	3.744%	\$ 44,475	\$ 11,622,194
11/1/2021	\$ 11,632,720	2.70%	\$ 26,174	\$ 9,401,079	\$ 11,622,194	3.789%	\$ 36,699	\$ 9,401,079
			\$9,401,079			0.046%	\$9,401,079	



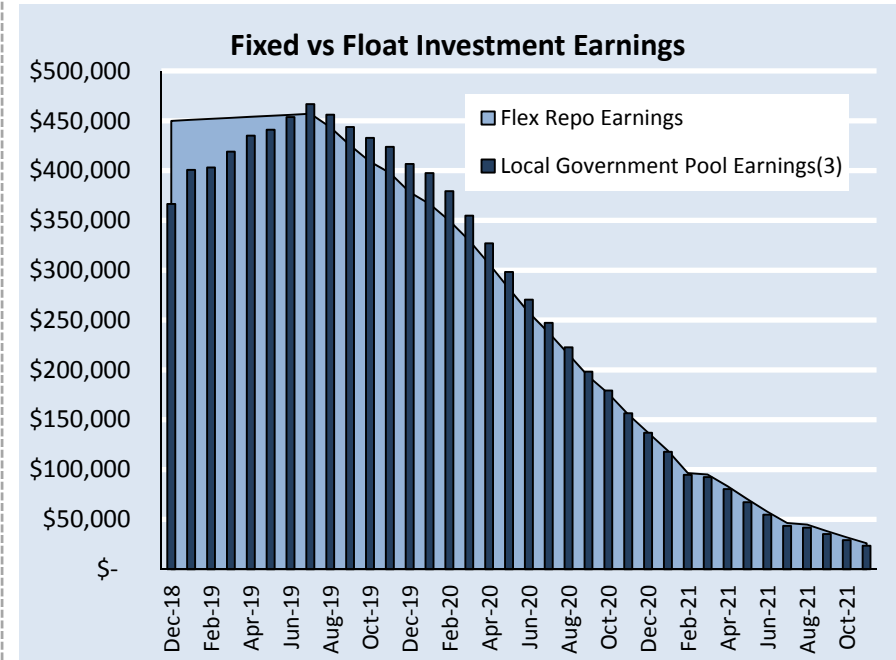
RESULTS:

- ❖ As of November 8, 2018, the indicative rate of a flexible repurchase agreement with a thirty-six month term is **2.70%**
- ❖ For the District to breakeven on earnings on the flex repo, investment pool rates would need to increase nearly **4.6 basis points** per month
- ❖ Investment pool rates could increase **160 basis points** in total in equal monthly increments over the term of the agreement.

36 Month Term – Fed Funds Forwards – Breakeven Analysis

Hilltop ran a breakeven analysis to see how much investment pool rates would need to change over the term of the agreement for the District to earn as much interest as the fixed flex repo.

Date	Flex Repo Earnings				Local Government Pool Earnings ⁽³⁾			
	Beginning Balance	Yield	Investment Earnings	Ending Balance	Beginning Balance	Yield	Investment Earnings	Ending Balance
12/1/2018	\$ 200,000,000	2.70%	\$ 450,000	\$ 200,450,000	\$ 200,000,000	2.200%	\$ 366,667	\$ 200,366,667
1/1/2019	\$ 200,450,000	2.70%	\$ 451,013	\$ 200,901,013	\$ 200,366,667	2.400%	\$ 400,733	\$ 200,767,400
2/1/2019	\$ 200,901,013	2.70%	\$ 452,027	\$ 201,353,040	\$ 200,767,400	2.410%	\$ 403,208	\$ 201,170,608
3/1/2019	\$ 201,353,040	2.70%	\$ 453,044	\$ 201,806,084	\$ 201,170,608	2.500%	\$ 419,105	\$ 201,589,713
4/1/2019	\$ 201,806,084	2.70%	\$ 454,064	\$ 202,260,148	\$ 201,589,713	2.590%	\$ 435,098	\$ 202,024,811
5/1/2019	\$ 202,260,148	2.70%	\$ 455,085	\$ 202,715,233	\$ 202,024,811	2.620%	\$ 441,088	\$ 202,465,899
6/1/2019	\$ 202,715,233	2.70%	\$ 456,109	\$ 203,171,342	\$ 202,465,899	2.690%	\$ 453,861	\$ 202,919,760
7/1/2019	\$ 203,171,342	2.70%	\$ 457,136	\$ 197,156,653	\$ 202,919,760	2.760%	\$ 466,715	\$ 196,914,650
8/1/2019	\$ 197,156,653	2.70%	\$ 443,602	\$ 189,106,481	\$ 196,914,650	2.780%	\$ 456,186	\$ 188,877,062
9/1/2019	\$ 189,106,481	2.70%	\$ 425,490	\$ 181,825,439	\$ 188,877,062	2.820%	\$ 443,861	\$ 181,614,391
10/1/2019	\$ 181,825,439	2.70%	\$ 409,107	\$ 176,828,684	\$ 181,614,391	2.860%	\$ 432,848	\$ 176,641,376
11/1/2019	\$ 176,828,684	2.70%	\$ 397,865	\$ 168,192,724	\$ 176,641,376	2.880%	\$ 423,939	\$ 168,031,491
12/1/2019	\$ 168,192,724	2.70%	\$ 378,434	\$ 162,957,175	\$ 168,031,491	2.905%	\$ 406,776	\$ 162,824,284
1/1/2020	\$ 162,957,175	2.70%	\$ 366,654	\$ 155,488,898	\$ 162,824,284	2.930%	\$ 397,563	\$ 155,386,916
2/1/2020	\$ 155,488,898	2.70%	\$ 349,850	\$ 146,608,238	\$ 155,386,916	2.930%	\$ 379,403	\$ 146,535,809
3/1/2020	\$ 146,608,238	2.70%	\$ 329,869	\$ 136,214,060	\$ 146,535,809	2.907%	\$ 354,938	\$ 136,166,701
4/1/2020	\$ 136,214,060	2.70%	\$ 306,482	\$ 125,203,175	\$ 136,166,701	2.883%	\$ 327,170	\$ 125,176,505
5/1/2020	\$ 125,203,175	2.70%	\$ 281,707	\$ 114,467,351	\$ 125,176,505	2.860%	\$ 298,327	\$ 114,457,300
6/1/2020	\$ 114,467,351	2.70%	\$ 257,552	\$ 105,525,351	\$ 114,457,300	2.837%	\$ 270,551	\$ 105,528,300
7/1/2020	\$ 105,525,351	2.70%	\$ 237,432	\$ 95,793,197	\$ 105,528,300	2.813%	\$ 247,390	\$ 95,806,104
8/1/2020	\$ 95,793,197	2.70%	\$ 215,535	\$ 86,012,658	\$ 95,806,104	2.790%	\$ 222,733	\$ 86,032,763
9/1/2020	\$ 86,012,658	2.70%	\$ 193,528	\$ 78,437,146	\$ 86,032,763	2.766%	\$ 198,336	\$ 78,462,059
10/1/2020	\$ 78,437,146	2.70%	\$ 176,484	\$ 69,105,017	\$ 78,462,059	2.743%	\$ 179,355	\$ 69,132,801
11/1/2020	\$ 69,105,017	2.70%	\$ 155,486	\$ 60,963,498	\$ 69,132,801	2.720%	\$ 156,683	\$ 60,992,479
12/1/2020	\$ 60,963,498	2.70%	\$ 137,168	\$ 52,882,188	\$ 60,992,479	2.696%	\$ 137,046	\$ 52,911,047
1/1/2021	\$ 52,882,188	2.70%	\$ 118,985	\$ 42,915,276	\$ 52,911,047	2.673%	\$ 117,857	\$ 42,943,007
2/1/2021	\$ 42,915,276	2.70%	\$ 96,559	\$ 42,283,609	\$ 42,943,007	2.650%	\$ 94,818	\$ 42,309,599
3/1/2021	\$ 42,283,609	2.70%	\$ 95,138	\$ 37,062,095	\$ 42,309,599	2.626%	\$ 92,595	\$ 37,085,542
4/1/2021	\$ 37,062,095	2.70%	\$ 83,390	\$ 31,279,074	\$ 37,085,542	2.603%	\$ 80,440	\$ 31,299,571
5/1/2021	\$ 31,279,074	2.70%	\$ 70,378	\$ 25,731,908	\$ 31,299,571	2.579%	\$ 67,281	\$ 25,749,308
6/1/2021	\$ 25,731,908	2.70%	\$ 57,897	\$ 20,647,019	\$ 25,749,308	2.556%	\$ 54,848	\$ 20,661,370
7/1/2021	\$ 20,647,019	2.70%	\$ 46,456	\$ 19,965,248	\$ 20,661,370	2.533%	\$ 43,608	\$ 19,976,752
8/1/2021	\$ 19,965,248	2.70%	\$ 44,922	\$ 17,036,355	\$ 19,976,752	2.509%	\$ 41,774	\$ 17,044,712
9/1/2021	\$ 17,036,355	2.70%	\$ 38,332	\$ 14,279,335	\$ 17,044,712	2.486%	\$ 35,311	\$ 14,284,670
10/1/2021	\$ 14,279,335	2.70%	\$ 32,129	\$ 11,632,720	\$ 14,284,670	2.463%	\$ 29,315	\$ 11,635,242
11/1/2021	\$ 11,632,720	2.70%	\$ 26,174	\$ 9,401,079	\$ 11,635,242	2.439%	\$ 23,651	\$ 9,401,079
			\$9,401,079			-0.023%	\$9,401,079	



RESULTS:

- ❖ As of November 8, 2018, the indicative rate of a flexible repurchase agreement with a thirty-six month term is **2.70%**
- ❖ The local government pool yields shaded in blue are the markets current expectations of where Fed Funds rates will be at each FOMC meeting date.
- ❖ Fed Funds can be used as a proxy for local government pool yields.

Disclosure

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