

Overview of the IHS Markit Virginia Revenue Forecasting Review

Presented to the
House Appropriations Committee

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Secretary of Finance
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Scope of Review

- IHS Markit was engaged by TAX to evaluate major source revenue models and solicit JABE members' input.
 - Last review was done in 2006 by Moody's Analytics
 - Verified models were sound.
- Main areas of work included:
 - Conduct interviews and compile recommendations by JABE members.
 - Review the individual income tax withholding model.
 - Review the individual income tax nonwithholding revenue models (estimated payments and final payments).
 - Review the sales tax revenue model.
 - Analyze the validity of the Nonwithholding Collar by a methodology review by IHS Markit staff along with feedback from JABE members.

Review of the Individual Income Tax Models Was Positive

- **Withholding**

- Tested current model and two alternatives with mixed results.
- Alternative 2 outperforms original for fiscal years 2012-2015.
 - Forecast variance in fiscal years 2016-2017 are worse than current model.
- Original model performs better.
 - Variance within 2 percent for each fiscal year.
- JABE members generally approved withholding model.

- **Nonwithholding**

- Tested current estimated and final payment models and two alternatives for each.
 - Results were mixed, current models were acceptable.
- JABE members generally approved of the estimated payment and final payment models.

IHS Markit Review of the Sales Tax Model

- **Sales Tax**

- Tested current model and three alternative specifications.
- Alternative models included more variables.
 - IHS Markit pointed out more variables do not necessarily produce more accurate forecasts.
- None of the alternatives consistently outperforms the current model in predicting revenue collections.
- Current model variance within 2%.
- JABE members suggested adding more explanatory variables to the model to increase explanatory power.
 - National defense spending
 - Tourism
 - Federal spending generally – sequestration
 - Variables to address other significant industry sectors
 - Technology
 - Construction

Nonwithholding Collar Was Reviewed

- JABE members were consulted and generally supported the collar.
 - No specific alternatives were given.
- JABE members also recognized that the nonwithholding component of income tax collections was inherently unpredictable and large forecast errors were to be expected at times.
- As a result, they supported the use of the collar as a prudent measure in income tax forecasting and budget planning.

Key Findings and Future Plans

- Virginia's forecasting process is similar to that of other states.
 - The process generates forecasts that are relatively accurate.
 - The process is well-documented and accessible to review.
 - The forecast is based on sound economic models.
- Methodology represents a best-practice approach to state tax revenue estimating.
- Maintained use of current revenue models.
 - *Alternatives fit better in prior years but not recent years, they also have large swings in outcomes.*
- Maintained use of nonwithholding collar.
 - *JABE and IHS Markit supported methodology.*
- IHS Markit concurred with TAX's practice of using the current models and continued monitoring of alternative equations each year.
 - *Research is underway to find alternative sales tax data sources.*