

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-87918/January 9, 2020]

Order Making Fiscal Year 2020 Annual Adjustments to Transaction Fee Rates

I. Background

Section 31 of the Securities Exchange Act of 1934 (“Exchange Act”) requires each national securities exchange and national securities association to pay transaction fees to the Commission.¹ Specifically, Section 31(b) requires each national securities exchange to pay to the Commission fees based on the aggregate dollar amount of sales of certain securities (“covered sales”) transacted on the exchange.² Section 31(c) requires each national securities association to pay to the Commission fees based on the aggregate dollar amount of covered sales transacted by or through any member of the association other than on an exchange.³

Section 31 of the Exchange Act requires the Commission to annually adjust the fee rates applicable under Sections 31(b) and (c) to a uniform adjusted rate.⁴ Specifically, the Commission must adjust the fee rates to a uniform adjusted rate that is reasonably likely to produce aggregate fee collections (including assessments on security futures transactions) equal to the regular appropriation to the Commission for the applicable fiscal year.⁵

¹ 15 U.S.C. 78ee.

² 15 U.S.C. 78ee(b).

³ 15 U.S.C. 78ee(c).

⁴ In some circumstances, the SEC also must make a mid-year adjustment to the fee rates applicable under Sections 31(b) and (c).

⁵ 15 U.S.C. § 78ee(j)(1) (the Commission must adjust the rates under Sections 31(b) and (c) to a “uniform adjusted rate that, when applied to the baseline estimate of the aggregate dollar amount of sales for such fiscal year, is reasonably likely to produce aggregate fee collections under [Section 31] (including assessments collected under [Section 31(d)]) that are equal to the regular appropriation to the Commission by Congress for such fiscal year.”).

The Commission is required to publish notice of the new fee rates under Section 31 not later than 30 days after the date on which an Act making a regular appropriation for the applicable fiscal year is enacted.⁶ On December 20, 2019, the President signed into law the Consolidated Appropriations Act, 2020, which includes total appropriations of \$1,825,525,000 to the SEC for fiscal year 2020.

II. Fiscal Year 2020 Annual Adjustment to the Fee Rate

The new fee rate is determined by (1) subtracting the sum of fees estimated to be collected prior to the effective date of the new fee rate⁷ and estimated assessments on security futures transactions to be collected under Section 31(d) of the Exchange Act for all of fiscal year 2020⁸ from an amount equal to the regular appropriation to the Commission for fiscal year 2020, and (2) dividing by the estimated aggregate dollar amount of covered sales for the remainder of the fiscal year following the effective date of the new fee rate.⁹

⁶ 15 U.S.C. § 78ee(g).

⁷ The sum of fees to be collected prior to the effective date of the new fee rate is determined by applying the current fee rate to the dollar amount of covered sales prior to the effective date of the new fee rate. The exchanges and FINRA have provided data on the dollar amount of covered sales through November, 2019. To calculate the dollar amount of covered sales from December, 2019 to the effective date of the new fee rate, the Commission is using a new methodology described further in this order and also in Appendix A of this order.

⁸ Although the Commission is using a new methodology to calculate the baseline estimate of the aggregate dollar amount of covered sales, the Commission is using the same methodology it has used previously to estimate assessments on security futures transactions to be collected in fiscal year 2020. An explanation of the methodology appears in Appendix A.

⁹ To estimate the aggregate dollar amount of covered sales for the remainder of fiscal year 2020 following the effective date of the new fee rate, the Commission is using the new methodology referenced above and further described in Appendix A of this order.

As noted above, the Consolidated Appropriations Act, 2020, includes total appropriations of \$1,825,525,000 to the Commission for fiscal year 2020.¹⁰ The Commission estimates that it will collect \$798,679,778 in fees for the period prior to the effective date of the new fee rate and \$26,122 in assessments on round turn transactions in security futures products during all of fiscal year 2020. Using the methodology described in Appendix A, the Commission estimates that the aggregate dollar amount of covered sales for the remainder of fiscal year 2020 to be \$46,381,289,295,437.

The uniform adjusted rate is computed by dividing the residual fees to be collected of \$1,026,819,100 by the estimated aggregate dollar amount of covered sales for the remainder of fiscal year 2020 of \$46,381,289,295,437; this results in a uniform adjusted rate for fiscal year 2020 of \$22.10 per million.¹¹

III. Effective Date of the Uniform Adjusted Rate

Under Section 31(j)(4)(A) of the Exchange Act, the fiscal year 2020 annual adjustments to the fee rates applicable under Sections 31(b) and (c) of the Exchange Act shall take effect on the later of October 1, 2019, or 60 days after the date on which a regular appropriation to the Commission for fiscal year 2020 is enacted.¹² The regular appropriation to the Commission for fiscal year 2020 was enacted on December 20, 2019, and accordingly, the new fee rates applicable

¹⁰ The Consolidated Appropriations Act, 2020 includes an appropriation of \$1,815,000,000 for necessary expenses for the Commission and an appropriation of \$10,525,000 for costs associated with relocation under a replacement lease for the Commission's New York regional office facilities. The act provides that "for purposes of calculating the fee rate under section 31(j) of the [Exchange Act] for fiscal year 2020, all amounts appropriated [to the Commission in the act] shall be deemed to be the regular appropriation to the Commission for fiscal year 2020."

¹¹ Appendix A shows the process of calculating the fiscal year 2020 annual adjustment and includes the data used by the Commission in making this adjustment.

¹² 15 U.S.C. § 78ee(j)(4)(A).

under Sections 31(b) and (c) of the Exchange Act will take effect on February 18, 2020.

IV. New Methodology for the Baseline Estimate of the Aggregate Dollar Volume of Covered Sales

The methodology used to generate the baseline estimate of the aggregate dollar amount of covered sales is required to be developed by the Commission in consultation with the Congressional Budget Office (“CBO”) and the Office of Management and Budget (“OMB”).¹³ The Commission recently completed a comprehensive review of the methodology and determined that modifications to the methodology would improve the accuracy of the estimates. The Commission consulted with CBO and OMB regarding the modifications to the methodology, as required under Section 31(l) of the Exchange Act. Consequently, the Commission has adopted the new methodology to generate the baseline estimate of the aggregate dollar volume of covered sales, which is used to determine the new fee rates. The methodology is explained in Appendix A of this order.

¹³ 15 U.S.C. § 78ee(l).

V. Conclusion

Accordingly, pursuant to Section 31 of the Exchange Act,

IT IS HEREBY ORDERED that the fee rates applicable under Sections 31(b) and (c) of the Exchange Act shall be \$22.10 per \$1,000,000 effective on February 18, 2020.

By the Commission.

Vanessa A. Countryman
Secretary

APPENDIX A

This appendix provides the methodology for determining the annual adjustment to the fee rates applicable under Sections 31(b) and (c) of the Exchange Act for fiscal year 2020.

Section 31 of the Exchange Act requires the fee rates to be adjusted so that it is reasonably likely that the Commission will collect aggregate fees equal to its regular appropriation for fiscal year 2020.

To make the adjustment, the Commission must project the aggregate dollar amount of covered sales of securities on the securities exchanges and certain over-the-counter (“OTC”) markets over the course of the year. The fee rate equals the ratio of the Commission’s regular appropriation for fiscal year 2020 (less the sum of fees to be collected during fiscal year 2020 prior to the effective date of the new fee rate and aggregate assessments on security futures transactions during all of fiscal year 2020) to the estimated aggregate dollar amount of covered sales for the remainder of the fiscal year following the effective date of the new fee rate.

For 2020, the Commission has estimated the aggregate dollar amount of covered sales by projecting forward the trend established in the previous decade. More specifically, the dollar amount of covered sales was forecasted for months subsequent to November 2019, the last month for which the Commission has data on the dollar volume of covered sales.¹⁴

The following sections describe this process in detail.

¹⁴ To determine the availability of data, the Commission compares the date of the appropriation with the date the transaction data are due from the exchanges (10 business days after the end of the month). If the business day following the date of the appropriation is equal to or subsequent to the date the data are due from the exchanges, the Commission uses these data. The appropriation was signed on December 20, 2019. The first business day after this date was December 23, 2019. Data for November 2019 were due from the exchanges on December 13, 2019. As a result, the Commission used November 2019 and earlier data to forecast volume for December 2019 and later months.

A. Baseline estimate of the aggregate dollar amount of covered sales for fiscal year 2020

First, calculate the average daily dollar amount of covered sales (“ADS”) for each month in the sample (February 2009 – November 2019). The monthly total dollar amount of covered sales (exchange plus certain OTC markets) is presented in column C of Table A.

The model forecasts the monthly moving average of the average daily dollar amount of covered sales. Each month’s average daily dollar amount of covered sales is calculated by dividing the total covered sales for that month (column C of Table A) by the number of trading days for that month (column B of Table A). These amounts are shown in column D of Table A. The moving average will span the same number of months required to be forecast for the remainder of the fiscal year. The trailing moving average used in the forecast model is presented in column E of Table A.

To capture the recent trends in the monthly changes in the moving averages, calculate the 1-month and 2-month lags of the trailing moving average shown in column E in Table A. These amounts are shown in columns F and G, respectively, of Table A.

Next, model the monthly trailing moving average of ADS as function of a constant term and the two lagged trailing moving averages using the ordinary least squares technique.

Use the estimated model to forecast the trailing moving average of ADS of the first month after the last available monthly data. Estimate the trailing moving average of the second month using the forecasted value of the first month and the actual value of the month before that. Similarly, estimate the trailing moving average of the third month using the forecasted values of the two previous months. Continue in this fashion until the end of the fiscal year.

The estimate of the trailing moving average ADS for the last applicable month in the fiscal year is a prediction of the moving average for those months that need to be predicted. This

estimate is used as the predicted value of ADS for each month in the forecast period; to obtain the forecast total covered sales for each month, multiply the predicted ADS by the number of days in each month.

The following is a more formal (mathematical) description of the procedure:

1. Begin with the monthly data for total dollar volume of covered sales (column C). The sample spans ten years, from February 2009 – November 2019.¹⁵ Divide each month's total dollar volume by the number of trading days in that month (column B) to obtain the average daily dollar volume (ADS, column D).
2. For each month t , calculate the 9-month trailing moving average of ADS (shown in column E). For example, the value for October 2010 is the average of the 9 months ending in October, 2010, or February 2010 through October 2010 inclusive.
3. Calculate the 1-month and 2-month lags of the trailing moving average. For example, the 1-month lag of the 9-month trailing moving average for October, 2010 is equal to the 9-month trailing moving average for September, 2010. The 2-month lag of the 9-month trailing moving average for October 2010 is equal to the 9-month trailing moving average for August 2010. These are shown in columns F and G.
4. Estimate the model using ordinary least squares:

$$y_t = \alpha + \beta_1 y_{t-1} + \beta_2 y_{t-2} + u_t$$

¹⁵ Because the model uses a two period lag in the 9-month trailing moving average of average daily covered sales, ten additional months of data are added to the table so that the model is estimated with 120 observations.

Where y_t is the 9-month trailing moving average of the average daily sales for month t, and y_{t-1} and y_{t-2} are the 1-month and 2-month lags of y_t , and u_t representing the error term for month t. The model can be estimated using standard commercially available software. The estimated parameter values are $\hat{\alpha} = 3,776,474,199$, $\hat{\beta}_1 = +1.4834$ and $\hat{\beta}_2 = -0.49513$. The root-mean squared error (RMSE) of the regression is 4,771,330,095.

5. The predicted value of the 9-month trailing moving average of the last month to be forecast represents the final forecast of covered sales for the entire prediction period. This value is shown in column H. This represents the prediction for August of 2020. To calculate this value from the model above, one needs the 1-month and 2-month lag of the 9-month trailing moving average ADS, i.e., the 9-month trailing moving average for June and July. The 9-month trailing moving average for July is obtained by using the 1-month and 2-month lags for July, that is, the 9-month trailing moving averages for June and May. To arrive at all the necessary inputs, one begins with the first month to be forecast, in this case, December 2019, and iterates predictions forward until the last month is predicted. One then multiplies the final predicted 9-month trailing moving average ADS by the number of days in each month to arrive at the forecast total dollar amount of covered sales. This is shown in column I.

6. For example, for December 2019, using the $\hat{\alpha}$, $\hat{\beta}_1$, and $\hat{\beta}_2$ parameters shown above, along with the 1-month and two-month lags in the 9-month trailing moving average ADS (representing the 9-month trailing moving average ADS for November and October 2019, respectively), one can estimate the forecast 9-month trailing moving average ADS for December: $3,776,474,199 + (1.4834 \times 343,446,332,375) + (-0.49513 \times 344,795,734,916) = 342,525,566,044$.

7. With the estimated 9-month trailing moving average ADS for December 2019 calculated above, one can estimate the 9-month trailing moving average ADS for January, 2020. The estimate obtained from December becomes the 1-month lag for January, and the 1-month lag used in the December forecast becomes the 2-month lag for the January forecast. Thus, the predicted 9-month trailing moving average ADS for January 2020 is calculated as:

$$3,776,474,199 + (1.4834 \times 342,525,566,044) + (-0.49513 \times 343,446,332,375) = 341,827,831,235.$$

8. Using the forecasts for December and January, one can estimate the value for February. Repeat this procedure for subsequent months, until the estimate for August 2020 is obtained. This value is 338,549,556,901.¹⁶ This value is then used to calculate the final forecast total monthly covered sales for all 9 months from December 2019 through August 2020.
9. To obtain the estimate of total monthly covered sales for each month, multiply the number of trading days in the month, shown in column B in Table A, by the final forecast 9-month trailing moving average ADS, shown in column H of Table A. This product is shown in column I of Table A, and these figures are used to calculate the new fee rate.

B. Using the forecasts from A to calculate the new fee rate

1. Use Table A to estimate fees collected for the period September 1, 2019 through February 17, 2020. The projected aggregate dollar amount of covered sales for this period is

¹⁶ One obtains insignificantly different values using the rounded parameter estimates shown above. The predicted ADS values displayed above represents the full precision estimate.

\$38,583,564,152,842. Actual and projected fee collections at the current fee rate of \$20.70 per million are \$798,679,778.

2. Estimate the amount of assessments on security futures products collected from September 1, 2019 through August 31, 2020. First, calculate the average and the standard deviation of the change in log average daily sales, in column E, for the 120 months ending December 2019. The average is 0.00293464 and the standard deviation is 0.11329321. These are used to estimate an average growth rate in ADS using the formula $\exp\left(0.00293464 + \frac{1}{2}0.11329321^2\right) - 1$. This results in an average monthly increase of 0.93962%. Apply this monthly increase to the last month for which single stock futures' assessments are available, which was \$2,068.87, for November 2019. Estimate all subsequent months in fiscal year 2020 by applying the growth rate to the previously estimated monthly value, and sum the results. This totals \$26,122.20 for the entire fiscal year.
3. Subtract the amounts \$798,679,778 and \$26,122 from the target off-setting collection amount set by Congress of \$1,825,525,000, leaving \$1,026,819,100 to be collected on dollar volume for the period February 18, 2020 through August 31, 2020.
4. Use Table A to estimate dollar volume for the period February 18, 2020 through August 31, 2020. The estimate is \$46,381,289,295,437. Finally, compute the fee rate required to produce the additional \$1,026,819,100 in revenue. This rate is \$1,026,819,100 divided by \$46,381,289,295,437 or 0.00002213865.
5. Round the result to the seventh decimal point, yielding a rate of 0.0000221 (or \$22.10 per million).

This table summarizes the estimates of the aggregate dollar amount of covered sales, by time period. The figures in this table can be used to determine the new fee rate.

Table A. Baseline estimate of the aggregate dollar amount of sales.

Fee rate calculation.

a. Baseline estimate of the aggregate dollar amount of sales, 09/01/2019 to 01/31/2020 (\$Millions)	35,198,069
b. Baseline estimate of the aggregate dollar amount of sales, 02/01/2020 to 02/17/2020 (\$Millions)	3,385,496
c. Baseline estimate of the aggregate dollar amount of sales, 02/18/2020 to 02/29/2020 (\$Millions)	3,046,946
d. Baseline estimate of the aggregate dollar amount of sales, 03/01/2020 to 08/31/2020 (\$Millions)	43,334,343
e. Estimated collections in assessments on security futures products in fiscal year 2020 (\$Millions)	0.026
f. Implied fee rate $((\$1,825,525,000 - \$20.70*(a+b) - e) / (c+d))$	\$22.10

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Feb-09	19	\$4,771,470,184,048	\$251,130,009,687					
Mar-09	22	\$5,885,594,284,780	\$267,527,012,945					
Apr-09	21	\$5,123,665,205,517	\$243,984,057,406					
May-09	20	\$5,086,717,129,965	\$254,335,856,498					
Jun-09	22	\$5,271,742,782,609	\$239,624,671,937					
Jul-09	22	\$4,659,599,245,583	\$211,799,965,708					
Aug-09	21	\$4,582,102,295,783	\$218,195,347,418					
Sep-09	21	\$4,929,155,364,888	\$234,721,684,042					
Oct-09	22	\$5,410,025,301,030	\$245,910,240,956	\$240,803,205,177				
Nov-09	20	\$4,770,928,103,032	\$238,546,405,152	\$239,405,026,896	\$240,803,205,177			
Dec-09	22	\$4,688,555,303,171	\$213,116,150,144	\$233,359,375,473	\$239,405,026,896	\$240,803,205,177		
Jan-10	19	\$4,661,793,708,648	\$245,357,563,613	\$233,511,987,274	\$233,359,375,473	\$239,405,026,896		
Feb-10	19	\$4,969,848,578,023	\$261,570,977,791	\$234,315,889,640	\$233,511,987,274	\$233,359,375,473		
Mar-10	23	\$5,563,529,823,621	\$241,892,601,027	\$234,567,881,761	\$234,315,889,640	\$233,511,987,274		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Apr-10	21	\$5,546,445,874,917	\$264,116,470,234	\$240,380,826,709	\$234,567,881,761	\$234,315,889,640		
May-10	20	\$7,260,430,376,294	\$363,021,518,815	\$256,472,623,530	\$240,380,826,709	\$234,567,881,761		
Jun-10	22	\$6,124,776,349,285	\$278,398,924,967	\$261,325,650,300	\$256,472,623,530	\$240,380,826,709		
Jul-10	21	\$5,058,242,097,334	\$240,868,671,302	\$260,765,475,894	\$261,325,650,300	\$256,472,623,530		
Aug-10	22	\$4,765,828,263,463	\$216,628,557,430	\$258,330,159,480	\$260,765,475,894	\$261,325,650,300		
Sep-10	21	\$4,640,722,344,586	\$220,986,778,314	\$259,204,673,721	\$258,330,159,480	\$260,765,475,894		
Oct-10	21	\$5,138,411,712,272	\$244,686,272,013	\$259,130,085,766	\$259,204,673,721	\$258,330,159,480		
Nov-10	21	\$5,279,700,881,901	\$251,414,327,710	\$258,001,569,090	\$259,130,085,766	\$259,204,673,721		
Dec-10	22	\$4,998,574,681,208	\$227,207,940,055	\$256,369,940,093	\$258,001,569,090	\$259,130,085,766		
Jan-11	20	\$5,043,391,121,345	\$252,169,556,067	\$255,042,505,186	\$256,369,940,093	\$258,001,569,090		
Feb-11	19	\$5,114,631,590,581	\$269,191,136,346	\$244,616,907,134	\$255,042,505,186	\$256,369,940,093		
Mar-11	23	\$6,499,355,385,307	\$282,580,668,926	\$245,081,545,351	\$244,616,907,134	\$255,042,505,186		
Apr-11	20	\$4,975,954,868,765	\$248,797,743,438	\$245,962,553,367	\$245,081,545,351	\$244,616,907,134		
May-11	21	\$5,717,905,621,053	\$272,281,220,050	\$252,146,182,547	\$245,962,553,367	\$245,081,545,351		
Jun-11	22	\$5,820,079,494,414	\$264,549,067,928	\$256,986,436,948	\$252,146,182,547	\$245,962,553,367		
Jul-11	20	\$5,189,681,899,635	\$259,484,094,982	\$258,630,639,500	\$256,986,436,948	\$252,146,182,547		
Aug-11	23	\$8,720,566,877,109	\$379,155,081,613	\$272,824,056,601	\$258,630,639,500	\$256,986,436,948		
Sep-11	21	\$6,343,578,147,811	\$302,075,149,896	\$281,142,635,472	\$272,824,056,601	\$258,630,639,500		
Oct-11	21	\$6,163,272,963,688	\$293,489,188,747	\$285,733,705,770	\$281,142,635,472	\$272,824,056,601		
Nov-11	21	\$5,493,906,473,584	\$261,614,593,980	\$284,891,867,729	\$285,733,705,770	\$281,142,635,472		
Dec-11	21	\$5,017,867,255,600	\$238,946,059,790	\$280,043,577,825	\$284,891,867,729	\$285,733,705,770		
Jan-12	20	\$4,726,522,206,487	\$236,326,110,324	\$278,657,840,812	\$280,043,577,825	\$284,891,867,729		
Feb-12	20	\$5,011,862,514,132	\$250,593,125,707	\$276,248,052,552	\$278,657,840,812	\$280,043,577,825		
Mar-12	22	\$5,638,847,967,025	\$256,311,271,228	\$275,332,741,808	\$276,248,052,552	\$278,657,840,812		
Apr-12	20	\$5,084,239,396,560	\$254,211,969,828	\$274,746,950,124	\$275,332,741,808	\$276,248,052,552		
May-12	22	\$5,611,638,053,374	\$255,074,456,972	\$260,960,214,052	\$274,746,950,124	\$275,332,741,808		
Jun-12	21	\$5,121,896,896,362	\$243,899,852,208	\$254,496,292,087	\$260,960,214,052	\$274,746,950,124		
Jul-12	21	\$4,567,519,314,374	\$217,500,919,732	\$246,053,151,085	\$254,496,292,087	\$260,960,214,052		
Aug-12	23	\$4,621,597,884,730	\$200,939,038,467	\$239,311,422,695	\$246,053,151,085	\$254,496,292,087		

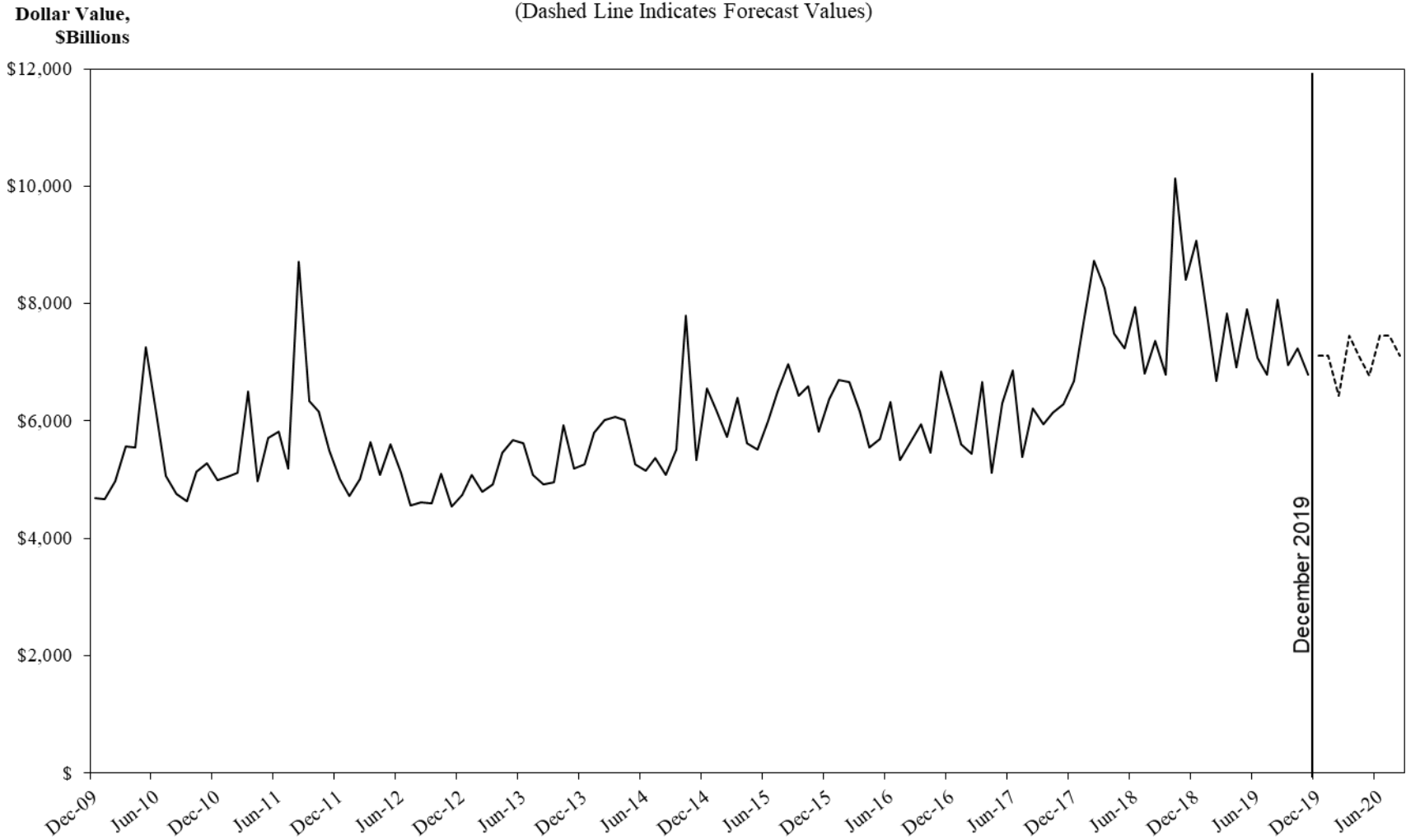
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Sep-12	19	\$4,598,499,962,682	\$242,026,313,825	\$239,653,673,143	\$239,311,422,695	\$246,053,151,085		
Oct-12	21	\$5,095,175,588,310	\$242,627,408,967	\$240,353,817,437	\$239,653,673,143	\$239,311,422,695		
Nov-12	21	\$4,547,882,974,292	\$216,565,855,919	\$236,573,009,683	\$240,353,817,437	\$239,653,673,143		
Dec-12	20	\$4,744,922,754,360	\$237,246,137,718	\$234,454,661,515	\$236,573,009,683	\$240,353,817,437		
Jan-13	21	\$5,079,603,817,496	\$241,885,896,071	\$233,085,097,764	\$234,454,661,515	\$236,573,009,683		
Feb-13	19	\$4,800,663,527,089	\$252,666,501,426	\$232,817,547,148	\$233,085,097,764	\$234,454,661,515		
Mar-13	20	\$4,917,701,839,870	\$245,885,091,993	\$233,038,129,346	\$232,817,547,148	\$233,085,097,764		
Apr-13	22	\$5,451,358,637,079	\$247,789,028,958	\$236,403,474,816	\$233,038,129,346	\$232,817,547,148		
May-13	22	\$5,681,788,831,869	\$258,263,128,721	\$242,772,818,178	\$236,403,474,816	\$233,038,129,346		
Jun-13	20	\$5,623,545,462,226	\$281,177,273,111	\$247,122,924,765	\$242,772,818,178	\$236,403,474,816		
Jul-13	22	\$5,083,861,509,754	\$231,084,614,080	\$245,840,392,000	\$247,122,924,765	\$242,772,818,178		
Aug-13	22	\$4,925,611,193,095	\$223,891,417,868	\$246,654,343,327	\$245,840,392,000	\$247,122,924,765		
Sep-13	20	\$4,959,197,626,713	\$247,959,881,336	\$247,844,759,285	\$246,654,343,327	\$245,840,392,000		
Oct-13	23	\$5,928,804,028,970	\$257,774,088,216	\$249,610,113,968	\$247,844,759,285	\$246,654,343,327		
Nov-13	20	\$5,182,024,612,049	\$259,101,230,602	\$250,325,083,876	\$249,610,113,968	\$247,844,759,285		
Dec-13	21	\$5,265,282,994,173	\$250,727,761,627	\$250,863,158,280	\$250,325,083,876	\$249,610,113,968		
Jan-14	21	\$5,808,700,114,288	\$276,604,767,347	\$254,064,906,990	\$250,863,158,280	\$250,325,083,876		
Feb-14	19	\$6,018,926,931,054	\$316,785,627,950	\$260,567,406,904	\$254,064,906,990	\$250,863,158,280		
Mar-14	21	\$6,068,617,342,988	\$288,981,778,238	\$261,434,574,140	\$260,567,406,904	\$254,064,906,990		
Apr-14	21	\$6,013,948,953,528	\$286,378,521,597	\$267,578,341,642	\$261,434,574,140	\$260,567,406,904		
May-14	21	\$5,265,594,447,318	\$250,742,592,729	\$270,561,805,516	\$267,578,341,642	\$261,434,574,140		
Jun-14	21	\$5,159,506,989,669	\$245,690,809,032	\$270,309,686,371	\$270,561,805,516	\$267,578,341,642		
Jul-14	22	\$5,364,099,567,460	\$243,822,707,612	\$268,759,532,970	\$270,309,686,371	\$270,561,805,516		
Aug-14	21	\$5,075,332,147,677	\$241,682,483,223	\$266,824,116,595	\$268,759,532,970	\$270,309,686,371		
Sep-14	21	\$5,507,943,363,243	\$262,283,017,297	\$268,108,033,892	\$266,824,116,595	\$268,759,532,970		
Oct-14	23	\$7,796,638,035,879	\$338,984,262,430	\$275,039,088,901	\$268,108,033,892	\$266,824,116,595		
Nov-14	19	\$5,340,847,027,697	\$281,097,211,984	\$271,073,709,349	\$275,039,088,901	\$268,108,033,892		
Dec-14	22	\$6,559,110,068,128	\$298,141,366,733	\$272,091,441,404	\$271,073,709,349	\$275,039,088,901		
Jan-15	20	\$6,185,619,541,044	\$309,280,977,052	\$274,636,158,677	\$272,091,441,404	\$271,073,709,349		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Feb-15	19	\$5,723,523,235,641	\$301,238,065,034	\$280,246,766,711	\$274,636,158,677	\$272,091,441,404		
Mar-15	22	\$6,395,046,297,249	\$290,683,922,602	\$285,246,001,552	\$280,246,766,711	\$274,636,158,677		
Apr-15	21	\$5,625,548,298,004	\$267,883,252,286	\$287,919,395,405	\$285,246,001,552	\$280,246,766,711		
May-15	20	\$5,521,351,972,386	\$276,067,598,619	\$291,739,963,782	\$287,919,395,405	\$285,246,001,552		
Jun-15	22	\$6,005,521,460,806	\$272,978,248,218	\$292,928,322,773	\$291,739,963,782	\$287,919,395,405		
Jul-15	22	\$6,493,670,315,390	\$295,166,832,518	\$288,059,719,450	\$292,928,322,773	\$291,739,963,782		
Aug-15	21	\$6,963,901,249,270	\$331,614,345,203	\$293,672,734,252	\$288,059,719,450	\$292,928,322,773		
Sep-15	21	\$6,434,496,770,897	\$306,404,608,138	\$294,590,872,186	\$293,672,734,252	\$288,059,719,450		
Oct-15	22	\$6,592,594,708,082	\$299,663,395,822	\$293,522,252,049	\$294,590,872,186	\$293,672,734,252		
Nov-15	20	\$5,822,824,015,945	\$291,141,200,797	\$292,400,378,245	\$293,522,252,049	\$294,590,872,186		
Dec-15	22	\$6,384,337,478,801	\$290,197,158,127	\$292,346,293,303	\$292,400,378,245	\$293,522,252,049		
Jan-16	19	\$6,696,059,796,055	\$352,424,199,792	\$301,739,731,915	\$292,346,293,303	\$292,400,378,245		
Feb-16	20	\$6,659,878,908,747	\$332,993,945,437	\$308,064,881,562	\$301,739,731,915	\$292,346,293,303		
Mar-16	22	\$6,161,943,754,542	\$280,088,352,479	\$308,854,893,146	\$308,064,881,562	\$301,739,731,915		
Apr-16	21	\$5,541,076,988,322	\$263,860,808,968	\$305,376,446,085	\$308,854,893,146	\$308,064,881,562		
May-16	21	\$5,693,520,415,112	\$271,120,019,767	\$298,654,854,370	\$305,376,446,085	\$308,854,893,146		
Jun-16	22	\$6,317,212,852,759	\$287,146,038,762	\$296,515,013,328	\$298,654,854,370	\$305,376,446,085		
Jul-16	20	\$5,331,797,261,269	\$266,589,863,063	\$292,840,176,355	\$296,515,013,328	\$298,654,854,370		
Aug-16	23	\$5,635,976,607,786	\$245,042,461,208	\$287,718,094,178	\$292,840,176,355	\$296,515,013,328		
Sep-16	21	\$5,942,072,286,976	\$282,955,823,189	\$286,913,501,407	\$287,718,094,178	\$292,840,176,355		
Oct-16	21	\$5,460,906,573,682	\$260,043,170,175	\$276,648,942,561	\$286,913,501,407	\$287,718,094,178		
Nov-16	21	\$6,845,287,809,886	\$325,966,086,185	\$275,868,069,311	\$276,648,942,561	\$286,913,501,407		
Dec-16	21	\$6,208,579,880,985	\$295,646,660,999	\$277,596,770,257	\$275,868,069,311	\$276,648,942,561		
Jan-17	20	\$5,598,200,907,603	\$279,910,045,380	\$279,380,018,748	\$277,596,770,257	\$275,868,069,311		
Feb-17	19	\$5,443,426,609,533	\$286,496,137,344	\$281,088,476,256	\$279,380,018,748	\$277,596,770,257		
Mar-17	23	\$6,661,861,914,530	\$289,646,170,197	\$281,366,268,638	\$281,088,476,256	\$279,380,018,748		
Apr-17	19	\$5,116,714,033,499	\$269,300,738,605	\$281,667,477,031	\$281,366,268,638	\$281,088,476,256		
May-17	22	\$6,305,822,460,672	\$286,628,293,667	\$286,288,125,082	\$281,667,477,031	\$281,366,268,638		
Jun-17	22	\$6,854,993,097,601	\$311,590,595,346	\$289,469,766,433	\$286,288,125,082	\$281,667,477,031		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Jul-17	20	\$5,394,333,070,522	\$269,716,653,526	\$290,544,597,917	\$289,469,766,433	\$286,288,125,082		
Aug-17	23	\$6,206,204,906,864	\$269,834,995,951	\$284,307,810,113	\$290,544,597,917	\$289,469,766,433		
Sep-17	20	\$5,939,886,169,525	\$296,994,308,476	\$284,457,548,721	\$284,307,810,113	\$290,544,597,917		
Oct-17	22	\$6,134,529,538,894	\$278,842,251,768	\$284,338,904,987	\$284,457,548,721	\$284,307,810,113		
Nov-17	21	\$6,289,748,560,897	\$299,511,836,233	\$285,785,093,752	\$284,338,904,987	\$284,457,548,721		
Dec-17	20	\$6,672,181,323,001	\$333,609,066,150	\$290,669,859,969	\$285,785,093,752	\$284,338,904,987		
Jan-18	21	\$7,672,288,677,308	\$365,347,079,872	\$301,341,675,665	\$290,669,859,969	\$285,785,093,752		
Feb-18	19	\$8,725,420,462,639	\$459,232,655,928	\$320,519,938,139	\$301,341,675,665	\$290,669,859,969		
Mar-18	21	\$8,264,755,011,030	\$393,559,762,430	\$329,627,623,370	\$320,519,938,139	\$301,341,675,665		
Apr-18	21	\$7,490,308,402,446	\$356,681,352,497	\$339,290,367,701	\$329,627,623,370	\$320,519,938,139		
May-18	22	\$7,242,077,467,179	\$329,185,339,417	\$345,884,850,308	\$339,290,367,701	\$329,627,623,370		
Jun-18	21	\$7,936,783,802,579	\$377,942,085,837	\$354,879,047,793	\$345,884,850,308	\$339,290,367,701		
Jul-18	21	\$6,807,593,326,456	\$324,171,110,784	\$359,915,587,683	\$354,879,047,793	\$345,884,850,308		
Aug-18	23	\$7,363,115,444,274	\$320,135,454,099	\$362,207,100,779	\$359,915,587,683	\$354,879,047,793		
Sep-18	19	\$6,781,988,459,996	\$356,946,761,052	\$364,800,177,991	\$362,207,100,779	\$359,915,587,683		
Oct-18	23	\$10,133,514,480,998	\$440,587,586,130	\$373,160,234,242	\$364,800,177,991	\$362,207,100,779		
Nov-18	21	\$8,414,847,862,204	\$400,707,041,057	\$366,657,388,145	\$373,160,234,242	\$364,800,177,991		
Dec-18	19	\$9,075,221,733,736	\$477,643,249,144	\$375,999,997,780	\$366,657,388,145	\$373,160,234,242		
Jan-19	21	\$7,960,664,643,749	\$379,079,268,750	\$378,488,655,141	\$375,999,997,780	\$366,657,388,145		
Feb-19	19	\$6,676,391,653,247	\$351,389,034,381	\$380,955,732,359	\$378,488,655,141	\$375,999,997,780		
Mar-19	21	\$7,828,979,311,928	\$372,808,538,663	\$380,385,338,229	\$380,955,732,359	\$378,488,655,141		
Apr-19	21	\$6,907,923,076,080	\$328,948,717,909	\$380,916,183,465	\$380,385,338,229	\$380,955,732,359		
May-19	22	\$7,895,053,976,747	\$358,866,089,852	\$385,219,587,438	\$380,916,183,465	\$380,385,338,229		
Jun-19	20	\$7,070,583,442,058	\$353,529,172,103	\$384,839,855,332	\$385,219,587,438	\$380,916,183,465		
Jul-19	22	\$6,792,811,319,721	\$308,764,150,896	\$370,192,806,973	\$384,839,855,332	\$385,219,587,438		
Aug-19	22	\$8,059,527,400,976	\$366,342,154,590	\$366,374,486,254	\$370,192,806,973	\$384,839,855,332		
Sep-19	20	\$6,958,116,138,899	\$347,905,806,945	\$351,959,214,899	\$366,374,486,254	\$370,192,806,973		
Oct-19	23	\$7,235,982,824,882	\$314,607,948,908	\$344,795,734,916	\$351,959,214,899	\$366,374,486,254		
Nov-19	20	\$6,784,888,230,209	\$339,244,411,510	\$343,446,332,375	\$344,795,734,916	\$351,959,214,899		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Dec-19	21				\$343,446,332,375	\$344,795,734,916	\$338,549,556,901	\$7,109,540,694,921
Jan-20	21					\$343,446,332,375	\$338,549,556,901	\$7,109,540,694,921
Feb-20	19						\$338,549,556,901	\$6,432,441,581,119
Mar-20	22						\$338,549,556,901	\$7,448,090,251,822
Apr-20	21						\$338,549,556,901	\$7,109,540,694,921
May-20	20						\$338,549,556,901	\$6,770,991,138,020
Jun-20	22						\$338,549,556,901	\$7,448,090,251,822
Jul-20	22						\$338,549,556,901	\$7,448,090,251,822
Aug-20	21						\$338,549,556,901	\$7,109,540,694,921

Figure A.
 Aggregate Dollar Amount of Sales Subject to Exchange Act Sections 31(b) and 31(c)¹
 Methodology Developed in Consultation With OMB and CBO
 (Dashed Line Indicates Forecast Values)



¹Forecasted line is not smooth because the number of trading days varies by month.