Forecasting in Times of Increased Volatility

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What Makes a Good Forecast?

Accuracy
Timing
Assessment of Risk
Accuracy in Forecasts

Actual receipts vs. forecasted receipts
Overestimates vs. underestimates
Measure and size of bias
Timing of Receipts

Forecast on a quarterly basis, convert to monthly estimates
Adjust for seasonal differences
Payment of tax liabilities vs. county receipts
Assessment of Risk

Confidence in forecasted values

Sensitivity analysis

Matching revenues to expenditures based on risk assessment
Why volatility is a problem?

Most economic forecasts are based on historical patterns and recent trends. Difficult to match volatility of receipts with volatility of expenditures.
Sources of Revenue Volatility

Changes in economic conditions
Legislative changes to the tax base
Changes in consumption patterns
Strategies for Dealing with Increased Volatility

Forecast major revenue sources separately
Pay attention to timing of receipts
Update forecasts often
Analyze past forecasting errors
Talk with local business leaders
Volatility in Sales Tax Revenues

Monthly variation in revenues
Legislative changes in base
Changes in consumption patterns over time
Monthly vs Quarterly Variation

**Monthly**

- $0
- $1,000,000
- $2,000,000
- $3,000,000
- $4,000,000
- $5,000,000
- $6,000,000
- $7,000,000

**Quarterly**

- Quarter 1
- Quarter 4
Elimination of Sales Tax on MV and Energy Used in Agriculture and Manufacturing
U.S. Consumption in Goods and Services, 1980-2014

U.S. Consumption in Goods and Services per $ of Personal Income, 1980-2014
Volatile in TAVT Revenues

Annual effective tax rate changes
Annual reviews of revenues against revenue targets with the potential for rate and share adjustments
Cyclical nature of vehicle purchases
State and Local TAVT Rates

![State and Local TAVT Rates Graph](image-url)
Complexity of TAVT

Forecast also depends on rate of decline of property taxes from motor vehicles

Review of state revenue collections in CY2015, CY2018, CY2022

Annual review of local revenue collections beginning CY2016-CY2022
Volatility in Property Tax Revenues

Different types of property in the tax base
Presence of foreclosures and short sales
Modifications to the appeal process
County Property Tax Revenue by Property Class

Georgia Department of Revenue Property Tax Administration
Annual Report, FY2013
Growth Rates in Assessed Value by Property Class
Are forecasts useful to policymakers and to the policy making process?

Informed estimation is better than uninformed estimation.

Even though forecasts are subject to margins of error, they have the ability to guide policy makers.
It's tough to make predictions, especially about the future.

(Yogi Berra)
Thank You
and
Happy Forecasting!!