



AMY PITTER
COMMISSIONER

The Commonwealth of Massachusetts
Department of Revenue
Office of the Commissioner
P.O. Box 9550
Boston, MA 02114-9550

December 30, 2011

Mr. Martin Benison
Comptroller
Commonwealth of Massachusetts
1 Ashburton Place, 9th Floor
Boston, MA 02108

Re: Sales Tax Holiday for August 13 & 14, 2011.

Dear Mr. Benison:

Pursuant to St. 2011, c. 86, the Department of Revenue hereby certifies the amount of forgone sales tax revenue as a result of the sales tax holiday that occurred on August 13 & 14, 2011.

Based on our analysis of the available data, DOR estimates that the amount of forgone sales tax revenue was approximately \$20.98 million. DOR estimates that this forgone revenue had no impact on the MBTA State and Local Contribution Fund, but impacted the amounts going to the School Modernization and Reconstruction Trust Fund (\$3.4 million), and Commonwealth Transportation Fund (\$1.3 million). Further, DOR estimates that the revenue impact on the Convention Center Fund was less than \$19,400. The remainder of the revenue impact of the sales tax holiday was a revenue loss from the General Fund. The DOR also estimates (although with less certainty) that the indirectly raised revenues (income, corporate, and other) due to increased economic activity was less than \$2.0 million.

Attached is a copy of our analysis explaining how we arrived at these estimates and caveats. If you have any questions concerning this matter, please contact me (at 617-626-2201) or Kazim P. Ozyurt, Director of the Office of Tax Policy Analysis (at 617-626-2121).

Sincerely,

A handwritten signature in cursive script that reads "Amy A. Pitter".

Amy Pitter
Commissioner

cc: Jay Gonzalez, Secretary of Administration and Finance
The Honorable Brian S. Dempsey, Chair, House Committee on Ways and Means
The Honorable Stephen M. Brewer, Chair, Senate Committee on Ways and Means
The Honorable Jay R. Kaufman, House Chair, Joint Committee on Revenue
The Honorable Gale D. Candaras, Senate Chair, Joint Committee on Revenue

Massachusetts Department of Revenue

Revenue Impact Analysis

Title: Sales Tax Holiday for August 13 & 14, 2011

Legal Reference: St. 2011, c. 86

Overview: Generally, the state imposes a sales and use tax at the rate of 6.25% on the purchase prices of many “tangible” goods, utilities, and telecommunications services, and on meals served at restaurants. Residential electricity, gas, steam, and certain telecommunications charges are exempt from the sales tax under current law. The sales/use tax statutes also contain various other product-based exemptions, *i.e.*, food, prescription medicines, certain medical products, and clothing with a sales price of up to \$175.

The sales tax holiday legislation waived the sales tax on otherwise taxable non-businesses purchases made on August 13 and 14, 2011, except purchases of telecommunications services, gas, steam, electricity, motor vehicles, motorboats, meals, and any single item the price of which was in excess of \$2,500. Similar to the 2010 sales tax holiday, the *exclusion* of prior sales and layaway sales was in effect during the 2011 sales tax holiday.

Methodology/Data Source/History: The Department of Revenue does not collect data on the amount of taxable purchases made by businesses versus non-businesses, nor does it track sales of individual items. As a result, we extrapolated estimates using aggregated data that we were able to obtain. We did this in two separate ways: (1) based on monthly sales tax returns; and (2) credit card and sales tax collections data.

Under the first methodology, we used DOR sales tax return data to generate an estimate of the amount of exempt sales on the dates of the holiday. Generally, sales data are reported by retailers on a monthly basis, so we do not know how much they had in sales on any given day of a particular month. The appropriate place for sales tax filers to report their exempt sales from the sales tax holiday is on line 2 of the sales tax return¹, labeled “Sales for Resale/Exempt Sales or Other Adjustments”. We analyzed the returns of taxpayers identifying themselves by NAICS² code as part of the broad category of retailers, although this does leave out some retail sales made by other businesses. By focusing on retailers, we think that the result from this methodology somewhat understates the amount of forgone revenues.

The sales tax holiday was not in effect two years ago (August 2009), and so the assessment of the increase in taxes foregone in 2011 compared to 2009 will be more meaningful in this year’s analysis (the incremental change would be due to both the impact from the sales tax holiday in 2011 and other growth factors). We began by comparing the amounts these taxpayers listed on line 2 of their August 2009 tax returns with what those same taxpayers listed on their August 2011 returns.³ We found that about 22,253 retailers met these conditions, and they reported exempt sales of about \$3,536.2 million for August 2009 and \$4,558.7 million for August 2011. Thus, the incremental change in exempt sales from August 2009

¹ See form ST-9, available on DOR’s website:
http://www.mass.gov/Ador/docs/dor/Forms/Wage_Rpt/PDFs/st9.pdf.

² NAICS is the North American Industrial Classification System, under which businesses are supposed to identify their principal industry.

³ For monthly taxpayers, the August returns represent sales that occurred during August, and are due and payable by the twentieth day of the following month. In carrying out this part of the comparison, we ignored taxpayers that only filed returns for one of the two periods, or filed a “zero sales” return, stating that they had no sales during the month.

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and to August 2011 is about \$1,022.5 million. As mentioned, not all of this is attributable to the sales tax holiday – some of the increase may have been due to more sales for resale, greater economic activity, more sales to exempt organizations, or a variety of other factors. We first needed to determine what portion of the gross sales reported in August 2011 and the three-month period immediately preceding August 2011⁴ was attributable to the incremental change in exempt sales reported for the same months and periods in 2009. About 15.476% of the gross sales reported in August 2011 was attributable to incremental change in exempt sales from August 2009; about 12.023% of the gross sales reported for the three-month period immediately preceding August of each year was attributable to incremental change in exempt sales from the same three-month period immediately preceding August 2009. So, the difference (3.453% point) between 15.476% and 12.023% could be interpreted as the incremental impact on the August 2011 exempt sales due to the sales tax holiday. After applying this percent difference (3.453%) and the current sales tax rate of 6.25% to the entire gross sales amount reported for August, 2011 (\$7,359 million), we were able to determine that the forgone sales tax revenue amount due to this year's sales tax holiday was about \$15.88 million.

This estimate does not consider impacts from businesses that identify themselves in NAICS categories other than principally making retail sales. As a result, this methodology may not reflect the possibility that some transactions in other NAICS categories could also be such sales that were affected by the sales tax holiday. Ignoring this possibility may understate the correct amount of forgone revenue. To account for this or to confirm this estimate, we decided to use a second methodology.

Under the second methodology, we attempted to obtain data on credit card sales transactions occurring in Massachusetts from a major credit card company for the month of August 2011 in order to determine the percentage of credit card sales volume attributable to transactions during the sales tax holiday compared to the total transactions for the month as a whole. Unfortunately, we do not have the data for 2011. However, we do have data from them for August 2005 which also had a two-day tax holiday. We assumed that the proportion of sales transactions during the sales tax holiday weekend to monthly sales did not change from 2005 (10.11%). Although not all sales were exempt on the sales tax holiday weekend, for the purposes of this analysis we assumed that they were, and thus our estimate under this methodology is expected to somewhat overstate the amount of forgone revenue. (Examples of sales that would not have been exempt would be items purchased by businesses and items costing more than \$2,500.). We then applied this share to DOR's sales tax collections for that month. The estimated total exempted amount using this method represented \$417.05 million in exempt sales, for a maximum tax impact of about \$26.07 million for this year.

The mid-point value of these two methodologies is our final mid-point estimate of \$20.98 million. The static revenue loss figures reported in the table in the following section appear to represent a reasonable range of values for the amount of forgone revenue attributable to the August 13 & 14 sales tax holiday in 2011.

⁴ It is important to look at the three-month periods immediately preceding August, in which we did not have sales tax holiday, to get a sense of sales trends during those periods, so that we could compare those sales trends to the sales trends in the months (August) that we had sales tax holiday.

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State Fiscal Year Static Revenue Loss Estimate: Since under current law the sales tax holiday is scheduled as a one-time event, occurring only during state fiscal year 2012, the estimate below shows a revenue loss impact only for that fiscal year.

Sales Tax Revenue Forgone Due to Sales Tax Holiday (\$ millions)

	<u>Lower Bound</u>	<u>Midpoint</u>	<u>Upper Bound</u>
FY 2012	15.88	20.98	26.07

Revenues Forgone by Fund:

Sales tax revenue is currently deposited into the General Fund, the MBTA State and Local Contribution Fund⁵, the School Modernization and Reconstruction Trust Fund⁶, Commonwealth Transportation Fund⁷, Convention Center Fund⁸. Under the relevant statutes and formulae, we estimate that the sales tax holiday did not lower the amount going to the MBTA State and Local Contribution Fund, but it did lower the amounts going to the School Modernization and Reconstruction Trust Fund (\$3.4 million), and Commonwealth Transportation Fund (\$1.3 million). The impact on the Convention Center Fund was less than \$19,400. The remainder of the impact was on the General Fund.

Additional Revenues Collected Due to Increased Sales Activity:

DOR is required by the statute to provide an estimate of new revenues raised from personal and corporate income taxes and other sources as a result of the sales tax holiday. It is possible that sales tax holidays increase overall economic activity. Although this activity may have, for example, increased employment due to increased sales, DOR does not have direct data to estimate this impact. Also, the literature and studies conducted on the topic do not provide any definitive guidance in estimating such an impact. Although we attempted to indirectly determine the impact of the sales tax holiday on economic activity based on the literature research, marketing studies, the US Census figures on the average sales per retail employee, and studies on elasticity⁹, our findings are not definitive. We estimate that the maximum impact of indirectly generated additional revenues due to the sales tax holiday would probably be about \$2.0 million. However, the true value of the indirectly raised revenues is probably much less than this amount. According to a 2003 study of a Florida sales tax holiday¹⁰ (most relevant study we could find),

⁵ See Chapter 127 of the Acts of 1999.

⁶ See Chapter 210 of the Acts of 2004.

⁷ See Chapter 35 of the Acts of 2009.

⁸ See Chapter 152 of the Acts of 1997, as amended.

⁹ Consumers' response to a decrease in price (*price elasticity of demand*), and their response to advertising (*elasticity of advertising*).

¹⁰ Harper, Hawkins, Martin, and Sjolander, *Price Effects around a Sales Tax Holiday: An Exploratory Study*, Public Budgeting & Finance, Winter 2003.

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retailers tend to offer less-generous markdowns and may charge higher prices during the holiday than they would in the absence of one, which means that net price reductions to consumers may have been less than the 6.25% tax reduction resulting from the holiday. Because of these reasons, the \$2.0 million indirect impact figure should be used with caution.

Confidence Level: The after-the-fact static sales tax revenue impact figures are generally close to the forecast estimate we conducted prior to the implementation of the sales tax holiday. We are reasonably confident that the true amount of forgone sales revenue lies within the range provided.

As mentioned above, there is a much greater uncertainty as to how sales tax holiday affect economic activity, and the existing literature and studies do not provide a clear guidance on estimating such indirect impacts. It appears that there is a need for further academic and marketing studies to be conducted in the future. Therefore the maximum indirectly-raised revenue figure mentioned above should be used with caution.