Drawing Inferences From Early Tax Returns; Potential Gains in Forecast Accuracy Due to Technological Innovation

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Outline

- Forecast Issues in Oregon
- Oregon Gross Income-Liability Model
- New processing system/data availability
- Data Methodology
- Analytical Results
- Conclusion

Forecast Issues in Oregon

- May forecast in odd years binds the two-year budget
- Personal Income Tax accounts for 87% of total General Fund revenues
- Gross Income-Liability Model centerpiece of the PIT Collections forecast.

Oregon GI-L Model

- Based on tax return data for full-year filers
- Models eight components of income (Wages, Dividends, Capital Gains, Retirement, Schedule E, etc.) on economic variables.
- Models gross effective tax rate to project resulting tax liability.
- Lag in availability of tax return data a major forecasting obstacle.

Use of "early" return data

- Estimated 80% of 2006 returns processed and available for analysis going into the May 2007 forecast.
- Research question: what inferences can we make from these returns regarding income and tax liability changes?

Data Availability, Faster Processing

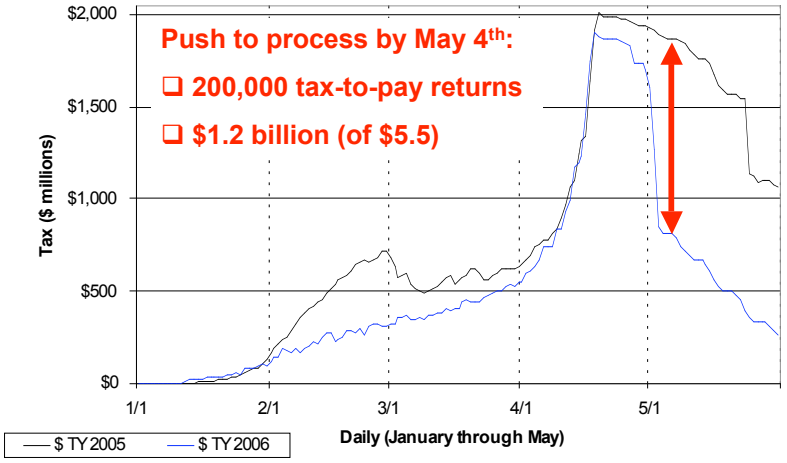
Technology:

- New return processing system – "ITX"
- Other significant improvements
- Continued enhancements in coming years

- Coordination/Planning:
  - Research requests processing push – May 4th
  - Work around processing limitations
  - Major effort systems poeple

Effect of Faster Processing

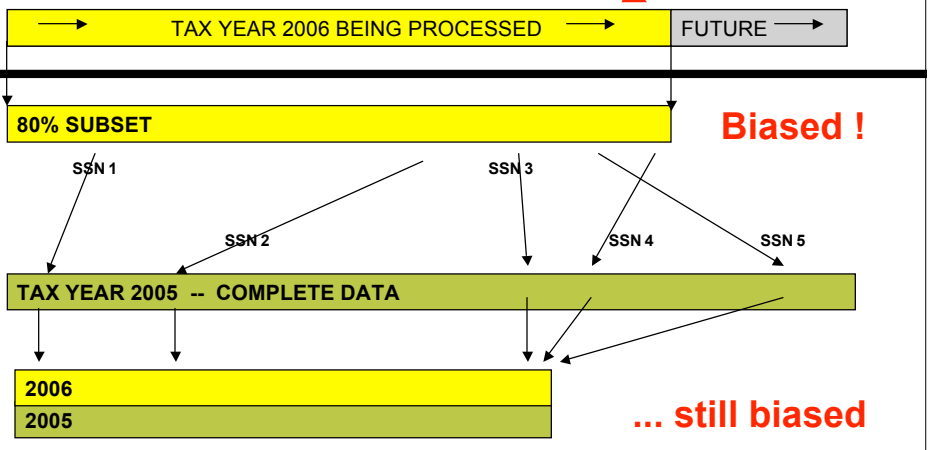
- Unknown tax on unprocessed returns – TY 2006 vs. TY 2005



Data Handling and Analysis

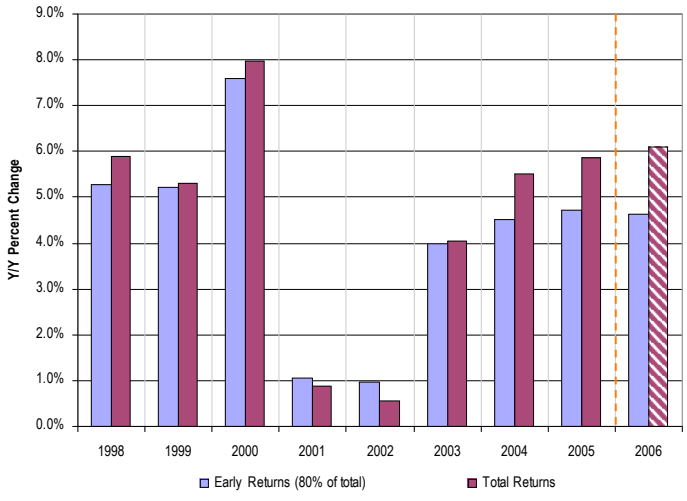
By May 4th, 80% are done

Expect total of 1.7 million (future)

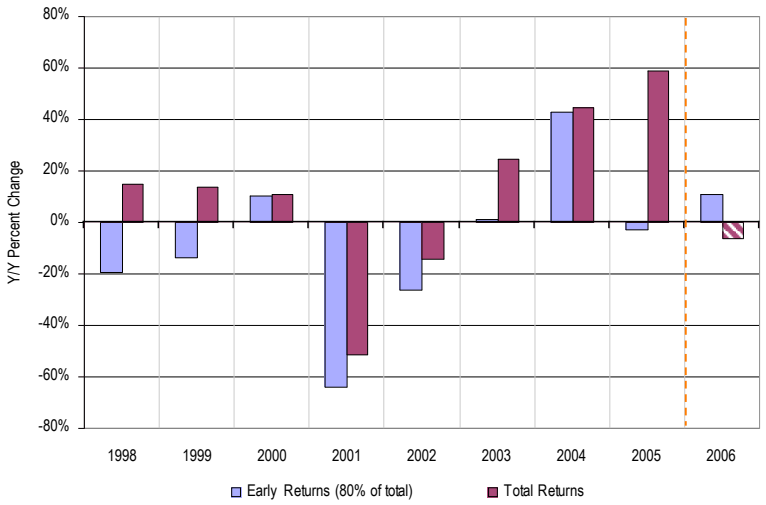


Analytical results . . .

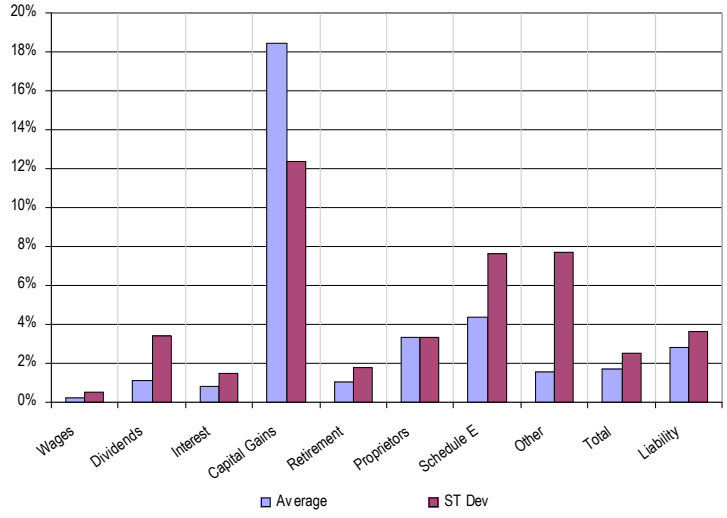
Wage and Salary Income



Capital Gains Income



Average and Standard Deviations



Conclusions

- Some valued added to analyzing “early” returns.
- Insights should only improve with technological innovations (new processing system), increased use of electronic filing, and additional tax year observations.
- Use of early data requires analysis and coordination of technology and resources.

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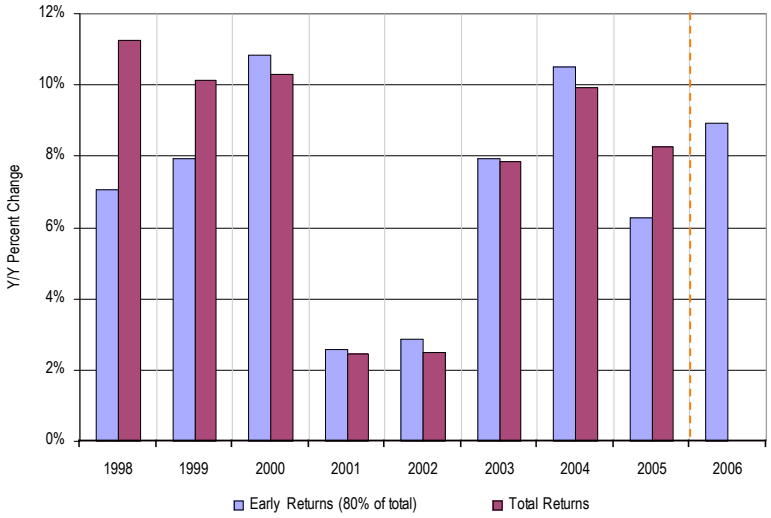
Background Information

Gross Income-Liability Specifications

- GI_Wages = F[C, PI_Wages, AR(1)]
- GI_Interest = F[C, IR_3Month, AR(1)]
- GI_Dividends = F[C, PI_DIR, Corp_profits, AR(1,2)]
- GI_CapGains = F[C, MKT_W5000, AR(1)]
- GI_Retirement = F[C, Pop65, PI_Total – PI_Wages, MKT_W5000, AR(1)]
- GI_Proprietors = F[C, PI_Proprietors, AR(1,2)]
- GI_SchedE = F[C, Corp_Profits, AR(1)]
- GI_Other = F[C]
- EffTaxRate = F[CPI, (GI_CapGains+GI_SchedE)/GI_Wages, AR(1)]

Where GI = Gross Income as reported on FY Oregon tax returns
PI = Personal Income as reported by BEA

Retirement Income



Schedule E Income

Tax Liability