



## **Item 4: Periodic Report on Credit Work Group Activity**

*Donald Meek*

Chair, Credit Work Group

Finance & Audit Committee Meeting

ERCOT Public

June 11, 2018

# Credit Work Group Update – Reviewed NPRRs

- **NPRRs Reviewed Without Credit Impact**

- NPRR 851 – Procedure for Managing Disconnections for Bidirectional Electrical Connections at Transmission Level Voltages
- NPRR 856 – Treatment of OFFQS Status in Day-Ahead Make Whole and RUC Settlements
- NPRR 873 – Posting of the ERCOT Wide Intra-Hour Wind Power and Load Forecast on the MIS

- **NPRRs with Positive Credit Impacts**

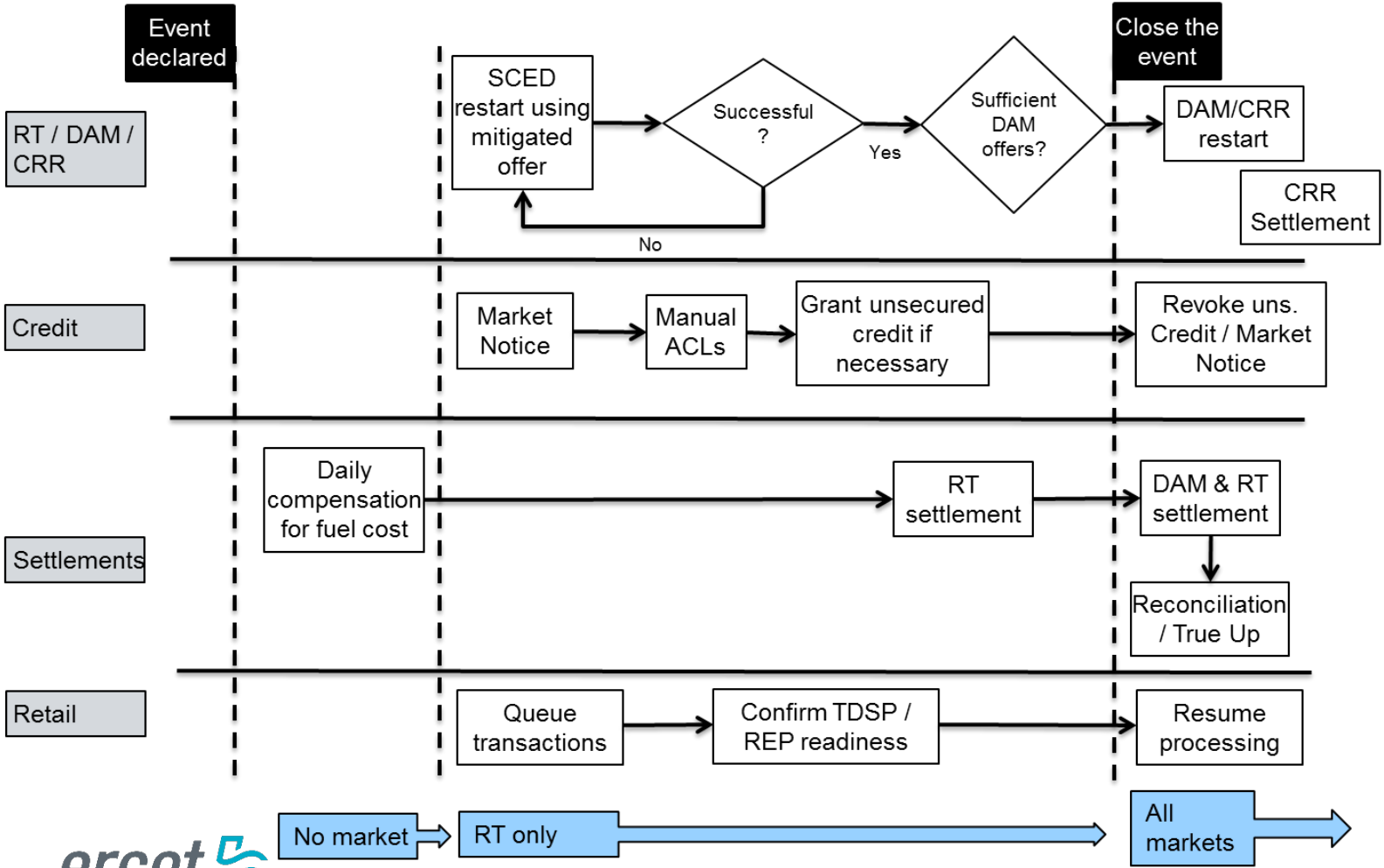
- NPRR 867 – Revisions to CRR Auction Credit Lock Amount to Reduce Excess Collateral (proposed by Credit Working Group)
  - Changes the amount of each Counter Party's Available Credit Limit (ACL) locked for Congestion Revenue Rights (CRR) Auctions during the duration of the auction process so that it is capped at the pre-auction screening credit exposure amount.
- NPRR 870 – Eliminate Requirement for Forward Adjustment Factors Report in MIS Certified Area
  - Removes grey boxed language requiring ERCOT post a report on the Market Information System (MIS) which duplicates information provided to each Counterparty on their daily Estimated Aggregate Liability (EAL) report.

# NPRR 850 – Market Suspension and Restart

- ERCOT employed stakeholder feedback to develop a principles-based approach to Market Suspension and Market Restart.
- ERCOT has drafted proposed language to handle collateral requests during the transition from pre-to post-market restart.
  - Based upon feedback from the CWG, ERCOT has added discretionary language to allow up to two additional days for Market Participants to make payment on any outstanding invoices / collateral calls during a market restart.
- Comments pending to be filed by LCRA:
  - LCRA is proposing to file comments which allocate the costs associated with market restart based on AMS/IDR meter reads instead of by load ratio share. This would be any money paid to generators to get the grid going again and would be more accurate/appropriate than load ratio share.
- Many issues remain for discussion such as what if ERCOT cannot receive any of the AMS/IDR data – can it be stored somewhere else OR how do the TDSPs even know the data is not being properly processed, etc.

Discussion will continue at upcoming CWG/MCWG meetings.

# NPRR 850 - ERCOT Market Suspension and Restart Conceptual Framework “Swim Lanes”



# Posting of Transaction/Acquisition Business Contact Information (REP Book Sales)

- A Retail Market Guide Revision Request (RMGRR) may be considered for a Competitive Retailer to provide transition/acquisition business contact information be posted publically.
- To better facilitate the sale/acquisition of a Retail Electric Provider's (REP's) portfolio and make the possible REP contact list available for this summer, ERCOT is considering a temporary approach to develop a list and REPs can voluntarily supply a contact to be available 24x7 to respond to REPs who wish to quickly sell their books prior to a possible credit default/mass transition.
- Currently there is no such list and ERCOT does not collect the information of who would be an appropriate contact available at all hours to initiate such a possible transaction.
- Longer term would require an NPRR to include such a contact in the market participant registration forms.
- ERCOT will work with Legal to make sure such list is compiled, updated and published while a longer term approach is explored.
- ERCOT may reach out to the CWG/MCWG leadership to discuss any legal issues.

This idea will be discussed further at RMS and an upcoming CWG/MCWG meeting.

# ERCOT Mass Transition Drill Lessons Learned

Two important 'lessons learned' from the May 2018 ERCOT Mass Transition Drill:

1) When a credit default is declared no earlier than 15:00 on a given day, there is a minimum 2 hours window before a mass transition conference call can be held. This means that the call has to happen the next day because the notice cannot be issued before 15:30 to 16:00 by the time it clears ERCOT Legal and other involved parties.

This adds a day of delay to the mass transition timeline and potentially increases uplift. ERCOT is going to discuss at RMS if this window can be decreased by utilizing proactive communications including calendar invitations. This will not require an NPRR but a Retail Market Guide Revision Request (RMGRR) which has a much shorter process than an NPRR.

2) Meter reads are performed (to establish the beginning of the new service with the POLR) two days after the declared default. This would require an NPRR to change the protocols.

There is additional default risk in reading meters two days after a declared default which would be reduced with one day reads, which is now possible given the extensive usage of AMS/IDR meters. This change would require confirmation/coordination with the TDSPs that they are capable of such a task as well as an NPRR and an RMGRR – a much longer process.

Discussion will continue at RMS and upcoming CWG/MCWG meetings.

# Letter of Credit Concentration Limit Update

- Two LC Issuers have reached their credit concentration limits during the last two months: Natixis and Morgan Stanley Bank, NA.
- Currently any institution which has reached its limit may not supply an additional LC to a new counterparty which is acceptable to ERCOT, however any existing LC holder may amend/increase their LC with that financial institution during a 4 month window without limit.
- There is no 'draw down' requirement to reduce total LCs issued to the aggregate credit concentration limit which could result in total LCs issued in aggregate in excess of the concentration limit remaining in place indefinitely. This is particularly concerning if an LC concentration limit were breached because a financial institution had its credit rating downgraded resulting in a lower ERCOT limit with market participants simultaneously exercising their 4 month amendment window.
- ERCOT will review their risk tolerance related to LC concentration limits, potential drawdown requirements, and limits to LC amendments.

# Letter of Credit Issuer Limits

## Detailed statistics

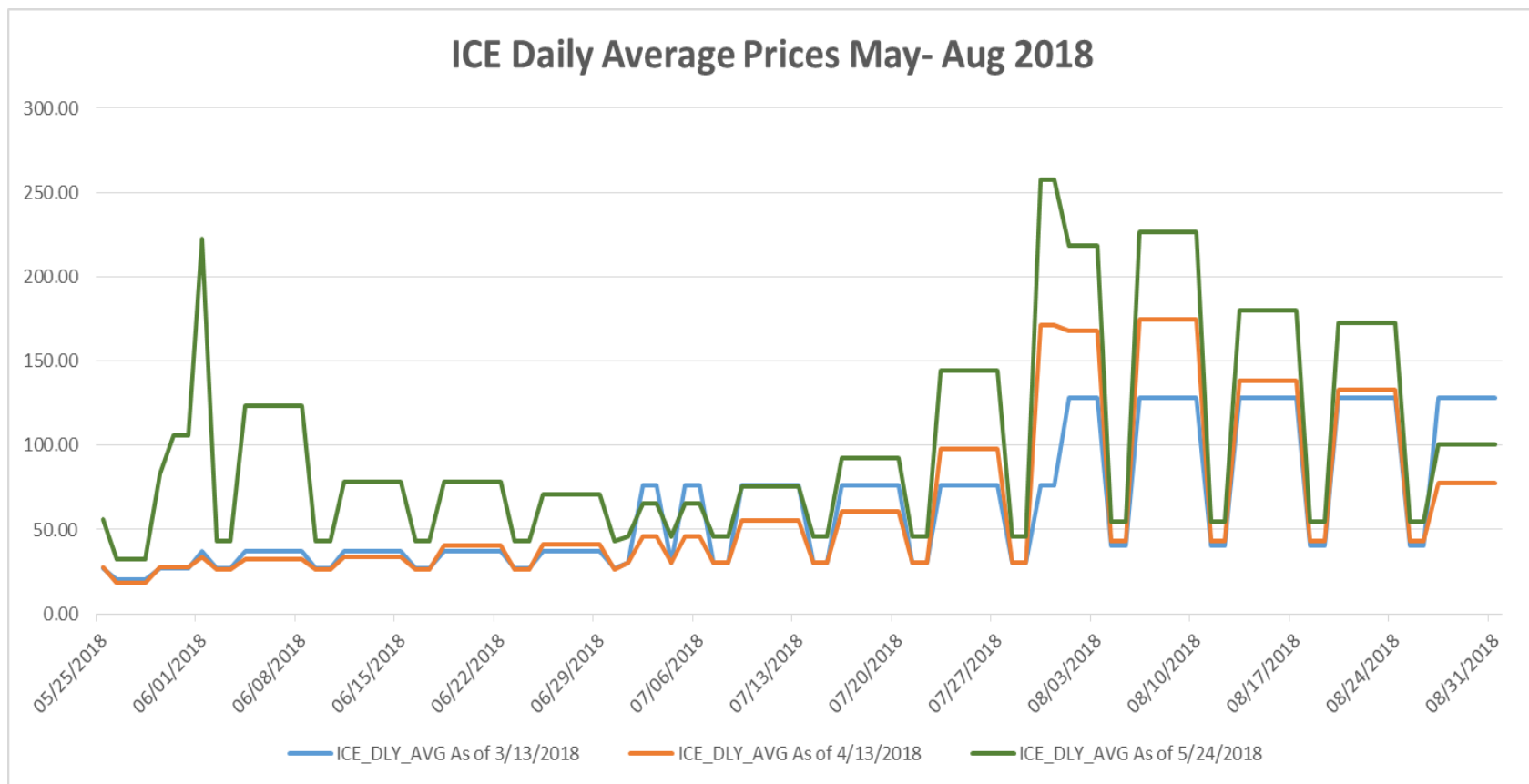
Letter of Credit Concentration Limits (\$ millions)

LC Issuer	Computed Issuer Limit	LCs Outstanding as of May 29, 2018	Excess Capacity as of May 29, 2018	% Current Excess / Limit
Bank of America NA	750.00	149.90	600.10	80%
Bank of Nova Scotia	297.29	87.55	209.74	71%
Bank of Tokyo-Mitsubishi UFJ, Ltd. New York Branch	717.36	200.22	517.14	72%
Barclays Bank PLC	556.31	116.00	440.31	79%
BNP Paribas	735.85	86.00	649.85	88%
BOKF NA(FI)	17.47	0.20	17.27	99%
Canadian Imperial Bank	148.20	39.46	108.74	73%
Citibank NA	750.00	28.00	722.00	96%
CoBank ACB	72.88	35.00	37.88	52%
Comerica Bank	50.96	2.20	48.76	96%
Cooperatieve Rabobank U.A.	385.04	0.20	384.84	100%
Credit Agricole Corporate & Investment Bank SA	154.42	0.00	154.42	100%
Credit Suisse AG	268.73	35.60	233.12	87%
DNB Bank ASA	162.15	150.00	12.15	7%
KeyBank National Association	86.93	15.00	71.93	83%
Lloyds Bank PLC	472.13	99.80	372.33	79%
Mizuho Corporate Bank Ltd.	462.01	294.55	167.46	36%
Morgan Stanley Bank, N.A.	121.03	205.50	-84.47	-70%
MUFG Union Bank N.A.	100.15	8.00	92.15	92%
Natixis	122.54	182.30	-59.77	-49%
PNC Bank NA	211.59	41.50	170.09	80%
Royal Bank of Canada	384.54	0.00	384.54	100%
Societe Generale	440.61	97.00	343.61	78%
Sumitomo Mitsui Banking Corporation.	516.72	0.50	516.22	100%
Toronto-Dominion Bank, The	365.34	10.00	355.34	97%
Wells Fargo	750.00	47.80	702.20	94%
		1932.27		



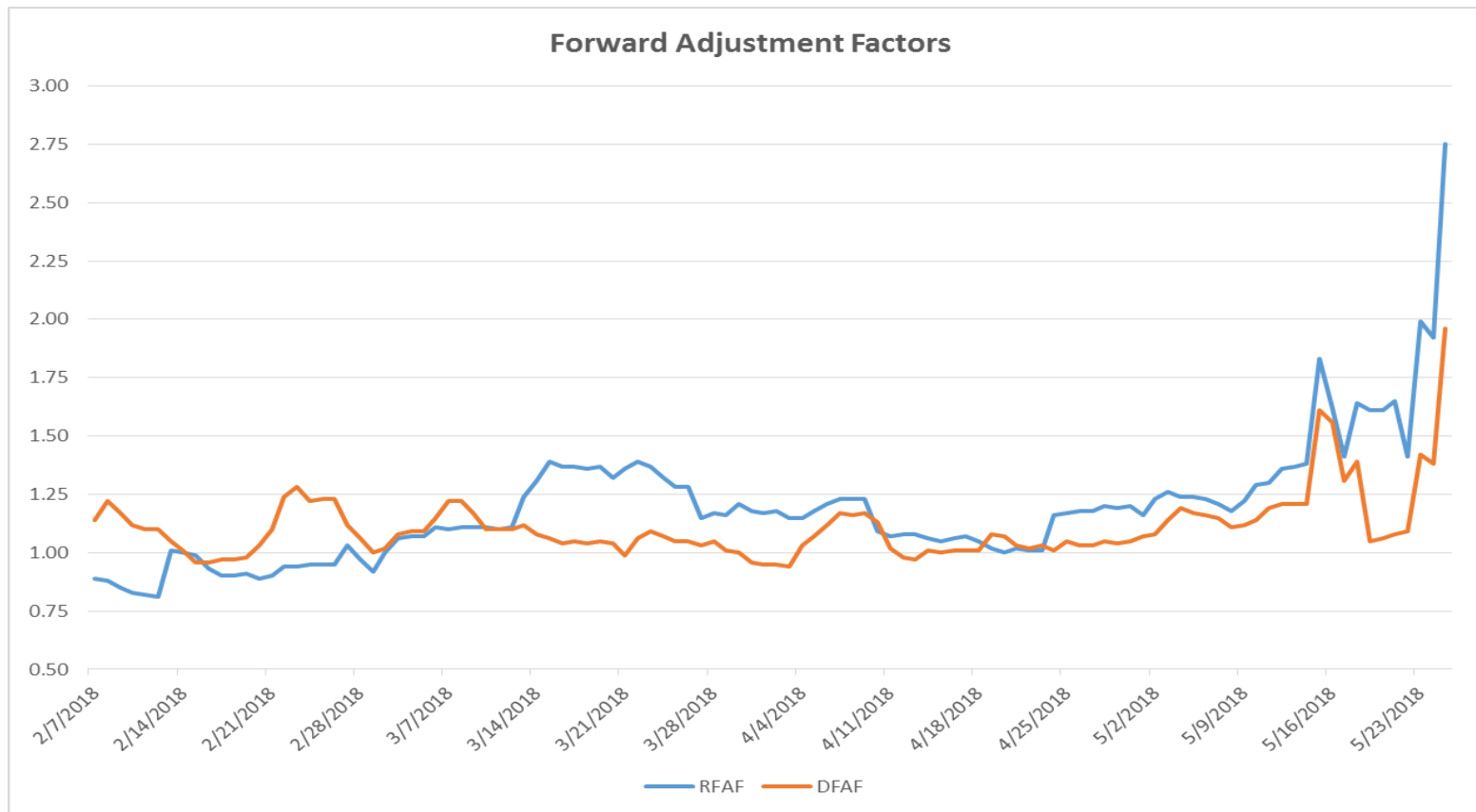
# Impact of Forward ERCOT Prices

Comparison of ICE forward curves – March 2018 – May 2018



# Impact of Forward ERCOT Prices

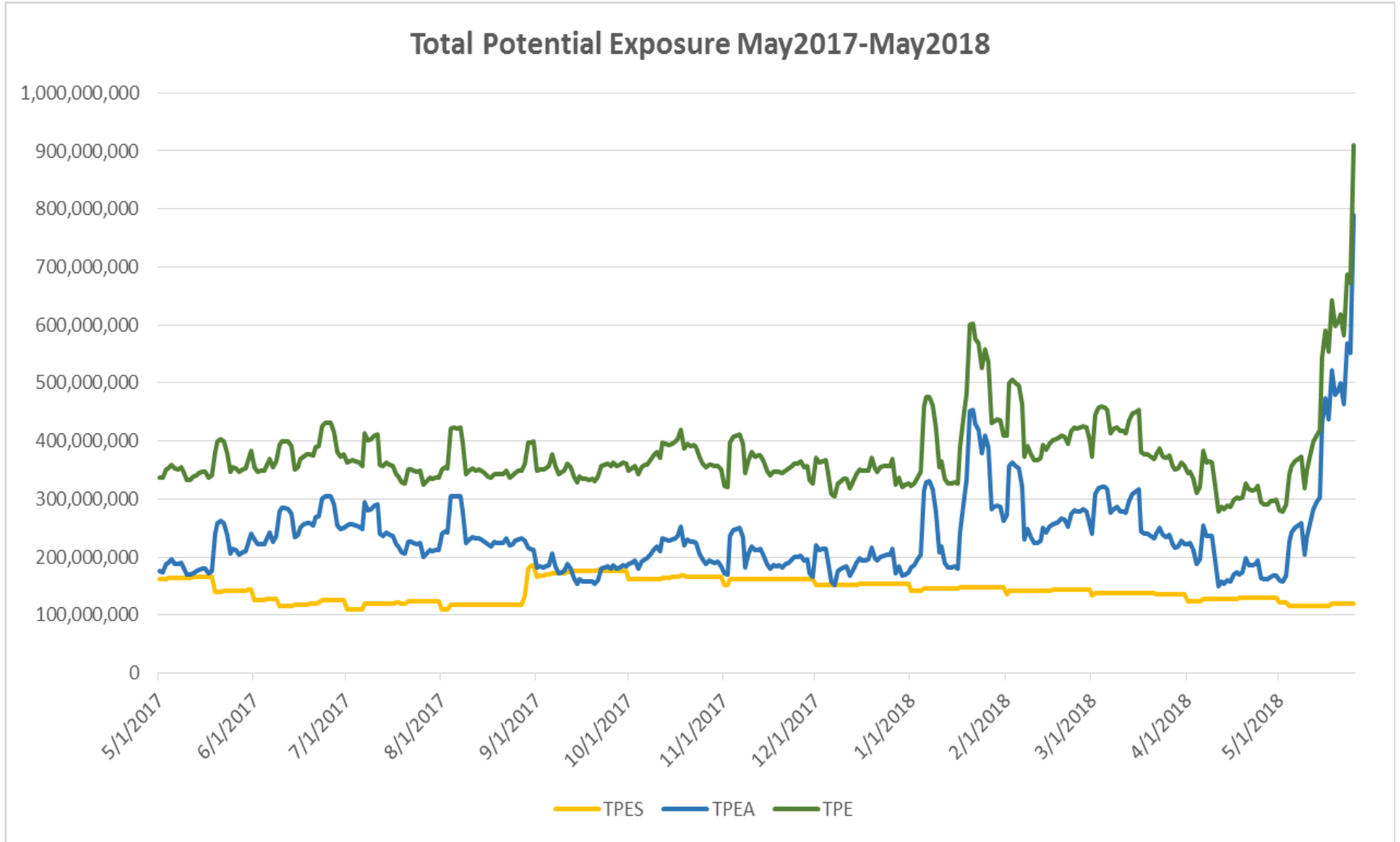
## Forward Adjustment Factors



Forward adjustment factors are calculated as the ratio of 21 days forward ICE prices to 14 days Real-Time or 7 days Day-Ahead historic prices.

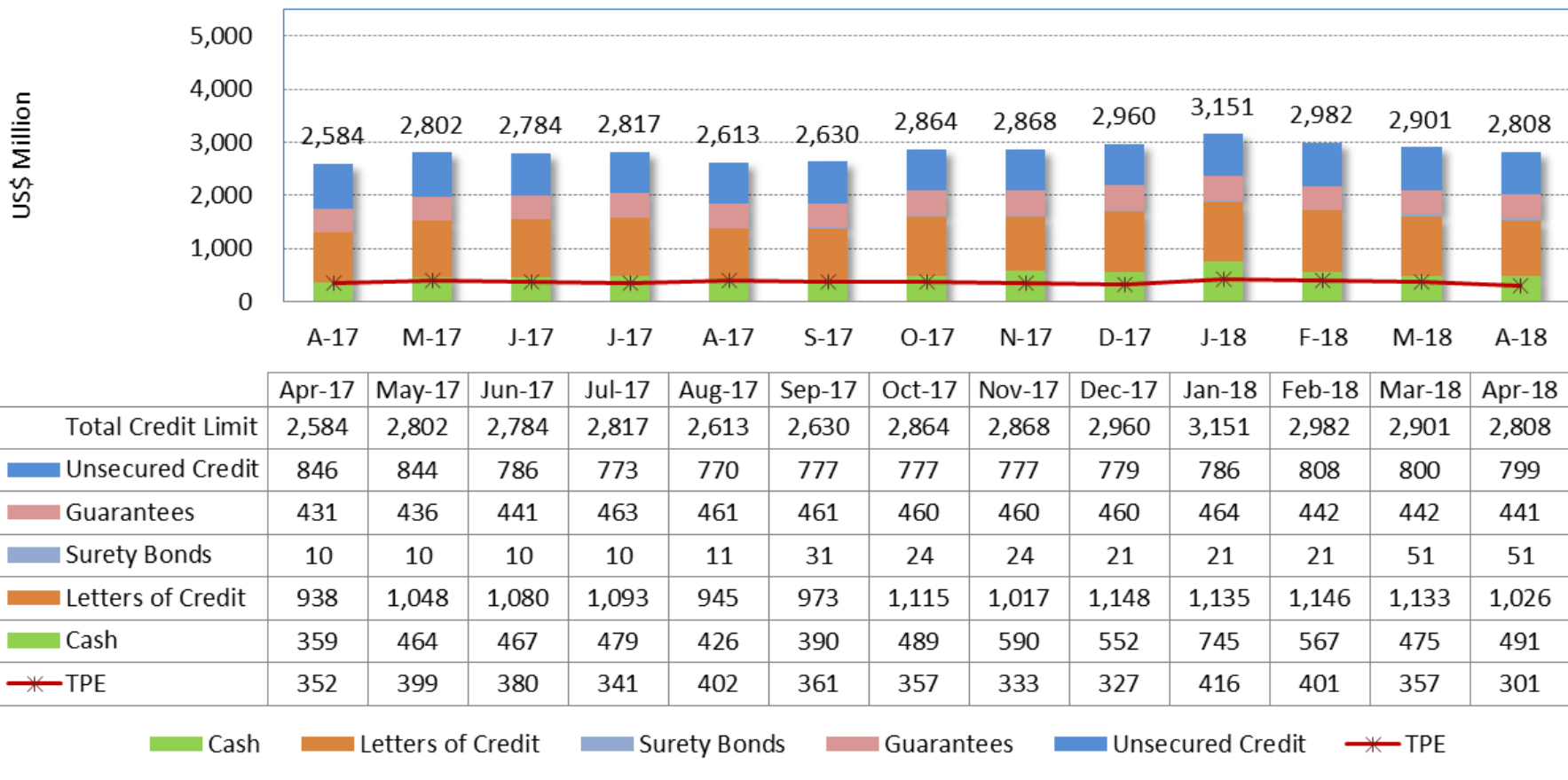
# Counter-Party Credit Exposure

## Total Potential Exposure May2017-May2018



# Counter-Party Credit Exposure – Mar./Apr. 2018

## Credit Limit/Type of Security vs TPE



# Counter-Party Credit Exposure – April 2018

Distribution of TPE by Rating and Category

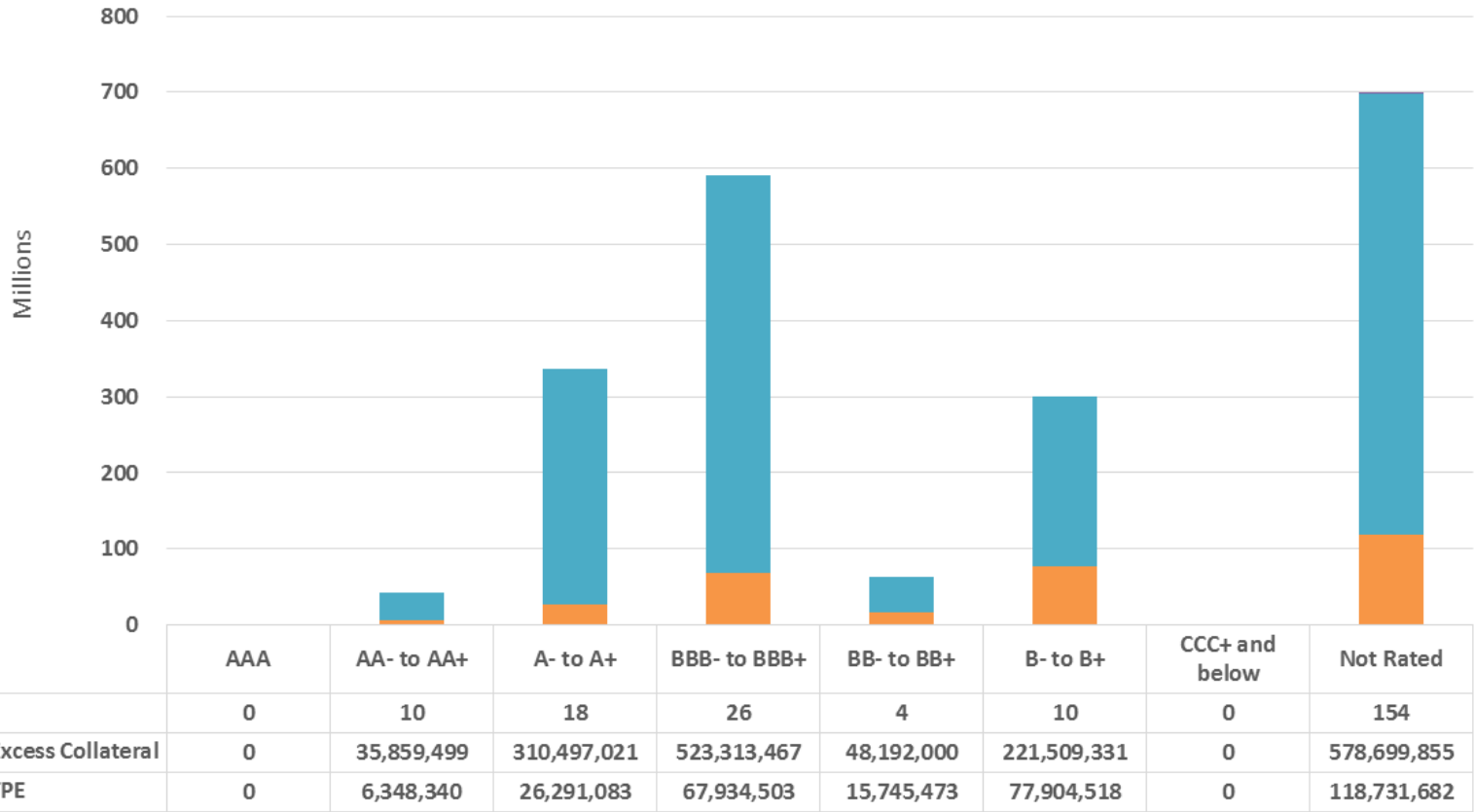
Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Total TPE	Percent TPE
AAA	0	0	0	0	0	0	0.00%
AA- to AA+	285,023	0	0	6,063,317	0	6,348,340	2.03%
A- to A+	69,438	944,951	3,441,828	16,424,595	5,410,271	26,291,083	8.40%
BBB- to BBB+	0	6,178,985	2,798,869	32,706,153	26,250,495	67,934,503	21.71%
<b>Investment Grade</b>	<b>354,461</b>	<b>7,123,936</b>	<b>6,240,697</b>	<b>55,194,065</b>	<b>31,660,767</b>	<b>100,573,925</b>	<b>32.14%</b>
BB- to BB+	0	0	7,037,282	1,643,083	7,065,108	15,745,473	5.03%
B- to B+	0	19,736	0	42,204,067	35,680,715	77,904,518	24.89%
CCC+ and below	0	0	0	0	0	0	0.00%
Not Rated	16,271,548	14,596,076	2,994,038	31,291,245	53,578,775	118,731,682	37.94%
<b>Non-Investment Grade</b>	<b>16,271,548</b>	<b>14,615,812</b>	<b>10,031,321</b>	<b>75,138,395</b>	<b>96,324,598</b>	<b>212,381,673</b>	<b>67.86%</b>
<b>Total TPE</b>	<b>16,626,008</b>	<b>21,739,748</b>	<b>16,272,018</b>	<b>130,332,461</b>	<b>127,985,365</b>	<b>312,955,599</b>	<b>100.00%</b>
<b>Percent TPE</b>	<b>5.31%</b>	<b>6.95%</b>	<b>5.20%</b>	<b>41.65%</b>	<b>40.90%</b>	<b>100.00%</b>	

Distribution of Excess Collateral by Rating and Category

Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Excess Collateral	Percent Excess Collateral
AAA	0	0	0	0	0	0	0.00%
AA- to AA+	7,087,621	0	0	28,771,878	0	35,859,499	2.09%
A- to A+	14,353,379	34,055,049	53,158,173	176,275,420	32,655,000	310,497,021	18.07%
BBB- to BBB+	3,150,000	16,163,345	71,001,142	333,501,200	99,497,780	523,313,467	30.46%
<b>Investment Grade</b>	<b>24,591,000</b>	<b>50,218,394</b>	<b>124,159,315</b>	<b>538,548,499</b>	<b>132,152,780</b>	<b>869,669,987</b>	<b>50.62%</b>
BB- to BB+	0	0	5,804,429	13,912,769	28,474,802	48,192,000	2.81%
B- to B+	0	165,308	0	172,622,600	48,721,423	221,509,331	12.89%
CCC+ and below	0	0	0	0	0	0	0.00%
Not Rated	47,117,440	52,113,338	21,992,740	261,383,778	196,092,559	578,699,855	33.68%
<b>Non-Investment Grade</b>	<b>47,117,440</b>	<b>52,278,646</b>	<b>27,797,169</b>	<b>447,919,146</b>	<b>273,288,785</b>	<b>848,401,186</b>	<b>49.38%</b>
<b>Total Excess Collateral</b>	<b>71,708,441</b>	<b>102,497,040</b>	<b>151,956,483</b>	<b>986,467,645</b>	<b>405,441,564</b>	<b>1,718,071,173</b>	<b>100.00%</b>
<b>Percent Excess Collateral</b>	<b>4.17%</b>	<b>5.97%</b>	<b>8.84%</b>	<b>57.42%</b>	<b>23.60%</b>	<b>100.00%</b>	

# Counter-Party Credit Exposure – April 2018

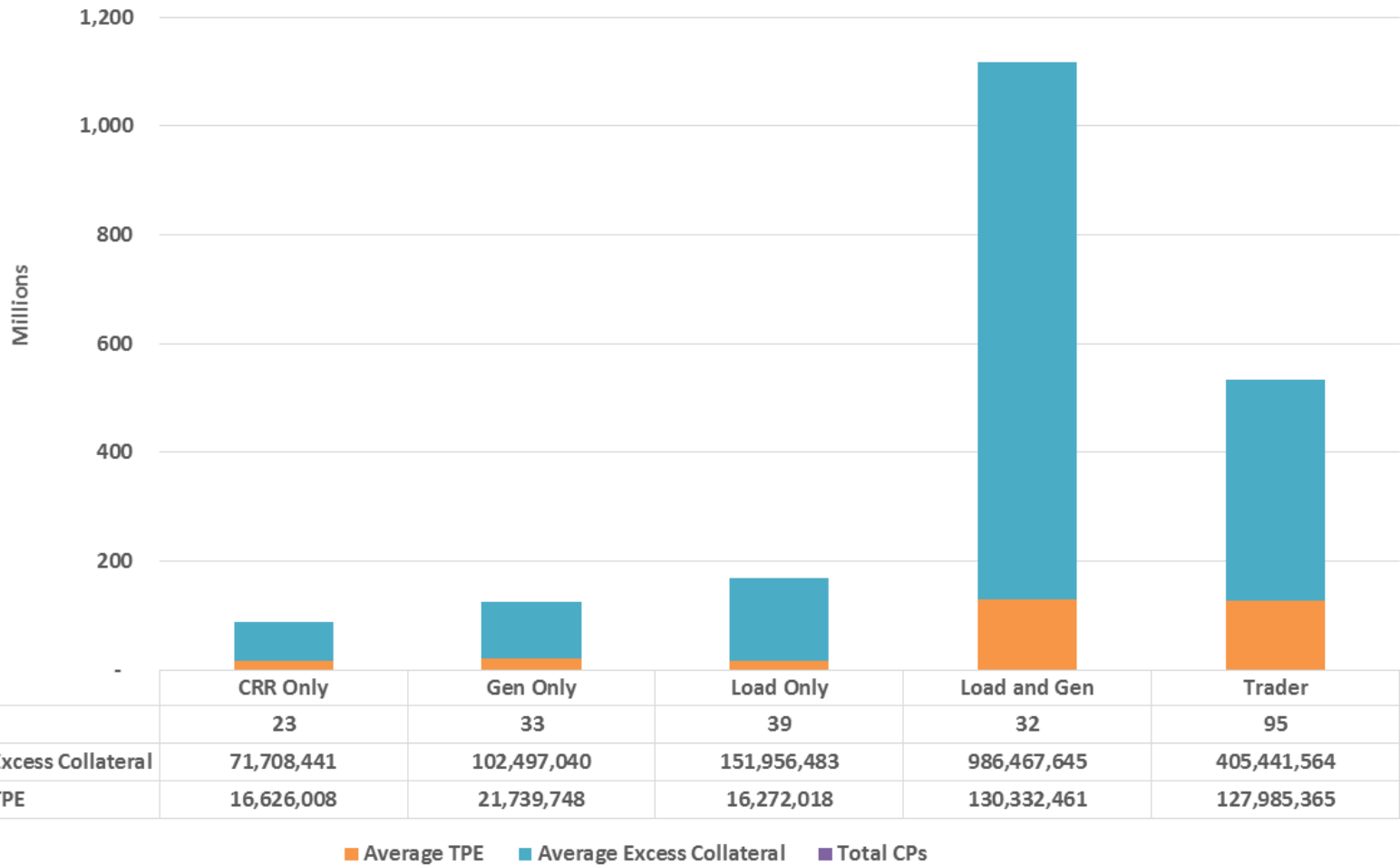
## Average TPE and Collateral Distribution by Rating Category



■ Average TPE   ■ Average Excess Collateral   ■ Total CPs

# Counter-Party Credit Exposure – April 2018

## Average TPE and Collateral Distribution by Market Segment



# Counter-Party Credit Changes April 2018

## Summary of distribution by Category

Category	CP Distribution			Average TPE Distribution			Average Excess Collateral Distribution		
	Mar-18	Apr-18	Change	Mar-18	Apr-18	Change	Mar-18	Apr-18	Change
CRR Only	10.50%	10.36%	-0.14%	5.53%	5.31%	-0.22%	3.82%	4.17%	0.36%
Gen Only	15.53%	14.86%	-0.66%	8.03%	6.95%	-1.08%	6.57%	5.97%	-0.61%
Load Only	18.26%	17.57%	-0.70%	11.34%	5.20%	-6.14%	8.07%	8.84%	0.77%
Load and Gen	14.6%	14.4%	-0.20%	42.21%	41.65%	-0.56%	59.44%	57.42%	-2.02%
Trader	41.1%	42.8%	1.70%	32.89%	40.90%	8.00%	22.10%	23.60%	1.50%

## Summary of distribution by Rating Group

Rating Group	CP Distribution			Average TPE Distribution			Average Excess Collateral		
	Mar-18	Apr-18	Change	Mar-18	Apr-18	Change	Mar-18	Apr-18	Change
0									
AAA	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%
AA- to AA+	4.6%	4.5%	-0.06%	2.0%	2.0%	0.00%	1.7%	2.1%	0.36%
A- to A+	8.2%	8.1%	-0.11%	10.4%	8.4%	-1.98%	17.1%	18.1%	1.00%
BBB- to BBB+	12.3%	11.7%	-0.62%	23.7%	21.7%	-1.99%	33.9%	30.5%	-3.40%
Investment Grade	25.1%	24.3%	-0.79%	36.1%	32.1%	-3.97%	52.7%	50.6%	-2.03%
BB- to BB+	1.8%	1.8%	-0.02%	4.0%	5.0%	1.03%	2.7%	2.8%	0.15%
B- to B+	4.6%	4.5%	-0.06%	24.9%	24.9%	-0.05%	13.3%	12.9%	-0.38%
CCC+ and below	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%
Not Rated	68.5%	69.4%	0.88%	34.9%	37.9%	2.99%	31.4%	33.7%	2.26%
Non-investment Grade	74.9%	75.7%	0.79%	63.9%	67.9%	3.97%	47.3%	49.4%	2.03%



# Counter-Party Credit Exposure – April 2018 Average TPE and Excess Collateral for the Bottom Quintile of Market Participants

Quintile Distribution of Average TPE by Rating and Category									
Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Quintile Average TPE	Percent Quintile Average TPE	Percent Total Average TPE	
AAA	0	0	0	0	0	0	0.0%	0.00%	
AA- to AA+	402	0	0	0	0	402	0.0%	0.00%	
A- to A+	2,878	0	0	271,529	0	274,407	7.2%	0.09%	
BBB- to BBB+	0	264	0	0	0	264	0.0%	0.00%	
<b>Investment Grade</b>	<b>3,280</b>	<b>264</b>	<b>0</b>	<b>271,529</b>	<b>0</b>	<b>275,072</b>	<b>7.2%</b>	<b>0.09%</b>	
BB- to BB+	0	0	0	0	0	0	0.0%	0.00%	
B- to B+	0	0	0	0	150	150	0.0%	0.00%	
CCC+ and below	0	0	0	0	0	0	0.0%	0.00%	
Not Rated	0	1,209,282	518,717	201,393	1,625,192	3,554,584	92.8%	1.14%	
<b>Non-Investment Grade</b>	<b>0</b>	<b>1,209,282</b>	<b>518,717</b>	<b>201,393</b>	<b>1,625,342</b>	<b>3,554,734</b>	<b>92.82%</b>	<b>1.14%</b>	
<b>Quintile Average TPE</b>	<b>3,280</b>	<b>1,209,546</b>	<b>518,717</b>	<b>472,922</b>	<b>1,625,342</b>	<b>3,829,806</b>	<b>100.0%</b>	<b>1.22%</b>	
<b>Percent Quintile Average TPE</b>	<b>0.1%</b>	<b>31.6%</b>	<b>13.5%</b>	<b>12.3%</b>	<b>42.4%</b>	<b>100.0%</b>			
<b>Percent Total Average TPE</b>	<b>0.00%</b>	<b>0.39%</b>	<b>0.17%</b>	<b>0.15%</b>	<b>0.52%</b>	<b>1.22%</b>			

Quintile Distribution of Excess Collateral by Rating and Category									
Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Total Quintile Excess Collateral	Percent Quintile Excess Collateral	Percent Total Excess Collateral	
AAA	0	0	0	0	0	0	0.00%	0.00%	
AA- to AA+	28,786	0	0	0	0	28,786	1.40%	0.00%	
A- to A+	108,672	0	0	132,507	6,469	247,648	12.07%	0.01%	
BBB- to BBB+	0	103,233	0	0	0	103,233	5.03%	0.01%	
<b>Investment Grade</b>	<b>137,459</b>	<b>103,233</b>	<b>0</b>	<b>132,507</b>	<b>6,469</b>	<b>379,667</b>	<b>18.50%</b>	<b>0.02%</b>	
BB- to BB+	0	0	0	0	0	0	0.00%	0.00%	
B- to B+	0	0	0	0	101,986	101,986	4.97%	0.01%	
CCC+ and below	0	0	0	0	0	0	0.00%	0.00%	
Not Rated	1,021	234,757	451,016	53,627	830,180	1,570,601	76.53%	0.09%	
<b>Non-Investment Grade</b>	<b>1,021</b>	<b>234,757</b>	<b>451,016</b>	<b>53,627</b>	<b>932,166</b>	<b>1,672,587</b>	<b>81.50%</b>	<b>0.10%</b>	
<b>Total Quintile Excess Collateral</b>	<b>138,479</b>	<b>337,990</b>	<b>451,016</b>	<b>186,134</b>	<b>938,635</b>	<b>2,052,254</b>	<b>100.00%</b>	<b>0.12%</b>	
<b>Percent Quintile Excess Collateral</b>	<b>6.75%</b>	<b>16.47%</b>	<b>21.98%</b>	<b>9.07%</b>	<b>45.74%</b>	<b>100.00%</b>			
<b>Percent Total Excess Collateral</b>	<b>0.01%</b>	<b>0.02%</b>	<b>0.03%</b>	<b>0.01%</b>	<b>0.05%</b>	<b>0.12%</b>			

# Questions?