

**REPORT PREPARED FOR THE  
FLORIDA HURRICANE CATASTROPHE FUND**



**CLAIMS-PAYING CAPACITY ESTIMATES**

**OCTOBER 19, 2021**

***ONCE FINALIZED, THE STATEMENT OF THE FHCF'S ESTIMATED BORROWING CAPACITY, ESTIMATED CLAIMS-PAYING CAPACITY, AND PROJECTED YEAR-END BALANCE REQUIRED UNDER S. 215.555(4)(c)2., F.S., WILL BE PUBLISHED IN THE FLORIDA ADMINISTRATIVE REGISTER AS REQUIRED BY LAW.***

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## I. Introduction

The Florida Hurricane Catastrophe Fund ("FHCF") is a tax-exempt trust fund created by the State of Florida in 1993 and is administered by the State Board of Administration of Florida under Section 215.555, Florida Statutes. It was created to operate exclusively for the purpose of protecting and advancing the state's interest in maintaining insurance capacity by providing contractually specified coverage that provides reimbursement for a portion of residential property insurers' hurricane losses. Participation is mandatory for authorized property insurers, subject to limited exceptions.

Participating insurers pay the FHCF annual reimbursement premiums as consideration for this reimbursement coverage. The reimbursement premiums are based on insured values of covered properties, as reported annually to the FHCF. The FHCF statute requires the annual adoption of a reimbursement premium formula that generates "actuarially indicated" premiums as defined by law. An insurer's premium is proportionate to its coverage selection at a percentage level and its share of the FHCF's total risk exposure.

The annual reimbursement contract provides for reimbursement of a percentage of an insurer's residential hurricane losses in excess of its "retention" which is determined under a statutory formula. Reimbursement is provided at one of three percentage levels (90%, 75%, or 45%) selected in advance by the insurer.

The FHCF may obtain funds to pay its contractual reimbursement obligations from the following available potential sources:

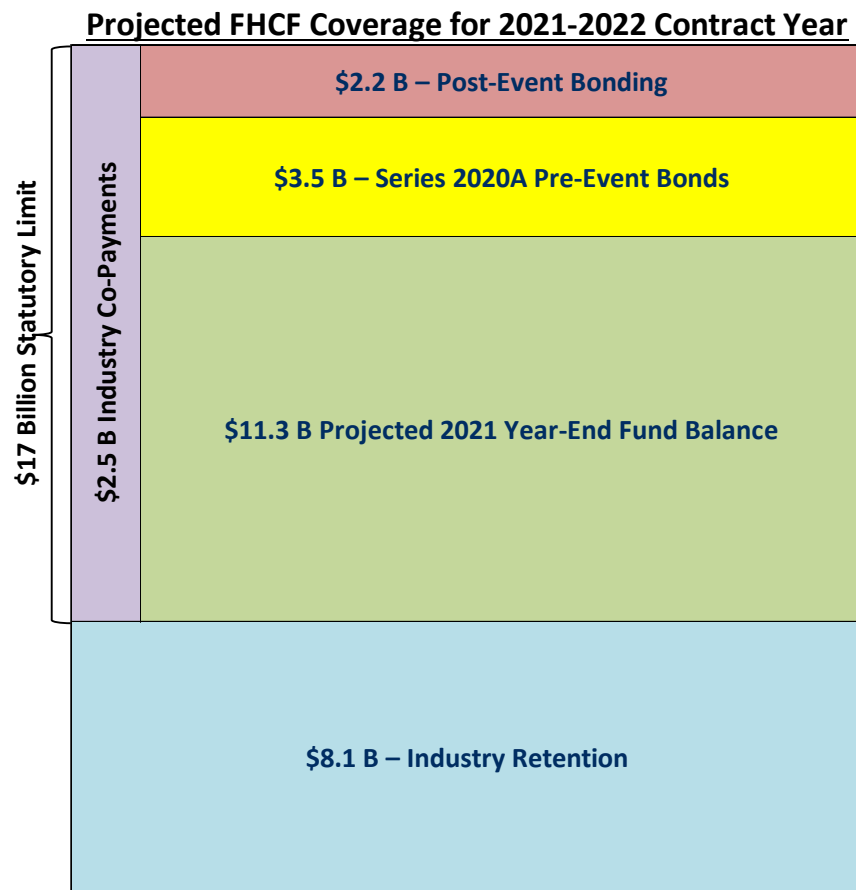
- (1) Accumulated reimbursement premiums*
- (2) Recoveries from reinsurance and other risk-transfer mechanisms, if any*
- (3) Pre-event bond proceeds and other pre-event liquidity resources*
- (4) Proceeds of post-event revenue bonds issued under Section 215.555(6), Florida Statutes, and secured by emergency assessments, if needed*
- (5) Emergency assessments under Section 215.555(6)(b), Florida Statutes, if needed*
- (6) Investment earnings on accumulated reimbursement premiums and emergency assessments*

The actual and potential obligations of the FHCF are limited by statute. For the contract year June 1, 2021 – May 31, 2022, the maximum potential liability of the FHCF is \$17 billion, with projected available total liquid resources of approximately \$14.8 billion or over \$2.2 billion below the maximum potential liability, which would therefore require additional financing. In addition, the FHCF statute limits the Fund's



reimbursement liability to its actual claims-paying capacity, which may depend on financial market conditions at the time of sale if any post-event revenue bonds are needed to pay claims.

The following chart summarizes the sources of funds for the FHCF’s projected coverage for the 2021-2022 Contract Year. The \$8.1 billion industry retention is the maximum loss amount retained by the industry below the FHCF coverage layer. The \$11.3 billion projected year-end 2021 fund balance is based on assumptions prepared by Paragon Strategic Solutions Inc. (Paragon), the FHCF’s consulting actuary and Raymond James, the FHCF’s financial advisor. The \$2.5 billion industry co-payments amount is the maximum co-pay for the industry for losses in the FHCF coverage layer based on the projected industry overall coverage selection of 86.157%. The \$17 billion of FHCF coverage includes an allowance of 10% for loss adjustment expenses.



*Numbers may not add due to rounding. Not drawn to scale*

Historically, the FHCF has shown probabilities of ground up losses based on the impact of simulated industry losses on the FHCF as a whole, with a single industry retention, industry limit and industry coverage selection, and all exposures combined. This approach produces an accurate estimate of industry expected losses for the FHCF coverage layer. However, in actual practice, each participating insurer has its own loss experience based on its own exposure, retention, limit, and FHCF coverage selection with its own unique probabilities of incurring FHCF layer losses. To more accurately estimate ground up losses and



return times for different levels within the FHCF coverage layer, Paragon uses a detailed company approach which includes an additional analysis based on model results by zip code and type of business and each individual company retention, company limit, and coverage selection. The following table compares the return times and corresponding ground up losses from these two methods for selected FHCF layer loss levels. The FHCF layer loss includes an allowance of 10% for loss adjustment expenses.

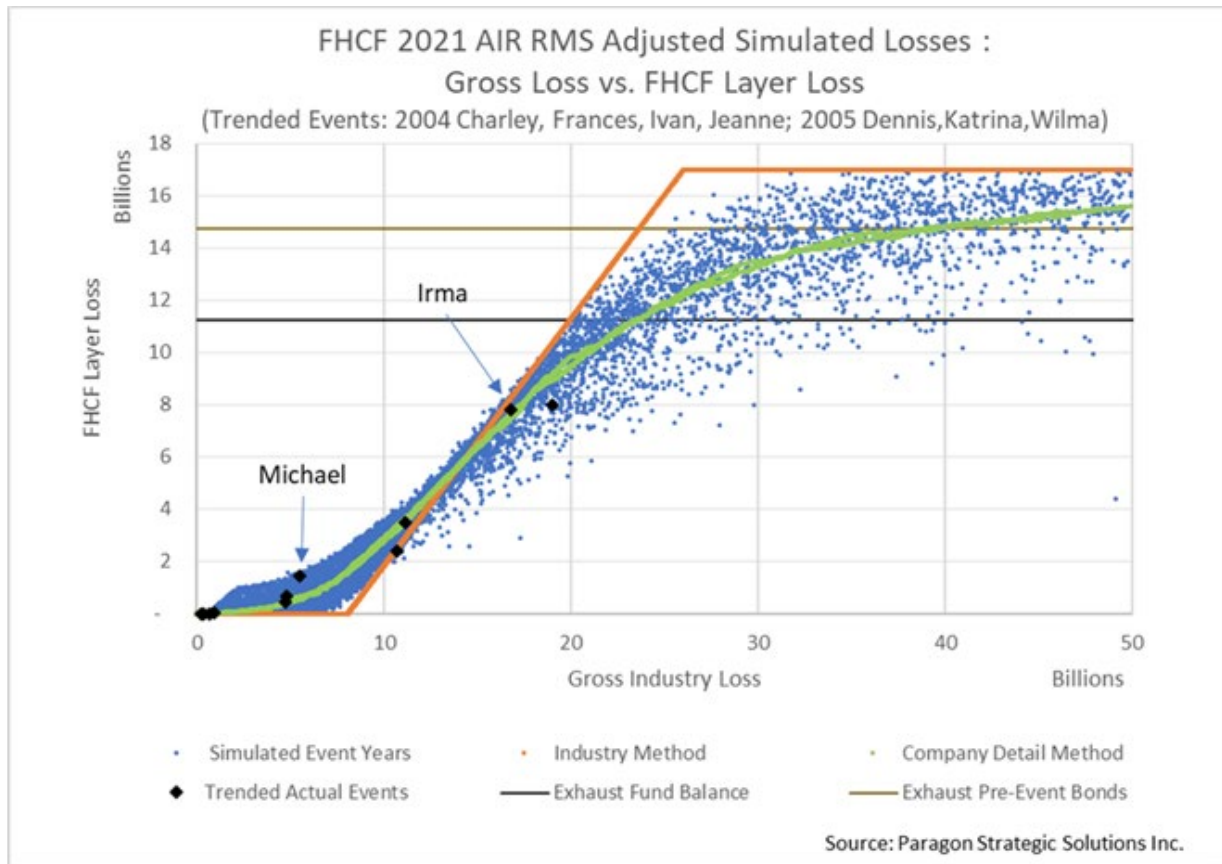
Layer	FHCF Layer Loss (\$ in Billions)	Return Times (Years) for Aggregate FHCF Layer Liabilities Only <sup>1</sup>	Ground Up Losses for Aggregate FHCF Layer Liabilities Only (\$ in Billions) <sup>1</sup>	Return Times (Years) for Average AIR and RMS Company Retention Limit Aggregate <sup>2</sup>	Ground Up Losses for Average AIR and RMS Company Retention Limit Aggregate (\$ in Billions) <sup>2</sup>
Maximum FHCF Statutory Limit	17.0	36	26.0	333	89.9
Project Fund Balance and Pre-Event Bonds Exhaustion	14.8	32	23.6	63	38.0
Project Fund Balance Exhaustion	11.3	25	19.9	33	25.0
Hurricane Irma Level Event	7.8	19	16.3	21	18.3
\$5 Billion Event	5.0	16	13.4	16	14.4
\$1 Billion Event	1.0	11	9.1	9	7.2

Source: Paragon Strategic Solutions  
Return times and ground up losses are shown for illustrative purposes only.

<sup>1</sup> The relevant data is shown aggregated for 157 FHCF participating insurers and the return times are presented as if all of the participating insurers had uniform exposures, coverage selections and loss experiences.

<sup>2</sup> The relevant data is shown for the sum of the 157 participating insurers with each having its own retention and coverage limits based upon its projected market share exposures, and therefore each participating insurer has its own unique probabilities of triggering its FHCF coverage and reaching its FHCF coverage limit.

The chart on the following page shows gross losses versus detailed company FHCF layer losses, simulated events (blue dots) and trended actual events (black diamonds). Note there are many possible FHCF layer losses for each gross loss level. The red line is based on the combined industry approach which has one FHCF layer loss outcome for each gross loss level. The green line is based on the average of the detailed company approach. The black line is set at the \$11.3 billion projected year-end fund balance. The brown line is the total liquidity level at \$14.8 billion and is the sum of the \$11.3 fund balance and the \$3.5 billion pre-event bonds. The FHCF has funds to cover an event (blue dots) below the funded black line and liquidity to cover an event below the brown line without immediate post-event bonding. Events above the brown line will require post-event bonding for a portion of their payments. For gross industry losses between \$12.5 billion and \$16.7 billion, the two methods generate similar average annual FHCF layer loss estimates. The combined industry approach (red line) underestimates the FHCF layer loss below \$12.5 billion gross industry losses and overestimates the FHCF layer losses above \$16.7 billion gross losses.



Pursuant to Section 215.555(4)(c)(2), Florida Statutes, “in May and October of the contract year, the board shall publish in the Florida Administrative Register a statement of the fund’s estimated borrowing capacity, the fund’s estimated claims-paying capacity, and the projected balance of the fund as of December 31.” The purpose of these claims-paying capacity estimate reports is to provide an estimate of the borrowing and claims-paying capacity of the FHCF for the 2021-2022 Contract Year in order to assist the FHCF’s participating insurers in determining their reimbursements.

Providing estimates at these particular times of the year is useful from the perspective that some insurers operate in multiple states and tend to purchase their private reinsurance effective January 1<sup>st</sup>, while many other insurers operate solely in Florida and purchase their private reinsurance prior to June, effective June 1<sup>st</sup> of each year.



## II. The Process

As in prior years, in order to estimate the FHCF's borrowing capacity for the 2021 and 2022 seasons, we took the following three steps:

- (1) Evaluated market conditions for the FHCF using our internal resources. Raymond James & Associates, Inc. ("Raymond James"), a full service broker-dealer with over \$20 billion in market capitalization (RJF, [www.raymondjames.com](http://www.raymondjames.com)), serves as the independent financial advisor to the FHCF.

Raymond James and the FHCF staff utilized the resources of the FHCF's five senior managing underwriters to estimate FHCF bonding capacity

Raymond James also serves as an independent advisor to numerous other governmental catastrophe insurance entities across the country and our experience includes the evaluation and placement of risk transfer programs in both traditional and capital markets, the issuance of pre-event bonds and other liquidity mechanisms, the issuance of post-event bonds, and serving as an investment consultant. We rank number one as financial advisor to state-sponsored public insurance entities and are among the top municipal underwriters in the country and participate daily in the market for fixed income securities similar to those the FHCF has issued or would issue to help meet its reimbursement obligations after an event and have served as independent advisor or underwriter on the issuance of over \$43 billion of debt and related financial instruments for the FHCF and other governmental catastrophe insurance entities around the country since 2005. Raymond James currently has approximately \$1.2 trillion of assets under management.

- (2) Solicited formal written feedback from the five current senior managing underwriters of the FHCF's financial services team. These firms – Bank of America, Citi, J.P. Morgan, Morgan Stanley and Wells Fargo – are among the largest financial services firms in the world, and each one has extensive experience and expertise with FHCF securities and similar instruments for other municipal issuers. They all were also part of the team for the successful execution of the FHCF's Series 2020A pre-event financing. In the solicitation for the preparation of this report, we asked them to provide their estimates, given certain assumptions, of the FHCF's bonding capacity. As always, in our written request for feedback, we sought to ensure that the underwriters had a clear understanding of the purpose of asking them to provide such estimates and the uses thereof. A copy of the solicitation and the response of each of the managers is contained in Appendix A.
- (3) We evaluated the written feedback and determined a recommended bonding capacity estimate for inclusion in this report.



### III. Analytical Considerations

The FHCF has very strong debt repayment capabilities. From a credit standpoint, the ability to levy emergency assessments on all property and casualty insurance lines except workers' compensation, medical malpractice, federal flood, and accident and health lines is similar to a statewide sales tax on an essential product with an underlying premium base of \$55.9 billion<sup>1</sup>. The strength of this pledged revenue stream is the primary reason the three major rating agencies – Moody's, Standard & Poor's, and Fitch – rate the FHCF's debt Aa3, AA, and AA, respectively. To put these ratings in perspective, less than 5% of U.S. corporations have ratings in the "AA" category by all three rating agencies.

**The major constraint, if any in the future, for the FHCF in achieving its maximum reimbursement obligation is potential limitation of market access and capacity, not a lack of assessment capability or credit strength**

While the FHCF statute does limit the amount of assessments that can be levied – 6% for losses attributable to one contract year and 10% for losses attributable to all years – these percentages, when applied to the current assessment base of \$55.9 billion, mean the FHCF could levy annual assessments of as much as \$3.35 billion for losses from hurricanes occurring in one contract year and as much as \$5.59 billion for losses from hurricanes occurring over all contract years. These annual amounts, in conjunction with the other available resources of the FHCF, are estimated to be more than sufficient to support enough bonds to enable the FHCF to meet its maximum initial season obligation and subsequent season coverage as well, assuming that the fixed income markets continue to function in a normal manner and the FHCF has market access to issue such bonds at the current market rates for the initial season, or even at inflated rates of 4% for the initial season and 6% for the subsequent season.

Despite volatility and the significant economic downturn in 2020 related to COVID-19, financial market conditions have improved significantly as the U.S. has begun its recovery from COVID-19. U.S. and global interest rates have marginally increased from historically low levels but are still relatively low based on historical averages, and investor demand has been strong, which has led to fixed rate issuance at all-time highs. These market conditions enabled the FHCF to successfully execute the Series 2020A taxable pre-event financing in September 2020. The Series 2020A financing had a preliminary transaction size of \$2.25 billion with \$750 million maturities in five, seven and ten years. Based on significant investor demand even at significantly low interest rates, the FHCF was able to upsize the transaction to \$3.5 billion while maintaining initial pricing levels with a low true interest cost of 1.842%. Based on stronger investor demand for the 5-year and 10-year maturities relative to the 7-year maturity at the time of sale, the 5-year and 10-year maturities were upsized to \$1.25 billion each while the 7-year maturity was upsized to \$1 billion. The Series 2020A financing had strong investor demand with over 100 investors participating in

<sup>1</sup> See Appendix B for an analysis of the size and growth of the FHCF's assessment base over time.





the transaction, placing approximately \$6.4 billion of orders. The FHCF was able to take advantage of historically low interest rates and pricing spreads that were lower than the pricing of both the Series 2013A and Series 2016A Bonds; the Series 2020A transaction also re-established the FHCF in the municipal bond marketplace and illustrated the significant amount of investor demand that currently exists in the taxable municipal market.

Market conditions are stable; however, market access can never be guaranteed, especially after an event or multiple events either in Florida or globally. Therefore, it is critical to understand the potential challenges the FHCF may face after a large event.

Under section 215.555(4)(b)2, Florida Statutes, an insurer is prohibited from electing a lower coverage percentage upon renewal of its FHCF reimbursement contract if any post-event revenue bonds are outstanding. However, since the defeasance of all outstanding FHCF post-event revenue bonds in 2014, some participating insurers based on their risk exposure, elected to lower their coverage percentage selections to take advantage of soft global risk transfer markets; the weighted average coverage percentage selection dropped from 89.9% in the 2014-2015 Contract Year to 73.5% for the 2018-2019 Contract Year. Subsequently, as a result of hardening pricing conditions in the global reinsurance markets due to significant global insured losses, including losses from Hurricanes Irma, Maria, and Michael, as well as Japanese earthquakes, California wildfires, and market volatility due to COVID-19, the participating insurers have gradually increased their average FHCF participation coverage to 86.2% for the 2021-2022 Contract Year. As a result of these changes and the enactment into law of HB 301, which increased the FHCF's LAE allowance from 5% to 10%, the co-payment amount for a \$17 billion FHCF payout has decreased from approximately \$6.0 billion for the 2018-2019 Contract Year to \$2.5 billion for the 2021-2022 Contract Year.

For the 2021-2022 Contract Year, the FHCF has approximately \$14.8 billion of liquidity resources, which is over \$2.2 billion below its maximum statutory obligation of \$17 billion. After an event and depending on market conditions and interest rates, the FHCF may be able to either draw on its pre-event bond proceeds and repay the pre-event bonds by issuing post-event bonds, or the FHCF could issue post-event bonds in the amount of approximately \$5.7 billion and preserve its \$3.5 billion Series 2020A pre-event bond proceeds for subsequent seasons. The table on the following page shows the FHCF's obligations and its projected liquidity resources for the 2021-2022 Contract Year.



FHCF Obligations and Liquidity Resources – 2021-2022 Contract Year	Amount (\$B)
Total Potential FHCF Obligations	\$17.0
Projected 2021 Year-End Fund Balance	\$11.3
Series 2020A Pre-Event Bonds Balance	\$3.5
Total Liquidity Resources	\$14.8
Total Liquidity Resources Below Potential Obligations	\$2.2

*Numbers may not add due to rounding.*

The FHCF's 2021-2022 Contract Year liquidity resources are adjusted for paid losses and loss reserves in the total amount of \$9.25 billion for Hurricanes Irma and Michael. At this time, the FHCF's projected ultimate incurred loss estimates by Paragon are \$7.80 billion from Hurricane Irma and \$1.45 billion from Hurricane Michael.

If the FHCF were to leave all of its \$3.5 billion Series 2020A pre-event bond proceeds outstanding, the potential maximum amount of post-event bonding needed is projected to be approximately \$5.7 billion for the 2021-2022 Contract Year. As shown in the charts on the following page, no single issuance has been greater than \$5 billion since 2018. After a hurricane event, the FHCF most likely will not need to do one single large financing. Based on a higher attachment point and the past payout patterns, the FHCF most probably will meet its 2021-2022 statutory obligation by issuing more than one series of bonds over a period of 12 months or longer, if needed. Accordingly, it is helpful to evaluate which issuers in the municipal market (both taxable and tax-exempt) have issued the most debt over a 12-month period. The charts on page 10 show that the cumulative amount issued by a single issuer in a calendar year has exceeded the required \$5.7 billion nine times since 2018.



Largest 25 Taxable Municipal Issuances By Par Amount Since 2018					
Rank	Issuer Name	State	Year of Sale	Issue Description	Par (\$MM)
1	Florida St Board Admin Fin Corp	FL	2020	Revenue Bonds	\$3,500
2	PR Govt Dev Bank Recovery Auth	PR	2018	Debt Recovery Bonds	\$2,598
3	California	CA	2018	Various GO & Refunding Bonds	\$2,147
4	Hawaii	HI	2021	Series of 2021 GD-J	\$1,883
5	NYS Dorm Authority	NY	2021	Series 2021 C	\$1,858
6	Golden State Tobacco Sec Corp	CA	2021	Series 2021 B	\$1,840
7	Regents of the Univ of California	CA	2020	General Revenue Bonds	\$1,823
8	Regents of the Univ of California	CA	2020	Medical Center Pooled Rev Bonds	\$1,800
9	Los Angeles Comm College Dt	CA	2020	GO Refunding Bonds	\$1,794
10	California State Univ Trustees	CA	2021	Series 2021 B	\$1,788
11	Grand Parkway Transport Corp	TX	2020	Sub Tier Toll Revenue Ref Bonds	\$1,514
12	New York City-New York	NY	2020	General Obligation Bonds	\$1,500
13	Regents of the Univ of California	CA	2021	General Revenue Bonds	\$1,482
14	NYS Dorm Authority	NY	2019	State Personal Inc Tax Rev Bonds	\$1,392
15	Texas Transportation Commission	TX	2020	GO Mobility Fund Ref Bonds	\$1,271
16	Dallas & Fort Worth Cities-Texas	TX	2020	Joint Revenue Refunding Bonds	\$1,194
17	Dallas & Fort Worth Cities-Texas	TX	2019	Joint Revenue Refunding Bonds	\$1,167
18	California	CA	2019	Various Purpose GO Bonds	\$1,138
19	Port Authority of NY & NJ	NY	2020	Consolidated Notes	\$1,100
20	Massachusetts School Bldg Auth	MA	2020	Sr Dedicated Sales Tax Bonds	\$1,445
21	Michigan Finance Authority	MI	2019	Hospital Revenue Refunding Bonds	\$1,091
22	Pennsylvania State University	PA	2020	Revenue Bonds	\$1,065
23	Pennsylvania State University	PA	2020	General Obligation Notes	\$1,061
24	Hawaii	HI	2020	General Obligation Bonds	\$1,000
25	New Jersey Turnpike Authority	NJ	2021	Turnpike Revenue Bonds	\$995

Source: Thomson Financial for long-term negotiated taxable issuances from January 1, 2018 to September 30, 2021.

Largest 25 Tax-Exempt Municipal Issuances By Par Amount Since 2018					
Rank	Issuer Name	State	Year of Sale	Issue Description	Par (\$MM)
1	Buckeye Tobacco Settle Fin Au	OH	2020	Tobacco Settle Asset-Backed Bonds	\$4,924
2	New Jersey	NJ	2020	GO Emergency Bonds	\$3,672
3	NJ Tobacco Settlement Fin Corp	NJ	2018	Tobacco Settlement Bonds	\$3,147
4	Metropolitan Transport Auth (MTA)	NY	2020	Payroll Mobility Tax BANs	\$2,907
5	California	CA	2020	Various Purpose GO & Ref Bonds	\$2,631
6	Denver City and Co-Colorado	CO	2018	Subordinate Revenue Bonds	\$2,526
7	NYS Dorm Authority	NY	2020	State Personal Income Tx Rev Bond	\$2,434
8	California	CA	2019	Various Purpose GO & Ref Bonds	\$2,405
9	California	CA	2019	GO Var Purpose & Ref Bonds	\$2,292
10	NYS Urban Development Corp	NY	2020	State Personal Inc Tax Rev Bonds	\$2,225
11	California	CA	2018	GO & Various Purpose Ref Bonds	\$2,181
12	California	CA	2020	Various Purp GO & Ref Bonds	\$2,096
13	California	CA	2021	Various Purp GO & Ref Bonds	\$2,095
14	Colorado Health Facilities Auth	CO	2019	Revenue Bonds	\$2,043
15	Colorado Health Facilities Auth	CO	2019	Revenue Bonds	\$2,043
16	California	CA	2019	Various Purpose GO & Ref Bonds	\$2,024
17	NYS Dorm Authority	NY	2019	State Personal Inc Tax Rev Bonds	\$2,013
18	NYS Thruway Authority	NY	2021	Series 2021 A-1	\$1,901
19	District of Columbia	DC	2019	Income Tax Secured Rev Bonds	\$1,886
20	NYS Dorm Authority	NY	2021	State Personal Inc Tax Rev Bonds	\$1,871
21	California	CA	2021	GO Various Purpose & Ref Bonds	\$1,842
22	Florida Development Fin Corp	FL	2019	Surface Transpo Fac Rev Bonds	\$1,750
23	NYS Dorm Authority	NY	2018	State Sales Tax Revenue Bonds	\$1,708
24	NYS Thruway Authority	NY	2019	Gen Rev Jr Indebtedness Oblig	\$1,693
25	San Francisco City & Co Airport Comm	CA	2019	2nd Series Revenue Bonds	\$1,675

Source: Thomson Financial for long-term negotiated tax-exempt issuances from January 1, 2018 to September 30, 2021.



Largest 25 Issuers By Issued Par Amount 2018		
Rank	Issuer Name	Par (\$MM)
1	<b>NYS Dorm Authority</b>	<b>\$8,184</b>
2	NYC Transitional Finance Auth	\$6,326
3	California	\$3,997
4	Metropolitan Transport Auth (MTA)	\$3,680
5	New York City-New York	\$3,569
6	Connecticut	\$3,308
7	NJ Tobacco Settlement Fin Corp	\$3,147
8	Texas Water Development Board	\$3,093
9	New Jersey Trans Trust Fund Au	\$2,763
10	Kentucky Pub Energy Au (PEAK)	\$2,731
11	Golden State Tobacco Sec Corp	\$2,496
12	Massachusetts	\$2,423
13	Main Street Natural Gas Inc	\$2,022
14	Illinois	\$1,706
15	Los Angeles Dept of Wtr & Power	\$1,703
16	Southeast Alabama Gas Dt	\$1,692
17	NYC Municipal Water Fin Auth	\$1,692
18	Regents of the Univ of California	\$1,682
19	California Statewide CDA (CSCDA)	\$1,499
20	PA Commonwealth Financing Auth	\$1,487
21	Grand Parkway Transport Corp	\$1,484
22	Pennsylvania	\$1,448
23	Chicago City BOE	\$1,412
24	NYC Housing Dev Corp	\$1,409
25	Ohio	\$1,391

Largest 25 Issuers By Issued Par Amount 2019		
Rank	Issuer Name	Par (\$MM)
1	<b>California</b>	<b>\$9,489</b>
2	NYS Dorm Authority	\$8,915
3	NYC Transitional Finance Auth	\$4,350
4	Metropolitan Transport Auth (MTA)	\$4,246
5	Colorado Health Facilities Auth	\$4,133
6	Massachusetts	\$4,019
7	Michigan Finance Authority	\$3,479
8	New York City-New York	\$3,474
9	New Jersey Trans Trust Fund Au	\$3,316
10	Empire State Development Corp	\$3,217
11	District of Columbia	\$3,157
12	San Francisco City & Co Airport Comm	\$3,078
13	NYC Municipal Water Fin Auth	\$2,938
14	Florida Development Fin Corp	\$2,849
15	Miami-Dade Co-Florida	\$2,711
16	NYS Thruway Authority	\$2,551
17	Connecticut	\$2,414
18	Port Authority of NY & NJ	\$2,401
19	Metro Washington Airports Auth	\$2,176
20	Washington	\$2,135
21	Wisconsin Public Finance Auth	\$2,106
22	Broward Co-Florida	\$2,068
23	Main Street Natural Gas Inc	\$2,003
24	Indiana Finance Authority	\$1,899
25	Texas PAB Surface Trans Corp	\$1,857

Largest 25 Issuers By Issued Par Amount 2020		
Rank	Issuer Name	Par (\$MM)
1	<b>Metropolitan Transport Auth (MTA)</b>	<b>\$9,253</b>
2	NYS Dorm Authority	\$8,920
3	California	\$7,473
4	Texas	\$7,362
5	New York City-New York	\$6,592
6	Buckeye Tobacco Settle Fin Au	\$5,352
7	Massachusetts	\$5,214
8	NYC Transitional Finance Auth	\$5,072
9	Regents of the Univ of California	\$4,599
10	NYS Urban Development Corp	\$4,078
11	New Jersey	\$3,997
12	Hawaii	\$3,592
13	<b>Florida St Board Admin Fin Corp</b>	<b>\$3,500</b>
14	NYC Municipal Water Fin Auth	\$3,154
15	New York Transportation Dev Corp	\$3,124
16	Texas Transportation Commission	\$3,090
17	Massachusetts Dev Finance Agcy	\$3,028
18	Miami-Dade Co-Florida	\$2,973
19	Illinois	\$2,790
20	District of Columbia	\$2,680
21	Pennsylvania State University	\$2,600
22	Connecticut	\$2,550
23	Los Angeles USD	\$2,330
24	Wisconsin	\$2,319
25	Grand Parkway Transport Corp	\$2,307

Largest 25 Issuers By Issued Par Amount 2021 YTD		
Rank	Issuer Name	Par (\$MM)
1	<b>California</b>	<b>\$5,647</b>
2	NYC Transitional Finance Auth	\$5,494
3	NYS Dorm Authority	\$4,913
4	Triborough Bridge & Tunnel Auth	\$3,054
5	Regents of the Univ of California	\$2,923
6	NYC Municipal Water Fin Auth	\$2,870
7	NYS Thruway Authority	\$2,504
8	Washington	\$2,368
9	NYC Housing Dev Corp	\$2,344
10	Miami-Dade Co-Florida	\$2,337
11	New York City-New York	\$2,300
12	CSCDA Community Imp Auth	\$2,295
13	Golden State Tobacco Sec Corp	\$2,277
14	Massachusetts	\$2,247
15	Pennsylvania Turnpike Commission	\$2,024
16	Connecticut	\$2,021
17	Hawaii	\$2,020
18	California State Univ Trustees	\$1,788
19	Los Angeles Dept of Airports	\$1,772
20	Illinois	\$1,751
21	Ohio	\$1,733
22	Port Authority of NY & NJ	\$1,699
23	Wisconsin Public Finance Auth	\$1,672
24	California Housing Finance Agcy	\$1,667
25	Puerto Rico Aqueduct & Sewer Authority	\$1,655

Source: Thomson Financial for long-term issuances from January 1, 2018 to September 30, 2021.



In reviewing this history of large municipal issuers, however, it is important to note that the FHCF has been a relatively infrequent but large issuer of debt. Since 2006, the FHCF has completed eight bond issues totaling \$15.6 billion (three tax-exempt issues totaling \$2.6 billion and five taxable issues totaling \$13.0 billion), of which \$3.5 billion is outstanding. By comparison, for example, since 2018, the State of California has completed 38 long-term bond issues totaling approximately \$29 billion, the New York State Dormitory Authority has completed 111 long-term bond issues totaling approximately \$28 billion, the New York City Transitional Finance Authority has completed 74 long-term bond issues totaling approximately \$23 billion, and the Commonwealth of Massachusetts has completed 39 long-term bond issues totaling over \$12 billion. The FHCF's debt has always been issued with relatively short maturities ranging from 1-10 years (although it has the authority to issue debt with maturities of up to 30 years). All of the issuers listed above have had final maturities of 30 years or more. Interest rates are near historic lows and investor demand remains strong across the maturity spectrum.

Analysis of potential market acceptance of large amounts of FHCF debt must include not only relevant historical references, but also an evaluation of current market conditions and cash flow needs. In this regard, conditions seem to be excellent in both tax-exempt and taxable municipal markets, as well as in the corporate market.

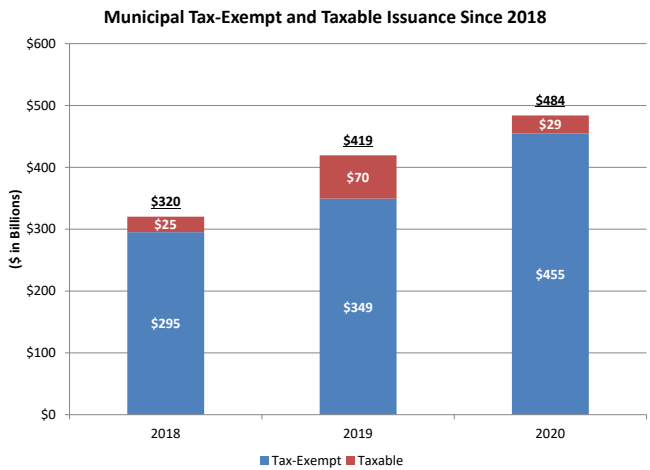
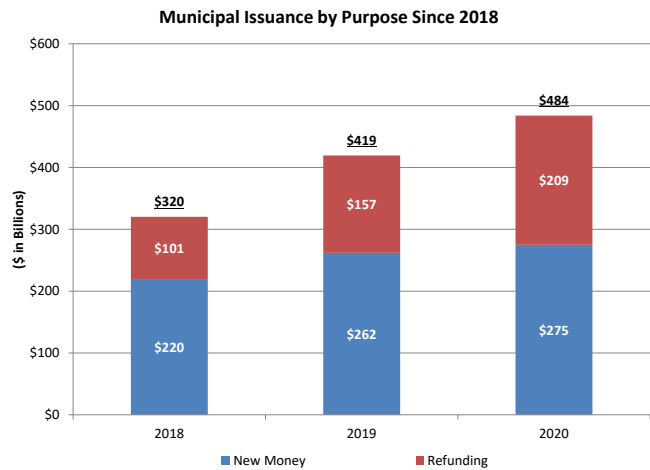
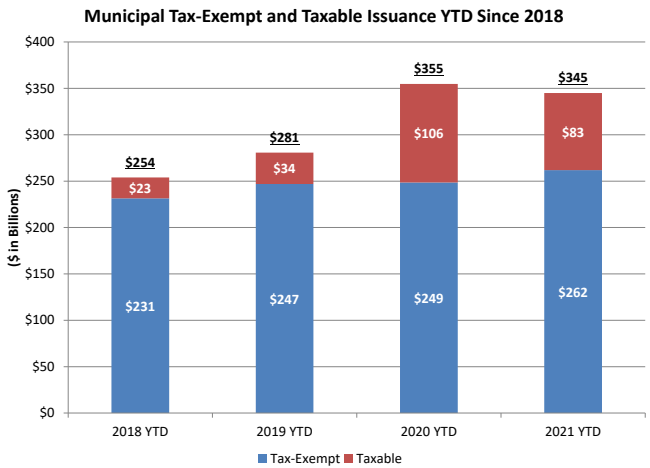
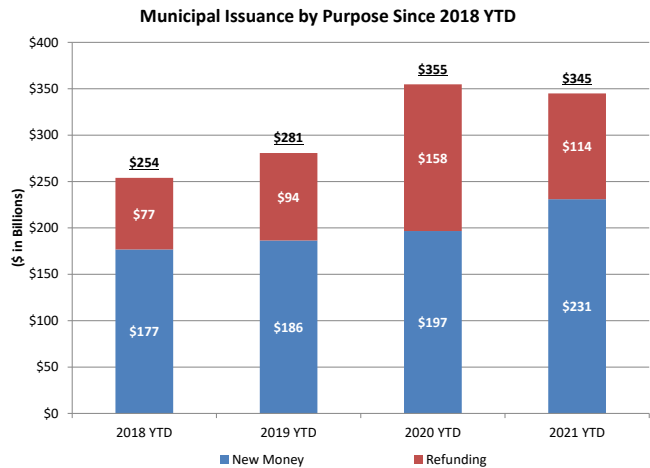
In 2020, corporate issuance was \$2.3 trillion (\$1.9 trillion investment grade, \$421 billion high yield, and \$1.8 billion convertible), which was significantly larger than 2019 issuance of \$1.4 trillion (\$1.1 trillion investment grade, \$279 billion high yield, and \$800 million convertible). Through September 30, 2021, corporate bond issuance is at \$1.6 trillion (\$1.2 trillion investment grade, \$408 billion high yield, and \$400 million convertible), or 20% lower than the record-breaking \$2.0 trillion issued over the same time period in 2020. The corporate bond market has topped \$1 trillion each year since 2011 as interest rates have been consistently historically low.

While corporate bond issuance has reached record levels since 2011, most issuances are for liquidity and financial engineering rather than to build manufacturing plants or infrastructure to fund growth – i.e., more issuances are to fund mergers and acquisitions, build additional reserves, stock buybacks, and refinance higher yielding debt in the record low interest rate environment, which include Boeing's record-breaking \$25 billion issuance, Amazon's \$19 billion issuance, AT&T's \$12 billion issuance, Disney's \$11 billion issuance, T-Mobile's \$7 billion issuance, Microsoft's \$6 billion issuance, Comcast's \$6 billion issuance, and Apple's \$5 billion issuance.

For 2020, municipal long-term issuance was 15% higher compared to 2019 with \$484 billion of issuance. For year-to-date 2021, municipal long-term negotiated issuance is \$344 billion and is relatively flat compared to the \$355 billion issued over the same time period in 2020. Prior to the Tax Reform Bill of



2018, the majority of municipal issuance over the past few years had been issued for refundings to capitalize on low interest rates, but as rates have reached historic lows new money issuance has grown, which is evidenced by the amount of new money issuance for 2020 – \$275 billion, or 57% of the total \$484 billion of long-term issuance. As part of the Tax Reform Bill of 2018, the tax-exempt provision for advance refundings was eliminated, which has affected the volume of refundings – 38%, 43%, and 33% of municipal issuance was for refundings in 2019, 2020, and year-to-date 2021, respectively.



Source: Thomson Financial for municipal long-term issuances from January 1, 2018 to September 30, 2021.

There is strong investor demand in both the tax-exempt and taxable markets as evidenced by the record issuance in 2020 and strong issuance so far in 2021. Additionally, the FHCF has multiple factors working in its favor, including, but not limited to: (1) the FHCF is a well-regarded, highly-rated credit (AA category), closely associated with (though not guaranteed by) the State of Florida, a blue-chip name in the market; (2) in September 2020, the FHCF successfully priced \$3.5 billion of Series 2020A taxable pre-event bonds with a 10-year final maturity at a true interest cost of 1.842%, which re-established the strength of the FHCF credit in the taxable market; (3) strong demand in the current market environment for taxable issuances and (4) similar to its pre-event financings, any post-event bond issuances of the size the FHCF may need to undertake would also be included in the various benchmark indices market observers use to track market performance, so institutional money managers seeking to at least match indexed returns may



have a strong additional incentive to buy FHCF bonds, particularly if they are offered at interest rates marginally higher than those usually associated with typical “AA” rated credits.

Estimating the FHCF’s post-event bonding capacity is an inexact science. To do so requires a consideration of the factors above, an extrapolation about what market conditions might exist after hurricanes of various sizes, and an evaluation of the many subjective and substantive considerations surrounding these estimates and the uses thereof. Certainty is not a defining characteristic of an exercise like this; nor can the results be responsibly guaranteed. Nevertheless, with the proper experience, market perspective and analysis, we can make estimates suitable for the FHCF’s requirements – conservative estimates, not guaranteed to be accurate, but responsibly determined using the best available sources.

One additional note of caution is that financial markets can be highly volatile and uncertain at various times. Such uncertainty may create an additional risk for participating insurers who rely on the FHCF for reimbursements. Nonetheless, financial market conditions are currently very conducive for favorable debt issuance due to low interest rates and strong investor demand. While market conditions are favorable for the FHCF, it is not possible to guarantee financial market conditions for very large issuances or into the future for long-term sustainability of the FHCF. The FHCF’s estimated post-event borrowing capacity is subjective and depends heavily on the opinions of its five senior managing underwriters and our evaluation and analysis of their responses to our questions. As such, participating insurers should recognize the potential impact that financial markets can have on the FHCF’s claims-paying ability for subsequent seasons. The following pages provide current bonding and claims-paying capacity estimates.





#### IV. Bonding and Claims-Paying Capacity Estimates

To estimate the FHCF's bonding capacity, we used the general process described in Section II and detailed in Appendix A. The specific wording of the capacity question we asked the FHCF's senior managing underwriters was as follows:

**The preliminary estimated bonding capacity of the FHCF for the current contract year is \$9.2 billion**

*"Please provide us with your firm's opinion on the potential tax-exempt and/or taxable post-event market capacity over the next 0-12 and 12-24 months at rates that are at or above the current "market" scale, as needed."*<sup>2</sup>

We considered all data elements, and based on cash flow requirement projections from Paragon, guidance from FHCF staff about potential payout timing, and a desire for prudence, we continue to use the capacity estimates for the first 12 months in formulating the bonding capacity estimate for the initial season.

In general, it would take a hurricane event resulting in ground-up losses exceeding approximately \$38.0 billion based on the detailed company approach to exhaust the FHCF's projected liquid resources of approximately \$14.8 billion, which is over \$2.2 billion below its potential maximum obligation of \$17.0 billion. The amount of debt that the FHCF can raise within the first twelve months is helpful for the FHCF and participating insurers in protecting their financial solvency

We are also comfortable including estimates that contain some above-market interest rate capacity in recognition of the fact that the FHCF has ample assessment capability within its statutory limits to support the issuance of bonds, even at significantly higher rates. For purposes of calculating the potential assessment impact of the FHCF's bonding needs, we have calculated the assessment rate assuming the FHCF post-event bonds carry interest rates at an "above market" interest rate of 4% for the initial season and 6% for the subsequent season. There is also some overlap between tax-exempt and taxable capacity estimates and therefore the total capacity available will be marginally less than the sum of the tax-exempt and taxable capacity individually. A summary of the senior managers' responses is shown in the table on the following page:

<sup>2</sup> The complete information request and all responses are included in Appendix A.





FHCF Post-Event Estimated Bonding Capacity						
	Bank of America	Citi	J.P. Morgan	Morgan Stanley	Wells Fargo	Average <sup>1</sup>
<b>Bonding Estimates</b>						
<b>Tax-Exempt:</b>						
0-12 Months	\$2-\$3B	\$3-\$4B	\$5-\$6B	\$2-\$3B	\$5-\$7B	\$4.0B
12-24 Months	\$2-\$3B	\$3-\$4B	\$5-\$6B	\$4-\$5B	\$3-\$5B	\$4.0B
<i>Total tax-exempt</i>	<i>\$4-\$6B</i>	<i>\$6-\$8B</i>	<i>\$10-\$12B</i>	<i>\$6-\$8B</i>	<i>\$8-\$12B</i>	<i>\$8.0B</i>
<b>Taxable:</b>						
0-12 Months	\$3.5-\$5B	\$4.5-\$6B	\$6-\$7B	\$5.5-\$7B	\$3-\$4B	\$5.2B
12-24 Months	\$3.5-\$5B	\$4.5-\$6B	\$6-\$7B	\$8-\$12B	\$2-\$3B	\$5.7B
<i>Total taxable</i>	<i>\$7-\$10B</i>	<i>\$9-\$12B</i>	<i>\$12-\$14B</i>	<i>\$13.5-\$19B</i>	<i>\$5-\$7B</i>	<i>\$10.9B</i>
<b>Tax-Exempt and Taxable</b>						
<b>0-12 Months Total</b>	<b>\$5.5-\$8B</b>	<b>\$7.5-\$10B</b>	<b>\$11-\$13B</b>	<b>\$7.5-\$10B</b>	<b>\$8-\$11B</b>	<b>\$9.2B</b>
<b>12-24 Months Total</b>	<b>\$5.5-\$8B</b>	<b>\$7.5-\$10B</b>	<b>\$11-\$13B</b>	<b>\$12-\$17B</b>	<b>\$5-\$8B</b>	<b>\$9.7B</b>
<b>0-24 Months Total</b>	<b>\$11-\$16B</b>	<b>\$15-\$20B</b>	<b>\$22-\$26B</b>	<b>\$19.5-\$27B</b>	<b>\$13-\$19B</b>	<b>\$18.9B</b>

<sup>1</sup> Averages are rounded to the nearest hundred million dollars

As discussed earlier, we believe that using only the 0-12 months number to compute an average is a prudent approach to estimating bonding capacity for the initial season. Using this methodology yields an estimated bonding capacity of approximately \$9.2 billion and this capacity is significantly above what would be needed to meet the FHCF's potential obligations for the initial season if it were to leave its already issued pre-event bond proceeds outstanding, even if one conservatively expects that the FHCF payout after an event will need to occur within the first twelve months. However, when considering the larger picture of the FHCF's ability to pay additional claims for a subsequent season, the FHCF's bonding capacity beyond 0-12 months is also an important factor. Each of the senior managers believes that the FHCF would have significant additional capacity in the period 12-24 months after an event<sup>3</sup>. This additional capacity could be used to fund a portion of the amount potentially needed for the 2022-2023 Contract Year or subsequent season losses, in the approximate amounts as shown on the following pages.

## Estimated Claims-Paying Capacity

Estimated claims-paying capacity of the FHCF is equal to the sum of the projected year-end fund balance plus risk transfer, if any, and any other potential financing resources, such as bank loans, and the estimated bonding capacity. The FHCF projects that its year-end fund balance for the 2021-2022 Contract Year is approximately \$11.3 billion and it has an estimated bonding capacity of \$9.2 billion (includes repayment of pre-event bond proceeds in the amount of \$3.5 billion), which equals a total estimated claims-paying capacity of \$20.5 billion, or \$3.5 billion above its statutory limit of \$17.0 billion.

The subsequent season may have some remaining unused bonding capacity from the initial season, but for purposes of this analysis we assume the available initial season bonding capacity in the amount of \$9.2 billion is also available for the subsequent or 2022-2023 Contract Year. For any remaining losses

<sup>3</sup> The longer the time frame for estimation purposes, the greater the degree of uncertainty.



beyond the FHCF's estimated claims-paying capacity for the 2022-2023 Contract Year, the FHCF may have additional 12-24 month bonding capacity of up to \$9.7 billion available.

(\$ in Billions, Totals may not add due to rounding)		2021-2022 Contract Year	2022-2023 Contract Year
<b>FHCF Potential Coverage Obligation</b>			
<b>FHCF Coverage Obligation</b>	<b>(A)</b>	<b>\$17.0</b>	<b>\$17.0</b>
<b>FHCF Estimated Funding Sources Available</b>			
Projected FHCF Year-End Fund Balance	(B)	\$11.3	\$1.2
Risk Transfer	(C)	\$0.0	\$0.0
Pre-Event Bond Proceeds Available <sup>1</sup>	(D)	\$3.5	\$3.5
<b>Total Liquid Resources Available</b>	<b>(B + C + D) = (E)</b>	<b>\$14.8</b>	<b>\$4.7</b>
<b>Additional Funds / Potential Borrowing Need</b>	<b>(E - A) = (F)</b>	<b>(\$2.2)</b>	<b>(\$12.3)</b>
<b>FHCF Claims-Paying Capacity</b>			
Projected FHCF Year-End Fund Balance	(B)	\$11.3	\$1.2
Risk Transfer	(C)	\$0.0	\$0.0
Estimated FHCF Borrowing Capacity <sup>1</sup>	(G)	\$9.2	\$9.2
<b>Total Estimated Claims-Paying Capacity</b>	<b>(B + C + G) = (H)</b>	<b>\$20.5</b>	<b>\$10.4</b>
<b>Total Estimated Claims-Paying Capacity as a % of FHCF Coverage Obligation</b>			
<b>(H / A) = (I)</b>		<b>121%</b>	<b>61%</b>
<b>Amount Above / (Below) Coverage Obligation</b>			
<b>(H - A) = (J)</b>		<b>\$3.5</b>	<b>(\$6.6)</b>

Totals may not add due to rounding.

<sup>1</sup> Estimated borrowing capacity is inclusive of any repayment of pre-event bond proceeds. Pre-event bonds are available as a liquidity resource for the 2021-2022 Contract Year in the amount of \$3.5 billion, but we are assuming no pre-event bonds will be used to pay claims for the 2021-2022 Contract Year. However, the \$3.5 billion of pre-event bond proceeds will be available for the 2022-2023 Contract Year and, if used, will reduce the estimated FHCF borrowing capacity from \$9.2 billion to \$5.7 billion.

Under a scenario when a large event happens that depletes the liquid resources of the FHCF, we assume that the FHCF would leave its pre-event bond proceeds outstanding and issue approximately \$5.7 billion of post-event bonds to fund its maximum potential obligation for the 2021-2022 Contract Year. For the 2022-2023 Contract Year, the FHCF can then use its estimated bonding capacity of \$9.2 billion and the \$1.2 billion of reimbursement premiums projected to be accumulated during the subsequent season for total funding sources of \$10.4 billion, or approximately 61% of its potential maximum statutory obligation of \$17 billion for the 2022-2023 Contract Year. The FHCF would need an additional \$6.6 billion in funding sources in order to reach its maximum statutory obligation of \$17 billion for the 2022-2023 Contract Year.

Under this scenario, the breakdown of the potential assessments required for the FHCF's potential borrowing needs and repayment of pre-event bond proceeds are shown in the table on the following page based on an "above market" interest rate of 4% for the initial season and 6% for the subsequent season over a 30-year period, for informational purposes only. As seen in the table on the following page, even with an "above market" rate of 4% for the initial season and 6% for the subsequent season, the FHCF has significant remaining assessment capabilities within its 6% statutory cap.

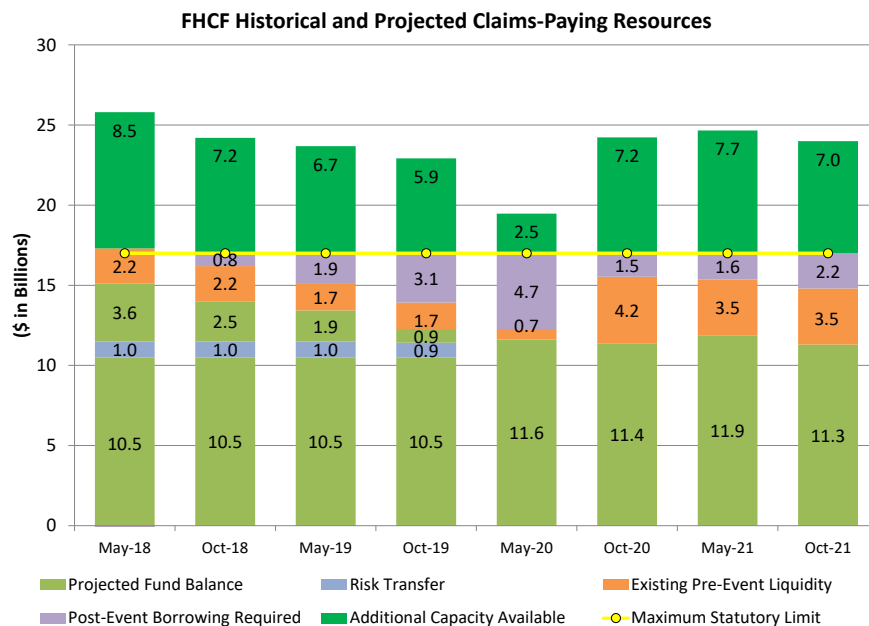


(\$ in Billions)	2021-2022 Contract Year	2022-2023 Contract Year
<b>Total Potential Borrowing</b>	<b>\$5.7</b>	<b>\$9.2</b>
<b>Assessment % over 30 Years if Financed at "Above Market" Rate of 4% for the Initial Season and 6% for the Subsequent Season</b>	<b>0.58%</b>	<b>1.18%</b>
<b>Assessment % over 10 Years if Financed at "Above Market" Rate of 4% for the Initial Season and 6% for the Subsequent Season</b>	<b>1.24%</b>	<b>2.19%</b>

## Historical Perspective on Estimated Claims-Paying Capacity

The estimated claims-paying capacity of the FHCF over time is subject to changes in the projected fund balance, risk transfer amount, available pre-event liquidity, and estimates of bonding capacity. While the projected fund balance climbed steadily from 2006 to 2017 without a major hurricane that triggered the FHCF, the estimated \$7.80 billion of Hurricane Irma losses and \$1.45 billion of Hurricane Michael losses reduced the FHCF's projected fund balance to approximately \$11.3 billion for the 2021-2022 Contract Year. During this time, the senior managers' estimates of the FHCF's bonding capacity are stable, but have significantly varied during prior time periods, reflecting both the big picture fundamental changes to the market described in Section III and the impact of market volatility at the time we asked them for estimates. The May 2021 average bonding estimate for 0-12 months was \$9.3 billion and the October 2021 average bonding estimate for 0-12 months is relatively unchanged at \$9.2 billion.

The chart below shows the total estimated initial season claims-paying resources of the FHCF since May 2018 with projected fund balance (light green), existing pre-event liquidity (orange), risk transfer (blue), post-event borrowing required (purple), if needed, and maximum statutory limit (yellow) with additional capacity available above (dark green) the maximum statutory limit.



Numbers may not add due to rounding.

The additional capacity above the maximum statutory limit reflects the estimated borrowing capacity plus any additional funds available.



The chart on the prior page reflects the history of the FHCF’s claims-paying resources. The outstanding pre-event notes, risk transfer, and the projected fund balance are reliable amounts since they are known prior to an event, but the post-event bonding capacity can vary depending on financial market conditions after a hurricane event. It is important that the FHCF’s claims-paying capacity estimates be reasonable and prudent in order to minimize financial risk for participating insurers for the initial and subsequent seasons as well as for long-term sustainability of the Florida residential property insurance market.

Over time, the range has narrowed and stabilized, and it is interesting to compare the range of the estimates during this time period, which is indicative of the certain level of uncertainty and variability among the team of senior managers with regard to the FHCF’s bonding capacity. The table below shows the aggregate ranges for each estimate since May 2018.

Post-Event Estimated Bonding Capacity Over 12 Months (Senior Managers' Range)									
(\$ in Billions)	May-18	Oct-18	May-19	Oct-19	May-20	Oct-20	May-21	Oct-21	May 2021 - Oct. 2021 Change
Overall Range	\$6.5-\$12	\$5.5-\$12	\$6-\$12	\$5.5-\$12	\$4-\$11	\$6.5-\$11	<b>\$5.5-\$13</b>	<b>\$5.5-\$13</b>	↔

The disparity in range of estimates reflects the fundamental underlying volatility and uncertainty of the markets and the bonding capacity estimating process for the FHCF. We believe the process of using a survey of the opinions of the best experts with the most relevant experience, and employing a prudent approach to pick among several potential estimates of capacity, provides a reasonable estimate that suits the purposes of the FHCF and the needs of its participating insurers. While the FHCF has liquid resources that are over \$2.2 billion below fully funding the initial season, the projected 0-12 month bonding capacity of \$9.2 billion allows for the FHCF to reach its maximum statutory obligation of \$17 billion with additional bonding capacity of \$5.7 billion, even after preserving pre-event bond proceeds for the subsequent season. Further, the FHCF has additional capacity available after an event for the subsequent season. This additional capacity still does not provide a guaranteed source of liquidity or claims-paying capacity for subsequent seasons, and the actual bonding results achieved by the FHCF after a hurricane could vary substantially from this estimate for subsequent seasons. Nonetheless, with strong cash balance and the successful execution of the Series 2020A financing, the FHCF is in a very strong financial position with approximately \$14.8 billion of liquidity. In addition, for the subsequent season, the FHCF has a strong projected potential claims-paying capacity of \$10.4 billion, or approximately 61% of its maximum statutory obligation of \$17 billion for the 2022-2023 Contract Year.



## **Appendix A – Bonding Capacity Solicitation & Senior Manager Responses**

## Sasha Stipanovich

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**From:** Sasha Stipanovich  
**Sent:** Friday, October 1, 2021 10:01 AM  
**Cc:** Kapil Bhatia  
**Subject:** FHCF Bonding Capacity Analysis

FHCF Senior Manager Team:

It's that time of year again where we need your input in preparation for presenting the bonding capacity estimates at the FHCF Advisory Council Meeting, which is scheduled for October 19<sup>th</sup>. ***For the bonding capacity analysis, we would like to know your opinion of the FHCF's tax-exempt and taxable bonding capacity over a 0-12 month and 12-24 month period and are still comfortable including estimates that contain above-market interest rate capacity estimates in recognition of the fact that the FHCF has ample assessment capability within its statutory limits to issue bonds, even at above market rates, if needed.***

In order to prepare the FHCF Bonding Capacity Report for October 2021, we need the following data elements from you by close of business Friday, October 8<sup>th</sup>:

1. Please provide a 30-year tax-exempt scale for the FHCF using the MMD at the close of business Tuesday, October 5<sup>th</sup>. This scale should be the one that you believe reflects a "market" scale given the FHCF's strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with 5.0% coupons throughout when writing the scale. Base your scale on an uninsured financing given the FHCF's strong current underlying ratings of Aa3/AA/AA (Moody's / S&P / Fitch).
2. Please provide a 30-year taxable scale using the Treasury curve at the close of business Tuesday, October 5<sup>th</sup>. This scale should be the one that you believe reflects a "market" scale given the FHCF's strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with par-ish coupons throughout when writing the scale. Again, base the scale on an uninsured financing given again the FHCF's current underlying ratings of Aa3/AA/AA (Moody's / S&P / Fitch).
3. Please provide us with your firm's opinion on the potential tax-exempt and/or taxable post-event market capacity over the next 0-12 **and** 12-24 months at rates that are at or above the current "market" scale, as needed. In addition, please include and describe briefly in your response if there is any overlap in tax-exempt / taxable capacity.

FHCF Post-Event Market Capacity			
Time Period	Tax-Exempt	Taxable	Total
0-12 Months			
12-24 Months			

**We would like to have to your responses back by close of business Friday, October 8<sup>th</sup>.** Additionally, we would like a representative from your firm (banker and/or underwriter) to dial-in during the meeting to answer any questions. If you have any questions or comments, please call or e-mail Kapil Bhatia (727-415-3267, [kapil.bhatia@raymondjames.com](mailto:kapil.bhatia@raymondjames.com)) or Sasha Stipanovich (850-544-1117, [sasha.stipanovich@raymondjames.com](mailto:sasha.stipanovich@raymondjames.com)).

Sasha Stipanovich  
Director

# Memorandum

**To:** Florida Hurricane Catastrophe Fund  
**From:** BofA Securities, Inc.  
**Date:** October 8, 2021  
**Subject:** Florida Hurricane Catastrophe Fund – October 2021 Bonding Capacity Analysis

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BofA Securities, Inc. (“BofA”) is pleased to provide the Florida Hurricane Catastrophe Fund (“FHCF”) with our firm’s estimates and views of the FHCF’s post-event bonding capacity and current market borrowing costs.

## Market Commentary

Since our last update to the FHCF, inflation and labor market tightness has emerged as an increasing concern for the Federal Reserve. Once described as “transitory” because of what was expected to be temporary supply chain bottlenecks caused by COVID-19, in recent months there has been increasing evidence that inflation is more durable than expected and that inflation pressures will last for longer than initially hoped. Core inflation, the Fed’s preferred measure, increased 3.6% year-over-year, the highest jump in 30 years. Chairman Powell recently described inflation as “frustrating” and the Fed expects inflation to run at 4.2% in 2021. As mentioned earlier, global supply chain issues continue to plague markets even as economies around the world slowly and carefully emerge from the ongoing COVID-19 pandemic. The Federal Reserve signaled in its last meeting that it would begin tapering, the process of slowing down its monthly bond purchases, likely as soon as November and signaled that interest rate increases would follow in 2022, sooner than expected by the markets and a shift from its stated policy six months ago. The unemployment rate continued to fall since our last update, reaching a level of 5.2% for August 2021. Additionally, there is a pending \$1 trillion infrastructure bill and \$3.5 trillion spending bill currently held up in Congress, the contents of which would have significant impacts for issuers and the municipal markets. The possibility of higher income and capital tax rates being discussed in Washington have also been supportive of municipal market inflows with only a single week of outflows in 2021.

Municipal bond funds have seen net inflows of approximately \$55.4 billion year to date that has contributed to strong performance in the muni market, although recent inflation concerns may put a damper on ongoing inflows. Since the last bonding capacity analysis presented at the May 2021 meeting, the municipal yield curve has increased across the entire curve. On the short-end of the tax-exempt AAA MMD yield curve (within 10 years), rates have increased 7-19 bps while on the medium- to long-end of the curve (11+ years), yields have increased 9-16 bps. The US Treasury curve has flattened since the last bonding capacity meeting with the spread between the 2-30 year, 3-30 year, 5-30 year and 10-30 year having decreased from 213, 196, 143 & 67 bps to 180, 157, 111 & 56 bps, respectively. Rates from year 1-5 increased by 3-18 basis points, but years 10-30 of the UST curve has decreased by 10-21 basis points. New issue supply in the municipal market thus far in 2021 has averaged approximately \$5.0 billion per week, with taxable issuance representing 24.3% of all muni bonds issued this year.

As we have stated in the past, and especially true in this market, despite the market dynamics in play in the current environment, a transaction or series of transactions by the FHCF and possibly other insurance-related entities in the State of Florida (e.g. Citizens, FIGA) after a hurricane event has been generally untested and may significantly impact market dynamics for a specific transaction. In the pages that follow, we provide BofA’s estimate of the FHCF’s current borrowing costs, as well as our view on the FHCF’s unconstrained issuance capacity in the current market. If you have any questions, please contact the BofA team.

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1. Please provide a 30-year tax-exempt scale for the FHCF using the MMD at the close of business Tuesday, October 5th. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with 5.0% coupons throughout when writing the scale. Base your scale on an uninsured financing given the FHCF’s strong current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

Below, we have provided a 30-year tax-exempt scale reflecting our view of the FHCF’s estimated current market borrowing costs based on an uninsured financing, Aa3/AA/AA ratings from Moody’s, S&P and Fitch, respectively, and no capacity constraints.

Tax-Exempt Scale					
Term	Maturity (July 1)	Coupon	MMD	Spread	Yield
1	2022	5.00%	0.130%	0.05%	0.18%
2	2023	5.00%	0.170%	0.10%	0.27%
3	2024	5.00%	0.240%	0.13%	0.37%
4	2025	5.00%	0.370%	0.15%	0.52%
5	2026	5.00%	0.510%	0.18%	0.69%
6	2027	5.00%	0.700%	0.20%	0.90%
7	2028	5.00%	0.840%	0.23%	1.07%
8	2029	5.00%	0.980%	0.25%	1.23%
9	2030	5.00%	1.060%	0.27%	1.33%
10	2031	5.00%	1.140%	0.28%	1.42%
11	2032	5.00%	1.180%	0.30%	1.48%
12	2033	5.00%	1.210%	0.33%	1.54%
13	2034	5.00%	1.240%	0.35%	1.59%
14	2035	5.00%	1.270%	0.38%	1.65%
15	2036	5.00%	1.300%	0.38%	1.68%
16	2037	5.00%	1.330%	0.38%	1.71%
17	2038	5.00%	1.360%	0.38%	1.74%
18	2039	5.00%	1.400%	0.38%	1.78%
19	2040	5.00%	1.440%	0.38%	1.82%
20	2041	5.00%	1.470%	0.38%	1.85%
21	2042	-	-	-	-
22	2043	-	-	-	-
23	2044	-	-	-	-
24	2045	-	-	-	-
25	2046	5.00%	1.62%	0.40%	2.02%
26	2047	-	-	-	-
27	2048	-	-	-	-
28	2049	-	-	-	-
29	2050	-	-	-	-
30	2051	5.00%	1.67%	0.40%	2.07%



2. Please provide a 30-year taxable scale using the Treasury curve at the close of business Tuesday, October 5th. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with par-ish coupons throughout when writing the scale. Again, base the scale on an uninsured financing given again the FHCF’s current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

Below, we have provided a 30-year taxable scale reflecting our view of the FHCF’s estimated current market borrowing costs based on an uninsured financing, Aa3/AA/AA ratings from Moody’s, S&P and Fitch, respectively, and no capacity constraints.

Taxable Scale					
Term	Maturity (July 1)	Coupon	UST	Spread	Yield
1	2022	0.29%	0.09%	0.20%	0.29%
2	2023	0.53%	0.28%	0.25%	0.53%
3	2024	0.84%	0.54%	0.30%	0.84%
4	2025	1.23%	0.98%	0.25%	1.23%
5	2026	1.38%	0.98%	0.40%	1.38%
6	2027	1.67%	1.32%	0.35%	1.67%
7	2028	1.87%	1.32%	0.55%	1.87%
8	2029	2.04%	1.54%	0.50%	2.04%
9	2030	2.14%	1.54%	0.60%	2.14%
10	2031	2.24%	1.54%	0.70%	2.24%
11	2032	2.39%	1.54%	0.85%	2.39%
12	2033	2.54%	1.54%	1.00%	2.54%
13	2034	2.64%	1.54%	1.10%	2.64%
14	2035	2.74%	1.54%	1.20%	2.74%
15	2036	2.84%	1.54%	1.30%	2.84%
16	2037	-	-	-	-
17	2038	-	-	-	-
18	2039	-	-	-	-
19	2040	-	-	-	-
20	2041	3.10%	2.10%	1.00%	3.10%
21	2042	-	-	-	-
22	2043	-	-	-	-
23	2044	-	-	-	-
24	2045	-	-	-	-
25	2046	3.15%	2.10%	1.05%	3.15%
26	2047	-	-	-	-
27	2048	-	-	-	-
28	2049	-	-	-	-
29	2050	-	-	-	-
30	2051	3.20%	2.10%	1.10%	3.20%

- 
3. Please provide us with your firm’s opinion on the potential tax-exempt and/or taxable post-event market capacity over the next 0-12 and 12-24 months at rates that are at or above the current “market” scale, as needed. In addition, please include and describe briefly in your response if there is any overlap in tax-exempt / taxable capacity.
- 

In the table below, we have provided our current tax-exempt and taxable FHCF capacity estimates at rates that are at or above the current “market” scale, as needed. We believe that sufficient demand exists at these capacity levels to complete a transaction of the sizes provided below and the risk of cross-market cannibalization is low.

FLORIDA HURRICANE CATASTROPHE FUND POST-EVENT MARKET CAPACITY (\$ BILLION)			
Time Period	Tax-Exempt	Taxable	Total
0-12 Months	\$2.0-3.0	\$3.5-5.0	\$5.5-8.0
12-24 Months	\$2.0-3.0	\$3.5-5.0	\$5.5-8.0
<b>0-24 Months</b>	<b>\$4.0-6.0</b>	<b>\$7.0-10.0</b>	<b>\$11.0-16.0</b>

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# Memorandum



To: Florida Hurricane Catastrophe Fund

From: Citigroup Global Markets Inc. ("Citi")

Date: October 8, 2021

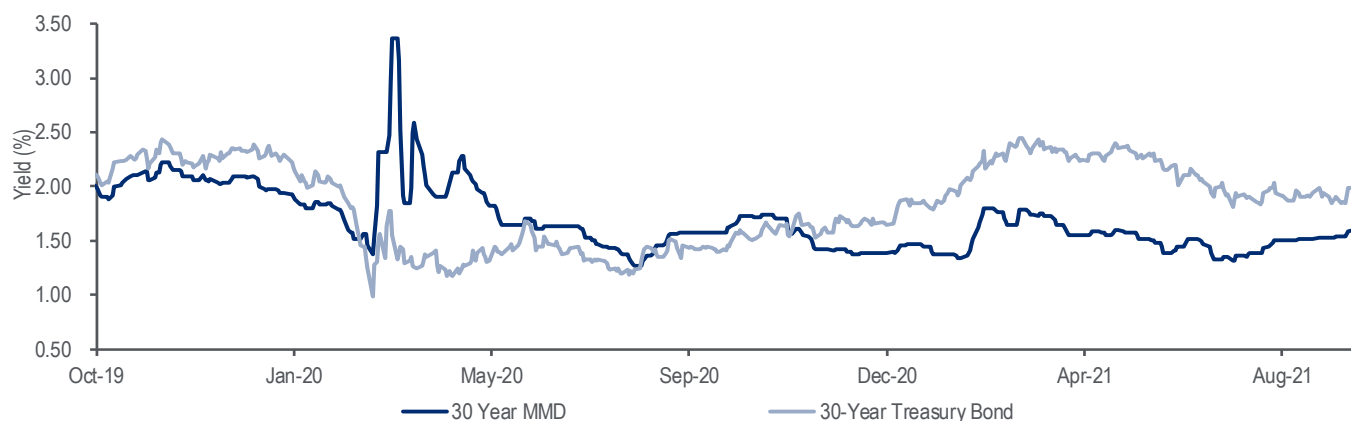
Re: FHCF October 2021 Capacity Analysis

Citigroup is pleased to provide the Florida Hurricane Catastrophe Fund (the "FHCF") with an updated estimated post-event bond capacity analysis.

**Municipal Market Update.** Recent municipal market developments include a back-up in rates and above average supply that has been met with solid demand amidst robust fund inflows and tightening credit spreads. Treasuries have recently responded to growth concerns around uncertainty over the spread of the COVID-19 delta variant and its effect on supply chains/inflation. Although municipal rates have buoyed by the aforementioned general rise in treasuries, this has been capped by ongoing cash inflows and manageable supply. Moreover, rates remain relatively low from a historical context. After a record 2020 year of total supply of \$474 billion, Citi is expecting a total supply of \$515 billion in 2021, which will set a new record if realized. 2021 is beginning to gain momentum after a relatively slow start to the year. Currently, estimated net supply for 2021 is at \$118 billion, the highest since 2009. The municipal market is expected to grow to ~\$4.1 trillion by YE'21. From a demand perspective, 2021YTD weekly fund inflows were low at \$408.1 million for the week ending September 29, following prior week's inflows of \$1.55 billion. Although municipal volatility declined after sharply rising on uncertainties surrounding COVID-19, volatility has somewhat increased recently amid economic and political uncertainty, including expectations for growth, stimulus and Fed support.

## 30-Year MMD and 30-Year Treasury

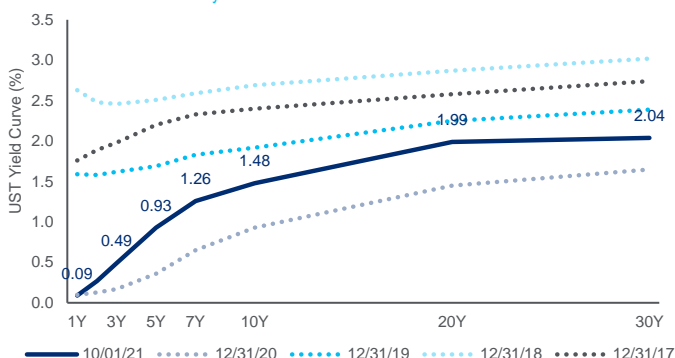
### Trailing 2-Years



**Yield Curve Environment.** At its September 22<sup>nd</sup> meeting, the Federal Open Market Committee ("FOMC") acknowledged stronger economic data and inflation on the rise. The market is pricing in the potential for higher rates by the end of 2021. Moreover, treasuries have backed-up following the passage of \$1.9 trillion of additional stimulus and investor expectations of future stimulus and inflation above 2.0%. All this being said, rates do continue to remain near all-time lows from a historical perspective.

## US Treasury Yield Curve

Treasuries remain historically low across the curve



1. Please provide a 30-year tax-exempt scale for the FHCF using the MMD at the close of business Tuesday, October 5<sup>th</sup>. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with 5.0% coupons throughout when writing the scale. Base your scale on an uninsured financing given the FHCF’s strong current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

Tax-Exempt Scale				
Year	10/05/2021 MMD	MMD Spread	Coupon	Base Yield
2022	0.12%	10	5.00%	0.22%
2023	0.17%	15	5.00%	0.32%
2024	0.23%	20	5.00%	0.43%
2025	0.34%	25	5.00%	0.59%
2026	0.48%	30	5.00%	0.78%
2027	0.66%	35	5.00%	1.01%
2028	0.81%	40	5.00%	1.21%
2029	0.95%	45	5.00%	1.40%
2030	1.05%	50	5.00%	1.55%
2031	1.13%	55	5.00%	1.68%
2032	1.17%	60	5.00%	1.77%
2033	1.20%	67	5.00%	1.87%
2034	1.24%	69	5.00%	1.93%
2035	1.27%	70	5.00%	1.97%
2036	1.30%	70	5.00%	2.00%
2037	1.33%	70	5.00%	2.03%
2038	1.36%	70	5.00%	2.06%
2039	1.40%	70	5.00%	2.10%
2040	1.44%	70	5.00%	2.14%
2041	1.47%	70	5.00%	2.17%
2042	1.50%			
2043	1.53%			
2044	1.56%			
2045	1.59%			
2046	1.62%	70	5.00%	2.32%
2047	1.63%			
2048	1.64%			
2049	1.65%			
2050	1.66%			
2051	1.67%	70	5.00%	2.37%

1. July Interpolated MMD.
2. Assumes a 10-year par call.

2. Please provide a 30-year taxable scale using the Treasury curve at the close of business Tuesday, October 5<sup>th</sup>. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with par-ish coupons throughout when writing the scale. Again, base the scale on an uninsured financing given again the FHCF’s current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

Taxable Scale					
Year	TSY	7-Oct TSY	Spread	Coupon	Yield
2022	2 Yr	0.32%	20	0.52%	0.52%
2023	2 Yr	0.32%	40	0.72%	0.72%
2024	3 Yr	0.57%	50	1.07%	1.07%
2025	5 Yr	1.02%	45	1.47%	1.47%
2026	5 Yr	1.02%	65	1.67%	1.67%
2027	7 Yr	1.36%	55	1.91%	1.91%
2028	7 Yr	1.36%	75	2.11%	2.11%
2029	10 Yr	1.58%	65	2.23%	2.23%
2030	10 Yr	1.58%	75	2.33%	2.33%
2031	10 Yr	1.58%	85	2.43%	2.43%
2032	10 Yr	1.58%	95	2.53%	2.53%
2033	10 Yr	1.58%	105	2.63%	2.63%
2034	10 Yr	1.58%	115	2.73%	2.73%
2035	10 Yr	1.58%	125	2.83%	2.83%
2036	10 Yr	1.58%	135	2.93%	2.93%
2037					
2038					
2039					
2040					
2041	30 Yr	2.13%	100	3.13%	3.13%
2042					
2043					
2044					
2045					
2046					
2047					
2048					
2049					
2050					
2051	30 Yr	2.13%	115	3.28%	3.28%

1. Assumes a make-whole call.

3. Please provide us with your firm's opinion on the potential tax-exempt and/or taxable post-event market capacity over the next 0-12 and 12-24 months at rates that are at or above the current "market" scale, as needed. In addition, please include and describe briefly in your response if there is any overlap in tax-exempt / taxable capacity.

FHCF Post-Event Market Capacity			
Time Period	Tax-Exempt	Taxable	Total
0-12 Months	\$3.0-\$4.0	\$4.5-\$6.0	\$7.0-\$9.0
12-24 Months	\$3.0-\$4.0	\$4.5-\$6.0	\$7.0-\$9.0
Total	\$6.0-\$8.0	\$9.0-\$12.0	\$14.0-\$18.0

Our capacity numbers assume no overlap between the tax-exempt and taxable sectors.



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# J.P.Morgan

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To: Florida Hurricane Catastrophe Fund  
From: J.P. Morgan  
Date: October 2021  
Subject: FHCF Estimated Bonding Capacity and Pricing

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Please find below J.P. Morgan's estimate of the Florida Hurricane Catastrophe Fund's ("FHCF") potential bonding capacity over the next 0-12 and 12-24 months, based on current market conditions. In addition, we have provided indicative pricing for tax-exempt and taxable offerings, as requested.

## Market Update

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- The U.S. Treasury curve steepened amid a volatile week where yields initially rose as the market digested the FOMC September meeting and concerns over the government's debt ceiling, before falling later in the week amid a heavy slate of mixed economic data; week-over-week, yields in the 2- and 5-year spots fell by 1 and 3 bps, while yields in the 10-, and 30-year spots rose by 1 and 5 bps, respectively
  - U.S. Policymakers were under focus last week, as they worked through a looming government shutdown, the debt ceiling, the infrastructure bill, and the budget reconciliation package
    - On Thursday, President Biden signed a nine-week stopgap funding bill ahead of Friday's deadline that prevented a government shutdown through December 3rd
    - However, the bill did not include a provision to suspend the nation's debt limit, which Treasury Secretary Janet Yellen notes "poses a threat to the government's ability to pay its bills if lawmakers fail to raise it before October 18th"; however, J.P. Morgan Research still expects a resolution before the deadline
    - President Biden also told House Democrats in a closed-door meeting to expect a smaller tax and spending package, and has indefinitely delayed the vote on the Infrastructure bill
  - Economic data last week was mixed amid weaker-than-expected inflation and labor data
    - Consumer Confidence fell for the third consecutive month to 109.3 in September, from 115.2 in August
    - Initial jobless claims increased for the third consecutive week, rising by 11,000 to 363,000 for the week ending September 25th; J.P. Morgan Research notes that the increase in claims reflect some weakening in the labor market
    - J.P. Morgan Economists lowered their estimate of Q3 annualized GDP growth to 4.0%, from 5.0%, citing supply chain issues and concerns over the Delta variant of COVID-19
    - Inflation concerns also came under the spotlight as Fed Chair Jerome Powell spoke at both a European Central Bank conference and a House hearing stating that the surging inflation is a result of recent supply chain disruptions
- In the municipal market, tax-exempt yields increased amid muted inflows; week-over-week, MMD yields increased in the 2-, 5-, 10-, and 30-year spots by 3, 7, 14, and 8 bps, respectively
  - J.P. Morgan Research notes that tax-exempt advance refunding is unlikely to be a part of the Budget Reconciliation proposal
  - Last week's primary municipal supply totaled \$11.1 billion, consisting of \$5.2 billion of tax-exempt issuance and \$5.9 billion muni taxable issuance
    - Primary transactions struggled in the beginning of last week due to rising U.S. Treasury rates and relatively heavy supply, but the market found its footing at higher levels with a more stable U.S. Treasury backdrop in the second half of the week
  - Municipal bond funds reported inflows of \$408 million (72% below the YTD average of \$1.5 billion) for the period ending September 29th, increasing YTD inflows to \$88.5 billion, which ranks 2nd highest among full-year muni bond fund inflows
    - Municipal bond funds have reported inflows in 71 out of the past 72 weeks, totaling a record \$150.0 billion and High Yield funds recorded an outflow of \$103 million, their first net outflow since the week ended March 3rd
  - Given the rise in MMD yields last week, 5-, 10-, and 30-year MMD/UST ratios increased by 8.77%-, 9.25%-, and 1.86%-points

## Potential Market Capacity

Based on market conditions as of close of business Tuesday, October 5<sup>th</sup>, J.P. Morgan estimates that FHCF could sell \$5-6 billion of tax-exempt bonds and \$6-7 billion of taxable bonds over the next 0-12 months at the market rate assumptions provided. Over the following 12-24 month period, FHCF could sell an additional \$5-6 billion of tax-exempt bonds and \$6-7 billion of taxable bonds. This would provide FHCF a total post-event market capacity of \$10-12 billion tax-exempt and \$12-14 billion taxable, for a total of \$22-26 billion.

Indicative Post-Event Market Capacity as of October 5, 2021			
Time Period	Tax-Exempt	Taxable	Total
0-12 Months	\$5-6 billion	\$6-7 billion	\$11-13 billion
12-24 Months	\$5-6 billion	\$6-7 billion	\$11-13 billion
<b>Total</b>	<b>\$10-12 billion</b>	<b>\$12-14 billion</b>	<b>\$22-26 billion</b>

This would provide FHCF a total post-event market capacity of \$10-12 billion tax-exempt and \$12-14 billion taxable, for a total of \$22-26 billion.

In order to accomplish an issuance of maximum size, FHCF would likely want to access both the tax-exempt and taxable markets across one or more offerings. Although the post-event bonds would qualify for tax-exemption, the taxable markets may provide additional depth of institutional buyers. By issuing taxable bonds in addition to tax-exempt bonds, FHCF would access certain investors that do not typically participate in tax-exempt offerings, and are not able to use the tax-exemption of municipal bonds. FHCF would likely see a significant increase in capacity by offering both a tax-exempt and taxable series as part of the same issuance, with the ultimate goal being to maximize the tax-exempt issuance. The capacity estimates above do consider the capacity overlap from investors that participate in both the tax-exempt and taxable markets, while prioritizing tax-exempt capacity over taxable.

On the following pages, please find J.P. Morgan's estimated 30-year tax-exempt and taxable scales assuming market conditions as of the close of business Tuesday, October 5<sup>th</sup>. The scales assume FHCF's current underlying ratings of Aa3/AA/AA.

# J.P.Morgan

## Florida Hurricane Catastrophe Fund - Tax-exempt Scale

Year	Maturity	Sinker/Term	Int. MMD	Spread	Coupon	Stated Yield
1	7/1/2022		0.12%	18	5.00%	0.30%
2	7/1/2023		0.17%	20	5.00%	0.37%
3	7/1/2024		0.23%	22	5.00%	0.45%
4	7/1/2025		0.34%	25	5.00%	0.59%
5	7/1/2026		0.48%	28	5.00%	0.76%
6	7/1/2027		0.66%	30	5.00%	0.96%
7	7/1/2028		0.81%	32	5.00%	1.13%
8	7/1/2029		0.95%	35	5.00%	1.30%
9	7/1/2030		1.05%	38	5.00%	1.43%
10	7/1/2031		1.13%	40	5.00%	1.53%
11	7/1/2032		1.17%	42	5.00%	1.59%
12	7/1/2033		1.20%	45	5.00%	1.65%
13	7/1/2034		1.24%	48	5.00%	1.72%
14	7/1/2035		1.27%	50	5.00%	1.77%
15	7/1/2036		1.30%	50	5.00%	1.80%
16	7/1/2037		1.33%	50	5.00%	1.83%
17	7/1/2038		1.36%	50	5.00%	1.86%
18	7/1/2039		1.40%	50	5.00%	1.90%
19	7/1/2040		1.44%	50	5.00%	1.94%
20	7/1/2041		1.47%	50	5.00%	1.97%
21	7/1/2042	*				
22	7/1/2043	*				
23	7/1/2044	*				
24	7/1/2045	*				
25	7/1/2046	T	1.62%	50	5.00%	2.12%
26	7/1/2047	*				
27	7/1/2048	*				
28	7/1/2049	*				
29	7/1/2050	*				
30	7/1/2051	T	1.67%	50	5.00%	2.17%

Assumes MMD as of close of business October 5, 2021 and an optional redemption date of 7/1/2031 at par.

# J.P.Morgan

## Florida Hurricane Catastrophe Fund - Taxable Scale

Year	Maturity	Sinker/Term	UST	Spread	Coupon	Stated Yield
1	7/1/2022		0.27%	30	0.57%	0.57%
2	7/1/2023		0.27%	40	0.67%	0.67%
3	7/1/2024		0.52%	50	1.02%	1.02%
4	7/1/2025		0.95%	40	1.35%	1.35%
5	7/1/2026		0.95%	60	1.55%	1.55%
6	7/1/2027		1.27%	45	1.72%	1.72%
7	7/1/2028		1.27%	65	1.92%	1.92%
8	7/1/2029		1.49%	55	2.04%	2.04%
9	7/1/2030		1.49%	70	2.19%	2.19%
10	7/1/2031		1.49%	80	2.29%	2.29%
11	7/1/2032		1.49%	90	2.39%	2.39%
12	7/1/2033		1.49%	100	2.49%	2.49%
13	7/1/2034		1.49%	105	2.54%	2.54%
14	7/1/2035		1.49%	110	2.59%	2.59%
15	7/1/2036		1.49%	115	2.64%	2.64%
16	7/1/2037	*				
17	7/1/2038	*				
18	7/1/2039	*				
19	7/1/2040	*				
20	7/1/2041	T	1.99%	95	2.94%	2.94%
21	7/1/2042	*				
22	7/1/2043	*				
23	7/1/2044	*				
24	7/1/2045	*				
25	7/1/2046	*				
26	7/1/2047	*				
27	7/1/2048	*				
28	7/1/2049	*				
29	7/1/2050	*				
30	7/1/2051	T	2.05%	105	3.10%	3.10%

Assumes UST rates as of close of business October 5, 2021, and a make-whole call.

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To: Florida Hurricane Catastrophe Fund

Date: October 8, 2021

From: Morgan Stanley

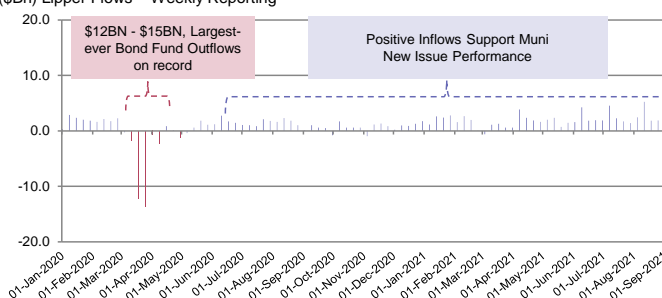
Subject: FHCF October 2021 Semi-Annual Bonding Capacity Analysis

Morgan Stanley is pleased to provide the Florida Hurricane Catastrophe Fund (“FHCF”) with our Firm’s Semi-Annual Bonding Capacity Analysis.

**Current Macroeconomic Themes.** Macroeconomic volatility has picked up amid inflation and monetary policy concerns and the global supply chain crunch. At the last FOMC meeting, Chairman Powell remarked to the Senate Banking Committee that “inflation is elevated and will likely remain so in coming months before moderating.” These inflation fears have been buoyed by skyrocketing energy and supply chain costs as demand continues to outpace supply. On Capitol Hill, last Thursday President Biden signed into law a stopgap appropriations bill to avert a partial government shutdown and extend Federal funding through December 3rd. Focus now turns to the impending debt limit dilemma, as lawmakers are locked in debate over a vote to increase or suspend the \$28.4 trillion limit. On the COVID-19 front, U.S. COVID-19 cases have swung off the peak in recent weeks, averaging 112,000 per day, one-third less than levels seen in mid-September. The fall in COVID-19 cases has coincided with an uptick in economic activity, with consumer spending rising 0.8% month-over-month.

## Fund Flows Have Already Surpassed 2020 Total Inflows

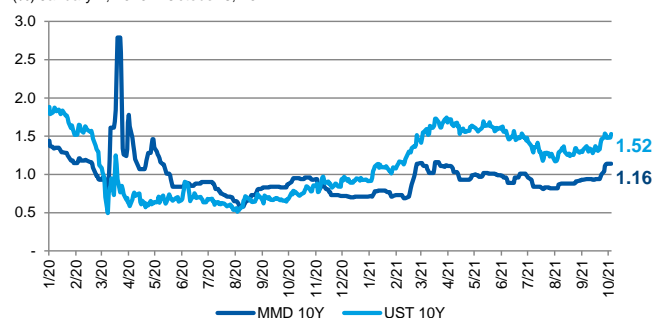
(\$Bn) Lipper Flows – Weekly Reporting



Source: Lipper

## Rates Remain Near All-Time Lows

(%) January 2, 2020 – October 6, 2021



Source: Morgan Stanley Matrix

**Municipal Market Dynamics.** Market conditions this year have continued to be extremely favorable to issuers. Technicals in the municipal market have been strong, marked by consistent inflows and moderate supply. Inflows into bond funds have been positive for all but one week year-to-date, and total inflows (as measured by Lipper) of \$88.5 billion have already exceeded 2020 total inflows. New issue supply has been moderate, with \$353 billion in issuance YTD vs. \$356 billion at this time in 2020. Taxable muni issuance is currently down 22% year-to-date, with \$83 billion in issuance compared to \$106 billion this time last year. As of October 5, 2021, 10-year MMD closed at 1.16% and the 10-year UST closed at 1.52%, just 58 and 103 bps off of all-time lows. After remaining range-bound for months, in the last few weeks both MMD and UST rates have increased by 10-20 bps across the curve. Morgan Stanley’s year-end Treasury forecast has been updated to 1.90% for the 10-year UST in our base case, with our bull and bear cases updated to 2.05% and 1.60%, respectively.

**Pricing Views.** On the following pages, we have provided our estimate of current pricing levels and bonding capacity over a 0-12 month and 12-24 month period.



1. Please provide a 30-year tax-exempt scale for the FHCF using the MMD at the close of business Tuesday, October 5th. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with 5.0% coupons throughout when writing the scale. Base the scale on an uninsured financing given the FHCF’s current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

FHCF Pricing Views: 30-Year Tax-Exempt Scale <sup>1</sup>					
Year	Maturity	MMD (10/5/2021) <sup>2</sup>	Spread (bps)	Coupon	Yield
1	2022	0.12%	5	5.00%	0.17%
2	2023	0.17%	8	5.00%	0.25%
3	2024	0.23%	10	5.00%	0.33%
4	2025	0.34%	13	5.00%	0.47%
5	2026	0.48%	16	5.00%	0.64%
6	2027	0.66%	19	5.00%	0.85%
7	2028	0.81%	22	5.00%	1.03%
8	2029	0.95%	25	5.00%	1.20%
9	2030	1.05%	28	5.00%	1.33%
10	2031	1.13%	31	5.00%	1.44%
11	2032	1.17%	34	5.00%	1.51%
12	2033	1.20%	36	5.00%	1.56%
13	2034	1.24%	38	5.00%	1.62%
14	2035	1.27%	40	5.00%	1.67%
15	2036	1.30%	40	5.00%	1.70%
16	2037	1.33%	40	5.00%	1.73%
17	2038	1.36%	40	5.00%	1.76%
18	2039	1.40%	40	5.00%	1.80%
19	2040	1.44%	40	5.00%	1.84%
20	2041	1.47%	40	5.00%	1.87%
21	2042				
22	2043				
23	2044				
24	2045				
25	2046	1.62%	40	5.00%	2.02%
26	2047				
27	2048				
28	2049				
29	2050				
30	2051	1.67%	43	5.00%	2.10%

Notes:

(1) Assumes 10-year par call on 7/1/2031

(2) Based on July Interpolated MMD on 10/5/2021

2. Please provide a 30-year taxable scale using the Treasury curve at the close of business Tuesday, October 5th. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with par-ish coupons throughout when writing the scale. Again, base the scale on an uninsured financing given again the FHCF’s current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

FHCF Pricing Views: 30-Year Taxable Scale <sup>1</sup>					
Year	Maturity	UST (10/5/2021)	Spread (bps)	Coupon	Yield
1	2022	0.29%	10	0.39%	0.39%
2	2023	0.29%	20	0.49%	0.49%
3	2024	0.52%	25	0.77%	0.77%
4	2025	0.98%	15	1.13%	1.13%
5	2026	0.98%	35	1.33%	1.33%
6	2027	1.31%	30	1.61%	1.61%
7	2028	1.31%	50	1.81%	1.81%
8	2029	1.53%	50	2.03%	2.03%
9	2030	1.53%	60	2.13%	2.13%
10	2031	1.53%	70	2.23%	2.23%
11	2032	1.53%	80	2.33%	2.33%
12	2033	1.53%	90	2.43%	2.43%
13	2034	1.53%	100	2.53%	2.53%
14	2035	1.53%	110	2.63%	2.63%
15	2036	1.53%	120	2.73%	2.73%
16	2037				
17	2038				
18	2039				
19	2040				
20	2041	2.04%	80	2.84%	2.84%
21	2042				
22	2043				
23	2044				
24	2045				
25	2046				
26	2047				
27	2048				
28	2049				
29	2050				
30	2051	2.10%	90	3.00%	3.00%

Notes:

(1) Assumes Make-Whole Call

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- 
3. Please provide us with your firm's opinion on the potential tax-exempt and/or taxable post-event market capacity over the next 0-12 and 12-24 months at rates that are at or above the current "market" scale, as needed. In addition, please include and describe briefly in your response if there is any overlap in tax-exempt / taxable capacity.
- 

FHCF Post-Event Market Capacity (\$ in Billions)			
Time Period	Tax-Exempt	Taxable	Total
0-12 Months	\$2.0 to \$3.0	\$5.5 to \$7.0	\$7.5 to \$10
12-24 Months	\$4.0 to \$5.0	\$8.0 to \$12.0	\$12.0 to \$17.0

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**To:** Florida Hurricane Catastrophe Fund  
**From:** Wells Fargo Securities  
**Date:** October 8, 2021  
**Re:** Florida Hurricane Catastrophe Fund Bonding Capacity Analysis for October 2021

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Wells Fargo Securities ("Wells Fargo") is pleased to provide the Florida Hurricane Catastrophe Fund ("FHCF") with our estimate of FHCF bonding capacity for October 2021. On the following pages, please find our estimate of current market tax-exempt and taxable scales and spreads along with our estimate of bonding capacity for the 0-12 and 12-24 month periods. Feel free to contact any member of the Wells Fargo team if we can provide additional information or address any questions regarding these estimates.

Wells Fargo believes that conditions in the municipal market are stable and strong fundamentals leave our current capacity estimates in the \$13.0 to \$19.0 billion<sup>1</sup> range in combined tax-exempt and taxable bonds over a 24-month time horizon. As in our previous bonding capacity estimates, the scales that we provide on the following page for taxable and tax-exempt FHCF bonds, based on market conditions as of October 5, 2021, assume a \$3 billion issuance amortized in discrete \$100 million amounts over 30 years. We believe this level of issuance falls well within the market's current capacity for FHCF's debt.

Since FHCF's Series 2020A pricing on September 2, 2021, the benchmark 10-year US Treasury has risen 87 basis points, with the current rate being 1.53%.<sup>2</sup> Tax-exempt rates have increased, as well: 10-year MMD has risen 33 basis points since Series 2020A's pricing, with the current rate being 1.16%.<sup>3</sup>

Treasury and equity markets corrected this past week. With central banks across the world signaling they will be weaning off pandemic stimulus measures and accelerating rate hikes, investors have jumped to get ahead of the impending Fed-induced sell off. Higher benchmark rates have aided taxable municipal and corporate markets somewhat as investors who have wanted yield for months finally hit formerly elusive yield bogeys. Last week saw an elevated supply that surpassed \$12 billion. Reception of new issue tax-exempt transactions was somewhat rocky as the UST markets saw a significant shift in rates last week. Cash inflows into municipal mutual funds slowed this week with only \$408 million of net inflows, but kept the streak up alive for the 30th consecutive week. The following weeks will give a better indication if the volatility we saw this week was just the market blowing off steam or a trend to higher rates as inflation headlines persist and Fed taper talk continues. Last week was the largest taxable new issue calendar of the year as nearly \$6 billion of par amount was sold in a volatile US Treasury market environment.<sup>4</sup>

Wells Fargo appreciates the opportunity to present our analysis of FHCF's current bonding capacity. As demonstrated by its last pricing, we believe FHCF would be able to execute one or more transactions in an aggregate amount equal to or greater than its potential capital markets funding needs. We will continue to monitor market conditions on FHCF's behalf and keep you informed of market developments that may impact FHCF's future bonding capacity.

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<sup>1</sup>The FHCF's maximum possible liability for the Contract Year ending May 31, 2021, is \$17 billion. Such amount may be subject to change in future Contract Years.

<sup>2</sup>Source: US Treasury as of September 2, 2020 and October 6, 2021.

<sup>3</sup>Source: Thomson Reuters TM3 as of September 2, 2020 and October 6, 2021.

<sup>4</sup>Market Update Sources: Refinitiv, TM3, IPREO, Bloomberg, Bond Buyer, The iMoney Net -Money Fund Report as of October 2, 2021.



1. Please provide a 30-year tax-exempt scale for the FHCF using the MMD at the close of business Tuesday, October 5th. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with 5.0% coupons throughout when writing the scale. Base your scale on an uninsured financing given the FHCF’s strong current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

Florida Hurricane Catastrophe Fund Indicative Tax-Exempt Scale Market Rates as of COB October 5, 2021						
Maturity	I-MMD	Spread (bps)	Coupon	Yield	Price (\$)	Yield-to-Maturity
07/01/2022	0.12%	+15	5.00%	0.27%	103.095	--
07/01/2023	0.17%	+20	5.00%	0.37%	107.634	--
07/01/2024	0.23%	+25	5.00%	0.48%	111.912	--
07/01/2025	0.34%	+30	5.00%	0.62%	115.806	--
07/01/2026	0.48%	+33	5.00%	0.78%	119.256	--
07/01/2027	0.66%	+35	5.00%	0.99%	122.001	--
07/01/2028	0.81%	+38	5.00%	1.16%	124.525	--
07/01/2029	0.95%	+40	5.00%	1.33%	126.627	--
07/01/2030	1.05%	+43	5.00%	1.45%	128.777	--
07/01/2031	1.13%	+45	5.00%	1.56%	130.721	--
07/01/2032	1.17%	+48	5.00%	1.62%	130.096	1.87%
07/01/2033	1.20%	+50	5.00%	1.68%	129.475	2.13%
07/01/2034	1.24%	+50	5.00%	1.74%	128.857	2.35%
07/01/2035	1.27%	+50	5.00%	1.77%	128.549	2.52%
07/01/2036	1.30%	+50	5.00%	1.80%	128.243	2.66%
07/01/2037	1.33%	+50	5.00%	1.83%	127.937	2.79%
07/01/2038	1.36%	+50	5.00%	1.86%	127.632	2.90%
07/01/2039	1.40%	+50	5.00%	1.90%	127.226	3.00%
07/01/2040	1.44%	+50	5.00%	1.94%	126.823	3.10%
07/01/2041	1.47%	+50	5.00%	1.97%	126.521	3.18%
07/01/2042	1.50%	--	--	--	--	--
07/01/2043	1.53%	--	--	--	--	--
07/01/2044	1.56%	--	--	--	--	--
07/01/2045	1.59%	--	--	--	--	--
07/01/2046	1.62%	+53	5.00%	2.15%	124.727	3.50%
07/01/2047	1.63%	--	--	--	--	--
07/01/2048	1.64%	--	--	--	--	--
07/01/2049	1.65%	--	--	--	--	--
07/01/2050	1.66%	--	--	--	--	--
07/01/2051	1.67%	+55	5.00%	2.22%	124.038	3.66%

Please note that the tax-exempt scale shown above assumes that the bonds would be issued with a 10-year par call provision. Bond prices shown in the table assume a November 5, 2021 delivery date, and the 2046 and 2051 term bond maturities.



2. Please provide a 30-year taxable scale using the Treasury curve at the close of business Tuesday, October 5th. This scale should be the one that you believe reflects a “market” scale given the FHCF’s strong credit with no capacity constraints. Please use serial bonds and 15, 20, 25, and/or 30-year term bonds, as needed, over a 30-year amortization period (7/1/22 - 7/1/51) with par-ish coupons throughout when writing the scale. Again, base the scale on an uninsured financing given again the FHCF’s current underlying ratings of Aa3/AA/AA (Moody’s / S&P / Fitch).

Florida Hurricane Catastrophe Fund Indicative Taxable Scale Market Rates as of COB October 5, 2021						
Maturity	UST	Spread (bps)	Coupon	Yield	Price (\$)	Yield-to-Maturity
7/1/2022	0.298%	+25	0.548%	0.548%	100.000	--
7/1/2023	0.298%	+35	0.648%	0.648%	100.000	--
7/1/2024	0.536%	+40	0.936%	0.936%	100.000	--
7/1/2025	0.986%	+30	1.286%	1.286%	100.000	--
7/1/2026	0.986%	+55	1.536%	1.536%	100.000	--
7/1/2027	1.316%	+45	1.766%	1.766%	100.000	--
7/1/2028	1.316%	+65	1.966%	1.966%	100.000	--
7/1/2029	1.526%	+55	2.076%	2.076%	100.000	--
7/1/2030	1.526%	+65	2.176%	2.176%	100.000	--
7/1/2031	1.526%	+75	2.276%	2.276%	100.000	--
7/1/2032	1.526%	+90	2.426%	2.426%	100.000	--
7/1/2033	1.526%	+105	2.576%	2.576%	100.000	--
7/1/2034	1.526%	+115	2.676%	2.676%	100.000	--
7/1/2035	1.526%	+125	2.776%	2.776%	100.000	--
7/1/2036	1.526%	+135	2.876%	2.876%	100.000	--
7/1/2037	2.072%	--	-	-	--	--
7/1/2038	2.072%	--	-	-	--	--
7/1/2039	2.072%	--	-	-	--	--
7/1/2040	2.072%	--	-	-	--	--
7/1/2041	2.072%	+115	3.222%	3.222%	100.000	--
7/1/2042	2.072%	--	-	-	--	--
7/1/2043	2.072%	--	-	-	--	--
7/1/2044	2.072%	--	-	-	--	--
7/1/2045	2.072%	--	-	-	--	--
7/1/2046	2.072%	--	-	-	--	--
7/1/2047	2.072%	--	-	-	--	--
7/1/2048	2.072%	--	-	-	--	--
7/1/2049	2.072%	--	-	-	--	--
7/1/2050	2.072%	--	-	-	--	--
7/1/2051	2.072%	+130	3.372%	3.372%	100.000	--

Please note that the indicative taxable scale shown above assumes that the bonds would be issued with a 10-year par call provision. Bond prices shown in the table assume a November 5, 2021 delivery date, and the 2041 and 2051 maturities represent term bonds.

3. Please provide us with your firm’s opinion on the potential tax-exempt and/or taxable post-event market capacity over the next 0-12 and 12-24 months at rates that are at or above the current “market” scale, as needed. In addition, please include and describe briefly in your response if there is any overlap in tax-exempt / taxable capacity.

FHCF Post-Event Market Capacity			
Time Period	Tax-Exempt	Taxable	Total
0-12 Months	\$5.0 - \$7.0 billion	\$3.0 - \$4.0 billion	\$8.0 - \$11.0 billion
12-24 Months	\$3.0 - \$5.0 billion	\$2.0 - \$3.0 billion	\$5.0 - \$8.0 billion

The capacity estimates shown in the table above assume FCHF would issue debt at higher interest rates than the current “market” tax-exempt and taxable scales that we have provided in our response to questions 1 and 2.





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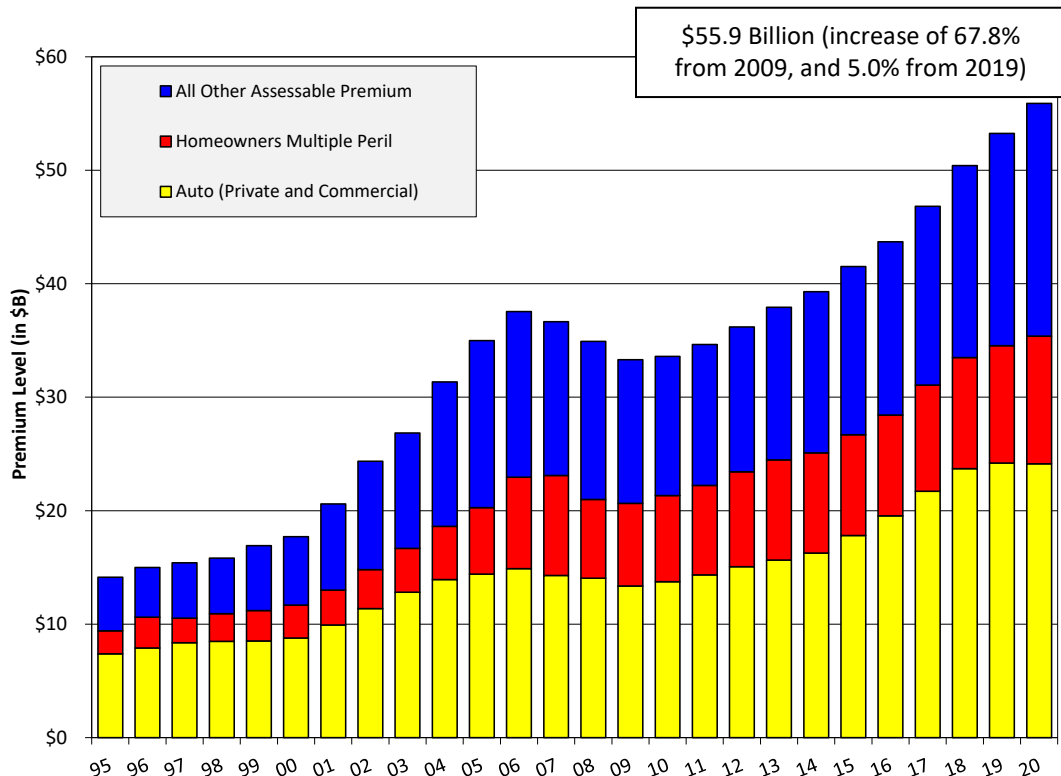


## Appendix B – The FHCF’s Emergency Assessment Base

According to Section 215.555(6)(b)1., Florida Statutes, “(i)f the board determines that the amount of revenue produced under subsection (5) is insufficient to fund the obligations, costs, and expenses of the fund and the corporation, including repayment of revenue bonds and that portion of the debt service coverage not met by reimbursement premiums, the board shall direct the Office of Insurance Regulation to levy, by order, an **emergency assessment on direct premiums for all property and casualty lines of business in this state, including property and casualty business of surplus lines insurers regulated under part VIII of chapter 626, but not including any workers' compensation premiums or medical malpractice premiums. As used in this subsection, the term "property and casualty business" includes all lines of business identified on Form 2, Exhibit of Premiums and Losses, in the annual statement required of authorized insurers by s. 624.424 and any rule adopted under this section, except for those lines identified as accident and health insurance and except for policies written under the National Flood Insurance Program.**”

In numerical terms, this gives the FHCF an ability to assess against a base which, as of the end of 2020 (the last official measurement date), totaled approximately \$55.9 billion. The chart below and table on the following page show the evolution of the FHCF’s assessment base over time, both by type of coverage and admitted market and surplus lines.

**Historical FHCF Emergency Assessment Base by Premium Category**





## Historical FHCF Emergency Assessment Base (\$MM)

Admitted Market, Surplus Lines, and the dollar value of a 6% emergency assessment

Calendar Year	Admitted Lines DWP*	Surplus Lines and NIMA Clearinghouse DWP	Total Aggregate Premium	6% Emergency Assessment	% Premium Change from Prior Year
1995	\$13,783	-	\$13,783	-	
1996	\$14,994	-	\$14,994	-	8.79%
1997	\$15,402	-	\$15,402	-	2.72%
1998	\$15,817	-	\$15,817	-	2.70%
1999	\$16,036	-	\$16,036	-	1.38%
2000	\$16,780	-	\$16,780	-	4.64%
2001	\$19,195	-	\$19,195	-	14.39%
2002	\$22,150	-	\$22,150	-	15.39%
2003	\$24,411	\$2,435	\$26,845	\$1,611	21.20%
2004	\$28,649	\$2,695	\$31,344	\$1,881	16.76%
2005	\$31,714	\$3,275	\$34,989	\$2,099	11.63%
2006	\$33,346	\$4,208	\$37,554	\$2,253	7.33%
2007	\$32,545	\$4,101	\$36,646	\$2,199	-2.42%
2008	\$30,830	\$4,095	\$34,926	\$2,096	-4.69%
2009	\$29,454	\$3,859	\$33,313	\$1,999	-4.62%
2010	\$29,888	\$3,715	\$33,603	\$2,016	0.87%
2011	\$30,943	\$3,696	\$34,640	\$2,078	3.09%
2012	\$32,323	\$3,862	\$36,185	\$2,171	4.46%
2013	\$33,726	\$4,206	\$37,933	\$2,276	4.83%
2014	\$35,085	\$4,216	\$39,302	\$2,358	3.61%
2015	\$36,957	\$4,550	\$41,507	\$2,490	5.61%
2016	\$39,069	\$4,623	\$43,693	\$2,622	5.26%
2017	\$41,844	\$4,973	\$46,817	\$2,809	7.15%
2018	\$44,858	\$5,547	\$50,405	\$3,024	7.66%
2019	\$47,033	\$6,205	\$53,238	\$3,194	5.62%
2020	\$48,827	\$7,066	\$55,892	\$3,354	4.99%

Source: Office of Insurance Regulation ("OIR") and Florida Surplus Lines Service Office ("FSLSO")

DWP is as of 12/31 and is based on companies reporting to the OIR on behalf of the FHCF and is subject to change as company/agent adjustments are reported. In 2004, the Florida legislature excluded medical malpractice for 3 years and included surplus lines. Medical malpractice has since been permanently exempted.

2011-2016 DWP numbers have been adjusted to reflect unassessable premiums written in assessable lines of business. However, beginning in 2017, this allowed adjustment figure is unavailable. The average reduction to DWP related to these adjustments was approximately 0.90%.

Average direct written premium increase (geometric mean) from 2000-2020 is 6.13%.



## 2020 Admitted Market Lines Premiums (\$MM)

Line of Business	2020 Total Assessable Premium
Fire	\$838.2
Allied Lines	\$2,030.0
Multiple Peril Crop	\$193.5
Private crop	\$0.5
Farmowners Multiple Peril	\$20.5
Homeowners Multiple Peril	\$10,522.3
Commercial multiple peril (liability portion)	\$634.4
Commercial multiple peril (non-liability portion)	\$1,001.9
Mortgage Guaranty	\$425.3
Ocean Marine	\$451.7
Inland Marine	\$1,478.0
Financial Guaranty	\$14.3
Earthquake	\$6.0
Other liability - occurrence	\$4,493.0
Other liability - claims-made	\$887.6
Products Liability	\$122.3
Private Flood	\$63.9
Private passenger auto no-fault (personal injury protection)	\$4,404.5
Other Private Passenger Auto Liability	\$10,339.9
Commercial auto no-fault (personal injury protection)	\$102.4
Other Commercial Auto Liability	\$2,676.6
Private Passenger Auto Physical Damage	\$6,002.4
Commercial Auto Physical Damage	\$464.9
Aircraft (All Perils)	\$151.7
Fidelity	\$64.2
Surety	\$419.2
Burglary and Theft	\$21.9
Boiler and Machinery	\$67.6
Credit	\$127.5
Warranty	\$661.5
Aggregate write-ins for other lines of business	\$138.6
<b>Totals</b>	<b>\$48,826.6</b>

Source: Florida Office of Insurance Regulation, Market Research Unit



## 2020 Surplus Lines Premiums (\$MM)

Coverage Code		2020 Surplus Lines Premiums (\$MM)	Coverage Code		2020 Surplus Lines Premiums (\$MM)
1000	Commercial Property	\$2,464.9	3006	Personal & Pleasure Boats & Yachts	\$20.5
1001	Builders Risk	\$76.1	3007	Ocean Marine Builder's Risk	\$3.2
1002	Business Income	\$2.4	3008	Longshoremen (Jones Act)	\$0.0
1003	Apartments (Commercial)	\$5.4	3010	Marine Operators Legal Liability - Non Taxable	\$0.0
1004	Boiler and Machinery	\$0.4	3011	Marine Liabilities Package - Non Taxable	\$0.0
1005	Commercial Package (Property & Casualty)	\$410.6	4000	Inland Marine (Commercial)	\$35.6
1006	Condominium Package (Commercial)	\$61.6	4001	Inland Marine (Personal)	\$21.7
1007	Crop Hail	\$0.0	4002	Motor Truck Cargo	\$26.9
1008	Difference In Conditions	\$5.5	4003	Jewelers Block	\$6.1
1009	Earthquake	\$0.3	4004	Furriers Block	\$0.0
1010	Flood	\$54.6	4005	Contractors Equipment	\$1.0
1011	Glass (Commercial)	\$0.0	4006	Electronic Data Processing	\$4.9
1012	Mortgagee Impairment	\$3.2	5000	Commercial General Liability	\$1,154.8
1013	Windstorm &/or Hail	\$128.7	5001	Commercial Umbrella Liability	\$88.0
1014	Mold Coverage - Commercial	\$1.1	5002	Directors & Officers Liability (Profit)	\$47.1
1015	Sinkhole Coverage - Commercial	\$0.0	5003	Directors & Officers Liability (Non-Profit)	\$8.3
1016	Excess Flood - Commercial	\$20.0	5004	Educator Legal Liability	\$1.2
1017	Collateral Protection	\$36.8	5005	Employment Practices Liability	\$14.6
1018	Fire	\$0.0	5006	Excess Commercial General Liability (Not Umbrella)	\$392.9
1100	Bankers Blanket Bond	\$3.8	5007	Excess Personal Liability (Not Umbrella)	\$6.8
1101	Blanket Crime Policy	\$0.7	5008	Liquor Liability	\$5.1
1102	Employee Dishonesty	\$0.0	5009	Owners & Contractors Protective	\$5.1
1103	Identity Theft	\$0.0	5010	Personal Umbrella	\$8.7
1104	Deposit Forgery	\$0.0	5011	Personal Liability	\$22.7
1105	Miscellaneous Crime	\$1.3	5012	Pollution & Environment Liability	\$75.1
1200	Accident & Health	\$0.0	5013	Product & Completed Operations Liability	\$21.5
1201	Credit Insurance	\$5.0	5014	Public Officials Liability	\$7.8
1202	Animal Mortality	\$0.0	5015	Police Professional Liability	\$2.6
1203	Mortgage Guaranty	\$0.0	5016	Media Liability	\$1.6
1204	Worker's Compensation-Excess Only	\$0.0	5017	Railroad Protective Liability	\$6.4
1205	Product Recall	\$8.7	5018	Asbestos Removal & Abatement	\$0.0
1206	Kidnap/Ransom	\$0.3	5019	Guard Service Liability	\$0.2
1207	Surety	\$11.0	5020	Special Events Liability	\$4.3
1208	Weather Insurance	\$0.5	5021	Miscellaneous Liability	\$115.9
1209	Prize Indemnification	\$0.2	5022	Cyber Liability	\$86.7
1210	Travel Accident	\$0.1	6000	Hospital Professional Liability	\$0.0
1211	Terrorism	\$16.1	6001	Miscellaneous Medical Professionals	\$0.0
1212	Fidelity	\$0.3	6002	Nursing Home Professional Liability	\$0.0
2000	Homeowners-HO-1	\$5.5	6003	Physician/Surgeon	\$0.0
2001	Homeowners-HO-2	\$0.1	7000	Architects & Engineers Liability	\$21.7
2002	Homeowners-HO-3	\$434.8	7001	Insurance Agents & Brokers E&O	\$10.0
2003	Tenant Homeowners-HO-4	\$1.8	7002	Lawyers Professional Liability	\$43.8
2004	Homeowners-HO-5	\$100.4	7003	Miscellaneous E&O Liability	\$150.0
2005	Condo Unit-Owners HO-6	\$104.5	7004	Real Estate Agents E&O	\$11.6
2006	Homeowners-HO-8	\$41.1	7005	Software Design Computer E & S	\$5.2
2007	Dwelling Builders Risk	\$5.4	8000	Commercial Auto Liability	\$74.0
2008	Dwelling Flood	\$43.7	8001	Commercial Auto Excess Liability	\$32.5
2009	Dwelling Property	\$164.8	8002	Commercial Auto Physical Damage	\$41.9
2010	Farmowners Multi-Peril	\$1.8	8003	Dealers Open Lot	\$33.5
2011	Mobile Homeowners	\$27.3	8004	Garage Liability	\$40.8
2012	Windstorm	\$34.6	8005	Garage Keepers Legal	\$2.1
2013	Mold Coverage - Residential	\$0.0	8006	Private Passengers Auto-Physical Damage Only	\$0.2
2014	Sinkhole Coverage - Residential	\$0.0	8007	Personal Excess Auto Liability	\$1.2
2015	Excess Flood - Residential	\$28.3	9000	Commercial Aircraft Hull &/or Liability	\$21.4
3000	Marine Operators Legal Liability - Taxable	\$2.1	9001	Airport Liability	\$1.8
3001	Marine Liabilities Package - Taxable	\$7.6	9002	Aviation Cargo	\$0.8
3002	Ocean Marine-Hull &/or Protection & Indemnity	\$12.0	9003	Aviation Product Liability	\$8.7
3003	Ocean Cargo Policy	\$31.5	9004	Hanger Keepers Legal Liability	\$0.0
3004	Ship Repairers Legal Liability	\$0.0	9005	Personal & Pleasure Aircraft	\$0.0
3005	Stevedores Legal Liability	\$0.0			
			<b>Totals</b>		<b>\$7,066</b>

Source: FSLSO

Based on policies with a submitted (filed) date from 1/1/20 to 12/31/20.



## Disclaimer

*The analysis or information presented herein is based upon projections and have limitations. No representation is made that any results indicated will be achieved. Changes to any prices, levels, or assumptions contained herein may have a material impact on results. Any estimates or assumptions contained herein represent our best judgment as of the date indicated and are subject to change.*