



# Florida Gulf Coast University

*Updated Series 2011A Refunding Analysis*

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## Series 2011A refunding continues to provide attractive savings in Dec. 2020

- \$4.1MM, or 16.4%, of NPV savings given current rates and December 1, 2020 dated date
- Value of 1bps equal to ~ \$16,818 given current rates
- Below sensitivity analysis, with a range of +/- 50bps, results in NPV savings % of par between 12.2% and 20.9%
- Refer to page 8 in the Appendix for greater detail about the refunding statistics and annual savings patterns

Change in Savings based on Rate Movements in Dec. 2020				
	Cash Flow Savings	NPV Savings	NPV Savings % of Par	Value of 1 bps
-50 bps	6,620,164	5,195,581	20.9%	16,979
-25 bps	6,034,914	4,625,542	18.6%	16,905
<b>Current</b>	<b>5,449,872</b>	<b>4,076,825</b>	<b>16.4%</b>	<b>16,818</b>
+25 bps	4,839,997	3,544,443	14.2%	16,781
+50 bps	4,235,872	3,030,964	12.2%	16,706

\*Current rates as of 9/11/20





## Series 2011A refunding provide greater savings in Feb. 2021

- \$4.2MM, or 17.0%, of NPV savings given current rates and February 1, 2021 dated date
- Value of 1bps equal to ~ \$16,392 given current rates
- Below sensitivity analysis, with a range of +/- 50bps, results in NPV savings % of par between 12.8% and 21.4%
- Refer to page 9 in the Appendix for greater detail about the refunding statistics and annual savings patterns

Change in Savings based on Rate Movements in Feb. 2021				
	Cash Flow Savings	NPV Savings	NPV Savings % of Par	Value of 1 bps
-50 bps	6,764,619	5,319,893	21.4%	16,543
-25 bps	6,198,369	4,761,992	19.1%	16,472
<b>Current</b>	<b>5,616,869</b>	<b>4,220,535</b>	<b>17.0%</b>	<b>16,392</b>
+25 bps	5,041,369	3,699,102	14.9%	16,304
+50 bps	4,446,369	3,194,219	12.8%	16,258

\*Current rates as of 9/11/20





## Including the 2021 maturity and deferring principal increases upfront savings

- Includes the February 1, 2021 maturity of the 2011A bonds, while deferring principal until FY 2022 in the refunding series
- Shortened par amount in FY 2041 to achieve equal remaining average life between 2011A bonds and refunding series
- Elevated savings in FY 2021 and 2041 due to structuring considerations
- \$4.1MM, or 16.2%, of NPV savings given current rates and December 1, 2020 dated date
- Monitor need/ability to remove the existing DSRF to downsize new issuance

Florida Gulf Coast University Series 2011A Tax-Exempt Refunding Analysis	
	Upfront Savings
Dated Date	12/1/2020
Call Date	2/1/2021
Refunded Par	25,600,000
Refunding Par	22,875,000
<b>Cash Flow Savings</b>	<b>5,494,205</b>
<b>NPV Savings</b>	<b>4,140,484</b>
<b>NPV Savings % of Par</b>	<b>16.174%</b>

FY Ending	Annual Cash Flow Savings						
	2011A Bonds			Refunding Bonds			Cash Flow Savings
	Principal	Interest	Debt Service	Principal	Interest	Debt Service	
2021	725,000	220,461	945,461	-	190,625	190,625	754,836
2022	755,000	1,293,769	2,048,769	705,000	1,143,750	1,848,750	200,019
2023	785,000	1,262,625	2,047,625	745,000	1,108,500	1,853,500	194,125
2024	825,000	1,229,263	2,054,263	790,000	1,071,250	1,861,250	193,013
2025	865,000	1,192,138	2,057,138	830,000	1,031,750	1,861,750	195,388
2026	905,000	1,153,213	2,058,213	875,000	990,250	1,865,250	192,963
2027	955,000	1,110,225	2,065,225	925,000	946,500	1,871,500	193,725
2028	1,000,000	1,064,863	2,064,863	970,000	900,250	1,870,250	194,613
2029	1,050,000	1,014,863	2,064,863	1,020,000	851,750	1,871,750	193,113
2030	1,105,000	962,363	2,067,363	1,070,000	800,750	1,870,750	196,613
2031	1,160,000	907,113	2,067,113	1,125,000	747,250	1,872,250	194,863
2032	1,215,000	846,213	2,061,213	1,175,000	691,000	1,866,000	195,213
2033	1,280,000	782,425	2,062,425	1,235,000	632,250	1,867,250	195,175
2034	1,345,000	713,625	2,058,625	1,295,000	570,500	1,865,500	193,125
2035	1,420,000	639,650	2,059,650	1,360,000	505,750	1,865,750	193,900
2036	1,490,000	561,550	2,051,550	1,420,000	437,750	1,857,750	193,800
2037	1,570,000	479,600	2,049,600	1,490,000	366,750	1,856,750	192,850
2038	1,655,000	393,250	2,048,250	1,560,000	292,250	1,852,250	196,000
2039	1,740,000	302,225	2,042,225	1,635,000	214,250	1,849,250	192,975
2040	1,830,000	206,525	2,036,525	1,710,000	132,500	1,842,500	194,025
2041	1,925,000	105,875	2,030,875	940,000	47,000	987,000	1,043,875
<b>Total</b>	<b>25,600,000</b>	<b>16,441,830</b>	<b>42,041,830</b>	<b>22,875,000</b>	<b>13,672,625</b>	<b>36,547,625</b>	<b>5,494,205</b>

Additional Assumptions:  
 1<sup>st</sup> interest payment date of 2/1/2021  
 Rates as of 9/11/20  
 COI of \$300K and UWD of \$4/bond

\*Prior DS includes accrued interest



## Including the 2021 maturity and refunding for level savings results in lower upfront debt service relief

- Matched maturity refunding of the 2011A bonds, including the 2021 maturity, solved for level savings
- Average annual savings of ~\$262,000
- \$4.0MM, or 15.9%, of NPV savings given current rates and December 1, 2020 dated date
- Monitor need/ability to remove the existing DSRF to downsize new issuance

Florida Gulf Coast University Series 2011A Tax-Exempt Refunding Analysis	
	Level Savings
Dated Date	12/1/2020
Call Date	2/1/2021
Refunded Par	25,600,000
Refunding Par	22,960,000
<b>Cash Flow Savings</b>	<b>5,388,747</b>
<b>NPV Savings</b>	<b>4,064,931</b>
<b>NPV Savings % of Par</b>	<b>15.879%</b>

FY Ending	Annual Cash Flow Savings						
	2011A Bonds			Refunding Bonds			Cash Flow Savings
	Principal	Interest	Debt Service	Principal	Interest	Debt Service	
2021	725,000	220,461	945,461	600,000	191,333	791,333	154,128
2022	755,000	1,293,769	2,048,769	670,000	1,118,000	1,788,000	260,769
2023	785,000	1,262,625	2,047,625	700,000	1,084,500	1,784,500	263,125
2024	825,000	1,229,263	2,054,263	745,000	1,049,500	1,794,500	259,763
2025	865,000	1,192,138	2,057,138	785,000	1,012,250	1,797,250	259,888
2026	905,000	1,153,213	2,058,213	825,000	973,000	1,798,000	260,213
2027	955,000	1,110,225	2,065,225	870,000	931,750	1,801,750	263,475
2028	1,000,000	1,064,863	2,064,863	915,000	888,250	1,803,250	261,613
2029	1,050,000	1,014,863	2,064,863	960,000	842,500	1,802,500	262,363
2030	1,105,000	962,363	2,067,363	1,010,000	794,500	1,804,500	262,863
2031	1,160,000	907,113	2,067,113	1,060,000	744,000	1,804,000	263,113
2032	1,215,000	846,213	2,061,213	1,110,000	691,000	1,801,000	260,213
2033	1,280,000	782,425	2,062,425	1,165,000	635,500	1,800,500	261,925
2034	1,345,000	713,625	2,058,625	1,220,000	577,250	1,797,250	261,375
2035	1,420,000	639,650	2,059,650	1,280,000	516,250	1,796,250	263,400
2036	1,490,000	561,550	2,051,550	1,340,000	452,250	1,792,250	259,300
2037	1,570,000	479,600	2,049,600	1,400,000	385,250	1,785,250	264,350
2038	1,655,000	393,250	2,048,250	1,470,000	315,250	1,785,250	263,000
2039	1,740,000	302,225	2,042,225	1,540,000	241,750	1,781,750	260,475
2040	1,830,000	206,525	2,036,525	1,610,000	164,750	1,774,750	261,775
2041	1,925,000	105,875	2,030,875	1,685,000	84,250	1,769,250	261,625
<b>Total</b>	<b>25,600,000</b>	<b>16,441,830</b>	<b>42,041,830</b>	<b>22,960,000</b>	<b>13,693,083</b>	<b>36,653,083</b>	<b>5,388,747</b>

Additional Assumptions:  
 1<sup>st</sup> interest payment date of 2/1/2021  
 Rates as of 9/11/20  
 COI of \$300K and UWD of \$4/bond

\*Prior DS includes accrued interest



## Comparison between upfront savings and levels savings patterns

- **Upfront:**
  - Includes the February 1, 2021 maturity while deferring principal until FY 2022
  - \$4.1MM, or 16.2%, of NPV savings
- **Level:**
  - Includes the February 1, 2021 maturity while refunding on a matched-maturity basis
  - \$4.0MM, or 15.9%, of NPV savings
- Refer to page 10 in the Appendix for refunding statistics and annual savings patterns assuming FGCU liquidates the existing DSRF

Annual Cash Flow Savings											
FY Ending	2011A Bonds			Refunding Bonds - Upfront Savings			Cash Flow Savings	Refunding Bonds - Level Savings			Cash Flow Savings
	Principal	Interest	Debt Service	Principal	Interest	Debt Service		Principal	Interest	Debt Service	
2021	725,000	220,461	945,461	-	190,625	190,625	754,836	600,000	191,333	791,333	154,128
2022	755,000	1,293,769	2,048,769	705,000	1,143,750	1,848,750	200,019	670,000	1,118,000	1,788,000	260,769
2023	785,000	1,262,625	2,047,625	745,000	1,108,500	1,853,500	194,125	700,000	1,084,500	1,784,500	263,125
2024	825,000	1,229,263	2,054,263	790,000	1,071,250	1,861,250	193,013	745,000	1,049,500	1,794,500	259,763
2025	865,000	1,192,138	2,057,138	830,000	1,031,750	1,861,750	195,388	785,000	1,012,250	1,797,250	259,888
2026	905,000	1,153,213	2,058,213	875,000	990,250	1,865,250	192,963	825,000	973,000	1,798,000	260,213
2027	955,000	1,110,225	2,065,225	925,000	946,500	1,871,500	193,725	870,000	931,750	1,801,750	263,475
2028	1,000,000	1,064,863	2,064,863	970,000	900,250	1,870,250	194,613	915,000	888,250	1,803,250	261,613
2029	1,050,000	1,014,863	2,064,863	1,020,000	851,750	1,871,750	193,113	960,000	842,500	1,802,500	262,363
2030	1,105,000	962,363	2,067,363	1,070,000	800,750	1,870,750	196,613	1,010,000	794,500	1,804,500	262,863
2031	1,160,000	907,113	2,067,113	1,125,000	747,250	1,872,250	194,863	1,060,000	744,000	1,804,000	263,113
2032	1,215,000	846,213	2,061,213	1,175,000	691,000	1,866,000	195,213	1,110,000	691,000	1,801,000	260,213
2033	1,280,000	782,425	2,062,425	1,235,000	632,250	1,867,250	195,175	1,165,000	635,500	1,800,500	261,925
2034	1,345,000	713,625	2,058,625	1,295,000	570,500	1,865,500	193,125	1,220,000	577,250	1,797,250	261,375
2035	1,420,000	639,650	2,059,650	1,360,000	505,750	1,865,750	193,900	1,280,000	516,250	1,796,250	263,400
2036	1,490,000	561,550	2,051,550	1,420,000	437,750	1,857,750	193,800	1,340,000	452,250	1,792,250	259,300
2037	1,570,000	479,600	2,049,600	1,490,000	366,750	1,856,750	192,850	1,400,000	385,250	1,785,250	264,350
2038	1,655,000	393,250	2,048,250	1,560,000	292,250	1,852,250	196,000	1,470,000	315,250	1,785,250	263,000
2039	1,740,000	302,225	2,042,225	1,635,000	214,250	1,849,250	192,975	1,540,000	241,750	1,781,750	260,475
2040	1,830,000	206,525	2,036,525	1,710,000	132,500	1,842,500	194,025	1,610,000	164,750	1,774,750	261,775
2041	1,925,000	105,875	2,030,875	940,000	47,000	987,000	1,043,875	1,685,000	84,250	1,769,250	261,625
<b>Total</b>	<b>25,600,000</b>	<b>16,441,830</b>	<b>42,041,830</b>	<b>22,875,000</b>	<b>13,672,625</b>	<b>36,547,625</b>	<b>5,494,205</b>	<b>22,960,000</b>	<b>13,693,083</b>	<b>36,653,083</b>	<b>5,388,747</b>

\*Prior DS includes accrued interest

Additional Assumptions:  
 1<sup>st</sup> interest payment date of 2/1/2021  
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