

# Legislative Fiscal Division Revenue Update

March 20, 2015

# Probability

- Historic general fund reaction to oil price declines
- Data Types
  - Accounting data
  - Return data
  - Economic data
- LFD estimates

# Recessions in General

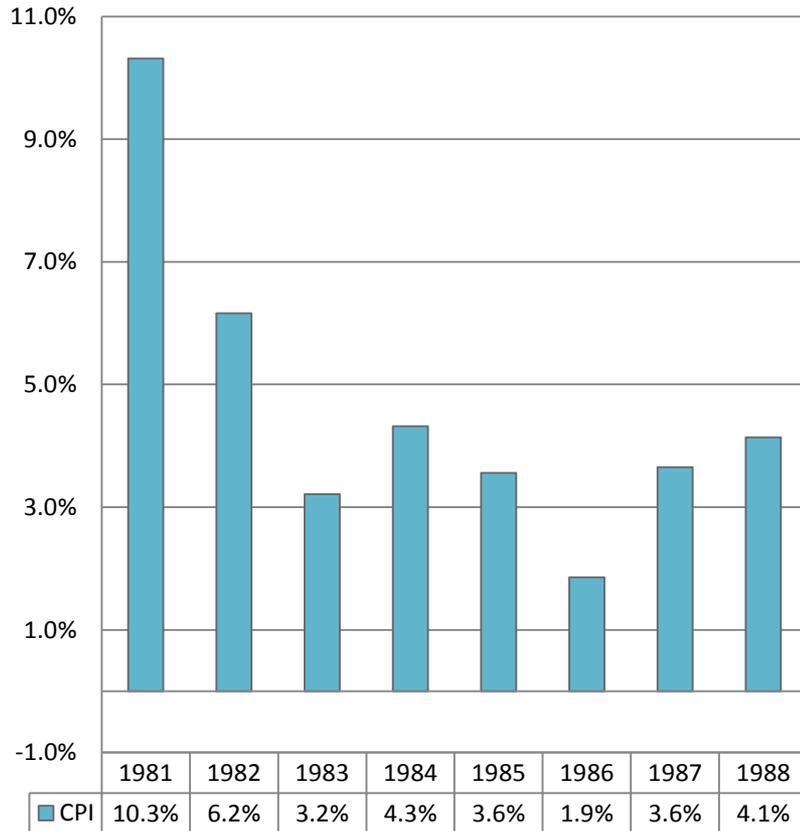
- Delayed impact to general fund revenues
- Recessions do not always cause a drop in Montana general fund revenue

# Mid-1980s

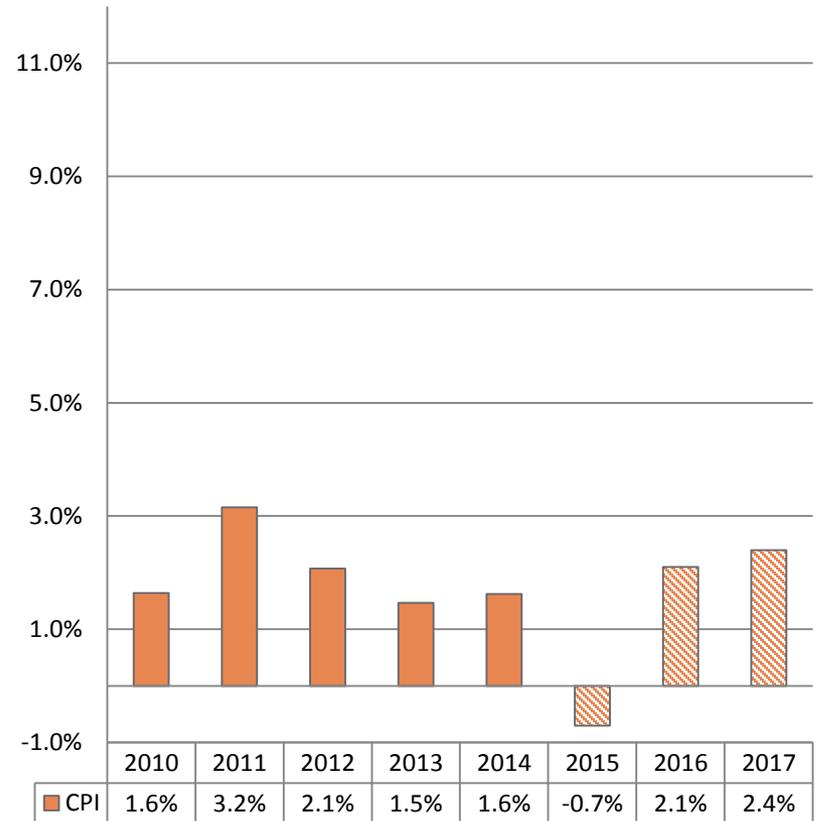
- No recession
- Price of oil decline sharpest in 1986, started prior to 1986
- OPEC collapse end of 1985
- Inflation drop and deflation in one year

# Comparison of Inflation

## Inflation 1981 to 1988



## Inflation 2010 to 2017



# Similarities to Present Day

- The current drop in price of oil appears similar given the economic forecasts
  - No recession
  - Price of oil decline
  - Inflation

# Types of Data: Income & Corp

- **Accounting:** actual receipts and refunds – bound by accounting, not bound by economic timeframe
- **Returns:** information reported by taxpayers about what they owe for which types of income – somewhat bounded by an economic timeframe
- **Economic:** IHS Econometrics and other sources – bound by an economic timeframe

# Models

Return Data

Data from historical **Returns**

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Economic  
data trended  
Return data

**Return** data trends well with economic data

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Conversion  
from Returns  
to Accounting

Accounting data has significant “noise” with  
**Return** data

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# CY 2014 / FY 2015 Income Tax Year to Date Analysis

## Known data in conflict

- **Accounting data:**
  - YTD overall growth for first 8 months = 6.8%
  - Withholding growth 8.1%
- **Economic data:** Wages grew 3.7-4.5%

## Unknown to bridge the gap

- **Accounting data FYE 2015:**
  - Taxpayer behavior
    - Refunds
    - Estimated taxes in last 2 Qtrs
  - Final audits
- **Return data November 2015:**
  - Actual business profits
  - Actual capital gains
  - Actual wages

# Predictive Usefulness

## Accounting

- Year to date
- Limited predictive power, i.e. current fiscal year
- **Applying economic trends to accounting data without considering actual liabilities adds risk as it build current taxpayer behavior in as ongoing**
- FY 2015 range: \$2,140 to \$2,220 million

## Economic / Return

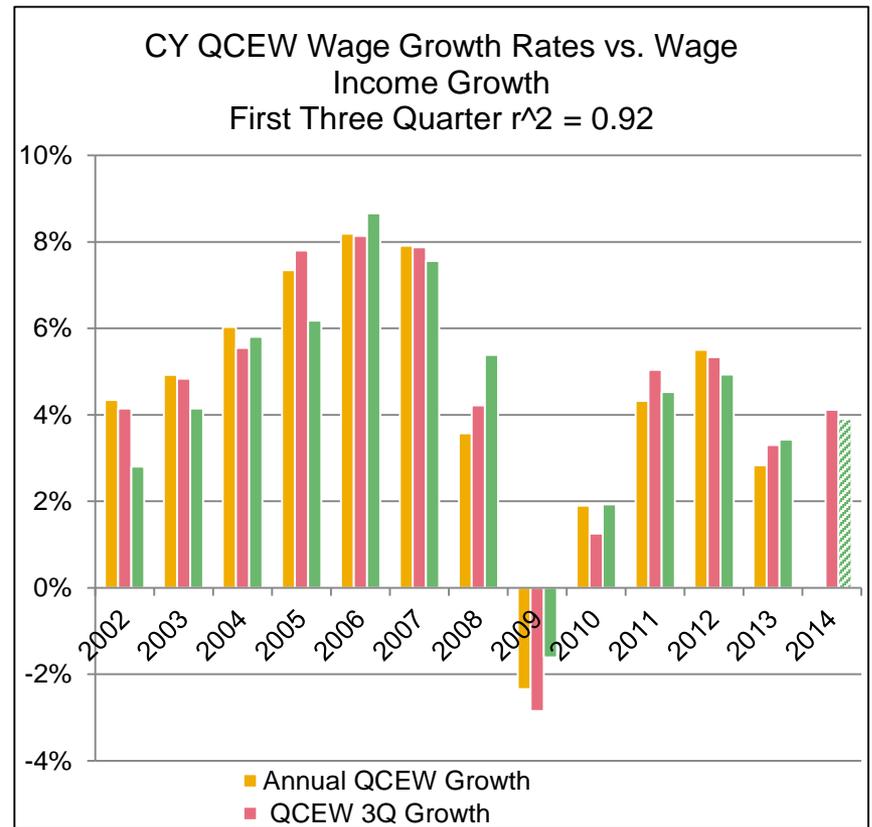
- Return data modeled from economic data
- Longer term predictability due to economic forecasts

# Comparing Predictive Capabilities of Data Types

## Accounting



## Economic

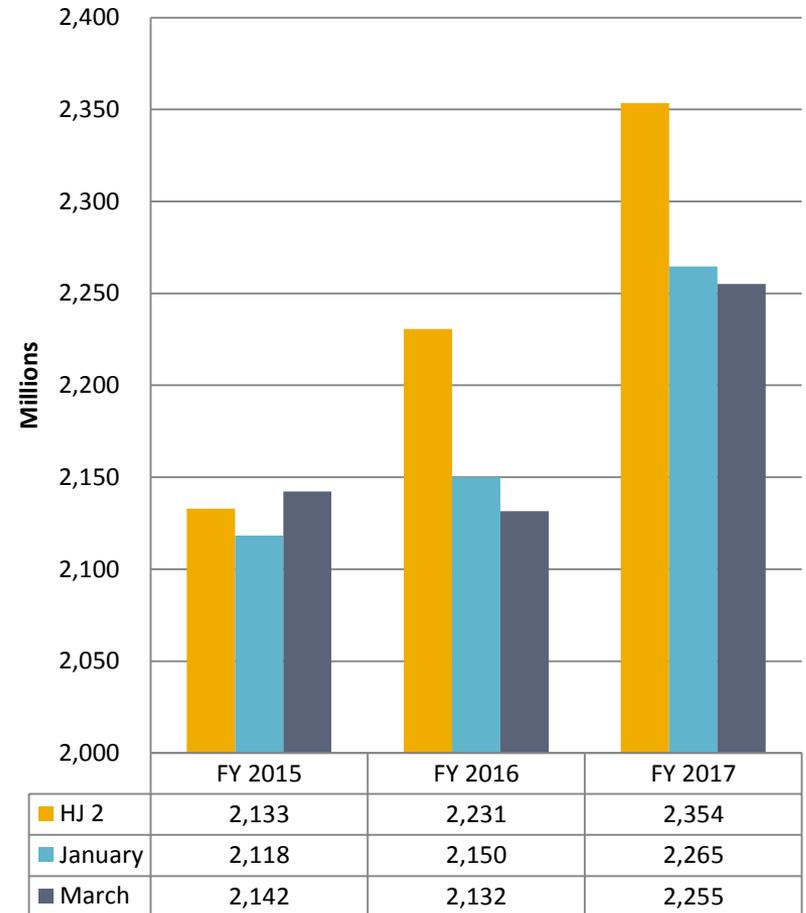


# Probability

- Economic data correlates well to return data
- IHS Econometrics forecasts economic data
- Bias in corporation tax removed
- Adjusting assumptions for taxpayer behavior for FY 2015 using accounting data

# Updated LFD Estimate

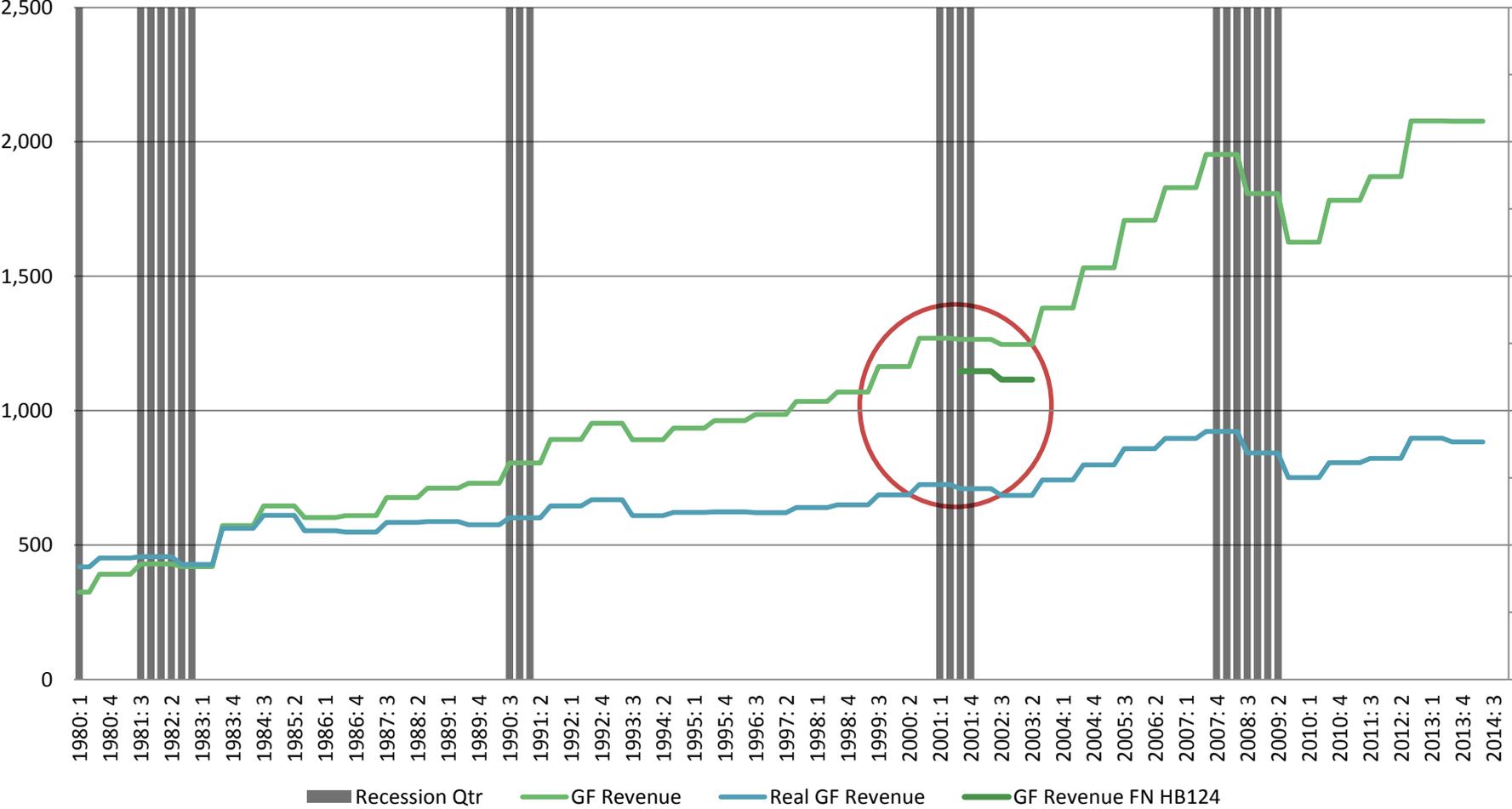
- Key differences: HJ 2
  - RTIC adjustments
  - Lower oil prices
- Key differences: January LFD
  - Lower oil prices
  - Higher insurance tax forecast due to new data
  - Lower Property tax forecast due to new reappraisal data
  - Slightly lower wage estimate offset by growing from base in the conversion for FY 2015
  - Modeling changes discussed in Subcommittee, including un-biasing the Corporation tax model



# Probabilities

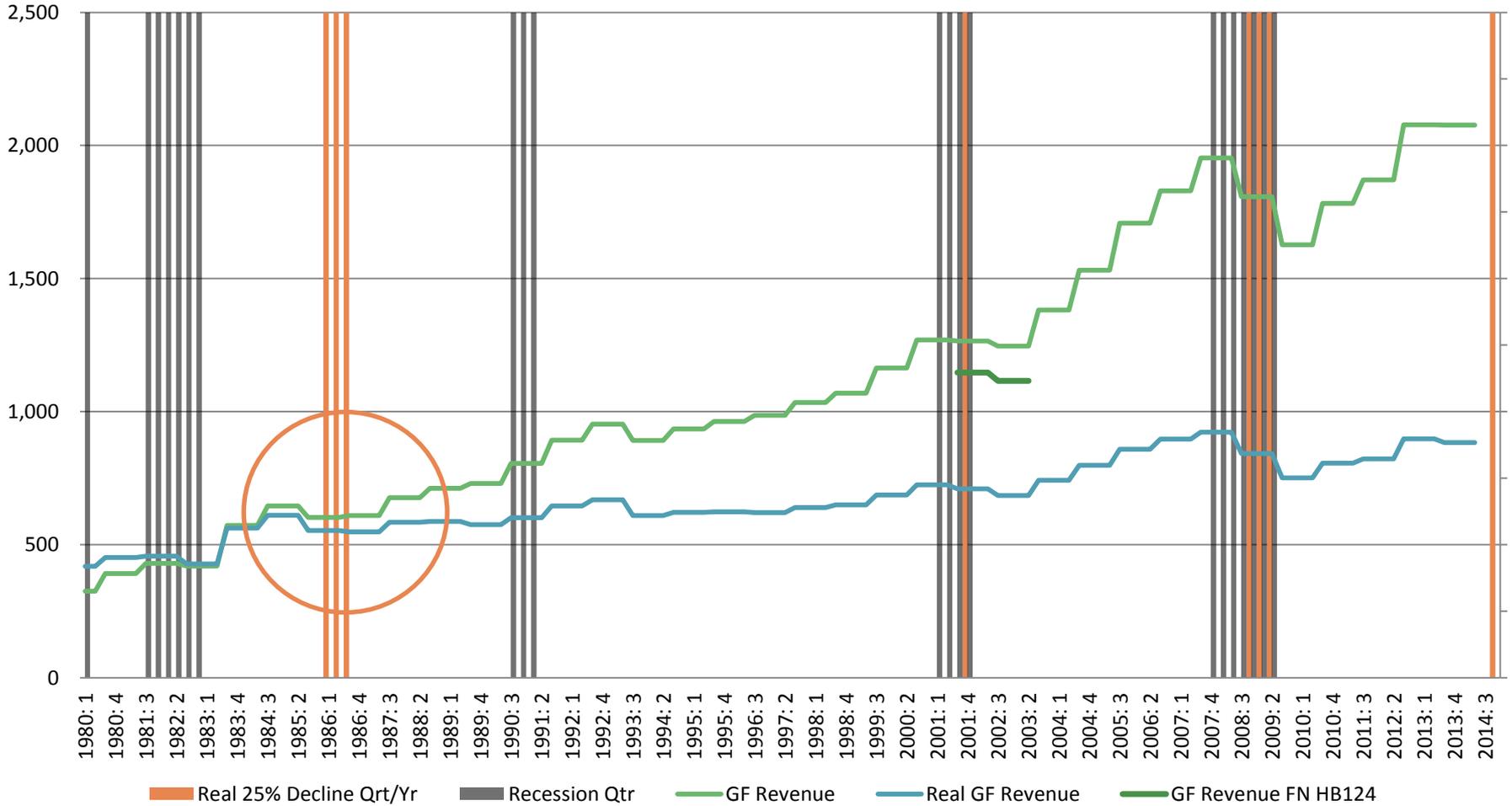
- Predictability of Montana Revenues is less than most states
- Historical growth pattern in times of oil price decline
- Probability
  - FY 2015 informed by Accounting data
  - FY 2016 and 2017 better informed by Economic data

# Quarters of Recession and General Fund Revenue



Note: FY 2002 would have shown material decline without the impacts of HB 124 which changed local government revenue streams into state revenue streams and then distributed these revenues through entitlement share and block grants.

# Quarters of Recession, GF Revenue and Steep Oil Price Declines



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