

Forecasting Colorado Sales Tax Revenues

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Colorado Sales Tax Collections

200
180
160
140
120
100
80
60
40
20
0

Raw



Evaluating Past Trends

EXTRACTING THE UNDERLYING ECONOMIC CHANGES

Standardizing the Data for Changes in Rate

- to March 1983
Rate = 3 Percent
- April 1983 to June 1984
Rate = 3.5 Percent
- July 1984 to December 2001
Rate = 3 Percent
- 2001 to Present
Rate = 2.9 Percent
- Adjusted data to current tax rate of 2.9 percent



Standardizing the Data for Changes in Vendor Fee

- to June 2003
Vendor Fee = 3.33 Percent
- July 2003 to June 2007
Vendor Fee = 2.33 Percent
- July 2007 to February 2009
Vendor Fee = 3.33 Percent
- March 2009 to June 2009
Vendor Fee = 1.35 Percent
- July 2009 to July 2011
Vendor Fee = 0
- July 2011 to
Vendor Fee = 3.33 percent
- Adjust for changes in vendor fee
 - Neutralized data by assuming that the state kept all vendor fees



Changing tax base

- Temporary elimination of sales tax exemption for cigarettes
July 2008 – July 2011
- Temporary and permanent base broadening
 - Direct Mail (permanent effective March 2010)
 - Energy Used for Industrial Purposes (March 2010 – June 2012)
 - Candy and Soda (permanent effective May 2010)
 - Online purchases (permanent effective March 2010)
 - Nonessential food containers (permanent effective March 2010)
 - Agricultural products (March 2010 to June 2013)



Budgetary Measures Affecting the General Fund Overview /A
(Millions of Dollars)

General Fund Revenue Impacts		2008-09	2009-10	2010-11	2011-12	2012-13
Sales Taxes						
SB 09-121	Taxation of Restaurant Employee Meals	-	(0.4)	(0.4)	(0.4)	(0.4)
SB 09-212	Temporarily Repeal Vendor Fee—Part 1	12.9	37.5	23.8	-	-
SB 09-275	Temporarily Repeal Vendor Fee—Part 2	-	25.5	42.8	8.90	-
HB 09-1035	Clean Technology/Medical Device Refund /B	-	-	-	-	-
HB 09-1126	Exemption for Solar Thermal Installation	-	(0.3)	(0.3)	(0.3)	(0.3)
HB 09-1342	Temporarily Repeal Cigarette Exemption	-	31.0	32.0	-	-
HB 10-1189	Repeal Exemption for Direct Mail	-	0.2	0.8	0.8	0.8
HB 10-1190	Temporarily Repeal Exemption for Industrial Energy	-	7.2	37.6	40.2	-
HB 10-1191	Repeal Exemption for Candy and Soda	-	1.4	18.0	18.0	18.0
HB 10-1192	Repeal Software Regulation	-	4.6	23.7	24.1	25.4
HB 10-1193	Sales Taxes and Out-of-State Retailers	-	0.02	0.2	12.5	17.1
HB 10-1194	Repeal Exemption for Food Containers	-	0.4	2.0	2.0	2.0
HB 10-1195	Temporarily Repeal Exemption for Agricultural Products	-	0.9	4.6	4.6	4.6
<i>Total Sales Taxes</i>		<i>12.9</i>	<i>108.1</i>	<i>184.9</i>	<i>110.4</i>	<i>67.2</i>

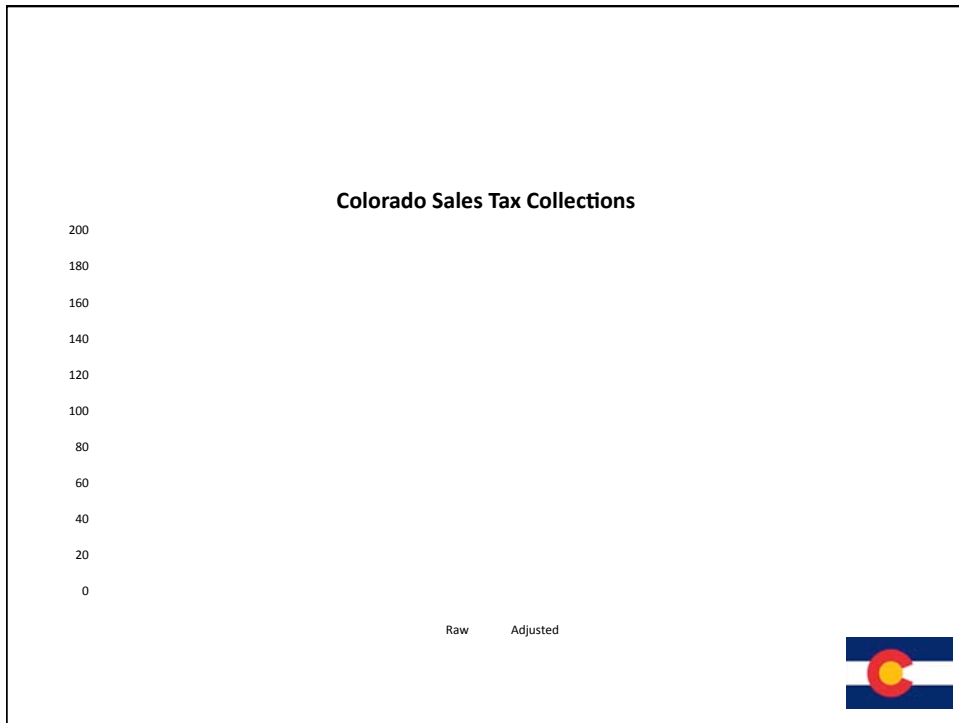
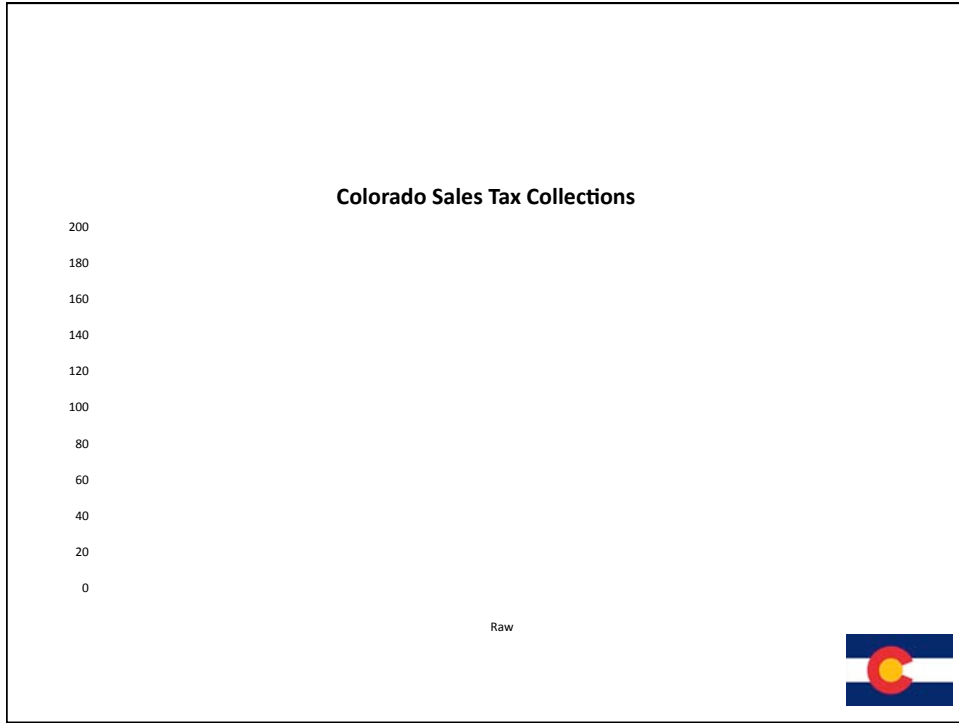
- Revenue removed and added back after forecast

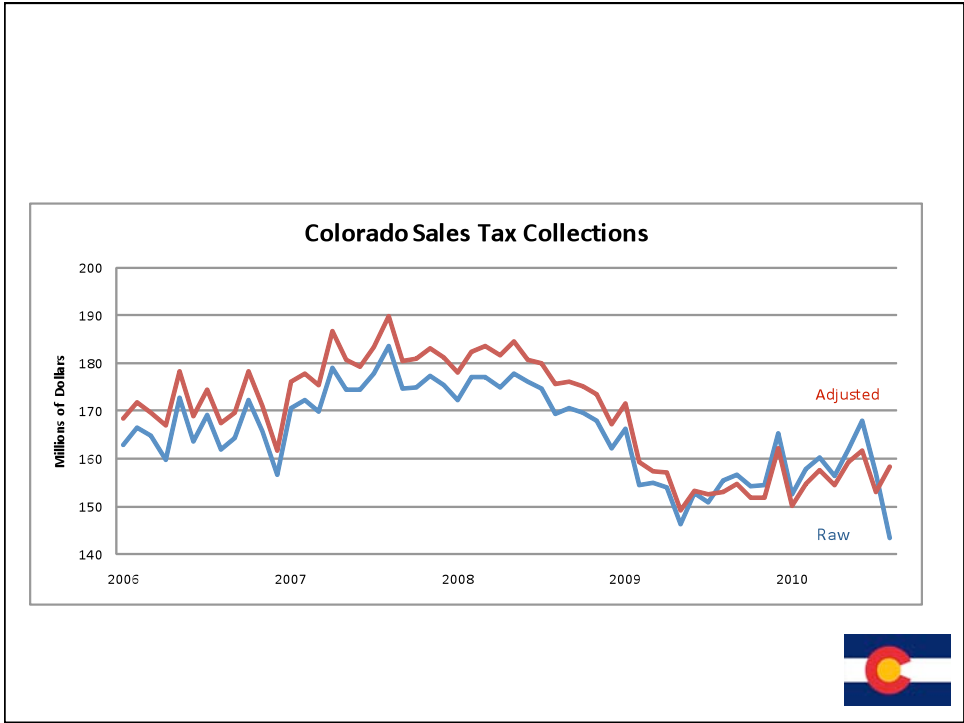


Smoothing Other Vibrations

- Audit Adjustments
- Seasonally Adjust
 - X12
 - Holiday and Trading Day adjustments
 - Correcting for outliers







FORECASTING

Reviewing Anecdotal Information

	<u>August Same-Store Sales</u>
• Target	↑ 3.4 percent
• Kohl's	↑ 4.5 percent
• Macy's	↑ 4.3 percent
• J.C. Penney	↑ 2.3 percent
• Nordstrom	↑ 6.3 percent
• Limited Brands	↑ 10 percent
• Costco Wholesale	↑ 7 percent
• Abercrombie & Fitch	↑ 6 percent
• Family Dollar Stores	↑ 8 percent



Independent Variables

- U.S. Personal Consumption Expenditures, Durable Goods
- U.S. Fixed Investment, Nonresidential Equipment and Software
- U.S. Household Cash Flow
- U.S. Net Worth
- U.S. Total Liabilities
- U.S. Debt Burden
- Foreclosures
- CO Personal Income



Independent Variables

- U.S. Retail Sales Lagged three times
- Co Sales Lagged three times
- All variables first differences of the natural log
- Eliminated outliers

