

REVENUE ESTIMATE**CIGARETTE AND TOBACCO PRODUCTS TAX EVASION****Summary**

We estimate that cigarette and tobacco products excise tax revenue evasion was about \$214 million in fiscal year 2012-13. This estimate is comprised of \$198 million by retailers who purchase and sell untaxed cigarettes and tobacco products to consumers and \$16 million in casual evasion by consumers. These estimates are broken out by type of tax and program in Table 1.

Table 1				
Summary of Cigarette and Tobacco Products Excise Tax Evasion Estimates				
Millions of Dollars - Fiscal Year 2012-13				
	Tax Rate or Price	Retailers	Consumers	Total
Cigarettes				
Distributions (Millions of Packs)	n.a.	131.5	13.6	145.1
<i>All Excise Taxes</i>	\$0.87	\$114.4	\$11.8	\$126.2
General Fund	\$0.10	\$13.1	\$1.4	\$14.5
Breast Cancer	\$0.02	\$2.6	\$0.3	\$2.9
Proposition 99	\$0.25	\$32.9	\$3.4	\$36.3
Proposition 10	\$0.50	\$65.7	\$6.8	\$72.5
Tobacco Products				
Distributions (Wholesale Cost)	n.a.	\$271	\$15	\$286.2
<i>All Excise Taxes</i>	30.68%	\$83.3	\$4.5	\$87.8
Proposition 99	19.48%	\$52.9	\$2.9	\$55.8
Proposition 10	11.20%	\$30.4	\$1.7	\$32.0
Summary: Cigarettes and Tobacco Products				
General Fund		\$13.1	\$1.4	\$14.5
Breast Cancer		\$2.6	\$0.3	\$2.9
Proposition 99		\$85.8	\$6.3	\$92.0
Proposition 10		\$96.1	\$8.5	\$104.6
All Excise Taxes		\$197.7	\$16.4	\$214.0
Note: Some numbers in the table may not match calculated figures due to rounding.				

Background, Methodology, and Assumptions

Methodology. We updated these estimates with the same methodology we used in our last set of estimates published in 2007.¹ The cigarette estimates were made using our econometric model.²

Cigarettes

Retailers. The cigarette tax evasion estimate methodology involves several steps: (1) predict tax paid distributions in fiscal year 2012-13, running the model with actual excise tax rate of \$0.87 per pack; (2) run the model a second time for the same fiscal year, this time using a cigarette excise tax rate of \$0.10 per pack, the rate in effect prior to 1989; (3) predict what tax paid distributions would have been with a tax rate of \$0.10 per pack; and (4) multiply the difference in tax paid distributions between the \$0.10 model and the \$0.87 model by 25 percent.³ Based on these calculations, we conclude that retailers evade \$114.4 million in tax on 131.5 million packs of cigarettes annually, as shown in the first row of data in Table 1.

Consumers. We assume that consumer cigarette evasion is 1.5 percent of tax paid distributions. This is 13.6 million packs of cigarettes, as shown in Table 1.

The assumption of 1.5 percent is much less than 5 percent, which we used in our 2007 estimates. There are several reasons for a lower percentage.

After consulting with Special Taxes Policy and Compliance Division staff, we have been advised that several external developments since 2007 have reduced sales transactions of cigarettes by consumers via the Internet. In 2010, the federal Jenkins Act was amended, adding additional reporting and licensing requirements on remote sellers. The PACT Act of 2009 amended the Jenkins Act to revise provisions governing the collection of taxes and trafficking by requiring Internet and other remote sellers of cigarettes and smokeless tobacco to comply with the same laws that apply to local cigarette and tobacco licensees. In addition, all of the major credit card companies agreed to stop processing credit card payments for Internet cigarette retailers, and DHL, UPS and FedEx have agreed to stop shipping packages for vendors selling to consumers.

Tobacco Products

Retailers. We updated our tobacco products⁴ evasion estimates with data available from the *2007 Economic Census* and other sources.⁵ Table 2 shows the calculations for tobacco products; footnotes in the table document the updated sources. We adjusted the 2007 data to reflect 2012-13 market conditions. As shown in Table 2, tobacco products excise tax evasion by retailers was \$83.3 million.

¹ "Cigarette and Tobacco Products Excise Tax Revenue Evasion," <http://www.boe.ca.gov/pdf/cig-evasion-07.pdf>

² Copies of the documentation of the model are available upon request from Joe Fitz, Chief, Research and Statistics Section, (916) 323-3802.

³ Twenty-five percent represents the percentage of revenue difference reasonably attributable to evasion based on our review of several studies.

⁴ As used here, the term "tobacco products" refers to all tobacco products except cigarettes. Examples of such products include chewing tobacco, snuff, cigars, pipe tobacco, and roll-your-own cigarette tobacco.

⁵ U.S. Census Bureau, <http://www.census.gov/econ/census/>

Table 2
Estimated Tobacco Products Excise Tax Evasion Revenues
Fiscal Year 2012-13 Tobacco Products Tax Rate: 30.68%

	North American Industry Classification Systems (NAICS) Code	2007 California Retail or CA Taxable Sales (\$ Millions)	U.S. Percentage of Cigarette and Tobacco Sales ¹	Estimated Other Tobacco Products Percentage of Total Tobacco Sales ²	Estimated Percentage of Industry Sales, Adjusted for California Cigarette Sales ³	Estimated California Retail Sales of Other Tobacco Products (\$ Millions)	Estimated Retail Margin Factor ⁴	2007 California Wholesale Sales of Other Tobacco Products (\$ Millions)	Estimated Other Tobacco Products Revenues (\$ Millions)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Retail Industry									
Food Stores	445	\$73,638	2.70%	7.20%	0.09%	\$67	1.31	\$51.2	\$15.7
Liquor Stores	4453	2,958	3.90%	7.20%	0.13%	\$4	1.32	\$2.9	\$0.9
Drug Stores	44611	22,217	0.90%	7.20%	0.03%	\$7	1.27	\$5.3	\$1.6
General Merchandise Stores	452	61,204	1.30%	7.20%	0.04%	\$27	1.35	\$19.8	\$6.1
Service Stations	447	40,325	8.00%	7.20%	0.27%	\$109	1.32	\$82.2	\$25.2
Cigar Shops ⁵	453991	344	n.a.	58.29%	n.a.	\$201	1.27	\$158.1	\$48.5
Cigarette Shops ⁵	453991	81	n.a.	7.20%	n.a.	\$6	1.27	\$4.6	\$1.4
Total Estimated Wholesale Sales and Excise Tax Liabilities						\$420		\$324.31	\$99.5
Wholesale Sales and Excise Tax Liabilities Derived From Board of Equalization Records ⁶								\$157.0	\$48.2
Difference -- Implied Industry Evasion Estimate								\$167.3	\$51.3
Growth Factor for Wholesale Sales From 2007 to 2012-13									1.62
Estimated Retail Tobacco Products Excise Tax Evasion in FY 2012-13									\$83.3

Footnotes:

- 1 Source: 2007 Economic Census, "Product Lines," U.S. Census Bureau.
- 2 Implied by the difference between U.S. tobacco spending in 2012-13 and the average cigarette price multiplied by the number of domestic packs sold. Sources: Tobacco spending: U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 2.4.5U. Cigarette packs and prices: *The Tax Burden on Tobacco: 2013*, Orzechowski and Walker, Arlington, Virginia.
- 3 Source: *The Tax Burden on Tobacco: 2013*, Orzechowski and Walker.
- 4 Source: *A Computational Routine for Disaggregating Industry Margin Data to Estimate Product Margin*, Matthew D. Adkinson, working paper, (BEA WP2003-02), Fall 2003, U.S. Bureau of Economic Analysis.
- 5 Source: Board of Equalization records for NAICS 453991, "Tobacco Shops" for fiscal year 2008-09. Cigar shops broken out from cigarette shops based on names of businesses.
- 6 Source: "Big Return," Board of Equalization Special Taxes Policy and Compliance Division, Line number 7, run 9/6/13.
- 7 Consumers of tobacco products are assumed to purchase the same percentages of tobacco products from out-of-state sources as other products.

Note: Some numbers in the table may not match calculated figures due to rounding.

Consumers. We believe that consumers purchase tobacco products online or by mail order in the same proportions that they purchase any other consumer product they typically buy online. The enforcement tools discussed for cigarettes are less applicable for tobacco products, since the Jenkins and PACT Act provisions do not extend to sales of cigars or pipe tobacco. Data from the U.S. Census Bureau show that e-commerce accounted for 5.8 percent of retail sales in 2013.⁶ We assume that consumer evasion is 5.8 percent of tobacco products sales. This proportion accounts for \$4.5 million in consumer tobacco revenues, as shown in Table 1.

Changes in Market Size. Packs of cigarettes and wholesale costs of tobacco products respectively, are typical measures of the size of these two markets. From 2005-06 (the fiscal year used for our 2007 estimates) to 2012-13 cigarette and tobacco sales have changed dramatically. In 2012-13 tax paid cigarette distributions were 24 percent lower than 2005-06.⁷ In

⁶ U.S. Census Bureau, <http://www.census.gov/retail/>

⁷ There are many reasons for declines in cigarette distributions, including health concerns, product price increases, and federal or state excise tax increases. In April 2009, the federal government increased the excise tax on cigarettes by \$1.01 per pack. In fiscal year 2009-10 California tax paid distributions declined by 8.1 percent, far more than a typical annual decline. Our review in the link below suggests that consumption declines of this magnitude are strongly associated with such relatively large tax increases. http://www.boe.ca.gov/legdiv/pdf/cigarette_price_effects_d2.pdf

contrast to cigarettes, wholesale sales of tobacco products were 106 percent higher in 2012-13 than in 2005-06. These shifts in market size account for much of the difference between these estimates and those published in 2007.

Compliance Improvement Estimates

Cigarette and tobacco products evasion would have been much higher without legislation that has improved compliance significantly since 2003. These improvements, which include licensing (AB 71), a counterfeit-resistant encrypted cigarette tax stamp (SB 1701), and retail inspections, were fully implemented during fiscal years 2004-05 and 2005-06.

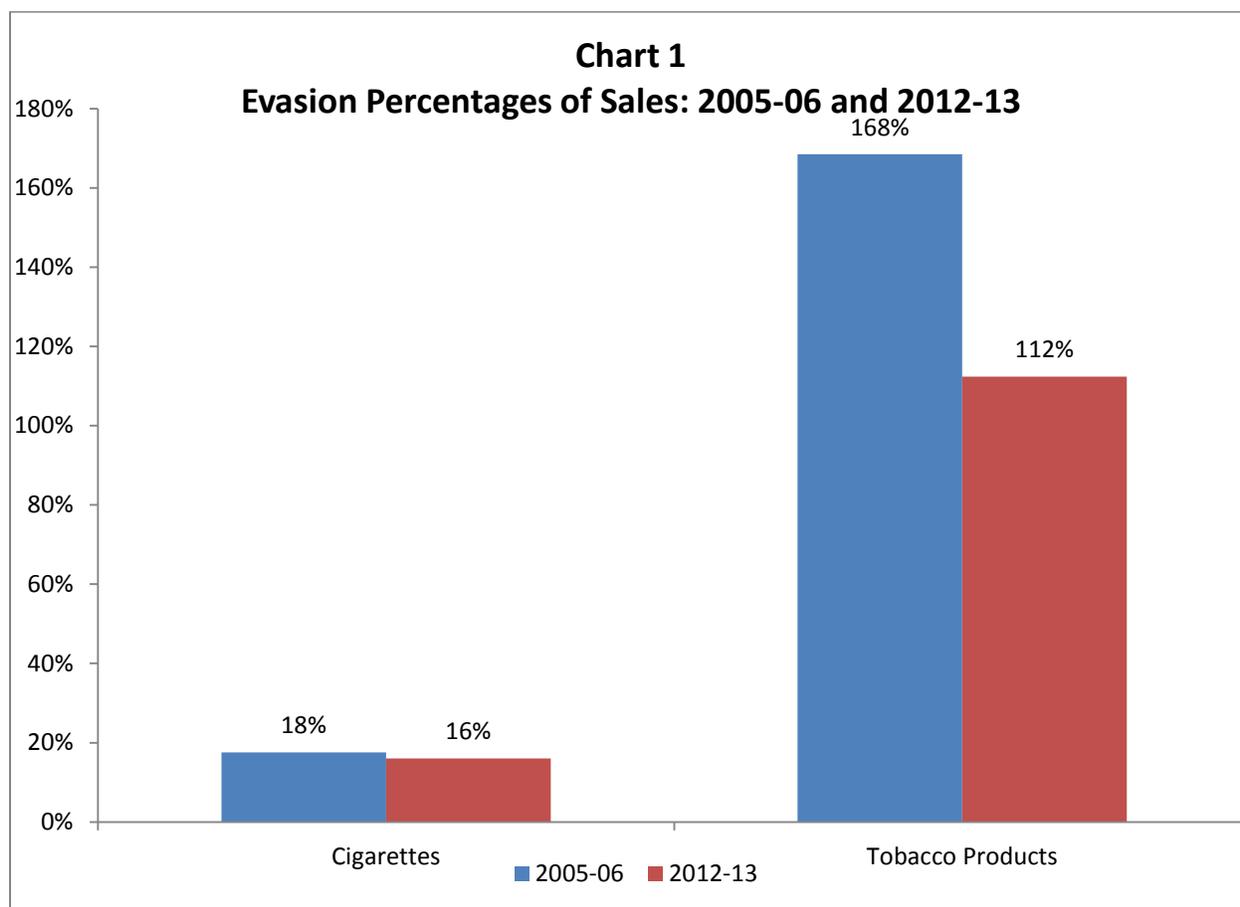
Table 3		
Ongoing Compliance Improvement Benefits (AB 71 and the Encrypted Stamp)		
Evaluated at Current Market Size and Tax Rates		
<i>Assumptions:</i>		
<i>Cigarette revenues would have declined 3% per year without licensing or the encrypted stamp.</i>		
<i>Tobacco products sales and revenues would not have changed without licensing.</i>		
<i>Thirty-month implementation period for both licensing and the stamp.</i>		
<i>(January 1, 2004 through June 30, 2006)</i>		
<i>Revenues are annual and ongoing.</i>		
<i>Market size adjusted proportionately to fiscal year 2012-13.</i>		
<i>Tobacco products tax rate is for fiscal year 2012-13.</i>		
		Fiscal Year 2012-13 and Future FYs
	Tax Rate or Price	Millions of Dollars
Cigarettes		
Distributions (Millions of Packs)	n.a	76.8
<i>All Excise Taxes</i>	\$0.87	\$66.8
General Fund	\$0.10	\$7.7
Breast Cancer	\$0.02	\$1.5
Proposition 99	\$0.25	\$19.2
Proposition 10	\$0.50	\$38.4
Tobacco Products		
Wholesale Cost	n.a.	\$79.9
<i>All Excise Taxes</i>	30.68%	\$24.5
Proposition 99	19.48%	\$15.6
Proposition 10	11.20%	\$9.0
Summary: Cigarettes and Tobacco Products		
General Fund		\$7.7
Breast Cancer		\$1.5
Proposition 99		\$34.8
Proposition 10		\$47.4
All Excise Taxes		\$91.3
Note: Some numbers in the table may not match calculated figures due to rounding.		

We estimated the impacts of these measures during a thirty-month implementation period (January 1, 2004 through July 1, 2006). A Bureau of State Audits report replicated our analysis,

and produced similar results.⁸ We have updated the estimates to account for market size changes discussed earlier. The results are shown in Table 3. We estimate that these compliance improvement measures produce about \$91.3 million in excise tax revenue on an annual basis. In addition to these excise taxes, we estimate that there are an additional \$44.4 million in state and local sales and use tax revenues associated with these compliance improvements. Total excise tax and sales and use tax compliance improvement benefits are \$135.7 million.

Comparisons to Previous Estimates

Chart 1 shows evasion percentages of cigarette and tobacco sales. As shown in the chart, the most recent estimates are lower for both cigarettes and tobacco products. For both years, cigarette evasion is a much lower portion of the market than tobacco products. One reason cigarette evasion is such a smaller percentage of sales is the stamp requirement for cigarettes.



Preparation

This evasion and revenue estimate was prepared by Joe Fitz, Research and Statistics Section, Legislative and Research Division. For additional information, please contact Mr. Fitz at (916) 323-3802.

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⁸ California Bureau of State Audits <http://www.bsa.ca.gov/pdfs/reports/2005-034.pdf>

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