



# **Derivatives Portfolio Report**

**MTA Finance Department  
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## **MTA's derivatives program reduces budget risk by employing interest rate and fuel hedging strategies**

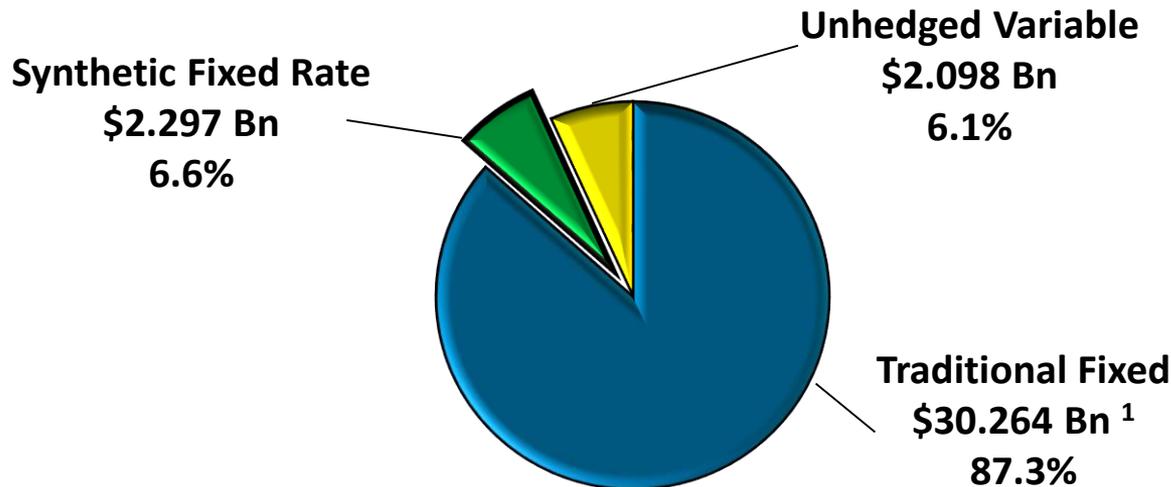
- MTA's synthetic fixed rate portfolio remains low cost
- \$2.3 billion notional with 8 counterparties
  - Executed 2001 thru 2007
  - Weighted average synthetic fixed rate of 4.12%
- MTA's fuel hedging program mitigates budget risk by dollar cost averaging half of our ultra-low sulfur diesel ("ULSD") expenses
  - 24 hedges with 5 counterparties
  - Final maturity 2020
  - Average locked in rate for the next 12 months is \$1.81



# Interest Rate Swaps



# MTA's debt portfolio is designed to manage budget volatility while maintaining a low cost of capital



- Interest rate exposure is managed through a combination of low cost synthetic fixed rate, fixed rate portfolio management through refundings and reasonable level of floating rate debt
- Exposure to liquidity events is manageable with a total variable rate debt load of \$4.396 billion allocated between bank facilities and FRNs

Note: As of October 1, 2018 and excludes State Service Contract Bonds, Special Obligation Bonds and Hudson Rail Yard Obligations.

<sup>1</sup> Excludes Put Bonds and BANs.



## **Outstanding synthetic fixed rate debt is declining and remains low cost**

- The weighted average cost of the synthetic fixed rate portfolio is 4.12% (including fees, excluding benefit of up-front payments)
- Synthetic fixed rate exposure continues to be manageable
- Mark-to-Market values do not impact capital or operating budgeting



# Outstanding counterparty exposure is manageable across strong counterparties

Swap Counterparty	Ratings Moody's/S&P/Fitch		Notional Amount (\$000)		% of Total Notional		MTM (mid)	
	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>
AIG Financial Products Corp.	Baa1/BBB+/BBB+	Baa1/BBB+/BBB+	\$98,745	\$95,175	4	4	(\$18,477)	(\$12,149)
BNP Paribas North America, Inc.	Aa3/A/A+	Aa3/A/A+	191,300	190,300	8	8	(31,952)	(19,382)
Citibank, N.A.	A1/A+/A+	A1/A+/A+	191,300	190,300	8	8	(31,952)	(19,382)
JPMorgan Chase Bank, N.A.	Aa3/A+/AA-	Aa3/A+/AA	782,950	758,600	33	33	(191,807)	(132,078)
The Bank of New York Mellon	Aa2/AA-/AA	Aa2/AA-/AA	328,980	326,860	14	14	(49,808)	(30,593)
UBS AG	A1/A+/AA-	Aa3/A+/AA-	487,535	475,825	21	21	(87,384)	(55,828)
US Bank, N.A.	A1/AA-/AA	A1/AA-/AA-	139,238	130,088	6	6	(17,541)	(10,485)
Wells Fargo Bank, N.A.	Aa2/AA-/AA	Aa2/A+/AA-	<u>139,238</u>	<u>130,088</u>	6	6	<u>(17,541)</u>	<u>(10,485)</u>
<b>Total</b>			<b>\$2,359,285</b>	<b>\$2,297,235</b>			<b>(\$446,463)</b>	<b>(\$290,380)</b>

- MTA continues to seek novation opportunities to increase counterparty credit strength and/or improve economic and credit terms

<sup>1</sup> Data from Mohanty Gargiulo LLC Interest Swap Portfolio Reports dated 9/29/17 and 9/28/2018  
Totals may not add due to rounding.



# Fuel Hedging Program



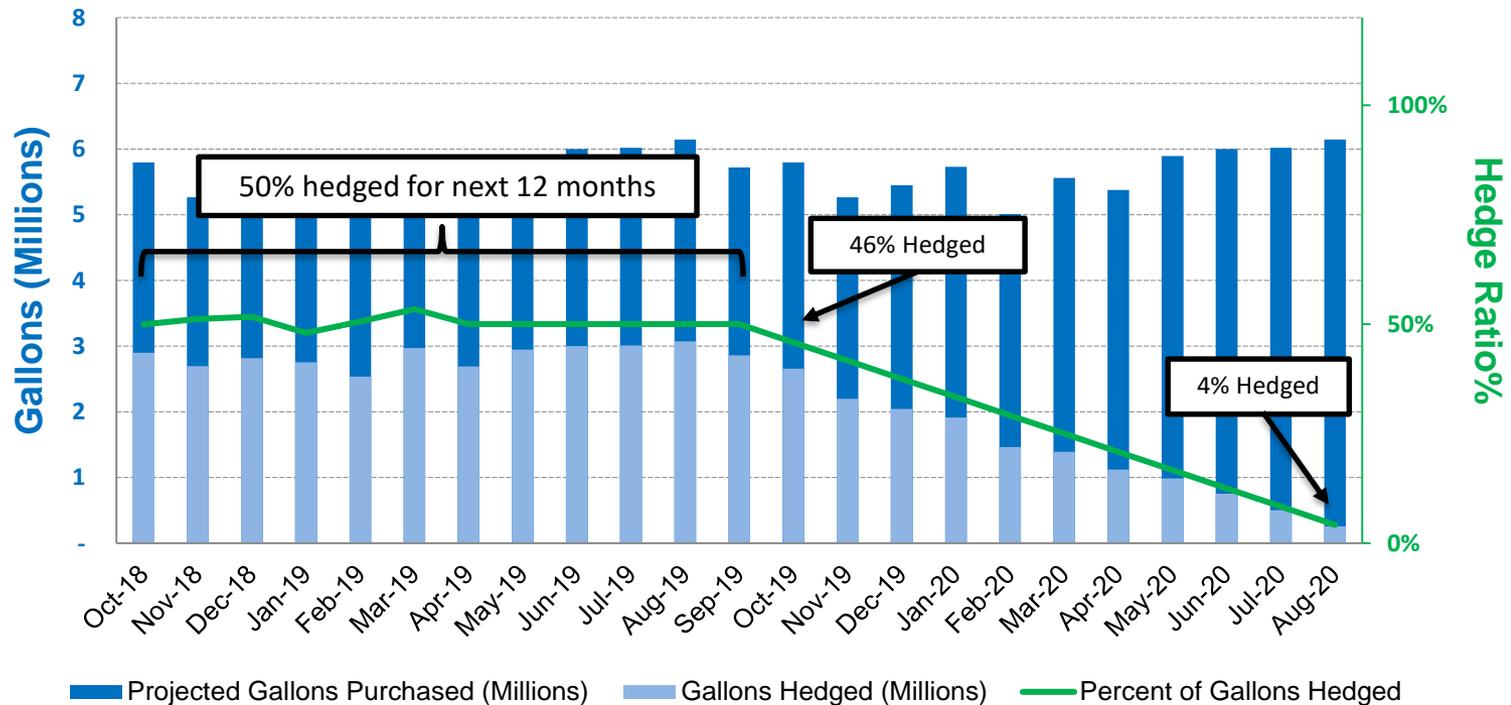
## **MTA hedges 50% of its fuel costs to protect ULSD budget from volatility**

- Currently hedging 50% of annual ultra-low sulfur diesel (“ULSD”) expenditures pursuant to existing Board Authorization in September 2012
- Hedges are procured through a competitive bidding process with pre-approved counterparties:
  - J. Aron & Company (42,227,969 gallons hedged)
  - Merrill Lynch Commodities Inc. (2,820,856 gallons hedged)
  - Macquarie Energy LLC (2,799,258 gallons hedged)
  - Cargill (945,767 gallons hedged)
  - JP Morgan (712,724 gallons hedged)



# Current portfolio hedges 50% of the next 12 months of projected fuel purchases laddered in over time

## Gallons Hedge Ratio

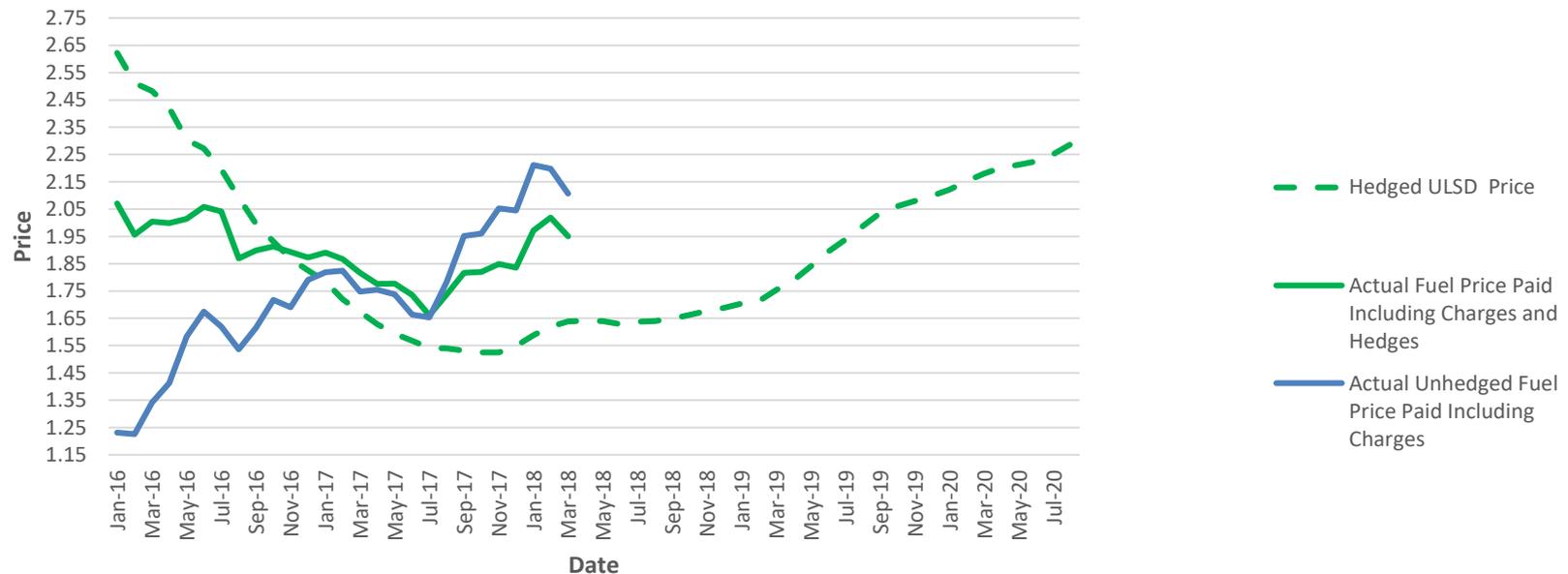


- The goal of the program is to be 50% hedged for the next 12 months.
- Hedges are entered into monthly for roughly 4% of the projected fuel purchases expected to occur 13-24 months from each hedge execution date.



# Hedge program provides budget stability while protecting against commodity price spikes

- Executing monthly forward hedges results in deferring the impact of major market moves in any current budget year by shifting them 12 months forward into future budgets
- With limited resources to protect the budget from negative volatility this strategy will reduce the immediate impact of potential spikes in fuel prices



- Sometimes this will result in not realizing the full effect of lower prices in a budget year, as was the case in 2016.
- But we do begin to realize the benefit of those falling prices in future years, e.g., second-half 2017 and first-quarter 2018.



# Appendix



# Interest Rate Derivative Contract Bond Allocation

## Interest Rate Derivative Contract Bond Allocation

Issue	Bond Series	Par Amount (\$Mn)	Fixed Rate Paid (%)	Variable Rate Index Received	Maturity Date	MTM Values (\$Mn)
Transportation Revenue						
	2002D-2	\$200.00	4.450%	69% 1-Month LIBOR	November 1, 2032	(\$52.300)
	2002G-1 <sup>1</sup>	127.66	3.520	67% 1-Month LIBOR	January 1, 2030	(7.053)
	2005D & 2005E	380.70	3.561	67% 1-Month LIBOR	November 1, 2035	(48.594)
	2011B <sup>1</sup>	69.59	3.520	67% 1-Month LIBOR	January 1, 2030	(10.578)
	2012G	357.15	3.563	67% 1-Month LIBOR	November 1, 2032	(60.134)
	Total	<u>\$1,135.10</u>				<u>(\$178.659)</u>
Dedicated Tax Fund						
	2008A	\$326.86	3.316	67% 1-Month LIBOR	November 1, 2031	(\$30.593)
	Total	<u>\$326.86</u>				<u>(\$30.593)</u>
Bridges and Tunnels --General Revenue						
	2001C	\$40.28	3.520	67% 1-Month LIBOR	January 1, 2030	(\$1.313)
	2002F& 2003B	190.30	3.076	67% 1-Month LIBOR	January 1, 2032	(19.382)
	2005A	22.65	3.520	67% 1-Month LIBOR	January 1, 2030	(2.025)
	2005B	570.90	3.076	67% 1-Month LIBOR	January 1, 2032	(58.146)
	Total	<u>\$824.13</u>				<u>(\$80.866)</u>
Bridges and Tunnels --Subordinate						
	2000ABCD	\$11.15	6.080	SIFMA-15 bps	January 1, 2019	(\$0.262)
	Total	<u>\$11.15</u>				<u>(\$0.262)</u>

Notes: Data for derivative contracts outstanding as of 9/28/18

Totals may not add due to rounding.

<sup>1</sup> Associated swap is with TBTA.