

Bond Rating and Debt Reports Covering Fiscal Year 2020

MTA credit ratings

MTA Core Credits	Moody's	S&P Global Ratings	Fitch	Kroll Bond Rating Agency
Transportation Revenue	A3 (Negative outlook)	BBB+ (Negative outlook)	A- (Negative outlook)	AA (Negative outlook)
Dedicated Tax Fund	Not applied for	AA (Negative outlook)	AA (Negative outlook)	Not applied for
TBTA — Senior Resolution	Aa3 (Negative outlook)	AA- (Negative outlook)	AA- (Stable outlook)	AA (Stable outlook)
TBTA — Subordinate Resolution	A1 (Negative outlook)	A+ (Negative outlook)	A+ (Stable outlook)	AA- (Stable outlook)

Other obligations

Obligation	Moody's	S&P Global Ratings	Fitch	Kroll Bond Rating Agency
MTA Hudson Rail Yard Trust Obligations	A3 (Negative outlook)	Not applied for	Not applied for	A- (Stable outlook)



Rating Action: Moody's places Metropolitan Transportation Authority, NY's Transportation Revenue Bond and BAN ratings under review for downgrade

19 Mar 2020

\$22.8 billion TRB bonds and \$7.5 billion of TRB BANs affected

New York, March 19, 2020 -- Moody's Investors Service has placed the A1 ratings of the Metropolitan Transportation Authority, NY's (MTA) Transportation Revenue Bonds (TRB) and the MIG 1 ratings on MTA's Transportation Revenue Bond Anticipation Notes (BAN) under review for possible downgrade. The outlook on the long term rating has been changed to rating under review (RUR) from negative.

RATINGS RATIONALE

The RUR for possible downgrade of the A1 TRB rating is prompted by the very sharp decline in MTA's ridership and toll revenues since the outbreak of coronavirus in the US, and the authority's potential \$4 billion budget shortfall in fiscal 2020, announced March 18. The ridership declines and potential budget shortfall highlight MTA's sensitivity to changing public sentiment and economic disruption related to local and regional efforts to control the coronavirus outbreak. Recovery from this unprecedented disruption will require political and financial support from local, state or federal governments, which has historically bolstered MTA's credit profile. Continuation of this support is highly likely given MTA's unmatched essentiality to the regional and national economy, especially during a post-coronavirus recovery.

The RUR for possible downgrade of the MIG 1 BAN rating is prompted by the potential downgrade in the TRB long-term ratings, which is a key factor in the MIG 1 rating, as well as the increased market access risk associated with recent volatility and economic strain. In addition, we expect that liquidity will decline in the coming months, providing a narrower cushion for the May 15 BAN maturity in the event of a temporary market disruption.

In its review over the next several weeks, Moody's will consider (i) emerging budget balancing actions, such as service level strategies and pace of capital spending; (ii) the type and timing of political and financial support offered by partner governments, including local, state and federal, (iii) the sufficiency of MTA's liquidity profile, including access to lines of credit for operations and borrowing to redeem short-term debt; (iv) evolving market conditions, including interest rates on variable rate interest resets and market access; (v) and the potential to restore its credit metrics and liquidity position in a timely manner following the coronavirus disruption. Possible review outcomes could include confirmation of the A1 rating and negative outlook and the MIG 1 rating, or downgrades of one or more notches.

The rapid and widening spread of the coronavirus outbreak, deteriorating global economic outlook, falling oil prices, and asset price declines are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

RECENT DEVELOPMENTS

MTA's coronavirus-related financial deterioration could lead to a 36% (\$6.4 billion) fiscal 2020 budget shortfall if ridership and toll collections are disrupted for the next six months, sanitation spending remains elevated, and dedicated taxes decline at a pace similar to the last recession for the full year. MTA has identified several budget balancing actions, including a request for \$4 billion of federal financial aid, shifting capital funding to operations, and additional borrowing. Other options include service cuts and additional fare increases, however these remain politically challenging to date. While MTA is likely to receive external financial support, the timing and format of this support remains uncertain.

MTA is also reliant on continued market access to redeem or remarket large short-term debt obligations in the next six months. The next large maturity is \$1 billion of TRB bond anticipation notes (rated MIG 1) coming due on May 15. Market access for BAN repayment is strengthened by MTA's status as a sophisticated, frequent issuer of bonds and notes, strong management team, and reasonable BAN takeout management plans.

However, market access for all participants is evolving during this period of market volatility. MTA's current cash levels would be sufficient to redeem BANs in the event of a sustained market dislocation that impedes timely long-term debt issuance, however liquidity will decline in the coming months due to significant revenue loss. As of February 29, MTA had \$3.76 billion of cash and unrestricted investments (per audited financials) to redeem BANs, and lines of credit with JP Morgan (\$800 million) and Bank of America (\$200 million). MTA also plans to draw \$244 million on its remaining RRIF loan, which will become available prior to BAN maturity.

LEGAL SECURITY

The transportation revenue bonds (TRBs) are one of four primary credits that the MTA uses to finance its capital programs. The TRB bonds are special obligations of the MTA, payable on a gross basis from transit and commuter system revenues, certain state and local operating subsidies, dedicated taxes, and operating surpluses of the Triborough Bridge and Tunnel Authority, NY (TBTA) (Aa3/stable senior lien) after operating and maintenance requirements and debt service payments on the TBTA's own debt. TRB financed projects must be approved by the state's Capital Program Review Board (CPRB).

The TRB rate covenant requires sum sufficient coverage by fares and subsidies of debt service and O&M. Only board approval is required to raise fares for the rate covenant. Unlike most other rated transit systems, there is no debt service reserve fund and no explicit additional bonds test for the TRBs, although the balanced budget requirement and CPRB approval provide solid leverage controls. Pledged revenues flow to a trustee held account and are set-aside monthly for debt service before being released for operations. The BANs are payable from proceeds of previously-authorized TRB notes and/or long-term TRB bonds, and the interest portion is further secured by a subordinate pledge of the transportation revenue bond pledged revenues.

PROFILE

The MTA is a public benefit corporation of New York State, created by the New York State legislature in 1965. The MTA's governing board is appointed by the governor with advice and consent of the state Senate. The MTA is responsible for developing and implementing a unified mass transportation policy for the Metropolitan Transportation District which includes New York City and the surrounding Duchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties. In addition to these counties, MTA's service area also includes Fairfield and New Haven counties in CT. MTA operations are performed through nine different agencies, including the Triborough Bridge and Tunnel Authority, NY (Sr lien Aa3 stable). TBTA profits, after paying its own O&M and debt service, are transferred to MTA to subsidize transit, bus and commuter rail operations.

METHODOLOGY

The principal methodology used in the Transportation Revenue Bond ratings was Mass Transit Enterprises Methodology published in December 2017. The principal methodology used in the Bond Anticipation Note ratings was US Bond Anticipation Notes and Related Instruments Methodology published in October 2019. Please see the Rating Methodologies page on www.moodys.com for a copy of these methodologies.

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Fitch Places Major U.S. Transit Agencies on Rating Watch Negative Amid Coronavirus Disruptions

Fitch Ratings - San Francisco - 20 March 2020:

Fitch Ratings has placed the ratings of five large U.S. public transit agencies on Rating Watch Negative. The following ratings are affected:

--Metropolitan Transportation Authority (MTA), NY's 'AA-' transportation revenue bond and 'F1+' transportation revenue bond anticipation note ratings;--San Francisco Bay Area Rapid Transit District (BART), CA's 'AA+' Issuer Default Rating (IDR) and sales tax revenue bond ratings;--Washington Metropolitan Area Transit Authority(WMATA), DC's 'AA-' gross revenue transit bond ratings;--Metropolitan Atlanta Rapid Transit Authority (MARTA), GA's 'AA-' IDR and third indenture sales tax revenue bond ratings;--Regional Transportation District (RTD), CO's 'AA' IDR and sales tax revenue bonds, 'AA-' certificate of participation (COP) and 'A+' Eagle Project Counterparty ratings.

For a complete list of the affected ratings, please see the detailed list of ratings below.

SECURITY

The MTA's transportation revenue bonds are backed by a gross lien on the MTA's operating revenues, which include, among other sources, fares received from the subway and bus systems operated by the MTA New York City Transit and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority, the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad, and buses operated by MTA Bus. TRBs are also backed by a gross lien on operating subsidies from the state of New York, New York City, and MTA Bridges and Tunnels surplus.

BART's sales tax revenue bonds are payable from a first lien on 75% of the 1/2 cent BART sales and use tax (sales tax) levied in Alameda and Contra Costa counties, and the City and County of San Francisco (collectively, the BART counties).

WMATA's gross revenue transit bonds are backed by a pledge of the trust estate established pursuant to the 2003 gross revenue bond resolution on parity with the Authority's outstanding gross revenue transit bonds, except that the series 2018 bonds and all other bonds issued under the resolution on or after Nov. 15, 2018, will not have a lien on future dedicated revenues provided by certain supporting overlapping entities.

MARTA's sales tax revenue bonds are payable from a first lien on sales tax receipts from the levy of a 1% sales tax within Fulton and DeKalb counties and the city of Atlanta (the authority's original sales tax) and a first priority lien on receipts of a 1% sales tax levied in Clayton County. The bonds were sold with a third lien on pledged revenues, but bonds issued under the prior liens have been repaid. Title ad valorem taxes on motor vehicles are also pledged.

RTD's sales tax revenue bonds are secured by a first lien on the district's 0.4% FasTracks sales tax and a subordinate lien on the 0.6% base system sales tax. The COPs are subordinate to the senior sales tax bonds, FasTracks bonds, Transportation Infrastructure Innovation Act (TIFIA) loan, and the capital portion of the Eagle Project payment, and are repaid out of all available revenues of the district, subject to annual appropriation. Base rental payments for the COPs are on parity with operating expenses of the base system and the non-capital portion of the Eagle project payment.

KEY RATING DRIVERS

Analytical Conclusion: The move to Rating Watch Negative reflects actual and expected severe declines in transit ridership and revenues due to coronavirus pandemic. The rating action applies to the transit agencies that have the highest dependence on fares to fund operations, though further rating action may be necessary in the sector as the degree of second order impacts (declines in economically sensitive tax revenues) becomes clear.

Sharp Revenue Declines Expected: Fitch expects widespread and sharp declines in transit ridership and fare revenues to create significant near-term stress in the U.S. public transit sector with the credits identified here at the greatest risk. Some transit agencies in

major urban areas that have already been impacted by the pandemic are reporting ridership declines of as much as 70% to 90% amid efforts at social distancing, a widespread shift to telecommuting, and shelter-in-place orders.

Traditional Tools Inadequate: Fitch does not believe that the traditional tools available to balance transit agency budgets will be sufficient to offset a meaningful proportion of revenue losses. While some capital spending may be delayed, service is unlikely to be curtailed enough to offset revenue losses due to the essentiality of the public service provided and need to continue providing transportation to health care workers and other essential workers. Fare increases are unlikely to be a meaningful budget balancing tool in the current environment and would be insufficient to offset the magnitude of revenue losses expected if attempted.

Liquidity Positions at Risk: These fare-dependent transit agencies entered the current period with solid to strong liquidity and operating reserves to offset typical ridership and economic volatility; however, the current period of stress is significantly greater than the rating case stresses factored into Fitch's transit ratings and a more extreme stress than transit agencies routinely plan for. Fitch believes transit agency liquidity positions are likely to erode rapidly given the current the scope of revenue losses and the need to continue essential public services.

Federal, State Responses Key: Major transit agencies have requested emergency federal assistance to support continued provision of transit services in U.S. urban areas. Fitch expects some degree of state and federal support to be forthcoming due to the essentiality of transit services to public health and safety. The degree of support and the speed with which it is provided will largely determine the near-term ratings impacts of the current ridership losses on these credits.

RATING SENSITIVITIES

Developments That May, Individually or Collectively, Lead to Negative Rating Action

--Failure of state and federal policymakers to provide substantial and timely emergency assistance to transit sector could lead to multinotch downgrades;--A decline in liquidity at any of the affected agencies, particularly declines that approach 60 days cash;--A substantial decline in non-fare revenues.

Developments That May, Individually or Collectively, Lead to Positive Rating Action -- The Rating Watch Negative could be removed and ratings affirmed if Fitch sees sustained recovery in ridership and revenues due to easing of pandemic or adaptation strategies and/or federal or state action that convincingly stabilizes the finances of affected transit agencies.

CREDIT PROFILE

Data reported by major U.S. transit agencies show a sharp decline in revenues and ridership due to the coronavirus pandemic and Fitch expects the impact on transit to continue to worsen and spread to more areas of the country in the near-term. The current rating action is the result of an event-driven rating committee and reflects publicly available data and disclosures from the affected transit agencies, as well as Fitch's expectation that other agencies will experience similar stresses in the weeks to come even if they are not yet reporting the same degree of stress. The RWN applies to all Fitch-rated transit agencies with a Fitch-calculated fare box ratio (operating revenues as a percentage of operating expenses excluding depreciation) of 25% or more.

Further analysis will follow in the weeks to come with detailed analyses of management reactions, state and federal policy responses, and incoming data on revenues, ridership and economic activity. In the longer-term, Fitch will analyze ridership and revenue impacts caused by possible changes in commuting patterns and increases in telecommuting as a result of the current experience.

Fitch believes the fare-dependent agencies listed here face the greatest risk to financial performance. Transit agencies that rely more heavily on tax revenues to fund operations are also likely to experience revenue losses due to general slowing of the economy and sales tax revenue collections in particular, but the impact is likely to be less acute and less immediate. Transit funding agencies with limited operations are expected to experience meaningful declines in sales tax revenues, but Fitch believes they are substantially less vulnerable than the agencies being placed on Rating Watch Negative.

Fitch expects some degree of federal and state support for transit agencies, given their strategic importance to regional economies, strong track records of state and federal support for transit, and the important role that transit agencies currently play in providing transportation to essential workers. The American Public Transportation Association has requested that \$12.9 billion of emergency federal for fiscal 2020 be included in the economic stimulus bills under consideration by the U.S. Congress. The degree and timing of such support is uncertain, and given the liquidity strains expected to affect transit agencies, Fitch believes a credit risks are heavily weighted to the downside. The outcome of the current Rating Watch Negative is unusually dependent upon the actions of federal policymakers. The range of possible outcomes includes fairly manageable scenarios where a combination of extraordinary state and federal aid, cost containment, local revenue measures and reserve spending stabilize transit agency finances with only moderate

declines in ratings and credit quality. However, absent a robust policy response or an unexpectedly rapid easing in the pandemic, Fitch believes the ratings of the most affected issuers could come under substantial downward pressure in the near-term.

Information is just beginning to be reported on the degree of ridership losses that transit agencies are facing with the most comprehensive data being reported by the large transit agencies that serve communities that have already implemented serious social distancing measures. All of the affected transit agencies have announced additional cleaning and public safety measures that are likely to add somewhat to costs. Thus far, the following data have been reported:

- --The New York MTA, which is the largest U.S. public transit agency, reported preliminary data showing that subway ridership fell 60% compared to a year ago on March 16, while bus ridership fell 48%. Peak morning ridership fell 90% on the Metro North Railroad and 67% on the Long Island Rail Road. Bridge and Tunnel usage has been less heavily impacted with traffic counts down by about 21%. Fares, tolls and other operating revenues equaled 67% of operating expenses excluding depreciation and certain non-cash expenses in 2018. On March 18, 2020, the MTA estimated current weekly revenue loss against its February projections of \$87 million, annualized to \$4.5 billion if the ridership losses were sustained for an entire year. The MTA estimates revenue losses could reach \$3.7 billion if current ridership levels are sustained for a six month period following by a gradual recovery to pre-outbreak traffic levels. MTA reported current liquidity resources of \$3.9 billion, including a cash balance of \$1.4 billion, commercial bank lines of credit of \$1 billion and \$325 million of reserves set aside for other post-employment benefits. It has requested \$4 billion in federal assistance. The MTA had \$3.5 billion of unrestricted cash and investments, or 89 days cash on hand, as of Dec. 31, 2018. Including lines of credit, available resources equaled 112 days cash. While liquidity levels are lower than peer agencies, MTA benefits from greater support from its sponsoring governments (New York City and the State of New York) than typical U.S. transit agencies and has the highest strategic and economic importance among its peer group.
- --BART, which serves the San Francisco Bay Area counties that have issued shelter-in-place orders, has reported worsening ridership losses in recent weeks with an 89% decline on March 19. Fares equaled 61% of operating expenses excluding depreciation in fiscal 2019. Sales and property taxes make up much smaller proportions of total revenues. The district estimates that a sustained loss of 85% of ridership and 50% decline in economic activity would reduce monthly revenues by \$55 million, a 69% decrease. BART's board of directors has requested emergency assistance from the Federal Emergency Management Agency as well as additional federal stimulus support, state funding, and additional local funding allocations from the Metropolitan Transportation Commission. The district announced March 19 that it will curtail night and weekend service due ridership losses, but it has thus far maintained day-time service due to the need to provide transport for essential workers and to provide adequate excess capacity to allow a degree of social distancing on trains. BART had \$707.7 million of unrestricted cash and investments, or 327 days cash on hand, as of June 30, 2019.
- --WMATA, which serves the nation's capital, has curtailed hours, canceled non-emergency track work, and recommended that the public limit system usage to only "essential travel." The authority reported that ridership was down nearly 70% on March 16. Fares and other operating revenues equaled 38% of operating expenses excluding depreciation in fiscal 2019. Subsidies from the federal government, Maryland, Virginia, the District of Columbia and local jurisdictions within the authority's service area provided 58% of authority revenues in fiscal 2019. WMATA had \$186.9 million of unrestricted cash and investments, or 33 days cash on hand, as of June 30, 2019. The authority also has certain available commercial bank lines of credit in the aggregate amount of \$350 million. Including lines of credit, available resources equaled 95 days cash. While liquidity levels are lower than peer agencies, WMATA benefits from greater support from its sponsoring governments than typical U.S. transit agencies.
- --MARTA, which serves 1.7 million people in metropolitan Atlanta, has not yet filed disclosures related to ridership declines. Fares and other operating revenues equaled 26% of operating expenses excluding depreciation in fiscal 2019. Local press reports suggest the authority has experienced ridership losses of approaching 50% and has begun to take measures to limit expenditures. The authority has also publicly urged teleworking when feasible. Sales taxes, which are highly sensitive to economic activity, are the authority's largest source of income at about 64% of revenues excluding capital grants. The agency had \$378.3 million of unrestricted cash and investments, or 243 days cash, on hand, as of June 30, 2019.
- --RTD, which serves eight Colorado counties that contain over one-half of the state's population and the city and county of Denver, has not yet disclosed updated ridership statistics and financial projections, but local news reports suggest the district has experienced ridership declines of as much as 60% with public health officials mandating 30-day state-wide closure of all bars, restaurants, theaters, gymnasiums and casinos. RTD operating revenues equaled 26% of operating expenses excluding depreciation in fiscal 2018. Like MARTA, RTD's sales taxes are its largest income source, accounting for 71% of revenues excluding capital grants. While RTD recently announced some changes to its appointment-based transportation for people with disabilities and high-level RTD discussions are occurring as to whether or when service changes will be necessary, it has not yet curtailed service due to the need to provide transport for essential workers and to provide adequate excess capacity to allow a degree of social distancing on trains. RTD had an available cash reserve of \$352 million, or 222 days cash on hand, as of Dec. 31, 2018.

ESG Considerations

The MTA, BART and WMATA have exposure to the impact of labor frameworks that are more complex than the typical U.S. public finance credit. Fitch's ESG score for Labor Relations & Practices is a 4 for these credits, which means that the factor is relevant to the rating but not a key rating driver on its own. Except for the matters discussed above, the highest level of ESG credit relevance, if present, is a score of 3 - ESG issues are credit neutral or have only a minimal credit impact on the entities, either due to their nature or the way in which they are being managed by the entities. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

RATING ACTIONS

ENTITY/DEBT	RATING ACTIONS RATING	PRIOR
	LT IDR	I NON
Metropolitan Atlanta Rapid Transit Authority (GA) [General Government]	AA- ❖ Rating Watch On	AA- •
Metropolitan Atlanta Rapid Transit Authority (GA) /Issuer Default Rating - General Government/1 LT	LT AA- → Rating Watch On	AA- •
Metropolitan Atlanta Rapid Transit Authority (GA) /Sales Tax Revenues/1 LT	LT AA- → Rating Watch On	AA- •
Metropolitan Transportation Authority (NY) [General Government]		
Metropolitan Transportation Authority (NY) /Transportation Revenues/1 LT	LT AA- → Rating Watch On	AA- •
Metropolitan Transportation Authority (NY) /Transportation Revenues/1 ST	ST F1+ → Rating Watch On	F1+
Washington Metropolitan Area Transit Authority (DC) [General Government]		
Washington Metropolitan Area Transit Authority (DC) /Transportation Revenues - Non Dedicated Revenues/2 LT	LT AA- → Rating Watch On	AA- •
Washington Metropolitan Area Transit Authority (DC) /Transportation Revenues/1 LT	LT AA- ∻ Rating Watch On	AA- •
Regional Transportation District (CO) [General Government]	LT IDR AA ← Rating Watch On	AA •
Regional Transportation District (CO) /Issuer Default Rating - General Government/1 LT	LT AA ∻ Rating Watch On	AA •
Regional Transportation District (CO) /Lease Obligations - Standard/1 LT	LT AA- → Rating Watch On	AA- •
	LT A+ → Rating Watch On	A+ O
Regional Transportation District (CO) /Sales Tax Revenues - FasTracks Project/1 LT	LT AA ← Rating Watch On	AA •
Regional Transportation District (CO) /Sales Tax Revenues/1 LT	LT AA ← Rating Watch On	AA •
San Francisco Bay Area Rapid Transit District (CA) [General Government]	LT IDR AA+ ← Rating Watch On	AA+ •
San Francisco Bay Area Rapid Transit District (CA) /Issuer Default Rating - General Government/1 LT	LT AA+ → Rating Watch On	AA+ •
San Francisco Bay Area Rapid Transit District (CA) /Sales Tax Revenues/1 LT	LT AA+ → Rating Watch On	AA+ •

Additional information is available on www.fitchratings.com

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The following issuer(s) did not participate in the rating process, or provide additional information, beyond the issuer's available public disclosure: Metropolitan Atlanta Rapid Transit Authority (GA)

Applicable Criteria

Public Sector, Revenue-Supported Entities Rating Criteria (pub. 07 Nov 2019) U.S. Public Finance Tax-Supported Rating Criteria (pub. 10 Jan 2020)

Additional Disclosures

Solicitation Status Endorsement Policy

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Metropolitan Transportation Authority (MTA)

Issuer: Metropolitan Transportation Authority				
Rating	Outlook			
AA+	Watch-Downgrade			
Ratings	Outlook			
AA+	Watch-Downgrade (from Negative)			
K1+	n/a			
	AA+ Ratings AA+			

For mapping of the long-term rating to the short-term rating, please refer to the **short-term KBRA Rating Scale**.

Methodology:

U.S. Public Toll Roads, Bridges & Tunnels Revenue Bond Rating Methodology

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Rating Summary: The Transportation Revenue Bonds (TRBs), Series 2020C will be issued to retire the Transportation Bond Anticipation Notes, Subseries 2018B-1 and Subseries 2019B-2 maturing on May 15, 2020. KBRA has placed the long-term rating on MTA's TRB's on Watch-Downgrade to reflect the significant operating and financial dislocation caused by the COVID-19 crisis.

Based on MTA's latest Disclosure¹, ridership on subways and buses 2 is down by 59.86% and 48.87%, respectively; and ridership on the commuter rails, LIRR and Metro-North, are down 67% and 90%, respectively. Meanwhile, MTA operating expenses have increased because of sanitizing efforts. The loss of farebox revenues and the inability to substantially reduce expenses has created an unsustainable imbalance in the MTA's fiscal operations. MTA's management indicates they are seeking to bolster liquidity through expansion of bank lines, amongst other measures. Current bank lines of \$ 1 billion expire on August 24, 2022. In addition, federal legislation wending its way through congress appears likely to provide substantial grant funds to America's urban transit systems including the MTA. While likely significant and very helpful, the federal relief funds are unlikely to be enough to close the MTA's structural imbalance, which has been widened by recent events. KBRA expects ridership declines to continue for some time and we also expect that state and local subsidies - some of which are derived from economically sensitive taxes - will decline in coming months because of the looming COVID-19 recession.

The three pillars that continue to support MTA's credit rating are:

- Pledged revenues are received by the TRB trustee and used to meet pro rata monthly debt service requirements before being released for operations. KBRA does not expect to see any deviation from the MTA's flow of funds as specified in its bond documents
- The strong management team has consistently demonstrated its ability to navigate financial and political challenges; and
- The essential nature of the MTA's transportation infrastructure to the New York metropolitan area economy.

The last pillar is among the reasons KBRA continues to believe there will be financial support from the State and or federal governments to help MTA bridge its near term operating and liquidity challenges. Nevertheless, the MTA will likely experience permanent changes to its operating and fiscal posture that remain hard to dimension at this time. For example, it is unlikely that the implementation of the nation's first congestion tolling system (please refer to KBRA's Congestion Pricing...What It Means for the MTA and TBTA) will proceed according to the original timeline. Likewise, KBRA would expect to see significant changes to the MTA's capital and debt issuing plans. In order to help quantify the near-term challenges, KBRA has developed the following stress scenario:

- Operating revenues:
 - Based on current ridership declines, KBRA expects farebox revenues to decline by 16% for the first quarter versus the 2020 budget; and then we assume worst case 85%, 65%, and 45% declines in the second

¹ MTA Annual Disclosure Statement Supplement dated March 18, 2020; data reflects year-over-year change on March 16.

 $^{^{\}rm 2}$ Reflects MTA Bus declined by 51.31% and NYCT Bus declined by 48.33%.



through fourth quarters, respectively. This translates to an operating revenue decline of \$3.4 billion from Adopted Budget 2020 (51% decline).

- For FY 2021 to FY 2023, KBRA assumes a 10% decline from budgeted FY 2020 figures.
- Special Tax-Supported Operating Subsidies:
 - For FY 2020, KBRA assumes a 25% decline on all the tax receipts for the period between April to December, which was roughly the level of decline that MMTOA Receipts³ experienced during the great recession.
 - For FY 2021 FY 2023, KBRA assumes a decline of 25%, 15%, and 10%, respectively, due to the lingering economic impact caused by the COVID-19 crisis.
- Revenues from TBTA Surplus:
 - For FY 2020, KBRA assumes that TBTA traffic declines by 50% in the second quarter 2020, 25% in the third quarter from budgeted FY 2020 figures, and fully recovers by the last quarter. This translates to a reduction in TBTA surplus by approximately \$330 million from the FY 2020 Adopted Budget (43% decline).
- Operating expenses:
 - For FY 2020 expenses, KBRA includes an increase of \$300 million due to sanitizing efforts.
 - FY 2021- FY 2023 expenses remain as projected based on the Adopted Budget 2020.
- This stress scenario excludes potential savings from the MTA's Transformation Plan.

				KBRA Stres	s Case	
	Final Estimate 2019	Adopted Budget 2020	2020	2021	2022	<u>2023</u>
Operating Revenues (including Farebox Revenue)	6,655	6,729	3,327	6,056	6,056	6,056
Special Tax-Supported Operating Subsidies	4,866	4,968	4,037	3,726	4,223	4,471
Non-Operating Revenues	1,282	1,149	1,149	1,149	1,149	1,149
Revenues from TBTA Surplus	783	776	446	1,328	1,266	1,093
Agency Operating Subsidies	376	460	460	460	460	460
Total Transportation Resolution Pledged Revenues	13,962	14,082	9,418	12,719	13,154	13,229
% Chg. vs FY 2020 Adopted Budget	-	-	-33.1%	-9.7%	-6.6%	-6.1%
TRB Debt Service	1,604	1,725	1,696	1,928	2,199	2,496
DSCR (Gross)	8.7x	8.2x	5.6x	6.6x	6.0x	5.3x
Total Operating Expenses	14,335	14,654	14,954	14,922	15,276	15,662
Surplus (Deficit)	(373)	(572)	(5,536)	(2,203)	(2,122)	(2,433)

Source: Metropolitan Transportation Authority

This extreme stress scenario demonstrates that pledged revenue can withstand the COVID-19 triggered crisis and produce ample debt service coverage. However, it is KBRA's view that the MTA's near to medium term structural balance will remain significant without further action by the board and by state and local funding partners.

The Watch Downgrade reflects the uncertainty regarding the timing and amount of state and federal financial support needed to help MTA.

Key Credit Considerations

The rating was assigned and affirmed because of the following key credit considerations:

<u>Credit Positives</u>

- The gross revenue pledge that supports debt service.
- MTA provides a critical transportation network for over 15 million people in the greater New York metropolitan area, which is essential to the economic and social fabric of the region.
- MTA management has a strong track record of balancing its operating budget over changing economic cycles and unforeseen events as well as managing complex capital programs designed to improve and expand the System.

Credit Challenges

- The COVID-19 crisis presents unprecedented challenges to the MTA's fiscal operations.
- MTA's high fixed cost structure will continue to challenge its ability to balance operating and capital budgets.
- MTA's ability to control growth in labor-related costs during the upcoming period of contract negotiations.

Rating Sensitivities

• Significant increase in revenues from non-fare revenue streams.



• Inability to obtain emergency financial support from the State or Federal government would create unsustainable liquidity pressure on the MTA and threaten its long-term viability.

³ Metropolitan Mass Transportation Operating Assistance (MMTOA) receipts, comprised of 0.375% regional sales tax, regional franchise tax surcharge, a portion of taxes on certain transportation and transmission companies, and an additional portion of the business privilege tax imposed on petroleum businesses.



ESG Considerations

When relevant to credit, ESG factors are incorporated into the credit analysis in the same manner as all other creditrelevant factors. Among the ESG factors that have impact on this rating analysis are:

- Discussions in RD 3 and 4 reflect Governance Factors. KBRA considered the MTA's Regulatory/Management Framework, financial profiles, and its rate-setting authority as criteria to support ongoing debt service.
- Discussions in RD 1 and 2 reflect Social Factors. KBRA has examined the following areas for this credit: trends in population and demographic changes, income, employment, unemployment, and the potential impact of the COVID-19 crisis.

More information on ESG Considerations for the Public Finance sector can be found here.

Rating Determinants (RD)	
1. Size and Scope of Operations	AAA
2. Demand Assessment	AA+
3. Regulatory/Management Framework	AA+
4. Financial Profile	AA
5. Security Provisions	AA-

There has been no new update to the above-mentioned rating determinants since KBRA's report published on August 2, 2019. To access the more detailed discussion, please click here. This report focuses on the ridership impact from COVID-19.

Full list of Affirmed Outstanding Transportation Revenue Bond Anticipation Notes

Issuer: Metropolitan Transportation Authority (MTA)		
Affirmed	Ratings	Outlook
Transportation Revenue Bond Anticipation Notes, Series 2018B Subseries 2018B-1 (maturing 5/15/2020)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2018B Subseries 2018B-2 (maturing 5/15/2021)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2018C-1 (maturing 9/1/2020)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2018C-2 (maturing 9/1/2021)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019B Subseries 2019B-1 (maturing 5/15/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019B Subseries 2019B-2 (maturing 5/15/2020)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019C (maturing 7/1/2020)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019D (maturing 9/1/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019E (maturing 9/1/2020)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019F (maturing 11/15/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2020A, Subseries 2020A-1 (maturing 2/1/2023)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2020A, Subseries 2020A-2S (maturing 2/1/2022)	K1+	n/a



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Summary:

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Rating Action

Negative Outlook

Summary:

Metropolitan Transportation Authority, New York; Joint Criteria; Note; Transit

(Editor's Note: The original report published March 24, 2020 included a rating action on the series 2015E-5 bonds in error. A corrected version follows.)

Credit Profile		
US\$800.0 mil transp rev bnds ser 2020C due 11/15/205	5	
Long Term Rating	A-/Negative	New
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit		
Unenhanced Rating	A-(SPUR)/Negative	Downgraded
Metropolitan Transp Auth transit		
Long Term Rating	A-/Negative	Downgraded
Metropolitan Transp Auth transit		
Long Term Rating	A-/Negative	Downgraded
Metropolitan Transp Auth transit		
Unenhanced Rating	A-(SPUR)/Negative	Downgraded
Metropolitan Transp Auth transit		
Long Term Rating	A-/Negative	Downgraded
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Long Term Rating	A-/Negative	Downgraded
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Long Term Rating	A-/Negative	Downgraded
Metropolitan Transp Auth transit (AGM)		
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Credit Profile (cont.)		
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Unenhanced Rating Metropolitan Transp Auth transit (AGM) (SEC MKT)	A-(SPUR)/Negative	Downgraded
Unenhanced Rating Metropolitan Transp Auth transit (AGM) (SEC MKT)	A-(SPUR)/Negative	Downgraded
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Metropolitan Transp Auth JOINTCRIT	AA /A 4	A (C
Long Term Rating Unenhanced Rating	AA/A-1 A-(SPUR)/Negative	Affirmed Downgraded
Onomianiou Huming	11 (01 019/110844140	Domigradou

Rating Action

S&P Global Ratings lowered its long-term rating and underlying rating (SPUR) to 'A-' from 'A' on the Metropolitan Transportation Authority (MTA, or the MTA), N.Y.'s transportation revenue bonds (TRBs) outstanding and assigned its 'A-' long-term rating to the MTA's proposed \$800 million series 2020C transportation revenue bonds. At the same time, we lowered our issuer credit rating (ICR) to 'A-' from 'A' on the MTA, and our stand-alone credit profile (SACP) to 'a-' from 'a' on the MTA. The outlook, where applicable, is negative.

We also took the following rating actions on the MTA's various variable-rate TRBs outstanding with enhancement by letters of credit, where the long-term rating reflects the application of joint criteria assuming low correlation:

- We lowered our dual rating to 'AA/A-1+' from 'AA+/A-1+' on the MTA's series 2012G-2 and 2002G-1G variable rate TRBs, with enhancement by letters of credit from Toronto Dominion Bank, and on the MTA's series 2015E-1 variable-rate TRBs, with enhancement by a letter of credit from U.S. Bank N.A.
- We lowered our dual rating to 'AA/A-1' from 'AA+/A-1' on the MTA's series 2005E-2 and 2015E-3 variable-rate TRBs, with enhancement by letters of credit from Bank of America N.A., and on the MTA's series 2012A-2 variable-rate TRBs, with enhancement by a letter of credit from Bank of Montreal.
- We affirmed our 'AA/A-1' dual rating on various other variable-rate TRBs with enhancement by letters of credit from Barclays Bank PLC, PNC Bank, N.A., MUFG Bank Ltd., and Landesbank Hessen-Thueringen Girozentrale.

Finally, we affirmed our 'SP-1' short-term rating on the MTA's previously issued TRB anticipation notes (BANs).

The series 2020C TRB proceeds will be used to refinance outstanding BANs.

Securing the TRBs is gross revenue before expenses of the MTA, the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Long Island Rail Road Co. (LIRR), Metro-North Commuter Railroad Co. (MNCRC), and MTA Bus Co. The pledged revenue consists of fares and other operating receipts from MTA subsidiaries (MTA Bus, LIRR, and MNCRC) and affiliates (the New York City Transit Authority and MaBSTOA). MTA nonoperating revenue, which consists of Triborough Bridge and Tunnel Authority surplus revenue, various tax revenue, subsidies, interest, and other miscellaneous MTA income, also secures the bonds. The MTA also receives a cash subsidy from the U.S. Treasury for its Build America Bonds. The subsidy payments are not part of the trust estate of the transportation resolution.

As of Feb. 7, 2020, the MTA had a consolidated, all-inclusive debt position of \$45.3 billion.

Credit overview

The rating actions reflect our view of the negative credit implications to the MTA as a result of the continually evolving impacts of the COVID-19 (the disease caused by the novel coronavirus) pandemic, including ongoing actions by the state and New York City to limit additional infections, such as stay-at-home requirements. In particular, we believe debt service coverage, liquidity, and debt metrics will worsen materially as a result of steep ridership and traffic declines and significant economic impacts at both the micro and macro levels, with likely declines in subsidies and tax revenue that also support the MTA. The COVID-19 pandemic comes at a time when the MTA was already facing

significant challenges in funding an extremely large capital plan and balancing its annual budget given operating expenses and debt service that have outpaced revenue growth over the past three fiscal years.

The MTA reports that ridership on subways declined 60% on March 16, 2020 versus the same date in 2019, with bridge and tunnel traffic down 21%. We note that these reported figures predated the stay-at-home order announced by Governor Cuomo on March 20 (effective 8 p.m. March 22), so we expect more up-to-date volume levels to be even more severe. MTA fare and toll revenue represented \$8.4 billion, or 52%, of gross revenue in unaudited fiscal 2019. At these reduced volume levels, the MTA estimates weekly revenue losses versus budget of \$87 million, or \$4.5 billion if continuing through fiscal 2020 (or \$3.7 billion if recovery begins after six months). Furthermore, these impacts are without regard to likely significant impacts to state and local subsidies and dedicated taxes, as fiscal stress is occurring at all government levels. These subsidies and taxes were estimated at \$6.4 billion (39% of gross revenue) in fiscal 2019. The MTA reports that it cannot make sufficient reductions to address these impacts.

On March 17, the MTA requested \$4 billion in federal aid to recoup projected revenue losses of \$3.7 billion and \$300 million in costs related to system cleaning and sanitizing. While we note that the MTA received several billion dollars in federal assistance after both the 9/11 attacks and Superstorm Sandy largely for capital purposes, it remains to be seen whether federal assistance will be provided for operations. Even if provided, its timing and terms (loan versus grant) are uncertain.

Prior to current severe declines caused by the COVID-19 pandemic, MTA's actual and estimated debt service coverage (S&P Global Ratings-calculated) was slightly less than 1x for the three-year average of fiscal years 2017 to 2019, and, according to the MTA's February 2020 Financial Plan, was projected to remain near those levels through 2023. While the MTA has continued to make progress on significant budget adjustments and cost savings including with regard to its Transformation Plan, we believe COVID-19 impacts could more than offset such progress. In addition, we foresee increased potential for intermediate-term or even permanent reductions in ridership and traffic attributable to changing work or commuting patterns and given our expectation of heightened unemployment. In addition, subsidies and taxes could take several years to recover, further crimping operations and system service levels.

While the MTA has continued to provide service to the millions of passengers taking public transit for essential activities, the MTA is considering temporary service adjustments if ridership declines are sustained. The MTA reports liquidity resources of \$3.9 billion to meet its short- and intermediate-term needs, but this may not be sufficient to cover longer-term funding gaps; it also must repay or replenish these funds. The MTA reports that longer-term solutions may include replacing pay-as-you-go capital funds of \$1.6 billion with debt, restructuring debt to generate potentially \$1.8 billion in resources, and applying new Federal Transit Administration (FTA) grant flexibility rules to use \$655 million in funds for emergency operating relief. We understand a fare and toll increase is not under consideration. While we note that MTA has historically benefited from very strong market access, the COVID-19 pandemic has resulted in significant market volatility. If market access is impaired, the MTA will need to rely on internal liquidity cited above to meet upcoming refinancing obligations that total \$1 billion on May 15, among others coming due this year. We understand the MTA fully drew down its \$1 billion in lines of credit on March 20, but plans to request additional credit line authorization of as much as \$3 billion. It also plans to draw down its \$244 million remaining on its Railroad

Rehabilitation and Improvement Financing (RRIF) program loan prior to May 15.

According to S&P Global Ratings' Global chief economist, there is a growing downside risk to S&P Global Ratings' forecasts, even from just one week ago. For the U.S., the year-on-year decline in GDP in the second quarter now looks to be at least double the 6% contraction we estimated last week, and we now expect a contraction in the first quarter as well. S&P Global Ratings acknowledges a high degree of uncertainty about the rate of spread and peak of the coronavirus outbreak. We believe measures to contain COVID-19 have pushed the global economy into recession. It has become increasingly clear to us that COVID-19 will be a major headwind to U.S. growth in the near term, though the inevitable impact on the U.S. economy depends largely on how long the COVID-19-related challenges last in America.

Key credit strengths, in our opinion, are the MTA's:

- Monopolistic business position and high essentiality;
- Relatively high consolidated farebox recovery ratio (including farebox and toll revenue) of 59%;
- Good liquidity with approximately \$3.9 billion as Feb. 29, 2020 combined with a history of very strong market access; and
- Experienced management team that has successfully managed historical challenges.

Key credit weaknesses, in our view, are the MTA's:

- Very weak all-in consolidated net revenue debt service coverage (DSC; per our calculations) that was slightly less than 1x in unaudited fiscal 2019, about 1x in audited fiscal 2018 and slightly less than 1x in audited fiscal 2017, with DSC likely to worsen in fiscal 2020 given the impacts of the COVID-19 pandemic, triggering a rating cap of 'A-';
- Mounting challenges to maintain a structural balance as a result of COVID-19-related impacts on the economy, ridership, traffic, subsidies, and taxes; and
- Very high debt burden (with a consolidated debt service carrying charge of approximately 16%) and significant capital needs, with a capital program of \$54.8 billion for fiscal years 2020 to 2024, which is more than 65% larger than the previous fiscal 2015-2019 program, with as much as \$35 billion, or 60%, debt financed.

We view the MTA's enterprise risk profile score as very strong and its financial risk profile score as adequate, resulting in an indicative SACP of 'a-', according to our criteria "Mass Transit Enterprise Ratings: Methodology And Assumptions," published Dec. 18, 2013 on RatingsDirect. Given that we do not consider the MTA a government-related entity, our ICR on the authority is also 'A-', reflecting our opinion of its overall ability to pay its financial obligations. The ICR also reflects our view of the MTA's capacity and willingness to meet its financial commitments as they come due, and does not refer to any specific financial obligation.

TRB provisions include a gross revenue pledge and a rate covenant that requires sufficiency, whereby pledged revenue is sufficient to cover annual operating expenses and debt service. In addition, the authority is statutorily required to achieve a balanced budget each year, although we understand this includes the use of cash balances carried over from prior years. While the bonds lack a debt service reserve fund, the MTA's liquidity, including its line of credit, and exceptional market access offset this. Given our analysis of the bond provisions in the context of the MTA's financial

metrics and industry standards, we view the provisions as credit neutral. Therefore, the issue rating on the authority's TRBs is 'A-'.

The 'SP-1' rating on the BANs reflects what we consider a low market risk profile, strong market access, and strong information disclosure. In addition, the 'SP-1' rating reflects our 'A-' long-term rating and SPUR on the MTA's transportation revenue bonds and our 'A-' ICR on the MTA. Principal of, and interest on, the BANs are payable solely from the proceeds of other notes, the proceeds of takeout bonds, and, with respect to interest payable, amounts available for payment of subordinated debt. The BANs are not secured by any other funds, accounts, or amounts that are pledged to the payment of bonds or parity obligations issued under the resolution.

The negative outlook on the TRBs reflects our view of the significant financial challenges posed by the COVID-19 pandemic including its impact on ridership and traffic, likely impact to subsidies and taxes, and prospects for permanent negative dislocation of transit and traffic volume.

Negative Outlook

Downside scenario

While our outlook horizon is typically two years, given the severity of the developments and the fluid nature of MTA's particular situation, we expect greater clarity of the likely impacts to the MTA over the next several months. We could lower the rating if the MTA's financial flexibility or liquidity suffer material declines, or if service area employment falls off significantly and on a sustained basis. Our assessment of the MTA's liquidity position will depend on several factors, including whether, when, and to what extent federal assistance is provided, the severity and duration of the pandemic and related travel restrictions, employment resilience, an assessment of the most critical capital needs, collateral posting or termination events related to swaps, and the impact of MTA internal structural solutions, if any. We believe the MTA's financial flexibility could come under pressure if ridership declines are sustained. Although the bonds are secured by gross revenue, which provided DSC of about 9x on a gross basis in unaudited fiscal 2019, our analysis focuses on consolidated system revenue available for all-in debt service after consideration of operating costs (net revenue), adjusted by noncash items, because we believe a system must pay operating expenses to remain viable. Under this approach, coverage has been at or slightly below sufficiency.

Upside scenario

We could revise the outlook to stable if the MTA's liquidity, financial flexibility, and service area economic fundamentals have stabilized whether because the COVID-19 pandemic dissipates or if federal intervention provides necessary liquidity support to stabilize the rating. While the MTA has overcome financial challenges in the past, such as in 2009, when the New York State Legislature established significant and sustainable new revenue sources (the payroll mobility tax and the aid trust account revenue) for the MTA, we believe the COVID-19 pandemic will be significantly more severe and potentially long-lasting.

Ratings Detail (As Of March 24, 2020)		
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Unenhanced Rating	NR(SPUR)	Current

Ratings Detail (As Of March 24, 2020) (co	nt.)	
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit	A OT	
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit	A (DT)	0
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit	A /NI	Comment
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth transit	CD 1	A CC
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth transit	CD 1	A £5 a .d
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth transit	A/Negative	Current
Long Term Rating	A/ Negative	Current
Metropolitan Transp Auth transit Long Term Rating	A/Negative	Current
	A/ Negative	Current
Metropolitan Transp Auth transit Long Term Rating	A/Negative	Current
	A/ Negative	Current
Metropolitan Transp Auth transit Long Term Rating	A/Negative	Current
Unenhanced Rating	NR(SPUR)	Current
Metropolitan Transp Auth transit	,	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit	, ,	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (wrap of insured	, , ,	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (wrap of insured	, , ,	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (wrap of insured	d) (FGIC) (ASSURED GTY) (SEC MKT)	
Unenhanced Rating	A(SPUR)/Negative	Current

Ratings Detail (As Of March 24, 2020) (cont.)		
Metropolitan Transp Auth transit (wrap of insured) (FGIO	C) (MBIA) (ASSURED GTY) (SEC MKT)	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)	A (ODY ID) (A)	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
·	A(SFOR)/ Negative	Current
Metropolitan Transp Auth transit (AGM) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)	Ti(of Ott)/Tvegative	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)	(/ 8	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)	· · · ·	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)	A (ODI ID) (A)	0
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)	A(SPUR)/Negative	Current
Unenhanced Rating	A(Sr OK)/ Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)	A(d) O(t)/ (vegative	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)	(/	
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Negative	Current

Ratings Detail (As Of March 24, 2020) (cont.)		
Metropolitan Transp Auth transit (AGM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (AGM) (SEC MKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (ASSURED GTY) (SEC Unenhanced Rating	C MKT) A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating Natural skitch Transp Auth transit (BAM) (SECMKT)	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating Metropolitan Transp Auth transit (BAM) (SECMKT)	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current

Ratings Detail (As Of March 24, 2020) (cont.)		
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) <i>Unenhanced Rating</i>	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SECMKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (BAM) (SEC MKT) Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (FGIC) (MBIA) (National Unenhanced Rating	al) A(SPUR)/Negative	Current

Ratings Detail (As Of March 24, 2020) (cont.)		
Metropolitan Transp Auth transit (FGIC) (National)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth transit (MBIA) (National)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth BANs	OD 4	A CC 1
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs	01 -1	7 mm med
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs	CD 1	۸ <i>د</i> م با
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs	0. 1	
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs	CD 1	A CC
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs	5. 1	· minimod
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed

Ratings Detail (As Of March 24, 2020) (cont.)		
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth BANs		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth ICR		
Long Term Rating	A/Negative	Current
Metropolitan Transp Auth JOINTCRIT	G	
Long Term Rating	AA/A-1	Affirmed
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1+	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA/A-1	Affirmed
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1+	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1+	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1+	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA/A-1	Affirmed
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA/A-1	Affirmed
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA/A-1	Affirmed
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1	Current
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth JOINTCRIT		
Long Term Rating	AA+/A-1	Current

Ratings Detail (As Of March 24, 2020) (cont.)		
Unenhanced Rating	A(SPUR)/Negative	Current
Metropolitan Transp Auth Note		
Short Term Rating	SP-1	Affirmed
Metropolitan Transp Auth Note		
Short Term Rating	SP-1	Affirmed
Many issues are enhanced by bond insurance.		

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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Ratings Outlooks On U.S. Transportation Infrastructure Issuers Revised To Negative Due To COVID-19 Pandemic

March 26, 2020

BOSTON (S&P Global Ratings) March 26, 2020--S&P Global Ratings today revised to negative the outlooks on nearly all long-term debt ratings in the U.S. transportation infrastructure sector due to the severe and ongoing impacts associated with the COVID-19 pandemic. We believe the dramatic contraction of the global and U.S. economies and virtual collapse of travel and mobility across the transportation subsectors is a demand shock without precedent, with no definitive indication at this time regarding its duration and severity as well as the follow-on effects of an economic recession. The outlook revisions to negative of each issuer and issuer credit rating follows on our updated overall view of the sector (see "U.S. Transportation Infrastructure Sector Outlook Update: Now Negative For All Sectors" published March 16, 2020, on RatingsDirect).

We are affirming the ratings and outlooks for transportation infrastructure issuers with existing negative outlooks and not modifying the ratings or outlooks of debt secured by federal transportation grants.

The expected passage into U.S. law of an approximately \$2 trillion federal stimulus package that includes direct financial aid to airport operators (\$10 billion) and transit authorities (\$25 billion) is viewed favorably and will alleviate immediate liquidity pressures, as well as assist with near-term operational funding requirements including debt service. Aid to the airline industry, in the form of loans and loan guarantees, should also support payments from airline tenants to airport operators. However, long-term credit implications across all sectors have yet to unfold, and we expect greater visibility on the broader impacts on issuers' financial and business profiles in the coming months.

This action applies to the ratings of approximately 187 issuers and 252 ratings (see list below) in the following six transportation subsectors: airports, toll roads and bridges, ports, transit systems, parking, and special facilities (e.g. consolidated rental car facilities at airports). Our entire transportation infrastructure portfolio of senior and subordinated credit ratings has a modal rating of 'A' with nearly all subject to volume risk--that is, they are dependent on passengers, riders, cargo, and vehicles to generate operating revenues necessary to meet operating requirements, debt service obligations, and capital needs.

"The revision of credit rating outlooks to negative provides clarity to market participants that issuers face at least a one-in-three likelihood of a negative rating action over the intermediate term for investment-grade credits (generally up to two years) and over the short term for speculative-grade credits (generally up to one year)," said S&P Global Ratings credit analyst Kurt Forsgren. All ratings will be individually reviewed with respect to an issuer's specific exposure to,

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and ability to mitigate against, the financial and operational challenges in the near-to-intermediate term and our views of longer term risks. Negative outlooks on specific ratings may be returned to stable on a case-by-case basis in the near-to-medium term.

It is important to recognize that the transportation infrastructure sectors benefit from -- and the current ratings on them reflect--strong fundamental credit features including the often-dominant business positions that both support their ability to collect revenues from users, largely without significant regulatory limitations or approvals, and recover from demand shocks such as COVID-19. Similarly, management teams of the highly rated issuers in our portfolio are experienced, generally conservative in their budgeting and forecasting assumptions, and have historically taken measures that balanced meeting their public missions as well as debt service obligations. We view overall liquidity levels to be favorable with median unrestricted days' cash on hand that has averaged near 600 days for fiscal years 2018 and 2019.

As of this date, credit conditions in the transportation industry continue to erode with plunging passenger and transaction volumes across the board in air travel, transit, toll facilities, and parking, as mobility is severely restricted or prohibited in many locations under stay-in-place orders. Collective efforts by federal, state and local officials to contain the virus outbreak and minimize the public health effects of COVID-19 by "flattening the curve" are both reducing the economic activity that the transportation sectors depend upon and prolonging the period volumes are depressed before recovering. Also, the lingering effects from trade conflicts and tariffs combined with the COVID-19 outbreak in China have dramatically disrupted shipping and maritime trade. (See "U.S. Ports Face Headwinds," published Feb. 19, 2020.)

Based on our analysis and preliminary year-over-year data reported by issuers that we rate, volume in the past two weeks from passengers, riders, toll and parking transactions as well as shipping containers are lower compared with the same period in 2019; in a range of 60%-90% on the high end to 20%-40% on the low end depending on the transportation asset. Some tolled facilities and ports appear less affected on a relative basis, but the declines for all transportation infrastructure subsectors are significant and, for many, financially unsustainable at the current depressed levels.

Critical to the near and long-term prospects of the transportation sectors is the economic outlook, which continues to worsen both globally and in the U.S. (See "Global Macroeconomic Update, March 24: A Massive Hit To World Economic Growth," and "Credit FAQ: Assessing The Coronavirus-Related Damage To The Global Economy And Credit Quality" published March 24, 2020.) For the U.S., the year-on-year contraction in second-quarter GDP now looks to be at least double S&P Global Economics' earlier 6% estimate.

Risks remain that U.S. travel restrictions could expand domestically, with continuing or lingering concerns about health and safety magnifying the negative effects across the travel value chain. Even when travel restrictions are lifted we believe there may be an extended period before volume levels return, which pressures near-term credit quality. Also, systemic or permanent changes in consumer and industry behavior, shifts in supply chains, economic softening, and recessionary pressures could affect our view of long-term ratings.

S&P Global Ratings will continue to monitor and evaluate the cascading effects of this fluid and fast-moving situation. Potential negative rating actions could be either broad-based or credit specific. Our approach in conversations with management teams and evaluating available information will be:

- Focusing on near-term (next six months) liquidity or refinancing or remarketing risks faced by issuers, with primary attention on issuers with weaker credit profiles and lower liquidity, with the expectation that the significant declines we've seen will extend into the late summer to

early fall. We expect to analyze issuers' available cash on hand, unrestricted and restricted assets, capital funding requirements and capital deferrals, and receivables, and any currently dedicated resources that may be available to meet near-term obligations, including use of federal stimulus money.

- Analyzing intermediate (six-12 months) funding and budgetary risks by issuers most affected by volume declines and evaluate management's actions to mitigate impacts and their contingency plans. We will monitor adjustments to operations, capital expenditures, financial forecasts, current and projected cash draws and liquidity levels as well as access to external liquidity while making principal and interest deposits.
- Gauging the shape of the economic and operational recovery at the macro level and what it could look like for the specific issuer. We will be reviewing long-term plans, evaluating growth rates and overall trajectory, operational changes, capital plan adjustments, and revised projections in the context of our view of anticipated volume levels.

S&P Global Ratings will continue to monitor activity levels, industry developments, policy actions at the federal, state and local levels, and comment or take credit action as appropriate.

TELECONFERENCE

There will be a teleconference scheduled in the coming days to discuss this action, related industry developments, and to answer your questions.

An Excel workbook listing the affected ratings can be downloaded here: https://www.standardandpoors.com/pt_LA/web/guest/article/-/view/sourceld/100042776

Table 1 Airport And Passenger Facility Charge

Credit	State	Current rating	Current outlook	Previous outlook
Albany International Airport - 1st Lien	NY	А	Negative	Stable
Albuquerque International Sunport - 1st Lien	NM	A+	Negative	Stable
Augusta Regional Airport - 1st Lien	GA	BBB	Negative	Stable
Austin Bergstrom International Airport - 1st Lien	TX	А	Negative	Positive
Baltimore/Washington International Airport - 1st Lien PFC	MD	A+	Negative	Stable
Bradley International Airport - 1st Lien	CT	A+	Negative	Stable
Burbank-Glendale-Pasadena Airport Authority - 1st Lien	CA	A+	Negative	Stable
Bush Intercontinental Airport and Hobby Airport - 2nd Lien	TX	A+	Negative	Stable
Charleston County Airport - 1st Lien	SC	A+	Negative	Stable
Charlotte/Douglas International Airport - 1st Lien	NC	AA-	Negative	Stable
Chicago Midway International Airport - 1st Lien	IL	А	Negative	Stable
Chicago Midway International Airport - 2nd Lien	IL	А	Negative	Stable
City of Palm Springs - 1st Lien PFC	CA	А	Negative	Stable
Cleveland Hopkins International Airport - 1st Lien	ОН	А	Negative	Stable
Dallas-Fort Worth International Airport - 1st Lien	TX	A+	Negative	Stable
Dayton International Airport - 1st Lien	ОН	BBB+	Negative	Stable
Denver International Airport - 1st Lien	CO	A+	Negative	Stable

Table 1 Airport And Passenger Facility Charge (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
Denver International Airport - 2nd Lien	CO	А	Negative	Stable
Des Moines International Airport - 1st Lien	IA	A+	Negative	Stable
Detroit Metro Wayne County Airport - 1st Lien	MI	А	Negative	Stable
Detroit Metro Wayne County Airport - 2nd Lien	MI	A-	Negative	Stable
El Paso International Airport - 1st Lien	TX	A+	Negative	Stable
Fort Lauderdale-Hollywood International Airport - 1st Lien	FL	A+	Negative	Stable
Fresno Yosemite International Airport - 1st Lien	CA	А	Negative	Stable
Guam International Airport - 1st Lien	GU	BBB+	Negative	Stable
Hartsfield Jackson Atlanta International Airport - 1st Lien	GA	AA-	Negative	Stable
Hawaii Airport System - 1st Lien	HI	A+	Negative	Stable
Hawaii Airport System - subordinate lien	HI	A+	Negative	Stable
Indianapolis International Airport - 1st Lien	IN	А	Negative	Stable
Jackson County Rogue Valley Intl Medford Airport - 1st Lien	OR	А	Negative	Stable
John Wayne Airport - 1st Lien	CA	AA-	Negative	Stable
Kansas City International Airport - 1st Lien	МО	А	Negative	Stable
Lambert-St. Louis International Airport - 1st Lien	МО	А	Negative	Stable
Las Vegas-McCarran International Airport - 1st Lien	NV	AA-	Negative	Stable
Las Vegas-McCarran International Airport - 2nd Lien	NV	A+	Negative	Stable
Las Vegas-McCarran International Airport - 3rd Lien	NV	A+	Negative	Stable
Los Angeles International Airport - 1st Lien	CA	AA	Negative	Stable
Los Angeles International Airport - 2nd Lien	CA	AA-	Negative	Stable
Louisville International Airport - 1st Lien	KY	A+	Negative	Stable
Love Field Airport Modernization Corporation - 1st Lien	TX	А	Negative	Stable
Manchester Airport - 1st Lien	NH	BBB+	Negative	Stable
Massachusetts Port Authority (Boston Logan International Airport) - 1st Lien	MA	AA	Negative	Stable
Memphis International Airport - 1st Lien	TN	А	Negative	Stable
Miami International Airport - 1st Lien	FL	А	Negative	Stable
Minneapolis-St. Paul International Airport - 1st Lien	MN	AA-	Negative	Stable
Minneapolis-St. Paul International Airport - 2nd Lien	MN	A+	Negative	Stable
Mobile Airport Authority - 1st Lien	AL	BBB+	Negative	Stable
Myrtle Beach International Airport - 1st Lien	SC	A+	Negative	Stable
Nashville International Airport - 1st Lien	TN	A+	Negative	Stable
New Orleans International Airport - 1st Lien	LA	А	Negative	Stable
Norfolk Airport Authority - 1st Lien	VA	А	Negative	Stable
O'Hare International Airport - 1st Lien	IL	А	Negative	Stable

Table 1 Airport And Passenger Facility Charge (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
O'Hare International Airport - 1st Lien PFC	IL	А	Negative	Stable
Okaloosa County - 1st Lien	FL	A-	Negative	Positive
Omaha Eppley Airfield - 1st Lien	NE	AA-	Negative	Stable
Ontario International Airport - 1st Lien	CA	A-	Negative	Positive
Orlando International Airport - 1st Lien	FL	AA-	Negative	Stable
Orlando International Airport - 2nd Lien	FL	A+	Negative	Stable
Palm Beach International Airport - 1st Lien	FL	A+	Negative	Stable
Philadelphia International Airport - 1st Lien	PA	А	Negative	Stable
Pittsburgh International Airport - 1st Lien	PA	A-	Negative	Stable
Port of Seattle (Seattle-Tacoma International Airport) - 1st Lien	WA	AA-	Negative	Stable
Port of Seattle (Seattle-Tacoma International Airport) - 1st Lien PFC	WA	A+	Negative	Stable
Port of Seattle (Seattle-Tacoma International Airport) - 2nd Lien	WA	A+	Negative	Stable
Port of Seattle (Seattle-Tacoma International Airport) - 3rd Lien	WA	A+	Negative	Stable
Portland International Airport - 1st Lien	OR	AA-	Negative	Stable
Portland International Airport - 1st Lien PFC	OR	A+	Negative	Stable
Portland International Airport - CFCs - 1st Lien	OR	Α-	Negative	Stable
Portland International Jetport - 1st Lien	ME	Α-	Negative	Stable
Sacramento International Airport - 1st Lien	CA	A+	Negative	Stable
Sacramento International Airport - 2nd Lien	CA	А	Negative	Stable
Salt Lake City International Airport - 1st Lien	UT	A+	Negative	Stable
San Antonio International Airport - 1st Lien	TX	А	Negative	Stable
San Diego County Regional Airport Authority - 1st Lien	CA	A+	Negative	Stable
San Diego County Regional Airport Authority - 2nd Lien	CA	А	Negative	Stable
San Francisco International Airport - 1st Lien	CA	A+	Negative	Stable
San Jose International Airport - 1st Lien	CA	А	Negative	Stable
Sky Harbor International Airport - 1st Lien	AZ	AA-	Negative	Stable
Sky Harbor International Airport - 2nd Lien	AZ	A+	Negative	Stable
Southwest Florida International Airport - 1st Lien	FL	А	Negative	Stable
T. F. Green International Airport - 1st Lien	RI	А	Negative	Stable
Tampa International Airport - 1st Lien	FL	AA-	Negative	Stable
Tampa International Airport - 2nd Lien	FL	A+	Negative	Stable
Tri-Cities Airport - 1st Lien	WA	A-	Negative	Stable
Tulsa International Airport - 1st Lien	OK	А	Negative	Stable

Table 1

Airport And Passenger Facility Charge (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
Washington Dulles International Airport and Reagan National Airport - 1st Lien	DC	AA-	Negative	Stable
Will Rogers World Airport - 2nd Lien	OK	A+	Negative	Stable

Table 2

Special Facilities

Credit	State	Current rating	Current outlook	Previous outlook
Austin-Bergstrom International Airport Rental Car Special Facility - 1st Lien	TX	А	Negative	Stable
Bradley International Airport Rental Car Facility - 1st Lien	СТ	Α-	Negative	Stable
Bush Intercontinental Airport Rental Car Facility - 1st Lien	TX	А	Negative	Stable
Charlotte/Douglas International Airport Rental Car Facility - 1st Lien	NC	А	Negative	Stable
Chicago O'Hare International Airport Rental Car Facility - 1st Lien	IL	BBB	Negative	Positive
Hartsfield Jackson Atlanta International Airport Rental Car Facility Project-1st Lien	GA	А	Negative	Stable
Hawaii Airport System - 1st Lien	НІ	A+	Negative	Stable
LAXFUEL Corporation - 1st Lien	CA	А	Negative	Stable
Massachusetts Port Authority Rental Car Facility - 1st Lien	MA	А	Negative	Stable
Nashville International Airport Rental Car Facility - 1st Lien	TN	А	Negative	Stable
New Orleans Aviation Board Rental Car Facility - 1st Lien	LA	А	Negative	Stable
Phoenix Sky Harbor International Airport Rental Car Facility - 1st Lien	AZ	А	Negative	Stable
Rhode Island Economic Development Corporation Rental Car Special Facility - 1st Lien	RI	А	Negative	Stable
San Antonio International Airport - 1st Lien	TX	А	Negative	Stable
San Diego Cnty Regl Arpt Auth Rental Car Facility - 1st Lien	CA	А	Negative	Stable
SEATAC Fuel Facilities, LLC - 1st Lien	WA	А	Negative	Stable
SFO Fuel Co LLC - 1st Lien	CA	А	Negative	Stable
Tampa International Airport CONRAC - 1st Lien	FL	А	Negative	Stable

Table 3

Toll Roads

Credit	State	Current rating	Current outlook	Previous outlook
Alligator Alley - 1st Lien	FL	AA-	Negative	Stable
Bay Area Toll Authority - 1st Lien	CA	AA	Negative	Stable

Table 3

Toll Roads (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
Bay Area Toll Authority - 2nd Lien	CA	AA-	Negative	Stable
Buffalo & Fort Erie Public Bridge Authority - 1st Lien	NY	A+	Negative	Stable
Central Florida Expressway Authority - 1st Lien	FL	A+	Negative	Stable
Central Texas Regional Mobility Authority - 1st Lien	TX	A-	Negative	Stable
Central Texas Regional Mobility Authority - 3rd Lien	TX	BBB+	Negative	Stable
Central Texas Turnpike System - 1st Lien	TX	А	Negative	Stable
Central Texas Turnpike System - 2nd Lien	TX	A-	Negative	Stable
Chesapeake Bay Bridge and Tunnel District - 1st Lien	VA	BBB	Negative	Stable
Chesapeake Transportation System - 1st Lien	VA	BBB+	Negative	Stable
Delaware River & Bay Authority - 1st Lien	DE	А	Negative	Stable
Delaware River Joint Toll Bridge Commission - 1st Lien	PA	А	Negative	Positive
Delaware River Port Authority - 1st Lien	PA	A+	Negative	Stable
Delaware River Port Authority - 2nd Lien	PA	А	Negative	Stable
E-470 Public Highway Authority - 2nd Lien	CO	А	Negative	Positive
Florida Turnpike Enterprise - 1st Lien	FL	AA	Negative	Stable
Foothill/Eastern Transportation Corridor Agency - 2nd Lien	CA	A-	Negative	Positive
Foothill/Eastern Transportation Corridor Agency - 3rd Lien	CA	BBB+	Negative	Positive
Georgia State Road and Tollway Auth (Northwest Corridor Project) - 2nd Lien	GA	BBB	Negative	Stable
Golden Gate Bridge Highway and Transportation District - 1st Lien	CA	AA-	Negative	Stable
Grand Parkway Transportation Corporation - 1st Lien	TX	BBB	Negative	Positive
Grand Parkway Transportation Corporation - 2nd Lien	TX	BBB	Negative	Positive
Greater New Orleans Expressway Commission - 1st Lien	LA	А	Negative	Stable
Harris County Toll Road Authority - 1st Lien	TX	AA-	Negative	Stable
Illinois State Toll Highway Authority - 1st Lien	IL	AA-	Negative	Stable
Kansas Turnpike Authority - 1st Lien	KS	AA-	Negative	Stable
Laredo - 1st Lien	TX	A+	Negative	Stable
Laredo - 2nd Lien	TX	А	Negative	Stable
Lee County - 1st Lien	FL	A+	Negative	Stable
Maine Turnpike Authority - 1st Lien	ME	AA-	Negative	Stable
Maine Turnpike Authority - 8th Lien	ME	A+	Negative	Stable
Maryland Transportation Authority - 1st Lien	MD	AA-	Negative	Stable
McAllen International Toll Bridge - 1st Lien	TX	А	Negative	Stable
Metropolitan Highway System - 1st Lien	MA	A+	Negative	Stable
Metropolitan Washington Airport Authority - 1st Lien	DC	А	Negative	Stable
Metropolitan Washington Airport Authority - 2nd Lien	DC	A-	Negative	Stable

Table 3

Toll Roads (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
Metropolitan Washington Airport Authority - 3rd Lien	DC	A-	Negative	Stable
Metropolitan Washington Airport Authority - 4th Lien	DC	А	Negative	Stable
Miami Dade Cnty (Rickenbacker Causeway) - 1st Lien	FL	A-	Negative	Stable
Miami-Dade Expressway Authority & MDX - 1st Lien	FL	А	Negative	Negative
Mid-Bay Bridge Authority - 1st Lien	FL	BBB+	Negative	Stable
Mid-Bay Bridge Authority - 2nd Lien	FL	BBB	Negative	Stable
Montgomery County Toll Road Authority - 1st Lien	TX	BBB-	Negative	Stable
New Hampshire Turnpike System - 1st Lien	NH	AA-	Negative	Stable
New Jersey Turnpike Authority - 1st Lien	NJ	A+	Negative	Stable
New Jersey Turnpike Authority Garden State Parkway - 1st Lien	NJ	A+	Negative	Stable
New York State Bridge Authority - 1st Lien	NY	A+	Negative	Stable
New York State Thruway Authority - 1st Lien	NY	А	Negative	Positive
New York State Thruway Authority - 2nd Lien	NY	A-	Negative	Positive
Niagara Falls Bridge Commission - 1st Lien	NY	A+	Negative	Stable
North Carolina Turnpike Authority Monroe Expressway - 1st Lien	NC	BBB	Negative	Stable
North Carolina Turnpike Authority Triangle Expressway - 1st Lien	NC	BBB	Negative	Stable
North Carolina Turnpike Authority Triangle Expressway - 2nd Lien	NC	BBB	Negative	Stable
North East Texas Regional Mobility Authority - 1st Lien	TX	BBB	Negative	Stable
North East Texas Regional Mobility Authority - 2nd Lien	TX	BBB-	Negative	Stable
North Texas Tollway Authority - 1st Lien	TX	A+	Negative	Stable
North Texas Tollway Authority - 2nd Lien	TX	А	Negative	Stable
Ohio Turnpike Commission - 1st Lien	ОН	AA-	Negative	Stable
Ohio Turnpike Commission - 2st Lien	ОН	A+	Negative	Stable
Oklahoma Turnpike Authority - 1st Lien	OK	AA-	Negative	Stable
Orange County Transportation Authority - 1st Lien	CA	AA-	Negative	Stable
Osceola County Parkway - 1st Lien	FL	BBB+	Negative	Stable
Pennsylvania Turnpike Commission - 1st Lien	PA	A+	Negative	Stable
Pennsylvania Turnpike Commission - 2nd Lien	PA	А	Negative	Stable
Rhode Island Turnpike & Bridge Authority - 1st Lien	RI	A-	Negative	Stable
Richmond Metropolitan Authority - 1st Lien	VA	A+	Negative	Stable
Riverside Cnty Transp Comm - 1st Lien	CA	А	Negative	Stable
San Diego Association of Governments: South Bay Expressway - 1st Lien	CA	А	Negative	Stable
San Joaquin Hills Transportation Corridor Agency - 1st Lien	CA	A-	Negative	Stable
			-	

Table 3

Toll Roads (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
San Joaquin Hills Transportation Corridor Agency - 2nd Lien	CA	A-	Negative	Stable
San Joaquin Hills Transportation Corridor Agency - 3rd Lien	CA	BBB+	Negative	Stable
South Jersey Transportation Authority - 1st Lien	NJ	BBB+	Negative	Stable
South Jersey Transportation Authority - 2nd Lien	NJ	BBB	Negative	Stable
Sunshine Skyway Bridge - 1st Lien	FL	А	Negative	Stable
Tampa-Hillsborough County Expressway Authority - 1st Lien	FL	A+	Negative	Stable
Triborough Bridge & Tunnel Authority - 1st Lien	NY	AA-	Negative	Stable
Triborough Bridge & Tunnel Authority - 2nd Lien	NY	A+	Negative	Stable
West Virginia Parkways Authority - 1st Lien	WV	AA-	Negative	Stable

Table 4

Parking

Credit	State	Current rating	Current outlook	Previous outlook
Albany Parking Authority - 2nd Lien	NY	Α-	Negative	Stable
Baltimore Mayor & City Council - 1st Lien	MD	AA-	Negative	Stable
Baltimore/Washington International Airport - 1st Lien	MD	А	Negative	Stable
Berkeley Parking System - 1st Lien	CA	А	Negative	Stable
Bradley International Airport Parking - 1st Lien	СТ	BBB	Negative	Stable
Columbia - 2nd Lien	SC	Α-	Negative	Stable
Community Dev Props Scranton Inc - 1st Lien	PA	BB-	Negative	Negative
Little Rock - 1st Lien	AR	Α-	Negative	Stable
Maryland Economic Development Corporation - 1st Lien	MD	BBB	Negative	Stable
Maryland Economic Development Corporation - 2nd Lien	MD	BBB-	Negative	Stable
Massachusetts Bay Transportation Authority - 1st Lien	MA	A+	Negative	Stable
Miami Beach - 1st Lien	FL	A+	Negative	Stable
Missoula Parking Commission - 1st Lien	MT	Α-	Negative	Stable
New Orleans Aviation Board Parking Facilities Corporation - 1st Lien	LA	BBB+	Negative	Stable
Pennsylvania Econ Dev Fing Auth - 1st Lien	PA	BB+	Negative	Stable
Philadelphia Pkg Auth - 1st Lien	PA	А	Negative	Stable
Pike Place Mkt Preservation & Dev Auth - 1st Lien	WA	Α-	Negative	Stable
Pittsburgh & Allegheny Cnty Sports & Exhib Auth - 1st Lien	PA	А	Negative	Stable
Pittsburgh Pub Pkg Auth - 1st Lien	PA	A+	Negative	Stable
Revenue Authority of Prince George's County - 1st Lien	MD	А	Negative	Stable
San Diego Redev Agy - 1st Lien	CA	А	Negative	Stable
St Louis City Pkg Comm - 1st Lien	МО	А	Negative	Stable
-				

Table 4

Parking (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
St Louis City Pkg Comm - 2nd Lien	МО	Α-	Negative	Stable
St. Paul Housing & Redev Authority - 1st Lien	MN	A+	Negative	Stable
Stockton Parking Authority - 1st Lien	CA	BBB+	Negative	Stable
Tacoma - 1st Lien	WA	A+	Negative	Stable
Texas Medical Center - 1st Lien	TX	AA-	Negative	Stable

Table 5

Ports

Credit	State	Current rating	Current outlook	Previous outlook
Alabama State Port Authority - 1st Lien	AL	Α-	Negative	Stable
Alameda Corridor Transp Auth - 1st Lien	CA	Α-	Negative	Stable
Alameda Corridor Transp Auth - 2nd Lien	CA	BBB+	Negative	Stable
Brownsville Navigation District - 1st Lien	TX	A+	Negative	Stable
Galveston Wharves - 1st Lien	TX	A-	Negative	Stable
Guam Port Auth - 1st Lien	GU	А	Negative	Stable
Hawaii Harbor Division - 1st Lien	НІ	AA-	Negative	Stable
Lake Charles Harbor & Term Dist - 1st Lien	LA	A+	Negative	Stable
Long Beach Harbor Department - 1st Lien	CA	AA	Negative	Stable
Los Angeles Harbor Department - 1st Lien	CA	AA	Negative	Stable
Oxnard Harbor District - 1st Lien	CA	А	Negative	Stable
Port Authority of New York and New Jersey - 1st Lien	NY	AA-	Negative	Stable
Port Everglades - 1st Lien	FL	А	Negative	Stable
Port Freeport - 1st Lien	TX	А	Negative	Stable
Port of Alaska - 1st Lien	AK	А	Negative	Stable
Port of Corpus Christi Authority - 1st Lien	TX	A+	Negative	Negative
Port of New Orleans Board of Commissioners - 1st Lien	LA	А	Negative	Stable
Port of Oakland - 1st Lien	CA	A+	Negative	Stable
Port of Oakland - 3rd Lien	CA	А	Negative	Stable
Port of Redwood City - 1st Lien	CA	A-	Negative	Stable
Port of San Francisco - 1st Lien	CA	А	Negative	Stable
Port Of Tacoma - 1st Lien	WA	AA-	Negative	Stable
Port Of Tacoma - 2nd Lien	WA	A+	Negative	Stable
Port of Vancouver - 1st Lien	WA	А	Negative	Stable
San Diego Unified Port District - 1st Lien	CA	A+	Negative	Stable
South Carolina State Ports Authority - 1st Lien	SC	A+	Negative	Stable
Virginia Port Authority - ICR	VA	A	Negative	Stable

Table 5

Ports (cont.)

Credit	State	Current rating	Current outlook	Previous outlook
Virginia Port Authority - 3rd Lien	VA	Α-	Negative	Stable

Table 6

Transit

Credit	State	Current rating	Current outlook	Previous outlook
Alameda Contra Costa Transit District - 1st Lien	CA	A+	Negative	Stable
Capital Metro Transportation Authority - 1st Lien	TX	AA-	Negative	Stable
Chicago Transit Authority - 1st Lien	IL	A+	Negative	Stable
Corpus Christi Regional Transportation Authority - 1st Lien	TX	A+	Negative	Stable
Denver Regional Transportation District - 1st Lien	CO	AA-	Negative	Stable
Napa Valley Transportation Auth - 1st Lien	CA	A-	Negative	Stable
New York Metropolitan Transportation Authority - 1st Lien		A-	Negative	Negative
Peninsula Corridor Jt Pwrs Brd - 1st Lien	CA	A+	Negative	Stable
Sacramento Regional Transit District - 1st Lien	CA	A-	Negative	Stable
Sacramento Regional Transit District - 1st Lien	CA	A-	Negative	Stable
Saint Cloud Metropolitan Transit Commission - 1st Lien	MN	AA-	Negative	Stable
San Francisco Mun Trans Agency - 1st Lien	CA	AA	Negative	Stable
VIA Metro Transit Auth - 1st Lien	TX	A+	Negative	Stable
Washington Metropolitan Area Transit Authority - 1st Lien	DC	AA-	Negative	Stable

 $Certain\ terms\ used\ in\ this\ report,\ particularly\ certain\ adjectives\ used\ to\ express\ our\ view\ on\ rating\ relevant\ factors,$ have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of Ratings Direct at www.capitaliq.com. All ratings affected by this rating affected by this rating affected by the rating of the rating affected by the rating affe $action \ can be found on \ S\&P\ Global\ Ratings' \ public\ website\ at\ www.standard and poors.com.\ Use\ the\ Ratings\ search$ box located in the left column.

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Triborough Bridge and Tunnel Authority (TBTA)

Issuer: Triborough Bridge and Tunnel Authority			
	Ratings	Watch Status	
General Revenue Bonds	AA	Watch- Downgrade	
Subordinate Revenue Bonds	AA-	Watch- Downgrade	

Methodology:

U.S. Public Toll Roads, Bridges & Tunnels Revenue Bond Rating Methodology

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Rating Summary: KBRA has placed the long-term rating on the Triborough Bridge and Tunnel Authority (TBTA) General Revenue Bonds and Subordinate Revenue Bonds' ratings on Watch-Downgrade reflecting the significant decline in toll revenue caused by the COVID-19 crisis. While there is a high likelihood of substantial recovery of traffic on the TBTA's tolled bridges and tunnels, the timing and velocity of this recovery is unclear. The bonds are secured by a pledge of net revenues of the TBTA.

Based on MTA's latest Disclosure¹, toll traffic for the MTA Bridges and Tunnels declined by 59.93%, the day after the "New York State on PAUSE" executive order. A prolonged loss of toll revenues of this magnitude will impact the TBTA's ability to meet debt service obligations from current net revenues in FY 2020 and may also reduce or eliminate TBTA's ability to transfer surpluses to support the MTA's other operations. The next debt service date is May 15. The TBTA has a track record of setting aside funds to meet pro rata monthly debt service requirements.

KBRA performed a breakeven analysis that shows TBTA (which operates on a calendar year basis) can withstand an annualized 41% decline in toll revenues (\$870 million) relative to the FY 2020 budget before its combined debt service coverage falls below 1.00x. Given that January and February 2020 were slightly above budget (up by 1.2%),

TBTA could withstand a roughly 47% decline for the remainder of the year before breaching 1x combined debt service coverage. Though unlikely to occur, this analysis indicates that TBTA would not be able to withstand a full year of traffic declines that it is currently experiencing without falling below 1x total debt service coverage.

TBTA bonds are not secured by a debt service reserve fund. While it is not pledged, TBTA does have approximately \$412 million (representing 270 days cash on hand) in the Necessary Reconstruction Fund (NRF) that can be used for emergency capital and operating needs based on management discretion. In addition, KBRA understands that the TBTA can access liquidity that is available to the MTA through an interagency loan. MTA anticipates \$3.8 billion from the passage of the CARES Act. KBRA expects the MTA's management team to continue to demonstrate its ability to navigate financial and political challenges.

In order to help quantify the near-term challenges, KBRA has developed a stress scenario for FY 2020. In this scenario KBRA assumes that TBTA toll revenue declines by 50% in the second quarter and 25% in the third quarter from budgeted FY 2020 figures, and fully recovers by the last quarter. KBRA assumes investment income, expenses, debt service, amounts remain as shown in the FY 2020 Budget. This stress demonstrates that TBTA has significant cushion and can absorb significant declines in traffic. However, KBRA will continue to monitor toll revenue closely to determine if this stress needs to be modified.

¹ MTA Annual Disclosure Statement Supplement dated March 25, 2020; data reflects the year-over-year change on March 23.



Figure 1

			KBRA's Current Stress Scenario			
FYE December 31 (\$ in millions)	2019 Final Estimate	2020 Final Proposed Budget	2020	2021	2022	2023
B&T Revenues						
Total B&T Revenues	2,078	2,118	1,721	2,118	2,118	2,118
Investment Income and Other	24	20	20	20	20	20
Total Revenues	2,102	2,138	1,741	2,138	2,138	2,138
% chg. vs 2020 Budget			-19%	0%	0%	0%
Total Operating Expenses	527	555	555	572	588	591
Net Revenues Available for DS	1,574	1,583	1,186	1,566	1,550	1,547
MTA B&T Senior Lien DS	576	611	611	634	644	742
Senior DSCR	2.73x	2.59x	1.94x	2.47x	2.41x	2.09x
MTA B&T Subordinate Lien DS	102	102	102	102	103	103
Total DS	678	713	713	736	748	845
Combined DSCR	2.32x	2.22x	1.66x	2.13x	2.07x	1.83x
Source: TBTA Preliminary Offering Statement Note: Figures represent non-reimbursable amounts						
Necessary Reconstruction Fund Balance	412	412	412	412	412	412
balance as % of total OpEx	78%	74%	74%	72%	70%	70%
Days Cash on Hand based on the Necessary Reconstruction Fund (NRF)* Balance	284	270	270	262	255	254
Surplus to Support Mass Transit	766	870	472	830	803	702

^{*}This Reserve Fund is intended to be used for emergency capital and operating needs of the TBTA based on management discretion.

The Watch Downgrade reflects the uncertainty regarding the magnitude and tenor of the impact on toll revenues due to the evolving nature of the COVID-19 crisis.

Key Credit Considerations

KBRA continues to monitor the direct and indirect impacts of the COVID-19 virus on the U.S. public toll roads, bridge & tunnel sector.

Credit Positives

- The TBTA Board's Independent rate setting authority and its proven track record of implementing required rate increases.
- Essentiality of the TBTA facilities to the regional transportation network with historic traffic demand that remains strong despite toll increases.
- Strong historical operating surplus with high DSC of 2.62x on outstanding General Revenue Bonds and 2.16x on a combined basis based on audited FY 2018 results.

Credit Challenges

- The COVID-19 crisis presents unprecedented challenges to the TBTA's toll traffic and fiscal operations.
- Absence of service reserve funds.

Rating Sensitivities

- Growth in traffic volume that increases TBTA net revenues and results in a substantial and sustained increase in DSC.
- Significant declines in traffic volume, increases in operating expense, or higher leverage that reduces combined General Revenue and Subordinate Revenue Bond DSC below 1.75x.

ESG Considerations

When relevant to credit, ESG factors are incorporated into the credit analysis in the same manner as all other creditrelevant factors. Among the ESG factors that have impact on this rating analysis are:

- Discussions in RD 3 and 4 reflect Governance Factors. KBRA considered the MTA/TBTA's Regulatory/Management Framework, financial profiles, and its rate-setting authority as criteria to support ongoing debt service.
- Discussions in RD 1 and 2 reflect Social Factors. KBRA has examined the following areas for this credit: trends in population and demographic changes, income, employment, unemployment, and the potential impact of the COVID-19 crisis.

More information on ESG Considerations for the Public Finance sector can be found here.

TBTA General Revenue Bonds Page 2 March 31, 2020



Rating Determinants (RD)	Senior	Subordinate
1. Size and Scope of Operations	AA+	AA+
2. Demand Assessment	AA+	AA+
3. Regulatory/Management Framework	AA+	AA+
4. Financial Profile	AA	AA-
5. Security Provisions	Α	A-

There has been no new update to the above-mentioned rating determinants since KBRA's report published on November 20, 2019. To access the more detailed discussion, please click here. This report focuses on the tolled traffic impact from COVID-19 crisis.

TBTA General Revenue Bonds Page 3 March 31, 2020

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FitchRatings

RATING ACTION COMMENTARY

Fitch Downgrades MTA, NY's Transp Rev Bonds to 'A+'; Outlook Negative; Removes Rtg Watch Negative

Thu 02 Apr, 2020 - 6:01 PM ET

Fitch Ratings - New York - 02 Apr 2020: Fitch Ratings has assigned a rating of 'A+' on approximately \$800 million of transportation revenue bonds (TRB), series 2020C (climate bond certified) to be issued by the Metropolitan Transportation Authority (MTA). The bonds will be sold via negotiation—the sale date and par are both subject to market conditions. Proceeds will be used to retire the outstanding transportation revenue bond anticipation notes, subseries 2018B-1 and subseries 2019B-2. Concurrent with this rating action, Fitch has downgraded the rating on the MTA's outstanding transportation revenue bonds (TRBs) to 'A+' from 'AA-' and outstanding TRB anticipation notes to 'F1' from 'F1+' and removed the long-term rating from Rating Watch Negative. The Rating Outlook is Negative.

SECURITY

The TRBs are backed by a gross lien on the MTA's operating revenues, which include, among other sources, fares received from the subway and bus systems operated by the MTA New York City Transit and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority, the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad, and buses operated by MTA Bus. TRBs are also backed by a gross lien on operating subsidies from the state of New York, New York City, and surplus from the operation of the Triborough Bridge and Tunnel Authority (TBTA).

KEY RATING DRIVERS

Analytical Conclusion: The downgrade of the TRB rating to 'A+' from 'AA-' and Rating Outlook Negative reflect the risk to significant deterioration of the MTA's finances precipitated by the coronavirus outbreak and its unprecedented effect on system utilization and revenue. Fitch believes these pressures compound

the challenges the MTA faced prior to the virus outbreak and weaken the agency's prospects for credit quality improvement through the end of 2021. The TRB note rating at 'F1' maps to the 'A+' rating on the TRBs.

The MTA still faces considerable pressure notwithstanding the expected receipt of approximately \$3.8 billion under the \$2 trillion Coronavirus Aid, Relief, and Economic Security (CARES) Act signed into law last week. The current period of stress is significantly greater than the rating case stresses factored into Fitch's transit ratings and a more extreme stress than transit agencies routinely plan for. Fitch expects a sharp contraction in various dedicated tax revenues and subsidies over the next several months that are not factored into the MTA's current revenue loss estimates from fares on its transit system and TBTA surplus. The MTA's various non-operating revenues account for roughly 46% of its \$17.1 billion 2020 budget.

The MTA has reported acute declines in system utilization and operating revenue from fares and tolls. Ridership was down 87% on the subway system, 94% on Metro North, 71% on Long Island Rail Road, and crossings on TBTA facilities was lower by 60% measured from March 20-21 and March 23 compared to similar dates in 2019. The revenue impact from lower system utilization is significant—the MTA estimates its weekly fare revenue loss at \$125 million compared to the February Financial Plan, annualized to \$6.5 billion if the ridership losses were sustained for an entire year, or \$4.9 billion if current ridership levels were sustained for a six-month period following by a gradual recovery to pre-outbreak levels. Fare and toll revenues were estimated at \$8.6 billion for 2020 as of the February Plan. The estimated TBTA revenue decline of nearly \$1.3 billion annualized would eliminate the surplus that is legally required to be transferred to the MTA for the operation of its transit and commuter system

These acute revenue pressures represent a near-term risk to the MTA's liquidity profile. MTA reported current liquidity resources of \$3.75 billion as of March 25 which includes a cash balance of \$1.24 billion, internal available flexible funds of \$1.2 billion, commercial bank lines of credit of \$1 billion (which were fully drawn on March 20), and \$320 million of reserves set aside for other post-employment benefits. The MTA has been authorized to secure an additional \$2 billion in bank liquidity, pending market conditions.

Fitch continues to expect the MTA will take whatever measures are possible and necessary to continue to meet its financial obligations in a full and timely manner during this challenging period. This may require cash flow conservation measures not typically deployed through normal economic cycles including capital market solutions and workforce reduction given the significance of this spending area to the total budget—an estimated \$11.9 billion in 2020 or roughly \$230 per week (on a cash basis including benefits). The MTA has not enacted employee layoffs or furloughs to date, although it recently instituted service reductions that primarily target off-peak hours to ensure the continuity of service of essential travel. The unprecedented nature of the MTA's revenue stress exacerbates its pre-outbreak fiscal condition, which was characterized by operating margins equal to or slightly weaker than sum-sufficiency, and estimated annual deficits ranging from \$415 million in 2021 to \$901 million in 2023.

The 'A+' rating on the TRBs reflects the benefit of statutory provisions that explicitly prevent the MTA or any of its subsidiary corporations from filing a voluntary petition for bankruptcy protection so long as the MTA has TRBs outstanding. Fitch believes this statutory framework combined with bondholders' gross lien on TRB pledged revenues tempers risk to the MTA's otherwise high leverage position and capital needs. Fitch's public transit ratings assume a degree of higher level government support to maintain system solvency due to the strategic importance of transit to local economies and other public policy goals, including the mobility of public health and safety workers in the current health crisis. Furthermore, Fitch

continues to believe that the MTA benefits from greater support from its sponsoring governments than typical U.S. transit agencies and has the highest strategic and economic importance among its peer group.

Revenue Defensibility: Stronger

The strategic importance of the MTA transit system, bridges and tunnels to the economy of the New York region is the cornerstone of the 'stronger' revenue defensibility assessment. It supports an expectation for ongoing financial support from the state and the city, including periodic authorization of new recurring revenue sources, to fund the MTA's operating and capital budget.

Operating Risk: Midrange

The MTA's operating profile is driven by its cost of labor, including fringe benefits for existing and retired employees, and the financing of its extensive capital program. The MTA has been the beneficiary of new funding sources for both its operating and capital plan in recent history, but thus far it has failed to achieve meaningful labor reforms that Fitch considers critical to eliminating out-year budget imbalances. The MTA has consistently produced near-term solutions to its budgetary challenges in the past via a combination of fare increases, cost saving programs and non-recurring measures.

Financial Profile: Stronger

The MTA's ability to maintain financial leverage metrics consistent with its operating risk profile is an important long-term rating consideration. Fitch expects the MTA will adjust the implementation of non-essential capital investment in response to its current liquidity crisis, which may have adverse consequences on system performance and ridership over the intermediate term. Leverage pressures may materialize from financial market instability resulting in increases in the MTA's net pension liabilities, or the incurrence of additional long-term debt to replace programmed pay-as-you-go capital given its decline in revenue and near-term liquidity risk. Fitch's leverage analysis focuses on pledged gross TRB revenues rather than cash flow available for debt service. This alternative view of financial leverage is based on the protection afforded bondholders from the gross lien on pledged TRB revenues, statutory provisions that restrict the MTA from filing for bankruptcy protection, and a covenant of New York State not to change the law to permit the MTA to file such a petition as long as any TRBs are outstanding.

ESG Considerations

The Metropolitan Transportation Authority (NY) has an ESG Relevance Score of '4' for Labor Relations and Practices due to the challenging labor environment in which the MTA operates and its high cost of labor including fringe benefits for existing and retired employees, which has a negative impact on the credit profile and is relevant to the rating in conjunction with other factors.

RATING SENSITIVITIES

Developments that May, Individually or Collectively, Lead to Negative Rating Action:

--The insufficiency of state and federal policy tools and emergency assistance, which could lead to a multinotch downgrade;

- --The inability of the MTA to maintain liquidity resources to meet its near and intermediate term operating needs:
- --An increase in near and intermediate term financial pressure from a substantial decline in non-fare revenues absent commensurate measures to lower spending;
- --A sustained reduction in ridership and revenues in the post-crisis recovery period.

Developments that May, Individually or Collectively, Lead to Positive Rating Action:

--The Rating Outlook could be revised to Stable and the ratings affirmed if Fitch sees sustained recovery in ridership and revenues due to an easing of health concerns and gradual resumption of economic activity, and/or federal or state action that convincingly stabilizes the MTA's finances.

BEST/WORST CASE RATING SCENARIO

Ratings of Public Finance issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of three notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings please visit https://www.fitchratings.com/site/re/10111579.

CREDIT PROFILE

The MTA was created by special New York State legislation in 1965 as a public benefit corporation, separate and apart from the state without any power of taxation. The MTA is responsible for developing and implementing a single, integrated mass transportation policy for its designated service area and its governing body is appointed by the New York State governor with the advice and consent of the state senate.

The MTA carries out its operating responsibilities through its subsidiary and affiliate entities: New York City Transit Authority and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority; Staten Island Rapid Transit Operating Authority; Long Island Rail Road Company; Metro-North Commuter Railroad Company; MTA Bus Company; and MTA Construction and Development. The MTA Bridges and Tunnels, another affiliate of MTA, is a public benefit corporation empowered to construct and operate toll bridges and tunnels and other public facilities in New York City. The MTA Bridges and Tunnels' surplus amounts are used to fund certain transit and commuter operations and capital projects of the MTA.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG CONSIDERATIONS

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Except for the matters discussed above, the highest level of ESG credit relevance, if present, is a score of 3. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity(ies), either due to their nature or to the way in which they are being managed by the entity(ies). For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg

RATING ACTIONS

ENTITY/DEBT	RATII	NG		PRIOR
Metropolitan Transportation Authority (NY) [General Government]				
 Metropolitan Transportation Authority (NY) /Transportation Revenues/1 LT 	LT	A+	Downgrade	AA-
 Metropolitan Transportation Authority (NY) /Transportation Revenues/1 ST 	ST	F1	Downgrade	F1+

VIEW ADDITIONAL RATING DETAILS

Additional information is available on www.fitchratings.com

APPLICABLE CRITERIA

Public Sector, Revenue-Supported Entities Rating Criteria (pub. 27 Mar 2020) (including rating assumption sensitivity)

ADDITIONAL DISCLOSURES

Dodd-Frank Rating Information Disclosure Form

Solicitation Status

Endorsement Policy

ENDORSEMENT STATUS

Metropolitan Transportation Authority (NY) EU Endorsed

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US Public Finance North America United States



08 Apr 2020 Downgrade

Fitch Downgrades MUFG Group's Rating to 'A-'; Stable Outlook

Fitch Ratings-Tokyo-08 April 2020:

Fitch Ratings has downgraded to 'A-', from 'A', the Long-Term Issuer Default Ratings (IDR) of Mitsubishi UFJ Financial Group, Inc. (MUFG) and its subsidiaries - MUFG Bank, Ltd. and Mitsubishi UFJ Trust and Banking Corporation (together, MUFG group). The Long-Term IDR of Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (MUMSS) was also downgraded to 'A-' from 'A'. At the same time, Fitch has downgraded the Long-Term IDR of ACOM CO., LTD. to 'BBB+', from 'A-'. The Outlook is Stable. A full list of rating actions is below.

The downgrade reflects Fitch's assessment that a weaker and more challenging operating environment for the Japanese banks as a result of the coronavirus pandemic is likely to negatively affect MUFG's credit profile, although the extent of the economic and financial market implications are unclear. Fitch expects a deep global recession in 2020, with world economic activity to decline by 1.9% in 2020, with US GDP down by 3.3%, the eurozone down by 4.2% and Japan down by 2.7%, with further downside risk; see Global Economic Outlook - COVID-19 Crisis Update April 2 2020 at www.fitchratings.com/site/re/10116672

Mitsubishi UFJ Financial Group, Inc.; Long Term Issuer Default Rating; Downgrade; A-; RO:Sta

; Short Term Issuer Default Rating; Affirmed; F1

; Local Currency Long Term Issuer Default Rating; Downgrade; A-; RO:Sta

; Local Currency Short Term Issuer Default Rating; Affirmed; F1

; Viability Rating; Downgrade; a-

; Support Rating; Affirmed; 1

; Support Rating Floor; Affirmed; A-

----senior unsecured; Long Term Rating; Downgrade; A-

Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.; Long Term Issuer Default Rating; Downgrade; A-; RO:Sta

; Short Term Issuer Default Rating; Affirmed; F1

; Local Currency Long Term Issuer Default Rating; Downgrade; A-; RO:Sta

; Local Currency Short Term Issuer Default Rating; Affirmed; F1

; Support Rating; Affirmed; 1

ACOM CO., LTD.; Long Term Issuer Default Rating; Downgrade; BBB+; RO:Sta

; Short Term Issuer Default Rating; Affirmed; F1

; Local Currency Long Term Issuer Default Rating; Downgrade; BBB+; RO:Sta

; Local Currency Short Term Issuer Default Rating; Affirmed; F1

; Support Rating; Downgrade; 2

Mitsubishi UFJ Trust and Banking Corporation; Long Term Issuer Default Rating; Downgrade; A-; RO:Sta

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; Short Term Issuer Default Rating; Affirmed; F1
; Local Currency Long Term Issuer Default Rating; Downgrade; A-; RO:Sta
; Local Currency Short Term Issuer Default Rating; Affirmed; F1
; Viability Rating; Downgrade; a-
; Support Rating; Affirmed; 1
; Support Rating Floor; Affirmed; A-
MUFG Bank, Ltd.; Long Term Issuer Default Rating; Downgrade; A-; RO:Sta
; Short Term Issuer Default Rating; Affirmed; F1
; Local Currency Long Term Issuer Default Rating; Downgrade; A-; RO:Sta
; Local Currency Short Term Issuer Default Rating; Affirmed; F1
; Viability Rating; Downgrade; a-
; Support Rating; Affirmed; 1
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; Support Rating Floor; Affirmed; A-

----senior unsecured; Long Term Rating; Downgrade; A-

----subordinated; Long Term Rating; Criteria Observation Removed; A-

----subordinated; Long Term Rating; Downgrade; BBB

Key Rating Drivers

IDRS, SUPPORT RATINGS, SUPPORT RATING FLOORS, VIABILITY RATINGS AND SENIOR DEBT

The downgrade of the Viability Ratings is driven by Fitch's assessment of the downward pressure on the operating environment for Japanese banks. The deep global economic downturn adds to domestic structural challenges, such as negative policy rates, intense competition, changing client needs and the country's ageing and shrinking population. This is reflected in Fitch's revision of outlook to negative on our operating environment factor mid-point 'a-'.

Fitch expects the challenging operating environment to pressure the group's ability to restore sustainable profitability and test the group's underwriting and risk management standards, particularly in its offshore markets, where we expect to see weaker asset quality. Higher credit costs and impairments on investments from market dislocation, such as the recently announced one-time amortisation of goodwill at MUFG's Asian banks, will further pressure its ability to improve profitability.

Failure to execute the medium-term business plan, including revenue growth and cost reduction, would undermine the long-term sustainability of earnings, which could pressure the group's ability to generate capital commensurate with its risk appetite. However, Fitch believes MUFG will maintain its capitalisation (common equity Tier 1 ratio of 12.2% at end-March 2019 and 12.6% at end-2019), as we expect the increase in risk appetite to be gradual, well-controlled and accompanied by loss-absorption buffers.

The group's ratings reflect Fitch's view that MUFG's strong company profile, which is characterised by solid franchises in the domestic market and geographical diversification, with a balanced and diversified risk profile, is under pressure from the operating environment challenges. It has become more difficult to maintain pricing and

growth, including at its overseas businesses, in the face of low interest rates globally. We believe the Viability Ratings are sensitive to the downside.

The ratings are supported by MUFG group's sound liquidity and funding position, which is underpinned by abundant access to domestic deposits stemming from a sound franchise and diversified operations. Foreign-currency funding is strengthened via increasing foreign-currency deposits, foreign-currency borrowings and currency swaps.

The Long-Term IDRs are at the same level as the Viability Ratings and Support Rating Floors. The Outlook reflects the Outlook on the Japan sovereign (A/Stable). Fitch assesses MUFG and its subsidiaries on a consolidated basis.

MUFG group's Support Rating and Support Rating Floor reflect Fitch's view that, as a systematically important group in Japan, there is an extremely high probability that it will receive government support in case of need. The government can pre-emptively provide financial assistance to a solvent bank holding company when a serious system disruption is anticipated under Japan's Deposit Insurance Act. We do not believe support prospects have deteriorated, even though MUFG issued senior loss-absorbing debt through the holding company in response to the Financial Stability Board's global requirements. We equalise the ratings between the holding company and operating entities, as we expect support to equally benefit all entities.

The ratings on the senior unsecured debt issued by MUFG and MUFG Bank are at the same level as the entities' IDRs, in line with Fitch's criteria. MUFG's senior bonds, which are eligible as total loss-absorbing capacity, are also rated at the same level as its Long-Term IDR, as we believe the holding company's failure and senior-level default risk are similar to that of wholly owned operating banks, despite the notes' structural subordination features.

SUBORDINATED DEBT AND OTHER HYBRID SECURITIES

MUFG Bank's Basel II Tier 2 instrument is rated two notches below its anchor rating, which is consistent with the base case in Fitch's Bank Rating Criteria published 28 February 2020. The instrument was downgraded by two notches to reflect a one notch downgrade on its anchor rating and one notch for poor recovery expectation based on the new criteria. The anchor rating for the instrument is the IDR because Fitch believes that support can be factored into such instrument ratings, as the government can pre-emptively provide financial assistance to systemically important financial institutions. The rating on the instrument have been removed from the Criteria Under Observation, on which it was placed following the publication of Fitch's updated Bank Rating Criteria; see Fitch Places One IDR, Debt Ratings of 26 APAC Banks Under Criteria Observation, published 4 March 2020, at www.fitchratings.com/site/pr/10113130

SUBSIDIARY AND AFFILIATED COMPANIES

The Long-Term IDRs of MUMSS, which is 60% indirectly owned by MUFG and 40% by US-based Morgan Stanley (A/Stable), are equalised with the IDR of its ultimate parent, MUFG. The ratings reflect MUMSS' key role in supporting the group's securities business. The company also engages in retail, investment banking, sales, trading and research. The Outlook is Stable, in line with MUFG's IDR.

The Long-Term IDRs of ACOM, a 40% owned subsidiary of MUFG, reflect ACOM's strategic role as one of Japan's leading providers of consumer finance services. Its rating is notched down one notch from the IDR of MUFG, which maps to a Support Rating of '2'. The Outlook is Stable, in line with MUFG's support-driven IDR.

RATING SENSITIVITIES

IDRS, SUPPORT RATINGS, SUPPORT RATING FLOORS AND SENIOR DEBT

Factors that could, individually or collectively, lead to negative rating action/downgrade:

Any change in assumptions around lower propensity or deterioration in the sovereign's ability to provide timely support to MUFG could lead to negative rating action on the Support Ratings, leading to lower Support Rating Floors.

A downgrade of the sovereign ratings, which reflects a deterioration of the sovereign's ability to provide support, would lead to lower Support Ratings Floors and Support Ratings. A downgrade of the Viability Ratings would not immediately affect the IDRs, since the IDRs are underpinned by the Support Rating Floors.

Factors that could, individually or collectively, lead to positive rating action/upgrade:

Upgrade on the sovereign ratings could lead to positive rating action on the Support Rating Floors, supportdriven IDRs and senior debt ratings. This is not our base case under a deep global recession.

An upgrade of the Viability Ratings above the Support Rating Floors would also result in similar rating action on the IDRs and senior debt ratings.

VIABILITY RATINGS

Factors that could, individually or collectively, lead to negative rating action/downgrade:

Further challenges in the operating environment for the Japanese banks, such as a prolonged deep recession, could lead us to revise down the operating environment factor mid-point to 'bbb+'. This, in turn, would affect the benchmark mid-points on quantitative factors. Fitch's base case economic outlook is for a deep recession in 2Q20, with recovery from 3Q20, although with downside risk.

Negative rating action could be caused by a sharp deterioration in profitability or a lack of sustainable earnings improvement. This could follow from a dislocation in any of the group's larger overseas markets leading to deterioration of franchise strength, or from weaker asset quality. Deterioration in capitalisation could also lead to negative rating action.

A large increase in risk appetite, such as a significant rise in risky assets that exposes capital and earnings to higher volatility without commensurate increases in risk buffers, could lead to a downgrade. An increase in risky assets could stem from a rising exposure to riskier types of lending, especially late in the credit-cycle, or an increase in higher-risk investments. The common equity Tier 1 ratio consistently falling below 12% could lead to

a downgrade, even if the operating environment mid-point remains at 'a-'. This could be due to a non-performing loan/total loan ratio consistently above 1.5% (2019: 1%), resulting in an operating profit/risk weighted asset ratio continuously below 0.9% (nine months ending December 2019: 0.93%, financial year ending March 2019 (FYE19): 0.88%, FYE18: 0.98%).

Failure to maintain double leverage below 120% or a change in the consolidated-base supervision approach by the regulator could lead to a downgrade of MUFG's Viability Rating.

Factors that could, individually or collectively, lead to positive rating action/upgrade:

Sustained recovery and stabilisation of the global and domestic economy could ease pressure on the operating environment. However, we expect domestic structural challenges to remain a constraint.

Successful execution of the management plan to continually improve capitalisation to meet its target, ensuring a sufficient buffer commensurate with risk, stable and sustainable profitability, with less reliance on volatile trading income, and maintenance of healthy asset quality could lead to positive rating action.

SUBORDINATED DEBT

Factors that could, individually or collectively, lead to negative rating action/downgrade:

-Downgrade of IDRs could lead to negative rating action on the subordinated debt rating.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

-Upgrade of IDRs could lead to positive rating action on the subordinated debt rating

SUBSIDIARY AND AFFILIATED COMPANIES

Factors that could, individually or collectively, lead to negative rating action/downgrade:

- -Any negative rating action on MUFG could lead to negative rating action on MUMSS and ACOM.
- -Deterioration in MUFG's ability or propensity to support MUMSS or ACOM, including due to a decline in ownership or their strategic importance to the group, could lead to negative rating action on MUMSS or ACOM.

Factors that could, individually or collectively, lead to positive rating action/upgrade:

-Any positive rating action on MUFG would lead to positive rating action on MUMSS and ACOM.

Best/Worst Case Rating Scenario

Ratings of financial institutions issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a

negative direction) of four notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit www.fitchratings.com/site/re/10111579

Summary of Financial Adjustments

Total assets and total liabilities exclude acceptances and guarantees from Japan's generally accepted accounting principles balance sheet to be globally comparable.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG Considerations

ESG issues are credit neutral or have only a minimal credit impact on the entity(ies), either due to their nature or the way in which they are being managed by the entity(ies). For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

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Additional information is available on www.fitchratings.com

Applicable Criteria

Bank Rating Criteria (pub. 28 Feb 2020) (including rating assumption sensitivity)

Non-Bank Financial Institutions Rating Criteria (pub. 28 Feb 2020) (including rating assumption sensitivity)

Additional Disclosures

<u>Dodd-Frank Rating Information Disclosure Form</u>

Solicitation Status

Endorsement Status

Endorsement Policy

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Rating Action: Moody's revises the outlook for Triborough Bridge & Tunnel Authority, NY to negative

08 Apr 2020

New York, April 08, 2020 -- Moody's Investors Service has revised the outlook on the Triborough Bridge & Tunnel Authority, NY's (TBTA or MTA Bridges and Tunnels) to negative from stable. The Aa3 ratings on \$7.7 billion of General Revenue Bonds and A1 on \$936 million of Subordinate Revenue Bonds have been affirmed.

RATINGS RATIONALE

The rating action was prompted by the coronavirus outbreak in the US and its impact on both the TBTA and its parent, the Metropolitan Transportation Authority (MTA, Transportation Revenue Bonds A1, RUR for possible downgrade). Both TBTA and MTA traffic and revenues have seen sharp declines since early March, pressuring financial margins. Under the MTA's organization structure, TBTA has an open flow of funds, whereby after the payment of debt service and deposits to the Necessary Reconstruction Fund, annual surpluses are transferred to the MTA to support transit and commuter operations, limiting TBTA cash accumulation. Additionally, MTA has the ability to manage cash across all its component units; therefore TBTA's liquidity is available for use by its parent. Under normal market conditions, we view this relationship between the TBTA and its parent as credit supportive, giving it access to the MTA's broader financial resources if they were needed to support short-term expenses or liquidity needs. Under the current severe revenue stress at the MTA, this relationship becomes a vulnerability. The risks around TBTA's liquidity are exacerbated by the lack of a trustee-controlled debt service reserve fund. The possibility also exists that the MTA will use TBTA revenues to finance mass transit beyond the surplus transfers, which occurred during the last economic downturn.

The Aa3 senior lien / A1 all-in ratings reflect the essentially of the TBTA facilities to the NYC metropolitan region, and its historically solid financial metrics are among the strongest of all toll road facilities. TBTA tolls are set at a level to generate a surplus for transit operations, which normally provides a substantial pledged cushion to bondholders before the transfer to the MTA. Despite this extraordinary stress, the authority's credit profile remains strong and could withstand approximately a 40% reduction in operating revenues in FY 2020 while maintaining its ability to pay debt service without liquidity support.

The rapid and widening spread of the coronavirus outbreak, deteriorating global economic outlook, falling oil prices and asset price declines are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

RATING OUTLOOK

The negative outlook reflects the assumption of materially lower TBTA revenues in 2020 due to the coronavirus combined with ongoing credit pressure on the MTA which may materially reduce the organization's combined liquidity.

LEGAL SECURITY

Senior lien general revenue bonds are secured by a first lien on net revenues of bridges and tunnels; subordinate lien bonds are secured by a second lien on net revenues. The bonds do not benefit from a debt service reserve fund. There is a rate covenant that requires net revenues to be maintained at 1.25x annual debt service for senior lien debt and a strong additional bonds test that requires net revenues to be 1.40x the maximum annual debt service on outstanding and planned bonds if the bonds are issued for something other than to keep the facilities in good operating condition.

PROFILE

The Triborough Bridge & Tunnel Authority, or MTA Bridges and Tunnels, is a public benefit corporation (a corporate entity separate and apart from the state) without any power of taxation. TBTA is empowered to construct and operate toll bridges and tunnels and other public facilities in New York City. The TBTA's facilities include: Robert F. Kennedy Bridge (formerly the Triborough Bridge), Verrazzano-Narrows Bridge, Bronx-Whitestone Bridge, Throgs Neck Bridge, Henry Hudson Bridge, Marine Parkway-Gil Hodges Memorial Bridge, Cross Bay Veterans Memorial Bridge, Hugh L. Carey Tunnel (formerly the Brooklyn-Battery Tunnel), and the Queens Midtown Tunnel. The TBTA receives its revenues from all tolls, rates, fees, charges, rents, proceeds of use and occupancy insurance on any portion of its tunnels, bridges and other facilities, including the net revenues of the Battery Parking Garage, and bridges and tunnels' receipts from those sources. The TBTA issues debt obligations to finance the capital costs of its facilities; in the past, it has also funded the transit and commuter systems operated by other affiliates and subsidiaries of the Metropolitan Transportation Authority or MTA, though that has not been done since 2008. TBTA's surplus amounts are used to fund transit and commuter operations and finance capital projects.

FACTORS THAT COULD LEAD TO AN UPGRADE OF THE RATINGS

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- TBTA traffic and revenues return to pre-coronavirus levels, in concert with stabilization of the credit profile of the MTA
- Dedication of additional financial liquidity to support TBTA bondholders
- Clarity on future long-term capital requirements for both the TBTA and MTA that allows overall debt metrics and DSCRs to improve over the long-term could result in an upgrade

FACTORS THAT COULD LEAD TO A DOWNGRADE OF THE RATINGS

- A material decline in the MTA's liquidity position and overall credit quality, increasing the potential that the TBTA revenues are tapped to support the broader organization
- Declines in TBTA traffic and revenues with no sign of rebounding, leading to forecast financial metrics remaining weak for a sustained period

METHODOLOGY

The principal methodology used in these ratings was Publicly Managed Toll Roads and Parking Facilities published in March 2019 and available at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1091602. Alternatively, please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

REGULATORY DISCLOSURES

For further specification of Moody's key rating assumptions and sensitivity analysis, see the sections Methodology Assumptions and Sensitivity to Assumptions in the disclosure form. Moody's Rating Symbols and Definitions can be found at: https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC 79004.

For ratings issued on a program, series, category/class of debt or security this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series, category/class of debt, security or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the credit rating action on the support provider and in relation to each particular credit rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moodys.com.

The ratings have been disclosed to the rated entity or its designated agent(s) and issued with no amendment resulting from that disclosure.

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Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

Moody's general principles for assessing environmental, social and governance (ESG) risks in our credit analysis can be found at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC 1133569.

At least one ESG consideration was material to the credit rating outcome announced and described above.

The Global Scale Credit Rating on this Credit Rating Announcement was issued by one of Moody's affiliates outside the EU and is endorsed by Moody's Deutschland GmbH, An der Welle 5, Frankfurt am Main 60322, Germany, in accordance with Art.4 paragraph 3 of the Regulation (EC) No 1060/2009 on Credit Rating Agencies. Further information on the EU endorsement status and on the Moody's office that issued the credit rating is available on www.moodys.com.

Please see www.moodys.com for any updates on changes to the lead rating analyst and to the Moody's legal entity that has issued the rating.

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FitchRatings

RATING ACTION COMMENTARY

Fitch Affirms New York State's 'AA+' IDR; Revises Outlook to Negative

Fri 10 Apr, 2020 - 6:06 PM ET

Fitch Ratings - New York - 10 Apr 2020: Fitch Ratings has affirmed the State of New York's 'AA+' Issuer Default Rating (IDR), and the 'AA+' ratings on the following state bonds:

- --\$2.1 billion in outstanding general obligation (GO) bonds;
- --\$34.9 billion in outstanding personal income tax (PIT) revenue bonds;
- --\$10.8 billion in outstanding state sales tax revenue bonds;
- --\$2.5 billion in outstanding Local Government Assistance Corporation (LGAC) and Sales Tax Asset Receivable Corporation bonds;
- --\$1.2 billion in outstanding dedicated highway and bridge trust fund (DHBTF) bonds.

In addition, Fitch has affirmed the ratings on other securities linked to New York State's IDR, as detailed at the end of this release.

The Rating Outlook has been revised to Negative from Stable.

SECURITY

The GO bonds are backed by the full faith and credit of the State of New York.

State PIT revenue bonds are secured by financing agreement payments made by New York State, subject to legislative appropriation. Payments are derived from 50% of the state's PIT receipts and 50% of receipts from the employer compensation expense program.

State sales tax revenue bonds are secured by financing agreement payments made by New York State, subject to legislative appropriation. Payments are derived from one cent of the four-cent statewide sales tax, net of refunds, rising to two cents after LGAC bonds are refunded.

LGAC bonds are secured by financing agreement payments made by New York State, subject to legislative appropriation, from a separate one cent of the four-cent statewide sales tax, net of refunds. STAR bonds are secured by a \$170 million annual payment from the same pledged sales tax, on a subordinate basis to LGAC debt, subject to legislative appropriation.

DHBTF bonds are special obligations of the New York State Thruway Authority payable from transportation revenues dedicated to the highway and bridge trust fund in the form of cooperative agreement payments, subject to annual appropriation.

ANALYTICAL CONCLUSION

The revision of the Rating Outlook to Negative on New York State's 'AA+' IDR and on ratings linked to the IDR, reflects the considerable economic and fiscal uncertainty faced by the state as it confronts the coronavirus pandemic. Fitch views the sudden economic shock brought by the pandemic and the severe recession now unfolding as being well beyond the routine cyclicality typically faced by state and local governments and reflected in IDRs. While New York has a track record of very strong operating performance, its ability to absorb the shock and maintain financial

resilience will be tested by the depth and duration of the recession. The resulting pressure on credit is particularly acute for New York as one of the global epicenters of the pandemic.

The Negative Outlook indicates the direction the rating is likely to move over a one-to two-year period, however it does not imply that a rating change is inevitable. Fitch expects the direction of the state's credit quality to become clearer only after the immediate health crisis subsides and as the outlines of the recession and the effectiveness of the state's fiscal responses come into view. The Outlook revision, and the evaluation of the state's credit quality going forward, are informed by Fitch's coronavirus baseline and downside scenarios as described further below.

ECONOMIC RESOURCE BASE

The state's economic resource base is broad and dominated by services. The finance sector is a particularly large and important component of overall economic and fiscal performance, and is prone to above-average cyclicality. Economic growth is concentrated in the downstate region, home of the nation's largest metropolitan area. Wealth indices are well above average and employment growth has been steady until the coronavirus outbreak.

KEY RATING DRIVERS

Revenue Framework: 'aaa'

New York State's revenue base is diverse and has solid long-term growth prospects, driven by the state's solid economic profile. Taxes, in particular the large PIT component, are economically sensitive. The state has complete independent legal control over revenues.

Expenditure Framework: 'aaa'

The natural pace of New York's spending growth, driven by education and Medicaid funding demands, is likely to be marginally above revenue growth over time,

requiring ongoing budget management. The state has ample flexibility to control spending and fixed carrying costs are above average for a state but represent a low burden on resources.

Long-Term Liability Burden: 'aaa'

New York State's long-term liability burden, including debt and net pension liabilities, is just under the median for U.S. states as a percent of personal income, with tax-supported debt having declined steadily in recent years. Pensions are well-funded, with net liabilities below the median for states. Effects of the current market volatility are likely to result in an uptick in net liabilities.

Operating Performance: 'aa'

Operating performance has been aided by strong budgeting practices including multiyear planning, and by fiscal management improvements implemented in recent years, such as consensus revenue forecasting and caps on spending growth. Formal budgetary reserves are modest, with very strong financial resilience driven by the state's willingness to quickly adjust revenues and expenditures in response to fiscal deterioration. The state's ability to absorb the fiscal impact of the coronavirus crisis and recession now underway and ultimately rebuild financial resilience is a key test for the assessment of operating performance.

RATING SENSITIVITIES

Factors that could, individually or collectively, lead to positive rating action/upgrade:

--The Rating Outlook could be revised back to Stable if the state is able to effectively absorb the fiscal challenges triggered by a short but severe economic contraction and rebuild financial resilience over time.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

- --Economic contraction extending well into the second half of the year or beyond, consistent with Fitch's coronavirus downside scenario, that triggers sustained and deep revenue declines and materially erodes its historically very strong gap-closing capacity.
- --A weakening of the improved budgetary management practices institutionalized over the last decade, leading to the reemergence of material and recurring structural imbalances and the reliance to an excessive degree on one time budget solutions, including long-term borrowing, to support operations.

BEST/WORST CASE RATING SCENARIO

Ratings of Public Finance issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of three notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings visit

https://www.fitchratings.com/site/re/10111579.

CURRENT DEVELOPMENTS

Sector-Wide Coronavirus Implications

The recent outbreak of the coronavirus and related government containment measures worldwide creates an uncertain global environment for U.S. state and local governments and related entities in the near term. As severe limitations on economic activity only began very recently, most state governments' fiscal and economic data do not reflect any credit impairment. Material changes in revenues and expenditures are occurring across the country and likely to worsen in the coming weeks and months as economic activity suffers and public health spending increases. Fitch's ratings are forward looking, and Fitch will monitor developments in state and local governments as a result of the virus outbreak as it relates to

severity and duration, and incorporate revised expectations for future performance and assessment of key risks.

In its baseline scenario, Fitch assumes sharp economic contractions hit major economies in 1H20 at a speed and depth that is unprecedented since World War II. Recovery begins from 3Q20 onward as the health crisis subsides after a short but severe global recession. GDP remains below its 4Q19 level through most of 2021. Additional details, including key assumptions and implications of the baseline scenario and a downside scenario, are described in the full report at http://www.fitchratings.com/site/re/10116778 (Fitch Ratings Coronavirus Scenarios: Baseline and Downside Cases, April 2020).

Federal Aid Provides Some Support for State Budgets

Federal aid measures enacted in recent weeks will benefit state budgets, although details remain fluid. The Families First Coronavirus Response included a 6.2% increase in the Federal Medical Assistance Percentage (FMAP) for Medicaid for every quarter of the national emergency declared by the president on March 13. FMAP is the rate at which the federal government reimburses states for Medicaid spending. The Center on Budget and Policy Priorities estimates the 6.2% increase could provide New York with \$6.7 billion in federal aid over a full year, or roughly \$1.7 billion each quarter. The ultimate value of the FMAP rate increase will depend on states' actual Medicaid spending, among other factors.

Under the Coronavirus Aid, Relief and Economic Security Act enacted on March 27, the U.S. Treasury department will distribute \$150 billion to state and local governments within 30 days of enactment under a population-based formula. The statute limits the use of funds to coronavirus expense reimbursement rather than to offset anticipated state tax revenue losses. Federal Funds Information for States projects New York is eligible for \$7.5 billion, with at least \$4.1 billion allocated to the state and up to \$3.4 billion allocated to local governments with populations of 500,000 or more.

The Federal Reserve's recent announcement of a Municipal Lending Facility (MLF) to directly purchase up to \$500 billion in short-term debt issued by states, the District of Columbia and the largest counties and cities provides a potentially valuable source of short-term liquidity for New York. Under terms of the program, Fitch calculates that New York could borrow up to \$21.9 billion. Critical details for this

program, including how quickly the Federal Reserve will begin purchases, are yet to be determined.

CREDIT PROFILE

Coronavirus Impact in New York: Liquidity and Budget

Fitch does not currently anticipate that any state, including New York, will be unable to meet operating cash demands but considers liquidity the most significant risk the pandemic presents and is closely monitoring developments. The direct cost of pandemic response, the sharp falloff in economic activity and financial markets, delayed PIT filings and the ultimate level and timing of federal aid remain key challenges for New York State's liquidity and budget over the near term.

The state is entering the current crisis with solid cash balances following a long period of strong operating performance, supported by a high degree of inherent fiscal flexibility. As recently as February, tax collections in fiscal 2020 were performing strongly, with the comptroller reporting total state operating funds receipts 6.9% ahead of the prior year. In the January 2020 executive budget, the governor forecast a fiscal 2020 general fund balance as of the March 31 year-end at \$6.5 billion, even before considering interfund balances available outside the general fund and other actions to mobilize liquidity. Despite substantial outlays to date for crisis response, the state estimates it ended the fiscal year with \$8.9 billion in the general fund.

Liquidity at the close of fiscal 2020 and in the new fiscal year is being severely affected by the pandemic and by actions taken in response, particularly by the delay in tax filing to July 15. As one of the global epicenters of the pandemic, New York has borne considerable direct emergency response costs, which will continue to rise as the state increases its health care capacity.

More significantly, the fiscal 2021 executive budget anticipated \$9.2 billion in state PIT receipts in April, equal to 11% of forecast state tax receipts in the new fiscal year, most of which will be collected in July given the state PIT filing delay, in sync with the federal tax filing delay. The temporary liquidity gap that will open through the first quarter of fiscal 2021 will be aggravated further by the impact of job losses and "stay-at-home" restrictions on PIT withholding, sales tax and other tax receipts. For all of fiscal 2021, the budget office estimates a rough impact of \$10 billion on

budgeted revenues, equal to 11% of state operating funds tax receipts forecast by the governor in January. This figure is likely to change as actual collections come in and provide a better baseline for estimates going forward.

Fiscal 2021 Budget Reflects Evolving Fiscal Dynamics

Precise details on the state's enacted budget for fiscal 2021 remain limited, but Fitch views it as providing a drastically expanded set of tools to confront both the liquidity and budgetary challenges ahead. It authorizes \$11 billion in short-term borrowing to bridge the immediate liquidity gap opened by the PIT filing delay. Short-term borrowing would consist of \$8 billion in PIT revenue notes and a \$3 billion line of credit. Both are intended to be repaid during fiscal 2021, but could be extended and ultimately taken out with long-term PIT revenue bonds. The state anticipates issuing an initial tranche of short-term debt in late April or early May, with additional issuances dependent on the state's cash flow needs, including the availability of federal aid.

The enacted budget empowers the budget director to recalibrate spending downward, repeatedly if necessary, to conserve liquidity and to align spending to the direction of tax collections. One provision provides for an evaluation of actual to forecast tax receipts and actual to budgeted disbursements at three measurement periods: April 30, June 30 and December 31. Revenues falling 1% below or spending rising 1% above expectations would trigger across-the-board reductions of any amount necessary to maintain balance, unless the legislature agrees to an alternative plan within 10 days; debt service is not subject to reduction.

For the April 30 measurement date, the enacted budget specifies use of the executive budget tax forecast for this test, signaling that a substantial round of spending reductions is likely early in the fiscal year. Another provision more broadly authorizes the budget director to withhold appropriations for the following month upon five days' notice to the legislature. Total state operating funds spending in the plan is authorized at a \$105.8 billion maximum level, while contemplating that actual spending will likely fall \$10 billion below that level as revenue losses emerge. The plan reportedly allows the state to tap the FMAP rate increase, noted above, while implementing many of the reforms proposed by the governor's Medicaid Redesign Team in response to the sizable Medicaid structural imbalance that emerged at the start of fiscal 2020.

Federal funds from three rounds of coronavirus response bills passed to date (discussed above) and FEMA disaster assistance will likewise provide meaningful budgetary support and liquidity, but the timing and size of assistance remain unclear. The governor has imposed a stay-at-home order through April 29, with only limited exceptions, and has also noted the intent to coordinate with New Jersey and Connecticut on an eventual relaxation of restrictions once the immediate health crisis subsides.

Updated FAST Results Signal Fiscal Pressure

New York's exposure to economic and revenue cyclicality is above average, driven primarily by economically sensitive PIT receipts, although the state has at its disposal a wide array of budget management tools which have enabled it to confront sizable budget gaps in the past. Combined with the expanded statutory powers granted in the fiscal 2021 budget, Fitch believes that New York can absorb a higher degree of fiscal stress posed by the crisis, assuming a short, sharp contraction is followed by a return to growth in 2H2O, as described in Fitch's baseline coronavirus above.

The Fitch Analytical Stress Test (FAST) scenario analysis tool, which relates historical tax revenue volatility to GDP to support the assessment of operating performance under Fitch's criteria, has now been adjusted to reflect GDP parameters consistent with Fitch's global coronavirus forecast assumptions. Under the coronavirus base case scenario, annual GDP falls -3.3% in year one, followed by growth of 3.8% and 2% in years two and three. This scenario results a first year decline in New York's tax revenues of 15.6% and cumulative decline over the three year scenario of 5%. This compares to the state median decline of 11.3% in the first year and 2.7% over the three year scenario. Given the high degree of uncertainty, under a plausible downside scenario with a sharper contraction in year one and a longer recovery, the resulting impact on revenues could weaken financial resilience and result in a lower assessment for operating performance.

New York State's 'AA+' IDR continues to reflect its considerable economic resources, solid long-term economic performance, low liability burden, very strong ability to control the budget, and responsive budget management. Until the current pandemic, fiscal performance in recent years had been steady, supported by broad economic gains, careful fiscal management, and the presence of significant balances from extraordinary monetary settlements, despite cyclical tax revenue experience.

For additional information on New York State's IDR, please see "Fitch Rates New York State's \$915MM

GO Bonds 'AA+'; Outlook Stable" (Oct. 24, 2019); for more information on state PIT revenue bonds, see "Fitch Rates New York State Dormitory Auth (NY) \$3.2B Personal Income Tax Revs 'AA+'' (Dec. 16, 2019); for more information on state sales tax revenue bonds, see "Fitch Rates Empire State Development's (NY) \$2.1B Sales Tax Revs 'AA+'' (March 16, 2019).

Related Rating Actions

In conjunction with the affirmation of the state's IDR, Fitch has affirmed the ratings on various state appropriation-supported bonds, at 'AA', one notch below the state IDR, and revised the Outlook to Negative:

- --Service contract bonds issued by state agencies;
- --DASNY City University of New York (CUNY) revenue bonds;
- --DASNY Department of Health (DOH) revenue bonds;
- --DASNY mental health services facilities improvement revenue bonds;
- --DASNY secured hospitals program revenue bonds;
- -- New York City Transitional Finance Authority state building aid revenue bonds:
- --Metropolitan Transportation Authority dedicated tax revenues;
- --State of New York Municipal Bond Bank Agency (MBBA) special school purpose revenue

bonds (prior year claims);

--MBBA special school purpose revenue bonds (prior year claims - The City of New York), 2012

series A.

Finally, Fitch has affirmed the rating on several state intercept-backed bonds, at 'AA-', two notches below the state IDR, reflecting individual program mechanics for the intercept, and has likewise revised the Rating Outlook to Negative:

- -- DASNY school districts revenue bond financing program revenue bonds;
- --DASNY court facilities lease revenue bonds (City of New York issue).

The ratings on all of the related debt listed above are directly linked to the state's IDR.

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

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ENTITY/DEBT	ATING	
New York, State of (NY) [General Government]	T AA+ DR	Affirmed

ENTITY/DEBT	RATIN	NG		
 Metropolitan Transportation Authority (NY) /Dedicated Tax Revenues/1 LT 	LT	AA	Affirmed	
New York, State	LT	AA	Affirmed	

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APPLICABLE CRITERIA

U.S. Public Finance Tax-Supported Rating Criteria (pub. 27 Mar 2020) (including rating assumption sensitivity)

APPLICABLE MODELS

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

FAST States & Locals - Fitch Analytical Stress Test Model, v2.4.0 (1)

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Rating Action: Moody's downgrades MTA, NY's Transportation Revenue Bonds

to A2 from A1; outlook is negative

16 Apr 2020

\$22.8 billion TRB bonds and \$7.5 billion of TRB BANs affected

New York, April 16, 2020 -- Moody's Investors Service has downgraded to A2 from A1 the rating on the Metropolitan Transportation Authority's, NY (MTA) Transportation Revenue Bonds. The outlook has been revised to negative. Moody's has also downgraded to MIG 2 from MIG 1 the rating on MTA's Transportation Revenue Bond Anticipation Notes.

This action concludes the rating review initiated on 19 March 2020, following MTA's March 18 announcement of a \$4 billion revenue shortfall in fiscal 2020 prompted by the very sharp decline in ridership and toll revenues since the outbreak of coronavirus in the US.

RATINGS RATIONALE

The downgrade of the Transportation Revenue Bond ratings to A2 from A1 and negative outlook reflect the impact of the coronavirus crisis on system utilization and the regional economy, which will weaken financial and debt metrics well beyond the end of the economic disruption. The sharp drop in fiscal 2020 fares and tax revenue will create cash flow challenges, exacerbate risks from MTA's high short-term debt exposure, and create large structural budget gaps that will be difficult to resolve given MTA's already-narrow financial position and high fixed costs. While MTA has identified sufficient resources to resolve its budget gaps over the next two years, most of these solutions will be one-time in nature and/or result in higher-than-expected debt leverage. In addition, this period of economic disruption will alter the timing and implementation of MTA's \$55 billion capital program, which would diminish asset condition and service quality.

The MTA's financial pressures are balanced by bondholder protection provided by strong governance and a gross pledge of the authority's diverse revenue sources, the system's essential service to a vast and economically robust service area, and strong political and financial support from New York State (Aa1 negative), New York City (Aa1 negative) and the US Government (Aaa stable). Recent support includes state legislation that created new budget flexibility and authorized \$10 billion of MTA deficit financing, and substantial federal emergency assistance, including a \$3.8 billion grant for operations, approval for additional FEMA reimbursements, and the potential for Federal Reserve Bank lending through the State of New York. MTA will also benefit from federal economic assistance to the New York region, which will bolster household income and spending and therefore dedicated tax revenue.

The rapid and widening spread of the coronavirus outbreak, deteriorating global economic outlook, falling oil prices, and financial market declines are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. In the longer term, MTA will also be challenged by social risks such as growing and relatively inflexible labor costs, and environmental risks (particularly from natural disasters), although the latter is partially mitigated by MTA's significant resiliency investments and the availability of private insurance and federal disaster recovery assistance.

The downgrade of the rating on MTA's Transportation Revenue Bond (TRB) Anticipation Notes to MIG 2 from MIG 1 is based on the downgrade of the long-term TRB rating to A2 with a negative outlook. The minimum long-term rating threshold for a MIG 1 rating is A2 stable.

The MIG 2 rating on the BANs reflects the expectation that MTA will have adequate market access at BAN maturity given the MTA TRB's satisfactory long-term credit quality (A2 negative), strong BAN takeout management plans, and the MTA's status as a sophisticated, frequent issuer of bonds and notes. Moreover, in the unlikely event of a market dislocation that impedes timely long-term debt issuance, sufficient liquidity will likely be available to redeem the BANs when external liquidity sources and pending grants proceeds are included.

RATING OUTLOOK

The negative outlook is based on the expectation that steep coronavirus related revenue losses will recover gradually over at least several years, creating large budget gaps through a gradual and incomplete recovery period. The gaps will be challenging to resolve without further weakening financial and debt metrics, or negatively affecting MTA's service delivery and capital plans. Continued support from state, local or federal governments is highly likely given MTA's essentiality to the regional and national economy. However, the depth and duration of our forecasted MTA budget gaps will test the timing and strength of support from parent governments who will also be experiencing economic and financial strain as a result of the coronavirus crisis.

The short-term BAN rating does not carry an outlook.

FACTORS THAT COULD LEAD TO AN UPGRADE OF THE RATINGS

For the long-term TRB rating:

- Implementation of sustainable, structural budget solutions, that increase debt service coverage and liquidity above the historic 3-year average
- Sustained recovery of ridership and revenues to historic levels
- Reduced short-term debt risk and evidence that projected debt leverage metrics will stabilize at or below 3.5x
- Reduced labor-related financial and operating constraints and related fixed costs
- Continued progress with capital projects that supports improved asset condition and satisfactory service performance

For the short-term BAN rating:

- An upgrade of MTA's Transportation Revenue Bond rating (the expected takeout bond), combined with improved internal liquidity position

FACTORS THAT COULD LEAD TO A DOWNGRADE OF THE RATINGS

For the long-term TRB rating:

- Longer-than-expected economic and ridership disruption that leads to larger revenue losses and budget gaps
- Inability to structurally balance the budget after the crisis subsides that leads to significant reduction in liquidity and/or debt service coverage by net revenues that averages less than 1x
- Greater than expected rise in leverage position and associated fixed costs, or increased short-term debt risk
- Declines in service performance that reduce public and/or political support for MTA, its subsidies and future fare increases
- Significant capital project delays or cost overruns that increase debt or destabilize public support for the enterprise

For the short-term BAN rating:

- Significant decline in available liquidity to levels that would provide less than 50% coverage of maturing BANs
- Evidence of very limited market access for long-term bonds
- Sustained pattern of tight timing between takeout pricing and BAN maturity
- Downgrade of the long-term TRB rating below Baa1 stable

LEGAL SECURITY

TRB Security

The transportation revenue bonds (TRBs) are one of four primary credits that the MTA uses to finance its capital programs. The TRB bonds are special obligations of the MTA, payable on a gross basis from transit and commuter system revenues, certain state and local operating subsidies, dedicated taxes, and operating surpluses of the Triborough Bridge and Tunnel Authority, NY (TBTA) (Sr lien Aa3 negative) after operating and maintenance requirements and debt service payments on the TBTA's own debt. TRB financed projects must be approved by the state's Capital Program Review Board (CPRB).

The TRB rate covenant requires sum sufficient coverage by fares and subsidies of debt service and O&M. Only board approval is required to raise fares for the rate covenant. Unlike most other rated transit systems, there is no debt service reserve fund and no explicit additional bonds test for the TRBs, although the balanced budget requirement and CPRB approval provide solid leverage controls. Pledged revenues flow to a trustee held account and are set-aside monthly for debt service before being released for operations. The BANs are payable from proceeds of previously-authorized TRB notes and/or long-term TRB bonds, and the interest portion is further secured by a subordinate pledge of the transportation revenue bond pledged revenues.

BAN Security

The BANs are secured by the proceeds of other Transportation Revenue Bond anticipation notes, the proceeds of Transportation Revenue Bonds and, with respect to interest payable on the notes, amounts available for payment of subordinated indebtedness.

BANs are not secured by available cash and investments, however MTA could use these resources to redeem the notes in the event of a market dislocation that impedes timely long-term debt issuance to redeem the BANs. Based on cash and unrestricted investments available on February 29, 2020 and our liquidity forecast, MTA's available resources would provide ample coverage of all maturing BANs plus other BANs and FRNs being remarketed in the two prior months.

BAN credit quality would be negatively affected if MTA's liquidity levels decline dramatically over the next two years and/or additional market access-dependent debt is issued that matures in the two months prior to a BAN maturity.

PROFILE

The MTA is a public benefit corporation of New York State, created by the New York State legislature in 1965. The MTA's governing board is appointed by the governor with advice and consent of the state Senate. The MTA is responsible for developing and implementing a unified mass transportation policy for the Metropolitan Transportation District which includes New York City and the surrounding Duchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties. In addition to these counties, MTA's service area also includes Fairfield and New Haven counties in CT. MTA operations are performed through nine different agencies, including the Triborough Bridge and Tunnel Authority, NY (Sr lien Aa3 negative). TBTA profits, after paying its own O&M and debt service, are transferred to MTA to subsidize transit, bus and commuter rail operations.

METHODOLOGY

The principal methodology used in the long-term ratings was Mass Transit Enterprises Methodology published in December 2017 and available at https://www.moodys.com/researchdocumentcontentpage.aspx? docid=PBM_1105431. The principal methodology used in the short-term ratings was US Bond Anticipation Notes and Related Instruments Methodology published in October 2019 and available at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBM_1146782. Alternatively, please see the Rating Methodologies page on www.moodys.com for a copy of these methodologies.

REGULATORY DISCLOSURES

For further specification of Moody's key rating assumptions and sensitivity analysis, see the sections Methodology Assumptions and Sensitivity to Assumptions in the disclosure form. Moody's Rating Symbols and Definitions can be found at: https://www.moodys.com/researchdocumentcontentpage.aspx? docid=PBC_79004.

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At least one ESG consideration was material to the credit rating action(s) announced and described above.

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Metropolitan Transportation Authority, NY Ratings Placed On CreditWatch Negative Due To **COVID-19-Related Pressures**

May 4, 2020

SAN FRANCISCO (S&P Global Ratings) May 4, 2020--S&P Global Ratings placed the following ratings on the Metropolitan Transportation Authority (MTA), N.Y., on CreditWatch with negative implications:

- 'A-' issuer credit rating (ICR) on the MTA
- 'a-' stand-alone credit profile (SACP) on the MTA
- 'A-' long-term rating and underlying rating (SPUR) on the MTA's previously issued transportation revenue bonds (TRBs)
- 'AA/A-1+' dual rating on the MTA's series 2012G-2 and 2002G-1G variable-rate TRBs, with enhancement by letters of credit from Toronto Dominion Bank, and on the MTA's series 2015E-1 variable-rate TRBs, with enhancement by a letter of credit from U.S. Bank N.A.
- 'AA/A-1' dual rating on the MTA's series 2005E-2 and 2015E-3 variable-rate TRBs, with enhancement by letters of credit from Bank of America N.A., and on the MTA's series 2012A-2 variable-rate TRBs, with enhancement by a letter of credit from Bank of Montreal
- 'AA/A-1' dual rating on various other variable-rate TRBs with enhancement by letters of credit from Barclays Bank PLC, PNC Bank, N.A., MUFG Bank Ltd., and Landesbank Hessen-Thueringen Girozentrale

At the same time, we assigned our 'A-' long-term rating to the MTA's \$250 million series 2015A-2 remarketed TRBs (mandatory tender bonds), and simultaneously placed the rating on CreditWatch with negative implications.

We also affirmed our 'SP-1' short-term rating on the MTA's previously issued transportation revenue bond anticipation notes (BANs).

"The CreditWatch action reflects our assessment of the significant and growing operational and financial impacts on the MTA as a result of the ongoing COVID-19 pandemic," said S&P Global Ratings credit analyst Paul Dyson. "These impacts include efforts to promote health and safety with social distancing protocols that are leading to significant fare, toll, and likely tax and subsidy revenue declines of several billion dollars on a combined basis, projected over 2020-2021," Mr. Dyson added.

"The action also reflects our view that, despite federal aid of \$3.8 billion already granted to the MTA in response to the pandemic's impact, and absent additional materially positive cash flow

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Metropolitan Transportation Authority, NY Ratings Placed On CreditWatch Negative Due To COVID-19-Related Pressures

solutions such as additional federal aid and other measures, we could lower the rating by one or more notches over the next 90 days," said Mr. Dyson.

We analyzed the MTA's risks related to environmental, social, and governance factors and determined that, with the exception of social risks, all are in line with our view of the standard for mass transit. However, the MTA is exposed to social risks related to COVID-19-related social distancing requirements to promote health and safety that are already causing significant operating and financial pressures. We will continue to evaluate these risks as the situation evolves.

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Triborough Bridge and Tunnel Authority (TBTA)

Issuer: Triborough Bridge and Tunnel Authority				
Watch Status Resolved	Rating(s)	Outlook		
General Revenue Bonds	AA	Developing (from Watch-Downgrade Status)		
Subordinate Revenue Bonds	AA-	Developing (from Watch-Downgrade Status)		

Methodology:

U.S. Public Toll Roads, Bridges & Tunnels Revenue Bond Rating Methodology

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William Cox, Senior Managing Director (646) 731-2472 wcox@kbra.com Rating Summary: KBRA has affirmed the Triborough Bridge and Tunnel Authority (TBTA) General Revenue Bonds and Subordinate Revenue Bonds, has assigned a developing outlook and has removed them from Watch-Downgrade. The removal from Watch-Downgrade reflects the ongoing recovery of traffic on the TBTA's tolled bridges and tunnels. The Developing outlook reflects uncertainty regarding the extent of overall recovery on toll revenues due to the evolving nature of the COVID-19 crisis.

May 2020 Toll traffic for the MTA Bridges and Tunnels was down 49% compared with May 2019. Monthly volume had been down 65% in April. May's monthly revenues declined slightly less at 46.6% due to a slightly higher proportion of higher toll paying commercial vehicles. KBRA believes that TBTA has likely experienced the worst of traffic declines as June traffic thru the 24th only declined by 32% compared to the same time in 2019 and, if May revenues were realized for the remainder of the year, this will result in approximately 1.2x total debt service coverage.

KBRA performed a breakeven analysis that shows TBTA (which operates on a calendar year basis) can withstand an annualized 42% decline in toll revenues (\$900 million) relative to the FY 2020 budget before its combined debt service coverage falls below 1.00x. While toll revenues for January and February 2020 were slightly above budget (up by 1.2%), TBTA experienced declines of 26.3% and 59.7% compared to budgeted March and April 2020 figures. As such,

TBTA can now withstand a roughly 51% decline for the remainder of the year before breaching 1.0x combined debt service coverage. Additionally, MTA officials report TBTA has more than ample liquidity to meet this year's debt service obligations.

TBTA bonds do not have a debt service reserve fund. While it is not pledged, TBTA does have approximately \$412 million (representing 270 days cash on hand) in the Necessary Reconstruction Fund (NRF) that can be used for emergency capital and operating needs based on management discretion. In addition, KBRA understands that the TBTA can access liquidity that is available to the MTA through an interagency loan. The MTA has received approximately \$3.9 billion in CARES funding for operating purposes. On April 16, the MTA requested an additional \$3.9 billion of federal aid as the agency estimates the financial impact of the coronavirus may be greater than previously estimated. KBRA expects the MTA's management team to continue to demonstrate its ability to navigate financial and political challenges.

In order to help quantify the near-term challenges, KBRA has developed a stress scenario to reflect toll revenue declines from budgeted FY 2020 figures. Based on April and May traffic results, KBRA has adjusted its stress scenario assuming 49% decline in the second quarter from previously assumed 65%. For the second half of the year, KBRA assumes a decline of 35% from previously assumed 30% in the third quarter and 15% in the fourth quarter reflecting a gradual recovery given the easing of the lockdown. KBRA assumes investment income, expenses, and debt service remain as shown in the FY 2020 Budget. This stress demonstrates that TBTA has adequate cushion and can absorb significant declines in traffic.



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			KBRA's Updated Stress Scenario			
FYE December 31 (\$ in millions)	2019 Unaudited	2020 Adopted Budget	2020	2021	2022	2023
B&T Revenues Total B&T Revenues Investment Income and Other Total Revenues Total Operating Expenses	2,071 32 2,103 544	2,118 20 2,138 555	1,391 20 1,411 555	2,118 20 2,138 572	2,118 20 2,138 588	2,118 20 2,138 591
Net Revenues Available for DS	1,559	1,583	856	1,566	1,550	1,547
MTA B&T Senior Lien DS Senior DSCR	558 2.79 x	602 2.63 x	541 1.58x	595 2.63x	591 2.62x	602 2.57 x
MTA B&T Subordinate Lien DS Total DS	103 661	102 704	102 643	102 698	103 694	103 705
Combined DSCR	2.36x	2.25x	1.33x	2.25x	2.23x	2.19x
Source: TBTA/MTA Preliminary Offering Statement Note: Figures represent non-reimbursable amounts						
Necessary Reconstruction Fund Balance balance as % of total OpEx	412 76%	412 74%	412 74%	412 72%	412 70%	412 70%
Days Cash on Hand based on the Necessary Reconstruction Fund (NRF)* Balance	276	270	270	262	255	254
Surplus to Support Mass Transit	783	879	213	869	856	842

^{*}This Reserve Fund is intended to be used for emergency capital and operating needs of the TBTA based on management discretion.

The Developing Outlook reflects the uncertainty regarding the timing and extent of the overall recovery of tolled traffic due to the evolving nature of the COVID-19 crisis.

Key Credit Considerations

KBRA continues to monitor the direct and indirect impacts of the COVID-19 virus. Click here to access KBRA's ongoing research on the topic.

The rating and outlook revision reflects the following key credit considerations:

Credit Positives

- The TBTA Board's Independent rate setting authority and its proven track record of implementing required rate increases.
- Essentiality of the TBTA facilities to the regional transportation network and the resilience of NYC regional tolled traffic even amidst a near total lock down of the regional economy.
- Toll rates set to generate strong operating surpluses that are used to subsidize MTA's mass transit system.

Credit Challenges

- The COVID-19 crisis presents unprecedented challenges to the TBTA's toll traffic and fiscal operations.
- Absence requirement for funding debt service reserve funds.

Rating Sensitivities

- Growth in traffic volume that increases TBTA net revenues and results in a substantial and sustained increase in DSC.
- Significant declines in traffic volume, increases in operating expense, or higher leverage that reduces combined General Revenue and Subordinate Revenue Bond DSC below 1.75x.

ESG Considerations

When relevant to credit, ESG factors are incorporated into the credit analysis in the same manner as all other creditrelevant factors. Among the ESG factors that have impact on this rating analysis are:

- Discussions in RD 3 and 4 reflect Governance Factors. KBRA considered the MTA/TBTA's Regulatory/Management Framework, financial profiles, and its rate-setting authority as factors that support ongoing debt service.
- Discussions in RD 1 and 2 reflect Social Factors. KBRA has examined the following areas for this credit: trends in population, education, income, poverty levels, employment, unemployment, and the potential impact of the COVID-19 crisis.

More information on ESG Considerations for the Public Finance sector can be found here.



Rating Determinants (RD)	Senior	Subordinate
1. Size and Scope of Operations	AA+	AA+
2. Demand Assessment	AA+	AA+
3. Regulatory/Management Framework	AA+	AA+
4. Financial Profile	AA	AA-
5. Security Provisions	Α	A-

There has been no new update to the above-mentioned rating determinants since KBRA's report published on November 20, 2019. To access the more detailed discussion, please click here. This report focuses on the tolled traffic impact from COVID-19 crisis.

TBTA General Revenue Bonds Page 3 June 30, 2020

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Metropolitan Transportation Authority, NY Ratings Lowered On Steep Financial Decline; Removed From CreditWatch

July 7, 2020

One or more of the ratings referenced within this article was assigned by deviating from S&P Global Ratings' published Criteria. The exception relates to the application of "Mass Transit Enterprise Ratings: Methodology And Assumptions" (Mass Transit Criteria), published Dec. 18, 2013.

Tables 4, 5, and paragraph 65 in the Mass Transit Criteria call for the use of historical data in assigning initial scores for economic fundamentals, market position, debt service coverage, liquidity, financial flexibility, and debt burden factors. The initial scores for economic fundamentals and market position are based on data from the last five years and the initial scores for debt service coverage, liquidity, financial flexibility, and debt burden factors are based on data from the most recently completed fiscal year (sometimes referred to as the "base year"). Under the Mass Transit Criteria, we can make various positive and negative adjustments to the initial scores, but these can only change those initial scores by a maximum of 1 point per adjustment and 2 points in the aggregate. Given the significant negative impact of COVID-19 on various demand and financial metrics, we believe the existing criteria framework will limit our ability to adequately incorporate a forward looking view in our assessments of these factors. Similarly, depending on the speed of the recovery, the reverse situation could be observed in a future year, where by an entity's negative performance in the most recently completed year, or its significant impact on a 5-year historical average, will inappropriately weigh down the initial score, while any expectations we may have for positive performance as the economy recovers could only improve the score by 1 point. Accordingly, we excepted this rating from the provisions of the Mass Transit Criteria noted above by allowing instead for the use of current and next fiscal year projections in assigning the initial scores, rather than as an adjustment in assessing economic fundamentals, market position, debt service coverage, liquidity, financial flexibility, and debt burden scores.

In this instance, without the criteria exception, we would use 2014-2019 data to derive the initial scores for economic fundamentals and market position and 2019 data to derive the initial scores for all financial metrics per our analysis of the credit under our mass transit criteria. Under this exception, we are using 2015-2020 data in the economic fundamentals and market position analyses and 2019 data for the financial risk profile analysis.

SAN FRANCISCO (S&P Global Ratings) July 7, 2020--S&P Global Ratings took the following rating actions on the Metropolitan Transportation Authority (MTA) of New York:

- We lowered our issuer credit rating (ICR) to 'BBB+' from 'A-' on the MTA and removed the rating from CreditWatch, where it had been placed with negative implications on May 4, 2020;

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- We lowered our stand-alone credit profile (SACP) to 'bbb+' from 'a-' on the MTA;
- We lowered our long-term rating and underlying rating (SPUR) to 'BBB+' from 'A-' on the MTA's previously issued transportation revenue bonds (TRBs) and removed the rating from CreditWatch, where it had been placed with negative implications on May 4, 2020;
- We lowered our short-term rating to 'SP-2' from 'SP-1' on the MTA's previously issued transportation revenue bond anticipation notes (BANs);
- We assigned our 'BBB+' long-term rating to the MTA's proposed \$600 million series 2020D TRBs (mandatory tender bonds), consisting of \$300 million subseries 2020D-1 and \$300 million subseries 2020D-2; and
- We assigned our 'SP-2' short-term rating to the MTA's proposed \$500 million series 2020B-S transportation revenue BANs.

The outlook, where applicable, is negative.

Due to the lowering of the rating on the MTA's SPUR, under our joint criteria methodology we also took the following additional rating actions:

- We lowered our dual ratings to 'AA-/A-1+' from 'AA/A-1+' on various MTA variable-rate TRBs with enhancement by letters of credit from Toronto Dominion Bank and U.S. Bank N.A. and removed the ratings from CreditWatch, where they had been placed with negative implications on May 4, 2020; and
- We lowered our dual ratings to 'AA-/A-1' from 'AA/A-1' on various other MTA variable-rate TRBs with enhancement by letters of credit from Bank of America N.A., Bank of Montreal, Barclays Bank PLC, PNC Bank N.A., and Landesbank Hessen-Thueringen Girozentrale and removed the ratings from CreditWatch, where they had been placed with negative implications on May 4, 2020.

The ratings were placed on CreditWatch on May 4, 2020, reflecting our assessment of the significant and growing operational and financial impacts on the MTA as a result of the ongoing COVID-19 pandemic.

The dual ratings above reflect the application of our joint criteria, assuming low correlation, and our 'BBB+' SPUR on the MTA's existing TRBs.

"The rating actions and negative outlook reflect our view of the MTA's severely distressed financial condition largely as a result of the ongoing COVID-19 pandemic, including a sharp weakening of economic, operating, and financial metrics, as well as significant challenges amid a recessionary period to improve cash flow and restore structural budget balance," said S&P Global Ratings credit analyst Paul Dyson.

There remain many uncertainties, in our view, such as whether the MTA will be able to make enough budget adjustments to address or sufficiently mitigate its exposures; timing and amount of additional federal aid, if any; and procuring new revenue streams. These prospects will be examined against the backdrop of recessionary pressures, ridership trends, bridge and tunnel crossings and tax and subsidy performance as or if the pandemic loosens its grip. Our analysis of any corrective actions or measures put in place will focus on the sustainability of these solutions as well as their resulting impact on the MTA's future fixed obligations.

Key credit weaknesses, in our view, are the MTA's:

- Very weak all-in consolidated net revenue debt service coverage (DSC; per our calculations) that was slightly less than 1x in audited fiscal 2019, about 1x in audited fiscal 2018, and slightly less than 1x in audited fiscal 2017, with DSC almost certain to worsen to a level well below 1x in fiscal 2020 given the effects of the COVID-19 pandemic, triggering a rating cap of 'A-' under our mass transit criteria:

- Mounting challenges to maintain a structural balance as a result of COVID-19-related effects on the economy, ridership, traffic, subsidies, and taxes; and
- Very high debt burden (with a consolidated debt service carrying charge of approximately 18%) and significant capital needs, with a capital program of \$54.8 billion for fiscal years 2020 to 2024, which is more than 65% larger than the fiscal 2015-2019 program, with as much as \$35 billion, or 60%, debt financed. While we understand the capital program may be downsized and/or delayed given that many of its funding sources have deteriorated as a result of the pandemic, this could result in reduced service quality, and, in turn, reduced demand for transit.

Key credit strengths, in our opinion, are the MTA's:

- Monopolistic business position and high essentiality given its status as a critical service provider to the region, as evidenced by receiving \$4 billion in federal aid (CARES funding);
- Relatively high consolidated farebox recovery ratio (including farebox and toll revenue) of 63% in 2019, although this is likely to decline in coming years;
- Good liquidity with approximately \$5.6 billion as of June 25, 2020, combined with a history of very strong market access, although we expect liquidity will be spent down; and
- Experienced management team that has successfully managed historical crises, although none as acute as the COVID-19 pandemic.

We analyzed the MTA's risks related to environmental, social, and governance factors and determined that, with the exception of social risks, all are in line with the standard for mass transit. We view management favorably given its very strong financial planning and disclosure practices, and prudent financial policies. However, the MTA is exposed to significant social risks related to COVID-19-related social distancing requirements to promote health and safety that are causing significant revenue declines and operating and financial pressures. We will continue to evaluate these risks as the situation evolves.

We could lower the rating one or more notches to the extent the MTA's liquidity deteriorates significantly, financial flexibility becomes more constrained, or if we believe corrective measures to shore up the MTA's structural imbalance are insufficient. We could also lower the rating if the MTA relies heavily on deficit financing. Further downward rating pressure is likely to the extent the effects on the MTA from the current pandemic and its related economic impacts worsen or become protracted.

We could revise the outlook to stable if the MTA resolves its 2020 budget gap of almost \$4 billion and we view the prospects for material out-year budget deficit reduction or elimination as feasible. Our analysis of these items will consider the extent to which such solutions rely on recurring or non-recurring measures, and whether they constrain future budget flexibility. We will also take into account our view of the medium-to-longer-term impact of the COVID-19 pandemic to both operating and non-operating revenues due to permanent or persistent changes in passenger and commuting behavior as well as economic activity in general.

RELATED RESEARCH

- Through The ESG Lens 2.0: A Deeper Dive Into U.S. Public Finance Credit Factors, April 28, 2020

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors,

Metropolitan Transportation Authority, NY Ratings Lowered On Steep Financial Decline; Removed From CreditWatch

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KBRA Assigns Rating to Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2018D

NEW YORK (September 16, 2020) – Kroll Bond Rating Agency (KBRA) assigns a long-term rating of AA with a Stable Outlook to the Triborough Bridge and Tunnel Authority (TBTA) General Revenue Bonds, Series 2018D. The assignment of a Stable Outlook reflects the ongoing recovery of traffic since the onset of the COVID-19 pandemic in March 2020. Toll traffic has recovered significantly since pandemic-related travel restrictions led to a bottoming out of traffic in April 2020 (9.7 million crossing or a 65% decline compared to April 2019). Year-to-date toll traffic of 161.2 million through August is outpacing the July Financial Plan's estimate of 193.1 million for full-year 2020. Absent an unexpected change in events surrounding the phased reopening of the New York City metro area, as the economy continues to recover, KBRA believes that the financial stress on the TBTA has stabilized.

Concurrently, KBRA affirms the long-term rating of AA on the TBTA's outstanding General Revenue Bonds and the long-term rating of AA- on the Subordinate General Revenue Bonds. The Outlook on the outstanding bonds has been revised to Stable from Developing.

Key Credit Considerations

KBRA continues to monitor the direct and indirect impacts of the COVID-19 virus. Click here to access KBRA's ongoing research on the topic.

The rating action reflects the following key credit considerations:

Credit Positives

- The TBTA Board's independent rate setting authority and its proven track record of implementing required rate increases.
- Essentiality of the TBTA facilities to the regional transportation network and the resilience of NYC regional tolled traffic even amidst a near total lock down of the regional economy.
- Toll rates set to generate strong operating surpluses that are used to subsidize the MTA's mass transit system.

Credit Challenges

- The COVID-19 crisis presents unprecedented challenges to the TBTA's toll traffic and fiscal operations.
- Absence of requirement for funding debt service reserve funds.

Rating Sensitivities

For upgrade:

 Growth in traffic volume that increases TBTA net revenues and results in a substantial and sustained increase in DSC.

For downgrade:

• Significant declines in traffic volume, increases in operating expense, or higher leverage that projects prolong declines in combined General Revenue and Subordinate Revenue Bond DSC.

ESG Considerations

When relevant to credit, ESG factors are incorporated into the credit analysis in the same manner as all other credit-relevant factors. Among the ESG factors that have impact on this rating analysis are:

- Discussions in RD 3 and 4 reflect Governance Factors. KBRA considered the MTA/TBTA's Regulatory/Management Framework, financial profiles, and its rate-setting authority as factors that support ongoing debt service.
- Discussions in RD 1 and 2 reflect Social Factors. KBRA has examined the following areas for this credit: trends in population, education, income, poverty levels, employment, unemployment, and the potential impact of the COVID-19 crisis.



More information on ESG Considerations for the Public Finance sector can be found here.

To access ratings and relevant documents, click here.

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Disclosures

A description of all substantially material sources that were used to prepare the credit rating and information on the methodology(ies) (inclusive of any material models and sensitivity analyses of the relevant key rating assumptions, as applicable) used in determining the credit rating is available in the U.S. Information Disclosure Form located here.

Information on the meaning of each rating category can be located here.

Further disclosures relating to this rating action are available in the U.S. Information Disclosure Form referenced above. Additional information regarding KBRA policies, methodologies, rating scales and disclosures are available at www.kbra.com.

About KBRA

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Rating Action: Moody's downgrades MTA, NY's Transportation Revenue Bonds

to A3 from A2; outlook is negative

11 Sep 2020

\$24.4 billion of TRB bonds affected by downgrade

New York, September 11, 2020 -- Moody's Investors Service has downgraded to A3 from A2 the rating on the Metropolitan Transportation Authority's, NY (MTA) Transportation Revenue Bonds and affirmed the MIG 2 rating on MTA's Transportation Revenue Bond Anticipation Notes. Moody's has also assigned an A3 rating to MTA's \$900 million Transportation Revenue Green Bonds, Series 2020D (Climate Bond Certified). The outlook is negative.

RATINGS RATIONALE

The downgrade of Metropolitan Transportation Authority's (MTA) Transportation Revenue Bond ratings to A3 from A2 reflects an expectation that the system's ridership and revenue recovery from the coronavirus pandemic will be slower than originally forecast and result in larger budget gaps after 2020, higher leverage metrics, and significant capital program deferrals. We expect that the ridership recovery will be slower than our April forecast, resulting in larger budget gaps beginning in fiscal 2021.

Given the size of projected budget gaps, it is highly likely that MTA will balance its 2020 and 2021 financial plans with deficit financing bonds or notes. While deficit financing would alleviate immediate cash flow pressures and preserve service levels, this solution does not resolve structural budget gaps, and will result in higher debt and fixed costs that could crowd out other important spending. Use of debt capacity also risks disrupting the timing and implementation of the authority's \$55 billion capital program and potentially weakening asset condition and service quality. In addition, while we expect strong political and financial support will continue from New York State (Aa1 negative), New York City (Aa1 negative) and the US Government (Aaa stable), the amount and timing of additional support remains uncertain, particularly in light of these governments' own fiscal challenges.

The continuing impact of the coronavirus outbreak and protracted economic recovery is creating a severe and extensive credit shock across many sectors, regions and markets, and the combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety, and as a key driver in today's rating action. The MTA will also be challenged in the longer term by social risks such as growing and relatively inflexible labor costs, and environmental risks (particularly from natural disasters), although the latter is partially mitigated by MTA's significant resiliency investments and the availability of private insurance and federal disaster recovery assistance.

The MIG 2 rating on the BANs reflects the expectation that MTA will have adequate market access at BAN maturity given the TRB's satisfactory long-term credit quality and MTA's status as a sophisticated, frequent issuer of bonds and notes and its strong relationships with a diverse investor base. The MIG 2 rating also considers MTA's large short-term debt load that increases refinancing risks, as well as recently-increased capital market costs that indicate somewhat higher market access constraints. Lastly, the MIG 2 factors MTA's liquidity pressure from coronavirus-related revenue losses, which could reduce the availability of internal liquidity to redeem BANs in the event of a market dislocation at maturity.

RATING OUTLOOK

The negative outlook on the TRBs is based on the expectation that steep coronavirus related revenue losses will recover gradually over at least several years, creating large budget gaps through a gradual and incomplete recovery period. The gaps will be challenging to resolve without further weakening financial and debt metrics, or negatively affecting MTA's service delivery and capital plans. Continued support from state, local or federal governments is highly likely given MTA's essentiality to the regional and national economy. However, the depth and duration of our forecasted MTA budget gaps will test the timing and strength of support from parent governments who will also be experiencing economic and financial strain as a result of the coronavirus crisis.

The short-term BAN rating does not carry an outlook.

FACTORS THAT COULD LEAD TO AN UPGRADE OF THE RATINGS

For the long-term ratings:

- Implementation of sustainable, structural budget solutions, that increase debt service coverage and liquidity
- Sustained recovery of ridership and revenues toward historic levels
- Reduced short-term debt risk and evidence that projected debt leverage metrics will stabilize and begin to improve
- Reduced labor-related financial and operating constraints and related fixed costs
- Continued progress with capital projects that supports improved asset condition and satisfactory service performance

For the short-term ratings:

- An upgrade of MTA's Transportation Revenue Bond rating (the expected takeout bond), combined with improved internal liquidity position

FACTORS THAT COULD LEAD TO A DOWNGRADE OF THE RATINGS

For the long-term ratings:

- Longer-than-expected economic and ridership disruption that leads to larger revenue losses, budget gaps, and liquidity pressure
- Greater than expected rise in leverage position and associated fixed costs, or increased short-term debt risk
- Declines in service performance that reduce public and/or political support for MTA, its subsidies and future fare increases
- Significant capital project delays or cost overruns that increase debt or destabilize public support for the enterprise

For the short-term ratings:

- Significant decline in available liquidity
- Evidence of constrained market access for long-term bonds
- Downgrade of the long-term TRB rating below Baa1 stable

LEGAL SECURITY

TRB Security

The transportation revenue bonds (TRBs) are one of four primary credits that the MTA uses to finance its capital programs. The TRB bonds are special obligations of the MTA, payable on a gross basis from transit and commuter system revenues, certain state and local operating subsidies, dedicated taxes, and operating surpluses of the Triborough Bridge and Tunnel Authority, NY (TBTA) (Sr lien Aa3 negative) after operating and maintenance requirements and debt service payments on the TBTA's own debt. TRB financed projects must be approved by the state's Capital Program Review Board (CPRB).

The TRB rate covenant requires sum sufficient coverage by fares and subsidies of debt service and O&M. Only board approval is required to raise fares for the rate covenant. Unlike most other rated transit systems, there is no debt service reserve fund and no explicit additional bonds test for the TRBs, although the balanced budget requirement and CPRB approval provide solid leverage controls. Pledged revenues flow to a trustee held account and are set-aside monthly for debt service before being released for operations. The BANs are payable from proceeds of previously-authorized TRB notes and/or long-term TRB bonds, and the interest portion is further secured by a subordinate pledge of the transportation revenue bond pledged revenues.

BAN Security

The BANs are secured by the proceeds of other Transportation Revenue Bond anticipation notes, the proceeds of Transportation Revenue Bonds and, with respect to interest payable on the notes, amounts available for payment of subordinated indebtedness.

PROFILE

The MTA is a public benefit corporation of New York State, created by the New York State legislature in 1965. The MTA's governing board is appointed by the governor with advice and consent of the state Senate. The MTA is responsible for developing and implementing a unified mass transportation policy for the Metropolitan Transportation District which includes New York City and the surrounding Duchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester counties. In addition to these counties, MTA's service area also includes Fairfield and New Haven counties in CT. MTA operations are performed through nine different agencies, including the Triborough Bridge and Tunnel Authority (Sr lien Aa3 negative). TBTA profit, after paying its own O&M and debt service, are transferred to MTA to subsidize transit, bus and commuter rail operations.

METHODOLOGY

The principal methodology used in the long-term ratings was Mass Transit Enterprises Methodology published in December 2017 and available at https://www.moodys.com/researchdocumentcontentpage.aspx? docid=PBM_1105431. The principal methodology used in the short-term ratings was Short-term Debt of US States, Municipalities and Nonprofits Methodology published in July 2020 and available at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBM_1210749. Alternatively, please see the Rating Methodologies page on www.moodys.com for a copy of these methodologies.

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Moody's general principles for assessing environmental, social and governance (ESG) risks in our credit analysis can be found at $\frac{\text{https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1133569}}{\text{https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_1133569}}.$

At least one ESG consideration was material to the credit rating action(s) announced and described above.

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Rating Action: Moody's downgrades to A3 from A2 MTA Hudson Rail Yards Trust Obligations (NY) Ser 2016A. Outlook negative.

21 Sep 2020

New York, September 21, 2020 -- Moody's Investors Service has downgraded the rating to A3 from A2 on the Metropolitan Transportation Authority, NY (MTA) Hudson Rail Yards Trust Obligations, Series 2016 A. The outlook on the rating is revised to negative from stable.

There is \$682.43 M million in rated debt affected by this action. There is also \$162.6 million in 2020A refunding obligations that are unrated.

RATINGS RATIONALE

The downgrade to A3 incorporates a weakening of the liquidity support provided by the MTA, as reflected by the recent downgrade of the MTA's Transportation Revenue Bonds from A2/Neg to A3/Neg. The MTA provides liquidity support for interest reserve replenishment for up to 7 years following a lease default. The A3 rating is also supported by the strength of the ground lease legal structure, including escalating, fixed ground rent payments, the strong incentives for parties to pay ground lease payments or cure defaults given the ultimate anticipated value of the properties once constructed, and the senior-most claim of the obligations on lease revenue.

RATING OUTLOOK

The outlook has been revised to negative from stable reflecting the potential for further weakening of the MTA's liquidity support, as demonstrated by the negative outlook on the Transportation Revenue Bonds rating, as well as a the potential for weakening of the commercial real estate market in New York City.

FACTORS THAT COULD LEAD TO AN UPGRADE OF THE RATING

- Completion and lease-up of all buildings with a history of all leases paying in full and on-time
- Upgrade of the MTA's Transportation Revenue Bonds (A3/Neg)

FACTORS THAT COULD LEAD TO A DOWNGRADE OF THE RATING

- Significant construction delays and/or lease default
- A downgrade of the MTA's Transportation Revenue Bonds rating (A3/Neg) which would indicate a deterioration of the credit quality supporting the interest reserve advances

LEGAL SECURITY

Series 2016A are special limited obligations payable solely from the Trust Estate established under the Trust Agreement. The trust estate consists principally of monthly ground rent from tenants of the ERY and WRY, monthly scheduled transfers from the capitalized interest fund, payments made by the tenant upon the exercise of fee purchase options, contingent support payments made by the MTA (including interest reserve advances), and rights of the MTA to exercise remedies under the leases and rights of the Trustee to exercise remedies under the leases and the Fee Mortgage. To date, MTA has not had to make any contingent support payments.

The MTA granted separate fee mortgages to the trustee, Wells Fargo Bank, NA, giving the trustee a first secured lien on the MTA's fee simple interest in the owned property demised under the ERY and WRY leases, including each severed lease (the fee mortgages are not cross defaulted nor cross-collateralized). The fee mortgages secure the MTA's obligation to pass on payments of ground rent and fee option payments received from tenants under the ground lease. If the MTA does not exercise cure rights following a lease non-payment event of default, the trustee may exercise its remedies under the corresponding fee mortgage, including foreclosing MTA's fee interest and stepping into the MTA's position as fee owner of the applicable property and as landlord under the defaulted lease. This gives the trustee the right to terminate the lease and sell and/or re-lease the property.

PROFILE

The obligor is the MTA Hudson Rail Yards Trust Obligations, issued under a trust agreement dated as of September 1, 2016. The financially responsible party for the obligations is the MTA, a public benefit corporation of New York State, created by the New York State legislature in 1965. The MTA is responsible for developing and implementing a unified mass transportation policy for the Metropolitan Transportation District which includes New York City and the surrounding Duchess, Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester counties.

METHODOLOGY

The principal methodology used in this rating was Global Housing Projects published in June 2017 and available at https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBM_1077122.

Alternatively, please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

REGULATORY DISCLOSURES

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Metropolitan Transportation Authority (MTA)

Issuer: Metropolitan Transportation Authority											
Downgraded and Watch Status Resolved	Rating(s)	Outlook									
Transportation Revenue Bonds	AA (from AA+)	Negative (from Watch-Downgrade Status)									
Transportation Revenue Bond Anticipation Notes	K1+	n/a									

For mapping of the long-term rating to the short-term rating, please refer to the **short-term KBRA Rating Scale**.

Methodology:

U.S. Public Toll Roads, Bridges & Tunnels Revenue Bond Rating Methodology

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William Cox, Senior Managing Director (646) 731-2472 wcox@kbra.com Rating Summary: The lower rating reflects the expectation that the sharp decline in ridership due to COVID-19 will continue well into 2021. The decline in ridership has caused gross debt service coverage (DSC) for FY 2020 to drop to 4.8x per the MTA's Mid-Year Forecast, from 8.0x in FY 2019 and 9.1x in FY 2018. KBRA's stress scenario, detailed below, indicates that gross DSC could fall as low as 4.3x in 2020. The lower rating also reflects uncertainty regarding the timing and amount of state and federal financial support needed to support MTA's operations and address the significantly widened budget gap.

KBRA placed the MTA TRB ratings on Watch-Downgrade on March 24, 2020 as a result of the significant operating and fiscal dislocation caused by the COVID-19 crisis. This rating action resolves the Watch Status.

Based on MTA's latest daily ridership¹ data, average ridership in September 2020 has declined by 69% for subways, 50% for bus², 70% for LIRR, and 73% for Metro-North, relative to the same period average in 2019. While subway ridership continues to trend favorably as New York City progresses through various phases of reopening, the increases in ridership appear to have plateaued in recent weeks.

Despite service cuts, the MTA has also faced increased operating expenses due to additional sanitization efforts to combat COVID-19. While the loss of a significant portion of farebox revenues and the inability to substantially reduce expenses have created an unsustainable imbalance in the MTA's fiscal operations, the MTA has continued to set aside funds on a monthly basis for debt service, as required by its indenture.

The MTA has \$2.15 billion of bank lines expiring in 2022, with \$1.6657 billion undrawn as of September 15, 2020. The MTA has exhausted \$3.9 billion in CARES funding received in March for operating purposes. The MTA has requested an additional \$12 billion of federal aid and is now considering additional borrowing through the Federal Municipal Liquidity Facility to close the FY 2020 budget gap. Even if additional funding materializes, it is unlikely to be enough to address the MTA's structural imbalance, which pre-dates recent events.

Since KBRA's July 7, 2020 published <u>report</u>, the MTA released its 2021 Preliminary Budget/ July Financial Plan (JFP), which includes the 2020 Mid-Year Forecast, the 2021 Preliminary Budget, and projections for FY 2022-2024. Within the JFP, the MTA assumes receipt of the additional federal funding request of \$3.9 billion. Additional highlights of the JFP include:

- Estimated ridership declines of 66% for FY 2020, 49% for FY 2021³, and a return to pre-pandemic levels in FY 2024.
- The FY 2020 deficit is projected to widen significantly to \$3.2 billion from a surplus of \$81 million in the February Plan. The projected deficit widens to \$5.8 billion in FY 2021.

¹ Day-By-Day Ridership Numbers per MTA website | September 2020

² Local, Limited, SBS and Express.

³ Relative to FY 2019.



- Deficits remain for fiscal years 2021 through 2024 even assuming the receipt of additional federal funding.
- New saving actions totaled \$1.375 billion over the Plan period but are not sufficient to cover cumulative deficits⁴ of \$11.7 billion through FY 2024.

The three pillars that continue to support KBRA's rating of MTA's TRB bonds and BANs are:

- Pledged revenues are received by the TRB trustee and used to meet pro rata monthly debt service requirements before being released for operations. KBRA does not expect any deviation from the flow of funds specified in MTA's bond documents.
- The strong management team has consistently demonstrated its ability to navigate financial and political challenges; and
- The essential nature of the MTA's transportation infrastructure to the New York metropolitan area economy.

The last pillar is among the reasons KBRA continues to believe there will be financial support from the State and or federal governments to help MTA bridge its near term operating and liquidity challenges. Regardless of the timing and magnitude of any such support, however, the MTA will likely experience permanent changes to its operating and fiscal posture that remain hard to dimension at this time. For example, it is unlikely that the implementation of the nation's first congestion tolling system (please refer to KBRA's **Congestion Pricing...What It Means for the MTA and TBTA**) will proceed according to the original timeline. Most recently, New York State's FY 2021 Enacted Budget has amended Public Authorities Law 553-j to allow the Central Business District Tolling Lockbox Fund (Internet Sales Tax and Mansion Tax) to fund the MTA's operating needs for 2020 and 2021. KBRA expects to see additional significant changes to the MTA's capital and debt issuance plans.

The MTA's latest BudgetWatch Report for September indicates that while the MMTOA⁵ payments from the State were subsequently remitted to the MTA, payments were delayed. Additionally, the MTA is now estimating a reduction in MMTOA payments for 2020-2023 per JFP. The delay of funds is inconsistent with KBRA's expectation of uninterrupted State support of MTA operations and if sustained may lead us to re-examine this view. Furthermore, other state and local subsidies, some of which are reliant on economically sensitive taxes, are reduced due to an unprecedented pandemic. As such, the timely release of State appropriated funds is critically important.

Stress Scenario

In order to help quantify the MTA's near-term challenges, KBRA has developed a stress scenario to reflect ridership revenue declines:

- Operating Revenues (including Farebox Revenue):
 - Based on slightly improved daily ridership results through September 2020, KBRA has adjusted its stress scenario to assume a 61% ridership decline in the third quarter versus the same period in 2019. This decline assumption is slightly less severe than the 65% used in our previous stress analysis. For the fourth quarter, KBRA now assumes a ridership decline of 72% versus 4Q 2019. This assumption is more severe than the 45% decline previously utilized. The 72% decline is based on system ridership levels as of June 2020 (coincident with the first phase of reopening in NYC), and reflects our view of the potential for a pullback in reopening given the colder weather and the emergence of flu season.
 - These assumptions translate to an operating revenue decline of \$3.8 billion from the 2020 Adopted Budget and \$3.6 billion from 2019. In total, KBRA expects full year 2020 to experience a decline of 56% from 2019 and 57% from the 2020 Adopted Budget.
 - For FY 2021 and FY 2022, KBRA has adjusted the assumptions to reflect 50% and 40% declines, respectively.
 FY 2023 remains at a 10% decline. Assumptions are against FY 2020 Adopted Budget figures.
- Special Tax-Supported Operating Subsidies:
 - For FY 2020, KBRA assumes zero receipt of MMTOA funds or excess funds that flow through the TRB waterfall after payment of the Dedicated Tax Fund (DTF) bonds, including PBT⁶ revenues. This assumption reflects the State's delay in transferring the MMTOA to the MTA. We further assume of no excess revenues after the payment of DTF debt service. KBRA assumes a 40% and 30% decline in other tax receipts in the second and third quarter.

⁴ Inclusive of \$3.9 billion additional federal funding for FY 2020.

⁵ Metropolitan Mass Transportation Operating Assistance (MMTOA) receipts, comprised of 0.375% regional sales tax, regional franchise tax surcharge, a portion of taxes on certain transportation and transmission companies, and an additional portion of the business privilege tax imposed on petroleum businesses.

⁶ Petroleum Business Tax (PBT) is a business privilege tax which includes both a base tax and a supplemental tax, imposed on petroleum businesses operating in the State. The base of the PBT is the quantity of various petroleum products refunded or sold in the State or imported. Rates are taxes at cents per gallon.



- The FY 2021 estimate is based on JFP, reflecting a 27% from 2020 Adopted Budget.
- For FY 2022 FY 2023, KBRA assumes a decline of 15% and 10%, respectively, of total operating subsidies including key taxes/fees such as MMTOA, PBT, PMT⁷, and For-Hire Vehicle Surcharge due to the lingering economic impact caused by the COVID-19 crisis.
- Revenues from TBTA Surplus:
 - For FY 2020, KBRA assumes traffic declines of 27%, which translates to a reduction in TBTA surplus by approximately 61% from the FY 2020 Adopted Budget. Please see <u>TBTA report</u> published on September 18.
- This stress scenario excludes potential savings from the MTA's Transformation Plan and any additional federal support the MTA may receive. KBRA assumes non-operating revenues, agency operating subsidies, expenses, and debt service remain as projected in the 2020 Adopted Budget and JFP.

		2020 Adopted	2020 Mid-Year	KBRA Stress Case					
FYE December 31 (\$ in millions)	2019	Budget	Forecast	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>		
Operating Revenues (including Farebox Revenue)	6,638	6,776	2,506	2,996	3,388	4,065	6,098		
Special Tax-Supported Operating Subsidies	4,888	5,234	3,853	2,252	3,834	4,449	4,711		
Non-Operating Revenues	1,366	1,156	1,246	1,246	1,497	1,156	1,156		
Revenues from TBTA Surplus	788	879	37	342	113	639	672		
Agency Operating Subsidies	340	460	411	411	376	460	460		
Total Transportation Resolution Pledged Revenues (Gross Revenues)	14,020	14,412	8,053	7,247	9,208	10,769	13,096		
Gross Revenues as a % chg. vs 2019	-	2.8%	-42.6%	-48.3%	-34.3%	-23.2%	-6.6%		
Gross Revenues as a % chg. vs 2020 Adopted Budget	-	-	-44.1%	-49.7%	-36.1%	-25.3%	-9.1%		
TRB Debt Service	1,751	1,696	1,683	1,683	1,902	2,223	2,599		
DSCR (Gross)	8.0x	8.5x	4.8x	4.3x	4.8x	4.8x	5.0x		
Total Operating Expenses	13,952	14,654	14,867	14,867	15,064	15,603	15,991		
Surplus (Deficit) after Debt Service and Operating Expenses	(1,683)	(1,938)	(8,497)	(9,303)	(7,759)	(7,057)	(5,494)		

Source: Metropolitan Transportation Authority Offering Statement | 2020 February and July Financial Plan | KBRA's Analysis

This stress scenario demonstrates that while pledged revenue can withstand the COVID-19 triggered crisis, debt service coverage is expected to drop significantly and to remain depressed with a prolonged ridership decline before returning to the pre-pandemic level. Additionally, it is KBRA's view that the MTA's near to medium-term structural imbalance will remain significant without further action by the board and by federal, state, and local funding partners.

The Negative Outlook reflects KBRA's expectation of a prolonged reduction and slow recovery in ridership to prepandemic levels, as well as the uncertain timing and amount of federal and state support to address the worsening operating gap.

Key Credit Considerations

KBRA continues to monitor the direct and indirect impacts of the COVID-19 virus. Click here to access KBRA's ongoing research on the topic.

The rating actions reflect the following key credit considerations:

Credit Positives

- The gross revenue pledge that supports debt service.
- The MTA provides a critical transportation network for over 15 million people in the greater New York metropolitan area, which is essential to the economic and social fabric of the region.
- MTA management has a strong track record of balancing its operating budget over changing economic cycles and unforeseen events as well as managing complex capital programs designed to improve and expand the System.

Credit Challenges

- The COVID-19 crisis presents unprecedented challenges to the MTA's fiscal operations.
- MTA's high fixed cost structure will continue to challenge its ability to balance operating and capital budgets.
- MTA's ability to control growth in labor-related costs during the upcoming period of contract negotiations

	TITA'S ability to control growth in labor related costs during the apcorning period of contract negotiations:							
Rating Sensitivities								
	Significant increase in revenues from non-fare revenue streams.	+						
	• Inability to obtain emergency financial support from the State or Federal government would create unsustainable liquidity pressure on the MTA and threaten its long-term viability.	-						

⁷ Payroll Mobility Tax (PMT) is a 0.34% tax imposed on the payroll expense of employers and the net earnings of self-employed individuals engaging in business within the five boroughs, and the counties of Rockland, Nassau, Suffolk, Orange, Putnam, Dutchess, and Westchester.



ESG Considerations

When relevant to credit, ESG factors are incorporated into the credit analysis in the same manner as all other creditrelevant factors. Among the ESG factors that have impact on this rating analysis are:

- Discussions in RD 3 and 4 reflect Governance Factors. KBRA considered the MTA's Regulatory/Management Framework, financial profiles, and its rate-setting authority as criteria to support ongoing debt service.
- Discussions in RD 1 and 2 reflect Social Factors. KBRA has examined the following areas for this credit: trends in population and demographic changes, income, employment, unemployment, and the potential impact of the COVID-19 crisis.

More information on ESG Considerations for the Public Finance sector can be found here. Please refer to the MTA
report for discussions.

Full list of Affirmed Outstanding Transportation Revenue Bond Anticipation Notes

Affirmed	Rating(s)	Outlook
Transportation Revenue Bond Anticipation Notes, Series 2018B, Subseries 2018B-2 (maturing 5/15/2021)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2018C-2 (maturing 9/1/2021)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019B, Subseries 2019B-1 (maturing 5/15/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019D, Subseries 2019D-1 (maturing 9/1/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2019F (maturing 11/15/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2020A, Subseries 2020A-1 (maturing 2/1/2023)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2020A, Subseries 2020A-2S (maturing 2/1/2022)	K1+	n/a
Transportation Revenue Bond Anticipation Notes, Series 2020B (maturing 8/1/2023)	K1+	n/a

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FitchRatings

RATING ACTION COMMENTARY

Fitch Rates MTA, NY's Transportation Rev Bonds 'A-'; Outlook Negative

Fri 23 Oct, 2020 - 5:54 PM ET

Fitch Ratings - New York - 23 Oct 2020: Fitch Ratings has assigned an 'A-' rating to approximately \$257,500,000 of transportation revenue refunding green bonds, series 2020E (climate bond certified) to be issued by the Metropolitan Transportation Authority, NY (MTA). The bonds are expected to price on October 29 via negotiation. Proceeds will refund certain outstanding transportation revenue bonds (TRBs) for interest savings pending market conditions. Concurrent with this rating action, Fitch has downgraded the rating on the MTA's outstanding TRBs to 'A-' from 'A+' and outstanding TRB anticipation notes to 'F2' from 'F1'. The Rating Outlook is Negative.

SECURITY

The TRBs are backed by a gross lien on the MTA's operating revenues, which include, among other sources, fares received from the subway and bus systems operated by the MTA New York City Transit and its subsidiary; the Manhattan and Bronx Surface Transit Operating Authority; the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad; and buses operated by MTA Bus. TRBs are also backed by a gross lien on operating subsidies from the state of New York, New York City, after the payment of debt service on the MTA's dedicated tax fund bonds, and surplus from the operation of the MTA Bridges and Tunnels (TBTA) after the repayment of TBTA bond debt service. TRB anticipation notes are payable from the proceeds of other notes or TRB obligations to be issued by the MTA.

KEY RATING DRIVERS

Analytical Conclusion: The downgrade of the rating on the TRBs to 'A-' from 'A+' and to 'F2' from 'F1' on the TRB anticipation notes (which is mapped to the rating on the TRBs), reflects significant deficiencies in the MTA's credit profile, which Fitch expects to extend beyond the duration of a routine cyclical downturn. Key credit strengths have been neutralized by the breadth and acuity of coronavirus-related pressures on the MTA's operating and financial profile. The 'A-' rating reflects Fitch's view that the MTA continues to have the highest strategic and economic importance; that it will continue to benefit from sponsoring government support as it navigates the current crisis; and that its monopolistic position with respect to mass transit provision and strength of an experienced management team position it to stabilize its credit profile at the 'A-' level in the post-pandemic period.

The Negative Outlook considers myriad downside risks to the MTA's credit profile including a weak ridership and revenue outlook that drives MTA-forecasted budget gaps of \$3.2 billion in 2020, \$5.8 billion in 2021, and \$3.5 billion in 2022 (relative to an approximate annual operating budget in excess of \$17 billion). Gap closing actions identified by the MTA amount to roughly \$1.2 billion for 2020 and 2021, largely achieved through the use of OPEB reserves, elimination of pay-go capital, the use of lockbox capital revenue for operations, and expenditure cuts totaling \$240 million in 2020 and \$540 million in 2021. Service cuts of up to 40% to 50% on mass transit and commuter rail would result in the permanent reduction of more than 8,000 positions and additional annual savings of more than \$1 billion. In total, these and other deficit reduction measures, including potential fare and toll increases above the standard 4% biennial increases, would still leave a sizable shortfall in the MTA budget over the next several years, posing a risk to the MTA's already weakened financial resilience and liquidity.

These deficits will likely necessitate, in Fitch's view, a dependence on deficit borrowing in the absence of additional \$12 billion in federal stimulus the MTA is requesting. The MTA received \$4 billion out of the \$25 billion allocated to mass transit agencies under the Coronavirus Aid, Relief, and Economic Security (CARES) Act, but Fitch views the prospect for additional federal fiscal stimulus as speculative based on the uncertainty of the political landscape. Deficit borrowing options include the Federal Reserve's Municipal Liquidity Facility (MLF) -- Fitch estimates the MTA has \$2.9 billion in additional borrowing capacity following its sale of \$450 million of bond anticipation notes to the MLF in August. NYS also authorized the MTA, through 2022, to borrow up to \$10 billion to fund operating costs.

Fitch believes that a deficit borrowing scenario for the MTA increases risk to future capital market volatility and access, and its sensitivity to the timing and strength of an eventual revenue recovery that is highly dependent on public health and economic conditions and mass transit ridership behaviors. The MTA has also identified potential savings of \$1.8 billion in total over 2020 and 2021 from pension payment deferrals, which Fitch would similarly consider a form of deficit financing that increases the MTA's longer-term cost burden. Given the many risks associated with deficit financing, maintaining the 'A-' rating will require effective policy measures to more closely align operating obligations with revenues that are expected to be materially below pre-pandemic levels for several years.

Any deficit borrowing would also reduce the amount of resources to fund the \$51.5 billion 2020-2024 capital plan. Fitch believes this could adversely affect system performance and safety gains achieved following the declaration of a state of emergency for the MTA by Governor Cuomo in June 2017, further compounding risk to ridership and fare revenues. Central business district (CBD) tolling was scheduled to be online in early 2021 and expected to fund \$15 billion of the multi-year capital plan; however, the MTA has encountered delays in obtaining federal environmental reviews for the project. Furthermore, the CBD tolling program, if implemented, may not generate the revenue targets originally forecast given risk to continued lower traffic levels through the tolling area following the virus outbreak. The MTA has already put on hold the execution of contracts related to the 2020-2024 capital program in order to preserve cash flow.

Fitch's public transit ratings assume a higher level of government support to maintain system solvency due to the strategic importance of transit to local economies and other public policy goals, including the mobility of public health and safety workers in the current health crisis. However, the broad impact of the coronavirus on governmental revenues weakens the outlook for meaningful external financial support in the near term -- the Issuer Default Ratings on New York State (AA+) and New York City (AA) are both on Negative Outlook. The sharp decline in MTA cash flow generation triggers a considerably higher stress with regard to the affordability of long-term liabilities. The MTA is forecasting a 43% decline in TRB gross revenue in 2020 to \$8.1 billion, which would

increase the ratio of MTA net debt plus Fitch-adjusted net pension liabilities (NPL) to nearly 7x TRB gross revenue from 3.8x in 2019.

Liquidity remains adequate for now. As of October 19, 2020, the MTA reported \$5.24 billion in liquidity to cover operating costs with a Fitch-estimated burn-rate of approximately \$300 million per week. Liquidity resources include \$2.05 billion of cash, \$1.85 billion of undrawn or unspent commercial bank lines of credit (the MTA is authorized to solicit up to an additional \$1 billion in bank facilities, pending market conditions), \$1.17 billion of internal available flexible funds, and \$174 million in OPEB reserves. The reported cash position is net of amounts set aside to fund the upcoming November TRB debt service payments.

System utilization remains very low compared to pre-virus levels, particularly on mass transit which accounted for about 40% of pre-virus total revenue. Subway and bus ridership are particularly affected by concerns over the ability to socially distance, which could become more acute if the MTA enacts broad service cuts. Current ridership levels also reflect an uptick in remote work and learning and significant declines in employment within the New York metropolitan area which has experienced a peak to trough employment decline of 20% with less than 50% recovery. Mass transit ridership has leveled off at around 30% of 2019 levels since August. Fitch would not expect to see materially higher levels of ridership on mass transit until an effective vaccine or treatment becomes widely available.

MTA Bridges and Tunnels (TBTA) crossings have fared better, down an estimated 15% compared to 2019 levels. The MTA budget deficits noted earlier reflect the midpoint of several utilization and revenue scenarios prepared by McKinsey and Co. For transit, ridership through the remainder of 2020 is assumed at 40% and 21% in the moderate and severe scenarios, respectively. The moderate and severe scenarios for TBTA toll revenue assume a 57% and 44% level of activity, respectively, suggesting some modest revenue upside (the MTA receives TBTA surplus revenues - \$37 million estimated in 2020 down from \$788 million in 2019 - to fund certain transit and commuter operating and capital costs).

KEY RATING DRIVERS

Revenue Defensibility: Stronger

The strategic importance of the MTA transit system, bridges and tunnels to the economy of the New York region is the cornerstone of the 'stronger' revenue defensibility assessment. It supports an expectation for ongoing financial support from sponsoring governments, including periodic authorization of new recurring revenue sources to fund the MTA's operating and capital budget. The strength of this rating factor is tempered by the widespread adverse impact of the coronavirus on the New York State and New York City budgets and its many competing demands.

The MTA's monopolistic position with respect to mass transit provision is viewed as a credit positive, and MTA ridership had exhibited signs of stabilization prior to the pandemic following several years of moderate decline. However, the circumstances of the current stress are unique relative to historical experience, resulting in a greater level of uncertainty with regard to future ridership. The MTA's fare and toll rate-setting authority provides a mechanism to recover increased costs of service over time. The MTA is highly dependent on various dedicated tax revenues assessed on a broad range of activities unrelated to its functions which mitigates price and demand risk. However, dedicated tax volatility tends to be high and beyond the MTA's control, and affected by the same issues as farebox revenue, if to a lesser extent, which could exacerbate challenges from weakness in the underlying economic environment.

Operating Risk: Midrange

The MTA's operating profile is driven by its cost of labor, including fringe benefits for existing and retired employees, and the financing of its extensive capital program. The MTA has consistently produced near-term solutions to its budgetary challenges in the past via a combination of fare increases, cost saving programs and non-recurring measures, but it has failed to achieve meaningful labor reforms that could have provided the MTA with more flexibility to address its current fiscal stress. Prior to the coronavirus outbreak, the MTA had initiated implementation of an organizational transformation plan that mostly affected non-union workers, proposing the elimination of up to 2,700 positions yielding up to \$530 million in annual savings. Debt service and retiree benefit costs have risen substantially over the past decade and are increasingly burdensome given current revenue losses. The MTA's massive capital plan faces increased funding risk given declines in existing resources and a delay in the implementation of the central business tolling program, which was expected to fund \$15 billion in plan projects through 2024.

Financial Profile: Stronger

The MTA's financial profile assessment is increasingly pressured given the weakening of revenue resources forecast over the next several years. Fitch expects the MTA will adjust the implementation of non-essential capital investment in response to its current liquidity crisis, which may have adverse consequences on system performance and ridership over the intermediate term. Leverage pressures may materialize from financial market instability resulting in increases in the MTA's net pension liabilities (and potential pension contribution deferrals to help close the budget gaps), or the incurrence of additional long-term debt to replace programmed pay-as-you-go capital and to fund operations given its decline in revenue and near-term liquidity risk.

Fitch's leverage analysis focuses on pledged gross TRB revenues rather than cash flow available for debt service. This alternative view of financial leverage is based on the protection afforded to bondholders from the gross lien on pledged TRB revenues, statutory provisions that restrict the MTA from filing for bankruptcy protection, and a covenant of New York State not to change the law to permit the MTA to file such a petition as long as any TRBs are outstanding.

The MTA has an ESG Relevance Score of '4' for Labor Relations and Practices due to the challenging labor environment in which it operates and its high cost of labor including fringe benefits for existing and retired employees, which has a negative impact on the credit profile and is relevant to the rating in conjunction with other factors.

RATING SENSITIVITIES

Factors that could, individually or collectively, lead to a negative rating action/downgrade:

- --The insufficiency of state and federal policy tools and emergency assistance to stem further financial deterioration, and significant levels of deficit borrowing that weaken our view of the MTA's financial recovery could lead to a multi-notch downgrade;
- --The inability of the MTA to maintain sufficient liquid resources to meet its near and intermediate term operating needs, including that caused by hampered access to capital markets for necessary cash flow borrowing and/or the inability to lower operating costs given substantial reductions in operating and dedicated tax revenues;

--A sustained reduction in ridership and revenues in the post-crisis recovery period associated with underlying economic conditions, a re-emergence of infections and re-imposition of lockdown measures, declining system performance or otherwise, that adversely impacts Fitch's view of the MTA's leverage relative to available resources.

Factors that could, individually or collectively, lead to a positive rating action/upgrade:

--The Rating Outlook could be revised to Stable if Fitch sees sustained recovery in ridership and revenues due to an easing of health concerns and gradual resumption of economic activity, and/or federal or state action.

BEST/WORST CASE RATING SCENARIO

International scale credit ratings of Sovereigns, Public Finance and Infrastructure issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of three notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit [https://www.fitchratings.com/site/re/10111579].

CREDIT PROFILE

The MTA was created by special New York State legislation in 1965 as a public benefit corporation, separate and apart from the state without any power of taxation. The MTA is responsible for developing and implementing a single, integrated mass transportation policy for its designated service area, and its governing body is appointed by the New York State governor with the advice and consent of the state senate.

The MTA carries out its operating responsibilities through its subsidiary and affiliate entities: New York City Transit Authority and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority; Staten Island Rapid Transit Operating Authority; Long Island Rail Road Company; Metro-North Commuter Railroad Company; MTA Bus Company; and MTA Construction and Development. The MTA Bridges and Tunnels, another affiliate of MTA, is a public benefit corporation empowered to construct and operate toll bridges and tunnels and other public facilities in New York City. The MTA Bridges and Tunnels' surplus amounts are used to fund certain transit and commuter operations and capital projects of the MTA.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG CONSIDERATIONS

The MTA has an ESG Relevance Score of '4' for Labor Relations and Practices due to the challenging labor environment in which it operates and its high cost of labor including fringe benefits for existing and retired

employees, which has a negative impact on the credit profile and is relevant to the rating in conjunction with other factors.

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg

RATING ACTIONS

ENTITY/DEBT	RATI	NG		PRIOR
Metropolitan Transportation Authority (NY) [General Government]				
 Metropolitan Transportation Authority (NY) /Transportation Revenues/1 LT 	LT	A- Rating Outlook Negative	Downgrade	A+ Rating Outlook Negative
 Metropolitan Transportation Authority (NY) /Transportation Revenues/1 ST 	ST	F2	Downgrade	F1

VIEW ADDITIONAL RATING DETAILS

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APPLICABLE CRITERIA

Public Sector, Revenue-Supported Entities Rating Criteria (pub. 27 Mar 2020) (including rating assumption sensitivity)

ADDITIONAL DISCLOSURES

Dodd-Frank Rating Information Disclosure Form Solicitation Status

Endorsement Policy

ENDORSEMENT STATUS

Metropolitan Transportation Authority (NY)

EU Endorsed

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New York State Outlook Revised To Negative On **Looming Budget Uncertainty**

December 11, 2020

NEW YORK (S&P Global Ratings) Dec. 11, 2020--S&P Global Ratings revised its outlook to negative from stable on the State of New York. We also affirmed our 'AA+' rating on the state's general obligation (GO) debt outstanding and our 'AA' rating on its appropriation-backed obligation debt with various issuers and entities. We also affirmed our 'AAA/A-1+', 'AAA/A-1+, 'AA+/A-1+', 'AAA/A-1+', joint support and dual ratings on various issues where the short-term ratings are based on the liquidity support from various financial institutions.

In addition, we revised the outlook to negative from stable, while affirming our long-term rating, on various revenue bonds rated under our "Priority-Lien Tax Revenue Debt" criteria (published Oct. 22, 2018, on RatingsDirect), which factors in both the strength and stability of the pledged revenues, as well as the general creditworthiness of the linked obligor, in this case the State of New York (GO rating). The priority-lien rating on these bonds is limited by the state's general creditworthiness.

Our affirmation of various revenue bond ratings includes our:

- 'AAA' rating on the New York State Dormitory Authority's employer assessment revenue bonds;
- 'AAA' rating on the Nassau County Interim Finance Authority sales tax revenue bonds;
- 'AA+' on various personal income tax revenue bonds issued by the New York State Dormitory Authority and various other agencies;
- 'AA+' on sales tax revenue bonds issued by various agencies of the state;
- 'AA+' rating on the New York State Thruway Authority second general highway and bridge trust fund bonds; and our
- 'AA' rating on the Metropolitan Transportation Authority's Dedicated Tax Fund bonds.

In addition, S&P Global Ratings assigned its 'AA+' long-term rating to the New York State Urban Development Corp.'s (UDC) series 2020E (tax-exempt) and 2020F (taxable) state personal income tax (PIT) revenue bonds. At the same time, we affirmed our 'AA+' long-term rating on parity PIT-secured bonds outstanding. The outlook is negative.

The series 2020 bonds are issued on a parity with all other bonds which have been or may be issued under the General Resolution. As of Nov. 30, 2020, there were approximately \$43.3 billion of state PIT bonds outstanding.

"The negative outlook on the GO debt reflects our view of heightened risks to the state's ability to maintain structural budgetary balance and effectuate planned budget reductions over the current and subsequent fiscal years," said S&P Global Ratings credit analyst Timothy Little. "While we

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New York State Outlook Revised To Negative On Looming Budget Uncertainty

view the state's financial plan as reasonably achievable to maintain balance, near-term risks include potentially weaker economic growth compared to the rest of the country, uncertainty surrounding continuing federal aid, and contagion risk from financial and economic stress associated with the Metropolitan Transportation Authority (MTA) and the New York City metropolitan statistical area (MSA)."

"The negative outlook on the PIT revenue bonds reflects that of the state of New York," added Mr. Little. We rate the bonds based on our "Priority-Lien Tax Revenue Debt" criteria (Oct. 22, 2018), which take into account both the strength and stability of the pledged revenues, as well as the general credit quality of the obligor where taxes are distributed and/or collected, in this case, the State of New York (GO rating: 'AA+/Negative').

The state's economy was hit hardest in April due to health and safety measures put it place to mitigate the spread of coronavirus. For the month of April, the state's year-over-year decline in total employment was 19.4% almost 1.9 million jobs mostly in the leisure and hospitality sector. However, the state's financial services sector's employment has remained relatively flat in part due to the disproportionate effect mitigation efforts had on low-wage workers and a longer trend of financial services firms moving toward automation for certain functions and leaner operations.

Given the severity of the downturn, it will likely be years before the New York economy gets back to where it was before the pandemic hit. Real gross output in New York is expected to decline in 2020 more than that of the nation, with much of the recovery expected to happen in 2021 and beyond. In a Boston Consulting Group study commissioned by the state in April, the analysis suggested the state's economy would recover to the "Pre-COVID" level in the first quarter of 2023. When a vaccine or viable treatment option is widely available, the New York City region is likely to post strong economic gains, a positive for the state's overall economic profile. However, unknown long-term changes in consumer behavior, the region's workforce, and immigration could have potentially negative effects.

Our outlook revisions reflect our view that the risks posed by the COVID-19 pandemic to public health and safety as a social risk, if sustained, could weaken the state's economy, liquidity, and budgetary performance. (For more information on the potential effects of the COVID-19 pandemic on state credit conditions, see "The COVID-19 Outbreak Weakens U.S. State And Local Government Credit Conditions," April 2, 2020, and "U.S. States Mid-Year Sector View: States Will Continue To Be Tested In Unprecedented Ways," July 13, 2020).

Absent the implications of COVID-19, we consider the state's social risks in line with that of the sector as demographic trends in the state's Upstate region have been offset by strong growth in the New York City MSA. Environmental risks are somewhat elevated for the state due to its exposure to rising sea levels on Long Island, in New York City, and in communities along the Great Lakes. We view New York's governance risks as being in line with the sector and it has historically maintained a strong management and policy framework to respond to developing risks. (For more information, see "ESG U.S. Public Finance Report Card: Tri-State Region Governments And Not-For-Profit Enterprises," Oct. 28, 2020.)

RELATED RESEARCH

- Through The ESG Lens 2.0: A Deeper Dive Into U.S. Public Finance Credit Factors, April 28, 2020

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitalig.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.



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US Public Finance Infrastructure and Project Finance North America United States

Metropolitan Transportation Authority Triborough Bridge and Tunnel Authority New York City Transit Authority

DEBT REPORT REQUIRED BY SECTION 2800(1)(a)(4)⁽¹⁾ OF THE PUBLIC AUTHORITIES LAW

(1) Public Authorities Law Section 2800(1)(a) provides, in relevant part, as follows: "For the purpose of furnishing the state with systematic information regarding the status and the activities or public authorities, every state authority or commission...shall submit...within ninety days after the end of its fiscal year, a complete and detailed report or reports setting forth: ...(4) a schedule of its bonds and notes outstanding at the end of its fiscal year, together with a statement of the amounts redeemed and incurred during such fiscal year as part of a schedule of debt issuance that includes the date of issuance, term, amount, interest rate and means of repayment. Additionally the debt schedule shall also include all refinancings, calls, refundings, defeasements and interest rate exchange or other such agreements, and for any debt issued during the reporting year, the schedule shall also include a detailed list of costs of issuance for such debt..."

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DEFINITIONS

Called – Bonds or Notes a call option of which has been exercised during the reporting period for which no prior defeasance has occurred.

COPS -- 2 Broadway Certificates of Participation.

Defeased – Bonds or Notes that have been secured by a defeasance obligation, as defined under the applicable bond resolution, and hence, cease to be an MTA debt obligation during the reporting period.

DTF – MTA Dedicated Tax Fund Bonds or Notes.

HRY – Hudson Rail Yards Trust Obligations.

Matured – Bonds or Notes which at the end of the reporting period had zero remaining life left.

Redeemed – Bonds or Notes that have been purchased by MTA during the reporting period.

Refinanced – Bonds or Notes which have been remarketed by MTA during the reporting period with substantially modified terms.

SSC – MTA State Service Contract Bonds or Notes.

SOB – MTA Special Obligation Taxable Refunding Bonds.

TRB –MTA Transportation Revenue Bonds or Notes.

TBTA – MTA Bridges and Tunnels Senior Revenue Bonds or Notes.

TBTA SUB- MTA Bridges and Tunnels Subordinate Revenue Bonds or Notes.

SCHEDULE OF BONDS AND NOTES

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped	,
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>	_
NAF/NAF/NAF/NAF			COPs 2004A-1	9/22/2004	400,000	1/1/2013	4.000	_	_	_	_	_	_	_	
NAF/NAF/NAF/NAF			COPs 2004A-1	9/22/2004	1,450,000	1/1/2014	4.000	-	-	-	=	-	=	-	
NAF/NAF/NAF/NAF			COPs 2004A-1	9/22/2004	1,925,000	1/1/2015	4.000	-	=	-	=	-	-	-	
NAF/NAF/NAF/NAF			COPs 2004A-1	9/22/2004	2,375,000	1/1/2016	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	1,950,000	1/1/2017	4.000	=	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	2,475,000	1/1/2018	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	2,725,000	1/1/2019	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	1,625,000	1/1/2020	4.000	-	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	150,000	1/1/2021	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	150,000	1/1/2022	4.000	-	=	-	=	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	150,000	1/1/2023	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	150,000	1/1/2024	4.000	=	=	-	-	=	=	=	
NAF/NAF/NAF/NAF NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF		COPs 2004A-1 COPs 2004A-1	9/22/2004 9/22/2004	150,000 150,000	1/1/2025 1/1/2026	4.000 4.000	-	-	-	-	-	-	-	
	WD/WD/WD/NAF		COPS 2004A-1	9/22/2004	150,000		4.000	=	=	=	=	=	=	=	
NAF/NAF/NAF/NAF NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1 COPs 2004A-1	9/22/2004	150,000	1/1/2027 1/1/2028	4.000		= =		-	-	=		
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	150,000	1/1/2028	4.000	-		-	-	-	-		
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-1	9/22/2004	150,000	1/1/2030	4.000	_	_	_	_	_	_	_	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	275,000	1/1/2013	4.000	-	-	_	_	-	_	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,025,000	1/1/2014	4.000	-	=	_	=	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,375,000	1/1/2015	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,675,000	1/1/2016	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,375,000	1/1/2017	4.000	=	Ξ	-	=	=	=	=	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,725,000	1/1/2018	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,925,000	1/1/2019	4.000	-	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	1,125,000	1/1/2020	4.000	-	=	-	=	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2021	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2022	4.000 4.000	=	=	-	=	-	-	-	
NAF/NAF/NAF/NAF NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF		COPs 2004A-2 COPs 2004A-2	9/22/2004 9/22/2004	100,000 100,000	1/1/2023 1/1/2024	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPS 2004A-2	9/22/2004	100,000	1/1/2024	4.000	=	=	-	=	=	=	=	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2025	4.000	-		-	-	-	-		
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2027	4.000	-	-	_	-	_	_	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2028	4.000	=	=	-	=	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2029	4.000	-	=	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-2	9/22/2004	100,000	1/1/2030	4.000	-	-	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	1,050,000	1/1/2013	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	3,800,000	1/1/2014	4.000	=	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	5,100,000	1/1/2015	4.000	-	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	6,200,000	1/1/2016	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	5,150,000	1/1/2017	4.000	=	=	-	=	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3 COPs 2004A-3	9/22/2004	6,425,000	1/1/2018	4.000 4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF		COPS 2004A-3	9/22/2004 9/22/2004	7,125,000 4,225,000	1/1/2019 1/1/2020	4.000		= =		-	-	=		
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2020	4.000	-	-	-	-	-	-		
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2022	4.000	-	-	_	-	_	_	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2023	4.000	-	=	_	=	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2024	4.000	-	=	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2025	4.000	=	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2026	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2027	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2028	4.000	-	=	-	-	-	=	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2029	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-3	9/22/2004	375,000	1/1/2030	4.000	=	=	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-4	9/22/2004	950,000	1/1/2013	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF		COPs 2004A-4 COPs 2004A-4	9/22/2004 9/22/2004	3,500,000 4,700,000	1/1/2014 1/1/2015	4.000 4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF		COPS 2004A-4 COPS 2004A-4	9/22/2004	5,675,000	1/1/2015	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-4	9/22/2004	4,750,000	1/1/2017	4.000	-	-	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-4	9/22/2004	5,925,000	1/1/2018	4.000	-	=	-	-	-	-	-	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-4	9/22/2004	6,525,000	1/1/2019	4.000	Ξ.	=	=	=	=	-	=	
NAF/NAF/NAF/NAF	WD/WD/WD/NAF		COPs 2004A-4	9/22/2004	3,875,000	1/1/2020	4.000	-	-	-	-	-	-	-	

4,424,438,830

Total

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

2,157,670,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2021	4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF NAF/NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF			COPs 2004A-4 COPs 2004A-4	9/22/2004 9/22/2004	350,000 350,000	1/1/2022 1/1/2023	4.000 4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2024	4.000	-	-		-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2025	4.000	_	_	-	-	_	-	_
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2026	4.000	=	=	=	=	=	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2027	4.000	-	=	-	=	=	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2028	4.000	-	=	-	=	=	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-4	9/22/2004	350,000	1/1/2029	4.000	=	-	-	-	-	-	-
NAF/NAF/NAF/NAF NAF/NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF			COPs 2004A-4 COPs 2004A-5	9/22/2004 9/22/2004	350,000 100,000	1/1/2030 1/1/2013	4.000 4.000	=	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPS 2004A-5	9/22/2004	400,000	1/1/2013	4.000	-	=	-	-	-	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	525,000	1/1/2015	4.000	_	_	_	_	_	-	_
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	625,000	1/1/2016	4.000	=	=	=	=	=	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	525,000	1/1/2017	4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	650,000	1/1/2018	4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	700,000	1/1/2019	4.000	=	-	-	=	-	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	425,000	1/1/2020	4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2021	4.000	=	-	-	-	-	-	-
NAF/NAF/NAF/NAF NAF/NAF/NAF/NAF	WD/WD/WD/NAF WD/WD/WD/NAF			COPs 2004A-5 COPs 2004A-5	9/22/2004 9/22/2004	25,000 25,000	1/1/2022 1/1/2023	4.000 4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2024	4.000	-	-	_	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2025	4.000	-	=	-	=	=	=	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2026	4.000	-	-	-	-	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2027	4.000	=	=	-	=	-	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2028	4.000	-	-	-	-	=	-	-
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2029	4.000	=	=	=	=	=	=	=
NAF/NAF/NAF/NAF	WD/WD/WD/NAF			COPs 2004A-5	9/22/2004	25,000	1/1/2030	4.000	=	=	-	=	-	=	-
NAF/AA/AA-/NAF				DTF 2002A	8/15/2002	26,240,000	11/15/2013	4.000	-	-	-	-	=	=	-
NAF/AA/AA-/NAF NAF/AA/AA-/NAF				DTF 2002A DTF 2002A	8/15/2002 8/15/2002	15,270,000 2,705,000	11/15/2013 11/15/2014	5.500 4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	2,805,000	11/15/2014	4.200	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	2,885,000	11/15/2016	4.300	=	=	-	=	-	=	_
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	2,985,000	11/15/2017	4.400	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	3,145,000	11/15/2018	4.500	=	-	-	=	=	=	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	885,000	11/15/2019	4.600	-	=	-	=	=	=	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	2,430,000	11/15/2019	5.125	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	765,000	11/15/2020	4.700	-	-	-	=	=	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2002A DTF 2002A	8/15/2002 8/15/2002	2,725,000 3,590,000	11/15/2020 11/15/2021	5.125 4.800	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	3,780,000	11/15/2021	4.900	-	-	_	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	64,195,000	11/15/2023	5.000	_	_	-	-	_	-	_
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	67,405,000	11/15/2024	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	70,940,000	11/15/2025	5.250	-	=	-	=	=	=	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	50,000,000	11/15/2026	5.500	-	=	-	=	=	=	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	24,670,000	11/15/2026	4.750	=	=	=	=	=	=	=
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	45,580,000	11/15/2027	4.750	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2002A DTF 2002A	8/15/2002 8/15/2002	33,010,000 82,400,000	11/15/2027 11/15/2028	5.000 5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2002A	8/15/2002	86,520,000	11/15/2029	5.000		_	_	_			
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	80,850,000	11/15/2030	5.000	_	_	-	-	_	-	_
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	10,000,000	11/15/2030	5.250	=	=	=	=	=	=	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	95,415,000	11/15/2031	5.000	=	=	-	=	-	-	-
NAF/AA/AA/NAF				DTF 2002A	8/15/2002	136,160,000	11/15/2032	5.000	=	-	-	-	-	-	-
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1/F1/NR		DTF 2002B-1	3/23/2016	37,000,000	11/1/2020	4.000	37,000,000	-	=	-	-	=	=
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1/F1/NR		DTF 2002B-1	3/23/2016	55,300,000	11/1/2021	4.000	-	-	-	-	-	55,300,000	-
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1/F1/NR		DTF 2002B-1 DTF 2002B-2	3/23/2016 3/28/2012	57,700,000	11/1/2022	4.000 3.000	=	Ē	=	=	=	57,700,000	=
NAF/AA/AA-/NAF NAF/AA/AA/NAF				DTF 2002B-2	3/28/2012	37,375,000 25,000,000	11/1/2014 11/1/2015	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002B-2	3/28/2012	13,500,000	11/1/2015	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002B-2	3/28/2012	40,175,000	11/1/2016	5.000	-	=	=	=	=	≘	=
NAF/AA/AA/NAF				DTF 2002B-3a	3/28/2012	46,600,000	11/1/2017	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2002B-3b	3/28/2012	48,600,000	11/1/2018	4.000	=	=	=	=	=	=	=
NAF/AA/AA/NAF				DTF 2002B-3c	3/28/2012	50,700,000	11/1/2019	4.000	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA/NAF NAF/AA/AA-/NAF	42/44 /44 /44			DTF 2002B-3d DTF 2004A	3/28/2012 3/10/2004	15,900,000 4,255,000	11/1/2020 11/15/2013	4.000 3.200	15,900,000	=	-	=	=	=	=
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+ A3/AA-/AA-/AA+			DTF 2004A	3/10/2004	14,190,000	11/15/2013	5.250	-	-	-	-	-	-	-
NAF/AA/AA-/NAF	NAF/AA/AA-/NAF			DTF 2004A	3/10/2004	5,955,000	11/15/2013	3.375		_	_	_			
NAF/AA/AA-/NAF	NAF/AA/AA-/NAF			DTF 2004A	3/10/2004	13,375,000	11/15/2014	5.250	-	_	_	_	_	-	_
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004A	3/10/2004	20,230,000	11/15/2015	5.250	-	_	-	_	_	_	_
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004A	3/10/2004	21,295,000	11/15/2016	5.250	=	=	=	-	_	-	-
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004A	3/10/2004	22,410,000	11/15/2017	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004A	3/10/2004	23,590,000	11/15/2018	5.250	-	=	-	=	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	2,140,000	11/15/2019	4.000	=	-	-	=	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	5,630,000	11/15/2019	5.000	=	=	-	=	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	2,615,000	11/15/2020	4.000	2,615,000	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	5,565,000	11/15/2020	5.000	5,565,000	-	-	-	-		-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	3,570,000	11/15/2021	4.000	=	-	-	-	-	3,570,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2004B-1 DTF 2004B-1	4/26/2011 4/26/2011	5,000,000 2,045,000	11/15/2021 11/15/2022	5.000 4.000	-	-	-	-	-	5,000,000	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	7,000,000	11/15/2022	5.000		_	_	_			
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	9,480,000	11/15/2022	5.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	9,945,000	11/15/2024	5.000	-	_	_	-	_	_	_
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	4,215,000	11/15/2025	4.500	=	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	6,250,000	11/15/2025	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	10,995,000	11/15/2026	5.000	Ξ	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	11,530,000	11/15/2027	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	6,575,000	11/15/2028	4.750	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2004B-1	4/26/2011	4,000,000	11/15/2028	5.125	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2004B-2	4/28/2011	15,740,000	11/15/2031	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-2	4/28/2011	46,360,000	11/15/2032	5.000	=	-	-	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2004B-2 DTF 2004B-4	4/28/2011 4/27/2011	40,000,000 7,680,000	11/15/2033 11/15/2019	5.000 5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	8,160,000	11/15/2019	5.000	8,160,000	-		-		-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	2,450,000	11/15/2021	4.000	-	_	_	_	_	2,450,000	_
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	6,100,000	11/15/2021	5.000	-	_	-	_	_	6,100,000	_
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	2,990,000	11/15/2022	4.000	=	=	-	=	_	-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	5,980,000	11/15/2022	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	9,415,000	11/15/2023	5.000	-	=	-	=	-	-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	9,845,000	11/15/2024	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	10,360,000	11/15/2025	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	10,910,000	11/15/2026	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	11,415,000	11/15/2027	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2004B-4	4/27/2011	10,500,000	11/15/2028	5.125 5.000	=	-	-	-	-	-	-
NAF/AA/AA-/NAF NAF/AA/AA-/NAF				DTF 2004C DTF 2004C	12/21/2004 12/21/2004	8,170,000 955,000	11/15/2013 11/15/2013	3.375	=	=	-	=	-	=	=
NAF/AA/AA-/NAF	NAF/AA/AA-/NAF			DTF 2004C	12/21/2004	5,985,000	11/15/2013	5.000	= -	-		-	_	-	-
NAF/AA/AA-/NAF	NAF/AA/AA-/NAF			DTF 2004C	12/21/2004	3,675,000	11/15/2014	3.500	-	_	_	_	_	-	_
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004C	12/21/2004	10,060,000	11/15/2015	5.500	=	=	-	=	_	-	-
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004C	12/21/2004	10,640,000	11/15/2016	5.500	=	-	-	-	-	-	-
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004C	12/21/2004	11,195,000	11/15/2017	5.500	-	=	-	=	-	-	-
NAF/AA/AA/NAF	NAF/AA/AA/NAF			DTF 2004C	12/21/2004	7,170,000	11/15/2018	5.500	Ξ	=	-	=	-	=	-
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006A	6/21/2006	2,570,000	11/15/2013	4.000	-	-	-	-	-	-	-
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006A	6/21/2006	5,100,000	11/15/2013	5.000	=	=	-	=	-	=	-
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006A	6/21/2006	3,275,000	11/15/2014	4.000	=	-	-	-	-	-	-
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006A	6/21/2006	4,750,000	11/15/2014	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A DTF 2006A	6/21/2006 6/21/2006	8,395,000	11/15/2015 11/15/2016	4.000 4.000	-	=	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+ A3/AA-/AA/AA+			DTF 2006A	6/21/2006	8,730,000 9,080,000	11/15/2016	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	9,440,000	11/15/2017	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	9,915,000	11/15/2019	5.000	=	-	-	-	-	_	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	10,410,000	11/15/2020	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	10,930,000	11/15/2021	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	11,475,000	11/15/2022	5.000	÷	=	=	=	=	=	=
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	12,050,000	11/15/2023	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	12,655,000	11/15/2024	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	13,285,000	11/15/2025	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	235,000	11/15/2026	4.375	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

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Hadadiina I T Datings	Credit Supported L T	C T Datings							Amount Matural in	Amount Defeased	Amount Collect in	Amount In	Amount In	Amount Outstanding on	Amount Swapped
Underlying L T Ratings Mdy/S&P/Ftch/Krll	Ratings Mdy/S&P/Ftch/Krll	S T Ratings Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	Amount Defeased in 2020	2020	Redeemed in 2020	Refinanced in 2020	Amount Outstanding as of December 31, 2020	as of December 31, 2020
NAF/AA/AA/NAF	A3/AA-/AA/AA+	may our / rem kin	<u>50.1.05</u>	DTF 2006A	6/21/2006	13,715,000	11/15/2026	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	14,645,000	11/15/2027	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	15,380,000	11/15/2028	5.000	=	=	-	Ξ	=	=	=
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	16,150,000	11/15/2029	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	16,955,000	11/15/2030	5.000	=	=	=	Ξ	=	=	=
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	17,800,000	11/15/2031	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	18,690,000	11/15/2032 11/15/2033	5.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF	A3/AA-/AA/AA+ A3/AA-/AA/AA+			DTF 2006A DTF 2006A	6/21/2006 6/21/2006	19,625,000 20,610,000	11/15/2033	5.000 5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	1,635,000	11/15/2034	4.500	-	-		= =	-	-	
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006A	6/21/2006	20,005,000	11/15/2035	5.000	-	_	_	-	-	_	_
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006B	11/9/2006	8,435,000	11/15/2013	3.700	=	=	-	=	-	=	_
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006B	11/9/2006	3,895,000	11/15/2014	3.750	-	-	-	=	-	-	-
NAF/AA/AA-/NAF	A3/AA-/AA-/AA+			DTF 2006B	11/9/2006	4,855,000	11/15/2014	5.000	=	=	-	-	-	=	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	9,135,000	11/15/2015	5.000	=	=	-	Ξ	=	=	=
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	4,020,000	11/15/2016	3.875	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	5,575,000	11/15/2016	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,030,000	11/15/2017	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,530,000	11/15/2018	5.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B DTF 2006B	11/9/2006 11/9/2006	11,055,000 11,610,000	11/15/2019 11/15/2020	5.000 5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+ A3/AA-/AA/AA+			DTF 2006B	11/9/2006	1,900,000	11/15/2020	4.125	-	-		= =	-	-	
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,290,000	11/15/2021	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	12,780,000	11/15/2022	5.000	_	_	-	-	_	_	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	13,420,000	11/15/2023	5.000	_	_	-	-	_	_	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	14,090,000	11/15/2024	5.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	14,795,000	11/15/2025	5.000	=	=	-	-	-	=	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	15,535,000	11/15/2026	4.750	=	=	-	Ξ	=	=	=
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	16,275,000	11/15/2027	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	17,090,000	11/15/2028	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	17,945,000	11/15/2029	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	18,840,000	11/15/2030	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF	A3/AA-/AA/AA+ A3/AA-/AA/AA+			DTF 2006B DTF 2006B	11/9/2006 11/9/2006	19,780,000 10,000,000	11/15/2031 11/15/2032	5.000 4.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+ A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,770,000	11/15/2032	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,000,000	11/15/2032	4.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	11,760,000	11/15/2033	5.000	_	_	-	-	_	_	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,000,000	11/15/2034	4.500	=	=	-	=	-	=	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	12,800,000	11/15/2034	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,000,000	11/15/2035	4.500	=	=	-	Ξ	=	=	=
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	13,890,000	11/15/2035	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	10,000,000	11/15/2036	4.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA/AA+			DTF 2006B	11/9/2006	15,030,000	11/15/2036	5.000	=	=	-	=	-	=	-
NAF/AA/AA-/NAF				DTF 2008A-1	6/14/2017	1,050,000	11/1/2013	4.000	-	-	-	-	-	-	-
NAF/AA/AA-/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	1,085,000	11/1/2014	4.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	1,125,000	11/1/2015	4.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF	NAF/AAA/AAA/NAF NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR NR/A-1+/F1+/NR		DTF 2008A-1 DTF 2008A-1	6/14/2017 6/14/2017	1,160,000 1,205,000	11/1/2016 11/1/2017	4.000 4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	1,250,000	11/1/2017	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	10,495,000	11/1/2019	4.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	1,180,000	11/1/2020	4.000	1,180,000	_	-	-	_	_	_
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	10,435,000	11/1/2021	4.000	-	-	-	=	-	10,435,000	10,277,085
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	12,160,000	11/1/2022	4.000	-	-	-	-	-	12,160,000	11,975,980
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	12,585,000	11/1/2023	4.000	=	=	-	-	-	12,585,000	12,394,548
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	13,025,000	11/1/2024	4.000	-	-	-	-	-	13,025,000	12,827,890
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	13,495,000	11/1/2025	4.000	-	-	-	-	-	13,495,000	13,290,777
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	13,970,000	11/1/2026	4.000	=	-	-	=	-	13,970,000	13,758,589
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	14,465,000	11/1/2027	4.000	-	-	-	-	-	14,465,000	14,246,098
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017	14,975,000	11/1/2028	4.000	-	-	-	-	-	14,975,000	14,748,380
NAF/AA/AA/NAF	NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR		DTF 2008A-1 DTF 2008A-1	6/14/2017 6/14/2017	15,510,000	11/1/2029 11/1/2030	4.000 4.000	=	-	-	-	-	15,510,000 16,060,000	15,275,284
NAF/AA/AA/NAF NAF/AA/AA/NAF	NAF/AAA/AAA/NAF NAF/AAA/AAA/NAF	NR/A-1+/F1+/NR NR/A-1+/F1+/NR		DTF 2008A-1	6/14/2017 6/14/2017	16,060,000 16,625,000	11/1/2030	4.000	-	-	-	-	-	16,625,000	15,816,960 16,373,410
NAF/AA/AA-/NAF	INAT/AMA/MAA/NAT	NN/A-T+/LT+/NK		DTF 2008A-1	6/22/2011	1,050,000	11/1/2031	4.000	=	=	-	=	-	10,023,000	10,373,410
NAF/AA/AA-/NAF				DTF 2008A-2	6/22/2011	1,085,000	11/1/2013	4.000	-	-	-	-	-	-	_
100//04/01/14/01				Z000 Z	0,22,2011	2,003,000	11, 1, 2017	500							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

			Refulluling Bolius and Notes issued in 2020 1,231,130,000				iotai	4,424,438,830	230,000,000	1,033,770,000	120,723,000	320,033,000	48,308,102,238	2,137,070,000
	Condit Come										A	A		A
	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	<u>2020</u>	<u>2020</u>	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	1,120,000	11/1/2015	4.000	-	-	=	-	-	=	-
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	1,160,000	11/1/2016	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	1,210,000	11/1/2017	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	1,245,000	11/1/2018	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	10,495,000	11/1/2019	4.000	-	-	-	_	_	_	-
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	1,180,000	11/1/2020	4.000	1,180,000	_	_	_	_	_	_
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	10,430,000	11/1/2021	4.000	-	_	_	_	_	10,430,000	10,288,663
				5/25/2017									12,155,000	11,990,287
NAF/AA/AA/NAF			DTF 2008A-2a		12,155,000	11/1/2022	4.000	-	-	-	-	-		
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	12,585,000	11/1/2023	4.000	-	-	-	-	-	12,585,000	12,414,460
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	13,030,000	11/1/2024	4.000	-	-	=	-	-	13,030,000	12,853,430
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	13,495,000	11/1/2025	4.000	-	-	-	-	-	13,495,000	13,312,129
NAF/AA/AA/NAF			DTF 2008A-2a	5/25/2017	6,750,000	11/1/2026	4.000	-	-	-	-	-	6,750,000	6,658,531
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008A-2b	10/31/2019	7,220,000	11/1/2026	4.000	-	-	-	-	-	7,220,000	7,101,943
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008A-2b	10/31/2019	14,465,000	11/1/2027	4.000	-	-	-	_	_	14,465,000	14,228,477
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008A-2b	10/31/2019	14,975,000	11/1/2028	4.000		_	_	_	_	14,975,000	14,730,137
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008A-2b	10/31/2019	15,510,000	11/1/2029	4.000	_	_	_	_	_	15,510,000	15,256,389
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008A-2b	10/31/2019	16,055,000	11/1/2030	4.000						16,055,000	15,792,478
								-	-	-	-	-		
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008A-2b	10/31/2019	16,630,000	11/1/2031	4.000	-	-	-	-	-	16,630,000	16,358,076
NAF/AA/AA-/NAF			DTF 2008B-1	8/13/2013	710,000	11/15/2013	2.000	-	-	-	-	-	=	-
NAF/AA/AA-/NAF			DTF 2008B-1	8/13/2013	745,000	11/15/2014	3.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	780,000	11/15/2015	3.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	815,000	11/15/2016	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	900,000	11/15/2017	4.000	-	-	-	-	-	_	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	1,725,000	11/15/2018	4.000	_	_	-	_	_	_	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,405,000	11/15/2019	5.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,650,000	11/15/2020	5.000	5,650,000						
						11/15/2020		3,030,000	-	-	=	=	F F70 000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,570,000		5.000	-	-	-	-	-	5,570,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,625,000	11/15/2022	5.000	-	-	-	-	-	5,625,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,745,000	11/15/2023	5.000	-	-	-	-	-	5,745,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,695,000	11/15/2024	5.000	-	-	-	-	-	5,695,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,775,000	11/15/2025	5.000	-	-	-	-	-	5,775,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,820,000	11/15/2026	5.000	-	-	-	-	-	5,820,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	2,865,000	11/15/2027	4.000	-	-	-	-	-	2,865,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	5,975,000	11/15/2028	4.000	_	_	-	_	_	5,975,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	12,790,000	11/15/2029	5.000	_	_	_	_	_	12,790,000	_
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	13,085,000	11/15/2030	4.250	_	_	_	_	_	13,085,000	_
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	8,965,000	11/15/2030	5.000						8,965,000	
								-	-	-	-	-		-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	1,435,000	11/15/2033	4.375	-	-	-	-	-	1,435,000	-
NAF/AA/AA/NAF			DTF 2008B-1	8/13/2013	1,340,000	11/15/2034	4.500	-	-	-	-	-	1,340,000	-
NAF/AA/AA-/NAF			DTF 2008B-2	8/3/2011	1,765,000	11/1/2013	5.000	-	-	=	-	-	=	-
NAF/AA/AA-/NAF			DTF 2008B-2	8/3/2011	1,845,000	11/1/2014	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-2	8/3/2011	1,930,000	11/1/2015	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-2	8/3/2011	2,025,000	11/1/2016	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-3a	11/3/2014	4,460,000	11/1/2025	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-3a	11/3/2014	14,450,000	11/1/2026	4.000	-	-	-	-	-	_	-
NAF/AA/AA/NAF			DTF 2008B-3a	11/3/2014	7,105,000	11/1/2027	4.000	_	_	_	_	_	-	_
NAF/AA/AA/NAF			DTF 2008B-3a	11/3/2014	8,985,000	11/1/2028	4.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF			DTF 2008B-3b	10/3/2014	5,850,000	11/1/2028	5.000	-	-	-	-	-	4,665,000	-
								-	-	-	-	-		-
NAF/AA/AA/NAF			DTF 2008B-3b	10/3/2016	31,735,000	11/15/2029	5.000	-	-	-	-	-	25,325,000	-
NAF/AA/AA/NAF			DTF 2008B-3b	10/3/2016	16,885,000	11/15/2030	5.000	-	-	-	-	-	13,470,000	-
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008B-3c	10/31/2019	15,590,000	11/1/2030	4.000	-	-	-	-	-	15,590,000	-
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008B-3c	10/31/2019	22,250,000	11/1/2031	4.000	-	-	-	-	-	22,250,000	-
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008B-3c	10/31/2019	3,565,000	11/1/2033	4.000	-	-	-	-	-	3,565,000	-
NAF/AA/AA/NAF	NAF/AA+/AAA/NAF	NAF/A-1/F1/NAF	DTF 2008B-3c	10/31/2019	3,335,000	11/1/2034	4.000	-	-	-	-	-	3,335,000	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	2,225,000	11/15/2017	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	4,275,000	11/15/2018	4.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	13,415,000	11/15/2019	5.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	14,025,000	11/15/2019	5.000	14,025,000	-		-	-	-	
								14,023,000	-	-	-	-	42.022.222	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	13,830,000	11/15/2021	5.000	-	-	-	-	-	13,830,000	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	13,960,000	11/15/2022	5.000	-	-	-	-	-	13,960,000	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	14,265,000	11/15/2023	5.000	-	-	-	-	-	14,265,000	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	14,130,000	11/15/2024	5.000	-	-	-	=	-	14,130,000	-
NAF/AA/AA/NAF			DTF 2008B-4	8/13/2013	9,875,000	11/15/2025	5.000	=	-	-	-	-	9,875,000	-
NAF/AA/AA-/NAF			DTF 2009A	3/19/2009	4,695,000	11/15/2013	3.000	-	-	-	=	-	=	-

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

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	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						_	Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	DTF 2000 *	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA-/NAF NAF/AA/AA/NAF				DTF 2009A DTF 2009A	3/19/2009 3/19/2009	4,835,000 4,995,000	11/15/2014 11/15/2015	3.300 3.500	=	=	=	=	=	-	=
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	4,995,000 5,170,000	11/15/2015	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	5,375,000	11/15/2017	5.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	5,645,000	11/15/2017	5.000	-	_	_	_	-	_	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	5,930,000	11/15/2019	5.000	-	-	_	_	_	_	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	6,225,000	11/15/2020	5.000	=	-	-	-	-	-	=
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	6,535,000	11/15/2021	5.000	-	=	=	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	6,860,000	11/15/2022	5.000	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	7,205,000	11/15/2023	5.100	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	7,575,000	11/15/2024	5.125	-	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	7,960,000	11/15/2025	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	8,380,000	11/15/2026	5.300	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	8,820,000	11/15/2027	5.375	=	=	-	=	=	-	-
NAF/AA/AA/NAF				DTF 2009A DTF 2009A	3/19/2009 3/19/2009	3,135,000	11/15/2028	5.500 5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2009A	3/19/2009	6,160,000 6,640,000	11/15/2028 11/15/2029	5.500	=	=	=	=	=	=	=
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	3,150,000	11/15/2029	5.375		=	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	10,325,000	11/15/2020	5.500	-	_	_	_	-	_	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	2,280,000	11/15/2031	5.625	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	8,615,000	11/15/2031	5.500	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	9,085,000	11/15/2032	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	2,410,000	11/15/2032	5.625	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	9,585,000	11/15/2033	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	2,545,000	11/15/2033	5.625	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	10,115,000	11/15/2034	5.500	-	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	2,685,000	11/15/2034	5.625	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	10,675,000	11/15/2035	5.500	=	=	-	=	=	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	2,835,000	11/15/2035	5.625	=	-	-	-	-	-	=
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2009A DTF 2009A	3/19/2009 3/19/2009	11,260,000 2,995,000	11/15/2036 11/15/2036	5.500 5.625	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	11,880,000	11/15/2030	5.500		=	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	3,165,000	11/15/2037	5.625	-	_	_	_	-	_	-
NAF/AA/AA-/NAF				DTF 2009A	3/19/2009	12,530,000	11/15/2038	5.500	-	-	_	_	-	_	_
NAF/AA/AA-/NAF				DTF 2009A	3/19/2009	3,345,000	11/15/2038	5.625	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	13,225,000	11/15/2039	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009A	3/19/2009	3,530,000	11/15/2039	5.625	-	=	=	=	-	=	-
NAF/AA/AA-/NAF				DTF 2009B	4/30/2009	2,000,000	11/15/2013	3.000	=	=	-	=	=	=	=
NAF/AA/AA-/NAF				DTF 2009B	4/30/2009	5,970,000	11/15/2013	5.000	-	-	-	-	-	-	-
NAF/AA/AA-/NAF				DTF 2009B	4/30/2009	2,000,000	11/15/2014	3.000	-	=	-	=	-	=	-
NAF/AA/AA-/NAF				DTF 2009B	4/30/2009	6,325,000	11/15/2014	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	2,000,000	11/15/2015	3.000	-	=	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	6,705,000	11/15/2015	5.000	=	-	-	-	-	-	=
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2009B DTF 2009B	4/30/2009 4/30/2009	2,000,000 7,100,000	11/15/2016 11/15/2016	3.250 5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	1,765,000	11/15/2016	3.500	=	=	=	=	=	=	=
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	7,755,000	11/15/2017	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	7,965,000	11/15/2018	5.000	-	-	_	_	-	_	_
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	2,000,000	11/15/2018	3.750	=	=	-	=	-	=	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	2,000,000	11/15/2019	4.000	=	-	-	-	-	-	=
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	8,440,000	11/15/2019	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	10,940,000	11/15/2020	5.250	=	=	-	=	=	=	=
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	11,515,000	11/15/2021	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	12,120,000	11/15/2022	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	12,755,000	11/15/2023	5.250	-	-	-	-	-	-	=
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	13,425,000	11/15/2024	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	14,130,000	11/15/2025	5.250	Ξ.	=	=	-	=	=	=
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2009B DTF 2009B	4/30/2009 4/30/2009	14,875,000	11/15/2026 11/15/2027	5.250 5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009 4/30/2009	15,655,000 16,475,000	11/15/2027	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	17,340,000	11/15/2028	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	18,250,000	11/15/2029	5.250	-	-	-	_	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	19,210,000	11/15/2031	5.000	-	=	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2009B	4/30/2009	20,175,000	11/15/2031	5.000	-	=	-	-	-	-	-
				5055	., 20, 2003	_3,1,3,000	,,,	5.000							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA/NAF			DTF 2009B	4/30/2009	167,040,000	11/15/2033	5.000	=	=	=	-	-	=	-
NAF/AA/AA/NAF			DTF 2009B	4/30/2009	50,000,000	11/15/2034	5.000	≘	Ē	=	-	=	350,000,000	=
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2009C Build America Bonds DTF 2009C Build America Bonds	4/30/2009 4/30/2009	250,000,000 250,000,000	11/15/2037 11/15/2038	7.336 7.336	-	-	-	-	-	250,000,000 250,000,000	-
NAF/AA/AA/NAF			DTF 2009C Build America Bonds	4/30/2009	250,000,000	11/15/2039	7.336	=	-		-		250,000,000	
NAF/AA/AA-/NAF			DTF 2010A-1	3/25/2010	475,000	11/15/2013	4.000	_	_	_	-	-	230,000,000	_
NAF/AA/AA-/NAF			DTF 2010A-1	3/25/2010	6,795,000	11/15/2013	5.000	_	_	-	_	-	_	_
NAF/AA/AA-/NAF			DTF 2010A-1	3/25/2010	825,000	11/15/2013	3.000	-	-	-	-	=	-	-
NAF/AA/AA-/NAF			DTF 2010A-1	3/25/2010	1,670,000	11/15/2014	3.000	-	-	-	-	-	-	-
NAF/AA/AA-/NAF			DTF 2010A-1	3/25/2010	2,535,000	11/15/2014	4.000	=	-	-	=	=	-	-
NAF/AA/AA-/NAF			DTF 2010A-1	3/25/2010	4,275,000	11/15/2014	5.000	-	=	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2010A-1	3/25/2010	4,425,000	11/15/2015	3.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2010A-1	3/25/2010	4,420,000	11/15/2015	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2010A-1	3/25/2010	3,395,000	11/15/2016	3.000 5.000	-	=	-	=	=	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2010A-1 DTF 2010A-1	3/25/2010 3/25/2010	4,350,000 1,450,000	11/15/2016 11/15/2016	4.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2010A-1	3/25/2010	4,120,000	11/15/2016	3.000	=	-	-	=	=	-	-
NAF/AA/AA/NAF			DTF 2010A-1	3/25/2010	4,130,000	11/15/2017	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2010A-1	3/25/2010	1,325,000	11/15/2017	4.500	_	_	_	-	-	_	_
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	9,970,000	11/15/2018	4.655	=	-	-	=	-	-	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	10,440,000	11/15/2019	4.805	=	-	-	=	-	-	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	10,940,000	11/15/2020	4.955	10,940,000	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	11,485,000	11/15/2021	5.105	=	-	-	=	=	11,485,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	12,070,000	11/15/2022	5.255	-	-	-	-	=	12,070,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	12,705,000	11/15/2023	5.355	-	=	-	-	-	12,705,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	13,385,000	11/15/2024	5.455	=	-	-	-	=	13,385,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	14,120,000	11/15/2025	5.535	-	-	-	-	-	14,120,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	14,905,000	11/15/2026	5.989	=	-	-	=	-	14,905,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	15,795,000	11/15/2027	5.989	-	=	-	=	=	15,795,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds DTF 2010A-2 Build America Bonds	3/25/2010 3/25/2010	16,745,000	11/15/2028 11/15/2029	5.989 5.989	-	-	-	-	-	16,745,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	17,750,000 18,815,000	11/15/2029	5.989	=	-		-		17,750,000 18,815,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	19,945,000	11/15/2031	6.089	-	-	-	-	-	19,945,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	21,160,000	11/15/2032	6.089	_	_	_	-	-	21,160,000	_
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	22,450,000	11/15/2033	6.089	_	_	-	-	-	22,450,000	_
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	23,820,000	11/15/2034	6.089	-	-	-	-	=	23,820,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	25,275,000	11/15/2035	6.089	=	=	-	-	-	25,275,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	26,815,000	11/15/2036	6.089	=	=	-	-	-	26,815,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	28,450,000	11/15/2037	6.089	-	-	-	-	=	28,450,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	30,185,000	11/15/2038	6.089	=	-	-	-	=	30,185,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	32,030,000	11/15/2039	6.089	-	-	-	-	-	32,030,000	-
NAF/AA/AA/NAF			DTF 2010A-2 Build America Bonds	3/25/2010	33,980,000	11/15/2040	6.089	=	-	-	=	-	33,980,000	-
NAF/AA/AA-/NAF NAF/AA/AA-/NAF			DTF 2011A DTF 2011A	3/31/2011	1,840,000	11/15/2013	3.000 4.000	-	-	-	-	-	-	-
NAF/AA/AA-/NAF			DTF 2011A	3/31/2011 3/31/2011	10,200,000 1,275,000	11/15/2013 11/15/2014	3.000	=	-		-			
NAF/AA/AA-/NAF			DTF 2011A	3/31/2011	11,230,000	11/15/2014	4.000	_	_	_	_	_	_	_
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	1,345,000	11/15/2015	3.000	_	_	_	-	-	_	_
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	14,335,000	11/15/2015	5.000	Ξ.	Ē	=	-	=	Ē	=
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	1,125,000	11/15/2016	3.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	15,310,000	11/15/2016	5.000	=	=	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	1,910,000	11/15/2017	4.000	=	-	-	=	=	=	-
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	15,320,000	11/15/2017	5.000	-	=	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	1,350,000	11/15/2018	4.000	-	-	-	=	=	-	-
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	16,725,000	11/15/2018	5.000	-	-	-	=	=	-	-
NAF/AA/AA/NAF			DTF 2011A	3/31/2011	620,000	11/15/2019	4.000	2 205 000	-	-	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2011A DTF 2011A	3/31/2011	2,265,000	11/15/2020 11/15/2020	4.000 5.000	2,265,000 17,690,000	Ē	=	-	=	Ē	=
NAF/AA/AA/NAF			DTF 2011A DTF 2011A	3/31/2011 3/31/2011	17,690,000 2,575,000	11/15/2020	5.000	17,690,000	-	-	-	-	2,575,000	-
NAF/AA/AA/NAF			DTF 2011A	10/25/2012	56,385,000	11/15/2021	2.000	-	-	-	-	-	2,373,000	-
NAF/AA/AA-/NAF			DTF 2012A	10/25/2012	16,820,000	11/15/2013	4.000	-	-	-	-	=	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	3,035,000	11/15/2014	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	3,090,000	11/15/2016	5.000	Ξ.	Ē	=	-	=	Ē	=
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	3,190,000	11/15/2017	2.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	2,245,000	11/15/2018	3.000	-	-	-	-	-	-	-
•														

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

 Total Bonds and Notes Issued in 2020
 10,170,427,707

 New Money Bonds and Notes Issued in 2020
 8,939,237,707

 Refunding Bonds and Notes Issued in 2020
 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series	Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	20,985,000	11/15/2018	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	660,000	11/15/2019	2.500	=	=	-	=	-	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	23,480,000	11/15/2019	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	2,200,000	11/15/2020	2.000	2,200,000	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	23,145,000	11/15/2020	5.000	23,145,000	-	=	=	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2012A DTF 2012A	10/25/2012 10/25/2012	1,905,000 22,665,000	11/15/2021 11/15/2021	3.000 5.000	-	-	-	-	-	1,905,000 22,665,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	8,385,000	11/15/2021	4.000	-	-		-		8,385,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	19,360,000	11/15/2022	5.000			_	_		19,360,000	
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	89,275,000	11/15/2023	5.000	_	_	_	_	_	89,275,000	_
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	5,000,000	11/15/2024	2.500	_	=	_	-	_	5,000,000	_
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	68,265,000	11/15/2024	5.000	-	-	-	-	-	68,265,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	70,280,000	11/15/2025	5.000	-	-	-	-	-	70,280,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	73,865,000	11/15/2026	5.000	=	=	-	=	-	73,865,000	=
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	77,560,000	11/15/2027	5.000	-	-	-	=	-	77,560,000	=
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	50,000,000	11/15/2028	3.000	-	-	-	-	-	50,000,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	33,340,000	11/15/2028	5.000	=	=	-	=	-	33,340,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	84,400,000	11/15/2029	5.000	-	-	-	-	-	84,400,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	100,000	11/15/2030	5.000	=	=	-	=	-	100,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	88,525,000	11/15/2030	-	-	-	-	-	-	88,525,000	-
NAF/AA/AA/NAF			DTF 2012A	10/25/2012	48,320,000	11/15/2031	4.000	-	-	-	-	-	48,320,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2012A DTF 2012A	10/25/2012 10/25/2012	40,305,000 128,550,000	11/15/2031 11/15/2032	5.000	-	-	-	-	-	40,305,000 128,550,000	-
NAF/SP-1+/F1+/NAF			DTF 2015A-1 BANS	9/17/2015	200,000,000	6/1/2016	0.750	-	-	_	-	_	128,530,000	-
NAF/SP-1+/F1+/NAF			DTF 2015A-2 BANS	9/17/2015	30,000,000	6/1/2016	0.750	_	_	_	_	_	_	_
NAF/SP-1+/F1+/NAF			DTF 2015A-3 BANS	9/17/2015	10,000,000	6/1/2016	0.750	_	_	_	_	_	_	_
NAF/SP-1+/F1+/NAF			DTF 2015A-4 BANS	9/17/2015	75,000,000	6/1/2016	0.750	-	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2015A-5 BANS	9/17/2015	50,000,000	6/1/2016	0.750	-	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2015A-6 BANS	9/17/2015	30,000,000	6/1/2016	0.750	=	=	-	=	-	-	=
NAF/SP-1+/F1+/NAF			DTF 2015A-7 BANS	9/17/2015	35,000,000	6/1/2016	0.750	-	-	-	=	-	-	=
NAF/SP-1+/F1+/NAF			DTF 2015A-8 BANS	9/17/2015	70,000,000	6/1/2016	0.750	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	2,260,000	11/15/2016	2.000	-	-	=	Ξ	=	=	÷
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	7,755,000	11/15/2017	4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	295,000	11/15/2019	5.000	-	=	-	=	-	-	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	11,470,000	11/15/2020	5.000	11,470,000	-	-	-	-	45 455 000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2016A DTF 2016A	3/10/2016 3/10/2016	15,155,000 27,415,000	11/15/2021 11/15/2022	5.000 5.000	-	-	-	-	-	15,155,000 27,415,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	15,270,000	11/15/2022	5.000	=	=	-	=	-	15,270,000	=
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	1,750,000	11/15/2024	4.000	-	-	_	-		1,750,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	36,000,000	11/15/2024	5.000	_	_	-	-	_	36,000,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	7,500,000	11/15/2025	4.000	=	=	-	=	_	7,500,000	=
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	39,300,000	11/15/2025	5.000	-	-	-	-	-	39,300,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	15,750,000	11/15/2026	4.000	-	-	-	-	-	15,750,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	19,160,000	11/15/2026	5.000	=	=	-	=	-	19,160,000	=
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	36,495,000	11/15/2027	5.250	-	-	-	-	-	36,495,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	38,415,000	11/15/2028	5.250	-	-	-	-	-	38,415,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	40,435,000	11/15/2029	5.250	-	-	=	Ξ	=	40,435,000	÷
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	45,550,000	11/15/2030	5.250	-	-	-	-	-	45,550,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	47,940,000	11/15/2031	5.250	=	-	=	=	-	47,940,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	41,370,000	11/15/2032	5.250 3.125	-	-	-	-	-	41,370,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2016A DTF 2016A	3/10/2016 3/10/2016	6,990,000 22,010,000	11/15/2033 11/15/2033	5.250	-	-	-	-	-	6,990,000 22,010,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	1,475,000	11/15/2034	4.000	-	-		-	_	1,475,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	37,905,000	11/15/2034	5.250	_	_	_	_	_	37,905,000	_
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	2,050,000	11/15/2035	4.000	-	-	-	-	-	2,050,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	39,380,000	11/15/2035	5.250	-	-	-	-	-	39,380,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	2,920,000	11/15/2036	3.250	-	-	-	-	-	2,920,000	-
NAF/AA/AA/NAF			DTF 2016A	3/10/2016	17,940,000	11/15/2036	5.250	-	-	-	-	-	17,940,000	-
NAF/SP-1+/F1+/NAF			DTF 2016A-1a BANS	6/28/2016	50,000,000	3/1/2017	5.000	-	-	=	=	-	=	-
NAF/SP-1+/F1+/NAF			DTF 2016A-1b BANS	6/28/2016	100,000,000	3/1/2017	2.000	-	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2016A-1c BANS	6/28/2016	10,000,000	3/1/2017	2.000	-	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2016A-1d BANS	6/28/2016	100,000,000	3/1/2017	2.000	=	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2016A-1e BANS	6/28/2016	50,000,000	3/1/2017	2.000	=	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2016A-1f BANS	6/28/2016	25,000,000	3/1/2017	2.000	-	=	=	=	=	=	=

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/SP-1+/F1+/NAF			DTF 2016A-1g BANS	6/28/2016	10,000,000	3/1/2017	2.000	-	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF NAF/SP-1+/F1+/NAF			DTF 2016A-1h BANS	6/28/2016	5,000,000	3/1/2017	2.000 2.000	-	=	-	=	=	=	-
NAF/SP-1+/F1+/NAF			DTF 2016A-2a BANS DTF 2016A-2b BANS	6/28/2016 6/28/2016	25,000,000 10,000,000	6/1/2017 6/1/2017	2.000	-	-	-	-	-	-	-
NAF/SP-1+/F1+/NAF			DTF 2016A-2c BANS	6/28/2016	150,000,000	6/1/2017	4.000	=	= -	-	= -	_	-	-
NAF/SP-1+/F1+/NAF			DTF 2016A-2d BANS	6/28/2016	100,000,000	6/1/2017	2.000	_	-	_	-	-	-	_
NAF/SP-1+/F1+/NAF			DTF 2016A-2e BANS	6/28/2016	25,000,000	6/1/2017	2.000	_	-	_	-	_	-	_
NAF/SP-1+/F1+/NAF			DTF 2016A-2f BANS	6/28/2016	10,000,000	6/1/2017	2.000	-	=	-	=	=	=	-
NAF/SP-1+/F1+/NAF			DTF 2016A-2g BANS	6/28/2016	30,000,000	6/1/2017	2.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	1,755,000	11/15/2016	2.000	=	-	=	-	-	-	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	3,775,000	11/15/2017	4.000	-	-	-	-	=	-	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	3,925,000	11/15/2018	4.000	-	=	-	=	=	=	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,085,000	11/15/2019	5.000	-	=	-	=	=	=	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,290,000	11/15/2020	5.000	4,290,000	=	=	=	-	-	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,505,000	11/15/2021	5.000	-	-	-	-	-	4,505,000	-
NAF/AA/AA/NAF			DTF 2016B-1 DTF 2016B-1	5/26/2016 5/26/2016	4,730,000 4,965,000	11/15/2022 11/15/2023	5.000 5.000	-	-	-	-	-	4,730,000 4,965,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	5,215,000	11/15/2023	5.000	-	=	-	-	-	5,215,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	5,475,000	11/15/2025	5.000	-	-	-	-	-	5,475,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	5,745,000	11/15/2026	5.000	_	-	_	-	-	5,745,000	_
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	6,035,000	11/15/2027	5.000	_	-	_	-	_	6,035,000	_
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	6,335,000	11/15/2028	5.000	=	=	=	-	-	6,335,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	6,655,000	11/15/2029	5.000	-	-	-	-	-	6,655,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	6,985,000	11/15/2030	5.000	=	Ξ	=	Ξ	=	6,985,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	7,335,000	11/15/2031	5.000	-	=	-	-	=	7,335,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	7,700,000	11/15/2032	5.000	=	-	-	-	-	7,700,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	8,085,000	11/15/2033	5.000	-	=	-	=	=	8,085,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	8,490,000	11/15/2034	5.000	=	=	=	=	-	8,490,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	8,915,000	11/15/2035	5.000	=	=	=	=	-	8,915,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	198,415,000	11/15/2036	5.000	-	-	-	-	-	198,415,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2016B-1 DTF 2016B-1	5/26/2016 5/26/2016	3,025,000 3,175,000	11/15/2037 11/15/2038	5.000 5.000	-	-	-	-	-	3,025,000 3,175,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	3,335,000	11/15/2038	5.000	-	-	-	-	-	3,335,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	3,500,000	11/15/2040	5.000	_	_	_	_	_	3,500,000	_
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	3,675,000	11/15/2041	5.000	_	-	_	-	_	3,675,000	_
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	3,860,000	11/15/2042	5.000	=	=	=	-	-	3,860,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,055,000	11/15/2043	5.000	-	-	-	-	-	4,055,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,255,000	11/15/2044	5.000	=	-	=	-	-	4,255,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,470,000	11/15/2045	5.000	=	Ξ	=	Ξ	=	4,470,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,690,000	11/15/2046	5.000	=	-	-	-	-	4,690,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	4,925,000	11/15/2047	5.000	-	Ξ	-	-	=	4,925,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	5,175,000	11/15/2048	5.000	-	=	-	=	=	5,175,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	5,430,000	11/15/2049	5.000	=	=	=	=	-	5,430,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	5,705,000	11/15/2050	5.000	-	=	-	=	=	5,705,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2016B-1 DTF 2016B-1	5/26/2016 5/26/2016	5,990,000 6,285,000	11/15/2051 11/15/2052	5.000 5.000	-	=	-	-	-	5,990,000 6,285,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	6,600,000	11/15/2052	5.000	=	= -	-	= -	_	6,600,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	6,930,000	11/15/2054	5.000	_	-	_	-	-	6,930,000	_
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	7,280,000	11/15/2055	5.000	=	=	=	=	-	7,280,000	-
NAF/AA/AA/NAF			DTF 2016B-1	5/26/2016	7,640,000	11/15/2056	5.000	=	=	=	-	-	7,640,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	14,170,000	11/15/2026	5.000	-	-	-	-	-	14,170,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	14,875,000	11/15/2027	5.000	=	Ξ	=	Ξ	=	14,875,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	15,615,000	11/15/2028	5.000	-	-	-	-	=	15,615,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	16,400,000	11/15/2029	5.000	=	-	-	-	-	16,400,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	17,220,000	11/15/2030	5.000	-	=	-	=	=	17,220,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	7,955,000	11/15/2032	5.000	-	-	-	=	-	7,955,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	10,900,000	11/15/2033	5.000	=	Ξ	-	Ξ	=	10,900,000	=
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	11,445,000	11/15/2034	5.000	-	-	-	-	-	11,445,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2016B-2 DTF 2016B-2	5/26/2016 5/26/2016	12,020,000 12,615,000	11/15/2035 11/15/2036	5.000 5.000	-	-	-	-	-	12,020,000 12,615,000	-
NAF/AA/AA/NAF			DTF 2016B-2 DTF 2016B-2	5/26/2016	13,250,000	11/15/2036	5.000	-	-	-	-	-	13,250,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	8,865,000	11/15/2037	4.000	-	-	-	-	-	8,865,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	5,045,000	11/15/2038	5.000	-	-	-	-	-	5,045,000	-
NAF/AA/AA/NAF			DTF 2016B-2	5/26/2016	7,220,000	11/15/2039	3.000	=	=	-	=	=	7,220,000	-
				-, -, -==	, -,								, -,	

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA/NAF				DTF 2016B-2	5/26/2016	7,295,000	11/15/2039	5.000	=	-	-	-	-	7,295,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017A DTF 2017A	2/23/2017 2/23/2017	2,945,000 3,095,000	11/15/2018 11/15/2019	5.000 5.000	=	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	3,250,000	11/15/2019	5.000	3,250,000	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	3,410,000	11/15/2021	5.000	3,230,000	_	-	-	_	3,410,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	3,580,000	11/15/2022	5.000	=	=	=	=	=	3,580,000	=
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	3,760,000	11/15/2023	5.000	=	=	=	-	=	3,760,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	3,950,000	11/15/2024	5.000	=	=	-	-	=	3,950,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	4,145,000	11/15/2025	5.000	-	-	-	-	-	4,145,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017A DTF 2017A	2/23/2017 2/23/2017	4,355,000 4,570,000	11/15/2026 11/15/2027	5.000 5.000	-	-	-	-	-	4,355,000 4,570,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	4,800,000	11/15/2027	5.000	=	-	-	=	=	4,800,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	5,040,000	11/15/2029	5.000	-	_	-	_	_	5,040,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	5,290,000	11/15/2030	3.000	=	=	=	=	=	5,290,000	=
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	5,450,000	11/15/2031	5.000	-	-	-	-	-	5,450,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	5,725,000	11/15/2032	5.000	-	-	-	-	-	5,725,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	6,010,000	11/15/2033	5.000	=	=	=	=	=	6,010,000	=
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	7,750,000	11/15/2034	3.500	=	=	=	-	=	7,750,000	-
NAF/AA/AA/NAF				DTF 2017A DTF 2017A	2/23/2017 2/23/2017	17,250,000	11/15/2034 11/15/2035	5.000	-	-	-	-	-	17,250,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017A	2/23/2017	55,000,000 15,000,000	11/15/2035	5.000 4.000	=	=	=	-	=	55,000,000 15,000,000	=
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	9,355,000	11/15/2036	5.000	-	-	-	-	-	9,355,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	9,825,000	11/15/2037	5.000	=	=	-	-	=	9,825,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	10,315,000	11/15/2038	5.000	-	-	-	-	-	10,315,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	1,480,000	11/15/2039	4.000	-	=	-	-	=	1,480,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	9,350,000	11/15/2039	5.000	-	-	-	-	-	9,350,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	1,540,000	11/15/2040	4.000	-	-	-	-	-	1,540,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	9,820,000	11/15/2040	5.000	=	=	=	-	=	9,820,000	-
NAF/AA/AA/NAF				DTF 2017A DTF 2017A	2/23/2017 2/23/2017	1,600,000	11/15/2041 11/15/2041	4.000 5.000	-	-	-	-	-	1,600,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017A	2/23/2017	10,310,000 1,665,000	11/15/2041	4.000	-	-	-	-	-	10,310,000 1,665,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	10,825,000	11/15/2042	5.000	-	_	-	-	_	10,825,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	13,095,000	11/15/2043	5.000	=	=	=	=	=	13,095,000	=
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	13,750,000	11/15/2044	5.000	-	-	-	-	-	13,750,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	14,440,000	11/15/2045	5.000	-	-	-	-	-	14,440,000	-
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	15,160,000	11/15/2046	5.000	=	=	=	=	=	15,160,000	=
NAF/AA/AA/NAF				DTF 2017A	2/23/2017	15,920,000	11/15/2047	5.000	=	=	=	-	=	15,920,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017B-1 DTF 2017B-1	5/17/2017 5/17/2017	500,000 515,000	11/15/2018 11/15/2019	4.000 4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	530,000	11/15/2019	4.000	530,000	-	-	-	-	=	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	555,000	11/15/2021	4.000	-	_	-	-	_	555,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	1,660,000	11/15/2022	4.000	=	=	-	-	=	1,660,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	1,725,000	11/15/2023	4.000	-	-	-	-	-	1,725,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	1,795,000	11/15/2024	4.000	-	-	-	-	-	1,795,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	1,860,000	11/15/2025	4.000	=	=	-	-	=	1,860,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	2,645,000	11/15/2026	5.000	-	-	-	-	-	2,645,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	14,040,000	11/15/2027	5.000	=	=	=	-	=	14,040,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017B-1 DTF 2017B-1	5/17/2017 5/17/2017	6,665,000 12,160,000	11/15/2028 11/15/2029	5.000 5.000	-	-	-	-	-	6,665,000 12,160,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	7,735,000	11/15/2030	5.000	_	_	_	_	_	7,735,000	_
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	5,585,000	11/15/2031	5.000	=	=	-	-	=	5,585,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	8,090,000	11/15/2032	5.000	-	-	-	-	-	8,090,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	6,870,000	11/15/2033	5.000	-	-	-	-	-	6,870,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	22,470,000	11/15/2034	5.000	-	-	-	-	-	22,470,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	33,940,000	11/15/2035	5.000	-	-	-	-	-	33,940,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				DTF 2017B-1 DTF 2017B-1	5/17/2017 5/17/2017	4,825,000 5,060,000	11/15/2036 11/15/2037	5.000 5.000	=	=	-	=	-	4,825,000 5,060,000	-
NAF/AA/AA/NAF				DTF 2017B-1 DTF 2017B-1	5/17/2017 5/17/2017	5,060,000	11/15/2037	3.500	-	-	-	-	-	5,060,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	5,500,000	11/15/2039	5.000	-	-	-	-	-	5,500,000	_
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	5,775,000	11/15/2040	5.000	-	-	-	=	_	5,775,000	_
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	6,070,000	11/15/2041	5.000	-	-	-	-	-	6,070,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	6,370,000	11/15/2042	5.000	=	=	=	=	=	6,370,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	6,690,000	11/15/2043	5.000	-	-	-	-	-	6,690,000	-
NAF/AA/AA/NAF				DTF 2017B-1	5/17/2017	7,020,000	11/15/2044	5.000	-	-	-	-	-	7,020,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	7,375,000	11/15/2045	5.000	=	=	-	-	-	7,375,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	7,745,000	11/15/2046	5.000	=	-	-	=	=	7,745,000	=
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2017B-1 DTF 2017B-1	5/17/2017 5/17/2017	8,130,000 200,000	11/15/2047 11/15/2048	5.000 5.000	-	-	-	-	-	8,130,000 200,000	-
NAF/AA/AA/NAF			DTF 2017B-1 DTF 2017B-1	5/17/2017	8,340,000	11/15/2048	4.000	-	-	-	-	-	8,340,000	-
NAF/AA/AA/NAF			DTF 2017B-1 DTF 2017B-1	5/17/2017	200,000	11/15/2048	5.000	-	-		-	_	200,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	8,685,000	11/15/2049	4.000	_	_	_	_	_	8,685,000	_
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	200,000	11/15/2050	5.000	_	_	_	-	_	200,000	_
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	9,040,000	11/15/2050	4.000	=	-	=	-	_	9,040,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	200,000	11/15/2051	5.000	-	-	-	-	-	200,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	9,415,000	11/15/2051	4.000	-	-	-	-	-	9,415,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	200,000	11/15/2052	5.000	=	-	-	=	-	200,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	9,800,000	11/15/2052	4.000	-	-	-	-	-	9,800,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	10,395,000	11/15/2053	5.250	-	-	-	-	-	10,395,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	10,940,000	11/15/2054	5.250 5.250	-	=	-	-	-	10,940,000	-
NAF/AA/AA/NAF			DTF 2017B-1	5/17/2017	11,515,000	11/15/2055		-	-	-	-	-	11,515,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2017B-1 DTF 2017B-1	5/17/2017 5/17/2017	12,120,000 12,755,000	11/15/2056 11/15/2057	5.250 5.250	-	-	-	-	-	12,120,000 12,755,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	3,955,000	11/15/2022	5.000	-	-		-	_	3,955,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	17,815,000	11/15/2023	5.000	_	_	_	_	_	17,815,000	_
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	18,650,000	11/15/2024	5.000	_	_	_	-	_	18,650,000	_
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	19,635,000	11/15/2025	5.000	=	-	-	=	_	19,635,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	20,675,000	11/15/2026	5.000	-	-	-	-	-	20,675,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	21,655,000	11/15/2027	5.000	=	-	=	=	-	21,655,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	19,720,000	11/15/2028	5.000	=	-	-	=	-	19,720,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	17,785,000	11/15/2031	5.000	-	-	-	-	-	17,785,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	18,675,000	11/15/2032	4.000	=	-	-	=	-	18,675,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	45,285,000	11/15/2033	5.000	-	-	-	-	-	45,285,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	30,000,000	11/15/2033	3.125	-	-	-	-	-	30,000,000	-
NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds	5/17/2017	40,000,000	11/15/2033	5.250	=	-	-	=	-	40,000,000	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			DTF 2017B-2 Refunding Green Bonds DTF 2017B-2 Refunding Green Bonds	5/17/2017 5/17/2017	50,000,000 27,190,000	11/15/2033 11/15/2034	4.000 5.000	-	-	-	-	-	50,000,000 27,190,000	-
NAF/AA/AA/NAF			DTF 20176-2 Refunding Green Bonds	5/17/2017	20,000,000	11/15/2034	4.000	-	-		-	_	20,000,000	-
NAF/AA/AA/NAF		NAF/SP-1+/F1+/NAF	DTF 20176-2 Returning Green Bonus	3/19/2019	750,000,000	3/1/2022	5.000		_	_	_		750,000,000	
A2/NAF/NAF/A-		IVAL/SI II/III/IVAI	HRY 2016A	9/22/2016	162,660,000	11/15/2046	5.000	_	_	162,660,000	_	_	-	_
A2/NAF/NAF/A-			HRY 2016A	9/22/2016	307,000,000	11/15/2051	5.000	_	_	-	_	_	307,000,000	_
A2/NAF/NAF/A-			HRY 2016A	9/22/2016	375,430,000	11/15/2056	5.000	-	=	-	-	-	375,430,000	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	20,550,000	7/1/2015	0.220	-	-	-	=	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	19,710,000	7/1/2016	0.582	=	-	-	=	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	30,945,000	7/1/2017	1.069	-	=	-	=	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	31,295,000	7/1/2018	1.469	-	-	-	-	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	31,745,000	7/1/2019	1.848	=	-	-	=	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	32,335,000	7/1/2020	2.168	32,335,000	-	-	-	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	33,045,000	7/1/2021	2.523	=	-	33,045,000	=	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	33,885,000	7/1/2022	2.723	-	-	33,885,000	-	-	-	-
Aaa/NAF/NAF/NAF Aaa/NAF/NAF/NAF			SOB 2014 Taxable SOB 2014 Taxable	8/14/2014	31,270,000	7/1/2023	2.868 3.018	-	-	31,270,000	-	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014 8/14/2014	32,175,000 28,230,000	7/1/2024 7/1/2025	3.118	-	-	32,175,000 28,230,000	=	-	-	-
Aaa/NAF/NAF/NAF			SOB 2014 Taxable	8/14/2014	23,725,000	7/1/2026	3.218	-	-	23,725,000	-	_	_	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	7,500,000	7/1/2012	5.000	_	_	-	_	_	_	_
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	1,085,000	1/1/2013	4.400	_	_	-	_	_	_	_
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	7,500,000	7/1/2013	4.300	-	=	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	1,490,000	1/1/2014	4.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	21,960,000	7/1/2014	5.500	=	-	-	=	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	4,140,000	7/1/2014	4.400	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	28,385,000	1/1/2015	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	29,165,000	7/1/2015	5.500	=	=	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	29,970,000	1/1/2016	5.750	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	30,830,000	7/1/2016	5.750	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A	6/27/2002	31,715,000	1/1/2017	5.750	=	Ξ	≘	=	=	Ē	=
NAF/AA/AA/NAF NAF/AA/AA/NAF			SSC 2002A SSC 2002A	6/27/2002 6/27/2002	32,630,000 33,525,000	7/1/2017 1/1/2018	5.500 5.750	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A SSC 2002A	6/27/2002	34,490,000	7/1/2018	5.750	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2002A SSC 2002A	6/27/2002	35,480,000	1/1/2019	5.500	-	=	-	-	-	-	-
NOI / OO/ OO/ NAF			33C 2002A	0/2//2002	33,400,000	1,1,2013	5.500							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	36,455,000	7/1/2019	5.500	-	=	-	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				SSC 2002A	6/27/2002	37,460,000	1/1/2020	5.500	-	=	=	-	-	=	=
NAF/AA/AA/NAF				SSC 2002A SSC 2002A	6/27/2002 6/27/2002	38,490,000 10,000,000	7/1/2020 1/1/2021	5.500 5.100	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	29,550,000	1/1/2021	5.000	=	-	-	-	-	=	
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	40,540,000	7/1/2021	5.000	_	-	_	_	_	-	_
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	10,000,000	1/1/2022	5.125	_	_	_	_	_	_	_
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	31,555,000	1/1/2022	5.000	-	=	-	=	-	=	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	42,600,000	7/1/2022	5.000	=	-	=	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	43,665,000	1/1/2023	5.250	=	=	=	-	-	=	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	44,810,000	7/1/2023	5.125	=	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	45,960,000	1/1/2024	5.125	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	47,135,000	7/1/2024	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	48,315,000	1/1/2025	5.000	-	=	-	=	-	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				SSC 2002A SSC 2002A	6/27/2002 6/27/2002	49,525,000 52,900,000	7/1/2025 1/1/2026	5.000 5.125	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	54,330,000	7/1/2026	5.125			_		_		
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	55,675,000	1/1/2027	5.125	_	_	_	_	_	_	_
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	57,045,000	7/1/2027	5.125	_	_	_	_	_	_	_
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	58,450,000	1/1/2028	5.125	-	=	-	=	-	=	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	59,890,000	7/1/2028	5.125	-	=	-	=	-	=	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	61,610,000	1/1/2029	5.125	=	-	=	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	60,360,000	7/1/2029	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	61,945,000	1/1/2030	5.000	=	=	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	63,570,000	7/1/2030	5.000	=	=	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	49,340,000	1/1/2031	5.250	=	=	=	-	-	-	-
NAF/AA/AA/NAF				SSC 2002A	6/27/2002	6,950,000	7/1/2031	5.250	-	=	-	=	-	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				SSC 2002A SSC 2002B	6/27/2002 7/2/2002	60,000,000 4,060,000	7/1/2031 7/1/2012	5.750 4.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	18,215,000	7/1/2012	5.500	-	=	=	-	-	=	=
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	29,460,000	1/1/2013	5.500	_	-	_	_	_	-	_
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	23,880,000	7/1/2013	5.500	=	=	=	-	-	=	_
NAF/AA/AA/NAF	A3/AA-/AA-/AA+			SSC 2002B	7/2/2002	30,710,000	1/1/2014	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF	A3/AA-/AA-/AA+			SSC 2002B	7/2/2002	6,975,000	7/1/2014	5.500	=	-	=	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	5,580,000	1/1/2015	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	5,730,000	7/1/2015	5.500	=	=	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	5,885,000	1/1/2016	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	6,050,000	7/1/2016	5.500	=	=	=	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				SSC 2002B SSC 2002B	7/2/2002 7/2/2002	6,220,000 6,385,000	1/1/2017 7/1/2017	5.500 5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	6,565,000	1/1/2017	5.500	=	-	-	-	-	=	
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	6,745,000	7/1/2018	5.500	_	-	_	_	_	-	_
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	6,930,000	1/1/2019	5.500	=	=	=	-	-	=	_
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	7,120,000	7/1/2019	5.500	-	=	-	=	-	=	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	7,315,000	1/1/2020	5.500	-	=	=	-	-	=	=
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	7,515,000	7/1/2020	5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	7,720,000	1/1/2021	5.000	=	=	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	7,920,000	7/1/2021	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	8,115,000	1/1/2022	5.000	-	=	-	=	-	=	-
NAF/AA/AA/NAF NAF/AA/AA/NAF				SSC 2002B SSC 2002B	7/2/2002 7/2/2002	8,315,000 8,525,000	7/1/2022 1/1/2023	5.000 5.500	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	8,760,000	7/1/2023	5.500	-	=	=	-	-	=	=
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	9,000,000	1/1/2024	5.500	_	-	_	_	_	-	_
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	9,250,000	7/1/2024	5.500	_	_	_	_	_	_	_
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	4,605,000	1/1/2025	5.375	-	=	-	=	-	=	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	2,290,000	1/1/2025	5.250	=	=	=	=	-	=	=
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	2,610,000	1/1/2025	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	4,715,000	7/1/2025	5.375	-	=	-	-	-	=	=
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	2,360,000	7/1/2025	5.250	-	=	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B	7/2/2002	2,675,000	7/1/2025	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B SSC 2002B	7/2/2002	3,810,000	1/1/2026	5.375 5.250	=	=	=	=	-	=	€
NAF/AA/AA/NAF NAF/AA/AA/NAF				SSC 2002B SSC 2002B	7/2/2002 7/2/2002	1,895,000 2,165,000	1/1/2026 1/1/2026	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF				SSC 2002B SSC 2002B	7/2/2002	3,870,000	7/1/2026	5.000	-	-	-	-	-	-	-
NAT/AA/AA/NAT				33C 2002B	1/2/2002	3,670,000	//1/2020	3.373	=	=	=	-	-	=	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
NAF/AA/AA/NAF			SSC 2		1,930,000	7/1/2026	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		2,200,000	7/1/2026	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		3,990,000	1/1/2027	5.375	-	=	-	-	-	=	-
NAF/AA/AA/NAF			SSC 2		2,000,000	1/1/2027	5.250	-	=	-	-	-	=	-
NAF/AA/AA/NAF			SSC 20 SSC 20		2,265,000 4,120,000	1/1/2027 7/1/2027	5.000 5.375	-	-	-	-	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			SSC 2		4,120,000 2,075,000	7/1/2027	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		2,335,000	7/1/2027	5.000	-	-	-	-		-	
NAF/AA/AA/NAF			SSC 2		4,250,000	1/1/2028	5.375	_	_	-	_	_	_	_
NAF/AA/AA/NAF			SSC 2		2,150,000	1/1/2028	5.250	_	_	_	_	_	_	_
NAF/AA/AA/NAF			SSC 2		2,410,000	1/1/2028	5.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF			SSC 2	02B 7/2/2002	4,385,000	7/1/2028	5.375	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2	02B 7/2/2002	2,230,000	7/1/2028	5.250	=	=	-	-	-	=	-
NAF/AA/AA/NAF			SSC 2	02B 7/2/2002	2,485,000	7/1/2028	5.000	=	=	=	-	-	=	-
NAF/AA/AA/NAF			SSC 2		4,405,000	1/1/2029	5.375	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		2,250,000	1/1/2029	5.250	-	=	-	-	-	=	-
NAF/AA/AA/NAF			SSC 2		2,500,000	1/1/2029	5.000	-	-	-	=	-	-	-
NAF/AA/AA/NAF			SSC 2		5,870,000	7/1/2029	5.375	-	=	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		3,020,000	7/1/2029	5.250	=	-	-	=	-	-	-
NAF/AA/AA/NAF NAF/AA/AA/NAF			SSC 2		3,330,000	7/1/2029 1/1/2030	5.000 5.375	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		5,980,000 3,095,000	1/1/2030	5.250	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2		3,390,000	1/1/2030	5.000				_		-	
NAF/AA/AA/NAF			SSC 2		6,090,000	7/1/2030	5.250	_	_	-	_	_	_	_
NAF/AA/AA/NAF			SSC 2		6,625,000	7/1/2030	5.000	_	-	-	_	_	_	_
NAF/AA/AA/NAF			SSC 2		13,850,000	1/1/2031	5.250	-	=	-	-	-	=	-
NAF/AA/AA/NAF			SSC 2	02B 7/2/2002	15,010,000	1/1/2031	5.000	-	-	-	-	-	-	-
NAF/AA/AA/NAF			SSC 2	02B 7/2/2002	13,285,000	7/1/2031	5.350	=	=	-	=	-	=	-
Aa3/AA-/AA-/AA			TBTA 2	01B 9/26/2018	3,225,000	1/1/2013	4.000	-	=	=	-	-	=	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		3,815,000	1/1/2014	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2		4,460,000	1/1/2015	4.000	-	=	-	-	-	=	-
Aa3/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		4,765,000	1/1/2016	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		5,090,000	1/1/2017	4.000	-	=	-	-	-	=	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		5,435,000	1/1/2018	4.000 4.000	=	-	-	=	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR		TBTA 20 TBTA 20		5,805,000 6,100,000	1/1/2019 1/1/2020	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		6,350,000	1/1/2020	4.000	-	=	-	-		=	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		6,600,000	1/1/2022	4.000	_	_	_	_	_	_	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		6,865,000	1/1/2023	4.000	_	_	-	_	_	_	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		7,140,000	1/1/2024	4.000	-	=	-	-	-	=	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		7,425,000	1/1/2025	4.000	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		7,720,000	1/1/2026	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2	01B 9/26/2018	8,030,000	1/1/2027	4.000	=	=	-	=	-	=	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		8,355,000	1/1/2028	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		8,685,000	1/1/2029	4.000	=	=	-	=	-	=	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		9,035,000	1/1/2030	4.000	-	=	-	-	-	=	-
Aa3/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2		9,395,000	1/1/2031	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR	1010101010101	TBTA 2		9,775,000	1/1/2032	4.000	-	=	-	-	-	=	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		3,225,000	1/1/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR VMIG 1/NR/F1+/NR	TBTA 20 TBTA 20		3,820,000 4,460,000	1/1/2014 1/1/2015	4.000 4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		4,765,000	1/1/2015	4.000	-	=	-	-		=	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		5,090,000	1/1/2017	4.000	-	-	-	-		-	
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		5,435,000	1/1/2017	4.000	-	-	_	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		5,800,000	1/1/2019	4.000	-	=	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		6,105,000	1/1/2020	4.000	6,105,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		6,345,000	1/1/2021	4.000	-	-	-	-	-	6,345,000	665,304
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		6,600,000	1/1/2022	4.000	E	=	-	=	-	6,600,000	692,042
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		6,865,000	1/1/2023	4.000	E	=	-	=	-	6,865,000	719,828
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		7,140,000	1/1/2024	4.000	-	-	-	-	-	7,140,000	748,663
Aa3/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		7,425,000	1/1/2025	4.000	=	=	-	-	-	7,425,000	778,547
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		7,725,000	1/1/2026	4.000	-	-	-	-	-	7,725,000	810,003
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2		8,030,000	1/1/2027	4.000	-	-	-	-	-	8,030,000	841,984
Aa3/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2	01C 6/27/2018	8,350,000	1/1/2028	4.000	=	=	-	=	=	8,350,000	875,537

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings Mdy/S&P/Ftch/Krll	Ratings Mdy/S&P/Ftch/Krll	S T Ratings Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturitu	Coupon	Amount Matured in 2020	in 2020	Amount Called in 2020	Redeemed in 2020	Refinanced in 2020	Amount Outstanding as of December 31, 2020	as of December 31, 2020
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2001C	6/27/2018	8,690,000	Maturity 1/1/2029	4.000	2020	<u>III 2020</u>	2020	2020	2020	8,690,000	911,188
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2001C		9,035,000	1/1/2030	4.000	-	-	-	-	-	9,035,000	947,363
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2001C		9,395,000	1/1/2031	4.000	-	-	-	-	-	9,395,000	985,111
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR	TBTA 2001C		9,770,000	1/1/2032	4.000	-	=	-	-	-	9,770,000	1,024,431
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	69,565,000	11/15/2013	5.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	71,720,000	11/15/2014	5.250	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	75,480,000	11/15/2015	5.250	-	=	-	-	=	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	80,100,000	11/15/2016	5.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	11,440,000	11/15/2017	4.125	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	72,870,000	11/15/2017	5.250	=	=	-	=	=	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2002B TBTA 2002B	10/8/2002 10/8/2002	90,285,000 95,025,000	11/15/2018 11/15/2019	5.250 5.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	100,015,000	11/15/2019	5.000	-	=	-	-	=	=	=
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	105,015,000	11/15/2020	5.000							
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	20,750,000	11/15/2022	4.600	_	-	_	_	-	-	_
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	68,920,000	11/15/2022	5.000	_	-	_	_	_	_	_
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	95,570,000	11/15/2023	4.750	-	=	_	-	-	=	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	56,000,000	11/15/2024	5.000	-	=	-	-	=	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	58,810,000	11/15/2025	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	61,740,000	11/15/2026	5.000	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	51,400,000	11/15/2027	5.000	-	=	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	39,370,000	11/15/2028	5.125	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	41,385,000	11/15/2029	5.125	-	=	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	28,320,000	11/15/2030	5.000	=	Ξ	=	=	-	=	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	29,730,000	11/15/2031	5.000	-	=	-	-	=	-	-
Aa3/AA-/AA-/AA			TBTA 2002B	10/8/2002	22,950,000	11/15/2032	4.750	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	4-4/44-/44-/ND	VIDAUC 4 /A 4 /E4 /AUD	TBTA 2002B	10/8/2002	187,960,000	11/15/2032	5.000	=	=	-	=	=	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	7,030,000	11/1/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR VMIG 1/A-1/F1/NR	TBTA 2002F TBTA 2002F	10/30/2018 10/30/2018	7,310,000 7,605,000	11/1/2014	4.000 4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	7,910,000	11/1/2015 11/1/2016	4.000	-	=	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	8,230,000	11/1/2017	4.000							
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	8,560,000	11/1/2018	4.000	_	-	_	_	-	-	_
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	8,900,000	11/1/2019	4.000	_	-	_	_	-	-	_
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	9,260,000	11/1/2020	4.000	9,260,000	-	_	_	_	_	_
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	9,630,000	11/1/2021	4.000	-	=	-	-	=	9,630,000	9,630,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	10,020,000	11/1/2022	4.000	-	-	-	-	-	10,020,000	10,020,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	10,420,000	11/1/2023	4.000	-	-	-	-	-	10,420,000	10,420,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	10,840,000	11/1/2024	4.000	-	Ξ	-	-	=	10,840,000	10,840,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	11,275,000	11/1/2025	4.000	-	-	-	-	-	11,275,000	11,275,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	11,725,000	11/1/2026	4.000	-	=	-	-	-	11,725,000	11,725,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	12,195,000	11/1/2027	4.000	-	=	-	-	-	12,195,000	12,195,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	12,685,000	11/1/2028	4.000	-	-	-	-	-	12,685,000	12,685,000
Aa3/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	13,195,000	11/1/2029	4.000	=	=	-	=	-	13,195,000	13,195,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F	10/30/2018	13,725,000	11/1/2030	4.000	-	-	-	-	-	13,725,000	13,725,000
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR	TBTA 2002F TBTA 2002F	10/30/2018 10/30/2018	14,275,000 14,850,000	11/1/2031 11/1/2032	4.000 4.000	-	-	-	-	-	14,275,000 14,850,000	14,275,000 14,850,000
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR VMIG 1/A-1/F1+/NR	TBTA 2002F	1/31/2012	2,980,000	1/1/2032	4.000	-	=	-	-	-	14,650,000	14,650,000
Aa3/AA-/AA-/AA	Aa1/A/AAA/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/31/2012	3,110,000	1/1/2013	4.000							
Aa3/AA-/AA-/AA	Aa1/A/AAA/NR	VMIG 1/A 1/F1+/NR	TBTA 2003B-1	1/31/2012	3,230,000	1/1/2015	4.000	_	_	_	_	_	_	_
Aa3/AA-/AA-/AA	Aa1/A/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/28/2015	3,360,000	1/1/2016	4.000	_	-	_	-	_	-	_
Aa3/AA-/AA-/AA	Aa1/A/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/28/2015	3,490,000	1/1/2017	4.000	_	-	_	_	_	_	_
Aa3/AA-/AA-/AA	Aa1/A/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/28/2015	3,630,000	1/1/2018	4.000	-	=	-	-	=	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	6,195,000	1/1/2019	4.000	-	=	-	-	=	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	6,445,000	1/1/2020	4.000	6,445,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	6,695,000	1/1/2021	4.000	=	=	=	=	=	6,695,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	6,965,000	1/1/2022	4.000	-	-	-	-	-	6,965,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	7,240,000	1/1/2023	4.000	-	-	-	-	-	7,240,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	7,540,000	1/1/2024	4.000	-	-	-	-	-	7,540,000	-
Aa3/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	7,835,000	1/1/2025	4.000	=	-	-	-	=	7,835,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	8,155,000	1/1/2026	4.000	-	-	-	-	-	8,155,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	8,480,000	1/1/2027	4.000	-	=	-	-	-	8,480,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	8,820,000	1/1/2028	4.000	Ξ	Ξ	=	=	=	8,820,000	-
Aa3/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2003B-1	1/24/2018	9,165,000	1/1/2029	4.000	-	-	-	-	-	9,165,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR		TBTA 2003B-1	1/24/2018	9,535,000	1/1/2030	4.000	-	-	-	-	-	9,535,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR VMIG 1/A-1/F1+/NR		TBTA 2003B-1 TBTA 2003B-1	1/24/2018 1/24/2018	9,920,000 10,310,000	1/1/2031 1/1/2032	4.000 4.000	-	-	-	_	-	9,920,000 10,310,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR		TBTA 2003B-1	1/24/2018	9,335,000	1/1/2032	4.000	-	-	-	-	_	9,335,000	-
Aa3/AA-/AA-/AA	Au I/AA //AA // III	VIVIIO 1/A 1/11 1/IVII		TBTA 2003B-2	12/10/2003	1,610,000	1/1/2013	4.000	-	_	-	_	-	-	_
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/10/2003	1,680,000	1/1/2014	4.000	=	-	-	-	-	=	_
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/10/2003	1,740,000	1/1/2015	4.000	-	=	=	-	=	=	-
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	9,820,000	1/1/2020	4.000	9,820,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	2,210,000	1/1/2021	4.000	=	-	=	-	-	2,210,000	2,086,477
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	2,300,000	1/1/2022	4.000	-	-	-	-	-	2,300,000	2,171,446
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	2,390,000	1/1/2023	4.000	=	=	-	=	Ξ	2,390,000	2,256,416
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	2,480,000	1/1/2024	4.000	=	-	-	-	-	2,480,000	2,341,386
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	2,580,000	1/1/2025	4.000	=	-	-	-	-	2,580,000	2,435,796
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019 12/3/2019	2,680,000 2,790,000	1/1/2026 1/1/2027	4.000 4.000	-	-	-	-	-	2,680,000 2,790,000	2,530,207 2,634,059
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2003B-2 TBTA 2003B-2	12/3/2019	2,900,000	1/1/2027	4.000	-	-	-	-		2,900,000	2,737,911
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	3,020,000	1/1/2029	4.000		_		_		3,020,000	2,851,203
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	3,140,000	1/1/2030	4.000	-	_	-	_	-	3,140,000	2,964,496
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	3,260,000	1/1/2031	4.000	_	_	_	_	_	3,260,000	3,077,789
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	3,400,000	1/1/2032	4.000	=	-	=	-	-	3,400,000	3,209,964
Aa3/AA-/AA-/AA				TBTA 2003B-2	12/3/2019	3,080,000	1/1/2033	4.000	-	=	=	-	=	3,080,000	2,907,850
Aa3/AA-/AA-/AA				TBTA 2003B-3	1/31/2012	1,915,000	1/1/2013	4.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2003B-3	1/31/2012	1,980,000	1/1/2014	4.000	=	-	=	-	=	=	=
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2003B-3	1/31/2012	2,070,000	1/1/2015	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA		VMIG 1/A-1+/F1+/NR		TBTA 2003B-3	1/28/2015	2,150,000	1/1/2016	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2003B-3	1/28/2015	2,230,000	1/1/2017	4.000	=	-	-	-	-	=	-
Aa3/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2003B-3	1/28/2015	2,330,000	1/1/2018	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	3,745,000	11/1/2015	4.000	=	-	-	-	-	=	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	3,900,000	11/1/2016	4.000	=	-	-	-	=	=	=
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	4,065,000	11/1/2017	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005A TBTA 2005A	1/28/2015 1/28/2015	4,215,000 4,425,000	11/1/2018 11/1/2019	4.000 4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	4,610,000	11/1/2019	4.000				4,610,000			
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	4,795,000	11/1/2021	4.000	_	_	_	4,795,000	_	_	_
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	4,995,000	11/1/2022	4.000	-	_	-	4,995,000	-	-	_
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	5,205,000	11/1/2023	4.000	=	-	-	5,205,000	-	=	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	5,415,000	11/1/2024	4.000	-	=	=	5,415,000	=	=	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	5,660,000	11/1/2025	4.000	-	-	-	5,660,000	-	=	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	5,890,000	11/1/2026	4.000	=	-	-	5,890,000	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	6,140,000	11/1/2027	4.000	=	-	=	6,140,000	=	=	=
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	6,395,000	11/1/2028	4.000	-	-	-	6,395,000	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	6,655,000	11/1/2029	4.000	-	-	-	6,655,000	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	6,950,000	11/1/2030	4.000	=	=	-	6,950,000	Ξ	=	=
Aa3/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	7,240,000	11/1/2031	4.000	-	-	-	7,240,000	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015	7,540,000	11/1/2032	4.000	-	=	=	7,540,000	=	=	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005A	1/28/2015 1/28/2015	7,860,000	11/1/2033 11/1/2034	4.000 4.000	-	=	=	7,860,000	=	=	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005A TBTA 2005A	1/28/2015	8,190,000 8,530,000	11/1/2034	4.000	-	-	-	8,190,000 8,530,000	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR		TBTA 2005A	1/24/2020	102,070,000	11/1/2033	4.000	-	-	-	8,330,000	102,070,000	102,070,000	21,780,000
Aa3/AA-/AA-/AA	AUI/ANI/ANI/III	VIVIIG 1/A 1/11/IVIN		TBTA 2005A-1	1/31/2012	1,590,000	11/1/2013	4.000	_	_	_	_	102,070,000	102,070,000	-
Aa3/AA-/AA-/AA				TBTA 2005A-1	1/31/2012	1,650,000	11/1/2014	4.000	-	_	_	_	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005A-2	1/31/2012	855,000	11/1/2013	4.000	=	-	-	-	-	=	-
Aa3/AA-/AA-/AA				TBTA 2005A-2	1/31/2012	895,000	11/1/2014	4.000	-	-	-	-	-	=	-
Aa3/AA-/AA-/AA				TBTA 2005A-3	1/31/2012	1,020,000	11/1/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005A-3	1/31/2012	1,060,000	11/1/2014	4.000	=	=	-	=	=	=	=
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2	1/28/2015	900,000	1/1/2016	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2	1/28/2015	900,000	1/1/2017	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA-/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2	1/28/2015	1,000,000	1/1/2018	4.000	=	=	-	=	-	=	=
Aa3/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR		TBTA 2005B-2	1/24/2018	1,000,000	1/1/2019	4.000	=	=	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR		TBTA 2005B-2	1/24/2018	1,000,000	1/1/2020	4.000	1,000,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1/NR		TBTA 2005B-2	1/24/2018	1,100,000	1/1/2021	4.000	=	Ξ	=	Ξ	=	1,100,000	1,100,000
Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	600,000	1/1/2022	4.000	-	-	-	-	-	600,000	600,000
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a TBTA 2005B-2a	1/21/2021 1/21/2021	500,000 5,100,000	1/1/2023 1/1/2024	4.000 4.000	-	-	-	-	-	500,000 5,100,000	500,000 5,100,000
Mas/AA-/AA-/AA	na 1/ nn A/ AAA/ NK	VIVIIG 1/M-1+/F1+/INK		1 D 1 M 2 UU 3 D - 2 d	1/21/2021	3,100,000	1/1/2024	4.000	-	-	-	-	-	3,100,000	3,100,000

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	500,000	1/1/2025	4.000	-	-	-	-	-	500,000	500,000
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a TBTA 2005B-2a	1/21/2021 1/21/2021	500,000 600,000	1/1/2026 1/1/2027	4.000 4.000	-	-	-	-	-	500,000 600,000	500,000 600,000
Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	3,200,000	1/1/2027	4.000	=	-	=	=	=	3,200,000	3,200,000
Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	18,800,000	1/1/2028	4.000	-	-	-	-	-	18,800,000	18,800,000
Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	19,300,000	1/1/2030	4.000	_	_	_	_	_	19,300,000	19,300,000
Aa3/AA-/AA-/AA	Aa1/AAA/AAA/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	21,900,000	1/1/2031	4.000	_	_	-	-	_	21,900,000	21,900,000
Aa3/AA-/AA-/AA		VMIG 1/A-1+/F1+/NR		TBTA 2005B-2a	1/21/2021	22,600,000	1/1/2032	4.000	-	=	-	=	-	22,600,000	22,600,000
Aa3/AA-/AA-/AA				TBTA 2005B-2a	1/31/2012	370,000	1/1/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005B-2a	1/31/2012	370,000	1/1/2014	4.000	=	-	=	=	=	=	-
Aa3/AA-/AA-/AA				TBTA 2005B-2a	1/31/2012	420,000	1/1/2015	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA				TBTA 2005B-2b	1/31/2012	200,000	1/1/2013	4.000	-	-	-	=	-	-	-
Aa3/AA-/AA				TBTA 2005B-2b	1/31/2012	200,000	1/1/2014	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA				TBTA 2005B-2b	1/31/2012	220,000	1/1/2015	4.000	=	-	=	=	-	=	-
Aa3/AA-/AA-/AA				TBTA 2005B-2c TBTA 2005B-2c	1/31/2012	230,000	1/1/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2005B-2c	1/31/2012 1/31/2012	230,000 260,000	1/1/2014 1/1/2015	4.000 4.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-2C	6/15/2012	800,000	1/1/2013	4.000	-	-	-	-	-	=	
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/15/2012	800,000	1/1/2013	4.000		-	-	-	-	-	
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/15/2012	900,000	1/1/2015	4.000	_	_	_	-	-	_	_
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	7/1/2015	900,000	1/1/2016	4.000	_	_	-	-	_	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	7/1/2015	900,000	1/1/2017	4.000	-	=	-	=	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	7/1/2015	1,000,000	1/1/2018	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	1,000,000	1/1/2019	4.000	=	-	=	=	=	=	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	1,000,000	1/1/2020	4.000	1,000,000	-	=	=	=	=	-
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	1,100,000	1/1/2021	4.000	-	-	-	-	-	1,100,000	1,100,000
Aa3/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	1,100,000	1/1/2022	4.000	-	-	-	=	-	1,100,000	1,100,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	1,100,000	1/1/2023	4.000	-	-	-	-	-	1,100,000	1,100,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	10,300,000	1/1/2024	4.000	-	-	-	-	-	10,300,000	10,300,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	1,000,000	1/1/2025	4.000	-	=	-	=	-	1,000,000	1,000,000
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR VMIG 1/NR/F1+/NR		TBTA 2005B-3 TBTA 2005B-3	6/27/2018 6/27/2018	1,000,000 1,100,000	1/1/2026 1/1/2027	4.000 4.000	-	-	-	-	-	1,000,000 1,100,000	1,000,000 1,100,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	6,400,000	1/1/2027	4.000	-	-	-	-	-	6,400,000	6,400,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	37,500,000	1/1/2028	4.000		_	_			37,500,000	37,500,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	38,700,000	1/1/2030	4.000	_	_	_	-	-	38,700,000	38,700,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	43,800,000	1/1/2031	4.000	_	_	_	-	_	43,800,000	43,800,000
Aa3/AA-/AA-/AA	Aa1/NR/AAA/NR	VMIG 1/NR/F1+/NR		TBTA 2005B-3	6/27/2018	45,200,000	1/1/2032	4.000	-	=	-	=	-	45,200,000	45,200,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	7/6/2012	800,000	1/1/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005B-4a	1/2/2013	800,000	1/1/2014	4.000	=	-	=	=	-	=	-
Aa3/AA-/AA-/AA				TBTA 2005B-4a	1/2/2014	900,000	1/1/2015	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005B-4a	11/19/2015	900,000	1/1/2016	4.000	=	-	-	=	-	=	-
Aa3/AA-/AA				TBTA 2005B-4a	11/19/2015	900,000	1/1/2017	4.000	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005B-4a	11/1/2016	1,000,000	1/1/2018	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2005B-4a	11/1/2016	1,000,000	1/1/2019	4.000	4 000 000	=	-	=	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2005B-4a TBTA 2005B-4a	11/1/2016 11/1/2016	1,000,000 1,100,000	1/1/2020 1/1/2021	4.000 4.000	1,000,000	-	-	-	-	1,100,000	1,100,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	1,100,000	1/1/2021	4.000	-	-	-	-	-	1,100,000	1,100,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	1,100,000	1/1/2023	4.000	_	_	_	_	_	1,100,000	1,100,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	10,300,000	1/1/2024	4.000	_	_	-	-	_	10,300,000	10,300,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	1,000,000	1/1/2025	4.000	_	_	_	-	_	1,000,000	1,000,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	1,000,000	1/1/2026	4.000	-	=	-	=	-	1,000,000	1,000,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	1,100,000	1/1/2027	4.000	-	-	-	-	-	1,100,000	1,100,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	6,400,000	1/1/2028	4.000	=	-	=	=	=	6,400,000	6,400,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	37,500,000	1/1/2029	4.000	=	=	=	=	=	37,500,000	37,500,000
Aa3/AA-/AA-/AA				TBTA 2005B-4a	2/1/2021	45,200,000	1/1/2032	4.000	-	-	-	-	-	45,200,000	45,200,000
Aa3/AA-/AA-/AA		VMIG 1/A-1+/F1+/NR		TBTA 2005B-4c	11/28/2018	38,700,000	1/1/2030	4.000	-	=	=	=	-	38,700,000	38,700,000
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR	VMIG 1/A-1+/F1+/NR		TBTA 2005B-4c	11/28/2018	43,800,000	1/1/2031	4.000	-	-	-	-	-	43,800,000	43,800,000
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	4,420,000	11/15/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	4,600,000	11/15/2014	4.000	=	Ξ	=	=	=	=	=
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2006A TBTA 2006A	6/22/2006 6/22/2006	4,785,000 4,975,000	11/15/2015 11/15/2016	4.000 4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	5,175,000 5,175,000	11/15/2016	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	75,000	11/15/2017	4.125	-	-	-	-	-	-	_
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	5,310,000	11/15/2018	5.000	-	-	_	-	-	-	-
					-,,	3,310,000	,,,	3.000							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Cradit Supported LT											Amount	Amount		Amount Swapped
Underlying LT Ratings	Credit Supported L T Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
Aa3/AA-/AA-/AA	-			TBTA 2006A	6/22/2006	5,655,000	11/15/2019	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	5,940,000	11/15/2020	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	6,235,000	11/15/2021	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	6,545,000	11/15/2022	5.000	=	-	=	-	=	-	-
Aa3/AA-/AA				TBTA 2006A	6/22/2006	6,875,000	11/15/2023	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA				TBTA 2006A	6/22/2006	7,215,000	11/15/2024	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	7,580,000	11/15/2025	5.000	=	=	-	-	-	-	=
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	135,000	11/15/2026	4.450 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2006A TBTA 2006A	6/22/2006 6/22/2006	7,820,000 8,355,000	11/15/2026 11/15/2027	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	8,770,000	11/15/2027	5.000			_				
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	9,210,000	11/15/2029	5.000	-	_	_	_	_	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	9,670,000	11/15/2030	5.000	-	_	_	_	_	_	_
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	10,155,000	11/15/2031	5.000	=	-	-	-	-	-	=
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	10,660,000	11/15/2032	5.000	=	=	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	11,195,000	11/15/2033	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	11,755,000	11/15/2034	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2006A	6/22/2006	1,800,000	11/15/2035	4.500	=	=	-	-	-	-	-
Aa3/AA-/AA				TBTA 2006A	6/22/2006	10,545,000	11/15/2035	5.000	=	-	-	-	-	-	=
Aa3/AA-/AA				TBTA 2007A	6/20/2007	4,440,000	11/15/2013	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	4,620,000	11/15/2014	5.000	=	-	=	-	=	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	4,850,000	11/15/2015	4.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2007A TBTA 2007A	6/20/2007 6/20/2007	5,055,000 5,265,000	11/15/2016 11/15/2017	4.125 4.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	5,490,000	11/15/2017	4.250		_		_	_		
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	5,720,000	11/15/2018	5.000		-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	6,005,000	11/15/2020	5.000	-	_	_	_	_	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	6,305,000	11/15/2021	5.000	=	-	-	-	-	-	=
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	6,625,000	11/15/2022	5.000	=	-	-	-	-	-	=
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	6,955,000	11/15/2023	4.500	-	=	=	-	=	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	7,265,000	11/15/2024	5.000	=	=	-	-	=	-	=
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	7,630,000	11/15/2025	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	8,010,000	11/15/2026	5.000	=	=	=	-	=	=	÷
Aa3/AA-/AA				TBTA 2007A	6/20/2007	8,410,000	11/15/2027	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	2,575,000	11/15/2028	4.600	=	-	=	-	=	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2007A TBTA 2007A	6/20/2007 6/20/2007	6,255,000	11/15/2028 11/15/2029	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	9,265,000 9,725,000	11/15/2029	5.000	=	=	=	-	=	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	10,215,000	11/15/2030	5.000		-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	10,725,000	11/15/2031	5.000	-	_	_	_	_	_	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	11,260,000	11/15/2033	5.000	=	-	=	-	=	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	11,825,000	11/15/2034	5.000	=	-	-	-	-	_	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	12,415,000	11/15/2035	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	13,035,000	11/15/2036	5.000	=	=	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2007A	6/20/2007	13,685,000	11/15/2037	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	16,670,000	11/15/2013	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	18,340,000	11/15/2014	5.000	=	-	=	-	=	-	-
Aa3/AA-/AA				TBTA 2008A	3/27/2008	1,875,000	11/15/2015	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	18,020,000	11/15/2015	5.000	=	=	-	-	-	-	=
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	21,920,000	11/15/2016	5.000	=	=	-	-	-	-	=
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008A TBTA 2008A	3/27/2008 3/27/2008	23,015,000 24,165,000	11/15/2017 11/15/2018	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	25,375,000	11/15/2018	5.000		-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	26,645,000	11/15/2020	5.000	_	_	_	_	_	_	_
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	27,975,000	11/15/2021	5.000	-	_	_	_	_	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	30,550,000	11/15/2023	4.500	Ξ.	=	=	=	=	≘	=
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	35,080,000	11/15/2028	4.875	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	39,145,000	11/15/2029	4.750	=	=	=	-	=	=	=
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	41,005,000	11/15/2030	4.750	÷	=	=	=	=	=	=
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	42,955,000	11/15/2031	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	45,100,000	11/15/2032	5.000	=	=	=	-	=	=	=
Aa3/AA-/AA				TBTA 2008A	3/27/2008	49,330,000	11/15/2033	5.000	-	=	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	1,495,000	11/15/2033	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	36,110,000	11/15/2034	5.000	=	-	=	-	=	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	31, 2020
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	42,715,000	11/15/2035	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008A TBTA 2008A	3/27/2008 3/27/2008	5,000,000 56,250,000	11/15/2035 11/15/2036	5.250 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	5,000,000	11/15/2036	5.250	-	-	-	= -	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	49,925,000	11/15/2037	5.000	-	-	_	-	_	_	_
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	10,000,000	11/15/2037	5.250	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008A	3/27/2008	70,000,000	11/15/2038	5.250	=	=	-	=	=	=	-
Aa3/AA-/AA-/AA				TBTA 2008B-1	11/15/2013	29,375,000	11/15/2022	5.000	=	=	-	-	=	29,375,000	-
Aa3/AA-/AA-/AA				TBTA 2008B-1	11/15/2013	31,925,000	11/15/2024	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008B-1	11/15/2013	22,200,000	11/15/2025	3.000 4.000	-	-	-	-	-	11 000 000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008B-2 TBTA 2008B-2	11/17/2014 11/17/2014	11,000,000 34,530,000	11/15/2025 11/15/2026	4.000	=	=	-	=	-	11,000,000 34,530,000	-
Aa3/AA-/AA-/AA				TBTA 2008B-2	11/17/2014	18,120,000	11/15/2027	4.000	-	-	_	-	_	18,120,000	_
Aa3/AA-/AA-/AA				TBTA 2008B-3	11/16/2015	17,790,000	11/15/2027	5.000	=	=	-	Ξ	=	,,	-
Aa3/AA-/AA-/AA				TBTA 2008B-3	11/16/2015	2,265,000	11/15/2028	5.000	=	=	-	=	=	=	-
Aa3/AA-/AA-/AA				TBTA 2008B-3	11/16/2015	1,790,000	11/15/2033	5.000	-	-	-	-	-	1,550,000	-
Aa3/AA-/AA-/AA				TBTA 2008B-3	11/16/2015	19,115,000	11/15/2034	5.000	=	=	=	Ξ	=	16,580,000	=
Aa3/AA-/AA-/AA				TBTA 2008B-3	11/16/2015	10,080,000	11/15/2035	5.000	=	=	-	=	=	8,740,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008B-3 TBTA 2008B-3	11/16/2015 11/16/2015	12,485,000 17,385,000	11/15/2036 11/15/2037	5.000 5.000	-	-	-	-	-	10,830,000 15,080,000	-
Aa3/AA-/AA-/AA				TBTA 2008B-3	11/16/2015	24,170,000	11/15/2037	5.000	-	-	-	-		20,965,000	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	11,515,000	11/15/2013	5.000	=	=	-	-	=	-	=
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	12,090,000	11/15/2014	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	12,695,000	11/15/2015	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	13,330,000	11/15/2016	5.000	=	=	-	-	=	=	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	13,995,000	11/15/2017	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008C TBTA 2008C	7/30/2008 7/30/2008	14,695,000 15,430,000	11/15/2018 11/15/2019	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	16,200,000	11/15/2019	5.000	-	-	-	= -	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	17,010,000	11/15/2021	5.000	-	-	_	-	_	_	_
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	17,865,000	11/15/2022	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	18,755,000	11/15/2023	5.000	=	=	-	=	=	=	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	19,695,000	11/15/2024	5.000	=	=	-	-	=	=	-
Aa3/AA-/AA				TBTA 2008C	7/30/2008	20,680,000	11/15/2025	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008C TBTA 2008C	7/30/2008	21,710,000 22,800,000	11/15/2026 11/15/2027	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008 7/30/2008	23,940,000	11/15/2027	5.000	=	=	-	=	-	=	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	25,135,000	11/15/2029	5.000	-	_	_	-	_	_	_
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	26,390,000	11/15/2030	5.000	=	=	-	Ξ	=	=	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	27,710,000	11/15/2031	5.000	=	=	-	=	=	=	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	29,095,000	11/15/2032	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	30,550,000	11/15/2033	5.000	=	=	=	Ξ	=	=	=
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	32,080,000	11/15/2034	5.000	=	=	-	=	-	=	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2008C TBTA 2008C	7/30/2008 7/30/2008	33,685,000 35,365,000	11/15/2035 11/15/2036	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	37,135,000	11/15/2037	5.000	-	-	-	-		-	-
Aa3/AA-/AA-/AA				TBTA 2008C	7/30/2008	38,990,000	11/15/2038	5.000	=	=	-	-	=	=	=
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	5,380,000	11/15/2013	2.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	5,945,000	11/15/2014	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	6,560,000	11/15/2015	4.000	=	=	-	-	=	=	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	10,085,000	11/15/2016	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2009A-1 TBTA 2009A-1	11/15/2012 11/15/2012	7,680,000 8,365,000	11/15/2017 11/15/2018	4.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA				TBTA 2009A-1	11/15/2012	3,345,000	11/15/2018	1.500	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	2,350,000	11/15/2019	4.000	2,350,000	-	-	-	_	-	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	445,000	11/15/2022	3.000	-	-	-	-	-	445,000	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	415,000	11/15/2023	3.000	=	-	-	-	-	140,000	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	4,205,000	11/15/2024	2.625	-	-	-	-	-	1,400,000	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	6,580,000	11/15/2025	5.000	=	-	-	-	-	2,190,000	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	6,970,000	11/15/2026	5.000	-	-	=	=	-	2,320,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2009A-1 TBTA 2009A-1	11/15/2012 11/15/2012	2,550,000 3,700,000	11/15/2027 11/15/2028	5.000 3.000	-	-	-	-	-	850,000 3,700,000	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	3,925,000	11/15/2028	5.000	-	=	-	-	=	3,925,000	-
Aa3/AA-/AA-/AA				TBTA 2009A-1	11/15/2012	4,140,000	11/15/2029	5.000	-	-	-	-	_	4,140,000	-
,,,					,,	.,,000	-,,	2.300						.,5,000	

4,424,438,830

Total

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA			TBTA 2009A-1 TBTA 2009A-1	11/15/2012	4,380,000 4,635,000	11/15/2031	5.000 5.000	-	-	-	-	-	4,380,000 4,635,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2009A-1 TBTA 2009A-1	11/15/2012 11/15/2012	4,635,000 4,965,000	11/15/2032 11/15/2033	5.000	-	-	-	-	-	4,635,000 4,965,000	-
Aa3/AA-/AA-/AA			TBTA 2009A-1	11/15/2012	5,250,000	11/15/2034	5.000	-	-	-	-	-	5,250,000	-
Aa3/AA-/AA-/AA			TBTA 2009A-1	11/15/2012	5,565,000	11/15/2035	5.000	=	=	-	=	-	5,565,000	=
Aa3/AA-/AA-/AA			TBTA 2009A-1	11/15/2012	5,910,000	11/15/2036	5.000	-	-	-	-	-	5,910,000	-
Aa3/AA-/AA-/AA			TBTA 2009A-1	11/15/2012	6,235,000	11/15/2037	5.000	-	-	=	-	-	6,235,000	-
Aa3/AA-/AA-/AA			TBTA 2009A-1	11/15/2012	6,650,000	11/15/2038	5.000	=	=	=	=	=	6,650,000	=
Aa3/AA-/AA			TBTA 2009A-2	2/18/2009	4,420,000	11/15/2013	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2009A-2 TBTA 2009A-2	2/18/2009 2/18/2009	2,895,000 2,000,000	11/15/2014 11/15/2014	3.000 2.500	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	4,830,000	11/15/2015	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	1,765,000	11/15/2016	3.000	_	-	_	-	_	_	_
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	5,300,000	11/15/2017	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	1,200,000	11/15/2018	3.250	-	-	=	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	2,880,000	11/15/2019	3.500	=	=	=	=	=	=	=
Aa3/AA-/AA			TBTA 2009A-2	2/18/2009	4,325,000	11/15/2020	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	7,120,000	11/15/2021	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2009A-2 TBTA 2009A-2	2/18/2009 2/18/2009	1,890,000 5,000,000	11/15/2022 11/15/2022	4.250 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	1,830,000	11/15/2023	4.500	_	_	-	-	-	-	_
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	14,610,000	11/15/2023	5.000	=	=	-	=	-	-	=
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	3,495,000	11/15/2024	4.625	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	1,340,000	11/15/2025	4.750	=	=	=	=	-	=	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	1,460,000	11/15/2026	4.875	-	-	-	-	-	-	-
Aa3/AA-/AA			TBTA 2009A-2	2/18/2009	11,990,000	11/15/2027	5.000	=	=	=	=	=	=	=
Aa3/AA-/AA			TBTA 2009A-2	2/18/2009	42,360,000	11/15/2028	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	11,305,000	11/15/2029	5.125 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2009A-2 TBTA 2009A-2	2/18/2009 2/20/2009	32,870,000 49,965,000	11/15/2029 11/15/2030	5.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/20/2009	52,250,000	11/15/2031	5.250	-	-	-	-		_	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/20/2009	5,490,000	11/15/2032	5.250	_	-	_	-	_	_	_
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/20/2009	5,720,000	11/15/2033	5.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/20/2009	6,035,000	11/15/2034	5.250	=	=	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2009A-2	2/18/2009	6,350,000	11/15/2035	5.375	-	-	=	-	-	-	-
Aa3/AA-/AA			TBTA 2009A-2	2/18/2009	6,680,000	11/15/2036	5.375	=	=	=	=	=	=	=
Aa3/AA-/AA			TBTA 2009A-2	2/18/2009	7,070,000	11/15/2037	5.375	=	=	-	=	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2009A-2 TBTA 2009B	2/18/2009 9/17/2009	7,415,000 35,640,000	11/15/2038 11/15/2035	5.375 5.420	-	-	-	-	-	35,640,000	-
Aa3/AA-/AA-/AA			TBTA 2009B	9/17/2009	37,700,000	11/15/2035	5.420	-	=	-	-	_	37,700,000	-
Aa3/AA-/AA-/AA			TBTA 2009B	9/17/2009	39,875,000	11/15/2037	5.500	-	_	-	-	-	39,875,000	_
Aa3/AA-/AA-/AA			TBTA 2009B	9/17/2009	42,175,000	11/15/2038	5.500	=	=	-	=	_	42,175,000	-
Aa3/AA-/AA-/AA			TBTA 2009B	9/17/2009	44,610,000	11/15/2039	5.500	-	-	-	-	-	44,610,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-1	10/28/2010	6,045,000	11/15/2013	5.000	-	-	=	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2010A-1	10/28/2010	6,230,000	11/15/2014	5.000	=	-	=	-	-	-	-
Aa3/AA-/AA			TBTA 2010A-1	10/28/2010	6,475,000	11/15/2015	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2010A-1	10/28/2010	6,730,000	11/15/2016	5.000	=	=	=	=	=	=	=
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2010A-1 TBTA 2010A-1	10/28/2010 10/28/2010	7,000,000 7,350,000	11/15/2017 11/15/2018	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2010A-1	10/28/2010	7,720,000	11/15/2019	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2010A-1	10/28/2010	8,105,000	11/15/2020	5.000	8,105,000	_	-	-	-	-	_
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	8,510,000	11/15/2021	4.050	-	-	=	=	-	8,510,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	8,870,000	11/15/2022	4.250	=	=	-	-	-	8,870,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	9,265,000	11/15/2023	4.500	=	=	=	=	-	9,265,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	9,665,000	11/15/2024	4.750	-	-	-	-	-	9,665,000	-
Aa3/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	10,095,000	11/15/2025	5.000	=	-	-	-	-	10,095,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	10,550,000	11/15/2026	5.150	-	-	=	-	-	10,550,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds TBTA 2010A-2 Build America Bonds	10/28/2010 10/28/2010	11,105,000 11,695,000	11/15/2027 11/15/2028	5.300 5.450	-	-	-	-	-	11,105,000 11,695,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds TBTA 2010A-2 Build America Bonds	10/28/2010	12,315,000	11/15/2028	5.450	-	-	-	-	-	12,315,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	12,965,000	11/15/2029	5.450	-	-	-	-	-	12,965,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	13,650,000	11/15/2031	5.450	-	-	-	-	-	13,650,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	14,395,000	11/15/2032	5.450	-	-	-	-	-	14,395,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	15,175,000	11/15/2033	5.550	-	-	-	-	-	15,175,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

 Total Bonds and Notes Issued in 2020
 10,170,427,707

 New Money Bonds and Notes Issued in 2020
 8,939,237,707

 Refunding Bonds and Notes Issued in 2020
 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in				Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds TBTA 2010A-2 Build America Bonds	10/28/2010 10/28/2010	16,000,000 16,870,000	11/15/2034 11/15/2035	5.550 5.550	-	-	-	-	-	16,000,000 16,870,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	17,790,000	11/15/2035	5.550	-	-		-		17,790,000	-
Aa3/AA-/AA-/AA			TBTA 2010A 2 Build America Bonds	10/28/2010	18,765,000	11/15/2037	5.550	_	_	_	_	_	18,765,000	_
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	19,800,000	11/15/2038	5.550	_	_	_	-	_	19,800,000	_
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	20,885,000	11/15/2039	5.550	=	-	_	=	-	20,885,000	-
Aa3/AA-/AA-/AA			TBTA 2010A-2 Build America Bonds	10/28/2010	22,035,000	11/15/2040	5.550	-	=	-	=	-	22,035,000	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	7,185,000	1/1/2013	2.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	6,910,000	1/1/2014	2.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	9,125,000	1/1/2014	4.000	-	=	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	16,535,000	1/1/2015	5.000	=	-	-	=	-	-	-
Aa3/AA-/AA			TBTA 2011A	10/13/2011	4,465,000	1/1/2016	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA			TBTA 2011A	10/13/2011	12,900,000	1/1/2016	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	4,055,000	1/1/2017	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	14,090,000	1/1/2017	5.000	-	=	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	3,585,000	1/1/2018	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2011A TBTA 2011A	10/13/2011 10/13/2011	17,485,000 1,255,000	1/1/2018 1/1/2019	5.000 2.500	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	20,810,000	1/1/2019	5.000	-	-		= -	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	3,760,000	1/1/2019	4.000	3,760,000	-		-		-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	19,370,000	1/1/2020	5.000	19,370,000	_	_	_	_	_	_
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	1,630,000	1/1/2021	3.000	-	_	_	-	_	1,630,000	_
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	22,625,000	1/1/2021	5.000	=	-	_	-	-	22,625,000	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	450,000	1/1/2022	3.000	-	-	-	-	-	450,000	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	24,975,000	1/1/2022	5.000	-	-	-	-	-	24,975,000	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	47,290,000	1/1/2023	5.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	5,060,000	1/1/2024	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	7,940,000	1/1/2024	5.000	=	-	-	=	-	-	-
Aa3/AA-/AA			TBTA 2011A	10/13/2011	84,810,000	1/1/2025	5.000	=	-	-	=	-	=	-
Aa3/AA-/AA			TBTA 2011A	10/13/2011	275,000	1/1/2026	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	88,765,000	1/1/2026	5.000	=	-	-	=	-	=	-
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	93,495,000	1/1/2027	5.000 3.500	-	=	-	=	-	-	=
Aa3/AA-/AA-/AA			TBTA 2011A	10/13/2011	2,515,000	1/1/2028		-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2011A TBTA 2012A	10/13/2011 6/6/2012	88,070,000 1,820,000	1/1/2028 11/15/2012	5.000 2.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,155,000	11/15/2012	3.000							
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,240,000	11/15/2014	4.000	_	_	_	-	_	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,325,000	11/15/2015	5.000	_	_	_	-	_	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,410,000	11/15/2016	5.000	_	_	_	_	_	_	_
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,540,000	11/15/2017	5.000	-	=	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,680,000	11/15/2018	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	4,820,000	11/15/2019	5.000	=	-	-	-	=	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	5,010,000	11/15/2020	5.000	5,010,000	-	-	Ξ	-	=	=
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	5,210,000	11/15/2021	5.000	-	-	-	-	-	5,210,000	-
Aa3/AA-/AA			TBTA 2012A	6/6/2012	5,420,000	11/15/2022	5.000	=	-	-	=	-	5,420,000	-
Aa3/AA-/AA			TBTA 2012A	6/6/2012	5,690,000	11/15/2023	5.000	-	=	=	-	-	=	=
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	5,975,000	11/15/2024	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	6,275,000	11/15/2025	5.000	=	-	-	=	-	=	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	6,590,000	11/15/2026	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	6,915,000	11/15/2027	5.000 3.000	-	-	-	-	-	7 265 000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2012A TBTA 2012A	6/6/2012 6/6/2012	7,265,000 7,625,000	11/15/2028 11/15/2029	4.000	-	-	-	-	-	7,265,000 7,625,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	8,005,000	11/15/2029	3.250						8,005,000	
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	8,405,000	11/15/2030	4.000	-	-	-	-	-	8,405,000	_
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	8,830,000	11/15/2031	4.000	-	-	-	-	-	8,830,000	_
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	9,270,000	11/15/2033	4.000	=	-	-	-	-	9,270,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	9,640,000	11/15/2034	4.000	-	-	-	-	-	9,640,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	10,025,000	11/15/2035	4.000	-	-	-	-	-	10,025,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	10,425,000	11/15/2036	4.000	-	=	-	-	-	10,425,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	10,845,000	11/15/2037	4.000	-	-	-	-	-	10,845,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	11,275,000	11/15/2038	4.000	-	-	-	-	-	11,275,000	-
Aa3/AA-/AA			TBTA 2012A	6/6/2012	11,730,000	11/15/2039	4.000	=	=	=	Ξ	=	11,730,000	=
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	12,195,000	11/15/2040	4.000	=	=	-	=	-	12,195,000	-
Aa3/AA-/AA-/AA			TBTA 2012A	6/6/2012	12,685,000	11/15/2041	4.000	-	=	-	=	=	12,685,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

						<u> </u>	_								
Hadashina I T Datings	Credit Supported L T	C T Datings							Amount Matural in	Amount Defended	Amount Called in	Amount In	Amount in	Amount Outstanding of	Amount Swapped
Underlying L T Ratings Mdy/S&P/Ftch/Krll	Ratings Mdy/S&P/Ftch/Krll	S T Ratings Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	Amount Matured in 2020	in 2020	2020	Redeemed in 2020	Refinanced in 2020	Amount Outstanding as of December 31, 2020	as of December 31, 2020
Aa3/AA-/AA-/AA	Widy/ Soci / Leti/ Kill	INICY/ SQL / I CEI/ KIII	<u>series</u>	TBTA 2012A	6/6/2012	13,195,000	11/15/2042	4.000	-	-	-	-	-	13,195,000	- 51,2020
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	485,000	11/15/2013	2.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	940,000	11/15/2014	3.000	-	-	=	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	970,000	11/15/2015	3.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	11,910,000	11/15/2016	3.000	-	-	-	-	=	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	35,015,000	11/15/2016	4.000	-	-	-	-	-	=	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2012B TBTA 2012B	8/23/2012 8/23/2012	34,175,000 8,010,000	11/15/2016 11/15/2017	5.000 3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	24,140,000	11/15/2017	4.000	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	52,420,000	11/15/2017	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	3,170,000	11/15/2018	3.000	=	-	-	-	-	=	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	37,215,000	11/15/2018	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	55,000,000	11/15/2018	5.000	=	-	=	-	=	=	=
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	9,090,000	11/15/2019	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA				TBTA 2012B	8/23/2012	90,705,000	11/15/2019	5.000	-	-	=	=	=	-	-
Aa3/AA-/AA				TBTA 2012B	8/23/2012	32,010,000	11/15/2020	4.000	32,010,000	-	-	-	-	=	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	78,695,000	11/15/2020	5.000	78,695,000	=	=	=	=	-	=
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2012B TBTA 2012B	8/23/2012 8/23/2012	55,130,000 60,785,000	11/15/2021 11/15/2021	4.000 5.000	-	-	-	-	-	55,130,000 60,785,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	4,045,000	11/15/2021	4.000	=	=	-	-	-	4,045,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	96,525,000	11/15/2022	5.000	-	_	-	_	-	96,525,000	_
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	100,100,000	11/15/2023	5.000	=	-	-	-	-	100,100,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	60,995,000	11/15/2024	5.000	-	-	-	-	-	60,995,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	44,060,000	11/15/2025	5.000	=	-	=	-	=	44,060,000	=
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	20,000,000	11/15/2025	4.000	-	-	=	-	=	20,000,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	66,910,000	11/15/2026	5.000	-	-	=	-	=	66,910,000	=
Aa3/AA-/AA				TBTA 2012B	8/23/2012	15,000,000	11/15/2027		-	-	-	-	-	15,000,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	33,620,000	11/15/2027	5.000	=	=	=	=	=	33,620,000	=
Aa3/AA-/AA-/AA				TBTA 2012B TBTA 2012B	8/23/2012 8/23/2012	15,000,000	11/15/2028 11/15/2028	5.000	-	-	-	-	-	15,000,000 20,700,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	20,700,000 15,000,000	11/15/2028	5.000		-	-	-	-	15,000,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	21,730,000	11/15/2029	5.000	-	_	-	_	-	21,730,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	10,000,000	11/15/2030	-	=	-	-	-	-	10,000,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	12,635,000	11/15/2030	5.000	-	-	-	-	-	12,635,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	10,000,000	11/15/2031	-	=	-	=	-	=	10,000,000	=
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	13,260,000	11/15/2031	5.000	-	-	-	-	-	13,260,000	-
Aa3/AA-/AA				TBTA 2012B	8/23/2012	166,500,000	11/15/2032	-	-	-	=	=	=	166,500,000	-
Aa3/AA-/AA-/AA				TBTA 2012B	8/23/2012	37,110,000	11/15/2032	4.000	-	-	-	-	-	37,110,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013B TBTA 2013B	1/29/2013 1/29/2013	9,335,000 31,030,000	11/15/2019 11/15/2019	4.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	8,495,000	11/15/2019	4.000	8,495,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	27,785,000	11/15/2020	5.000	27,785,000	_	_	_	_	_	_
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	7,015,000	11/15/2021	4.000	-	-	-	-	-	7,015,000	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	30,995,000	11/15/2021	5.000	-	-	-	-	-	30,995,000	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	13,045,000	11/15/2022	5.000	=	-	=	-	=	13,045,000	=
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	20,000,000	11/15/2023	4.000	-	-	=	-	=	20,000,000	-
Aa3/AA-/AA				TBTA 2013B	1/29/2013	34,890,000	11/15/2023	5.000	=	=	=	=	=	34,890,000	=
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	18,800,000	11/15/2024	5.000	-	-	-	-	-	18,800,000	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	6,985,000	11/15/2025	5.000	-	-	-	-	-	6,985,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013B TBTA 2013B	1/29/2013 1/29/2013	7,470,000 16,055,000	11/15/2026 11/15/2027	5.000 5.000	-	-	-	-	-	7,470,000 16,055,000	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	8,025,000	11/15/2027	5.000	-	-	-	-	-	8,025,000	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	8,425,000	11/15/2029	5.000	-	_	_	_	-	8,425,000	-
Aa3/AA-/AA-/AA				TBTA 2013B	1/29/2013	8,845,000	11/15/2030	5.000	-	-	-	-	-	8,845,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	3,390,000	11/15/2014	2.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	3,460,000	11/15/2015	3.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	3,560,000	11/15/2016	3.000	=	-	=	-	=	=	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	3,670,000	11/15/2017	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	3,815,000	11/15/2018	4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013C TBTA 2013C	4/18/2013 4/18/2013	3,970,000 4,125,000	11/15/2019 11/15/2020	4.000 4.000	4,125,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	4,125,000	11/15/2020	5.000	4,123,000	-	-	-	-	4,290,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	4,505,000	11/15/2021	5.000	-	-	-	-	-	4,505,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	4,730,000	11/15/2023	5.000	=	=	=	=	=	-,,555,500	-
					,	, ,									

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

							_								
Underlying L T Ratings	Credit Supported L T Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Amount Redeemed in	Amount Refinanced in	Amount Outstanding as	Amount Swapped as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	4,970,000	11/15/2024	5.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	5,215,000	11/15/2025	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013C TBTA 2013C	4/18/2013 4/18/2013	5,475,000 5,750,000	11/15/2026 11/15/2027	5.000 5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	6,040,000	11/15/2027	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	6,340,000	11/15/2029	5.000	=	-	=	=	=	6,340,000	=
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	6,660,000	11/15/2030	5.000	-	-	-	-	-	6,660,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	6,990,000	11/15/2031	5.000	-	-	-	-	-	6,990,000	-
Aa3/AA-/AA				TBTA 2013C	4/18/2013	7,340,000	11/15/2032	5.000	=	=	=	=	=	7,340,000	=
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	7,705,000	11/15/2033	5.000	-	-	=	=	=	7,705,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013C TBTA 2013C	4/18/2013 4/18/2013	15,020,000 15,770,000	11/15/2034 11/15/2035	5.000 5.000	-	-	-	-	-	15,020,000 15,770,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	16,560,000	11/15/2036	5.000	_	_	-	-	-	16,560,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	17,390,000	11/15/2037	5.000	-	-	-	-	-	17,390,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	18,260,000	11/15/2038	5.000	-	-	=	-	-	18,260,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	2,785,000	11/15/2039	3.750	-	-	=	=	=	2,785,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013	2,885,000	11/15/2040	3.750	-	-	-	-	-	2,885,000	-
Aa3/AA-/AA-/AA				TBTA 2013C	4/18/2013 4/18/2013	2,995,000	11/15/2041 11/15/2042	3.750 3.750	=	-	-	-	-	2,995,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2013C TBTA 2013C	4/18/2013	3,110,000 3,225,000	11/15/2042	3.750	=	-	-	-	-	3,110,000 3,225,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	5,040,000	11/15/2014	1.000	_	_	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	4,015,000	11/15/2015	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	4,215,000	11/15/2016	3.000	-	-	=	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	4,340,000	11/15/2017	5.000	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	4,555,000	11/15/2018	4.000	-	-	-	-	=	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014 2/6/2014	4,740,000	11/15/2019 11/15/2020	5.000	4,975,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2014A TBTA 2014A	2/6/2014	4,975,000 5,125,000	11/15/2020	3.000 4.000	4,975,000	-	-	-	-	5,125,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	5,330,000	11/15/2022	5.000	_	_	-	-	-	5,330,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	1,895,000	11/15/2023	3.000	-	-	-	-	-	1,895,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	3,700,000	11/15/2023	5.000	-	-	=	-	-	3,700,000	-
Aa3/AA-/AA				TBTA 2014A	2/6/2014	5,840,000	11/15/2024	5.000	=	=	=	=	=	=	=
Aa3/AA-/AA				TBTA 2014A	2/6/2014	4,625,000	11/15/2025	3.250	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2014A TBTA 2014A	2/6/2014 2/6/2014	1,505,000 6,355,000	11/15/2025 11/15/2026	5.000 5.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	6,675,000	11/15/2026	5.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	7,010,000	11/15/2028	5.000	-	-	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	7,360,000	11/15/2029	5.000	-	-	-	-	-	7,360,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	7,725,000	11/15/2030	5.000	-	-	=	-	-	7,725,000	-
Aa3/AA-/AA				TBTA 2014A	2/6/2014	8,110,000	11/15/2031	5.000	=	=	=	=	=	8,110,000	=
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	8,520,000	11/15/2032	4.000	-	-	=	=	=	8,520,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2014A TBTA 2014A	2/6/2014 2/6/2014	8,860,000 9,300,000	11/15/2033 11/15/2034	5.000 4.000	=	=	-	-	-	8,860,000 9,300,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	9,675,000	11/15/2034	4.000	=	-	-	-	-	9,675,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	485,000	11/15/2036	4.250	-	-	-	=	-	485,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	9,575,000	11/15/2036	5.000	-	-	-	-	-	9,575,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	505,000	11/15/2037	4.250	-	-	=	-	-	505,000	-
Aa3/AA-/AA				TBTA 2014A	2/6/2014	10,055,000	11/15/2037	5.000	=	=	=	=	=	10,055,000	=
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	530,000	11/15/2038	4.250	-	-	=	=	=	530,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2014A TBTA 2014A	2/6/2014 2/6/2014	10,555,000 550,000	11/15/2038 11/15/2039	5.000 4.250	-	-	-	-	-	10,555,000 550,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	11,085,000	11/15/2039	5.000	=	-	-	-	-	11,085,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	7,615,000	11/15/2040	5.000	-	-	-	=	-	7,615,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	4,595,000	11/15/2040	4.375	-	-	-	-	-	4,595,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	8,005,000	11/15/2041	5.000	=	-	-	-	-	8,005,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	4,790,000	11/15/2041	4.375	-	-	-	-	-	4,790,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	8,415,000	11/15/2042	5.000	-	-	-	-	-	8,415,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2014A TBTA 2014A	2/6/2014 2/6/2014	4,990,000 8,840,000	11/15/2042 11/15/2043	4.375 5.000	-	-	-	-	-	4,990,000 8,840,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	5,205,000	11/15/2043	4.375	-	-	-	-	-	5,205,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	9,295,000	11/15/2044	5.000	-	-	-	-	-	9,295,000	-
Aa3/AA-/AA-/AA				TBTA 2014A	2/6/2014	5,420,000	11/15/2044	4.375	-	-	-	-	-	5,420,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	3,075,000	11/15/2015	1.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	2,675,000	11/15/2016	5.000	-	-	-	-	-	=	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA				TBTA 2015A	5/15/2015	2,810,000	11/15/2017	3.000	=	=	=	=	=	=	=
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	2,895,000	11/15/2018	5.000	=	=	-	=	=	=	=
Aa3/AA-/AA-/AA Aa3/AA-/AA				TBTA 2015A TBTA 2015A	5/15/2015 5/15/2015	3,040,000 3,190,000	11/15/2019 11/15/2020	5.000 5.000	3,190,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	3,190,000	11/15/2020	5.000	3,190,000	-	-	-	-	3,350,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	3,520,000	11/15/2021	5.000	-	-		-	_	3,520,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	3,695,000	11/15/2023	5.000	-	_	_	_	_	3,695,000	_
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	3,880,000	11/15/2024	5.000	-	=	_	-	_	3,880,000	_
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	4,075,000	11/15/2025	5.000	-	=	_	-	_	· · ·	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	4,275,000	11/15/2026	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	4,490,000	11/15/2027	5.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	4,715,000	11/15/2028	5.000	=	=	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	4,950,000	11/15/2029	5.000	=	=	-	=	-	4,950,000	-
Aa3/AA-/AA				TBTA 2015A	5/15/2015	5,200,000	11/15/2030	5.000	-	-	-	-	-	5,200,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	5,460,000	11/15/2031	5.000 5.000	=	-	-	-	-	5,460,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	5,730,000	11/15/2033		-	-	-	-	-	5,730,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2015A TBTA 2015A	5/15/2015 5/15/2015	6,020,000 6,215,000	11/15/2034 11/15/2035	3.250 5.000	-	-	-	-	-	6,020,000 6,215,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	6,525,000	11/15/2035	5.000	-	-		-	_	6,525,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	6,850,000	11/15/2037	5.000	_	_	_	_	_	6,850,000	_
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	7,195,000	11/15/2038	5.000	-	_	-	-	_	7,195,000	_
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	7,555,000	11/15/2039	5.000	=	=	-	=	_	7,555,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	7,930,000	11/15/2040	5.000	-	-	-	-	-	7,930,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	8,330,000	11/15/2041	5.250	-	=	-	=	-	8,330,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	8,765,000	11/15/2042	5.250	=	=	-	=	-	8,765,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	9,225,000	11/15/2043	5.250	-	-	-	-	-	9,225,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	9,710,000	11/15/2044	5.250	=	=	-	=	-	9,710,000	-
Aa3/AA-/AA				TBTA 2015A	5/15/2015	10,220,000	11/15/2045	5.250	-	-	-	-	-	10,220,000	-
Aa3/AA-/AA				TBTA 2015A	5/15/2015	10,755,000	11/15/2046	5.000	-	-	-	-	-	10,755,000	-
Aa3/AA-/AA				TBTA 2015A	5/15/2015	11,295,000	11/15/2047	5.000	=	-	=	=	-	11,295,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA				TBTA 2015A TBTA 2015A	5/15/2015 5/15/2015	11,860,000 12,450,000	11/15/2048	5.000 5.000	-	-	-	-	-	11,860,000 12,450,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	5/15/2015	13,075,000	11/15/2049 11/15/2050	5.000	-	-		-	_	13,075,000	-
Aa3/AA-/AA-/AA				TBTA 2015A	11/16/2015	1,125,000	11/15/2016	2.000		_	_			13,073,000	
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,155,000	11/15/2017	5.000	-	_	_	_	_	_	_
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,210,000	11/15/2018	5.000	_	_	_	_	_	_	_
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,270,000	11/15/2019	5.000	=	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,335,000	11/15/2020	1.750	1,335,000	-	-	=	-	-	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,360,000	11/15/2021	5.000	-	=	-	=	-	1,360,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,425,000	11/15/2022	2.250	-	-	-	-	-	1,425,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,460,000	11/15/2023	5.000	-	-	-	-	-	1,460,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,530,000	11/15/2024	5.000	=	=	-	=	-	1,530,000	-
Aa3/AA-/AA				TBTA 2015B	11/16/2015	1,605,000	11/15/2025	5.000	=	-	-	-	-	1,605,000	-
Aa3/AA-/AA				TBTA 2015B	11/16/2015	1,685,000	11/15/2026	5.000	=	=	-	=	-	1,685,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	1,770,000	11/15/2027	5.000	-	-	-	-	-	1,770,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA				TBTA 2015B TBTA 2015B	11/16/2015 11/16/2015	1,860,000 1,955,000	11/15/2028 11/15/2029	5.000 5.000	-	-	-	-	-	1,860,000 1,955,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,050,000	11/15/2029	5.000	-	-		-		2,050,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,155,000	11/15/2031	5.000	-	_	_	_	_	2,155,000	_
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,260,000	11/15/2033	5.000	_	_	_	_	_	2,260,000	_
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,375,000	11/15/2034	5.000	-	=	_	-	_	2,375,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,495,000	11/15/2035	5.000	-	-	-	-	-	2,495,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,620,000	11/15/2036	5.000	=	=	-	=	-	2,620,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,750,000	11/15/2037	5.000	=	=	=	=	=	2,750,000	=
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	2,885,000	11/15/2038	5.000	-	-	-	-	-	2,885,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	3,030,000	11/15/2039	5.000	=	-	=	=	-	3,030,000	-
Aa3/AA-/AA				TBTA 2015B	11/16/2015	3,180,000	11/15/2040	5.000	-	-	-	-	-	3,180,000	-
Aa3/AA-/AA				TBTA 2015B	11/16/2015	3,340,000	11/15/2041	5.000	-	-	-	-	-	3,340,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	3,505,000	11/15/2042	5.000	=	=	=	=	=	3,505,000	=
Aa3/AA-/AA-/AA Aa3/AA-/AA				TBTA 2015B TBTA 2015B	11/16/2015 11/16/2015	3,685,000 3,865,000	11/15/2043 11/15/2044	5.000 5.000	-	-	-	-	-	3,685,000 3,865,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2015B	11/16/2015	4,060,000	11/15/2044	5.000	-	-	-	-	-	4,060,000	-
Aa3/AA-/AA-/AA				TBTA 2015B	1/28/2016	7,530,000	11/15/2045	4.000	-	-	-	-	-	-,000,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	5,000,000	11/15/2017	3.000	-	-	-	-	-	-	-
					-, -0, 2010	3,000,000	,, 202,	3.000							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	5,445,000	11/15/2017	4.000	=	=	=	Ξ	=	=	=
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	4,420,000	11/15/2018	4.000	=	=	-	=	-	=	=
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2016A TBTA 2016A	1/28/2016 1/28/2016	6,495,000 6,775,000	11/15/2018 11/15/2019	5.000 4.000	-	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	3,500,000	11/15/2019	4.000	3,500,000	-	-	-	-	-	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	4,045,000	11/15/2020	5.000	4,045,000	-	_	-		-	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	6,210,000	11/15/2021	5.000	-	_	_	-	_	6,210,000	_
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	6,520,000	11/15/2022	5.000	=	-	-	=	-	6,520,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	46,645,000	11/15/2023	5.000	=	-	-	=	-	46,645,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	51,315,000	11/15/2024	5.000	-	=	-	-	=	51,315,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	22,265,000	11/15/2025	5.000	-	-	-	-	-	22,265,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	21,820,000	11/15/2026	5.000	=	=	-	=	-	21,820,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	8,275,000	11/15/2027	5.000	=	-	-	=	-	8,275,000	-
Aa3/AA-/AA				TBTA 2016A	1/28/2016	17,515,000	11/15/2028	5.000	=	=	-	-	-	17,515,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	18,400,000	11/15/2029	5.000 5.000	=	-	-	=	-	18,400,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	19,315,000	11/15/2030		-	-	-	-	-	19,315,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2016A TBTA 2016A	1/28/2016 1/28/2016	30,440,000 20,700,000	11/15/2031 11/15/2033	5.000 5.000	-	-	-	-	-	30,440,000 20,700,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	23,325,000	11/15/2033	3.000	= -	-		-	-	23,325,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	10,235,000	11/15/2034	5.000		-	_	-		10,235,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	24,025,000	11/15/2035	3.000	-	_	_	-	_	24,025,000	_
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	10,745,000	11/15/2035	5.000	=	=	-	=	=	10,745,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	11,280,000	11/15/2036	5.000	-	-	-	-	-	11,280,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	11,845,000	11/15/2037	5.000	-	=	-	-	=	11,845,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	12,440,000	11/15/2038	5.000	=	=	-	=	-	12,440,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	13,060,000	11/15/2039	5.000	-	-	-	-	-	13,060,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	13,715,000	11/15/2040	5.000	=	=	-	=	-	13,715,000	-
Aa3/AA-/AA				TBTA 2016A	1/28/2016	14,400,000	11/15/2041	5.000	-	-	-	-	-	14,400,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	15,120,000	11/15/2042	5.000	-	-	-	-	-	15,120,000	-
Aa3/AA-/AA				TBTA 2016A	1/28/2016	15,875,000	11/15/2043	5.000	=	-	=	-	-	15,875,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA				TBTA 2016A TBTA 2016A	1/28/2016 1/28/2016	16,670,000 17,500,000	11/15/2044 11/15/2045	5.000 5.000	-	-	-	-	-	16,670,000 17,500,000	-
Aa3/AA-/AA-/AA				TBTA 2016A	1/28/2016	18,375,000	11/15/2045	5.000	= -	-		-	-	18,375,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2010A	1/19/2017	13,415,000	11/15/2022	4.000		_	_		_	13,415,000	
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	46,755,000	11/15/2024	5.000	-	_	_	-	_	46,755,000	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	8,165,000	11/15/2025	5.000	-	_	_	-	_	8,165,000	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	8,655,000	11/15/2026	5.000	=	-	-	=	-	8,655,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	19,240,000	11/15/2027	5.000	=	-	-	-	-	19,240,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	4,565,000	11/15/2030	3.000	-	=	-	-	=	4,565,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	9,445,000	11/15/2033	5.000	-	-	-	-	-	9,445,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	9,915,000	11/15/2034	5.000	-	-	-	-	-	9,915,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	10,410,000	11/15/2035	5.000	=	=	-	=	-	10,410,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	9,560,000	11/15/2036	3.375	=	-	-	=	-	9,560,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	11,255,000	11/15/2037	5.000	=	=	-	=	=	11,255,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	11,815,000	11/15/2038	5.000	-	-	-	-	-	11,815,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	12,405,000	11/15/2039	5.000 5.000	-	-	-	-	-	12,405,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR			TBTA 2017A TBTA 2017A	1/19/2017 1/19/2017	13,025,000 13,680,000	11/15/2040 11/15/2041	5.000	=	-	-	-	-	13,025,000 13,680,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	14,365,000	11/15/2041	5.000		-	_	-		14,365,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	15,080,000	11/15/2043	5.000	-	_	_	-	_	15,080,000	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	15,835,000	11/15/2044	5.000	-	_	_	-	_	15,835,000	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	16,625,000	11/15/2045	5.000	=	-	-	=	-	16,625,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	17,460,000	11/15/2046	5.000	-	-	-	-	-	17,460,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR			TBTA 2017A	1/19/2017	18,330,000	11/15/2047	5.000	-	-	-	-	-	18,330,000	-
MIG1/SP-1+/F1+/K1+				17A-1 BANS	10/6/2017	150,000,000	2/15/2018	2.000	-	-	-	-	-	-	-
MIG1/SP-1+/F1+/K1+				17A-2 BANS	10/6/2017	150,000,000	2/15/2018	2.000	-	-	-	-	-	-	-
MIG1/SP-1+/F1+/K1+				17A-3 BANS	10/6/2017	25,000,000	2/15/2018	2.000	-	-	-	=	-	-	-
MIG1/SP-1+/F1+/K1+				17A-4 BANS	10/6/2017	25,000,000	2/15/2018	2.000	-	-	-	-	-	-	-
MIG1/SP-1+/F1+/K1+				17A-5 BANS	10/6/2017	25,000,000	2/15/2018	2.000	-	-	-	-	-	-	-
MIG1/SP-1+/F1+/K1+	And /AAA /AA. /***			17A-6 BANS	10/6/2017	25,000,000	2/15/2018	2.000	=	=	=	=	-	40.040.000	=
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR			TBTA 2017B TBTA 2017B	1/19/2017 1/19/2017	10,940,000 14,305,000	11/15/2024 11/15/2025	5.000 5.000	-	-	-	-	-	10,940,000 14,305,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR			TBTA 2017B	1/19/2017	15,135,000	11/15/2025	5.000	-	-	-	-	-	15,135,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR			TBTA 2017B	1/19/2017	30,725,000	11/15/2026	5.000	=	-	-	-	-	30,725,000	-
, waj nn j nn j AA	, 102/, 100/ DO 1/ NIC				1, 13, 2017	33,723,000	11,10,100,	3.000						30,723,000	

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1.231.190.000

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	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	<u>2020</u>	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	63,480,000	11/15/2028	5.000	-	-	-	-	-	63,480,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	82,820,000	11/15/2029	5.000	=	=	-	=	-	82,820,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	88,325,000	11/15/2030	5.000	-	-	-	-	-	88,325,000	-
Aa3/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	92,465,000	11/15/2031	5.000	-	-	-	-	-	92,465,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	56,905,000	11/15/2032	5.000	-	-	-	-	-	56,905,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	74,450,000	11/15/2033	5.000	=	-	-	-	-	74,450,000	-
Aa3/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	49,100,000	11/15/2034	5.000	=	-	-	-	-	49,100,000	=
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	61,360,000	11/15/2035	5.000	-	-	-	-	-	61,360,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2017B	1/19/2017	88,595,000	11/15/2036	5.000	-	-	-	-	-	88,595,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR		TBTA 2017B TBTA 2017B	1/19/2017 1/19/2017	88,635,000	11/15/2037 11/15/2038	5.000 5.000	-	-	-	-	-	88,635,000 85,735,000	-
Aa3/AA-/AA-/AA	Ad1/AAA/AA+/INK		TBTA 2017C-1 Refunding Bonds	1/17/2017	85,735,000 17,185,000	11/15/2038	5.000	-	-	-	-	-	17,185,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	20,890,000	11/15/2023	5.000	=	=	=	-	=	20,890,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds TBTA 2017C-1 Refunding Bonds	11/17/2017	120,555,000	11/15/2024	5.000	-	-	-	-	-	120,555,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	2,255,000	11/15/2025	3.000	_	_	_	_	_	2,255,000	_
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	3,180,000	11/15/2025	4.000	_	_	_	_	_	3,180,000	_
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	1,955,000	11/15/2026	4.000	_	_	_	_	_	1,955,000	_
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	108,895,000	11/15/2026	5.000	_	_	_	_	_	108,895,000	_
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	118,110,000	11/15/2027	5.000	_	_	_	_	_	118,110,000	_
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	10,400,000	11/15/2027	4.000	=	-	-	-	_	10,400,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-1 Refunding Bonds	11/17/2017	117,565,000	11/15/2028	5.000	=	-	-	-	_	117,565,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-2	11/17/2017	46,405,000	11/15/2039	5.000	-	-	-	-	-	46,405,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-2	11/17/2017	48,720,000	11/15/2040	5.000	-	-	-	-	-	48,720,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-2	11/17/2017	51,160,000	11/15/2041	5.000	-	-	-	-	-	51,160,000	-
Aa3/AA-/AA-/AA			TBTA 2017C-2	11/17/2017	53,715,000	11/15/2042	5.000	-	-	-	-	-	53,715,000	-
Aa3/AA-/AA-/AA			TBTA 2018A	2/1/2018	51,830,000	11/15/2043	5.000	=	=	=	-	=	51,830,000	-
Aa3/AA-/AA-/AA			TBTA 2018A	2/1/2018	54,425,000	11/15/2044	5.000	-	-	-	-	-	54,425,000	-
Aa3/AA-/AA-/AA			TBTA 2018A	2/1/2018	57,145,000	11/15/2045	5.000	-	-	-	-	-	57,145,000	-
Aa3/AA-/AA-/AA			TBTA 2018A	2/1/2018	60,005,000	11/15/2046	5.000	-	-	-	-	-	60,005,000	-
Aa3/AA-/AA-/AA			TBTA 2018A	2/1/2018	63,005,000	11/15/2047	4.000	=	=	-	=	-	63,005,000	-
Aa3/AA-/AA			TBTA 2018A	2/1/2018	65,520,000	11/15/2048	4.000	-	-	-	-	=	65,520,000	-
Aa3/AA-/AA-/AA			TBTA 2018B	8/30/2018	18,185,000	11/15/2024	5.000	-	-	-	-	-	18,185,000	-
Aa3/AA-/AA-/AA			TBTA 2018B	8/30/2018	17,430,000	11/15/2025	5.000	=	-	-	-	-	17,430,000	-
Aa3/AA-/AA-/AA			TBTA 2018B	8/30/2018	18,400,000	11/15/2026	5.000	=	-	-	-	-	18,400,000	-
Aa3/AA-/AA			TBTA 2018B	8/30/2018	25,715,000	11/15/2027	5.000	=	=	-	-	-	25,715,000	-
Aa3/AA-/AA-/AA			TBTA 2018B TBTA 2018B	8/30/2018	45,650,000	11/15/2028	5.000 5.000	-	-	-	-	-	45,650,000	-
Aa3/AA-/AA-/AA				8/30/2018	47,620,000	11/15/2029		-	-	-	-	-	47,620,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA-/AA			TBTA 2018B TBTA 2018B	8/30/2018 8/30/2018	52,245,000 44,845,000	11/15/2030 11/15/2031	5.000 5.000	-	-	-	-	-	52,245,000 44,845,000	-
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	10,290,000	11/15/2031	5.000	-	= -	-	-		10,290,000	-
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	21,920,000	11/15/2031	5.000	-	-	-	-	-	21,920,000	
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	23,025,000	11/15/2034	5.000	_	_	_	_	_	23,025,000	_
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	20,100,000	11/15/2035	5.000	_	_	_	_	_	20,100,000	_
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	4,075,000	11/15/2035	4.000	_	_	_	_	_	4,075,000	_
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	25,330,000	11/15/2036	5.000	=	=	-	-	-	25,330,000	-
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	26,615,000	11/15/2037	5.000	=	=	-	-	-	26,615,000	-
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	10,840,000	11/15/2038	5.000	=	-	-	-	_	10,840,000	-
Aa3/AA-/AA-/AA			TBTA 2018C	8/30/2018	17,085,000	11/15/2038	3.375	-	-	-	-	-	17,085,000	-
Aa3/AA-/AA-/AA			TBTA 2018D	10/1/2020	24,740,000	11/15/2033	5.000	-	-	-	-	24,740,000	24,740,000	-
Aa3/AA-/AA-/AA			TBTA 2018D	10/1/2020	32,155,000	11/15/2034	5.000	=	=	-	=	32,155,000	32,155,000	-
Aa3/AA-/AA-/AA			TBTA 2018D	10/1/2020	4,535,000	11/15/2035	5.000	-	-	-	-	4,535,000	4,535,000	-
Aa3/AA-/AA-/AA			TBTA 2018D	10/1/2020	11,885,000	11/15/2036	5.000	-	-	-	-	11,885,000	11,885,000	-
Aa3/AA-/AA-/AA			TBTA 2018D	10/1/2020	11,800,000	11/15/2037	4.000	-	-	-	-	11,800,000	11,800,000	-
Aa3/AA-/AA-/AA			TBTA 2018D	10/1/2020	13,870,000	11/15/2038	4.000	-	-	-	-	13,870,000		-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	18,485,000	11/15/2026	4.000	-	-	-	-	-	18,485,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	19,330,000	11/15/2027	4.000	=	Ξ	=	=	=	19,330,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	20,205,000	11/15/2028	4.000	-	-	-	-	-	20,205,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	21,115,000	11/15/2029	4.000	-	-	-	-	-	21,115,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	22,065,000	11/15/2030	4.000	-	-	-	-	-	22,065,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	23,050,000	11/15/2031	4.000	-	-	-	-	-	23,050,000	-
Aa3/AA-/AA-/AA	Aa1/AA+/AA+/NR	VMIG 1/A-1/F1+/NR	TBTA 2018E Taxable	12/12/2018	24,220,000	11/15/2032	4.000	-	=	=	-	=	24,220,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2019A	5/23/2019	13,685,000	11/15/2041	5.000	=	-	-	-	-	13,685,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2019A TBTA 2019A	5/23/2019 5/23/2019	14,365,000 15,085,000	11/15/2042 11/15/2043	5.000 5.000	=	-	-	-	-	14,365,000 15,085,000	-
Aa3/AA-/AA	Aa1/AAA/AA+/NR		181A 2019A	5/25/2019	15,065,000	11/13/2043	5.000	-	-	-	-	-	13,065,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2019A TBTA 2019A	5/23/2019 5/23/2019	15,840,000 16,475,000	11/15/2044	4.000	-	-	-	-	-	15,840,000 16,475,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA	Aa1/AAA/AA+/NR Aa1/AAA/AA+/NR		TBTA 2019A TBTA 2019A	5/23/2019	17,295,000	11/15/2045 11/15/2046	5.000 5.000	-	-	-	-	-	17,295,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2019A	5/23/2019	18,160,000	11/15/2047	5.000		-	-	-	-	18,160,000	_
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2019A	5/23/2019	19,070,000	11/15/2048	5.000	=	=	-	=	-	19,070,000	-
Aa3/AA-/AA-/AA	Aa1/AAA/AA+/NR		TBTA 2019A	5/23/2019	20,025,000	11/15/2049	5.000	-	-	-	-	-	20,025,000	-
Aa3/AA-/AA-/AA			TBTA 2019B Taxable	9/25/2019	102,465,000	11/15/2044	3.427	-	-	=	-	-	102,465,000	-
Aa3/AA-/AA-/AA			TBTA 2019C	12/3/2019	25,000,000	11/15/2040	4.000	-	=	=	=	-	25,000,000	-
Aa3/AA-/AA-/AA			TBTA 2019C	12/3/2019	25,000,000	11/15/2041	4.000	-	-	=	=	-	25,000,000	-
Aa3/AA-/AA-/AA			TBTA 2019C	12/3/2019	25,000,000	11/15/2042	4.000	-	=	=	=	-	25,000,000	-
Aa3/AA-/AA-/AA Aa3/AA-/AA			TBTA 2019C TBTA 2019C	12/3/2019 12/3/2019	25,000,000 25,000,000	11/15/2043 11/15/2045	4.000 3.000	-	-	-	-	-	25,000,000 25,000,000	-
Aa3/AA-/AA-/AA			TBTA 2019C	12/3/2019	25,000,000	11/15/2046	3.000		_			_	25,000,000	
Aa3/AA-/AA-/AA			TBTA 2019C	12/3/2019	25,000,000	11/15/2047	3.000	_	_	-	-	_	25,000,000	_
Aa3/AA-/AA-/AA			TBTA 2019C	12/3/2019	25,000,000	11/15/2048	3.000	=	=	-	=	=	25,000,000	_
Aa3/AA-/AA-/AA			TBTA EFC 1996A	3/17/2011	1,525,000	1/1/2013	1.407	-	-	-	-	-	· · · ·	-
Aa3/AA-/AA-/AA			TBTA EFC 1996A	3/17/2011	1,620,000	1/1/2014	1.817	=	=	-	-	=	-	-
Aa3/AA-/AA-/AA			TBTA EFC 1996A	3/17/2011	1,710,000	1/1/2015	2.324	-	-	=	-	-	-	-
Aa3/AA-/AA-/AA			TBTA EFC 1996A	3/17/2011	1,810,000	1/1/2016	2.637	=	=	-	=	-	-	-
Aa3/AA-/AA-/AA			TBTA EFC 1996A	3/17/2011	305,000	1/1/2017	2.996	-	-	=	=	-	-	-
Aa3/AA-/AA			TBTA EFC 1996A	3/17/2011	325,000	1/1/2018	3.301	-	-	-	-	-	-	-
MIG1/SP-1+/A+/K1+			TBTA SANDY BANS 2014A	2/6/2014	100,000,000	5/15/2015	5.000 4.000	=	-	=	-	-	-	-
A1/A+/A+/AA- A1/A+/A+/AA-	A1/AA/A+/AA-		TBTA SUB 2000AB TBTA SUB 2000AB	6/20/2007 6/20/2007	16,950,000 18,000,000	1/1/2013 1/1/2014	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-	A1/AA/A+/AA-		TBTA SUB 2000ABCD-1	9/30/2014	19,150,000	1/1/2014	4.000		_			_		
A1/A+/A+/AA-	A1/AA/A+/AA-	VMIG 1/NR/F1+/K1+	TBTA SUB 2000ABCD-2	9/30/2014	34,400,000	1/1/2016	4.000	_	_	-	-	_	_	_
A1/A+/A+/AA-	A1/AA/A+/AA-	NR/NR/F1+/K1+	TBTA SUB 2000ABCD-3	9/30/2014	36,600,000	1/1/2017	4.000	=	=	-	=	=	_	-
A1/A+/A+/AA-	A1/AA/A+/AA-		TBTA SUB 2000ABCD-4	9/30/2014	38,850,000	1/1/2018	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-	A1/AA/A+/AA-		TBTA SUB 2000ABCD-5	9/30/2014	18,850,000	1/1/2019	4.000	=	=	-	-	=	-	-
A1/A+/A+/AA-			TBTA SUB 2000CD	6/20/2007	11,700,000	1/1/2013	4.000	-	-	=	-	-	-	-
A1/A+/A+/AA-	A1/AA/A+/AA-		TBTA SUB 2000CD	6/20/2007	12,400,000	1/1/2014	4.000	-	-	=	=	-	-	-
A1/A+/A+/AA-	A1/AA-/A+/AA+		TBTA SUB 2002E	11/13/2002	31,645,000	11/15/2018	5.500	=	=	-	=	-	-	-
A1/A+/A+/AA- A1/A+/A+/AA-	A1/AA-/A+/AA+		TBTA SUB 2002E	11/13/2002 11/13/2002	56,490,000 59,050,000	11/15/2019 11/15/2020	5.500 5.500	24 505 000	-	-	-	-	-	-
A1/A+/A+/AA- A1/A+/A+/AA-	A1/AA-/A+/AA+ A1/AA-/A+/AA+		TBTA SUB 2002E TBTA SUB 2002E	11/13/2002	61,745,000	11/15/2020	5.500	34,505,000	-	-	-	-	36,080,000	-
A1/A+/A+/AA-	AI/AA-/AT/AAT		TBTA 30B 2002E	11/13/2002	54,590,000	11/15/2021	5.250	-	-	-	-	-	30,080,000	-
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	57,455,000	11/15/2023	5.250	=	=	-	=	-	-	-
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	38,515,000	11/15/2024	5.000	-	-	=	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	40,685,000	11/15/2025	5.000	=	=	-	-	=	-	-
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	42,970,000	11/15/2026	5.000	-	-	=	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	45,370,000	11/15/2027	5.000	=	=	=	=	=	=	=
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	47,890,000	11/15/2028	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2002E	11/13/2002	50,535,000	11/15/2029	5.000	=	-	=	-	-	=	-
A1/A+/A+/AA- A1/A+/A+/AA-			TBTA SUB 2002E TBTA SUB 2002E	11/13/2002 11/13/2002	53,310,000 56,225,000	11/15/2030 11/15/2031	5.000 5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA 30B 2002E	11/13/2002	59,620,000	11/15/2031	5.000		_			_		
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	5,650,000	11/15/2013	3.750	_	_	-	-	_	_	_
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	4,690,000	11/15/2014	3.875	=	=	=	=	=	ē	-
A1/A+/A+/AA-	A1/A+/A+/AA-		TBTA SUB 2003A	3/5/2003	4,495,000	11/15/2015	5.250	=	=	-	-	=	-	-
A1/A+/A+/AA-	A1/A+/A+/AA-		TBTA SUB 2003A	3/5/2003	5,050,000	11/15/2016	5.250	=	=	=	=	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	5,060,000	11/15/2017	5.250	=	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	5,025,000	11/15/2018	5.250	-	-	=	=	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	5,320,000	11/15/2019	5.250	=	=	-	=	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	5,275,000	11/15/2020	5.250	=	-	=	-	-	-	-
A1/A+/A+/AA- A1/A+/A+/AA-			TBTA SUB 2003A TBTA SUB 2003A	3/5/2003 3/5/2003	5,865,000 5,935,000	11/15/2021 11/15/2022	5.250 4.500	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	7,965,000	11/15/2022	4.625	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	32,220,000	11/15/2024	4.750	=	-	=	-	-	=	=
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	33,940,000	11/15/2025	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	35,465,000	11/15/2026	5.125	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	11,280,000	11/15/2027	4.750	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	26,135,000	11/15/2027	5.000	=	-	=	=	-	=	=
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	39,305,000	11/15/2028	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	41,175,000	11/15/2029	5.250	=	=	=	-	-	=	=

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

			Refunding Bonds and No	tes Issued in 2020	1,231,190,000	L	Total	4,424,438,830	250,000,000	1,053,770,000	128,725,000	326,055,000	48,368,162,258	2,157,670,000
														(
	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in		Amount Called in	Redeemed in	Refinanced in		
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	<u>2020</u>	2020	of December 31, 2020	<u>31, 2020</u>
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	23,420,000	11/15/2030	5.250	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	19,980,000	11/15/2030	5.000	=	-	-	-	-	=	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	45,650,000	11/15/2031	5.000	-	-	-	-	-	=	-
A1/A+/A+/AA-			TBTA SUB 2003A	3/5/2003	34,370,000	11/15/2032	5.000	-	-	-	-	-	_	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	16,965,000	11/15/2013	4.000	-	-	-	-	-	_	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	19,820,000	11/15/2014	5.000	-	_	_	_	_	_	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	20,115,000	11/15/2015	5.000	_	_	_	_	_	_	_
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	5,330,000	11/15/2016	4.000	_	_	_	_	_	_	_
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	16,340,000	11/15/2016	5.000							
A1/A+/A+/AA-			TBTA 308 2008D	7/30/2008	8,535,000	11/15/2017	4.000		=		=	-	_	-
A1/A+/A+/AA-			TBTA 308 2008D	7/30/2008	14,140,000	11/15/2017	5.000		=		=	-	_	-
								-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	12,220,000	11/15/2018	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	12,355,000	11/15/2019	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	11,375,000	11/15/2020	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	1,465,000	11/15/2020	4.000	=	-	-	-	-	=	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	5,350,000	11/15/2021	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	9,260,000	11/15/2021	4.000	=	-	-	-	-	=	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	5,970,000	11/15/2022	4.250	=	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	19,395,000	11/15/2022	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	5,705,000	11/15/2023	4.250	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	20,000,000	11/15/2023	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	20,000,000	11/15/2024	5.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	4,865,000	11/15/2024	4.375	-	-	-	-	-	_	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	25,575,000	11/15/2025	5.000	=	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	27,040,000	11/15/2026	5.000	-	_	_	_	_	_	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	27,990,000	11/15/2027	5.000	_	_	_	_	_	_	_
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	7,550,000	11/15/2028	5.000	_	_	_	_	_	_	_
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	21,895,000	11/15/2028	4.500	_	_	_	_	_	_	_
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	30,500,000	11/15/2029	5.000							
A1/A+/A+/AA-			TBTA 308 2008D	7/30/2008	32,070,000	11/15/2029	5.000		=		=	-	_	-
A1/A+/A+/AA-			TBTA SUB 2008D	7/30/2008	33,425,000	11/15/2030	5.000	-	-	-	-	-	-	-
			TBTA SUB 2008D	1/29/2013	6,770,000	11/15/2031		-	-	-	-	-	-	-
A1/A+/A+/AA-							2.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	2,035,000	11/15/2015	3.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	2,095,000	11/15/2016	3.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	7,220,000	11/15/2017	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	7,285,000	11/15/2018	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	7,780,000	11/15/2019	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	7,770,000	11/15/2020	4.000	7,770,000	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	8,390,000	11/15/2021	4.000	-	-	-	-	-	8,390,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	5,550,000	11/15/2022	4.000	-	-	-	-	-	5,550,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	46,800,000	11/15/2022	5.000	-	-	-	-	-	46,800,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	10,680,000	11/15/2023	4.000	-	-	-	-	-	10,680,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	45,540,000	11/15/2023	5.000	-	-	-	-	-	45,540,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	57,270,000	11/15/2024	5.000	-	-	-	-	-	57,270,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	60,465,000	11/15/2025	5.000	=	-	-	-	-	60,465,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	63,460,000	11/15/2026	5.000	_	_	_	_	_	63,460,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	15,010,000	11/15/2027	4.000	_	_	_	_	_	15,010,000	_
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	51,905,000	11/15/2027	5.000	_	_	_	_	_	51,905,000	_
A1/A+/A+/AA-			TBTA 308 2013A	1/29/2013	11,175,000	11/15/2027	4.000	_		_	_	_	11,175,000	_
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	59,130,000	11/15/2028	5.000						59,130,000	
								-	-	-	-	-		-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	15,000,000	11/15/2029	5.000	-	-	-	-	-	15,000,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	58,760,000	11/15/2029	-	-	-	-	-	-	58,760,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	59,720,000	11/15/2030		=	=	-	=	=	59,720,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	15,000,000	11/15/2030	5.000	-	-	-	-	-	15,000,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	59,775,000	11/15/2031	-	-	-	=	-	=	59,775,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	15,000,000	11/15/2031	3.125	=	=	-	-	-	15,000,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	47,015,000	11/15/2032	-	-	-	-	-	-	47,015,000	-
A1/A+/A+/AA-			TBTA SUB 2013A	1/29/2013	15,000,000	11/15/2032	3.125	-	-	-	-	-	15,000,000	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	1,000,000	11/15/2014	1.000	=	=	=	-	=	=	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	1,230,000	11/15/2015	1.000	=	-	-	=	-	=	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	1,250,000	11/15/2016	1.000	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	1,275,000	11/15/2017	1.250	-	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	9,210,000	11/15/2018	2.435	=	=	-	-	-	=	_
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	14,170,000	11/15/2019	2.885	_	-	_	_	_	_	_
,,			555 25155 1 7888510	,,,	_1,170,000	, -5, 2015	2.005							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

					, . , , ,	_		, , , , , , , , , , , , , , , , , , , ,	,,	,, -,	-, -,	,,	.,,,	, - ,,
	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	<u>2020</u>	2020	of December 31, 2020	<u>31, 2020</u>
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	26,725,000	11/15/2020	3.348	26,725,000	-	-	-	-	-	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	27,380,000	11/15/2021	3.598	-	-	-	-	-	27,380,000	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	23,975,000	11/15/2022	3.884	=	-	=	=	-	23,975,000	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	24,895,000	11/15/2023	4.134	=	=	=	-	=	24,895,000	-
A1/A+/A+/AA-			TBTA SUB 2013D-1 Taxable	12/19/2013	16,790,000	11/15/2024	4.284 4.434	-	-	-	-	-	16,790,000	-
A1/A+/A+/AA-	4 - 2 / 4 4 4 / 4 4 / NID	VMIG 1/A-1/F1/NR	TBTA SUB 2013D-1 Taxable	12/19/2013	17,605,000	11/15/2025	4.434	-	-	-	-	-	17,605,000	-
A1/A+/A+/AA- A1/A+/A+/AA-	Aa2/AAA/AA/NR Aa2/AAA/AA/NR	VMIG 1/A-1/F1/NR VMIG 1/A-1/F1/NR	TBTA SUB 2013D-2a Taxable TBTA SUB 2013D-2a Taxable	12/17/2015 12/17/2015	18,485,000 19,330,000	11/15/2026 11/15/2027	4.000	-	-	-	-	-	-	-
A1/A+/A+/AA-	Aa2/AAA/AA/NR	VMIG 1/A-1/F1/NR	TBTA SUB 2013D-2a Taxable	12/17/2015	20,205,000	11/15/2027	4.000		=	=	-	=		-
A1/A+/A+/AA-	Aa2/AAA/AA/NR Aa2/AAA/AA/NR	VMIG 1/A-1/F1/NR VMIG 1/A-1/F1/NR	TBTA SUB 2013D-2a Taxable	12/17/2015	21,115,000	11/15/2028	4.000		-	-	-	-	-	-
A1/A+/A+/AA-	Aa2/AAA/AA/NR	VMIG 1/A-1/F1/NR	TBTA SUB 2013D-2b Taxable	12/17/2015	22,065,000	11/15/2020	4.000	_	_	_	_	_	_	_
A1/A+/A+/AA-	Aa2/AAA/AA/NR	VMIG 1/A-1/F1/NR	TBTA SUB 2013D-2b Taxable	12/17/2015	23,050,000	11/15/2030	4.000	-	_	-	_	_	-	_
A1/A+/A+/AA-	Aa2/AAA/AA/NR	VMIG 1/A-1/F1/NR	TBTA SUB 2013D-2b Taxable	12/17/2015	24,220,000	11/15/2032	4.000	-	-	-	_	-	_	_
A3/BBB+/A-/AA	7.02/70097097111	***************************************	TRB 2002A	5/30/2002	60,365,000	11/15/2013	5.500	-	-	-	_	-	_	_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	20,395,000	11/15/2013	4.300	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	1,190,000	11/15/2013	4.400	_	-	-	-	-	_	-
A3/BBB+/A-/AA	A2/AA-/A/AA+		TRB 2002A	5/30/2002	84,965,000	11/15/2014	5.500	-	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	1,490,000	11/15/2014	4.600	_	-	-	-	-	_	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	90,380,000	11/15/2015	5.500	_	-	-	-	-	_	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	825,000	11/15/2015	4.625	-	-	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	95,175,000	11/15/2016	5.500	-	-	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	1,075,000	11/15/2016	4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	100,620,000	11/15/2017	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	735,000	11/15/2017	4.800	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	106,985,000	11/15/2018	5.500	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	1,260,000	11/15/2018	4.900	=	=	=	-	=	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	102,315,000	11/15/2019	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	2,685,000	11/15/2019	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	76,110,000	11/15/2020	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	3,890,000	11/15/2020	5.125	=	=	=	=	=	=	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	63,270,000	11/15/2021	5.125	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	13,195,000	11/15/2021	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	3,535,000	11/15/2021	5.125	=	=	=	-	=	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	39,860,000	11/15/2022	5.125	=	=	=	-	=	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	31,210,000	11/15/2022	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002A TRB 2002A	5/30/2002 5/30/2002	8,930,000 133,090,000	11/15/2022 11/15/2023	5.125 5.000	-	-	-	-	-	-	-
			TRB 2002A	5/30/2002			5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002A	5/30/2002	139,760,000 146,660,000	11/15/2024 11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	154,615,000	11/15/2026	5.000					_		_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	113,560,000	11/15/2027	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	48,785,000	11/15/2027	5.125	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	119,315,000	11/15/2028	5.000	-	-	-	_	-	_	_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	51,230,000	11/15/2028	5.125	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	125,095,000	11/15/2029	5.000	_	-	-	-	-	_	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	53,855,000	11/15/2029	5.125	_	-	-	-	-	_	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	132,680,000	11/15/2030	5.000	-	-	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	56,615,000	11/15/2030	5.125	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	100,000,000	11/15/2031	5.250	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	89,515,000	11/15/2031	5.125	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	100,000,000	11/15/2032	5.750	=	=	=	-	=	-	-
A3/BBB+/A-/AA			TRB 2002A	5/30/2002	70,000,000	11/15/2032	5.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002B-1	5/30/2002	4,500,000	11/1/2013	4.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002B-1	5/30/2002	4,600,000	11/1/2014	4.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-1	5/30/2002	4,900,000	11/1/2015	4.000	=	=	=	=	=	=	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-1	5/30/2002	5,100,000	11/1/2016	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-1	5/30/2002	5,600,000	11/1/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-1	5/30/2002	5,100,000	11/1/2018	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-1	5/30/2002	9,300,000	11/1/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-1	5/30/2002	26,000,000	11/1/2020	4.000	Ξ.	Ē	=	Ξ	=	Ξ	=
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+ A1/AA/A/AA+		TRB 2002B-1 TRB 2002B-1	5/30/2002 5/30/2002	29,150,000 11,000,000	11/1/2021 11/1/2022	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	AI/AA/A/AA+		TRB 2002B-1	5/30/2002	4,500,000	11/1/2022	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002B-2	5/30/2002	4,500,000	11/1/2013	4.000	-	-	-	-	-	-	-
мэ/онт/А-/АА			1 NB 2002B-2	3/30/2002	4,000,000	11/1/2014	4.000	-	=	=	-	=	=	=

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll Series		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-2	5/30/2002	4,900,000	11/1/2015	4.000	-	=	=	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-2	5/30/2002	5,100,000	11/1/2016	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-2	5/30/2002	5,600,000	11/1/2017	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+ A1/AA/A/AA+		TRB 2002B-2 TRB 2002B-2	5/30/2002 5/30/2002	5,100,000 9,300,000	11/1/2018 11/1/2019	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+ A1/AA/A/AA+		TRB 2002B-2	5/30/2002	26,000,000	11/1/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-2	5/30/2002	29,150,000	11/1/2021	4.000							
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002B-2	5/30/2002	11,000,000	11/1/2022	4.000	-	-	-	_	-	-	-
A3/BBB+/A-/AA	,		TRB 2002D-1	5/9/2012	28,970,000	11/1/2022	5.000	_	_	_	-	_	28,970,000	_
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	7,000,000	11/1/2022	4.000	-	-	-	-	-	7,000,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-1	5/9/2012	5,000,000	11/1/2022	4.000	=	=	=	=	=	5,000,000	-
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	15,415,000	11/1/2023	5.000	-	-	-	-	-	15,415,000	-
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	2,875,000	11/1/2023	3.000	=	=	=	=	-	2,875,000	-
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	14,455,000	11/1/2024	5.000	-	-	-	-	-	14,455,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-1	5/9/2012	5,000,000	11/1/2024	3.000	-	-	-	=	-	5,000,000	-
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	20,775,000	11/1/2025	5.000	-	-	-	-	-	20,775,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002D-1 TRB 2002D-1	5/9/2012 5/9/2012	21,665,000 23,120,000	11/1/2026 11/1/2027	5.000 5.000	-	-	-	-	-	21,665,000 23,120,000	-
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	24,680,000	11/1/2027	5.000	-	-	-	= =	-	24,680,000	-
A3/BBB+/A-/AA			TRB 2002D-1	5/9/2012	2,000,000	11/1/2029	3.750	-	_	_	-	-	2,000,000	_
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-1	5/9/2012	3,770,000	11/1/2029	3.625	_	_	_	-	_	3,770,000	_
A3/BBB+/A-/AA	,		TRB 2002D-2a-1	4/6/2020	5,700,000	11/1/2029	4.000	=	=	=	=	5,700,000		5,700,000
A3/BBB+/A-/AA			TRB 2002D-2a-1	4/6/2020	7,850,000	11/1/2030	4.000	-	-	-	-	7,850,000		7,850,000
A3/BBB+/A-/AA			TRB 2002D-2a-1	4/6/2020	7,750,000	11/1/2031	4.000	=	=	-	=	7,750,000	7,750,000	7,750,000
A3/BBB+/A-/AA			TRB 2002D-2a-1	4/6/2020	28,700,000	11/1/2032	4.000	=	=	=	=	28,700,000	28,700,000	28,700,000
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-2a-2	4/6/2017	5,700,000	11/1/2029	4.000	-	-	-	-	-	5,700,000	5,700,000
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-2a-2	4/6/2017	7,850,000	11/1/2030	4.000	=	=	=	=	-	7,850,000	7,850,000
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-2a-2	4/6/2017	7,750,000	11/1/2031	4.000	-	-	-	-	-	7,750,000	7,750,000
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB 2002D-2a-2	4/6/2017	28,700,000	11/1/2032	4.000	-	-	-	-	-	28,700,000	28,700,000
A3/BBB+/A-/AA	A1/AA/AA-/AA+		TRB 2002D-2b	3/29/2018	11,400,000	11/1/2029	4.000	-	-	-	=	-	11,400,000	11,400,000
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/AA-/AA+ A1/AA/AA-/AA+		TRB 2002D-2b TRB 2002D-2b	3/29/2018 3/29/2018	15,700,000 15,500,000	11/1/2030 11/1/2031	4.000 4.000	-	-	-	-	-	15,700,000 15,500,000	15,700,000 15,500,000
A3/BBB+/A-/AA	A1/AA/AA-/AA+		TRB 2002D-2b	3/29/2018	57,400,000	11/1/2031	4.000	-	-	-	= =	-	57,400,000	57,400,000
A3/BBB+/A-/AA	AI/AA/AA-/AA+		TRB 2002E	7/2/2002	8,510,000	11/15/2013	5.500						37,400,000	37,400,000
A3/BBB+/A-/AA	A2/AA-/A/AA+		TRB 2002E	7/2/2002	9,015,000	11/15/2014	5.500	-	_	_	-	-	_	_
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2002E	7/2/2002	9,410,000	11/15/2015	5.500	=	=	=	=	-	-	_
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	10,030,000	11/15/2016	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	10,325,000	11/15/2017	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	11,185,000	11/15/2018	5.500	=	=	=	=	=	=	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	13,155,000	11/15/2019	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	12,265,000	11/15/2020	5.500	=	=	=	-	=	=	=
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	13,500,000	11/15/2021	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	10,935,000	11/15/2022	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002E TRB 2002E	7/2/2002 7/2/2002	13,740,000 14,405,000	11/15/2023 11/15/2024	5.100 5.125	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	15,075,000	11/15/2024	5.000	=	=	=	=	=	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	15,725,000	11/15/2026	5.250							
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	16,515,000	11/15/2027	5.250	-	-	-	-	-	-	_
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	17,300,000	11/15/2028	5.250	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	18,420,000	11/15/2029	5.250	-	-	-	=	=	≘	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	17,465,000	11/15/2030	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002E	7/2/2002	29,820,000	11/15/2031	5.250	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2002F	11/20/2002	11,800,000	11/15/2013	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002F	11/20/2002	43,270,000	11/15/2028	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002F	11/20/2002	45,430,000	11/15/2029	5.000	=	=	=	≘	≘	≘	≘
A3/BBB+/A-/AA			TRB 2002F	11/20/2002	47,705,000	11/15/2030	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002F	11/20/2002	50,090,000	11/15/2031	5.000	=	=	=	=	=	≘	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002G-1 TRB 2002G-1a	10/9/2008 10/3/2013	5,900,000 12,270,000	11/1/2013 11/1/2014	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2002G-1a	10/3/2013	12,760,000	11/1/2014	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002G-16	10/3/2013	13,255,000	11/1/2016	4.000	-	-	-	-	-	-	_
A3/BBB+/A-/AA			TRB 2002G-1d	10/3/2013	13,800,000	11/1/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2002G-1f	10/30/2018	4,305,000	11/1/2018	4.000	-	-	-	=	=	≘	-
A3/BBB+/A-/AA			TRB 2002G-1f	10/30/2018	4,475,000	11/1/2019	4.000	-	-	-	-	-	-	-
•														

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707
New Money Bonds and Notes Issued in 2020 8,939,237,707
Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	TRB 2002G-1f	Date Issued	Amount Issued	Maturity	<u>Coupon</u> 4.000	<u>2020</u> 4,650,000	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2002G-11	10/30/2018 10/30/2018	4,650,000 4,840,000	11/1/2020 11/1/2021	4.000	4,650,000	-	-	-	-	4,840,000	4,840,000
A3/BBB+/A-/AA				TRB 2002G-1f	10/30/2018	5,035,000	11/1/2022	4.000	-	_	-	-	-	5,035,000	5,035,000
A3/BBB+/A-/AA				TRB 2002G-1f	10/30/2018	5,235,000	11/1/2023	4.000	_	_	_	_	_	5,235,000	5,235,000
A3/BBB+/A-/AA				TRB 2002G-1f	10/30/2018	5,445,000	11/1/2024	4.000	=	-	=	-	-	5,445,000	5,445,000
A3/BBB+/A-/AA				TRB 2002G-1f	10/30/2018	5,665,000	11/1/2025	4.000	-	-	-	-	-	5,665,000	5,665,000
A3/BBB+/A-/AA				TRB 2002G-1f	10/30/2018	2,925,000	11/1/2026	4.000	=	=	=	=	-	2,925,000	2,925,000
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	4,300,000	11/1/2018	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	4,475,000	11/1/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	4,650,000	11/1/2020	4.000	4,650,000	-	=	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	4,840,000	11/1/2021	4.000	-	=	-	=	-	4,840,000	4,840,000
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	5,030,000	11/1/2022	4.000	=	-	=	-	-	5,030,000	5,030,000
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+ Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g TRB 2002G-1g	10/12/2018 10/12/2018	5,235,000 5,440,000	11/1/2023 11/1/2024	4.000 4.000	-	-	-	-	-	5,235,000 5,440,000	5,235,000 5,440,000
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	5,660,000	11/1/2024	4.000	-	-	-	-		5,660,000	5,660,000
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NR		TRB 2002G-1g	10/12/2018	2,920,000	11/1/2026	4.000	-	_	-	_	_	2,920,000	2,920,000
A3/BBB+/A-/AA	,,,			TRB 2002G-1h	11/1/2016	5,750,000	11/1/2018	4.000	-	_	-	-	_	-,,	-,,
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	5,980,000	11/1/2019	4.000	=	=	-	=	_	-	-
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	6,215,000	11/1/2020	4.000	6,215,000	-	=	-	-	-	-
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	6,470,000	11/1/2021	4.000	-	-	-	-	-	6,470,000	6,470,000
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	6,730,000	11/1/2022	4.000	=	=	=	=	-	6,730,000	6,730,000
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	6,995,000	11/1/2023	4.000	-	-	-	-	-	6,995,000	6,995,000
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	7,275,000	11/1/2024	4.000	=	=	-	=	-	7,275,000	7,275,000
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	7,565,000	11/1/2025	4.000	=	-	=	-	-	7,565,000	7,565,000
A3/BBB+/A-/AA				TRB 2002G-1h	11/1/2016	3,910,000	11/1/2026	4.000	-	-	-	-	-	3,910,000	3,910,000
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	2,510,000	11/15/2013	4.000	=	-	=	=	-	-	-
A3/BBB+/A-/AA	42/44 /4/44			TRB 2003A	5/14/2003	10,760,000	11/15/2013	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A2/AA-/A/AA+ A2/AA-/A/AA+			TRB 2003A TRB 2003A	5/14/2003 5/14/2003	6,435,000 7,345,000	11/15/2014 11/15/2014	3.625 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2003A	5/14/2003	14,245,000	11/15/2014	5.000	-	-	-	-			-
A3/BBB+/A-/AA	AI/AA-/A/AA+			TRB 2003A	5/14/2003	14,805,000	11/15/2016	5.000	-	-	-	-		_	-
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	15,395,000	11/15/2017	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	15,995,000	11/15/2018	5.000	=	-	=	-	-	-	-
A3/BBB+/A-/AA	A1/A+/A/AA+			TRB 2003A	5/14/2003	16,635,000	11/15/2019	5.500	=	-	=	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2003A	5/14/2003	17,270,000	11/15/2020	5.500	17,270,000	=	-	=	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2003A	5/14/2003	17,440,000	11/15/2021	5.500	-	-	-	-	-	17,440,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2003A	5/14/2003	17,525,000	11/15/2022	5.500	-	-	-	-	-	17,525,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2003A	5/14/2003	17,460,000	11/15/2023	5.500	=	-	=	-	-	17,460,000	-
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	12,145,000	11/15/2024	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	5,950,000	11/15/2024	5.000	=	-	=	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2003A TRB 2003A	5/14/2003 5/14/2003	18,605,000 19,175,000	11/15/2025 11/15/2026	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2003A	5/14/2003	19,760,000	11/15/2026	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	3,750,000	11/15/2027	5.000		_					
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	16,605,000	11/15/2028	5.000	-	_	-	_	_	_	_
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	20,960,000	11/15/2029	5.000	-	_	-	-	_	-	_
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	21,665,000	11/15/2030	5.000	=	=	-	=	_	-	-
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	22,425,000	11/15/2031	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003A	5/14/2003	10,210,000	11/15/2032	5.000	-	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	3,425,000	11/15/2013	4.000	=	=	=	=	-	=	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	15,080,000	11/15/2013	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	11,690,000	11/15/2014	4.200	=	=	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	7,740,000	11/15/2014	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	4,160,000	11/15/2015	4.300	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	16,170,000	11/15/2015	5.250	=	=	=	=	=	=	=
A3/BBB+/A-/AA				TRB 2003B TRB 2003B	8/13/2003	710,000	11/15/2016	4.400 5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2003B	8/13/2003 8/13/2003	20,645,000 695,000	11/15/2016 11/15/2017	4.450	-	-	-	-	-	- -	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	21,775,000	11/15/2017	5.250	=	-	=	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	990,000	11/15/2017	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	22,655,000	11/15/2018	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	1,390,000	11/15/2019	4.600	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/A+/A/AA+			TRB 2003B	8/13/2003	23,490,000	11/15/2019	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2003B	8/13/2003	715,000	11/15/2020	4.700	=	=	=	=	=	=	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll Series		Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2003B TRB 2003B	8/13/2003	25,460,000 5,420,000	11/15/2020	5.250 4.750	25,460,000	=	=	-	=	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2003B	8/13/2003 8/13/2003	5,420,000 22,130,000	11/15/2021 11/15/2021	4.750 5.250	-	-	-	-	-	22,130,000	-
A3/BBB+/A-/AA	AI/AT/A/AAT		TRB 2003B	8/13/2003	28,965,000	11/15/2021	5.250	=	-	-	-	-	22,130,000	=
A3/BBB+/A-/AA			TRB 2003B	8/13/2003	30,490,000	11/15/2022	5.000	-		-	-	-	-	-
A3/BBB+/A-/AA			TRB 2003B	8/13/2003	32,010,000	11/15/2024	5.125	-	-	-	_	-	-	_
A3/BBB+/A-/AA			TRB 2003B	8/13/2003	33,655,000	11/15/2025	5.250	=	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2003B	8/13/2003	37,280,000	11/15/2027	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2003B	8/13/2003	39,145,000	11/15/2028	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	3,670,000	11/15/2013	3.300	=	Ξ	=	-	=	=	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	7,470,000	11/15/2013	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA	A2/AA-/A/AA+		TRB 2005A	2/15/2005	2,695,000	11/15/2014	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A2/AA-/A/AA+		TRB 2005A	2/15/2005	8,940,000	11/15/2014	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	5,245,000	11/15/2015	3.500	-	=	-	-	=	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA-/A/AA+ A1/AA-/A/AA+		TRB 2005A TRB 2005A	2/15/2005 2/15/2005	6,955,000 12,015,000	11/15/2015 11/15/2016	5.000 5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+ A1/AA-/A/AA+		TRB 2005A	2/15/2005	12,675,000	11/15/2016	5.500	=	=	=	-	=	=	-
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005A	2/15/2005	13,375,000	11/15/2017	5.500	-		-	-	-	-	-
A3/BBB+/A-/AA	7.2/7.1/7.4/7.		TRB 2005A	2/15/2005	14,110,000	11/15/2019	5.000	_	-	_	_	_	-	_
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	14,815,000	11/15/2020	5.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	14,840,000	11/15/2021	5.000	-	=	-	-	=	=	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	15,585,000	11/15/2022	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	8,600,000	11/15/2023	4.750	=	Ξ	=	-	=	=	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	16,360,000	11/15/2023	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	9,005,000	11/15/2024	4.750	=	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	17,345,000	11/15/2024	4.000	-	=	-	-	=	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	9,435,000	11/15/2025	4.750	=	=	=	-	-	=	-
A3/BBB+/A-/AA			TRB 2005A	2/15/2005	18,385,000	11/15/2025	4.000	-	=	-	-	=	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005 2/15/2005	9,885,000	11/15/2026 11/15/2026	4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A TRB 2005A	2/15/2005	19,485,000 31,005,000	11/15/2026	4.000 4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	32,485,000	11/15/2027	4.750	-		-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	27,180,000	11/15/2029	4.750	_	-	_	_	_	-	_
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	6,845,000	11/15/2029	4.375	_	-	_	_	_	-	_
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	35,615,000	11/15/2030	4.750	-	=	-	-	=	=	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	37,305,000	11/15/2031	5.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	39,175,000	11/15/2032	5.000	-	-	-	-	=	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	41,130,000	11/15/2033	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	43,185,000	11/15/2034	4.500	-	=	-	-	=	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005A	2/15/2005	45,130,000	11/15/2035	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005B	7/1/2005	5,760,000	11/15/2013	3.500	-	=	-	-	=	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A2/AA-/A/AA+		TRB 2005B TRB 2005B	7/1/2005 7/1/2005	10,000,000	11/15/2013 11/15/2014	5.000 3.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A2/AA-/A/AA+ A2/AA-/A/AA+		TRB 2005B	7/1/2005	1,565,000 14,895,000	11/15/2014	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	1,900,000	11/15/2014	3.625	-		-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	15,360,000	11/15/2015	5.000	-	-	-	_	-	-	_
A3/BBB+/A-/AA	,,.,.,		TRB 2005B	7/1/2005	18,095,000	11/15/2016	5.000	_	-	_	_	_	-	_
A3/BBB+/A-/AA			TRB 2005B	7/1/2005	19,000,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005B	7/1/2005	19,950,000	11/15/2018	5.250	=	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005B	7/1/2005	21,000,000	11/15/2019	5.250	=	Ξ	=	-	=	=	-
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005B	7/1/2005	22,100,000	11/15/2020	5.250	22,100,000	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005B	7/1/2005	23,260,000	11/15/2021	5.250	=	Ξ	=	=	=	23,260,000	=
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005B	7/1/2005	24,485,000	11/15/2022	5.250	-	-	-	-	-	24,485,000	-
A3/BBB+/A-/AA	A1/A+/A/AA+		TRB 2005B	7/1/2005	25,770,000	11/15/2023	5.250	-	-	-	-	-	25,770,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/A+/A/AA+ A1/AA-/A/AA+		TRB 2005B TRB 2005B	7/1/2005 7/1/2005	27,120,000 925,000	11/15/2024 11/15/2025	5.250 4.125	=	-	-	-	-	27,120,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005 7/1/2005	27,620,000	11/15/2025	4.125 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	29,965,000	11/15/2025	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	31,465,000	11/15/2027	5.000	_	-	_	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	33,035,000	11/15/2028	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	34,690,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005B	7/1/2005	4,665,000	11/15/2030	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005B	7/1/2005	31,755,000	11/15/2030	5.000	-	=	=	=	=	=	=
A3/BBB+/A-/AA			TRB 2005B	7/1/2005	38,245,000	11/15/2031	5.000	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005		40,155,000	11/15/2032 11/15/2033	5.000	=	=	-	=	-	=	=
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA-/A/AA+ A1/AA-/A/AA+		TRB 2005 TRB 2005		42,165,000 44,270,000	11/15/2033	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005		1,580,000	11/15/2035	4.375		_		_			
A3/BBB+/A-/AA	A1/AA-/A/AA+		TRB 2005		44,905,000	11/15/2035	5.000	-	_	-	_	-	_	-
A3/BBB+/A-/AA	,,.,.		TRB 2005		4,115,000	11/15/2013	4.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA			TRB 2005		11,240,000	11/15/2013	5.000	=	-	=	-	=	-	-
A3/BBB+/A-/AA			TRB 2005	11/2/2005	1,795,000	11/15/2014	4.000	-	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2005	11/2/2005	14,285,000	11/15/2014	5.250	=	=	=	=	-	=	-
A3/BBB+/A-/AA			TRB 2005		6,410,000	11/15/2015	4.150	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005		10,490,000	11/15/2015	5.000	=	-	=	Ξ	=	-	-
A3/BBB+/A-/AA			TRB 2005		3,740,000	11/15/2016	4.250	=	=	-	=	-	=	-
A3/BBB+/A-/AA			TRB 2005		7,675,000	11/15/2016	5.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA			TRB 2005D- TRB 2005D-		1,875,000 5,375,000	11/1/2016 11/1/2017	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2005D-		5,575,000	11/1/2017	4.000		-	-	-		-	-
A3/BBB+/A-/AA			TRB 2005D-		5,800,000	11/1/2019	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2005D-		6,025,000	11/1/2020	4.000	6,025,000	_	-	_	-	_	-
A3/BBB+/A-/AA			TRB 2005D-		6,250,000	11/1/2021	4.000	-	_	_	_	_	6,250,000	6,250,000
A3/BBB+/A-/AA			TRB 2005D-		6,500,000	11/1/2022	4.000	-	=	-	-	_	6,500,000	
A3/BBB+/A-/AA			TRB 2005D-		6,775,000	11/1/2023	4.000	=	-	=	-	=	6,775,000	6,775,000
A3/BBB+/A-/AA			TRB 2005D-	1 10/30/2018	7,050,000	11/1/2024	4.000	-	=	-	=	-	7,050,000	7,050,000
A3/BBB+/A-/AA			TRB 2005D-	1 10/30/2018	7,325,000	11/1/2025	4.000	=	=	=	=	=	7,325,000	7,325,000
A3/BBB+/A-/AA			TRB 2005D-	1 10/30/2018	7,625,000	11/1/2026	4.000	-	-	-	-	-	7,625,000	7,625,000
A3/BBB+/A-/AA			TRB 2005D-		7,925,000	11/1/2027	4.000	-	-	-	-	-	7,925,000	7,925,000
A3/BBB+/A-/AA			TRB 2005D-		8,250,000	11/1/2028	4.000	=	=	=	=	-	8,250,000	8,250,000
A3/BBB+/A-/AA			TRB 2005D-		8,575,000	11/1/2029	4.000	-	-	-	-	-	8,575,000	8,575,000
A3/BBB+/A-/AA			TRB 2005D-		8,925,000	11/1/2030	4.000	=	=	-	=	-	8,925,000	
A3/BBB+/A-/AA			TRB 2005D-		9,250,000	11/1/2031	4.000	=	=	=	=	-	9,250,000	
A3/BBB+/A-/AA			TRB 2005D-		9,625,000	11/1/2032 11/1/2033	4.000	-	-	-	-	-	9,625,000	
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2005D- TRB 2005D-		10,025,000 10,425,000	11/1/2033	4.000 4.000	-	-	-	-	-	10,025,000 10,425,000	10,025,000 10,425,000
A3/BBB+/A-/AA			TRB 2005D-		10,825,000	11/1/2035	4.000						10,825,000	
A3/BBB+/A-/AA	Δα3/ΔΔΔ/ΔΔ/ΔΔ+	VMIG 1/ A-1/F1+/NAF	TRB 2005D-		1,250,000	11/1/2016	4.000	_	_	_	_	_	10,023,000	10,023,000
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		3,575,000	11/1/2017	4.000	-	_	-	_	-	_	-
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		3,700,000	11/1/2018	4.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		3,875,000	11/1/2019	4.000	=	-	=	-	=	-	-
A3/BBB+/A-/AA	Aa3/AAA/AA/AA+	VMIG 1/ A-1/F1+/NAF	TRB 2005D-	2 9/20/2017	4,000,000	11/1/2020	4.000	4,000,000	-	=	=	-	-	-
A3/BBB+/A-/AA	Aa3/AAA/AA/AA+	VMIG 1/ A-1/F1+/NAF	TRB 2005D-	2 9/20/2017	4,175,000	11/1/2021	4.000	-	=	-	=	-	4,175,000	4,175,000
A3/BBB+/A-/AA	Aa3/AAA/AA/AA+	VMIG 1/ A-1/F1+/NAF	TRB 2005D-	9/20/2017	4,325,000	11/1/2022	4.000	=	=	=	=	=	4,325,000	4,325,000
A3/BBB+/A-/AA	Aa3/AAA/AA/AA+	VMIG 1/ A-1/F1+/NAF	TRB 2005D-	2 9/20/2017	4,500,000	11/1/2023	4.000	-	-	-	-	-	4,500,000	4,500,000
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		4,700,000	11/1/2024	4.000	-	-	-	-	-	4,700,000	
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		4,875,000	11/1/2025	4.000	=	-	=	Ξ	=	4,875,000	
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		5,075,000	11/1/2026	4.000	-	-	-	-	-	5,075,000	
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		5,275,000	11/1/2027	4.000	=	-	=	-	=	5,275,000	5,275,000
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF VMIG 1/ A-1/F1+/NAF	TRB 2005D-		5,500,000	11/1/2028 11/1/2029	4.000 4.000	=	-	=	-	=	5,500,000 5,700,000	5,500,000 5,700,000
A3/BBB+/A-/AA A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D- TRB 2005D-		5,700,000 5,950,000	11/1/2029	4.000	-	-	-	=	-	5,950,000	
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		6,175,000	11/1/2031	4.000		-	-	-	-	6,175,000	
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		6,425,000	11/1/2032	4.000	_	_	_	_	_	6,425,000	6,425,000
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		6,675,000	11/1/2033	4.000	_	_	-	-	_	6,675,000	6,675,000
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		6,975,000	11/1/2034	4.000	=	=	-	=	-	6,975,000	6,975,000
A3/BBB+/A-/AA		VMIG 1/ A-1/F1+/NAF	TRB 2005D-		7,275,000	11/1/2035	4.000	-	-	=	=	-	7,275,000	7,275,000
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-	1 8/22/2018	1,260,000	11/1/2016	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		3,560,000	11/1/2017	4.000	=	-	=	=	-	=	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-	1 8/22/2018	3,710,000	11/1/2018	4.000	=	=	=	=	=	=	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		3,850,000	11/1/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		4,020,000	11/1/2020	4.000	4,020,000	-	=	=	-	=	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		4,180,000	11/1/2021	4.000	=	-	-	-	-	4,180,000	
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		4,350,000	11/1/2022	4.000	-	-	-	-	-	4,350,000	
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		4,520,000	11/1/2023 11/1/2024	4.000	=	-	=	=	=	4,520,000	2,712,216
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-		4,690,000		4.000 4.000	-	-	-	-	-	4,690,000	
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+ Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF VMIG 1/A-1/F1/NAF	TRB 2005E- TRB 2005E-		4,890,000 5,080,000	11/1/2025 11/1/2026	4.000	-	-	-	-	-	4,890,000 5,080,000	
AJ/DDD+/A-/AA	Mai/MAA/AA+/AA+	AIMING TIM-TILETIMAL	IND 2005E-	0/22/2018	3,000,000	11/1/2020	4.000	-	-	-	-	-	3,060,000	3,040,243

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased		Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series TDD 20055 4	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+ Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF VMIG 1/A-1/F1/NAF	TRB 2005E-1 TRB 2005E-1	8/22/2018 8/22/2018	5,280,000 5,490,000	11/1/2027 11/1/2028	4.000 4.000	-	-	-	-	-	5,280,000 5,490,000	3,168,253 3,294,263
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	5,720,000	11/1/2028	4.000		-	-	-		5,720,000	3,432,274
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	5,930,000	11/1/2030	4.000	-	_	_	_	_	5,930,000	3,558,284
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	6,190,000	11/1/2031	4.000	-	_	_	_	_	6,190,000	3,714,296
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	6,430,000	11/1/2032	4.000	=	=	-	-	-	6,430,000	3,858,308
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	6,690,000	11/1/2033	4.000	=	-	-	=	-	6,690,000	4,014,320
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	6,940,000	11/1/2034	4.000	-	=	=	=	-	6,940,000	4,164,332
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-1	8/22/2018	7,220,000	11/1/2035	4.000	=	=	-	=	-	7,220,000	4,332,345
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	945,000	11/1/2016	4.000	=	-	=	=	-	=	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	2,670,000	11/1/2017	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	2,782,500	11/1/2018	4.000	Ξ	-	=	=	-	=	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	2,887,500	11/1/2019	4.000	Ξ	-	=	=	-	=	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	3,015,000	11/1/2020	4.000	3,015,000	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	3,135,000	11/1/2021	4.000	=	-	=	=	-	3,135,000	1,881,150
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	3,262,500	11/1/2022	4.000	-	-	-	-	-	3,262,500	1,957,656
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	3,390,000	11/1/2023	4.000	-	-	-	-	-	3,390,000	2,034,162
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+ Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF VMIG 1/A-1/F1+/NAF	TRB 2005E-2 TRB 2005E-2	12/13/2017 12/13/2017	3,517,500 3,667,500	11/1/2024 11/1/2025	4.000 4.000	-	-	-	-	-	3,517,500 3,667,500	2,110,668 2,200,675
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	3,810,000	11/1/2025	4.000		-	-	-		3,810,000	2,286,182
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	3,960,000	11/1/2027	4.000		-	-		-	3,960,000	2,376,189
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	4,117,500	11/1/2027	4.000						4,117,500	2,470,697
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A 1/F1+/NAF	TRB 2005E-2	12/13/2017	4,290,000	11/1/2029	4.000	-	_	_	_	_	4,290,000	2,574,205
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	4,447,500	11/1/2030	4.000	-	_	_	_	_	4,447,500	2,668,713
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	4,642,500	11/1/2031	4.000	-	_	_	_	_	4,642,500	2,785,722
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	4,822,500	11/1/2032	4.000	=	=	-	-	-	4,822,500	2,893,731
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	5,017,500	11/1/2033	4.000	=	-	-	=	-	5,017,500	3,010,740
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	5,205,000	11/1/2034	4.000	-	-	-	-	-	5,205,000	3,123,249
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG 1/A-1/F1+/NAF	TRB 2005E-2	12/13/2017	5,415,000	11/1/2035	4.000	-	=	=	=	-	5,415,000	3,249,259
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/27/2015	945,000	11/1/2016	4.000	=	-	=	=	-	=	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/27/2015	2,670,000	11/1/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	2,782,500	11/1/2018	4.000	=	=	=	-	-	=	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	2,887,500	11/1/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	3,015,000	11/1/2020	4.000	3,015,000	-	-	-	-		
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	3,135,000	11/1/2021	4.000	=	-	-	-	-	3,135,000	1,881,150
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018 8/22/2018	3,262,500 3,390,000	11/1/2022 11/1/2023	4.000	-	-	-	-	-	3,262,500 3,390,000	1,957,656 2,034,162
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+ Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF VMIG 1/A-1/F1/NAF	TRB 2005E-3 TRB 2005E-3	8/22/2018	3,517,500	11/1/2023	4.000 4.000	=	-	-	-	-	3,517,500	2,034,162
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+ Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	3,667,500	11/1/2024	4.000		-	-	-		3,667,500	2,200,675
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	3,810,000	11/1/2026	4.000	_	_	_	_	_	3,810,000	2,286,182
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	3,960,000	11/1/2027	4.000	-	_	-	-	_	3,960,000	2,376,189
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	4,117,500	11/1/2028	4.000	-	_	_	_	_	4,117,500	2,470,697
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	4,290,000	11/1/2029	4.000	=	=	-	-	-	4,290,000	2,574,205
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	4,447,500	11/1/2030	4.000	=	-	-	=	-	4,447,500	2,668,713
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	4,642,500	11/1/2031	4.000	-	=	=	=	-	4,642,500	2,785,722
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	4,822,500	11/1/2032	4.000	=	=	-	=	-	4,822,500	2,893,731
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	5,017,500	11/1/2033	4.000	=	-	=	=	-	5,017,500	3,010,740
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	5,205,000	11/1/2034	4.000	=	=	-	=	-	5,205,000	3,123,249
A3/BBB+/A-/AA	Aa1/AAA/AA+/AA+	VMIG 1/A-1/F1/NAF	TRB 2005E-3	8/22/2018	5,415,000	11/1/2035	4.000	=	=	=	-	-	5,415,000	3,249,259
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	5,100,000	11/15/2013	4.000	Ξ	-	=	=	-	=	=
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	11,215,000	11/15/2013	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	3,385,000	11/15/2014	4.125	=	=	=	-	-	=	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	13,695,000	11/15/2014	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2005F TRB 2005F	12/7/2005 12/7/2005	3,560,000 14,345,000	11/15/2015 11/15/2015	4.200 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2005F	12/7/2005	14,345,000 3,130,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	28,925,000	11/15/2026	5.000	=	=	=	-	-	=	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	30,375,000	11/15/2027	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	31,890,000	11/15/2029	5.000	-	-	-	-	-	_	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	33,485,000	11/15/2030	5.000	=	=	=	=	-	=	=
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	765,000	11/15/2031	4.800	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	34,395,000	11/15/2031	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	805,000	11/15/2032	4.800	=	-	-	=	-	-	=
A3/BBB+/A-/AA			TRB 2005F	12/7/2005	36,110,000	11/15/2032	5.000	÷.	=	=	=	-	-	=

4,424,438,830

Total

250,000,000 1,053,770,000

128,725,000

326,055,000

 Total Bonds and Notes Issued in 2020
 10,170,427,707

 New Money Bonds and Notes Issued in 2020
 8,939,237,707

 Refunding Bonds and Notes Issued in 2020
 1,231,190,000

	Cradit Supported LT											Amount	Amount		Amount Swapped
Underlying LT Ratings	Credit Supported L T Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA				TRB 2005F	12/7/2005	840,000	11/15/2033	4.800	-	-	-	-	-	-	
A3/BBB+/A-/AA				TRB 2005F	12/7/2005	37,920,000	11/15/2033	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2005F	12/7/2005	880,000	11/15/2034	4.800	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2005F	12/7/2005	39,820,000	11/15/2034	5.000	-	=	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2005F	12/7/2005	925,000	11/15/2035	4.800	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2005F	12/7/2005	41,805,000	11/15/2035	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	17,535,000	11/15/2016	5.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	18,235,000	11/15/2017	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2005G TRB 2005G	12/7/2010 12/7/2010	18,965,000 19,725,000	11/15/2018 11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	20,510,000	11/15/2019	5.000	20,510,000						
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	21,330,000	11/15/2021	5.000	-	-	-	-	-	-	_
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	22,185,000	11/15/2022	5.250	_	_	_	-	_	-	_
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	23,075,000	11/15/2023	5.250	-	-	-	=	-	_	_
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	23,995,000	11/15/2024	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	24,955,000	11/15/2025	5.250	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2005G	12/7/2010	23,030,000	11/15/2026	5.250	=	=	-	=	=	=	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	2,750,000	11/15/2013	4.125	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	7,070,000	11/15/2013	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	3,260,000	11/15/2014	4.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	7,025,000	11/15/2014	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	8,345,000	11/15/2015	4.250	=	=	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	2,430,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2006A TRB 2006A	7/20/2006 7/20/2006	3,600,000 7,655,000	11/15/2016 11/15/2016	4.500 5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	4,455,000	11/15/2016	4.400	-	-		= =	-		
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	7,340,000	11/15/2017	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	12,360,000	11/15/2018	5.000	_	_	_	-	_	-	_
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	12,980,000	11/15/2019	5.000	=	=	-	=	=	-	_
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	13,625,000	11/15/2020	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	14,310,000	11/15/2021	5.000	=	=	-	-	=	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	15,025,000	11/15/2022	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	15,775,000	11/15/2023	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	16,565,000	11/15/2024	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	17,390,000	11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	18,260,000	11/15/2026	5.000	=	=	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	19,175,000	11/15/2027	5.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2006A TRB 2006A	7/20/2006 7/20/2006	20,135,000 21,140,000	11/15/2028 11/15/2029	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	22,195,000	11/15/2029	5.000	-	-		= =	-		
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	23,305,000	11/15/2031	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	24,475,000	11/15/2032	5.000	_	-	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	25,695,000	11/15/2033	5.000	-	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	26,980,000	11/15/2034	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	2,185,000	11/15/2035	4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006A	7/20/2006	26,145,000	11/15/2035	5.000	=	=	-	-	=	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	9,300,000	11/15/2013	5.000	=	=	=	=	=	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	2,955,000	11/15/2014	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	6,805,000	11/15/2014	5.000	=	=	=	Ξ	=	=	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	10,225,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	2,065,000	11/15/2016	4.000	=	=	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	8,665,000	11/15/2016	5.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	620,000	11/15/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2006B TRB 2006B	12/20/2006 12/20/2006	10,630,000 11,805,000	11/15/2017 11/15/2018	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	12,395,000	11/15/2018	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	13,015,000	11/15/2019	5.000	-	-	_	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	13,665,000	11/15/2021	5.000	-	-	-	-	_	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	14,350,000	11/15/2022	5.000	Ē	-	-	=	=	≘	=
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	15,065,000	11/15/2023	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	15,820,000	11/15/2024	5.000	=	-	-	=	=	=	=
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	16,615,000	11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	72,645,000	11/15/2026	5.250	-	-	-	-	-	72,645,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	46,465,000	11/15/2027	4.500	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	13,000,000	11/15/2027	4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	5,910,000	11/15/2028	4.500	=	=	-	=	-	-	-
A3/BBB+/A-/AA	01/00/0/00			TRB 2006B TRB 2006B	12/20/2006	13,000,000	11/15/2028	4.750 4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006 12/20/2006	47,890,000 13,000,000	11/15/2029 11/15/2029	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	50,665,000	11/15/2029	4.500				_			
A3/BBB+/A-/AA	AI/AA/A/AA			TRB 2006B	12/20/2006	13,000,000	11/15/2030	4.750	_	_	-	_	-	_	_
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	53,560,000	11/15/2031	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	13,000,000	11/15/2031	4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2006B	12/20/2006	42,635,000	11/15/2032	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	20,600,000	11/15/2032	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	23,225,000	11/15/2033	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	24,270,000	11/15/2034	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	25,360,000	11/15/2035	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2006B	12/20/2006	26,500,000	11/15/2036	4.500	-	-	=	-	-	-	-
A3/BBB+/A-/AA	42/44 /4/44			TRB 2007A	7/11/2007	8,510,000	11/15/2013	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A2/AA-/A/AA+ A2/AA-/A/AA+			TRB 2007A TRB 2007A	7/11/2007 7/11/2007	5,350,000 3,500,000	11/15/2014 11/15/2014	4.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	9,240,000	11/15/2014	4.125		-	-		-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	9,620,000	11/15/2016	4.125	_	_	_	_	_	_	_
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	8,850,000	11/15/2017	4.125	_	_	-	_	-	_	_
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	1,165,000	11/15/2017	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	6,245,000	11/15/2018	4.250	-	=	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	4,195,000	11/15/2018	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	7,290,000	11/15/2019	4.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	3,625,000	11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	11,405,000	11/15/2020	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	11,975,000	11/15/2021	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	12,575,000	11/15/2022	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	13,205,000	11/15/2023	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+ A1/AA/A/AA+			TRB 2007A TRB 2007A	7/11/2007 7/11/2007	13,865,000 14,555,000	11/15/2024 11/15/2025	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	15,285,000	11/15/2025	5.000				_			
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	3,950,000	11/15/2027	4.500	_	_	-	_	-	_	_
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	12,100,000	11/15/2027	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	16,830,000	11/15/2028	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	17,675,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	18,555,000	11/15/2030	5.000	=	-	=	=	=	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	19,485,000	11/15/2031	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	20,460,000	11/15/2032	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2007A	7/11/2007	21,480,000	11/15/2033	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007	22,555,000	11/15/2034	4.750	-	-	=	-	-	-	-
A3/BBB+/A-/AA	A1/AA-/A/AA+			TRB 2007A	7/11/2007 7/11/2007	23,625,000 24,750,000	11/15/2035 11/15/2036	4.750 4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA-/A/AA+ A1/AA-/A/AA+			TRB 2007A TRB 2007A	7/11/2007	25,925,000	11/15/2036	4.750		-	-		-	-	-
A3/BBB+/A-/AA	AI/AA /A/AA			TRB 2007B	12/13/2007	8,115,000	11/15/2013	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	8,440,000	11/15/2014	5.000	_	_	-	_	-	_	_
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	8,865,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	9,305,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	9,770,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	10,260,000	11/15/2018	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	10,670,000	11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	11,205,000	11/15/2020	5.000	-	-	=	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	11,765,000	11/15/2021	5.000	-	-	=	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	12,355,000	11/15/2022	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	12,970,000	11/15/2023	5.000 5.000	Ξ	Ξ	=	Ξ	=	Ē	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2007B TRB 2007B	12/13/2007 12/13/2007	13,620,000 14,300,000	11/15/2024 11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2007B	12/13/2007	15,015,000	11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	15,765,000	11/15/2026	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	16,475,000	11/15/2027	5.000	-	-	-	-	-	-	_
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	17,300,000	11/15/2029	5.000	Ξ.	≘	=	=	=	Ē	=
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	18,165,000	11/15/2030	5.000	Ξ.	≘	=	=	=	Ē	=
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	19,075,000	11/15/2031	5.000	-	-	-	-	-	-	-
·															

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	20,025,000	11/15/2032	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	21,025,000	11/15/2033	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	8,330,000	11/15/2034	4.500	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	13,750,000	11/15/2034	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2007B TRB 2007B	12/13/2007 12/13/2007	9,390,000 13,750,000	11/15/2035 11/15/2035	4.500 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2007B	12/13/2007	10,500,000	11/15/2035	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	13,750,000	11/15/2036	5.000	-	-	_	-	_	-	-
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	11,660,000	11/15/2037	4.500	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2007B	12/13/2007	13,750,000	11/15/2037	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	1,710,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	24,125,000	11/15/2017	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	25,335,000	11/15/2018	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	17,220,000	11/15/2030	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	43,180,000	11/15/2031	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	45,340,000	11/15/2032	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	47,610,000	11/15/2033	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2008A	2/21/2008	37,470,000	11/15/2034	5.250 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2008A TRB 2008A	2/21/2008 2/21/2008	12,520,000 20,000,000	11/15/2034 11/15/2035	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	10,000,000	11/15/2035	5.000			_	_			
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	22,580,000	11/15/2035	4.500	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	25,000,000	11/15/2036	5.250	_	=	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	20,000,000	11/15/2036	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	10,150,000	11/15/2036	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	4,130,000	11/15/2037	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	53,785,000	11/15/2037	4.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008A	2/21/2008	60,545,000	11/15/2038	4.500	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008B-1	11/15/2011	5,000,000	11/15/2013	3.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008B-1	11/15/2011	13,725,000	11/15/2013	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-1	11/15/2011	4,960,000	11/15/2014	4.000	=	-	-	-	-	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2008B-1 TRB 2008B-1	11/15/2011 11/15/2011	15,510,000 260,000	11/15/2014 11/15/2015	5.000 3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-1	11/15/2011	22,030,000	11/15/2015	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008B-1	11/15/2011	2,965,000	11/15/2015	3.000	-	-	_	-		-	-
A3/BBB+/A-/AA				TRB 2008B-1	11/15/2011	12,010,000	11/15/2016	5.000	_	-	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	5,345,000	11/15/2016	5.000	=	=	-	=	_	_	_
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	825,000	11/15/2017	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	820,000	11/15/2018	3.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	22,060,000	11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	22,945,000	11/15/2020	5.000	22,945,000	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	23,860,000	11/15/2021	5.000	-	-	-	=	-	23,860,000	-
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	24,820,000	11/15/2022	5.000	-	-	-	-	-	24,820,000	-
A3/BBB+/A-/AA				TRB 2008B-2	11/15/2012	9,545,000	11/15/2023	5.000	=	=	-	=	-	4,300,000	-
A3/BBB+/A-/AA				TRB 2008B-3	11/15/2013	19,780,000	11/15/2023	5.000	-	-	-	-	-	17,385,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2008B-3 TRB 2008B-3	11/15/2013 11/15/2013	32,650,000 33,960,000	11/15/2024 11/15/2025	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-3	11/15/2013	35,320,000	11/15/2025	5.000	-	-	_	-	_	-	-
A3/BBB+/A-/AA				TRB 2008B-3	11/15/2013	8,290,000	11/15/2027	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2008B-4	11/15/2019	28,550,000	11/15/2027	5.000	_	-	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2008B-4	11/15/2019	38,315,000	11/15/2028	5.000	-	-	_	-	_	_	-
A3/BBB+/A-/AA				TRB 2008B-4	11/15/2019	39,230,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008B-4	11/15/2019	23,905,000	11/15/2030	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/23/2008	3,000,000	11/15/2013	4.375	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/23/2008	15,230,000	11/15/2014	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/24/2008	2,675,000	11/15/2014	5.750	=	-	=	=	=	=	=
A3/BBB+/A-/AA				TRB 2008C	10/23/2008	16,070,000	11/15/2015	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/24/2008	2,830,000	11/15/2015	5.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/23/2008	16,950,000	11/15/2016	5.500	Ē	=	=	=	=	Ē	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2008C TRB 2008C	10/24/2008 10/23/2008	2,990,000 17,885,000	11/15/2016 11/15/2017	5.750 5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2008C	10/24/2008	3,160,000	11/15/2017	5.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/23/2008	18,865,000	11/15/2017	5.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2008C	10/24/2008	3,345,000	11/15/2018	5.750	-	-	-	-	-	-	-
, 15, 555 - , A , AA				20000	10,11,2000	5,5.5,000	-1,15,2010	5.750							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	21,180,000	11/15/2019	6.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	22,505,000	11/15/2020	6.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	23,915,000	11/15/2021	6.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2008C TRB 2008C	10/23/2008 10/23/2008	25,405,000 26,995,000	11/15/2022 11/15/2023	6.250 6.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	46,545,000	11/15/2023	6.500	=	-		-		-	-
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	49,570,000	11/15/2024	6.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	52,790,000	11/15/2026	6.500	-	_	-	_	_	_	_
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	56,220,000	11/15/2027	6.500	-	-	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2008C	10/23/2008	59,875,000	11/15/2028	6.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	15,405,000	11/15/2018	4.813	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	15,890,000	11/15/2019	4.913	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	16,395,000	11/15/2020	5.013	16,395,000	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	16,930,000	11/15/2021	5.113	=	=	-	-	-	16,930,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	17,490,000	11/15/2022	5.113	±	=	-	=	-	17,490,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	24,330,000	11/15/2029	5.871	-	-	-	-	-	24,330,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	25,260,000	11/15/2030	5.871	=	-	-	-	-	25,260,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	26,220,000	11/15/2031	5.871	-	-	-	=	-	26,220,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds TRB 2009A-1 Build America Bonds	10/15/2009 10/15/2009	27,220,000 28,260,000	11/15/2032 11/15/2033	5.871 5.871	-	-	-	-	-	27,220,000 28,260,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	29,340,000	11/15/2033	5.871	=	=	-	=	-	29,340,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	30,460,000	11/15/2034	5.871				_		30,460,000	
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	31,620,000	11/15/2035	5.871	_	_	_	-	_	31,620,000	_
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	32,830,000	11/15/2037	5.871	-	-	-	_	_	32,830,000	_
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	34,080,000	11/15/2038	5.871	=	=	-	=	_	34,080,000	-
A3/BBB+/A-/AA			TRB 2009A-1 Build America Bonds	10/15/2009	35,380,000	11/15/2039	5.871	=	-	-	=	-	35,380,000	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	2,820,000	11/15/2013	4.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	9,400,000	11/15/2013	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	5,580,000	11/15/2014	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	7,220,000	11/15/2014	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	1,570,000	11/15/2015	3.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	11,760,000	11/15/2015	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	835,000	11/15/2016	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2009A-2 TRB 2009A-2	10/15/2009 10/15/2009	13,140,000 6,295,000	11/15/2016 11/15/2017	5.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2009A-2	10/15/2009	8,365,000	11/15/2017	5.000	=	-		-		-	-
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	45,655,000	11/15/2017	6.668	-	-	-	-	-	45,655,000	-
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	47,620,000	11/15/2034	6.668	_	_	_	-	_	47,620,000	_
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	49,670,000	11/15/2035	6.668	-	-	-	-	_	49,670,000	_
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	51,810,000	11/15/2036	6.668	-	-	-	-	-	51,810,000	-
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	54,035,000	11/15/2037	6.668	-	-	-	-	-	54,035,000	-
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	56,365,000	11/15/2038	6.668	=	=	-	-	-	56,365,000	-
A3/BBB+/A-/AA			TRB 2010A	1/13/2010	58,790,000	11/15/2039	6.668	=	=	-	=	-	58,790,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	9,435,000	11/15/2018	5.204	=	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	12,015,000	11/15/2019	5.304	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	12,435,000	11/15/2020	5.404	12,435,000	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	12,870,000	11/15/2021	5.554	=	=	-	=	-	12,870,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	13,345,000	11/15/2022	5.654	-	-	-	=	-	13,345,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds TRB 2010B-1 Build America Bonds	2/11/2010 2/11/2010	31,905,000 460,000	11/15/2023 11/15/2024	5.754 6.548	-	-	-	-	-	31,905,000 460,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	14,785,000	11/15/2024	5.854	=	-	-	-	-	14,785,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	15,830,000	11/15/2024	6.548	-	-	-	-	-	15,830,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	16,510,000	11/15/2026	6.548	-	-	_	-	_	16,510,000	_
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	17,215,000	11/15/2027	6.548	=	-	-	-	-	17,215,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	17,950,000	11/15/2028	6.548	=	Ē	=	-	-	17,950,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	58,155,000	11/15/2029	6.548	-	-	-	-	-	58,155,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	60,640,000	11/15/2030	6.548	=	=	=	-	-	60,640,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	63,240,000	11/15/2031	6.548	-	-	-	-	-	63,240,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	65,945,000	11/15/2032	6.648	-	-	-	-	-	65,945,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	23,150,000	11/15/2033	6.648	=	=	=	-	-	23,150,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	24,170,000	11/15/2034	6.648	-	-	-	-	-	24,170,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	25,230,000	11/15/2035	6.648	-	-	-	-	-	25,230,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	26,345,000	11/15/2036	6.648	=	Ē	=	-	-	26,345,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds	2/11/2010	27,505,000	11/15/2037	6.648	-	-	-	-	-	27,505,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds TRB 2010B-1 Build America Bonds	2/11/2010 2/11/2010	28,715,000 29,980,000	11/15/2038 11/15/2039	6.648 6.648	-	-	-	-	-	28,715,000 29,980,000	-
A3/BBB+/A-/AA			TRB 2010B-1 Build America Bonds TRB 2010B-2	2/11/2010	2,000,000	11/15/2013	3.000	-	-	-	-	-	29,980,000	-
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	3,000,000	11/15/2013	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	2,000,000	11/15/2014	3.000	_	-	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	6,030,000	11/15/2014	4.000	=	=	-	-	_	=	-
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	2,000,000	11/15/2015	3.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	6,325,000	11/15/2015	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	3,000,000	11/15/2016	3.000	=	=	=	-	-	=	=
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	5,705,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	3,000,000	11/15/2017	4.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2010B-2	2/11/2010	6,085,000	11/15/2017	5.000	-	=	=	-	-	-	=
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	10,585,000	11/15/2016	4.276	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	11,040,000	11/15/2017	4.546	=	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	11,540,000	11/15/2018	4.969 5.119	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds TRB 2010C-1 Build America Bonds	7/7/2010 7/7/2010	12,115,000	11/15/2019 11/15/2020	5.269	12,735,000	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	12,735,000 13,400,000	11/15/2021	5.369	12,755,000	-	-	-	-	13,400,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	14,120,000	11/15/2021	6.200	-	-	-	-	-	14,120,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	14,995,000	11/15/2023	6.200	-	-	-	_	_	14,995,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	15,930,000	11/15/2024	6.200	_	-	_	_	_	15,930,000	_
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	16,915,000	11/15/2025	6.200	=	=	-	=	_	16,915,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	17,965,000	11/15/2026	6.200	-	-	-	=	-	17,965,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	5,980,000	11/15/2027	6.587	-	-	-	=	-	5,980,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	6,370,000	11/15/2028	6.587	-	-	-	=	-	6,370,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	6,790,000	11/15/2029	6.587	-	-	-	-	-	6,790,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	7,240,000	11/15/2030	6.587	=	-	-	=	-	7,240,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	21,310,000	11/15/2031	6.687	-	=	=	-	-	21,310,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	22,730,000	11/15/2032	6.687	-	-	-	-	-	22,730,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	24,250,000	11/15/2033	6.687	=	=	-	-	-	24,250,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	25,870,000	11/15/2034 11/15/2035	6.687 6.687	-	-	-	-	-	25,870,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds TRB 2010C-1 Build America Bonds	7/7/2010 7/7/2010	27,600,000 29,445,000	11/15/2036	6.687	-	-	-	-	-	27,600,000 29,445,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	31,410,000	11/15/2037	6.687	_	_	_	_	_	31,410,000	_
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	33,505,000	11/15/2038	6.687	-	-	-	_	_	33,505,000	-
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	35,745,000	11/15/2039	6.687	_	_	_	_	_	35,745,000	_
A3/BBB+/A-/AA			TRB 2010C-1 Build America Bonds	7/7/2010	38,135,000	11/15/2040	6.687	-	=	-	-	-	38,135,000	-
A3/BBB+/A-/AA			TRB 2010C-2	7/7/2010	7,500,000	11/15/2013	3.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010C-2	7/7/2010	2,000,000	11/15/2013	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010C-2	7/7/2010	1,510,000	11/15/2014	3.000	=	-	=	=	-	=	-
A3/BBB+/A-/AA			TRB 2010C-2	7/7/2010	8,300,000	11/15/2014	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010C-2	7/7/2010	5,075,000	11/15/2015	3.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010C-2	7/7/2010	5,105,000	11/15/2015	5.000	-	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	2,490,000	11/15/2013	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	10,625,000	11/15/2013	3.000	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	5,170,000	11/15/2014	3.000	=	=	=	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2010D TRB 2010D	12/7/2010 12/7/2010	8,315,000 1,870,000	11/15/2014 11/15/2015	4.000 3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	12,105,000	11/15/2015	4.000	-	-	-	-		-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	1,015,000	11/15/2016	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	13,500,000	11/15/2016	5.000	-	-	-	_	_	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	4,145,000	11/15/2017	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	11,085,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	1,340,000	11/15/2018	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	14,610,000	11/15/2018	5.000	=	=	=	=	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	1,845,000	11/15/2019	4.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	14,890,000	11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	7,875,000	11/15/2020	4.000	7,875,000	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	9,675,000	11/15/2020	5.000	9,675,000	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	8,515,000	11/15/2021	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	9,835,000	11/15/2021	5.000	=	=	=	=	-	=	-
A3/BBB+/A-/AA			TRB 2010D	12/7/2010	8,335,000	11/15/2022	4.125	=	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2010D TRB 2010D	12/7/2010 12/7/2010	10,850,000 3,070,000	11/15/2022 11/15/2023	5.000 4.375	-	-	-	-	-	-	-
A3/DDD+/A-/AA			1 KB 2010D	12///2010	3,070,000	11/13/2023	4.3/5	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707
New Money Bonds and Notes Issued in 2020 8,939,237,707
Refunding Bonds and Notes Issued in 2020 1,231,190,000

Marchian		Credit Supported L T										Amount	Amount		Amount Swapped
Martine Mart	Underlying L T Ratings		S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Amount Redeemed in		Amount Outstanding as	
Applient / March Teach T				<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon							
Allensin-Shale Allens									-	-	-	-	-	-	
APERILA-FAME APERI									-	-	=	-	=	-	-
APRINCIPADE 177,77000 177,7000 177,0									=	=	-	-	-	=	-
APERIN, A. P. 192000 127/2005 1.51/2007 1.51/2									-	=	-	=	-	-	-
APPEN									=	=	=	=	=	=	-
Appeller									-	-	-	-	-	-	-
Applies Appl									-	-	-	-	-	-	-
Aprilled									-	-	-	-	-	-	-
Agring to Agri									-	-	-	-	-	-	-
Algebra-from Part									=	=	=	-	=	=	-
Applies									=	=	=	-	=	=	-
Applies									-	-	-	-	-	-	-
A Part Par									-	-	-	-	-	-	-
A									-	-	-	-	-	-	-
A Markel									-	-	-	-	-	=	-
Aprillate-ja-ja-ja-ja-ja-ja-ja-ja-ja-ja-ja-ja-ja-									=	=	=	-	-	-	-
A)1886-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-															
A JUNES-A-A-A A TRE 2010 11/27/281 1									_	_	_	_	_	_	_
A A JAMBA-J-A A THE 2000 17/7/2019 15/15/2004 5.00									_	_	_	_	_	_	_
A \$\text{A}\text{B}\text{A}\text{A}\text{B}\text{A}\text{A}\text{B}\text{A}\text{A}\text{B}\text{A}\te									_	_	_	_	_	_	_
A3/888-/-/									-	-	-	_	-	-	_
A J/1080-Hy-JAA									_	_	_	_	_	-	_
A JABBEL (A) A LA BEL (B) A JABBEL (A) A LA BEL (B) A JABBEL (A) A JABBEL (A) A LA BEL (B) A JABBEL (A) A LA BEL (B) A JABBEL (A) A LA BEL (B) A JABBEL (A) A JABBEL (A) A LA BEL (B) A JABBEL (A) A JABBEL (A) A LA BEL (B) A JABBEL (A) A JABBEL (A) A LA BEL (B) A JABBEL (A) A JAB									=	-	-	-	-	=	_
AJ988-yi-AnA AJ988								5.250	=	-	-	-	-	=	_
A JOBBS 1-/A A TO THE 2010 BLUE AMERICAN BOOKS 11/15/1001 A 27/1001 A 28/100. 11/15/1001 A 27/1001 A 28/1001 A 28/10									=	-	-	-	-	=	_
A \$1888+ A	A3/BBB+/A-/AA			TRB 2010D	12/7/2010		11/15/2039	5.250	-	-	=	-	=	=	-
A JBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 3,198.00 AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 3,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 3,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 3,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 4,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 4,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 4,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 4,198.00 AJBBBH-Jr-AA AJBBBH-Jr-AA TRE 2010 Build America Bonds 12/29/2010 4,198.00 TRE 2010 Build America Bonds	A3/BBB+/A-/AA			TRB 2010D	12/7/2010	47,205,000		5.250	-	-	-	-	-	-	-
A 2/8881-//A TRB 2016 Build America Bonds 1/2/9/2010 5,740,000 1/15/2027 7,134 - 3,1,850,000 - 4,2881-//A TRB 2016 Build America Bonds 1/2/9/2010 5,590,000 1/15/2028 6734 - 5,90,000 - 4,2881-//A TRB 2016 Build America Bonds 1/2/9/2010 5,590,000 1/15/2028 6734 - 5,90,000 - 4,2881-//A TRB 2016 Build America Bonds 1/2/9/2010 6,50,000 1/15/2028 7,134 - 3,346,000 - 6,50,000 - 4,2881-//A TRB 2016 Build America Bonds 1/2/9/2010 6,50,000 1/15/2029 7,134 - 3,00,000 - 6,50,000 -	A3/BBB+/A-/AA			TRB 2010E Build America Bonds	12/29/2010	5,500,000	11/15/2026	6.734	-	-	-	-	-	5,500,000	-
A3/888-I/-AA TR8 2010E build America Bonds 12/39/2010 31.88.000 11/15/2027 7.34 . 31.88.000	A3/BBB+/A-/AA			TRB 2010E Build America Bonds	12/29/2010	30,575,000	11/15/2026	7.134	=	=	30,575,000	-	-	=	-
A3/888-/-/AA A3/88-/-/AA A3/88-/-	A3/BBB+/A-/AA			TRB 2010E Build America Bonds	12/29/2010	5,740,000	11/15/2027	6.734	=	=	=	-	=	5,740,000	-
A3/888/-/-A4 A3/888/-/-A5 A3/88				TRB 2010E Build America Bonds	12/29/2010				-	-	31,985,000	-	-	-	-
A3/8884/A/A A3/8884/A/A A3/8884/A/A A3/8884/A A3/8844/A	A3/BBB+/A-/AA			TRB 2010E Build America Bonds	12/29/2010	5,990,000	11/15/2028	6.734	-	-	-	-	-	5,990,000	-
A3/888/A/AA A3/888									-	-	33,460,000	-	-	-	-
A3/888-/A-/A A3									=	=	-	-	-	6,250,000	-
A3/B8B-h-/-AA A3									=	=	35,005,000	=	=	=	=
A 3/888+/-/AA									-	-	-	-	-	6,520,000	-
A3/888h/AA									-	-	36,625,000	-	-	-	-
A3/B88h/A-/A A3/B8									-	-	-	-	-		-
A3/889-/A/AA TR8 2010E Build America Bonds 1/29/2010 53,240,000 11/15/2035 6.814									=	=	=	-	=		-
A3/888-/A-/AA TR8 2010E Build America Bonds 12/29/2010 56,010,000 11/15/2035 6.814									-	-	-	-	-		-
A3/BBB-/A-/AA A TRB 2010E Build America Bonds 1/2/9/2010 58,80.00 1/15/2037 6.814									-	-	-	-	-		-
A3/8B8-/A-/AA A3/8B8-/A-/AA A3/8B8-/A-/AA A3/8B8-/A-/AA A5/8B8-/A-/AA A5/AB/AA A5/AA/AA A5/AA/AA A5/AA/AA A5/AA/AA A5/AA/AA A5/AA/AA A5/AA/AA A5/AA/AA A5/AA									-	-	-	-	-		-
A3/BB8-/A-/AA TRB 2010E Build America Bonds 12/29/2010 63,770,000 11/15/2038 6.814 61,070,000 - 61,070,000 A3/BB8-/A-/AA TRB 2010E Build America Bonds 12/29/2010 65,585,000 11/15/2040 6.814 66,585,000 - 65,585,000 - 63,780,000 A3/BB8-/A-/AA TRB 2010E Build America Bonds 12/29/2010 66,585,000 11/15/2040 6.814 66,585,000 - 65,585,000 - 64,070,000 A3/BB8-/A-/AA TRB 2010E Build America Bonds 12/29/2011 4,015,000 11/15/2013 3.000 65,585,000 - 64,070,000 A3/BB8-/A-/AA TRB 2011A 7/20/2011 4,015,000 11/15/2014 5.000 65,585,000									-	-	-	-	-		-
A3/BB8+/A/AA TBB 2010E Build America Bonds 12/29/2010 66,585,000 11/15/2013 6.814 -									-	-	-	-	-		-
A3/B8b4/A/AA TRB 2010E Build America Bonds 12/29/2010 66,585,000 11/15/2013 3.000 66,585,000									-	-	-	-	-		-
A3/BB4/A-/AA A3/BB															
A3/BB8+/A-/AA A3									_	_	_	_	_	-	_
A3/BB8+/A-/AA A3									_	_	_	_	_	_	_
A3/BBB+/A-/AA A3/BBA+/AA A3/BAA+A A3/B									-	-	-	_	-	-	_
A3/BB8+/A-/AA A3									-	-	-	_	-	-	_
A3/BB8+/A-/AA									_	_	_	_	_	-	_
A3/BB8+/A-/AA A3									-	=	=	Ē	=	≘	=
A3/BB8+/A-/AA TRB 2011A 7/20/2011 7,875,000 11/15/2019 5.000									-	-	-	-	-	-	-
A3/BB8+/A-/AA TRB 2011A 7/20/2011 4,960,000 11/15/2020 4.000									-	-	-	-	-	-	-
A3/BB8+/A-/AA TRB 2011A 7/20/2011 3,310,000 11/15/2020 5.000 3,310,000	A3/BBB+/A-/AA			TRB 2011A				4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA TRB 2011A 7/20/2011 2,325,000 11/15/2022 4.000								5.000	3,310,000	=	=	=	=	=	=
A3/BBB+/A-/AA TRB 2011A 7/20/2011 6,745,000 11/15/2022 5.000	A3/BBB+/A-/AA			TRB 2011A	7/20/2011	8,635,000	11/15/2021	5.000	-	=	=	=	=	8,635,000	=
A3/BBB+/A-/AA									-	-	=	-	-	-	-
A3/BBB+/A-/AA A1/AA/A/AA+ TRB 2011A 7/20/2011 9,875,000 11/15/2024 4.000									-	-	-	-	-	-	-
									-	=	-	-	=	=	-
A3/BBB+/A-/AA TRB 2011A 7/20/2011 10,270,000 11/15/2025 5.000		A1/AA/A/AA+							-	=	=	=	=	=	-
	A3/BBB+/A-/AA			TRB 2011A	7/20/2011	10,270,000	11/15/2025	5.000	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

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	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings	Contro		Data Januard	A				Amount Defeased		Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll A3/BBB+/A-/AA	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	TRB 2011A	Date Issued 7/20/2011	Amount Issued 10,785,000	Maturity 11/15/2026	<u>Coupon</u> 5.000	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	11,325,000	11/15/2027	5.000	_	_	-	-	_	_	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	3,085,000	11/15/2028	4.500	=	=	=	Ξ	=	=	=
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	8,810,000	11/15/2028	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	12,475,000	11/15/2029	5.250	=	-	=	Ξ	=	=	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	13,125,000	11/15/2030	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	13,785,000	11/15/2031	4.750	-	-	=	=	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011A	7/20/2011	9,360,000	11/15/2032	5.000	=	-	-	=	-	=	-
A3/BBB+/A-/AA	** /* * /* /* * .			TRB 2011A	7/20/2011	5,075,000	11/15/2032	5.000	-	=	=	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011A TRB 2011A	7/20/2011 7/20/2011	9,830,000 5,325,000	11/15/2033 11/15/2033	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011A	7/20/2011	5,835,000	11/15/2034	5.000	_	_	-	-	-	_	_
A3/BBB+/A-/AA	,,			TRB 2011A	7/20/2011	10,080,000	11/15/2034	5.000	_	_	_	-	_	_	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011A	7/20/2011	3,045,000	11/15/2035	5.000	-	-	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	7,795,000	11/15/2035	5.250	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	5,875,000	11/15/2035	5.000	-	-	=	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011A	7/20/2011	3,805,000	11/15/2036	5.000	=	-	=	=	-	=	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	7,595,000	11/15/2036	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	6,165,000	11/15/2036	5.000	-	=	=	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011A TRB 2011A	7/20/2011 7/20/2011	11,990,000 6,475,000	11/15/2037 11/15/2037	5.250 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	6,800,000	11/15/2037	5.000	-	-	-	= -	-	-	
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	12,620,000	11/15/2038	5.250	_	_	-	-	_	_	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	20,420,000	11/15/2039	5.000	=	-	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	21,440,000	11/15/2040	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	22,510,000	11/15/2041	5.000	-	-	=	=	-	=	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	8,265,000	11/15/2042	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	8,675,000	11/15/2043	5.000	-	-	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	9,110,000	11/15/2044	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011A	7/20/2011	9,565,000	11/15/2045	5.000	-	=	=	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011A TRB 2011B	7/20/2011 10/20/2017	10,045,000 18,380,000	11/15/2046 11/1/2037	5.000 4.000	-	-	-	-	-	18,380,000	17,068,330
A3/BBB+/A-/AA				TRB 2011B	10/20/2017	19,120,000	11/1/2037	4.000	-	-	-	-	-	19,120,000	17,755,520
A3/BBB+/A-/AA				TRB 2011B	10/20/2017	19,880,000	11/1/2039	4.000	_	_	-	-	_	19,880,000	18,461,284
A3/BBB+/A-/AA				TRB 2011B	10/20/2017	20,675,000	11/1/2040	4.000	=	=	=	Ξ	=	20,675,000	19,199,549
A3/BBB+/A-/AA				TRB 2011B	10/20/2017	21,505,000	11/1/2041	4.000	=	-	-	-	-	21,505,000	19,970,317
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	2,640,000	11/15/2015	5.000	-	-	=	-	-	-	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	1,165,000	11/15/2016	4.000	-	-	-	-	-	=	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	9,570,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	1,295,000	11/15/2017	3.000	-	=	=	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011C TRB 2011C	11/10/2011 11/10/2011	9,965,000 495,000	11/15/2017 11/15/2018	5.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	11,300,000	11/15/2018	5.000	=	-	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	1,065,000	11/15/2019	3.500	_	_	_	-	_	_	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	11,315,000	11/15/2019	5.000	-	-	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	3,150,000	11/15/2020	4.000	3,150,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	9,835,000	11/15/2020	5.000	9,835,000	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011C	11/10/2011	1,990,000	11/15/2021	5.000	-	-	-	-	-	1,990,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	11,610,000	11/15/2021	5.000	-	-	-	-	-	11,610,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	2,675,000	11/15/2022	4.000	=	-	-	=	-	1,825,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011C TRB 2011C	11/10/2011 11/10/2011	11,605,000 4,970,000	11/15/2022 11/15/2023	5.000 5.000	-	-	-	-	-	7,900,000 3,385,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	AI/AA/A/AA+			TRB 2011C	11/10/2011	10,000,000	11/15/2023	5.000	-	-	-	-	-	6,805,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	15,715,000	11/15/2024	5.000	_	_	-	-	_	10,700,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	16,505,000	11/15/2025	5.000	-	-	-	-	-	11,235,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	17,330,000	11/15/2026	5.000	-	-	-	-	-	11,795,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	18,195,000	11/15/2027	5.000	-	-	-	-	-	12,385,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+			TRB 2011C	11/10/2011	11,325,000	11/15/2028	5.000	-	-	=	=	-	7,710,000	-
A3/BBB+/A-/AA				TRB 2011C	11/10/2011	7,720,000	11/15/2028	5.000	-	-	-	=	-	5,255,000	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,000,000	11/15/2013	2.500	-	-	=	=	=	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011D TRB 2011D	12/7/2011 12/7/2011	5,440,000 3,400,000	11/15/2013 11/15/2014	3.000 3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	6,305,000	11/15/2014	4.000	-	-	=	=	-	=	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	3,900,000	11/15/2014	4.000	_	_	-	-	-	-	-
, , , , , , , , ,					, - ,	2,22,000	_,,	500							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

10,170,427,707	Total Bonds and Notes Issued in 2020
8,939,237,707	New Money Bonds and Notes Issued in 2020
1.231.190.000	Refunding Bonds and Notes Issued in 2020

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Amount Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	6,160,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	2,900,000	11/15/2016	3.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	7,625,000	11/15/2016	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,200,000	11/15/2017	4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	7,100,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,370,000	11/15/2018	3.000	=	=	=	=	=	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011D TRB 2011D	12/7/2011 12/7/2011	10,455,000 3,750,000	11/15/2018 11/15/2019	5.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	8,640,000	11/15/2019	5.000	=	=	=	=	=	-	=
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	3,000,000	11/15/2019	4.000					_		
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	9,975,000	11/15/2020	5.000	9,975,000	_	_	-	_	_	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,260,000	11/15/2021	4.000	-	=	=	=	=	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	12,330,000	11/15/2021	5.000	=	=	-	-	-	12,330,000	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	2,340,000	11/15/2022	4.000	-	-	-	-	-		-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	11,920,000	11/15/2022	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	14,905,000	11/15/2023	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	15,690,000	11/15/2024	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	16,480,000	11/15/2025	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	17,250,000	11/15/2026	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	17,990,000	11/15/2027	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	18,890,000	11/15/2028	5.000	=	=	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	19,830,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011D TRB 2011D	12/7/2011 12/7/2011	9,265,000 11,560,000	11/15/2030 11/15/2030	4.500 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	21,820,000	11/15/2030	5.000	=	=	=	=	=	-	=
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,070,000	11/15/2031	4.750					_		
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	18,840,000	11/15/2032	5.000	-	_	_	-	_	_	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,275,000	11/15/2033	4.750	_	_	_	-	_	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	19,770,000	11/15/2033	5.000	=	=	=	=	=	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,490,000	11/15/2034	4.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	20,745,000	11/15/2034	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	21,775,000	11/15/2035	5.000	=	=	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,715,000	11/15/2035	4.750	-	-	-	-	-	4,715,000	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	22,850,000	11/15/2036	5.000	=	=	=	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	4,950,000	11/15/2036	4.750	-	-	-	-	-	4,950,000	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	10,800,000	11/15/2037	5.250	=	=	=	=	=	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	11,365,000	11/15/2038	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2011D TRB 2011D	12/7/2011 12/7/2011	11,960,000 12,590,000	11/15/2039 11/15/2040	5.250 5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	13,250,000	11/15/2040	5.250	-	-	-	-	-		-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,005,000	11/15/2042	4.875	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,055,000	11/15/2043	4.875	-	_	_	-	_	_	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,105,000	11/15/2044	4.875	=	=	=	=	=	-	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,160,000	11/15/2045	4.875	=	=	-	-	-	_	-
A3/BBB+/A-/AA				TRB 2011D	12/7/2011	1,215,000	11/15/2046	4.875	=	=	=	-	=	-	-
A3/BBB+/A-/AA				TRB 2012A-1	5/15/2013	50,000,000	11/15/2040	5.000	=	=	-	=	-	50,000,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/NR	VMIG1/A-1/F1+/NR		TRB 2012A-2	6/3/2019	50,000,000	11/15/2041	4.000	-	-	-	-	-	50,000,000	-
A3/BBB+/A-/AA				TRB 2012A-3	3/28/2019	50,000,000	11/15/2042	4.000	-	-	-	-	-	50,000,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	5,145,000	11/15/2013	3.000	-	-	-	=	-	-	=
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	5,275,000	11/15/2014	5.000	-	-	-	=	-	-	=
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	5,435,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	5,595,000	11/15/2016	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012B TRB 2012B	3/15/2012 3/15/2012	5,790,000 5,995,000	11/15/2017 11/15/2018	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012B	3/15/2012 3/15/2012	5,995,000 6,235,000	11/15/2018	5.000	-	-	-	-	-	-	_
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	6,485,000	11/15/2019	5.000	6,485,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	6,745,000	11/15/2021	5.000	-	-	_	-	_	6,745,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	7,015,000	11/15/2022	5.000	-	-	-	=	=	7,015,000	=
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	7,330,000	11/15/2023	5.000	=	=	=	=	=	-	=
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	7,660,000	11/15/2024	3.000	-	-	-	-	-	7,660,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	8,005,000	11/15/2025	3.000	=	=	=	=	=	8,005,000	=
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	8,365,000	11/15/2026	3.250	-	-	-	-	-	8,365,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	8,780,000	11/15/2027	3.500	-	-	-	-	-	8,780,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	9,220,000	11/15/2028	4.000	=	=	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	9,680,000	11/15/2029	4.000	=	=	=	=	=	9,680,000	=
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	10,165,000	11/15/2030	4.000	=	=	-	=	=	10,165,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012B TRB 2012B	3/15/2012 3/15/2012	10,675,000 11,210,000	11/15/2031 11/15/2032	4.000 4.000	-	-	-	-	-	10,675,000 11,210,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012B	3/15/2012	11,770,000	11/15/2032	4.000	-	-	-	-	-	11,770,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	12,355,000	11/15/2034	4.000	-	-		-	_	12,355,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	12,975,000	11/15/2035	4.000	_	_	_	_	_	12,975,000	_
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	13,625,000	11/15/2036	4.000	_	-	_	_	_	13,625,000	_
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	14,305,000	11/15/2037	4.250	=	=	-	=	_	14,305,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	15,020,000	11/15/2038	4.250	-	-	-	-	-	15,020,000	-
A3/BBB+/A-/AA				TRB 2012B	3/15/2012	15,770,000	11/15/2039	4.250	=	=	-	=	-	15,770,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	6,630,000	11/15/2013	3.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	6,830,000	11/15/2014	4.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,105,000	11/15/2015	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,460,000	11/15/2016	4.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,755,000	11/15/2017	5.000	-	-	-	-	-	=	-
A3/BBB+/A-/AA				TRB 2012C TRB 2012C	5/3/2012 5/3/2012	5,000,000 5,265,000	11/15/2018	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012C	5/3/2012	5,265,000	11/15/2018 11/15/2019	5.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	5,675,000	11/15/2019	5.000	-	-		-	_	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	4,075,000	11/15/2020	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,085,000	11/15/2020	5.000	7,085,000	_	-	-	_	_	_
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	870,000	11/15/2021	4.000	-	=	-	=	_	=	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	10,810,000	11/15/2021	5.000	-	-	-	-	-	10,810,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	760,000	11/15/2022	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	11,495,000	11/15/2022	5.000	=	=	-	=	-	11,495,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	12,860,000	11/15/2023	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	13,500,000	11/15/2024	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	14,180,000	11/15/2025	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	14,885,000	11/15/2026	5.000	-	-	-	-	-		-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	11,335,000	11/15/2027	3.500	-	-	-	-	-	11,335,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012C TRB 2012C	5/3/2012 5/3/2012	4,295,000 56,630,000	11/15/2027 11/15/2028	5.000 5.000	-	-	-	-	-	40,385,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	59,455,000	11/15/2028	5.000	=	=	-	=	-	42,400,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	62,425,000	11/15/2029	5.000	-	-	_	-		44,520,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	4,755,000	11/15/2031	4.000	_	_	_	-	_	4,755,000	_
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	60,790,000	11/15/2031	5.000	=	=	-	=	_	41,990,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	19,740,000	11/15/2032	5.000	=	=	-	=	_	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	20,725,000	11/15/2033	4.000	-	-	-	-	-	20,725,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	21,555,000	11/15/2034	5.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	22,635,000	11/15/2035	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	23,765,000	11/15/2036	5.000	-	-	-	-	-	23,765,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	24,955,000	11/15/2037	5.000	=	-	-	=	-	24,955,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	26,205,000	11/15/2038	5.000	-	-	-	-	-	26,205,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	27,515,000	11/15/2039	5.000	=	=	-	=	-	27,515,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	28,890,000	11/15/2040	5.000	-	-	-	-	-	40.000.000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012C TRB 2012C	5/3/2012 5/3/2012	19,980,000 10,350,000	11/15/2041 11/15/2041	4.250 5.000	-	-	-	-	-	19,980,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	31,695,000	11/15/2041	4.250	-	-		-		31,695,000	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,055,000	11/15/2043	5.000	_	_	_	_	_	31,033,000	_
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,410,000	11/15/2044	5.000	_	_	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	7,780,000	11/15/2045	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	8,170,000	11/15/2046	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012C	5/3/2012	8,580,000	11/15/2047	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	5,580,000	11/15/2015	3.000	-	-	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	83,940,000	11/15/2015	4.000	=	=	=	=	=	=	=
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	90,000,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	8,725,000	11/15/2016	3.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	4,330,000	11/15/2016	4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	49,410,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	1,240,000	11/15/2018	3.000 4.000	=	=	=	Ξ	=	=	-
A3/BBB+/A-/AA				TRB 2012D	8/20/2012	1,725,000	11/15/2018		-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012D TRB 2012D	8/20/2012 8/20/2012	49,875,000 8,905,000	11/15/2018 11/15/2019	5.000 4.000	-	-	-	-	-	-	-
мэ/онт/А-/АА				1ND 2012D	0/20/2012	0,505,000	11/13/2019	4.000	=	=	-	=	-	=	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707	
New Money Bonds and Notes Issued in 2020	8,939,237,707	
Refunding Bonds and Notes Issued in 2020	1,231,190,000	

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	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						_	Amount Matured in			Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll A3/BBB+/A-/AA	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	2012D	<u>Date Issued</u> 8/20/2012	Amount Issued 43,370,000	Maturity 11/15/2019	<u>Coupon</u> 5.000	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA				2012D 2012D	8/20/2012	3,730,000	11/15/2019	4.000	3,730,000	=	-	-	-	-	-
A3/BBB+/A-/AA				2012D	8/20/2012	80,000,000	11/15/2020	5.000	80,000,000	_	_	_	_	_	_
A3/BBB+/A-/AA				2012D	8/20/2012	67,005,000	11/15/2021	5.000	-	=	-	-	=	67,005,000	-
A3/BBB+/A-/AA				2012D	8/20/2012	1,500,000	11/15/2022	4.000	-	-	-	-	-	1,500,000	-
A3/BBB+/A-/AA			TRB	2012D	8/20/2012	2,300,000	11/15/2023	4.000	-	=	-	-	-	2,300,000	-
A3/BBB+/A-/AA			TRB	2012D	8/20/2012	3,000,000	11/15/2023	5.000	-	-	-	-	-	3,000,000	-
A3/BBB+/A-/AA				2012D	8/20/2012	100,000,000	11/15/2023	5.000	-	-	-	-	-	=	-
A3/BBB+/A-/AA				2012D	8/20/2012	10,000,000	11/15/2024	5.000	-	-	-	=	-	10,000,000	-
A3/BBB+/A-/AA				2012D	8/20/2012	50,000,000	11/15/2024	5.000	-	-	-	-	-		-
A3/BBB+/A-/AA				2012D	8/20/2012	92,000,000	11/15/2025	5.000 5.000	=	-	=	=	-	92,000,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				2012D 2012D	8/20/2012 8/20/2012	30,000,000	11/15/2026 11/15/2027		-	-	-	-	-	30,000,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				2012D 2012D	8/20/2012 8/20/2012	25,000,000 100,000,000	11/15/2027	5.000 5.000	-	-	-	-	-	25,000,000	-
A3/BBB+/A-/AA				2012D 2012D	8/20/2012	77,640,000	11/15/2027	5.000	-	-	-	-	-	77,640,000	-
A3/BBB+/A-/AA				2012D	8/20/2012	82,000,000	11/15/2029	5.000	_	_	_	_	_	82,000,000	_
A3/BBB+/A-/AA				2012D	8/20/2012	20,540,000	11/15/2030	4.000	_	_	_	_	_	20,540,000	_
A3/BBB+/A-/AA				2012D	8/20/2012	82,000,000	11/15/2030	5.000	_	-	-	=	-	82,000,000	_
A3/BBB+/A-/AA				2012D	8/20/2012	52,410,000	11/15/2031	4.000	-	-	-	-	-	52,410,000	-
A3/BBB+/A-/AA			TRB	2012D	8/20/2012	17,785,000	11/15/2032	4.000	-	-	=	-	=	17,785,000	-
A3/BBB+/A-/AA			TRB	2012D	8/20/2012	19,355,000	11/15/2032	5.000	-	-	=	-	=	19,355,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	3,370,000	11/15/2012	3.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	10,660,000	11/15/2013	3.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	10,980,000	11/15/2014	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	11,420,000	11/15/2015	4.000	-	=	-	-	-	=	-
A3/BBB+/A-/AA				2012E	7/20/2012	11,875,000	11/15/2016	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				2012E 2012E	7/20/2012 7/20/2012	12,350,000 12,970,000	11/15/2017 11/15/2018	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	13,615,000	11/15/2019	4.000		_		_			
A3/BBB+/A-/AA				2012E	7/20/2012	14,160,000	11/15/2020	5.000	14,160,000	_	-	_	-	-	_
A3/BBB+/A-/AA				2012E	7/20/2012	14,870,000	11/15/2021	5.000	,,	=	-	-	-	14,870,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	15,610,000	11/15/2022	5.000	=	-	=	=	-	15,610,000	-
A3/BBB+/A-/AA			TRB	2012E	7/20/2012	16,395,000	11/15/2023	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB	2012E	7/20/2012	17,210,000	11/15/2024	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	18,075,000	11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	18,975,000	11/15/2026	5.000	-	-	-	-	-	=	-
A3/BBB+/A-/AA				2012E	7/20/2012	19,925,000	11/15/2027	3.500	-	-	-	=	-	19,925,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	20,625,000	11/15/2028	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012E	7/20/2012	21,655,000	11/15/2029	5.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA				2012E 2012E	7/20/2012	22,735,000	11/15/2030	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				2012E 2012E	7/20/2012 7/20/2012	23,875,000 25,065,000	11/15/2031 11/15/2032	3.500	-	=	=	-	=	25,065,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	25,945,000	11/15/2032	4.000				_		25,945,000	
A3/BBB+/A-/AA				2012E	7/20/2012	26,980,000	11/15/2034	4.000	_	_	-	_	-	26,980,000	_
A3/BBB+/A-/AA				2012E	7/20/2012	28,060,000	11/15/2035	4.000	-	=	-	-	-	28,060,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	29,185,000	11/15/2036	4.000	-	=	-	-	-	29,185,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	30,350,000	11/15/2037	4.000	-	-	-	-	-	30,350,000	-
A3/BBB+/A-/AA			TRB	2012E	7/20/2012	31,565,000	11/15/2038	4.000	-	-	=	-	=	31,565,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+		TRB	2012E	7/20/2012	5,800,000	11/15/2039	5.000	-	-	-	-	-	5,800,000	-
A3/BBB+/A-/AA				2012E	7/20/2012	27,030,000	11/15/2039	5.000	-	=	-	-	-	27,030,000	-
A3/BBB+/A-/AA	A1/AA/A/AA+			2012E	7/20/2012	6,090,000	11/15/2040	5.000	=	=	=	-	Ξ	=	=
A3/BBB+/A-/AA				2012E	7/20/2012	28,380,000	11/15/2040	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	A1/AA/A/AA+			2012E	7/20/2012	6,395,000	11/15/2041	5.000	Ē	Ē	=	-	=	≘	=
A3/BBB+/A-/AA	A4/AA/A/A			2012E	7/20/2012	29,800,000	11/15/2041	5.000	Ē	Ē	=	-	=	≘	=
A3/BBB+/A-/AA A3/BBB+/A-/AA	A1/AA/A/AA+			2012E 2012E	7/20/2012 7/20/2012	6,715,000 31,290,000	11/15/2042 11/15/2042	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012E 2012F	9/28/2012	41,825,000	11/15/2042	2.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA				2012F	9/28/2012	25,000,000	11/15/2012	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012F	9/28/2012	30,265,000	11/15/2013	4.000	-	-	-	_	_	_	-
A3/BBB+/A-/AA				2012F	9/28/2012	16,005,000	11/15/2014	2.000	Ē	=	=	-	=	Ξ.	=
A3/BBB+/A-/AA				2012F	9/28/2012	47,935,000	11/15/2014	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				2012F	9/28/2012	9,765,000	11/15/2015	4.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA				2012F	9/28/2012	10,580,000	11/15/2016	5.000	=	=	=	=	=	=	=
A3/BBB+/A-/AA			TRB	2012F	9/28/2012	6,965,000	11/15/2017	2.000	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

1	10,170,427,707	Total Bonds and Notes Issued in 2020
	8,939,237,707	New Money Bonds and Notes Issued in 2020
	1,231,190,000	Refunding Bonds and Notes Issued in 2020

	Condit Commented 1 =			-			_					A	A		Amount S
Underlying L T Ratings	Credit Supported L T Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Amount Redeemed in	Amount Refinanced in	Amount Outstanding as	Amount Swapped as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	81,745,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	12,370,000	11/15/2018	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012F TRB 2012F	9/28/2012 9/28/2012	61,300,000 2,780,000	11/15/2018 11/15/2019	5.000 2.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	60,300,000	11/15/2019	5.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	4,120,000	11/15/2020	3.000	4,120,000	-	=	-	-	=	=
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	5,790,000	11/15/2021	4.000		-	-	-	-	5,790,000	=
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	20,555,000	11/15/2021	5.000	-	-	-	-	-	20,555,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	3,375,000	11/15/2022	4.000	=	Ξ	=	=	=	3,375,000	=
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	80,025,000	11/15/2022	5.000 4.000	=	=	=	-	-	80,025,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012F TRB 2012F	9/28/2012 9/28/2012	1,685,000 72,485,000	11/15/2023 11/15/2023	5.000	-	-	-	-	-	1,685,000 72,485,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	119,355,000	11/15/2024	5.000	-	-	_	_	-	119,355,000	_
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	20,000,000	11/15/2025	3.125	-	-	-	-	-	20,000,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	103,750,000	11/15/2025	5.000	-	-	-	-	-	103,750,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	3,830,000	11/15/2026	4.000	=	=	-	-	-	3,830,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	128,355,000	11/15/2026	5.000	-	-	-	-	-	128,355,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012F	9/28/2012 9/28/2012	10,000,000	11/15/2027 11/15/2027	4.000 5.000	-	-	-	-	-	10,000,000	-
A3/BBB+/A-/AA				TRB 2012F TRB 2012F	9/28/2012	51,845,000 22,635,000	11/15/2027	4.000	=	=	-	-	-	51,845,000 22,635,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	87,625,000	11/15/2028	5.000	-	-	_	_	-	87,625,000	_
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	19,375,000	11/15/2029	4.000	-	-	-	-	-	19,375,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	70,715,000	11/15/2029	5.000	-	-	-	-	-	70,715,000	-
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	7,990,000	11/15/2030	4.000	=	Ξ	=	=	=	7,990,000	=
A3/BBB+/A-/AA				TRB 2012F	9/28/2012	28,100,000	11/15/2030	5.000	-	-	-	-	-	28,100,000	
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa2/AA/AA+/NR Aa1/AA+/AA+/AA+			TRB 2012G-1 TRB 2012G-2	10/31/2019 10/12/2018	84,450,000 89,925,000	11/1/2032 11/1/2031	4.000 4.000	-	-	-	=	-	84,450,000 89,925,000	84,450,000 89,925,000
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+			TRB 2012G-2	10/12/2018	35,075,000	11/1/2031	4.000	=	=	-	-	-	35,075,000	35,075,000
A3/BBB+/A-/AA	7.02/7.01.77.01.77.01.	***************************************		TRB 2012G-3	2/3/2020	10,750,000	11/1/2030	4.000	-	-	_	_	10,750,000		10,750,000
A3/BBB+/A-/AA				TRB 2012G-3	2/3/2020	64,250,000	11/1/2031	4.000	-	-	-	-	64,250,000		64,250,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	975,000	11/1/2013	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	300,000	11/1/2014	4.000	=	Ξ	=	=	=	=	=
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	325,000	11/1/2015	4.000	=	=	=	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012G-4 TRB 2012G-4	10/20/2017 10/20/2017	350,000 350,000	11/1/2016 11/1/2017	4.000 4.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	375,000	11/1/2017	4.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	400,000	11/1/2019	4.000	=	-	=	-	-	=	=
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	425,000	11/1/2020	4.000	425,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	425,000	11/1/2021	4.000	-	-	-	-	-	425,000	425,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	450,000	11/1/2022	4.000	=	Ξ	=	=	=	450,000	450,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	475,000	11/1/2023	4.000	=	=	=	-	-	475,000	475,000
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012G-4 TRB 2012G-4	10/20/2017 10/20/2017	500,000 525,000	11/1/2024 11/1/2025	4.000 4.000	-	-	-	-	-	500,000 525,000	500,000 525,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	550,000	11/1/2026	4.000	-	-	_	_	-	550,000	550,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	575,000	11/1/2027	4.000	-	-	-	-	-	575,000	575,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	12,725,000	11/1/2028	4.000	-	=	-	=	-	12,725,000	12,725,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	13,525,000	11/1/2029	4.000	-	-	-	-	-	13,525,000	13,525,000
A3/BBB+/A-/AA				TRB 2012G-4	10/20/2017	41,750,000	11/1/2030	4.000	-	-	-	-	-	41,750,000	41,750,000
A3/BBB+/A-/AA				TRB 2012H TRB 2012H	11/15/2012 11/15/2012	5,955,000	11/15/2013 11/15/2014	2.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012H	11/15/2012	3,025,000 3,050,000	11/15/2014	5.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	2,810,000	11/15/2015	4.000	=	-	=	-	-	=	=
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	3,540,000	11/15/2015	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	6,640,000	11/15/2016	4.000	=	-	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	6,905,000	11/15/2017	5.000	-	=	-	=	=	-	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	2,100,000	11/15/2018	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012H TRB 2012H	11/15/2012 11/15/2012	5,150,000 4,260,000	11/15/2018 11/15/2019	5.000 3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012H	11/15/2012	3,310,000	11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	2,730,000	11/15/2020	3.000	1,230,000	=	-	=	_	=	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	5,135,000	11/15/2020	5.000	5,135,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	8,205,000	11/15/2021	4.000	-	-	-	-	-	3,695,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	8,530,000	11/15/2022	4.000	-	=	-	=	=	3,840,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	3,820,000	11/15/2023	5.000	=	=	-	=	-	1,720,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	<u>2020</u>	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012H TRB 2012H	11/15/2012	5,050,000 9,265,000	11/15/2023	4.000 5.000	-	=	-	=	=	5,050,000 4,170,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012H	11/15/2012 11/15/2012	9,730,000	11/15/2024 11/15/2025	5.000	-	-	-	-	-	4,380,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	10,215,000	11/15/2025	5.000	_		_			4,600,000	
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	10,725,000	11/15/2027	5.000	-	-	-	-	-	4,830,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	11,260,000	11/15/2028	3.000	_	_	_	-	_	11,260,000	_
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	11,600,000	11/15/2029	5.000	=	=	-	=	_	5,220,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	12,180,000	11/15/2030	5.000	-	-	-	-	-	5,485,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	12,790,000	11/15/2031	5.000	-	-	-	-	-	5,760,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	13,430,000	11/15/2032	3.250	=	=	-	=	-	13,430,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	13,865,000	11/15/2033	5.000	=	-	-	-	-	6,240,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	14,555,000	11/15/2034	4.000	-	-	-	=	-	14,555,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	15,140,000	11/15/2035	3.625	-	-	-	-	-	15,140,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	15,690,000	11/15/2036	3.625	=	=	-	=	-	15,690,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2012H TRB 2012H	11/15/2012	16,255,000	11/15/2037	3.625 5.000	-	-	-	-	-	16,255,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012 11/15/2012	16,845,000 17,690,000	11/15/2038 11/15/2039	5.000	-	-	-	-	-	16,845,000 17,690,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	18,575,000	11/15/2039	5.000	-	-		-		8,360,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	19,500,000	11/15/2040	5.000	-	-	_	-		8,775,000	-
A3/BBB+/A-/AA				TRB 2012H	11/15/2012	20,475,000	11/15/2042	5.000	_	_	-	_	_	9,215,000	_
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	6,420,000	11/15/2013	2.500	_	=	_	_	_	-	_
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	8,105,000	11/15/2014	2.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	8,265,000	11/15/2015	3.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	8,515,000	11/15/2016	4.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	4,430,000	11/15/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	4,425,000	11/15/2017	5.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	4,630,000	11/15/2018	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	4,620,000	11/15/2018	5.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	4,840,000	11/15/2019	4.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	4,830,000	11/15/2019	5.000	4 000 000	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013A TRB 2013A	1/24/2013 1/24/2013	4,080,000 6,025,000	11/15/2020 11/15/2020	4.000 5.000	4,080,000 6,025,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	5,285,000	11/15/2020	5.000	0,023,000	-	_	-		4,530,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	5,285,000	11/15/2021	4.000	_	_	_	_	_	-,550,000	_
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	5,525,000	11/15/2022	4.000	_	_	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	5,520,000	11/15/2022	5.000	-	-	-	=	-	5,520,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	3,945,000	11/15/2023	4.000	-	-	-	-	-	3,945,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	7,595,000	11/15/2023	5.000	=	=	-	-	-	7,595,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	12,080,000	11/15/2024	5.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	12,680,000	11/15/2025	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	13,315,000	11/15/2026	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	13,980,000	11/15/2027	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	6,315,000	11/15/2028	4.000	=	=	-	-	-	6,315,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	8,365,000	11/15/2028	5.000	=	-	-	=	-	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013A TRB 2013A	1/24/2013 1/24/2013	15,350,000 16,120,000	11/15/2029 11/15/2030	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	16,925,000	11/15/2030	5.000	-	-		-		-	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	17,770,000	11/15/2031	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	2,720,000	11/15/2033	4.000	_	=	_	_	_	2,720,000	_
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	15,940,000	11/15/2033	5.000	=	=	-	=	_	15,940,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	19,565,000	11/15/2034	5.000	-	-	-	-	-	19,565,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	20,545,000	11/15/2035	5.000	=	=	-	-	-	20,545,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	21,570,000	11/15/2036	5.000	-	-	-	-	-	21,570,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	22,650,000	11/15/2037	5.000	-	-	-	-	-	22,650,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	23,785,000	11/15/2038	5.000	=	-	=	=	=	23,785,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	24,970,000	11/15/2039	5.000	-	-	-	-	-	24,970,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	26,220,000	11/15/2040	5.000	-	-	-	-	-	26,220,000	-
A3/BBB+/A-/AA				TRB 2013A	1/24/2013	27,530,000	11/15/2041	5.000	-	-	-	-	-	27,530,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013A TRB 2013A	1/24/2013 1/24/2013	28,910,000 30,355,000	11/15/2042 11/15/2043	5.000 5.000	-	-	-	-	-	28,910,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013A	4/2/2013	8,000,000	11/15/2043	1.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	7,755,000	11/15/2013	3.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	7,990,000	11/15/2015	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	3,000,000	11/15/2016	4.000	-	-	-	-	-	-	-
, 555., /AA				20100	., 2, 2023	3,000,000	,,,	1.000							

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	5,310,000	11/15/2016	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B TRB 2013B	4/2/2013 4/2/2013	8,695,000	11/15/2017	5.000	Ē	-	=	=	=	=	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013B	4/2/2013	4,130,000 5,000,000	11/15/2018 11/15/2018	4.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	435,000	11/15/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	9,110,000	11/15/2019	5.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	7,015,000	11/15/2020	5.000	4,015,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	3,000,000	11/15/2020	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	1,140,000	11/15/2021	3.000	Ξ	=	=	=	=	=	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	9,350,000	11/15/2021	5.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013B TRB 2013B	4/2/2013 4/2/2013	1,580,000 9,410,000	11/15/2022 11/15/2022	4.000 5.000	-	-	-	-	-	9,410,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	5,200,000	11/15/2022	4.000	-	-	-	_		5,200,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	6,325,000	11/15/2023	5.000	=	=	=	-	=	6,325,000	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	12,050,000	11/15/2024	5.000	-	-	-	-	-		-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	12,650,000	11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	13,285,000	11/15/2026	5.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	13,945,000	11/15/2027	5.000	-	-	-	-	-		-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	1,630,000	11/15/2028	4.000 5.000	=	=	=	-	=	1,630,000	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013B TRB 2013B	4/2/2013 4/2/2013	13,015,000 15,360,000	11/15/2028 11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	16,130,000	11/15/2029	5.000		-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	16,935,000	11/15/2031	5.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	17,780,000	11/15/2032	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	18,670,000	11/15/2033	5.000	-	-	-	-	-	18,670,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	19,605,000	11/15/2034	5.000	-	-	-	-	-	19,605,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	20,585,000	11/15/2035	5.000	=	=	=	-	=	20,585,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	21,615,000	11/15/2036	5.000	-	-	-	-	-	21,615,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	22,695,000	11/15/2037	5.000	=	=	=	-	=	22,695,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013B TRB 2013B	4/2/2013 4/2/2013	23,830,000 25,020,000	11/15/2038 11/15/2039	5.000 5.000	-	-	-	-	-	23,830,000 25,020,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	26,270,000	11/15/2039	5.000		-	-		-	26,270,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	15,335,000	11/15/2040	4.000	-	-	-	_	_	15,335,000	_
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	12,250,000	11/15/2041	5.000	=	=	=	-	=	12,250,000	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	15,945,000	11/15/2042	4.000	-	-	-	-	-	15,945,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	12,865,000	11/15/2042	5.000	-	-	-	-	-	12,865,000	-
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	16,585,000	11/15/2043	4.000	=	=	=	-	=	16,585,000	=
A3/BBB+/A-/AA				TRB 2013B	4/2/2013	13,505,000	11/15/2043	5.000	=	-	-	-	-	13,505,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	7,360,000	11/15/2013	2.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013C TRB 2013C	6/11/2013 6/11/2013	7,965,000 3,215,000	11/15/2014 11/15/2015	4.000 2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	5,065,000	11/15/2015	4.000		-	-	_		-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	1,955,000	11/15/2016	3.000	-	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	6,595,000	11/15/2016	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	540,000	11/15/2017	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	8,330,000	11/15/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	1,770,000	11/15/2018	3.000	Ξ	=	=	=	=	=	=
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	7,450,000	11/15/2018	5.000	=	=	=	-	=	=	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013C TRB 2013C	6/11/2013 6/11/2013	2,545,000 7,100,000	11/15/2019 11/15/2019	3.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	3,350,000	11/15/2019	2.000		-	-		-	=	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	6,730,000	11/15/2020	5.000	6,730,000	-	-	_	_	_	_
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	870,000	11/15/2021	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	9,610,000	11/15/2021	5.000	-	-	-	-	-	9,610,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	10,990,000	11/15/2022	5.000	-	-	-	-	-	10,990,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	1,775,000	11/15/2023	3.000	=	-	-	-	-	1,775,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	9,760,000	11/15/2023	5.000	-	=	-	-	-	9,760,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	12,080,000	11/15/2024	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C TRB 2013C	6/11/2013 6/11/2013	12,685,000	11/15/2025 11/15/2026	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013C	6/11/2013	13,315,000 13,985,000	11/15/2026	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	14,680,000	11/15/2027	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	15,415,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	16,185,000	11/15/2030	5.000	-	-	-	-	-	-	-
					•										

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	16,995,000	11/15/2031	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	17,845,000	11/15/2032	5.000	=	=	-	=	=	40.740.000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013C TRB 2013C	6/11/2013 6/11/2013	18,740,000 19,485,000	11/15/2033 11/15/2034	4.000 5.000	-	-	-	-	-	18,740,000 19,485,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013C	6/11/2013	20,460,000	11/15/2034	5.000	-	-	-	-	-	20,460,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	21,485,000	11/15/2036	5.000	-	-		-		21,485,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	22,560,000	11/15/2037	5.000	_	_	_	_	_	22,560,000	_
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	23,685,000	11/15/2038	5.000	_	=	_	-	_	23,685,000	_
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	24,870,000	11/15/2039	5.000	=	=	-	=	_	24,870,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	26,115,000	11/15/2040	5.000	-	-	-	=	-	26,115,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	27,420,000	11/15/2041	5.000	=	=	-	=	-	27,420,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	28,790,000	11/15/2042	5.000	-	-	-	-	-	28,790,000	-
A3/BBB+/A-/AA				TRB 2013C	6/11/2013	30,230,000	11/15/2043	4.000	=	=	-	=	-	30,230,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	1,740,000	11/15/2013	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	5,080,000	11/15/2014	4.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	5,285,000	11/15/2015	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D TRB 2013D	7/11/2013	5,495,000	11/15/2016	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013D	7/11/2013 7/11/2013	5,715,000 6,000,000	11/15/2017 11/15/2018	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	6,300,000	11/15/2018	5.000	-	-		-			-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	6,615,000	11/15/2020	5.000	6,615,000	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	6,945,000	11/15/2021	5.000	-	_	_	_	_	6,945,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	7,295,000	11/15/2022	5.000	=	=	-	=	_	795,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	7,660,000	11/15/2023	5.000	-	-	-	-	-	7,660,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	8,040,000	11/15/2024	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	8,445,000	11/15/2025	5.000	=	=	-	=	-	=	=
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	8,865,000	11/15/2026	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	9,330,000	11/15/2027	5.250	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	9,820,000	11/15/2028	5.250	-	-	=	Ξ	=	=	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	10,340,000	11/15/2029	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	10,880,000	11/15/2030	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013D TRB 2013D	7/11/2013 7/11/2013	11,450,000 12,055,000	11/15/2031 11/15/2032	5.250 5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	12,685,000	11/15/2032	5.250	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	13,350,000	11/15/2034	5.000	-	-	_	-		13,350,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	14,020,000	11/15/2035	5.000	_	_	_	_	_	14,020,000	_
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	14,720,000	11/15/2036	5.000	=	=	-	=	_	14,720,000	_
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	15,455,000	11/15/2037	5.000	=	=	-	=	_	15,455,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	16,230,000	11/15/2038	5.000	-	-	-	-	-	16,230,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	17,040,000	11/15/2039	4.750	=	=	-	=	-	17,040,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	17,850,000	11/15/2040	5.000	-	-	-	-	-	17,850,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	18,740,000	11/15/2041	5.000	-	-	-	-	-	18,740,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	19,680,000	11/15/2042	5.000	=	=	-	=	-	19,680,000	-
A3/BBB+/A-/AA				TRB 2013D	7/11/2013	20,665,000	11/15/2043	5.000	-	-	-	-	-	20,665,000	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	8,000,000	11/15/2014	2.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	4,125,000	11/15/2015	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013E TRB 2013E	11/15/2013 11/15/2013	4,035,000 4,295,000	11/15/2015 11/15/2016	5.000 4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013E	11/15/2013	4,190,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	2,870,000	11/15/2017	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	5,995,000	11/15/2017	5.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	4,600,000	11/15/2018	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	4,680,000	11/15/2018	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	3,965,000	11/15/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	5,730,000	11/15/2019	5.000	-	-	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	2,070,000	11/15/2020	4.000	=	=	=	=	=	=	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	8,070,000	11/15/2020	5.000	8,070,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	3,435,000	11/15/2021	4.000	-	-	=	=	=	=	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	7,195,000	11/15/2021	5.000	=	-	-	-	-	7,195,000	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	1,700,000	11/15/2022	4.000	-	-	-	-	-		-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	9,425,000	11/15/2022	5.000 4.000	=	=	=	=	=	9,425,000	-
A3/BBB+/A-/AA				TRB 2013E	11/15/2013	3,120,000	11/15/2023		-	-	-	-	-	3,120,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2013E TRB 2013E	11/15/2013 11/15/2013	8,545,000 12,215,000	11/15/2023 11/15/2024	5.000 5.000	-	-	-	-	-	8,545,000	-
мэ/онт/А-/АА				1 ND 2013E	11/13/2013	12,213,000	11/13/2024	5.000	=	=	-	=	-	-	=

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707
New Money Bonds and Notes Issued in 2020 8,939,237,707
Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	12,830,000	11/15/2025	5.000	-	-	-	=	=	-	=
A3/BBB+/A-/AA			TRB 2013E TRB 2013E	11/15/2013	13,470,000	11/15/2026	5.000	=	-	-	=	=	-	=
A3/BBB+/A-/AA				11/15/2013	14,140,000	11/15/2027	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2013E TRB 2013E	11/15/2013 11/15/2013	14,850,000 15,590,000	11/15/2028 11/15/2029	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	16,370,000	11/15/2029	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	17,190,000	11/15/2030	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	18,050,000	11/15/2032	5.000	-	-	_	_	_	18,050,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	18,950,000	11/15/2033	5.000	_	_	_	_	-	18,950,000	_
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	19,900,000	11/15/2034	5.000	=	=	-	-	_	19,900,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	20,895,000	11/15/2035	5.000	-	-	-	-	-	20,895,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	21,940,000	11/15/2036	5.000	=	=	-	=	-	21,940,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	23,035,000	11/15/2037	5.000	=	=	=	-	=	23,035,000	=
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	24,190,000	11/15/2038	5.000	-	-	-	-	-	24,190,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	25,400,000	11/15/2039	5.000	=	=	-	=	-	25,400,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	26,670,000	11/15/2040	5.000	-	-	-	=	=	26,670,000	=
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	28,000,000	11/15/2041	5.000	-	-	-	-	-	28,000,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	29,400,000	11/15/2042	5.000	=	=	-	-	-	29,400,000	-
A3/BBB+/A-/AA			TRB 2013E	11/15/2013	30,870,000	11/15/2043	5.000	=	-	-	=	=	30,870,000	=
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	6,310,000	11/15/2015 11/15/2016	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2014A-1 TRB 2014A-1	2/28/2014 2/28/2014	6,395,000 6,460,000	11/15/2016	2.000 3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	6,265,000	11/15/2017	3.000	-	-	-	-		=	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	6,435,000	11/15/2019	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	6,670,000	11/15/2020	4.000	4,955,000	_	_	_	-	_	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	6,960,000	11/15/2021	4.000	-,,,,,,,,,,	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	11,255,000	11/15/2023	5.000	-	-	-	=	=	11,255,000	=
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	14,665,000	11/15/2029	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	11,570,000	11/15/2030	5.000	-	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	12,145,000	11/15/2031	5.000	=	=	-	-	-	=	=
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	4,475,000	11/15/2032	5.000	-	-	-	-	-	4,475,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	3,630,000	11/15/2033	5.000	=	=	-	-	=	3,630,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	9,765,000	11/15/2033	5.250	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	3,870,000	11/15/2034	5.000	-	-	-	-	-	3,870,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	10,215,000	11/15/2034	5.250	=	=	-	-	-	-	=
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2014A-1 TRB 2014A-1	2/28/2014 2/28/2014	15,200,000 15,340,000	11/15/2035 11/15/2036	5.250	-	-	-	-	-	15,200,000 15,340,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2014A-1 TRB 2014A-1	2/28/2014	15,340,000	11/15/2036	5.250	-	-	-	-	-		-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	13,685,000	11/15/2037	5.250 5.250	-	=	-	-	-	16,875,000 13,685,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	13,025,000	11/15/2039	5.250	-	-	-	-	-	13,025,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	12,910,000	11/15/2040	5.000	-	-	_	_	_	12,910,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	13,655,000	11/15/2041	5.000	_	_	_	_	-	13,655,000	_
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	14,585,000	11/15/2042	5.000	=	=	-	-	-	14,585,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	13,040,000	11/15/2043	5.000	-	=	-	-	-	13,040,000	-
A3/BBB+/A-/AA			TRB 2014A-1	2/28/2014	14,005,000	11/15/2044	5.000	-	=	-	-	-	14,005,000	-
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	7,000,000	11/15/2018	4.000	=	=	-	=	-	=	-
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	7,400,000	11/15/2018	5.000	-	-	-	-	=	-	-
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	1,700,000	11/15/2022	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	25,520,000	11/15/2022	5.000	=	=	-	-	=	25,520,000	=
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	16,175,000	11/15/2024	5.000	-	-	-	=	=	-	=
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	16,650,000	11/15/2025	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	17,120,000	11/15/2026	5.000	=	=	-	-	-	=	=
A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds	2/28/2014	17,605,000	11/15/2027	5.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2014A-2 Refunding Bonds TRB 2014A-2 Refunding Bonds	2/28/2014	13,590,000	11/15/2028	5.000 5.000	=	=	-	-	-	7 925 000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2014A-2 Retunding Bonds	2/28/2014 4/17/2014	7,835,000 8,390,000	11/15/2032 11/15/2014	1.000	-	-	-	-	-	7,835,000	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	7,445,000	11/15/2014	4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	7,740,000	11/15/2016	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	8,125,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	8,535,000	11/15/2018	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	8,960,000	11/15/2019	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	9,410,000	11/15/2020	5.000	9,410,000	=	-	-	-	=	-
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	9,880,000	11/15/2021	5.000	=	=	-	=	=	9,880,000	=
A3/BBB+/A-/AA			TRB 2014B	4/17/2014	10,375,000	11/15/2022	5.000	-	-	-	-	-	10,375,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	<u>2020</u>	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014B TRB 2014B	4/17/2014	10,890,000 11,435,000	11/15/2023	5.000 5.000	-	-	-	=	=	10,890,000	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014B	4/17/2014 4/17/2014	12,010,000	11/15/2024 11/15/2025	5.000	-	-	-	-	-	11,435,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	12,610,000	11/15/2025	5.000		_	_		_	-	
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	13,240,000	11/15/2027	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	4,085,000	11/15/2028	3.750	_	-	-	_	_	4,085,000	_
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	9,815,000	11/15/2028	5.000	=	=	-	=	_	-	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	14,545,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	15,270,000	11/15/2030	5.000	-	-	-	-	-	15,270,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	6,350,000	11/15/2031	4.000	=	-	-	=	-	6,350,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	9,685,000	11/15/2031	5.000	=	=	-	-	-	9,685,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	16,775,000	11/15/2032	5.250	-	-	-	=	-	16,775,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	17,655,000	11/15/2033	5.250	-	-	-	=	-	17,655,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	18,580,000	11/15/2034	5.250	=	=	-	=	-	18,580,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014B TRB 2014B	4/17/2014 4/17/2014	19,555,000	11/15/2035	5.250 4.250	-	-	-	-	-	19,555,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	3,450,000 17,135,000	11/15/2036 11/15/2036	5.250	-	-	-	-	-	3,450,000 17,135,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	21,630,000	11/15/2036	5.250	=	-		-		21,630,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	22,765,000	11/15/2037	5.250	-	-	_	-	_	22,765,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	23,960,000	11/15/2039	5.250	_	-	-	_	_	23,960,000	_
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	12,640,000	11/15/2040	5.000	=	_	_	_	_	12,640,000	_
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	12,580,000	11/15/2040	5.250	-	-	-	=	-	12,580,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	13,275,000	11/15/2041	5.000	=	=	-	-	-	13,275,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	13,235,000	11/15/2041	5.250	-	=	-	=	-	13,235,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	13,935,000	11/15/2042	5.000	-	-	-	-	-	13,935,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	13,935,000	11/15/2042	5.250	=	=	-	-	-	13,935,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	14,635,000	11/15/2043	5.000	-	-	-	-	-	14,635,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	14,665,000	11/15/2043	5.250	=	=	-	=	-	14,665,000	-
A3/BBB+/A-/AA				TRB 2014B	4/17/2014	15,365,000	11/15/2044	5.000	=	=	-	=	-	15,365,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014B TRB 2014C	4/17/2014 6/26/2014	15,435,000 3,060,000	11/15/2044 11/15/2014	5.250 0.500	-	-	-	-	-	15,435,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014C	6/26/2014	7,980,000	11/15/2014	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	11,220,000	11/15/2015	4.000	-	-	_	-	_	_	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	18,465,000	11/15/2017	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	29,220,000	11/15/2018	5.000	_	_	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	36,070,000	11/15/2019	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	34,525,000	11/15/2020	5.000	34,525,000	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	38,285,000	11/15/2021	5.000	=	=	-	-	-	38,285,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	43,500,000	11/15/2022	5.000	=	-	-	=	-	27,670,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	36,025,000	11/15/2023	5.000	=	=	-	-	-	36,025,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	47,575,000	11/15/2024	5.000	=	-	-	-	-	47,575,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	27,155,000	11/15/2025	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	7,760,000	11/15/2026	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	18,400,000	11/15/2027	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014C TRB 2014C	6/26/2014 6/26/2014	14,070,000 14,775,000	11/15/2028 11/15/2029	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	15,510,000	11/15/2029	5.000	=	-		-		15,510,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	16,285,000	11/15/2031	5.000	_	_	_	_	_	16,285,000	_
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	17,100,000	11/15/2032	5.000	=	_	_	_	_	17,100,000	_
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	17,955,000	11/15/2033	5.000	=	=	-	=	_	17,955,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	23,855,000	11/15/2034	4.000	-	-	-	-	-	23,855,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	18,210,000	11/15/2035	5.000	=	=	-	-	-	18,210,000	-
A3/BBB+/A-/AA				TRB 2014C	6/26/2014	3,000,000	11/15/2036	5.000	-	-	-	-	-	3,000,000	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	14,175,000	11/15/2026	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	4,635,000	11/15/2027	5.000	-	=	=	=	-	=	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	10,115,000	11/15/2028	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	10,620,000	11/15/2029	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	11,155,000	11/15/2030	5.000	-	-	-	-	-	11,155,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014D-1 TRB 2014D-1	11/4/2014 11/4/2014	11,715,000 12,295,000	11/15/2031 11/15/2032	5.000 5.000	-	-	-	-	-	11,715,000 12,295,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	12,295,000	11/15/2032	5.000	-	-	-	-	-	12,295,000	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	515,000	11/15/2034	5.000	=	=	-	-	-	515,000	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	955,000	11/15/2034	5.000	-	-	-	-	-	955,000	_
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	4,960,000	11/15/2035	5.000	-	-	-	-	-	4,960,000	-
, 555., /AA					, -,	1,500,000	,, 2000	3.000						-,,500,500	

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	37,330,000	11/15/2037	5.000	=	=	=	=	=	37,330,000	=
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	39,190,000	11/15/2038	5.000	-	=	=	=	=	39,190,000	=
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014D-1 TRB 2014D-1	11/4/2014 11/4/2014	40,415,000 22,445,000	11/15/2039 11/15/2040	5.000 5.250	-	-	-	-	-	40,415,000 22,445,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	23,565,000	11/15/2040	5.250	-	-	-	-	-	22,445,000	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	24,745,000	11/15/2041	5.250	-	-	-	-	_	24,745,000	-
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	25,980,000	11/15/2043	5.250	_	-	_	-	_	25,980,000	_
A3/BBB+/A-/AA				TRB 2014D-1	11/4/2014	27,280,000	11/15/2044	5.250	-	-	=	=	-	27,280,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	8,345,000	11/15/2034	4.000	-	-	-	-	-	8,345,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	14,880,000	11/15/2035	4.000	=	=	-	-	-	14,880,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	27,670,000	11/15/2036	4.000	-	-	=	-	-	27,670,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	690,000	11/15/2039	4.000	-	-	=	-	-	690,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	20,675,000	11/15/2040	4.000	-	-	=	=	-	20,675,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	21,640,000	11/15/2041	4.000	-	-	-	-	-	21,640,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017	22,635,000	11/15/2042	4.000	=	-	=	=	-	22,635,000	-
A3/BBB+/A-/AA				TRB 2014D-2	11/3/2017 11/3/2017	23,685,000	11/15/2043 11/15/2044	4.000 4.000	-	-	-	-	-	23,685,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2014D-2 TRB 2015A-1	1/22/2015	24,780,000 17,070,000	11/15/2044	1.000	-	-	-	-	_	24,780,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	13,370,000	11/15/2016	5.000	-	-	-	-	_		-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	13,780,000	11/15/2017	5.000	_	-	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	14,465,000	11/15/2018	5.000	_	-	_	-	_	_	_
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	15,185,000	11/15/2019	5.000	-	-	=	=	-	-	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	15,940,000	11/15/2020	5.000	15,940,000	=	-	-	-	-	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	2,675,000	11/15/2021	3.000	=	=	=	=	-	2,675,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	14,075,000	11/15/2021	5.000	-	-	=	-	-	14,075,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	17,530,000	11/15/2022	5.000	-	=	=	-	-	17,530,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	3,365,000	11/15/2023	4.000	-	-	=	=	-	3,365,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	15,040,000	11/15/2023	5.000	=	=	-	=	-	15,040,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	19,285,000	11/15/2024	5.000	=	=	=	-	-	19,285,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2015A-1 TRB 2015A-1	1/22/2015 1/22/2015	1,390,000 18,870,000	11/15/2025 11/15/2025	3.000 5.000	-	-	-	-	-	1,390,000 18,870,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	5,515,000	11/15/2025	5.000	-	-	-	-	-	5,515,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	8,600,000	11/15/2027	5.000	-	-	-	-	_	8,600,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	495,000	11/15/2028	5.000	_	_	_	_	_	495,000	_
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	7,260,000	11/15/2029	5.000	_	-	_	-	_	7,260,000	_
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	5,500,000	11/15/2030	5.000	-	-	=	=	-	5,500,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	435,000	11/15/2031	5.000	=	=	-	-	-	435,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	750,000	11/15/2032	5.000	=	=	=	=	-	750,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	8,370,000	11/15/2033	5.000	-	-	-	-	-	8,370,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	9,690,000	11/15/2034	5.000	-	-	=	-	-	9,690,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	9,625,000	11/15/2035	5.000	-	-	-	-	-	9,625,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	20,770,000	11/15/2036	5.000	=	=	-	=	-	20,770,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015 1/22/2015	25,550,000 26,775,000	11/15/2037 11/15/2038	5.000	-	-	-	-	-	25,550,000	-
A3/BBB+/A-/AA				TRB 2015A-1 TRB 2015A-1	1/22/2015	28,050,000	11/15/2039	5.000 5.000	-	-	-	-	-	26,775,000 28,050,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	40,680,000	11/15/2040	5.000	_	_	_	_	_	40,680,000	_
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	39,800,000	11/15/2041	5.000	_	_	-	-	_	39,800,000	_
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	41,785,000	11/15/2042	5.000	=	=	-	=	_	41,785,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	43,875,000	11/15/2043	5.000	-	-	-	-	-	43,875,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	46,070,000	11/15/2044	5.000	-	-	-	-	-	46,070,000	-
A3/BBB+/A-/AA				TRB 2015A-1	1/22/2015	48,365,000	11/15/2045	5.000	-	-	=	-	-	48,365,000	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	15,390,000	11/15/2026	4.000	=	15,390,000	-	-	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	13,610,000	11/15/2027	4.000	-	13,610,000	-	-	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	22,780,000	11/15/2028	4.000	-	22,780,000	-	-	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	17,085,000	11/15/2029	4.000	=	17,085,000	=	-	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD RB 2015A-2 OLD	1/22/2015	19,995,000	11/15/2030	4.000	-	19,995,000	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015 1/22/2015	26,395,000 27,275,000	11/15/2031 11/15/2032	4.000 4.000	-	26,395,000 27,275,000	-	-	-	- -	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	20,845,000	11/15/2032	4.000	=	20,845,000	=	=	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	20,905,000	11/15/2034	4.000	-	20,905,000	-	-	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	22,120,000	11/15/2035	4.000	-	22,120,000	=	-	-	-	-
A3/BBB+/A-/AA				RB 2015A-2 OLD	1/22/2015	12,905,000	11/15/2036	4.000	-	12,905,000	-	-	-	-	-
A3/BBB+/A-/AA			Т	RB 2015A-2 OLD	1/22/2015	9,720,000	11/15/2037	4.000	-	9,720,000	-	-	-	-	-
A3/BBB+/A-/AA			Т	RB 2015A-2 OLD	1/22/2015	10,220,000	11/15/2038	4.000	=	10,220,000	=	=	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	<u>2020</u>	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA			TRB 2015A-2 OLD	1/22/2015	10,755,000	11/15/2039	4.000	=	10,755,000	=	=	=	-	-
A3/BBB+/A-/AA			TRB 2015A-1 BANS	6/25/2015	20,000,000	3/1/2016	0.200	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015A-2 BANS	6/25/2015	20,000,000	3/1/2016	0.200	-	=	-	-	-	-	=
A3/BBB+/A-/AA			TRB 2015A-3 BANS TRB 2015A-4 BANS	6/25/2015 6/25/2015	100,000,000 360,000,000	3/1/2016	0.210 0.257	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015A-4 BANS TRB 2015B	3/19/2015	1,570,000	3/1/2016 11/15/2015	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	2,430,000	11/15/2016	4.000	-	-	-	-	-		-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	2,525,000	11/15/2017	5.000	_	_	_	_	-	-	_
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	2,650,000	11/15/2018	5.000	_	-	_	_	_	_	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	2,785,000	11/15/2019	5.000	-	=	-	-	-	-	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	2,925,000	11/15/2020	5.000	2,925,000	=	-	=	=	=	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	3,070,000	11/15/2021	5.000	-	-	-	-	-	3,070,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	3,220,000	11/15/2022	5.000	=	=	-	=	-	3,220,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	3,385,000	11/15/2023	5.000	-	-	-	-	-	3,385,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	3,555,000	11/15/2024	5.000	-	=	-	-	-	3,555,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	3,730,000	11/15/2025	5.000	-	-	-	-	-	3,730,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015B TRB 2015B	3/19/2015 3/19/2015	3,915,000 4,110,000	11/15/2026 11/15/2027	5.000 3.000	-	-	-	-	-	4,110,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	4,235,000	11/15/2027	5.000	=	-	-	-	-	4,110,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	4,445,000	11/15/2029	5.000	_	-	_	_	_	4,445,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	4,670,000	11/15/2030	3.250	_	-	_	_	_	4,670,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	4,820,000	11/15/2031	5.000	=	=	-	=	=	4,820,000	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	5,065,000	11/15/2032	5.000	-	-	-	-	-	5,065,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	5,315,000	11/15/2033	5.000	=	=	-	=	=	5,315,000	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	5,580,000	11/15/2034	3.500	-	-	-	-	-	5,580,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	5,775,000	11/15/2035	5.000	=	=	-	=	-	5,775,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	6,065,000	11/15/2036	5.000	-	-	-	-	-	6,065,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	6,370,000	11/15/2037	5.000	-	=	-	-	-	6,370,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	6,685,000	11/15/2038	5.000	-	=	-	-	-	6,685,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015B TRB 2015B	3/19/2015 3/19/2015	7,020,000 7,370,000	11/15/2039 11/15/2040	5.000 5.000	-	-	-	-	-	7,020,000 7,370,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	7,740,000	11/15/2040	4.000	-	-	-	-	-	7,740,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	8,050,000	11/15/2042	4.000	_	-	_	_	_	8,050,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	8,375,000	11/15/2043	4.000	=	=	-	=	=	8,375,000	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	8,705,000	11/15/2044	4.000	-	-	-	-	-	8,705,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	9,055,000	11/15/2045	4.000	=	=	-	=	=	9,055,000	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	9,420,000	11/15/2046	5.250	-	-	-	-	-	9,420,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	9,910,000	11/15/2047	5.250	=	=	-	=	-	9,910,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	10,435,000	11/15/2048	5.250	-	-	-	-	-	10,435,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	10,980,000	11/15/2049	5.250	-	=	-	-	-	10,980,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015B TRB 2015B	3/19/2015 3/19/2015	11,555,000 12,165,000	11/15/2050 11/15/2051	5.250 5.250	-	-	-	-	-	11,555,000 12,165,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	12,800,000	11/15/2051	5.250	=	-	-	-	-	12,800,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	13,475,000	11/15/2052	5.250	_	-	_	_	_	13,475,000	-
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	14,180,000	11/15/2054	5.250	=	=	-	=	=	14,180,000	=
A3/BBB+/A-/AA			TRB 2015B	3/19/2015	14,925,000	11/15/2055	5.250	-	=	-	-	-	14,925,000	=
A3/BBB+/A-/AA			TRB 2015B-1a BANS	12/10/2015	50,000,000	8/1/2016	0.500	=	-	=	=	=	-	-
A3/BBB+/A-/AA			TRB 2015B-1b BANS	12/10/2015	20,000,000	8/1/2016	0.750	=	=	-	=	=	=	=
A3/BBB+/A-/AA			TRB 2015B-1c BANS	12/10/2015	10,000,000	8/1/2016	0.750	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-1d BANS	12/10/2015	50,000,000	8/1/2016	1.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2015B-1e BANS	12/10/2015	100,000,000	8/1/2016	5.000	-	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-1f BANS	12/10/2015	205,000,000	8/1/2016	0.500	-	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-1g BANS	12/10/2015	150,000,000	8/1/2016	1.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015B-1h BANS TRB 2015B-1i BANS	12/10/2015 12/10/2015	20,000,000 23,000,000	8/1/2016 8/1/2016	0.250 1.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-21 BANS (Taxable)	12/10/2015	12,000,000	8/1/2016	0.750		-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-26 BANS (Taxable)	12/10/2015	12,000,000	10/1/2016	1.000	-	-	-	_	-	-	-
A3/BBB+/A-/AA			TRB 2015B-2c BANS (Taxable)	12/10/2015	12,000,000	2/1/2017	1.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-2d BANS (Taxable)	12/10/2015	12,000,000	6/1/2017	1.125	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015B-2e BANS (Taxable)	12/10/2015	12,000,000	10/1/2017	1.250	=	÷	=	=	=	=	=
A3/BBB+/A-/AA			TRB 2015B-2f BANS (Taxable)	12/10/2015	12,000,000	2/1/2018	1.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015C-1	8/18/2015	5,315,000	11/15/2025	5.000	-	=	=	-	=	5,315,000	-
A3/BBB+/A-/AA			TRB 2015C-1	8/18/2015	16,235,000	11/15/2026	5.000	-	-	-	-	-	16,235,000	-
A3/BBB+/A-/AA			TRB 2015C-1	8/18/2015	44,430,000	11/15/2027	5.000	=	=	=	=	=	44,430,000	=

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	<u>2020</u>	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA				B 2015C-1 B 2015C-1	8/18/2015 8/18/2015	24,760,000 7,205,000	11/15/2028 11/15/2028	5.000 3.125	-	-	-	=	-	24,760,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				B 2015C-1 B 2015C-1	8/18/2015	30,195,000	11/15/2028	5.250	-	-	-	-	-	7,205,000 30,195,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	22,420,000	11/15/2028	5.000		_				22,420,000	
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	41,535,000	11/15/2029	5.250	-	-	-	-	-	41,535,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	43,980,000	11/15/2030	5.250	_	-	-	_	-	43,980,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	17,145,000	11/15/2030	5.000	=	=	-	=	-	17,145,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	10,200,000	11/15/2030	3.400	-	-	-	-	-	10,200,000	-
A3/BBB+/A-/AA			TR	B 2015C-1	8/18/2015	17,590,000	11/15/2031	5.000	-	-	-	-	-	17,590,000	-
A3/BBB+/A-/AA			TR	B 2015C-1	8/18/2015	45,110,000	11/15/2031	5.250	=	-	-	=	=	45,110,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	63,170,000	11/15/2034	5.000	=	=	-	-	-	63,170,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	11,025,000	11/15/2034	3.700	-	-	-	-	=	11,025,000	-
A3/BBB+/A-/AA				B 2015C-1	8/18/2015	76,795,000	11/15/2035	5.000	-	-	-	-	-	76,795,000	-
A3/BBB+/A-/AA				B 2015C-2	8/18/2015	35,780,000	11/15/2032	4.000	=	=	35,780,000	=	-	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				B 2015C-2 B 2015D-1	8/18/2015 9/17/2015	37,110,000	11/15/2033	4.000 5.000	-	-	37,110,000	-	-	6,575,000	-
A3/BBB+/A-/AA				В 2015D-1 В 2015D-1	9/17/2015	6,575,000 13,500,000	11/15/2024 11/15/2026	5.000	-	-	-	-	-	13,500,000	-
A3/BBB+/A-/AA				В 2015D-1 В 2015D-1	9/17/2015	13,500,000	11/15/2027	5.000	=	-	-	= =	-	13,500,000	-
A3/BBB+/A-/AA				B 2015D-1 B 2015D-1	9/17/2015	24,935,000	11/15/2028	5.000	-	-	-	-	-	24,935,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	27,435,000	11/15/2029	5.000	_	-	-	_	-	27,435,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	24,730,000	11/15/2030	5.000	=	_	_	_	_	24,730,000	_
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	38,110,000	11/15/2031	5.000	-	-	-	=	=	38,110,000	-
A3/BBB+/A-/AA			TR	B 2015D-1	9/17/2015	25,000,000	11/15/2032	5.000	=	=	-	-	-	25,000,000	-
A3/BBB+/A-/AA			TR	B 2015D-1	9/17/2015	20,885,000	11/15/2032	5.000	-	=	=	-	=	20,885,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	16,755,000	11/15/2032	3.000	-	-	-	-	-	16,755,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	25,000,000	11/15/2033	5.000	=	=	-	=	-	25,000,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	21,925,000	11/15/2033	5.000	-	-	-	-	=	21,925,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	17,265,000	11/15/2033	3.000	=	=	-	=	-	17,265,000	-
A3/BBB+/A-/AA				B 2015D-1	9/17/2015	20,000,000	11/15/2034	5.000	=	=	-	=	-	20,000,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				B 2015D-1 B 2015D-1	9/17/2015 9/17/2015	17,775,000 17,785,000	11/15/2034 11/15/2035	3.000 5.000	-	-	-	-	-	17,775,000 17,785,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				B 2015D-1 B 2015D-1	9/17/2015	8,155,000	11/15/2035	3.375	-	-	-	-	-	8,155,000	-
A3/BBB+/A-/AA				B 2015D-1 B 2015D-1	9/17/2015	17,700,000	11/15/2035	3.000	-	-	-	-	-	17,700,000	-
A3/BBB+/A-/AA				B 2015D-2	11/15/2019	5,450,000	11/15/2026	4.000	_	_	_	_	_		_
A3/BBB+/A-/AA				B 2015D-2	11/15/2019	25,250,000	11/15/2027	4.000	_	_	_	-	_	_	_
A3/BBB+/A-/AA				B 2015D-2	11/15/2019	7,540,000	11/15/2032	4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA				B 2015D-2	11/15/2019	9,190,000	11/15/2033	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TR	B 2015D-2	11/15/2019	3,235,000	11/15/2034	4.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TR	B 2015E-1	8/21/2018	1,360,000	11/15/2016	4.000	=	-	-	=	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,410,000	11/15/2017	4.000	=	=	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,470,000	11/15/2018	4.000	-	=	=	-	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,525,000	11/15/2019	4.000	-	-	-	-	=	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,590,000	11/15/2020	4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,650,000	11/15/2021	4.000	-	-	-	=	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,720,000	11/15/2022	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF		B 2015E-1 B 2015E-1	8/21/2018 8/21/2018	1,785,000 1,860,000	11/15/2023 11/15/2024	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	1,930,000	11/15/2024	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,010,000	11/15/2026	4.000	_	_	_	-	-	_	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,090,000	11/15/2027	4.000	_	_	_	-	_	_	_
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,175,000	11/15/2028	4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TR	B 2015E-1	8/21/2018	2,260,000	11/15/2029	4.000	-	-	-	-	-	2,260,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TR	B 2015E-1	8/21/2018	2,350,000	11/15/2030	4.000	=	=	=	=	=	2,350,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TR	B 2015E-1	8/21/2018	2,445,000	11/15/2031	4.000	=	=	=	=	=	2,445,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,545,000	11/15/2032	4.000	-	-	-	-	-	2,545,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,645,000	11/15/2033	4.000	-	=	=	=	=	2,645,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,750,000	11/15/2034	4.000	-	-	-	-	-	2,750,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,860,000	11/15/2035	4.000	-	-	-	-	-	2,860,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	2,975,000	11/15/2036	4.000	-	-	-	-	-	2,975,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF		B 2015E-1 B 2015E-1	8/21/2018 8/21/2018	3,095,000 3,215,000	11/15/2037 11/15/2038	4.000 4.000	-	-	-	-	-	3,095,000 3,215,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF		B 2015E-1 B 2015E-1	8/21/2018 8/21/2018	3,215,000 3,345,000	11/15/2038	4.000	-	-	-	-	-	3,215,000 3,345,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	3,480,000	11/15/2039	4.000	-	-	-	=	-	3,480,000	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF		B 2015E-1	8/21/2018	3,620,000	11/15/2040	4.000	=	=	-	=	-	3,620,000	-
A3,000-,A-,AA	· ····································		T I N	LU13L 1	0/21/2010	3,020,000	12/13/2071	4.500	-	=	•	-	-	3,020,000	

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020	10,170,427,707
New Money Bonds and Notes Issued in 2020	8,939,237,707
Refunding Bonds and Notes Issued in 2020	1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-1	8/21/2018	3,765,000	11/15/2042	4.000	=	Ξ	=	=	=	3,765,000	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-1	8/21/2018	3,915,000	11/15/2043	4.000	-	-	-	-	-	3,915,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-1	8/21/2018	4,070,000	11/15/2044	4.000	=	=	=	=	-	4,070,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF	TRB 2015E-1	8/21/2018	4,235,000 4,405,000	11/15/2045 11/15/2046	4.000 4.000	-	-	-	-	-	4,235,000 4,405,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+ Aa1/AA+/AA+/AA+		TRB 2015E-1 TRB 2015E-1	8/21/2018 8/21/2018	4,405,000	11/15/2046	4.000	-	-	-	-	-	4,405,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+ Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-1	8/21/2018	4,765,000	11/15/2047	4.000	-	= -	-	-		4,765,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+		TRB 2015E-1	8/21/2018	4,955,000	11/15/2049	4.000	_	_	_	_	_	4,955,000	_
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-1	8/21/2018	5,150,000	11/15/2050	4.000	-	-	-	_	_	5,150,000	_
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	3,395,000	11/15/2016	4.000	_	-	_	_	_	-	_
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	3,530,000	11/15/2017	4.000	-	=	-	-	-	=	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	3,670,000	11/15/2018	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	3,820,000	11/15/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	3,970,000	11/15/2020	4.000	=	=	=	-	-	-	=
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	4,130,000	11/15/2021	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	4,295,000	11/15/2022	4.000	-	=	=	-	-	-	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	4,465,000	11/15/2023	4.000	=	Ξ	=	-	-	-	÷
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	4,645,000	11/15/2024	4.000	-	=	=	=	-	=	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	4,830,000	11/15/2025	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	5,025,000	11/15/2026	4.000	=	=	=	-	-	=	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	5,225,000	11/15/2027	4.000	=	=	=	-	-	=	-
A3/BBB+/A-/AA	Aa2/AAA/AA-/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-2	9/5/2018	5,435,000	11/15/2028	4.000 4.000	-	-	-	-	-	5,650,000	-
A3/BBB+/A-/AA			TRB 2015E-2 TRB 2015E-2	9/5/2018 9/5/2018	5,650,000 5,880,000	11/15/2029 11/15/2030	4.000	-	-	-	-	-	5,650,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	6,115,000	11/15/2030	4.000	-	-	-	-	-	6,115,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	6,360,000	11/15/2031	4.000	-	=	-	-	-	6,360,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	6,610,000	11/15/2032	4.000	-	= -	-	-		6,610,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	6,875,000	11/15/2033	4.000	-	-	-	-		6,875,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	7,150,000	11/15/2035	4.000	_	_	_	_	_	7,150,000	_
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	7,440,000	11/15/2036	4.000	_	-	-	_	_	7,440,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	7,735,000	11/15/2037	4.000	-	=	-	-	-	7,735,000	=
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	8,045,000	11/15/2038	4.000	-	=	=	=	-	8,045,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	8,365,000	11/15/2039	4.000	-	-	-	-	-	8,365,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	8,700,000	11/15/2040	4.000	-	-	-	-	-	8,700,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	9,050,000	11/15/2041	4.000	=	=	=	=	-	9,050,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	9,410,000	11/15/2042	4.000	-	-	-	-	-	9,410,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	9,785,000	11/15/2043	4.000	=	=	-	=	-	9,785,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	10,180,000	11/15/2044	4.000	-	=	=	-	-	10,180,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	10,585,000	11/15/2045	4.000	-	-	-	-	-	10,585,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	11,010,000	11/15/2046	4.000	-	=	-	-	-	11,010,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	11,450,000	11/15/2047	4.000	=	=	=	=	-	11,450,000	-
A3/BBB+/A-/AA			TRB 2015E-2	9/5/2018	11,905,000	11/15/2048	4.000 4.000	-	-	-	-	-	11,905,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015E-2 TRB 2015E-2	9/5/2018 9/5/2018	12,385,000 12,880,000	11/15/2049 11/15/2050	4.000	-	-	-	-	-	12,385,000 12,880,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	2,715,000	11/15/2016	4.000				_		12,880,000	
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	2,825,000	11/15/2017	4.000	_	_	_	_	_	_	_
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	2,935,000	11/15/2018	4.000	_	-	-	_	_	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,055,000	11/15/2019	4.000	_	-	_	_	_	_	_
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,175,000	11/15/2020	4.000	-	=	-	-	-	=	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,305,000	11/15/2021	4.000	-	=	-	-	-	=	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,435,000	11/15/2022	4.000	-	=	=	-	-	-	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,575,000	11/15/2023	4.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,715,000	11/15/2024	4.000	=	=	=	=	-	=	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	3,865,000	11/15/2025	4.000	E	=	=	=	-	=	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	4,020,000	11/15/2026	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	4,180,000	11/15/2027	4.000	=	-	-	-	-	=	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	4,350,000	11/15/2028	4.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	4,520,000	11/15/2029	4.000	-	-	-	-	-	4,520,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	4,700,000	11/15/2030	4.000	-	-	-	-	-	4,700,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	4,890,000	11/15/2031	4.000	-	-	-	-	-	4,890,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018 9/5/2018	5,085,000	11/15/2032	4.000	Ē	Ξ	=	-	-	5,085,000	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3		5,290,000	11/15/2033	4.000 4.000	-	-	-	-	-	5,290,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF VMIG1/A-1/F1+/NAF	TRB 2015E-3 TRB 2015E-3	9/5/2018 9/5/2018	5,500,000 5,720,000	11/15/2034 11/15/2035	4.000	-	-	-	-	-	5,500,000 5,720,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	ANIA-T/LT+/MAL	I KB 2015E-3	3/2/5018	5,720,000	11/15/2035	4.000	-	-	-	-	-	5,720,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and No	tes Issued in 2020	10,170,427,707	
New Money Bonds and No	tes Issued in 2020	8,939,237,707	
Refunding Bonds and Not	tes Issued in 2020	1.231.190.000	

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	5,950,000	11/15/2036	4.000	-	=	-	=	-	5,950,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	6,190,000	11/15/2037	4.000	-	=	-	-	-	6,190,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	6,435,000	11/15/2038	4.000	-	-	-	-	-	6,435,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	6,695,000	11/15/2039	4.000	-	-	-	-	-	6,695,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	6,960,000	11/15/2040	4.000	=	-	-	-	-	6,960,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	7,240,000	11/15/2041	4.000	=	=	-	=	=	7,240,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+ Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF VMIG1/A-1/F1+/NAF	TRB 2015E-3 TRB 2015E-3	9/5/2018 9/5/2018	7,530,000 7,830,000	11/15/2042 11/15/2043	4.000 4.000	-	-	-	-	-	7,530,000 7,830,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+ Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	8,145,000	11/15/2043	4.000	=	=	=	=	=	8,145,000	=
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	8,470,000	11/15/2044	4.000		-	-	= =	-	8,470,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	8,805,000	11/15/2046	4.000	-	_	_	-	-	8,805,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	9,160,000	11/15/2047	4.000	-	=	=	=	-	9,160,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	9,525,000	11/15/2048	4.000	-	=	=	=	-	9,525,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1/F1+/NAF	TRB 2015E-3	9/5/2018	9,905,000	11/15/2049	4.000	-	-	-	-	-	9,905,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-3	9/5/2018	10,305,000	11/15/2050	4.000	-	=	=	-	-	10,305,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	890,000	11/15/2016	4.000	=	=	-	=	=	=	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	925,000	11/15/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	965,000	11/15/2018	4.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,005,000	11/15/2019	4.000	-	=	-	Ξ	=	=	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,045,000	11/15/2020	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,085,000	11/15/2021	4.000	-	=	-	=	-	=	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018 9/5/2018	1,130,000 1,175,000	11/15/2022	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa2/AA/AA+/AA+ Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF VMIG1/A-1/F1/NAF	TRB 2015E-4 TRB 2015E-4	9/5/2018	1,175,000	11/15/2023 11/15/2024	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,270,000	11/15/2024	4.000	-	- -	-	=	=	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,320,000	11/15/2025	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,370,000	11/15/2027	4.000	-	_	_	-	_	_	_
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	1,425,000	11/15/2028	4.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	2,970,000	11/15/2029	4.000	-	-	-	=	-	2,970,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,090,000	11/15/2030	4.000	-	-	-	-	-	3,090,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,210,000	11/15/2031	4.000	=	=	-	=	=	3,210,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,340,000	11/15/2032	4.000	-	-	-	-	-	3,340,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,470,000	11/15/2033	4.000	-	-	-	=	-	3,470,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,610,000	11/15/2034	4.000	-	-	-	=	-	3,610,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,760,000	11/15/2035	4.000	-	-	-	-	-	3,760,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	3,910,000	11/15/2036	4.000	-	=	-	=	-	3,910,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	4,060,000	11/15/2037	4.000 4.000	-	-	-	-	-	4,060,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aa2/AA/AA+/AA+ Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF VMIG1/A-1/F1/NAF	TRB 2015E-4 TRB 2015E-4	9/5/2018 9/5/2018	4,230,000 4,390,000	11/15/2038 11/15/2039	4.000	-	-	-	-	-	4,230,000 4,390,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+ Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	4,570,000	11/15/2039	4.000		-	-	= =	-	4,570,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	4,750,000	11/15/2041	4.000	_	_	_	_	_	4,750,000	_
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	4,940,000	11/15/2042	4.000	-	_	_	-	-	4,940,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	5,140,000	11/15/2043	4.000	_	-	_	_	_	5,140,000	_
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	5,350,000	11/15/2044	4.000	-	-	-	=	-	5,350,000	-
A3/BBB+/A-/AA	Aa2/AA/AA+/AA+	VMIG1/A-1/F1/NAF	TRB 2015E-4	9/5/2018	5,560,000	11/15/2045	4.000	-	=	=	-	-	5,560,000	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	890,000	11/15/2016	4.000	=	=	-	=	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	925,000	11/15/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	965,000	11/15/2018	4.000	-	-	-	=	-	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,005,000	11/15/2019	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,045,000	11/15/2020	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,085,000	11/15/2021	4.000	=	-	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF	TRB 2015E-5 TRB 2015E-5	9/10/2015 9/10/2015	1,130,000 1,175,000	11/15/2022 11/15/2023	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,220,000	11/15/2023	4.000	=	=	=	=	=	=	=
A3/BBB+/A-/AA A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,270,000	11/15/2024	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,320,000	11/15/2025	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,370,000	11/15/2027	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	1,425,000	11/15/2028	4.000	Ξ.	Ē	=	=	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2029	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	=	11/15/2030	4.000	=	=	-	=	=	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2031	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2032	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	=	11/15/2033	4.000	=	=	=	=	=	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2034	4.000	-	-	-	-	-	-	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings Mdy/S&P/Ftch/Krll	Ratings Mdy/S&P/Ftch/Krll	S T Ratings Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	Amount Matured in 2020	in 2020	2020	Redeemed in 2020	Refinanced in 2020	Amount Outstanding as of December 31, 2020	as of December 31, 2020
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	Amount issueu	11/15/2035	4.000	<u>2020</u>	<u>III 2020</u>	2020	2020	2020	of December 51, 2020	51, 2020
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	=	11/15/2036	4.000	-	=	-	-	=	=	=
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2037	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2038	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA	Aa1/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	=	11/15/2039	4.000	=	-	=	-	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2040	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	=	11/15/2041	4.000	-	-	=	=	=	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2042	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	=	11/15/2043	4.000	=	=	-	-	-	=	-
A3/BBB+/A-/AA		VMIG1/A-1+/F1+/NAF	TRB 2015E-5	9/10/2015	-	11/15/2044	4.000 4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA	Aal/AA+/AA+/AA+	VMIG1/A-1+/F1+/NAF	TRB 2015E-5 TRB 2015F	9/10/2015 12/17/2015	10,235,000	11/15/2045 11/15/2017	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	10,540,000	11/15/2017	4.000	=	=	=	=	-	-	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	10,965,000	11/15/2018	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	11,510,000	11/15/2020	5.000	11,510,000	_	_	_	_	-	_
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	12,085,000	11/15/2021	5.000	,,	=	-	-	-	12,085,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	12,695,000	11/15/2022	5.000	=	-	-	-	-	12,695,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	13,325,000	11/15/2023	5.000	-	-	-	-	-	13,325,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	13,990,000	11/15/2024	5.000	=	=	-	-	-	13,990,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	14,695,000	11/15/2025	5.000	-	-	=	-	=	14,695,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	9,405,000	11/15/2026	5.000	-	-	-	-	-	9,405,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	16,240,000	11/15/2027	5.000	=	-	=	-	-	16,240,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	17,055,000	11/15/2028	5.000	-	-	-	-	-	17,055,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	30,380,000	11/15/2029	5.000	=	=	-	-	-	30,380,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	18,770,000	11/15/2030	3.250	-	-	=	=	=	18,770,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015F TRB 2015F	12/17/2015 12/17/2015	19,380,000 20,010,000	11/15/2031 11/15/2032	3.250 5.000	-	-	-	-	-	19,380,000 20,010,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	4,500,000	11/15/2032	5.000	-	-	-	-	_	4,500,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	16,510,000	11/15/2033	3.250	_	_	_	_	_	16,510,000	_
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	7,000,000	11/15/2034	5.000	_	_	_	_	_	7,000,000	_
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	14,770,000	11/15/2034	3.375	=	=	-	-	-	14,770,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	22,620,000	11/15/2035	5.000	-	-	=	=	=	22,620,000	-
A3/BBB+/A-/AA			TRB 2015F	12/17/2015	23,750,000	11/15/2036	5.000	=	=	-	-	-	23,750,000	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	5,803,553	11/15/2018	2.380	=	-	=	-	=	=	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	5,941,678	11/15/2019	2.380	-	-	=	-	=	-	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	6,083,090	11/15/2020	2.380	6,083,090	-	=	-	-	=	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	6,227,867	11/15/2021	2.380	-	-	-	-	-	6,227,867	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	6,376,090	11/15/2022	2.380	=	=	-	-	-	6,376,090	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	6,527,841	11/15/2023	2.380 2.380	-	-	-	-	-	6,527,841	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC) TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016 9/20/2016	6,683,204 6,842,264	11/15/2024 11/15/2025	2.380	-	-	-	-	-	6,683,204 6,842,264	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	7,005,110	11/15/2026	2.380		_		_		7,005,110	
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	7,171,832	11/15/2027	2.380	-	_	-	_	-	7,171,832	_
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	7,342,521	11/15/2028	2.380	=	=	-	-	-	7,342,521	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	7,517,273	11/15/2029	2.380	-	-	-	-	-	7,517,273	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	7,696,184	11/15/2030	2.380	=	=	-	-	-	7,696,184	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	7,879,353	11/15/2031	2.380	=	-	=	-	=	7,879,353	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	8,066,882	11/15/2032	2.380	=	=	-	=	-	8,066,882	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	8,258,874	11/15/2033	2.380	-	-	=	=	=	8,258,874	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	8,455,435	11/15/2034	2.380	-	-	-	-	-	8,455,435	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	8,656,674	11/15/2035	2.380	=	=	-	-	-	8,656,674	-
A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC)	9/20/2016	8,862,703	11/15/2036	2.380	-	-	-	-	-	8,862,703	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015X-1 (RRIF LOAN - PTC) TRB 2015X-2 (RRIF LOAN - PTC)	9/20/2016 5/1/2019	9,073,636 15,938,453	11/15/2037 11/15/2019	2.380 2.380	-	-	-	-	-	9,073,636	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	15,938,453	11/15/2019	2.380	12,825,744	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	13,130,996	11/15/2020	2.380	12,023,744	-	-	-	-	13,130,996	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	13,443,514	11/15/2022	2.380	-	-	-	-	-	13,443,514	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	13,763,470	11/15/2023	2.380	-	=	=	-	=	13,763,470	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	14,091,040	11/15/2024	2.380	-	-	-	-	-	14,091,040	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	14,426,407	11/15/2025	2.380	-	=	=	-	=	14,426,407	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	14,769,755	11/15/2026	2.380	=	=	=	=	=	14,769,755	=
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	15,121,276	11/15/2027	2.380	-	-	-	-	-	15,121,276	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	15,481,162	11/15/2028	2.380	-	=	=	-	=	15,481,162	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	15,849,614	11/15/2029	2.380	=	-	=	=	-	15,849,614	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

 Total Bonds and Notes Issued in 2020
 10,170,427,707

 New Money Bonds and Notes Issued in 2020
 8,939,237,707

 Refunding Bonds and Notes Issued in 2020
 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in				Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Series	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC) TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019 5/1/2019	16,226,834 16,613,033	11/15/2030 11/15/2031	2.380 2.380	-	-	-	-	-	16,226,834 16,613,033	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	17,008,423	11/15/2031	2.380	-	-	-	-	-	17,008,423	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	17,413,224	11/15/2033	2.380	-	-	_	_	-	17,413,224	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	17,827,658	11/15/2034	2.380	=	=	=	-	=	17,827,658	=
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	18,251,957	11/15/2035	2.380	-	-	-	-	-	18,251,957	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	18,686,353	11/15/2036	2.380	=	-	-	=	-	18,686,353	-
A3/BBB+/A-/AA			TRB 2015X-2 (RRIF LOAN - PTC)	5/1/2019	19,131,088	11/15/2037	2.380	-	-	=	-	=	19,131,088	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	3,100,000	11/15/2016	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	4,355,000	11/15/2017	4.000	=	=	-	-	=	=	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	4,525,000	11/15/2018	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	4,755,000	11/15/2019	4.000	-	=	=	=	=	-	=
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	620,000	11/15/2020	4.000	620,000	-	=	=	=	-	=
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-1 TRB 2016A-1	2/25/2016 2/25/2016	4,325,000 2,435,000	11/15/2020 11/15/2021	5.000 4.000	4,325,000	-	-	-	-	2,435,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	2,750,000	11/15/2021	5.000	= -	-	-	-		2,750,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,420,000	11/15/2021	5.000				_		5,420,000	
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,690,000	11/15/2023	5.000	-	-	-	_	-	5,690,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,975,000	11/15/2024	5.000	-	-	_	_	_	5,975,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,275,000	11/15/2025	2.500	=	=	-	-	-	6,275,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,430,000	11/15/2026	5.000	=	_	-	=	_	6,430,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,750,000	11/15/2027	5.000	-	-	-	-	-	6,750,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	7,090,000	11/15/2028	5.000	Ξ	=	=	-	=	7,090,000	=
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	7,445,000	11/15/2029	5.000	-	-	=	-	=	7,445,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	7,815,000	11/15/2030	5.000	-	-	-	-	-	7,815,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	8,205,000	11/15/2031	5.000	=	=	-	-	=	8,205,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	8,620,000	11/15/2032	5.000	-	-	-	-	-	8,620,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	875,000	11/15/2033	5.000	=	=	-	-	-	875,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	8,175,000	11/15/2033	4.000	=	=	-	-	-	8,175,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	9,415,000	11/15/2034	3.000	•	-	-	-	-	9,415,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-1 TRB 2016A-1	2/25/2016 2/25/2016	1,160,000 3,540,000	11/15/2035 11/15/2035	5.000 3.100	-	-	-	-	-	1,160,000 3,540,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,000,000	11/15/2035	4.000				_		5,000,000	
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	10,070,000	11/15/2036	5.000	_	_	_	_	_	10,070,000	_
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,020,000	11/15/2037	3.500	-	-	-	_	-	6,020,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	4,555,000	11/15/2037	5.000	=	=	-	-	-	4,555,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,230,000	11/15/2038	3.500	=	=	=	-	=	6,230,000	=
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	4,780,000	11/15/2038	5.000	=	-	=	-	-	4,780,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,450,000	11/15/2039	3.500	-	-	-	-	-	6,450,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,020,000	11/15/2039	5.000	Ξ	=	=	-	=	5,020,000	=
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,670,000	11/15/2040	3.500	-	-	-	-	-	6,670,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,275,000	11/15/2040	5.000	-	-	-	-	-	5,275,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	6,905,000	11/15/2041	3.500	Ξ	=	=	-	=	6,905,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	5,535,000	11/15/2041	5.000	-	-	-	-	-	5,535,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	9,960,000	11/15/2042	5.000	=	=	-	-	-	9,960,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	3,000,000	11/15/2042	4.000	=	=	=	=	=	3,000,000	=
A3/BBB+/A-/AA			TRB 2016A-1 TRB 2016A-1	2/25/2016 2/25/2016	10,580,000 3,000,000	11/15/2043 11/15/2043	5.000 4.000	-	-	-	-	-	10,580,000 3,000,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	11,230,000	11/15/2043	5.000	=	-	-	-	-	11,230,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	3,000,000	11/15/2044	4.000				_		3,000,000	
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	11,910,000	11/15/2045	5.000	_	_	_	_	_	11,910,000	_
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	3,000,000	11/15/2045	4.000	-	-	_	_	_	3,000,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	12,625,000	11/15/2046	5.000	=	=	-	-	-	12,625,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	3,000,000	11/15/2046	4.000	-	-	-	-	-	3,000,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	13,750,000	11/15/2047	5.250	-	-	-	-	-	13,750,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	14,475,000	11/15/2048	5.250	=	=	=	-	-	14,475,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	15,235,000	11/15/2049	5.250	-	-	-	-	-	15,235,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	16,035,000	11/15/2050	5.250	-	-	-	-	-	16,035,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	16,875,000	11/15/2051	5.250	=	=	=	-	-	16,875,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	17,760,000	11/15/2052	5.250	=	=	=	-	-	17,760,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	18,695,000	11/15/2053	5.250	-	-	-	-	-	18,695,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	19,675,000	11/15/2054	5.250	-	-	-	-	-	19,675,000	-
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	20,705,000	11/15/2055	5.250	≘	=	=	=	=	20,705,000	=
A3/BBB+/A-/AA			TRB 2016A-1	2/25/2016	21,795,000	11/15/2056	5.250	=	=	=	-	-	21,795,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	<u>in 2020</u>	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	11,120,000	11/15/2017	4.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-2 TRB 2016A-2	2/25/2016 2/25/2016	11,570,000 16,110,000	11/15/2018 11/15/2019	5.000 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	16,920,000	11/15/2019	5.000	16,920,000	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	17,770,000	11/15/2021	5.000	10,520,000	-	_	-	_	17,770,000	_
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	33,675,000	11/15/2022	5.000	-	-	-	-	-	33,675,000	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	35,365,000	11/15/2023	5.000	=	=	-	=	-	35,365,000	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	34,860,000	11/15/2024	5.000	=	=	=	-	-	34,860,000	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	46,400,000	11/15/2025	5.000	-	-	-	-	-	46,400,000	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	7,590,000	11/15/2025	4.000 4.000	-	-	-	-	-	7,590,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-2 TRB 2016A-2	2/25/2016 2/25/2016	1,840,000 36,515,000	11/15/2026 11/15/2026	5.000	=	=	-	=	-	1,840,000 36,515,000	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	40,255,000	11/15/2027	5.000	-	-	_	-	_	40,255,000	_
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	1,255,000	11/15/2028	2.500	-	-	-	-	-	1,255,000	-
A3/BBB+/A-/AA			TRB 2016A-2	2/25/2016	26,715,000	11/15/2028	5.000	=	=	-	=	-	26,715,000	-
A3/BBB+/A-/AA			TRB 2016A-1a BANS	3/30/2016	50,000,000	10/1/2016	5.000	=	Ξ	=	Ξ	=	=	-
A3/BBB+/A-/AA			TRB 2016A-1b BANS	3/30/2016	10,000,000	10/1/2016	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-1c BANS TRB 2016A-1d BANS	3/30/2016 3/30/2016	25,000,000 25,000,000	10/1/2016 10/1/2016	2.000 1.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016A-1e BANS	3/30/2016	50,000,000	10/1/2016	2.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2016A-1f BANS	3/30/2016	340,000,000	10/1/2016	2.000	_	-	_	-	_	_	_
A3/BBB+/A-/AA			TRB 2016A-2a BANS	3/30/2016	10,000,000	2/1/2017	5.000	=	=	-	Ξ	-	-	=
A3/BBB+/A-/AA			TRB 2016A-2b BANS	3/30/2016	50,000,000	2/1/2017	2.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2016A-2c BANS	3/30/2016	120,000,000	2/1/2017	2.000	=	=	=	-	-	-	-
A3/BBB+/A-/AA			TRB 2016A-2d BANS	3/30/2016	10,000,000	2/1/2017	2.000	=	Ξ	=	Ξ	=	=	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016A-2e BANS TRB 2016B	3/30/2016 6/30/2016	10,000,000 19,285,000	2/1/2017 11/15/2018	3.000 3.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016B	6/30/2016	1,245,000	11/15/2018	3.500	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	18,620,000	11/15/2019	5.000	_	-	_	-	_	_	_
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	1,550,000	11/15/2020	4.000	1,550,000	=	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	19,290,000	11/15/2020	5.000	19,290,000	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	1,390,000	11/15/2021	3.000	-	-	-	-	-	1,390,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	20,475,000	11/15/2021	5.000	=	Ξ	=	Ξ	=	20,475,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	2,340,000	11/15/2022	4.000	-	-	-	-	-	2,340,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016B TRB 2016B	6/30/2016 6/30/2016	20,590,000 990,000	11/15/2022 11/15/2023	5.000 4.000	-	-	-	-	-	20,590,000 990,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	23,065,000	11/15/2023	5.000	-	-	-	-	-	23,065,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	1,045,000	11/15/2024	4.000	-	=	-	-	-	1,045,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	24,200,000	11/15/2024	5.000	-	-	-	-	-	24,200,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	5,195,000	11/15/2025	4.000	-	-	-	-	-	5,195,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	21,300,000	11/15/2025	5.000	-	-	-	-	-	21,300,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	6,245,000	11/15/2026	4.000	=	=	-	=	-	6,245,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016B TRB 2016B	6/30/2016 6/30/2016	21,525,000 29,095,000	11/15/2026 11/15/2027	5.000 5.000	-	-	-	-	-	21,525,000 29,095,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	11,060,000	11/15/2027	5.000	-	-	-	-	-	11,060,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	14,630,000	11/15/2029	5.000	Ξ.	=	=	=	-	14,630,000	=
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	7,500,000	11/15/2030	5.000	-	-	-	-	-	7,500,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	1,855,000	11/15/2031	5.000	=	=	=	-	-	1,855,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	6,545,000	11/15/2031	2.125	-	-	-	-	-	6,545,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	2,175,000	11/15/2032	5.000	=	=	-	=	-	2,175,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016B TRB 2016B	6/30/2016 6/30/2016	20,460,000 15,720,000	11/15/2032 11/15/2033	2.125 5.000	-	-	-	-	-	20,460,000 15,720,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	21,480,000	11/15/2033	2.250	-	-	_	-	_	21,480,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	18,060,000	11/15/2034	4.000	-	=	=	=	=	18,060,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	20,415,000	11/15/2034	5.000	-	-	-	-	-	20,415,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	46,570,000	11/15/2035	5.000	-	-	-	-	-	46,570,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	46,225,000	11/15/2035	5.000	=	=	=	=	=	46,225,000	-
A3/BBB+/A-/AA			TRB 2016B	6/30/2016	98,000,000	11/15/2036	4.000	-	=	-	=	-	98,000,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2016B TRB 2016C-1	6/30/2016 7/28/2016	105,850,000 4,850,000	11/15/2037 11/15/2017	5.000 3.000	-	-	-	=	-	105,850,000	-
A3/BBB+/A-/AA			TRB 2016C-1	7/28/2016	4,995,000	11/15/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016C-1	7/28/2016	5,245,000	11/15/2019	4.000	-	=	=	=	=	-	-
A3/BBB+/A-/AA			TRB 2016C-1	7/28/2016	5,455,000	11/15/2020	4.000	5,455,000	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2016C-1	7/28/2016	5,675,000	11/15/2021	5.000	-	-	-	-	-	5,675,000	-

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T											Amount	Amount		Amount Swapped
Underlying LT Ratings	Ratings	S T Ratings							Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>		Date Issued	Amount Issued	Maturity	Coupon	<u>2020</u>	<u>in 2020</u>	2020	<u>2020</u>	2020	of December 31, 2020	<u>31, 2020</u>
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-1 TRB 2016C-1	7/28/2016	5,955,000 6,255,000	11/15/2022	5.000 5.000	-	-	-	=	=	5,955,000 6,255,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016 7/28/2016	6,255,000	11/15/2023 11/15/2024	5.000	-	-	-	-	-	6,570,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	6,895,000	11/15/2024	5.000		_	_			6,895,000	
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	7,240,000	11/15/2026	4.000	-	_	_	-	_	7,240,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	7,530,000	11/15/2027	5.000	-	_	_	-	_	7,530,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	7,905,000	11/15/2028	5.000	=	=	-	=	_	7,905,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	8,305,000	11/15/2029	5.000	-	-	-	-	-	8,305,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	8,720,000	11/15/2030	5.000	-	-	-	-	-	8,720,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	9,155,000	11/15/2031	5.000	=	-	-	=	-	9,155,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	9,610,000	11/15/2032	5.000	-	=	-	-	-	9,610,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	10,090,000	11/15/2033	5.000	-	-	-	=	-	10,090,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	10,595,000	11/15/2034	5.000	-	-	-	-	-	10,595,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	11,125,000	11/15/2035	5.000	=	=	-	=	-	11,125,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-1 TRB 2016C-1	7/28/2016	11,680,000	11/15/2036	5.000 4.000	-	-	-	-	-	11,680,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016 7/28/2016	12,265,000 12,755,000	11/15/2037 11/15/2038	4.000	-	-	-	-	-	12,265,000 12,755,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	13,265,000	11/15/2038	5.000	-	-		-		13,265,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	13,930,000	11/15/2040	4.000	_	_	_	_	_	13,930,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	14,485,000	11/15/2041	4.000	_	_	_	-	_	14,485,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	4,650,000	11/15/2042	5.000	_	_	_	_	_	4,650,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,540,000	11/15/2042	4.000	-	-	-	=	-	5,540,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	4,875,000	11/15/2042	3.000	=	=	-	-	-	4,875,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	4,885,000	11/15/2043	5.000	=	-	-	=	-	4,885,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,760,000	11/15/2043	4.000	-	-	-	-	-	5,760,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,020,000	11/15/2043	3.000	=	=	-	-	-	5,020,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,125,000	11/15/2044	5.000	-	-	-	=	-	5,125,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,990,000	11/15/2044	4.000	=	=	-	=	-	5,990,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,175,000	11/15/2044	3.000	=	=	-	=	-	5,175,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-1 TRB 2016C-1	7/28/2016 7/28/2016	5,385,000 6,230,000	11/15/2045 11/15/2045	5.000 4.000	-	-	-	-	-	5,385,000 6,230,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,330,000	11/15/2045	3.000	-	-	-	-	-	5,330,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,655,000	11/15/2045	5.000	-	-	_	-	_	5,655,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	6,480,000	11/15/2046	4.000	_	_	_	_	_	6,480,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	5,485,000	11/15/2046	3.000	_	_	_	-	_	5,485,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	7,950,000	11/15/2047	5.000	-	-	-	=	-	7,950,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	10,380,000	11/15/2047	5.250	=	=	-	-	-	10,380,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	8,350,000	11/15/2048	5.000	=	=	-	-	-	8,350,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	10,920,000	11/15/2048	5.250	-	-	-	-	-	10,920,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	8,765,000	11/15/2049	5.000	=	-	-	-	-	8,765,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	11,495,000	11/15/2049	5.250	-	-	-	-	-	11,495,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	9,205,000	11/15/2050	5.000	-	-	-	-	-	9,205,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	12,100,000	11/15/2050	5.250	-	-	-	=	-	12,100,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-1 TRB 2016C-1	7/28/2016 7/28/2016	9,665,000 12,735,000	11/15/2051 11/15/2051	5.000 5.250	-	-	-	-	-	9,665,000 12,735,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	10,145,000	11/15/2051	5.000	=	=	-	=	-	10,145,000	=
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	13,405,000	11/15/2052	5.250			_			13,405,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	10,655,000	11/15/2052	5.000	-	_	_	-	_	10,655,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	14,105,000	11/15/2053	5.250	_	_	_	_	_	14,105,000	_
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	11,185,000	11/15/2054	5.000	=	=	-	=	_	11,185,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	14,850,000	11/15/2054	5.250	-	-	-	-	-	14,850,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	11,745,000	11/15/2055	5.000	=	=	-	-	-	11,745,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	15,630,000	11/15/2055	5.250	-	-	-	-	-	15,630,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	12,335,000	11/15/2056	5.000	-	-	-	-	-	12,335,000	-
A3/BBB+/A-/AA				TRB 2016C-1	7/28/2016	16,445,000	11/15/2056	5.250	-	=	=	=	-	16,445,000	-
A3/BBB+/A-/AA				TRB 2016C-2a	7/28/2016	26,390,000	11/15/2038	3.000	=	-	-	-	-	26,390,000	-
A3/BBB+/A-/AA				TRB 2016C-2a	7/28/2016	29,730,000	11/15/2038	4.000	-	-	45 505 000	-	-	29,730,000	-
A3/BBB+/A-/AA				TRB 2016C-2b	7/28/2016	15,585,000	11/15/2028	5.000	=	-	15,585,000	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-2b TRB 2016C-2b	7/28/2016 7/28/2016	16,210,000 34,080,000	11/15/2029 11/15/2030	5.000 5.000	=	-	16,210,000 34,080,000	-	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA				TRB 2016C-2b	7/28/2016	60,545,000	11/15/2030	5.000	-	-	60,545,000	-	-	-	-
A3/BBB+/A-/AA				TRB 2016C-2b	7/28/2016	56,290,000	11/15/2031	5.000	-	=	56,290,000	=	-	-	-
A3/BBB+/A-/AA				TRB 2016C-2b	7/28/2016	44,525,000	11/15/2032	5.000	_	-	44,525,000	-	-	-	-
A3/BBB+/A-/AA				TRB 2016C-2b	7/28/2016	46,305,000	11/15/2034	5.000	-	-	46,305,000	-	-	-	-
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Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

	Credit Supported L T										Amount	Amount		Amount Swapped
Underlying L T Ratings	Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Redeemed in	Refinanced in	Amount Outstanding as	as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA	-		TRB 20160	10/26/2016	21,685,000	11/15/2017	4.000	=	-	=	-	-	-	-
A3/BBB+/A-/AA			TRB 20160		23,245,000	11/15/2018	5.000	=	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 20160		34,785,000	11/15/2019	5.000	-	-	-	=	-	-	-
A3/BBB+/A-/AA			TRB 20160		3,090,000	11/15/2020	4.000	3,090,000	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 20160		55,875,000	11/15/2020	5.000	55,875,000	-	=	=	-	-	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 20160 TRB 20160		66,675,000 19,375,000	11/15/2021 11/15/2022	5.000 5.000	-	-	-	-	-	66,675,000 19,375,000	-
A3/BBB+/A-/AA			TRB 20160		13,725,000	11/15/2022	4.000	=	-	-	-		13,725,000	-
A3/BBB+/A-/AA			TRB 20160		14,510,000	11/15/2026	5.000	_	_	_	_	_	14,510,000	_
A3/BBB+/A-/AA			TRB 20160		57,015,000	11/15/2027	5.000	_	_	-	-	_	57,015,000	_
A3/BBB+/A-/AA			TRB 20160		30,895,000	11/15/2028	5.000	-	_	_	_	_	30,895,000	_
A3/BBB+/A-/AA			TRB 20160		57,805,000	11/15/2029	5.000	=	-	=	=	-	57,805,000	-
A3/BBB+/A-/AA			TRB 2016		60,700,000	11/15/2030	5.000	-	-	-	-	-	60,700,000	-
A3/BBB+/A-/AA			TRB 20160		52,730,000	11/15/2031	5.000	=	=	=	=	-	52,730,000	-
A3/BBB+/A-/AA			TRB 20160		11,000,000	11/15/2031	5.250	=	-	-	-	-	11,000,000	-
A3/BBB+/A-/AA			TRB 20160		31,595,000	11/15/2032	3.000	=	=	=	-	-	31,595,000	-
A3/BBB+/A-/AA			TRB 20160		29,005,000	11/15/2032	4.000	-	-	=	=	-	29,005,000	-
A3/BBB+/A-/AA			TRB 20160		19,845,000	11/15/2033	4.000	-	-	-	-	-	19,845,000	-
A3/BBB+/A-/AA			TRB 20160		20,635,000	11/15/2034	4.000	=	=	=	=	-	20,635,000	=
A3/BBB+/A-/AA			TRB 2016E		21,465,000	11/15/2035	3.125	-	-	-	-	-	21,465,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017A-1 TRB 2017A-1		1,730,000 1,750,000	11/15/2017 11/15/2018	1.500 5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-		1,835,000	11/15/2019	3.000				_			
A3/BBB+/A-/AA			TRB 2017A-		1,890,000	11/15/2020	4.000	1,890,000	_	-	-	_	_	_
A3/BBB+/A-/AA			TRB 2017A-		1,965,000	11/15/2021	5.000	-	_	-	-	_	1,965,000	_
A3/BBB+/A-/AA			TRB 2017A-1		2,065,000	11/15/2022	5.000	=	=	-	=	_	2,065,000	-
A3/BBB+/A-/AA			TRB 2017A-1		2,170,000	11/15/2023	5.000	=	-	=	=	-	2,170,000	-
A3/BBB+/A-/AA			TRB 2017A-	3/16/2017	2,255,000	11/15/2024	4.000	=	=	-	-	-	2,255,000	-
A3/BBB+/A-/AA			TRB 2017A-	3/16/2017	2,365,000	11/15/2025	5.000	=	=	=	=	-	2,365,000	-
A3/BBB+/A-/AA			TRB 2017A-		2,485,000	11/15/2026	5.000	-	-	-	-	-	2,485,000	-
A3/BBB+/A-/AA			TRB 2017A-1		2,610,000	11/15/2027	5.000	=	-	-	-	-	2,610,000	-
A3/BBB+/A-/AA			TRB 2017A-1		2,740,000	11/15/2028	5.000	-	-	=	=	-	2,740,000	-
A3/BBB+/A-/AA			TRB 2017A-		2,875,000	11/15/2029	5.000	-	-	-	-	-	2,875,000	-
A3/BBB+/A-/AA			TRB 2017A-1		3,020,000	11/15/2030	3.250	=	=	-	=	-	3,020,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017A-: TRB 2017A-:		3,120,000	11/15/2031	5.000 5.000	-	-	=	=	-	3,120,000	-
A3/BBB+/A-/AA			TRB 2017A-		3,275,000 3,440,000	11/15/2032 11/15/2033	3.500	=	-	-	-	-	3,275,000 3,440,000	-
A3/BBB+/A-/AA			TRB 2017A-		3,560,000	11/15/2034	5.000						3,560,000	
A3/BBB+/A-/AA			TRB 2017A-		3,735,000	11/15/2035	5.000	_	-	-	-	_	3,735,000	_
A3/BBB+/A-/AA			TRB 2017A-1		3,925,000	11/15/2036	5.000	=	=	-	=	_	3,925,000	-
A3/BBB+/A-/AA			TRB 2017A-1		4,050,000	11/15/2037	5.000	-	-	=	-	-	4,050,000	-
A3/BBB+/A-/AA			TRB 2017A-1		4,320,000	11/15/2038	4.000	=	-	=	=	-	4,320,000	-
A3/BBB+/A-/AA			TRB 2017A-	3/16/2017	4,495,000	11/15/2039	4.000	=	=	-	-	-	4,495,000	-
A3/BBB+/A-/AA			TRB 2017A-	3/16/2017	4,675,000	11/15/2040	4.000	-	-	-	-	-	4,675,000	-
A3/BBB+/A-/AA			TRB 2017A-1		4,860,000	11/15/2041	4.000	=	-	-	-	-	4,860,000	-
A3/BBB+/A-/AA			TRB 2017A-1		5,055,000	11/15/2042	4.000	=	=	=	-	-	5,055,000	-
A3/BBB+/A-/AA			TRB 2017A-		5,255,000	11/15/2043	4.000	-	-	=	=	-	5,255,000	-
A3/BBB+/A-/AA			TRB 2017A-1		5,470,000	11/15/2044	4.000	=	=	-	=	-	5,470,000	-
A3/BBB+/A-/AA			TRB 2017A-1		5,685,000	11/15/2045	4.000	-	-	=	=	-	5,685,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017A-: TRB 2017A-:		5,915,000 1,070,000	11/15/2046 11/15/2047	4.000 5.000	-	-	-	-	-	5,915,000 1,070,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017A-:		5,080,000	11/15/2047	4.000	-	-	-	-	-	5,080,000	-
A3/BBB+/A-/AA			TRB 2017A-		6,405,000	11/15/2047	4.000	-	-	-	-	-	6,405,000	-
A3/BBB+/A-/AA			TRB 2017A-		6,665,000	11/15/2048	5.000	_	_	_	_	-	6,665,000	-
A3/BBB+/A-/AA			TRB 2017A-		6,995,000	11/15/2050	5.000	=	-	-	-	-	6,995,000	-
A3/BBB+/A-/AA			TRB 2017A-		7,345,000	11/15/2051	5.000	=	-	=	-	-	7,345,000	=
A3/BBB+/A-/AA			TRB 2017A-1		7,715,000	11/15/2052	5.250	-	-	-	-	-	7,715,000	-
A3/BBB+/A-/AA			TRB 2017A-2		8,120,000	11/15/2053	5.250	=	-	=	-	-	8,120,000	=
A3/BBB+/A-/AA			TRB 2017A-2	3/16/2017	8,545,000	11/15/2054	5.250	=	-	=	-	-	8,545,000	=
A3/BBB+/A-/AA			TRB 2017A-1		8,995,000	11/15/2055	5.250	-	-	-	-	-	8,995,000	-
A3/BBB+/A-/AA			TRB 2017A-1		9,465,000	11/15/2056	5.250	-	-	-	-	-	9,465,000	-
A3/BBB+/A-/AA			TRB 2017A-		9,960,000	11/15/2057	5.250	-	-	-	-	-	9,960,000	-
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bond		10,875,000	11/15/2024	5.000	-	-	-	-	-	10,875,000	-
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bond	3/16/2017	22,955,000	11/15/2025	5.000	=	-	=	-	-	22,955,000	=

Total

4,424,438,830

250,000,000 1,053,770,000

128,725,000

326,055,000

48,368,162,258

Total Bonds and Notes Issued in 2020 10,170,427,707

New Money Bonds and Notes Issued in 2020 8,939,237,707

Refunding Bonds and Notes Issued in 2020 1,231,190,000

Underlying L T Ratings	Credit Supported L T Ratings	S T Ratings						Amount Matured in	Amount Defeased	Amount Called in	Amount Redeemed in	Amount Refinanced in	Amount Outstanding as	Amount Swapped as of December
Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	Mdy/S&P/Ftch/Krll	<u>Series</u>	Date Issued	Amount Issued	Maturity	Coupon	2020	in 2020	2020	2020	2020	of December 31, 2020	31, 2020
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bonds	3/16/2017	24,105,000	11/15/2026	5.000	-	-	-	-	-	24,105,000	
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bonds	3/16/2017	25,305,000	11/15/2027	5.000	-	-	-	-	-	25,305,000	-
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bonds	3/16/2017	24,940,000	11/15/2028	5.000	-	-	-	-	-	24,940,000	-
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bonds	3/16/2017	13,880,000	11/15/2029	5.000	-	-	-	-	-	13,880,000	-
A3/BBB+/A-/AA			TRB 2017A-2 Refunding Bonds	3/16/2017	14,575,000	11/15/2030	5.000	-	-	-	-	-	14,575,000	-
A3/BBB+/A-/AA			TRB 2017A-1a BANS	2/14/2017	250,000,000	8/1/2017	2.000	-	-	-	-	-		-
A3/BBB+/A-/AA			TRB 2017A-1b BANS	2/14/2017	100,000,000	8/1/2017	5.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-1c BANS	2/14/2017	50,000,000	8/1/2017	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-1d BANS	2/14/2017	25,000,000	8/1/2017	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-1e BANS	2/14/2017	25,000,000	8/1/2017	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-1f BANS	2/14/2017	25,000,000	8/1/2017	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-1g BANS	2/14/2017	25,000,000	8/1/2017	2.000	=	=	=	=	-	-	-
A3/BBB+/A-/AA			TRB 2017A-2a BANS	2/14/2017	50,000,000	10/2/2017	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-2b BANS	2/14/2017	50,000,000	10/2/2017	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017A-2c BANS	2/14/2017	25,000,000	10/2/2017	2.000	=	=	=	=	-	-	-
A3/BBB+/A-/AA			TRB 2017A-2d BANS	2/14/2017	50,000,000	10/2/2017	5.000	=	=	=	=	-	-	-
A3/BBB+/A-/AA			TRB 2017A-2e BANS	2/14/2017	25,000,000	10/2/2017	3.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	25,210,000	11/15/2021	5.000	-	-	-	-	-	25,210,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	7,735,000	11/15/2021	4.000	=	=	=	=	-	7,735,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	4,235,000	11/15/2022	4.000	-	-	-	-	-	4,235,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	53,405,000	11/15/2022	5.000	=	=	=	=	-	53,405,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	3,190,000	11/15/2023	4.000	=	=	=	=	-	3,190,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	167,310,000	11/15/2023	5.000	=	=	=	=	-	167,310,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	2,515,000	11/15/2023	3.000	-	-	-	-	-	2,515,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	145,940,000	11/15/2024	5.000	=	=	=	=	-	145,940,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	2,690,000	11/15/2024	4.000	-	-	-	-	-	2,690,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	103,250,000	11/15/2025	5.000	-	-	-	-	=	103,250,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	54,855,000	11/15/2026	5.000	-	-	-	-	-	54,855,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	1,810,000	11/15/2027	4.000	-	-	-	-	-	1,810,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	42,925,000	11/15/2027	5.000	-	-	-	-	-	42,925,000	-
A3/BBB+/A-/AA			TRB 2017B	9/28/2017	46,955,000	11/15/2028	5.000	-	-	-	-	-	46,955,000	-
A3/BBB+/A-/AA			TRB 2017B-1 BANS	6/29/2017	250,000,000	2/1/2018	2.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2017B-2 BANS	6/29/2017	100,000,000	2/1/2018	2.000	=	-	-	-	=	=	-
A3/BBB+/A-/AA			TRB 2017B-3 BANS	6/29/2017	50,000,000	2/1/2018	2.000	=	=	-	=	-	-	-
A3/BBB+/A-/AA			TRB 2017B-4 BANS	6/29/2017	50,000,000	2/1/2018	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017B-5 BANS	6/29/2017	25,000,000	2/1/2018	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017B-6 BANS	6/29/2017	25,000,000	2/1/2018	2.000	-	-	-	-	-	-	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	44,980,000	11/15/2023	5.000	-	-	-	-	-	44,980,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	4,265,000	11/15/2024	3.000	-	-	-	-	-	4,265,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	4,310,000	11/15/2024	4.000	-	=	-	=	-	4,310,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	96,725,000	11/15/2024	5.000	=	-	-	-	=	96,725,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	133,575,000	11/15/2025	5.000	=	-	-	-	=	133,575,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	1,125,000	11/15/2025	4.000	=	-	-	-	=	1,125,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	1,600,000	11/15/2025	3.000	-	-	-	-	-	1,600,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	4,300,000	11/15/2026	4.000	-	-	-	-	-	4,300,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	1,825,000	11/15/2026	3.000	-	-	-	-	-	1,825,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017C-1 TRB 2017C-1	12/14/2017 12/14/2017	173,050,000 95,205,000	11/15/2026 11/15/2027	5.000 5.000	-	-	-	-	-	173,050,000 95,205,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017C-1 TRB 2017C-1	12/14/2017		11/15/2027	5.000	-	-	-	-	-		-
					146,960,000		5.000	-	-	-	-	-	146,960,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	158,000,000	11/15/2029	5.000	-	-	-	-	-	158,000,000	-
A3/BBB+/A-/AA A3/BBB+/A-/AA			TRB 2017C-1 TRB 2017C-1	12/14/2017 12/14/2017	124,225,000 153,135,000	11/15/2030 11/15/2031	5.000	-	-	-	-	-	124,225,000 153,135,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	68,945,000	11/15/2031	4.000	-	=	=	-	=	68,945,000	-
A3/BBB+/A-/AA			TRB 2017C-1	12/14/2017	99,240,000	11/15/2031	4.000	=	=	=	=	=	99,240,000	-
A3/DDD+/A-/AA			IND 2017C-1	12/14/201/	99,240,000	11/13/2032	4.000	-	-	-	-	-	99,240,000	-

4,424,438,830

Total

250,000,000 1,053,770,000

128,725,000

326,055,000

INTEREST RATE EXCHANGE AGREEMENTS - MTA

As of December 31, 2020 (\$ in millions)

Metropolitan Transportation Authority								
Related Bonds	Notional Amount as of 12/31/20	Effective Date	Maturity Date	Terms Counterparty and Ratings (S&P / Moody's / Fitch)		Fair Value as of 12/31/20		
TRB 2002D-2	\$200.000	01/01/07	11/01/32	Pay 4.45%; receive 69% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	\$ (72.611)		
TRB 2005D & 2005E	250.770	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(56.362)		
TRB 2005E	83.590	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	AIG Financial Products ¹ (BBB+ / Baa1 / BBB+)	(18.787)		
TRB 2012G	355.950	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(98.731)		
DTF 2008A	301.970	03/24/05	11/01/31	Pay 3.3156%; receive 67% 1M LIBOR	Bank of New York Mellon (AA- / Aa2 / AA)	(53.228)		
Total	\$1,192.280					\$ (299.720)		

¹Guarantor: American International Group, Inc., parent of AIG Financial Products.

INTEREST RATE EXCHANGE AGREEMENTS - TBTA

As of December 31, 2020 (\$ in millions)

MTA Bridges and Tunnels								
Related Bonds	Notional Amount as of 12/31/20	Effective Date	Maturity Date	Terms	Terms Counterparty and Ratings (S&P / Moody's / Fitch)			
TBTA 2002F & 2003B-2	\$188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	Citibank, N.A. (A+ / Aa3 / A+)	\$ (41.775)		
TBTA 2005B-2	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(41.775)		
TBTA 2005B-3	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas North America (A+ / Aa3 / A+)	(41.775)		
TBTA 2005B-4	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(41.775)		
TRB 2002G-1 & 2011B, TBTA 2001C ² & 2005A	110.725³	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	U.S. Bank N.A. (AA- / A1 / AA-)	$(15.629)^3$		
TRB 2002G-1 & 2011B, TBTA 2001C ² & 2005A	110.725³	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	Wells Fargo Bank, N.A. (A+ / Aa2 / AA-)	(15.629) ³		
Total	\$974.650					\$ (198.359)		

¹In accordance with a swaption entered into on August 12, 1998, TBTA received an upfront option premium of \$22.740, which is being amortized over the life of the swap agreement.

²Between November 22, 2016 and December 5, 2016, the Variable Rate Certificates of Participation, Series 2004A were redeemed. Corresponding notional amounts from the Series 2004A COPs were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C.

³Pursuant to an Interagency Agreement (following novations from UBS in April 2016), MTA New York City Transit is responsible for 68.7%, MTA is responsible for 21.0%, and TBTA is responsible for 10.3% of the transaction.

COST OF ISSUANCE – 2020¹²³

Series	TRB 2020A-1,2	TRB 2020B-1,2	TRB 2020C-1,2	TRB 2020D	TRB 2020E	TRB BAN 2020A-1,2S	TRB BAN 2020B	
Dated Issued	1/16/2020	3/27/2020	5/14/2020	9/18/2020	11/13/2020	1/8/2020	8/26/2020	Sub Total ⁴
Issue Amount	\$924,750,000	\$162,660,000	\$1,725,000,000	\$900,000,000	\$419,915,000	\$1,500,000,000	\$450,720,000	\$6,083,045,000
NYS Bond Issuance Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Financial Advisor	65,000	0	340,034	0	128,000	130,000	0	\$663,034
Bond Insurance	1,984,783	0	0	0	0	0	0	\$1,984,783
Underwriter's Discount/ Counsel	4,080,007	150,628	8,007,051	944,000	1,884,852	221,000	450,720	\$15,738,257
Bond Counsel	211,000	120,000	592,879	215,000	260,000	250,000	117,500	\$1,766,379
Disclosure Counsel	103,753	0	296,440	106,000	130,000	125,000	58,750	\$819,943
Rating Agency	344,000	37,000	507,500	280,000	201,995	194,500	62,040	\$1,627,035
Verification/Auction Agent	0	0	0	0	0	0	0	\$0
Trustee	20,000	5,000	17,438	10,000	10,000	20,000	9,400	\$91,838
Printing and Distribution	5,000	0	11,866	4,250	4,250	5,000	2,115	\$32,481
Green Bond Certification	9,247	0	10,000	9,000	4,199	0	0	\$32,446
Independent Engineer and Miscellaneous	3,000	61,000	334,415	1,500	1,501	48,000	18,095	\$467,511
Total	\$6,825,790	\$373,628	\$10,117,622	\$1,569,750	\$2,624,797	\$993,500	\$718,620	\$23,223,707

¹ Includes cost of issuance estimates when actual data is not available.
² In addition to the cost of issuance related to bonds and notes issued in 2020 as detailed in the table above, in 2020, across the MTA debt portfolio, MTA incurred \$3.7 million of cost of issuance related to refinancing/remarketing and other debt transactions and \$16.5 million of on-going debt support costs.

³ Totals may not add due to rounding.

⁴ Total Issue Amount does not include the bond issuance related to the MTA RRIF Financing Agreement (TRB 2015X-3) or MTA HRY 2020A as there were no costs associated with them.

COST OF ISSUANCE CONTINUED FROM PAGE VII¹²³

Series	TBTA 2020A	PMT BAN 2020A	Sub Total- This	Total⁴	
Dated Issued	5/27/2020	12/17/2020	Page		
Issue Amount	\$525,000,000	\$2,907,280,000	\$3,432,280,000	\$9,515,325,000	
NYS Bond Issuance Fee	\$0	\$0	\$0	\$0	
Financial Advisor	65,000	0	\$65,000	\$728,034	
Bond Insurance	\$0	\$0	\$0	\$1,984,783	
Underwriter's Discount/ Counsel	2,461,537	2,907,280	\$5,368,817	\$21,107,075	
Bond Counsel	190,000	909,175	\$1,099,175	\$2,865,554	
Disclosure Counsel	95,000	166,326	\$261,326	\$1,081,269	
Rating Agency	252,500	125,000	\$377,500	\$2,004,535	
Verification/Auction Agent	0	0	\$0	\$0	
Trustee	12,000	5,000	\$17,000	\$108,838	
Printing and Distribution	4,500	0	\$4,500	\$36,981	
Green Bond Certification	0	0	\$0	\$32,446	
Independent Engineer and Miscellaneous	281,500	2,200	\$283,700	\$751,211	
Total	\$3,362,037	\$4,114,981	\$7,477,018	\$30,700,725	

¹ Includes cost of issuance estimates when actual data is not available.

² In addition to the cost of issuance related to bonds and notes issued in 2020 as detailed in the table above, in 2020, across the MTA debt portfolio, MTA incurred \$3.7 million of cost of issuance related to refinancing/remarketing and other debt transactions and \$16.5 million of on-going debt support costs.

³ Totals may not add due to rounding.

⁴ Total Issue Amount does not include the bond issuance related to the MTA RRIF Financing Agreement (TRB 2015X-3) or MTA HRY 2020A as there were no costs associated with them.