



UTAH STATE

LEGISLATURE

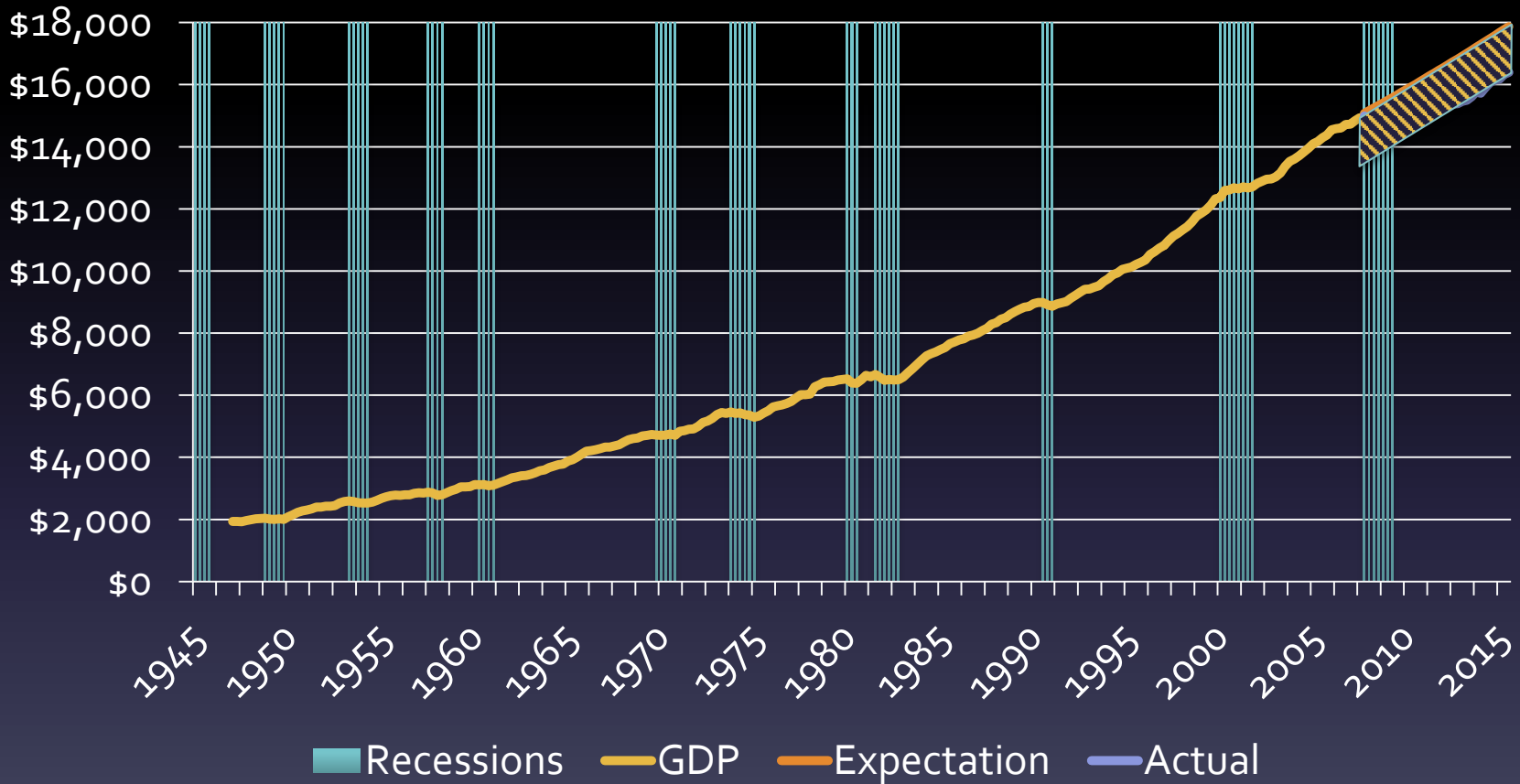
Stress Testing the Utah State Budget

NCSL Fiscal Analysts' Seminar

October 6, 2016

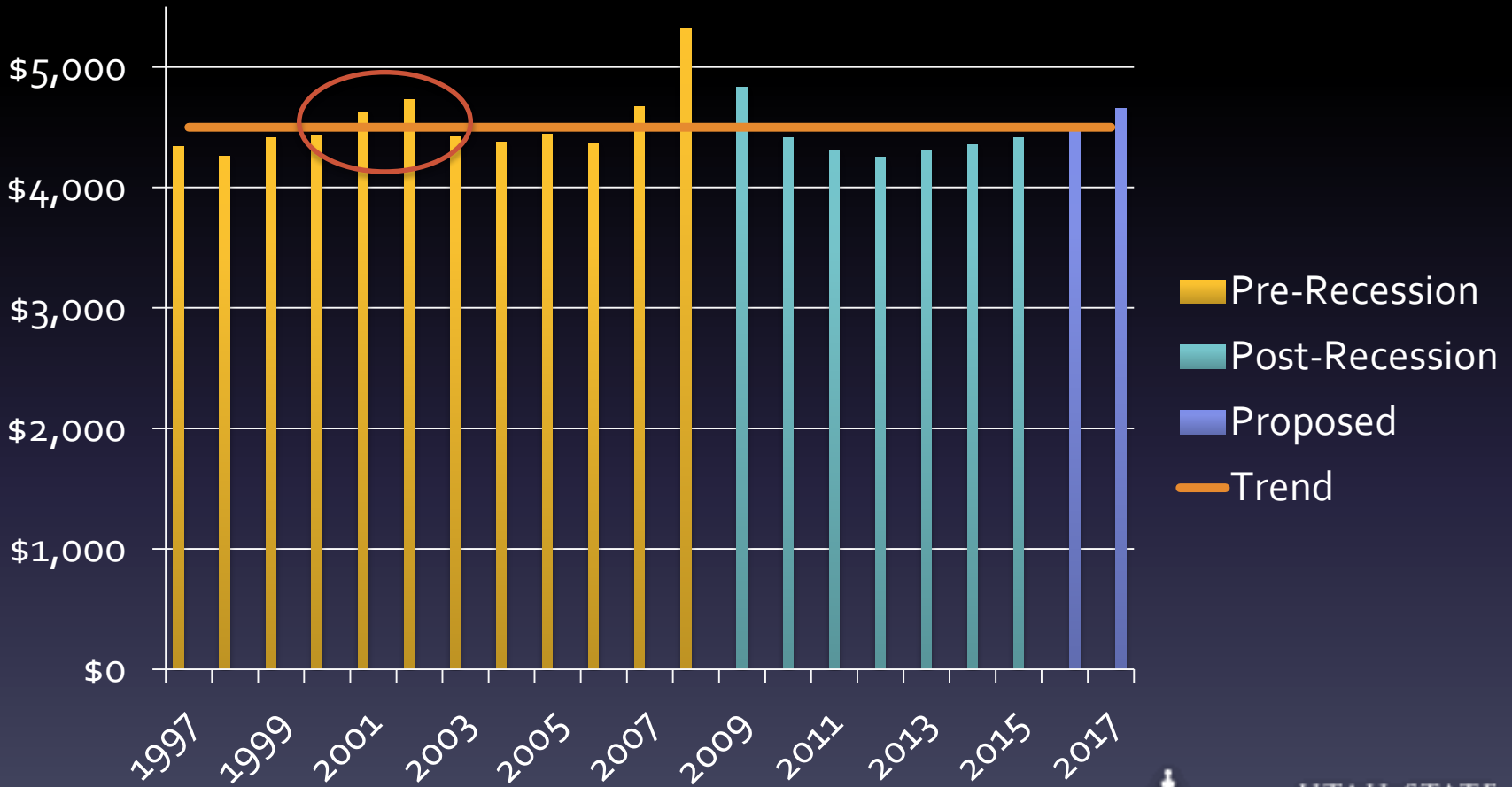
Jonathan Ball, Legislative Fiscal Analyst

U.S. GDP (\$b) & Recessions



Expectations...

Real Per-pupil State Appropriations



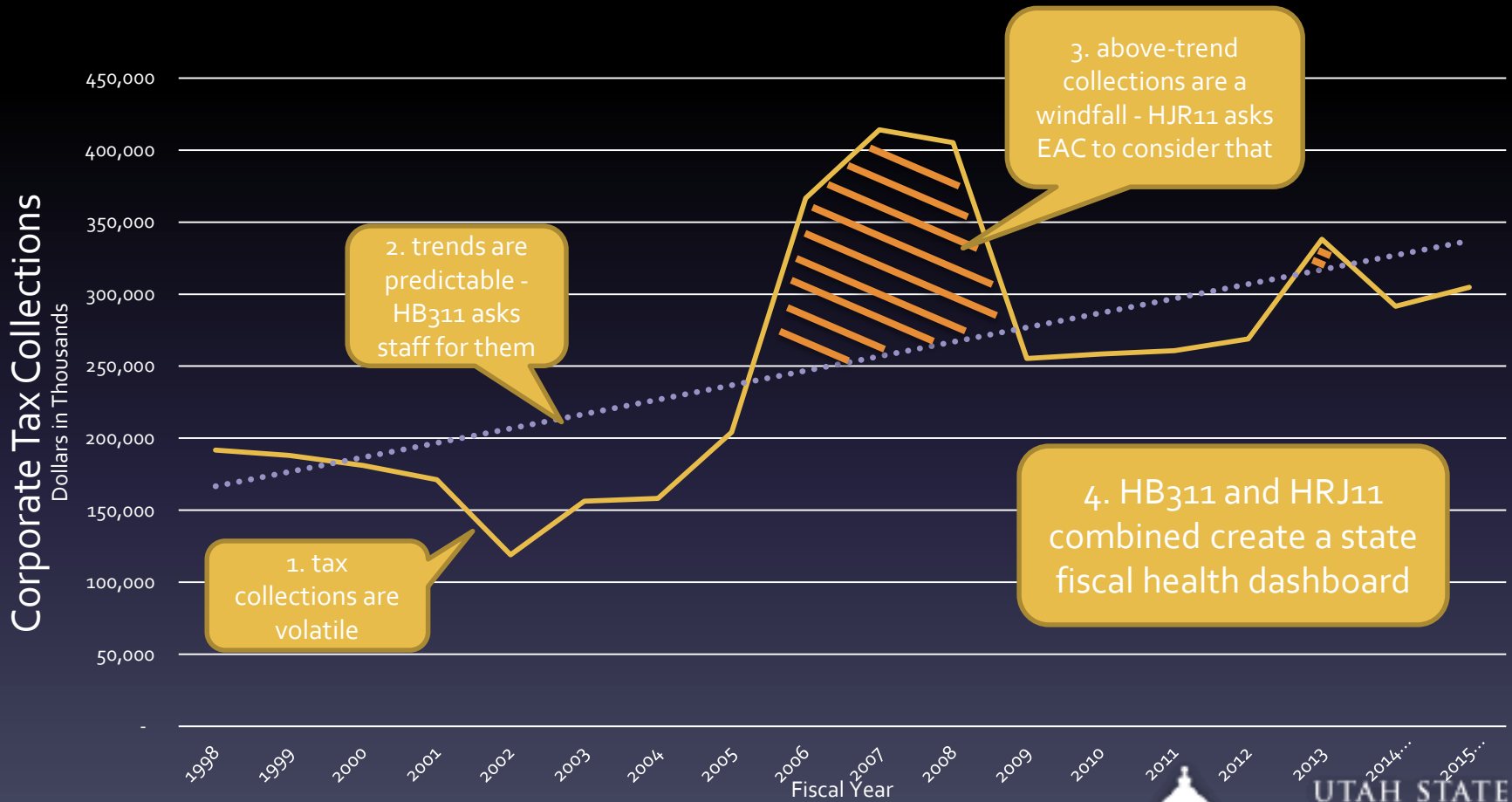
Why?

1. Manage the business cycle
2. Make promises we can keep and keep the promises that we make
3. Avoid irrational policy choices



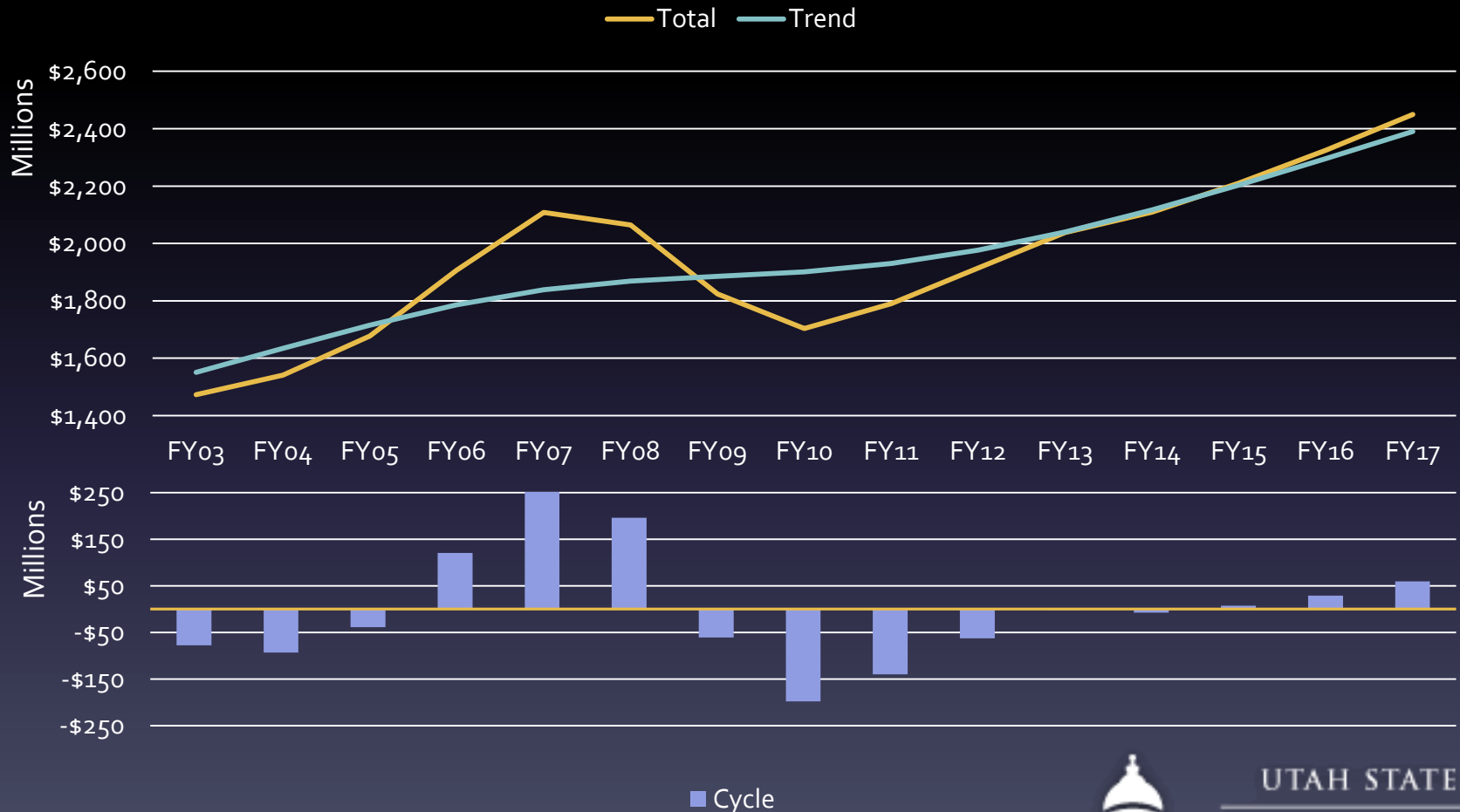
"Trend" Revenue

(HB 311 and HJR 11, 2014 GS)



Trend and Cycle

Sales Tax Collections



How?

Revenues



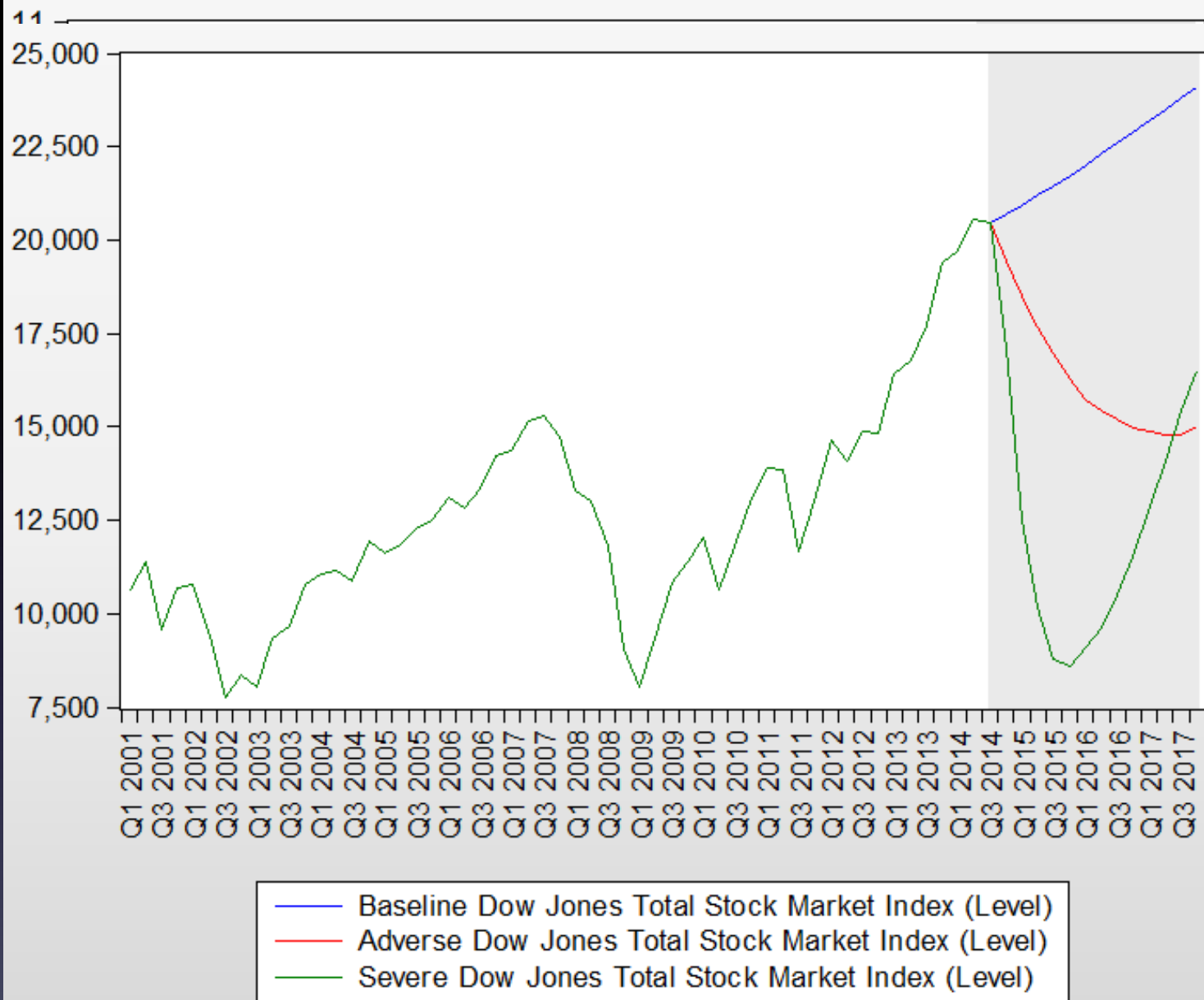
How?

Revenues

- Modeled major tax types
(sales, income, corporate)
- Used Federal Reserve
DFAST economic indicators
for Adverse and Severely
Adverse scenarios

Expenditures





Revenue Scenarios

1. Using REMI, replace baseline national economic indicators with DFAST indicators
2. Recalibrate regional control to get state share
3. Use alternative state share in time series revenue model (SAS, SPSS, R, etc.)



How?

Expenditures



How?

Revenues

- Modeled major tax types (sales, income, corporate)
- Used Federal Reserve DFAST economic indicators for Adverse and Severely Adverse scenarios

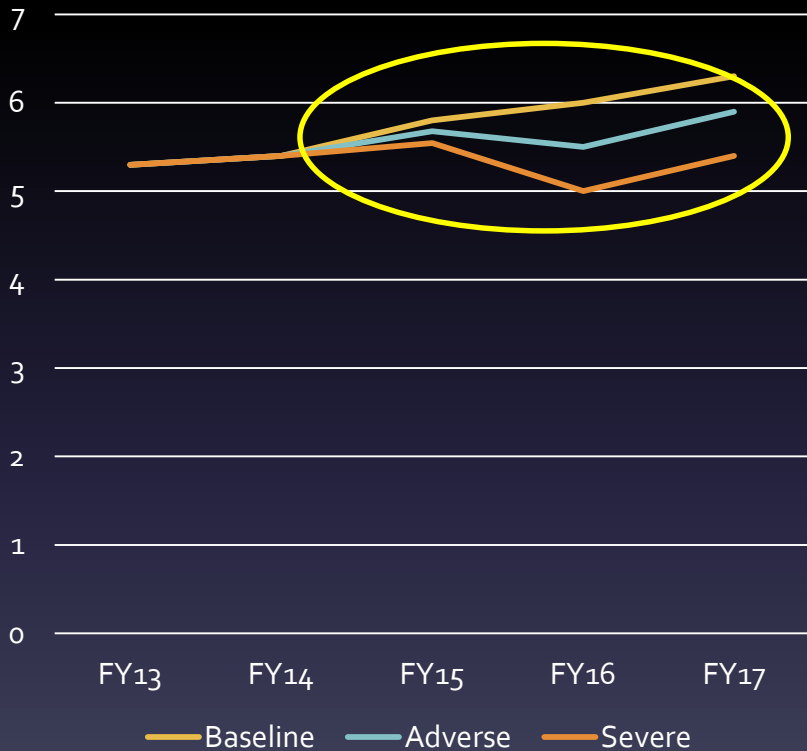
Expenditures

- Modeled enrollment driven programs (Medicaid, higher ed, public ed)
- Used 2001 and 2009 as proxies for Adverse Severely Adverse

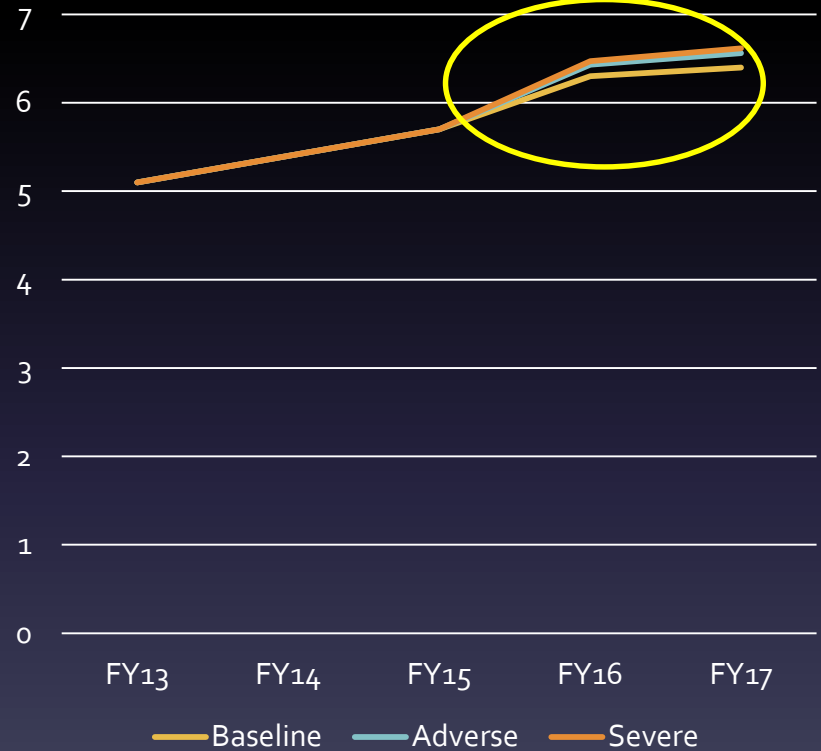


Results Over Time

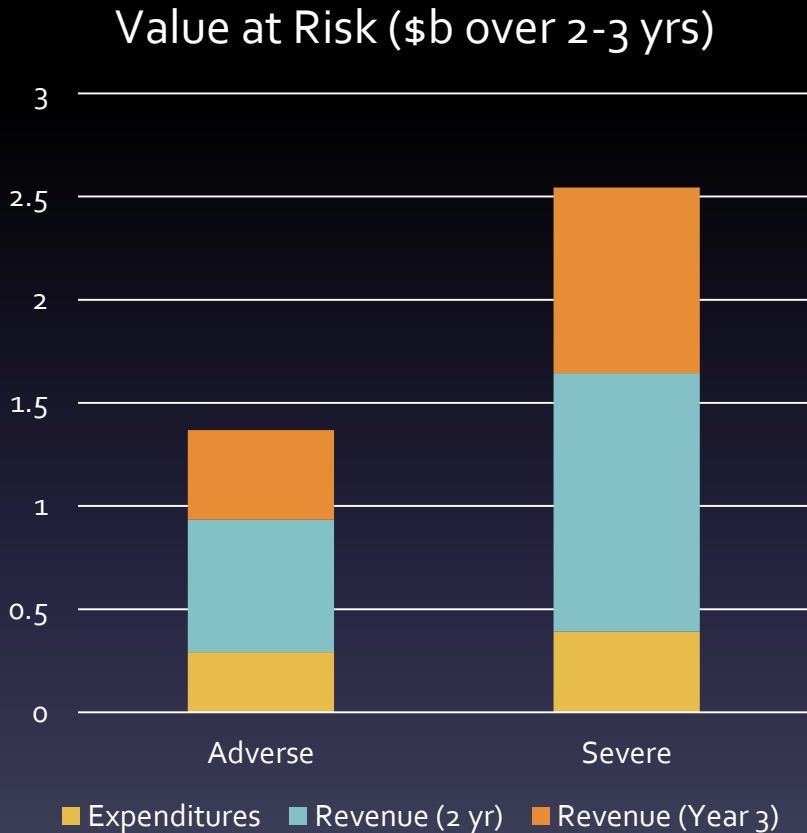
Revenues (\$b)



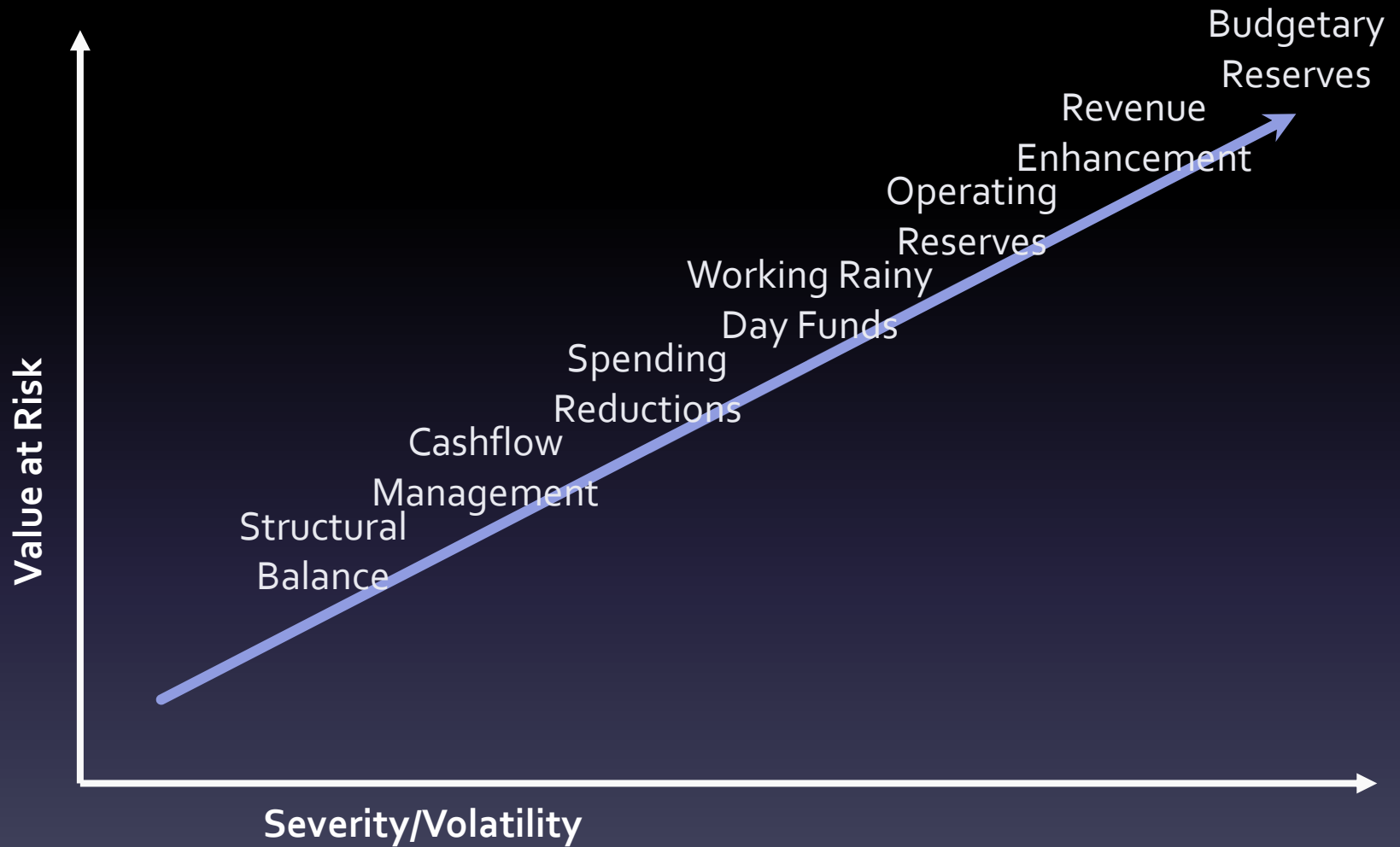
Expenditures (\$b)



Magnitude of Results



It takes a tool kit.



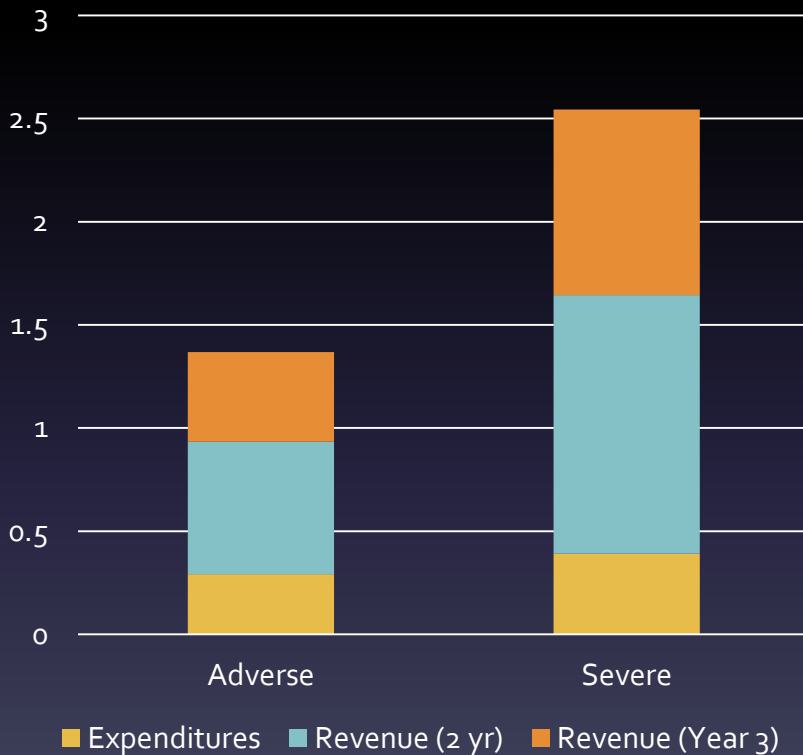
Inventory of Buffers

- **Easily Accessible:** Unappropriated balances, operating reserves, buildings working rainy day fund
- **Moderately Accessible:** Nonlapsing balances, roads working rainy day fund, capital improvements relief valve
- **Somewhat Difficult to Access:** Capital improvements corpus, restricted fund balances
- **Difficult to Access:** Formal rainy day funds
- **Very Difficult to Access:** Permanent trust funds

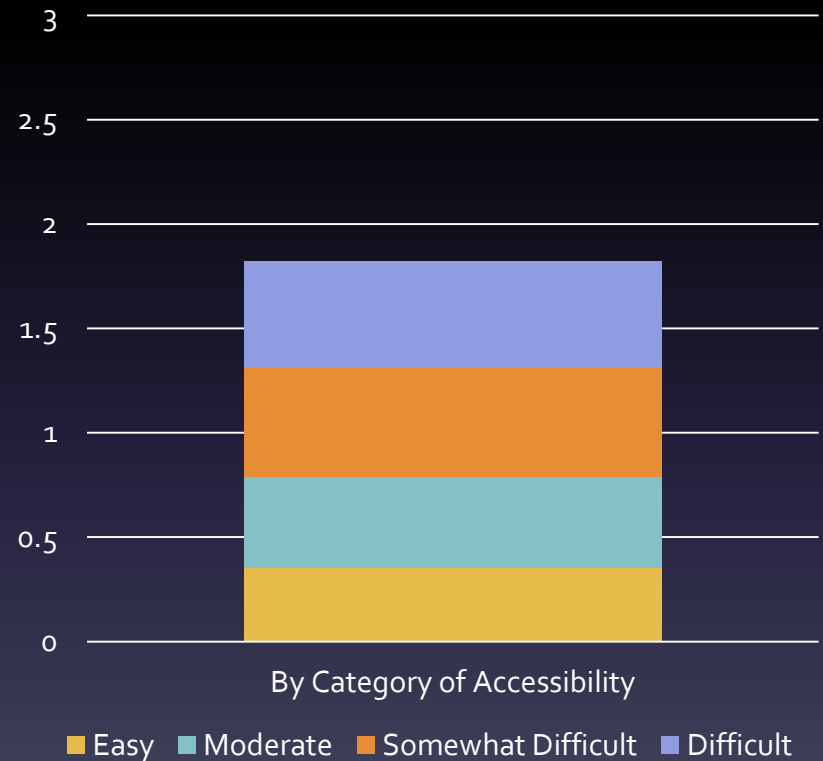


Magnitude of Results

Value at Risk (\$b over 2-3 yrs)



Reserves/Offsets (\$b)



Step-by-step

1. Start with a consensus baseline revenue forecast and budget
2. Model revenue alternatives
3. Model spending alternatives
4. Inventory and categorize buffers
5. Compare VAR with buffers and assess adequacy



Pitfalls

- Takes money off the table
- Ruins certain political narratives
- Relies on Fed Reserve scenarios for banks
- Too short-term
- Speculative



Utah's Future Plans

- Diversify economic scenarios
- Lengthen timeframe from 2 to five years
- Communicate probabilities
- Require in statute?

