



ALVAREZ & MARSAL
INSURANCE & RISK ADVISORY
SERVICES (IRAS)

**FEDERAL FUNDS RISK MODEL
BRIEFING**

**PREPARED FOR:
FEDERAL FUNDS COMMISSION
OF THE STATE OF UTAH**

June 25, 2015





AGENDA

- I. Federal Funds Risk Model (FFRM) Results
- II. FFRM Approach
- III. Exposure to Federal Funds
- IV. Sample FFRM Scenarios
- V. Case Study (Hill Air Force Base)
- VI. Project Reflections
- VII. Q&A and Next Steps
- VIII. Appendix - Case Study (Pell Grants)



FEDERAL FUNDS RISK MODEL RESULTS

Results from the FFRM

The FFRM will calculate:

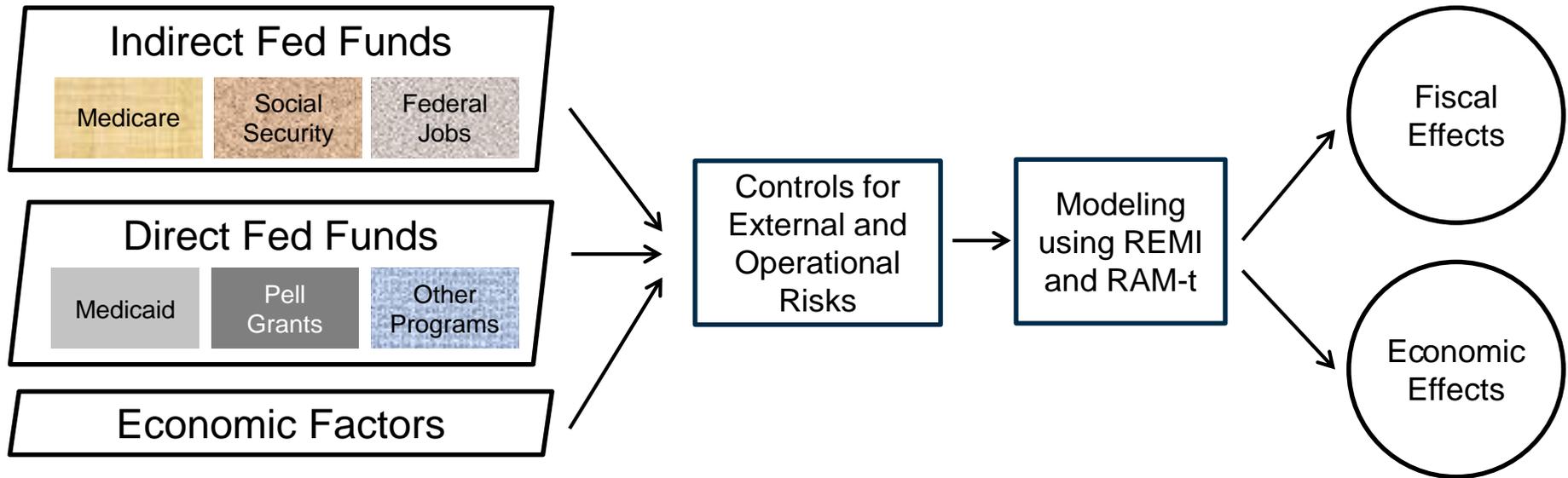
- Economic measures
 - Jobs
 - Revenue
 - State specific GDP
 - All including both direct and indirect effects
- Fiscal measures
 - Effects on General and Education Funds
 - Ramifications for Rainy Day Funds
 - Possible revenue increases and/or budget reductions
 - All aligned with the state's VaR calculations (12 months)

The FFRM will allow the Federal Funds Commission:

- To help answer “What do federal budget stand-offs mean for Utah
- To help drive policy making
- To solve for new hedging strategies
- To determine optimal risk solutions
- To understand risks to indirect funds that are not controlled by the state

APPROACH TO FEDERAL FUNDS

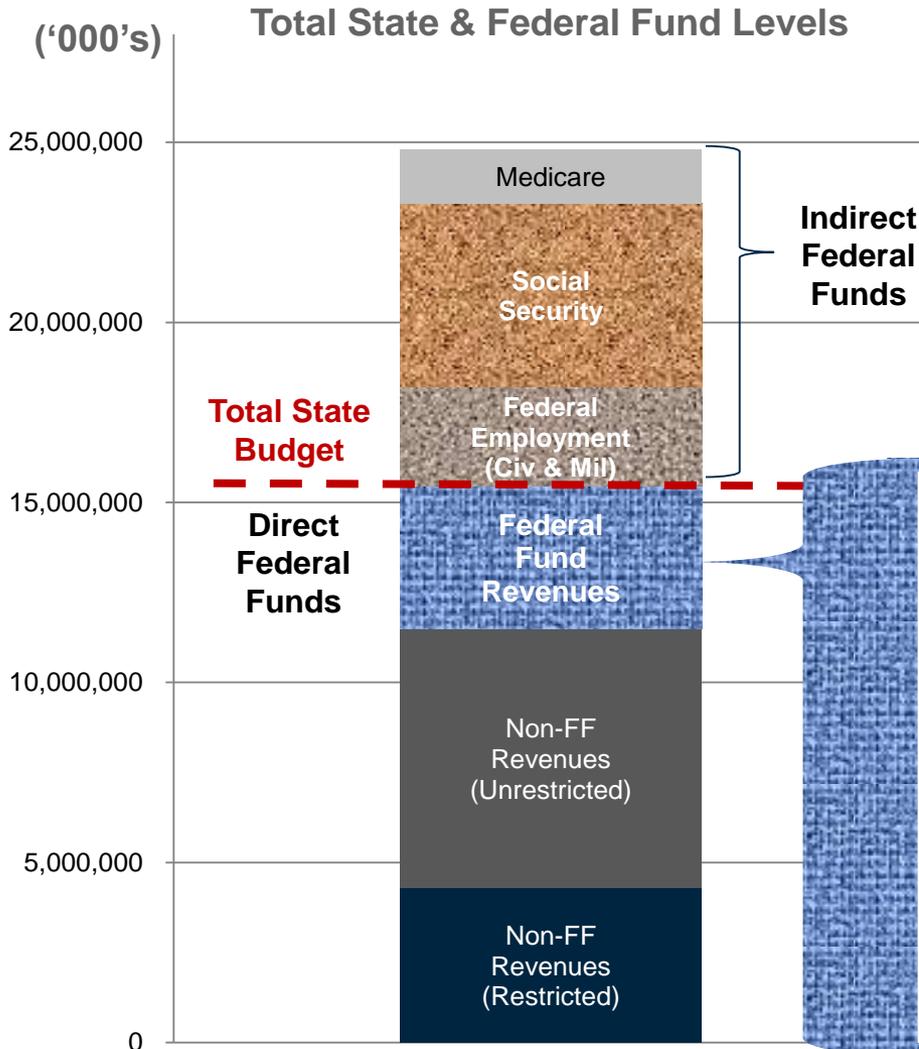
FFRM Risk Model Approach



- Control for Operational Risk and Maintenance of Effort, where relevant
- Control for other states impacting effects on Utah, such as knock-on effect / “Contagion Risk”

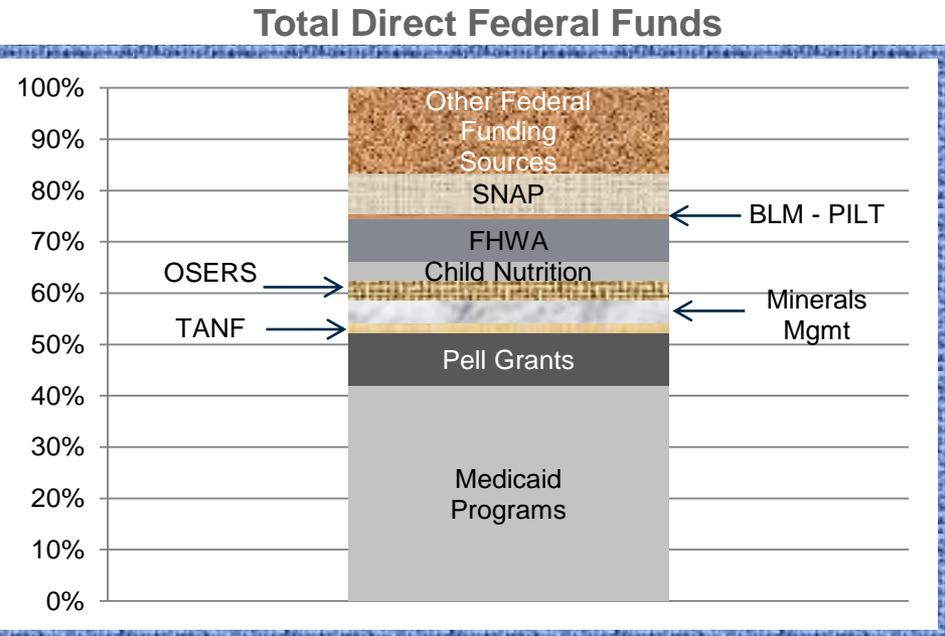
EXPOSURE TO FEDERAL FUNDS

The methodology that we will demonstrate with the FFRM today will present three example scenarios to evaluate direct and indirect federal funding for the state



The FFRM will evaluate risk factors as follows:

- Direct Federal Funding
- Indirect Federal Funding
- Example Scenarios that will be shown today:
 - Sequester
 - Interest Rate changes
 - Medicaid



HOW DO WE “GET SMARTER” ABOUT MANAGING RISK?



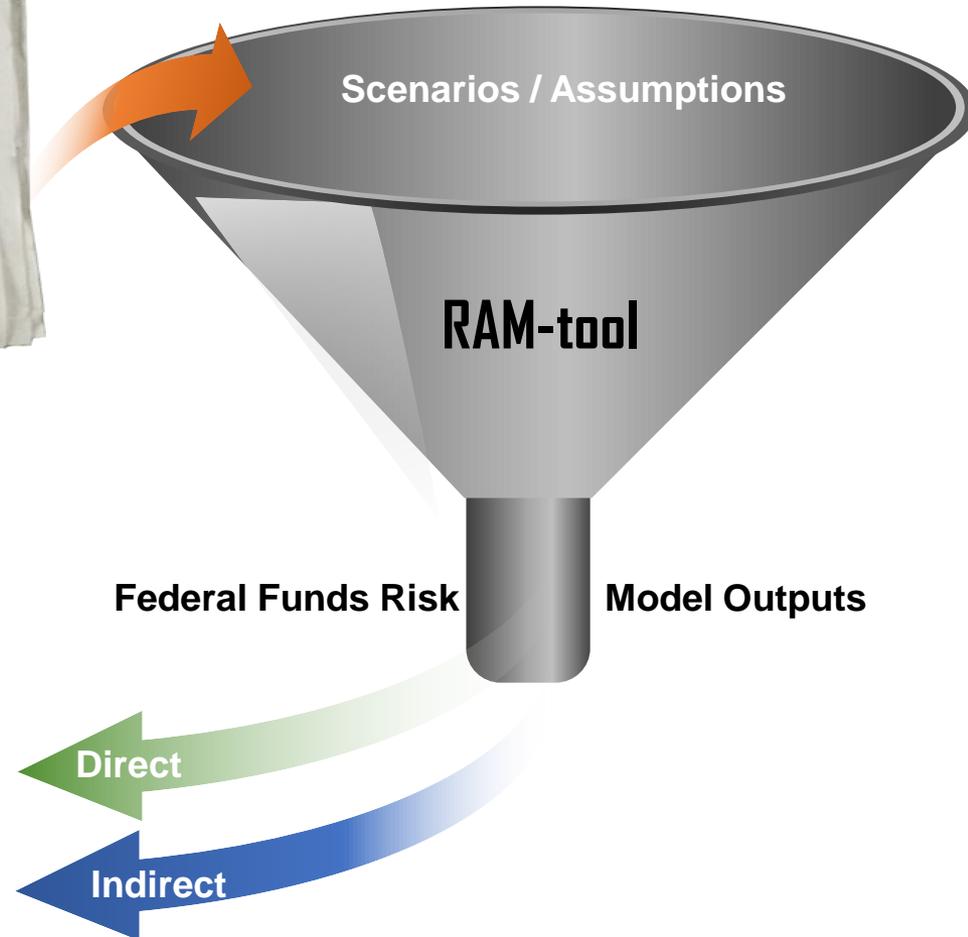
Interest Rate Scenario

Fed Raises Interest Rates

Assumptions:

- September timeframe
- Interest rates rise by 50 bps.
- Related reduced GDP, federal borrowing, and federal spending.

- ▶ In this one scenario the State of Utah could lose \$0.63m in Direct Federal Funds
- ▶ State of Utah could also lose 13,000 jobs, \$1.2b of state specific GDP, and over \$348m in state & federal direct and indirect funding





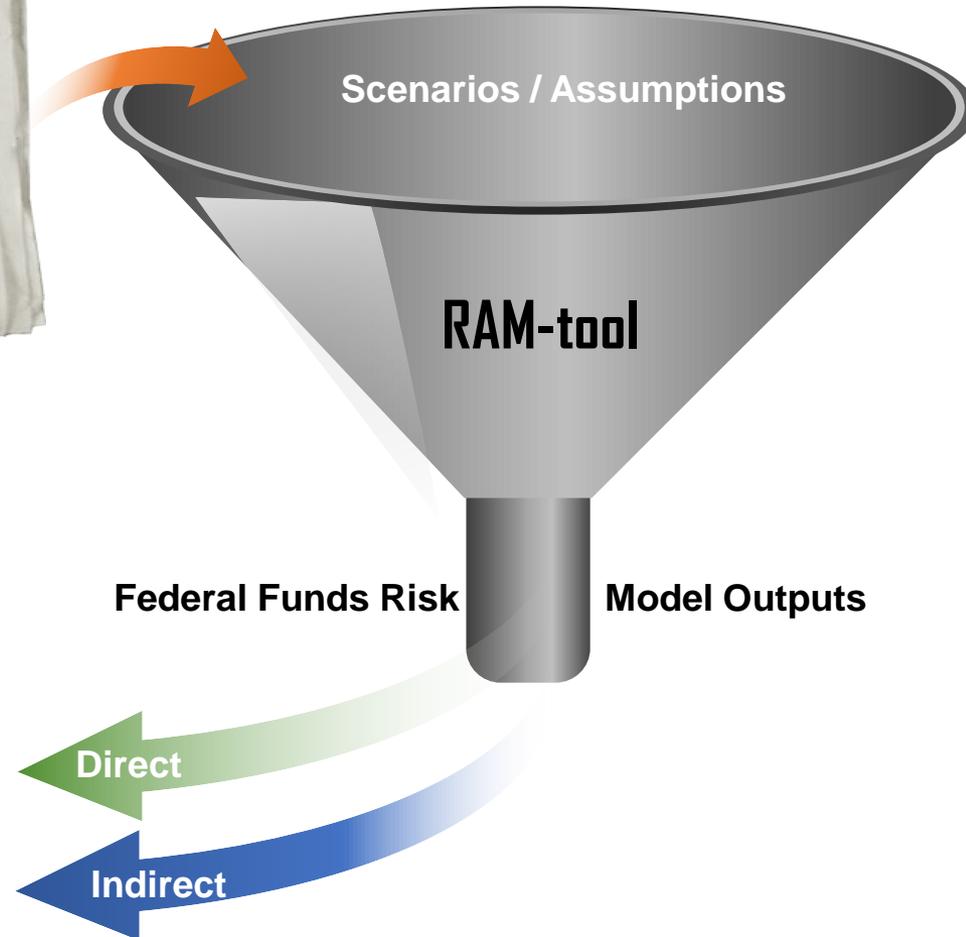
Medicaid Spending Reduction

Medicaid Spending is reduced

Assumptions:

- Congress decides to counteract the federal effects of Medicaid expansion.
- Medicaid spending goes down 5%.

- ▶ In this one scenario the State of Utah could lose \$105m in Direct Federal Funds
- ▶ State of Utah could also lose 3,000 jobs, \$127m of state specific GDP, and over \$105m in state & federal direct and indirect funding



HOW DO WE “GET SMARTER” ABOUT MANAGING RISK?



Combined Interest Rate and Medicaid Scenario

Fed Raises Interest Rates

Assumptions:

- September timeframe
- Interest rates rise by 50 bps.
- Related reduced GDP, federal borrowing, and federal spending.

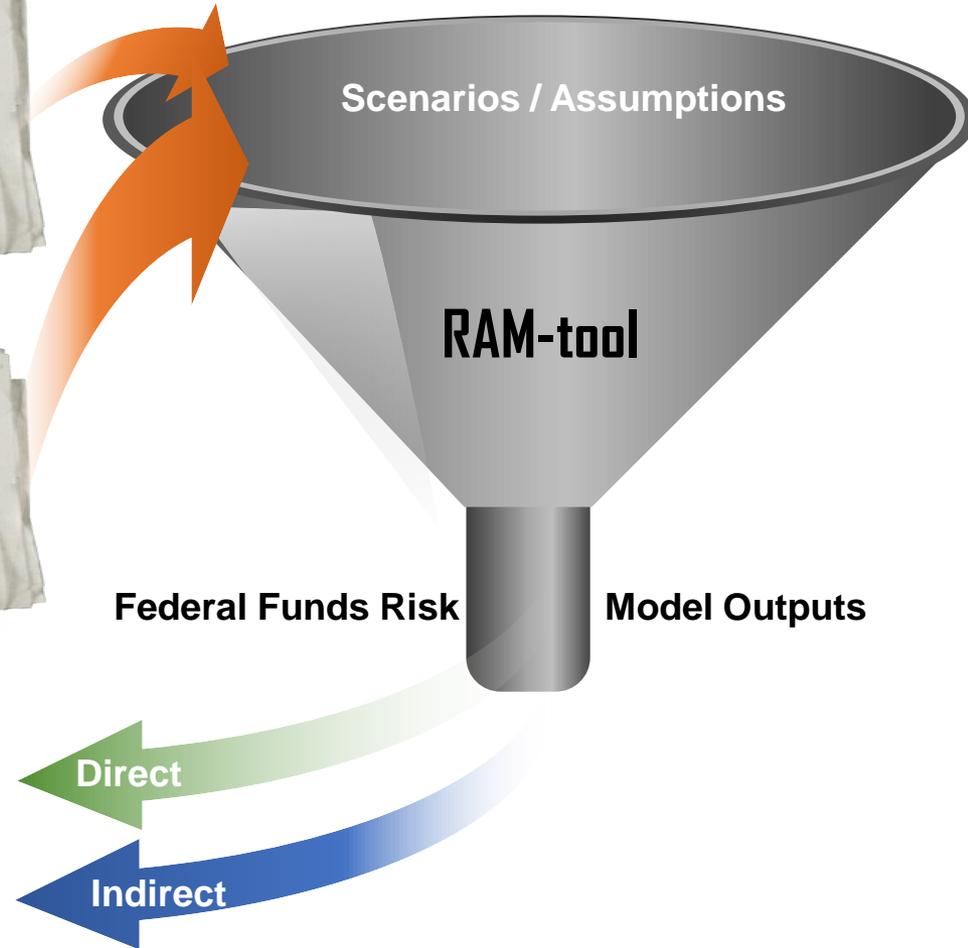


Medicaid Spending is reduced

Assumptions:

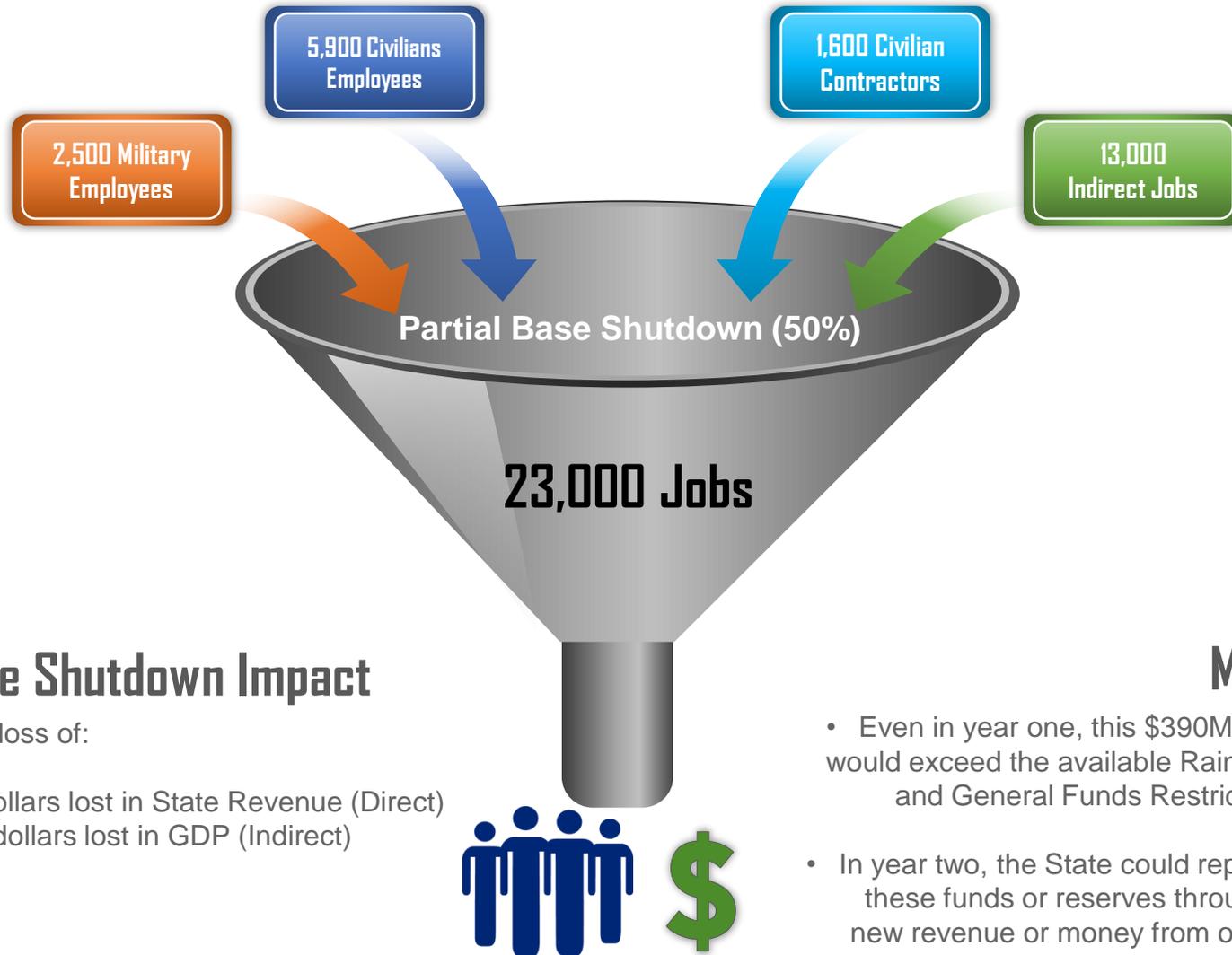
- Congress decides to counteract the federal effects of Medicaid expansion.
- Medicaid spending goes down 5%.

- ▶ **In this scenario, the State of Utah could lose \$113m in Direct Federal Funds**
- ▶ **State of Utah could also lose 17,000 jobs, \$1.4b of state specific GDP, and over \$452m in state & federal direct and indirect funding**



HOW DO WE THINK ABOUT RISK FACTORS THAT ARE NOT IN OUR CONTROL, AND CONTAGION?

Case Study: Hill Air Force Base – Indirect Funding risk factor analysis (Partial Shutdown)





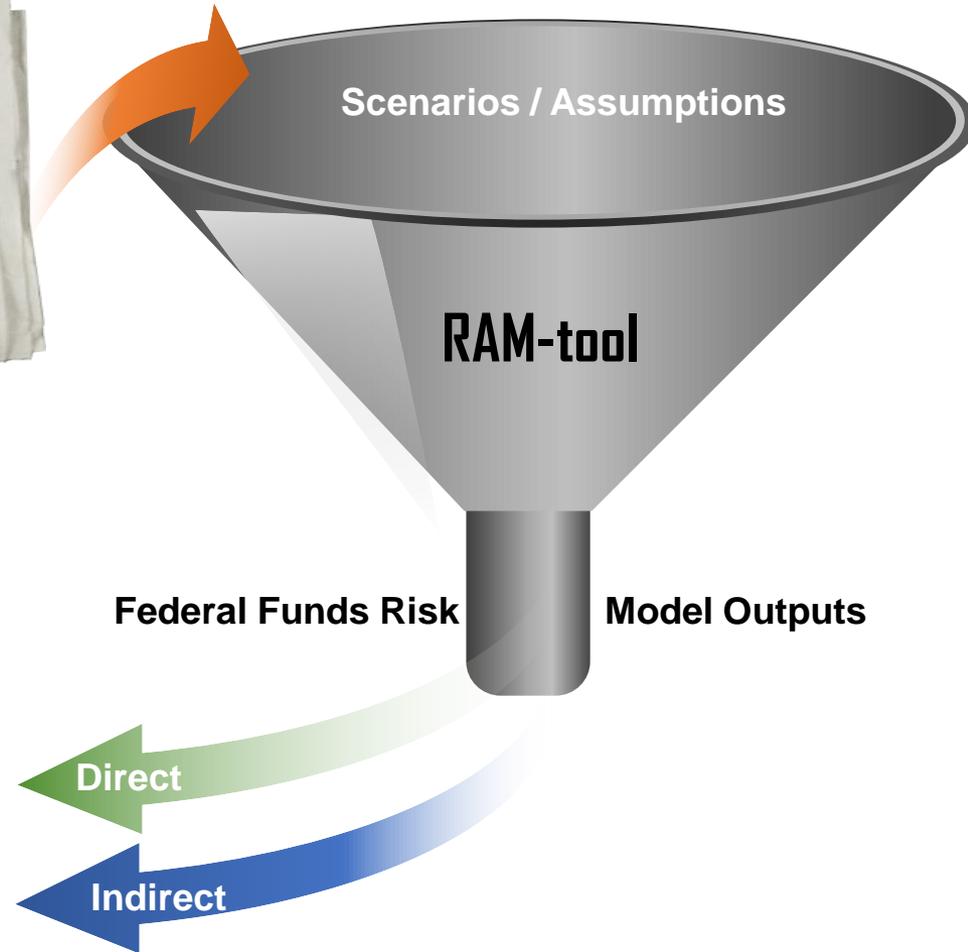
Fiscal Cliff Scenario

Fiscal Cliff

Scenario Assumptions:

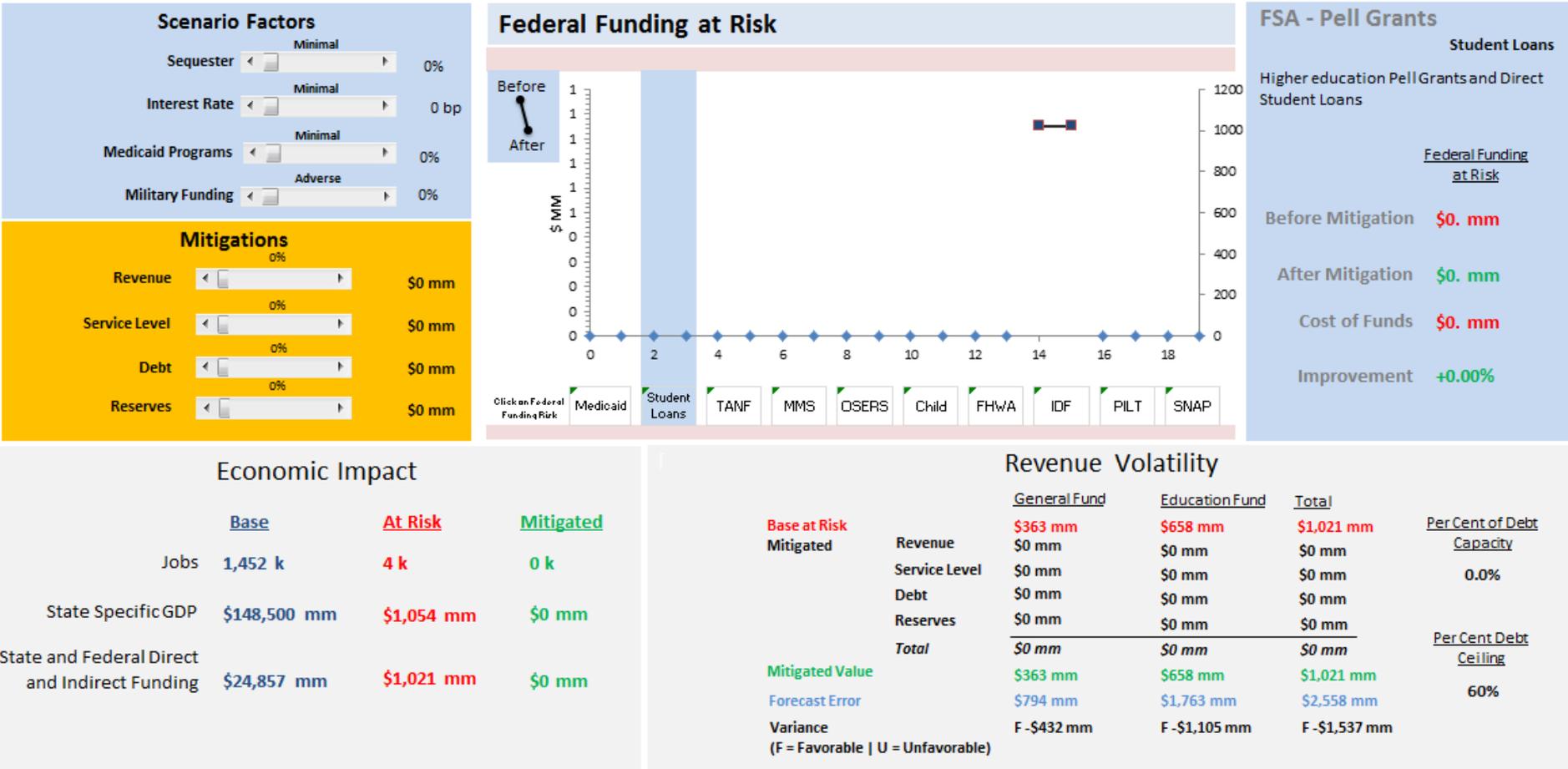
- Federal gov't falls off a fiscal cliff
- Triggers a 3% Sequestration
- Concurrent rise in interest rates of 1%
- Impact on UDOT, for example

- ▶ **In this one scenario the State of Utah could lose \$49m in Direct Federal Funds**
- ▶ **State of Utah could also lose 71,000 jobs, \$6.6b of state specific GDP, and over \$2.5b in state & federal direct and indirect funding**



SCENARIO 1: FISCAL CLIFF AND INTEREST RATE SPIKE

Federal Funds Risk Model – Baseline view



SCENARIO 1: FISCAL CLIFF AND INTEREST RATE SPIKE

Federal Funds Risk Model – Fiscal Cliff Scenario

Adjust for a 3% Sequestration

Scenario Factors

Sequester Adverse
 Interest Rate Minimal
 Medicaid Programs Minimal
 Military Funding Adverse

Mitigations

Revenue \$0 mm
 Service Level \$0 mm
 Debt \$0 mm
 Reserves \$0 mm

Federal Funding at Risk



FHWA Programs

FHWA
 Federal Highway Administration Surface, Performance, and other programs

Federal Funding at Risk
 Before Mitigation **\$49.38 mm**
 After Mitigation **\$49.38 mm**
 Cost of Funds **\$0.55 mm**
 Improvement **+0.00%**

Economic Impact

	Base	At Risk	Mitigated
Jobs	1,452 k	71 k	0 k
State Specific GDP	\$148,500 mm	\$6,661 mm	\$0 mm
State and Federal Direct and Indirect Funding	\$24,857 mm	\$2,483 mm	\$0 mm

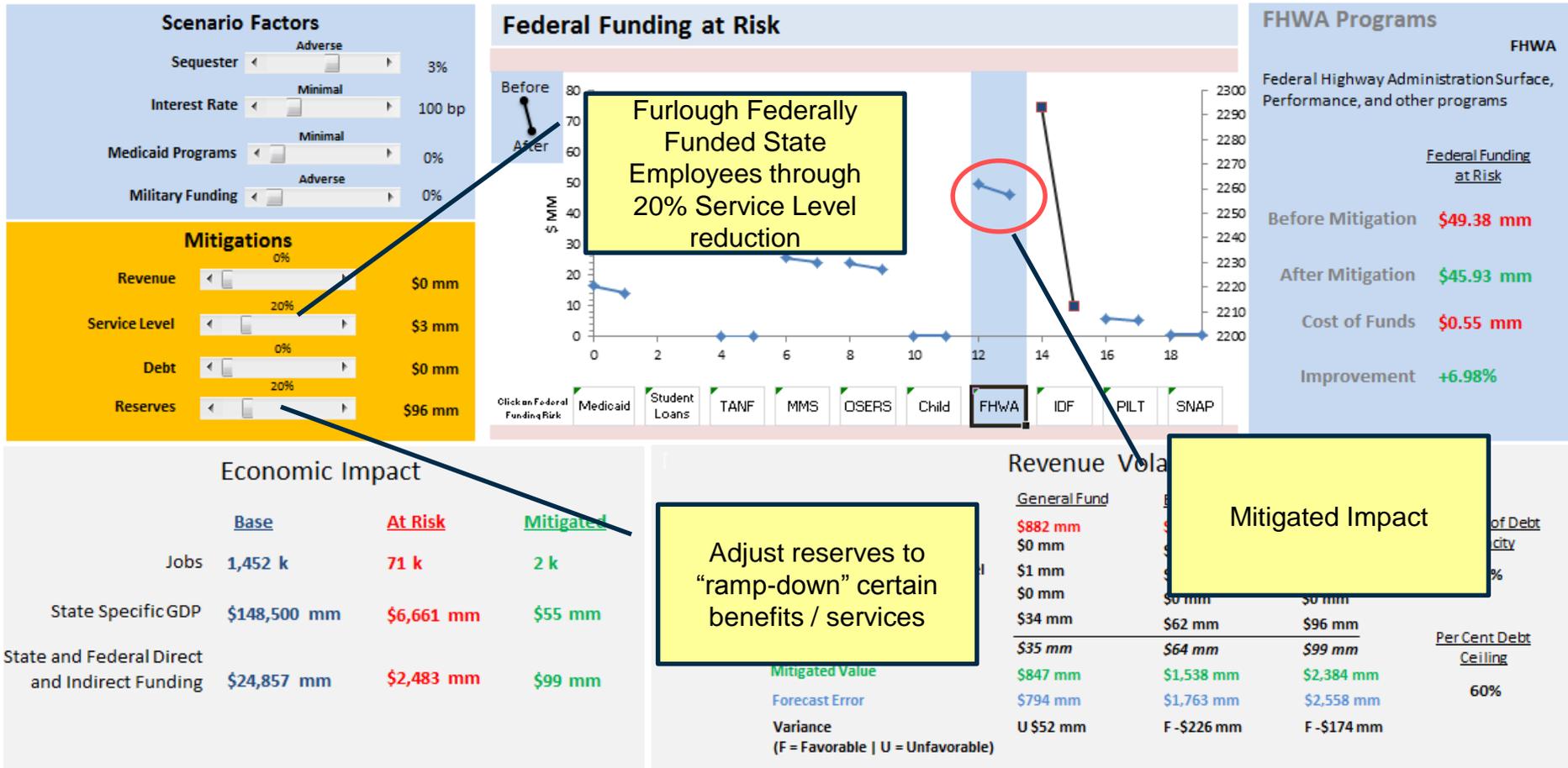
Revenue Volatility

	General Fund	Education Fund	Total	Per Cent of Debt Capacity
Base at Risk	\$882 mm	\$1,602 mm	\$2,483 mm	
Mitigated	\$0 mm	\$0 mm	\$0 mm	0.0%
Revenue	\$0 mm	\$0 mm	\$0 mm	
Service Level	\$0 mm	\$0 mm	\$0 mm	
Debt	\$0 mm	\$0 mm	\$0 mm	
Reserves	\$0 mm	\$0 mm	\$0 mm	
Total	\$0 mm	\$0 mm	\$0 mm	Per Cent Debt Ceiling
Mitigated Value	\$882 mm	\$1,602 mm	\$2,483 mm	60%
Forecast Error	\$794 mm	\$1,763 mm	\$2,558 mm	
Variance	U \$87 mm	F -\$162 mm	F -\$75 mm	

(F = Favorable | U = Unfavorable)

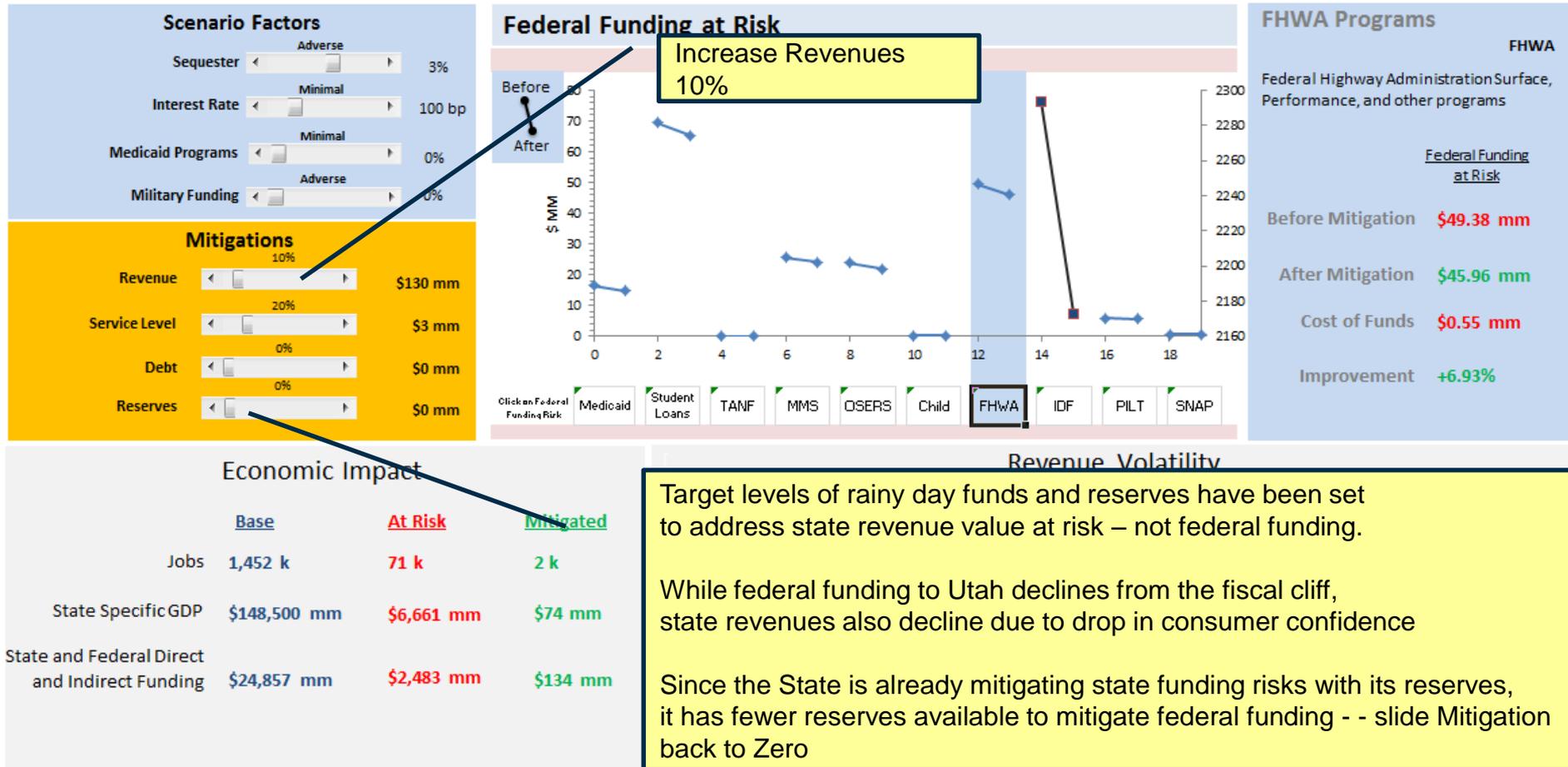
SCENARIO 1: FISCAL CLIFF AND INTEREST RATE SPIKE

Federal Funds Risk Model – Fiscal Cliff Scenario



SCENARIO 1: FISCAL CLIFF AND INTEREST RATE SPIKE

Federal Funds Risk Model – Fiscal Cliff Scenario



REFLECTION

Project Reflection

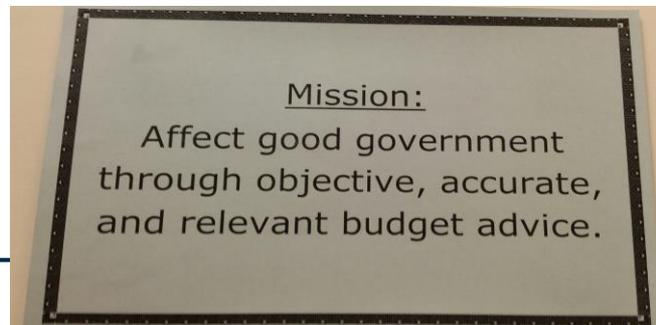
Alvarez & Marsal Insurance & Risk Advisory Services (IRAS) has built a Federal Funds risk framework and risk model for the Utah State Legislature's Federal Funds Commission.

Project deliverables included assessing various Federal Fund risk scenarios:

- overall reductions of federal funds, as in a sequester;
- effects on the value of federal funds, as with interest rate changes;
- specified reductions of federal funds, as with Medicaid reduction.

A&M assessed these scenarios, and others, by:

- Modeling the risks to guide legislators' decisions and policy making,
- Showing the impacts on the state of various federal funding scenarios,
- Suggesting ways to mitigate the risks, with plans that can be implemented if they occur,
- Helping the state avoid these risks, through proactive steps that the state can take now.



QUESTIONS AND NEXT STEPS

Project Wrap-up

- ▶ **Question and Answer period**
- ▶ **Discussion of model maintenance**
- ▶ **Project feedback**
- ▶ **Next Steps**
 - Provide a public interface which can be hosted on Utah's servers
 - Provide written methodology
 - Provide data & documentation sources
 - Provide interview list

Visualization Preview – Public Interface



Scenario Visualizer

Explore Federal Funds in Utah at the county level

Choose a variable to display data

Medicaid

As

Dollars per capita

Range for ratios and percents:

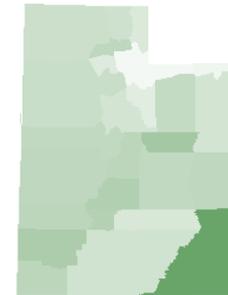
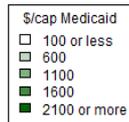


Data from 2013.

Medicaid and Snap data by county percentages of participants.

Pell data by colleges and universities receiving funds.

Scenario Setting Risk Analysis **County Visualizer** Risk Mitigation



Search:

Names	Medicaid	PellGrants	SnapPayments	Subtotal
BEAVER	647	0	193	840
BOX ELDER	524	0	194	718
CACHE	497	331	176	1004
CARBON	818	0	307	1124

APPENDIX – PELL GRANT CASE STUDY



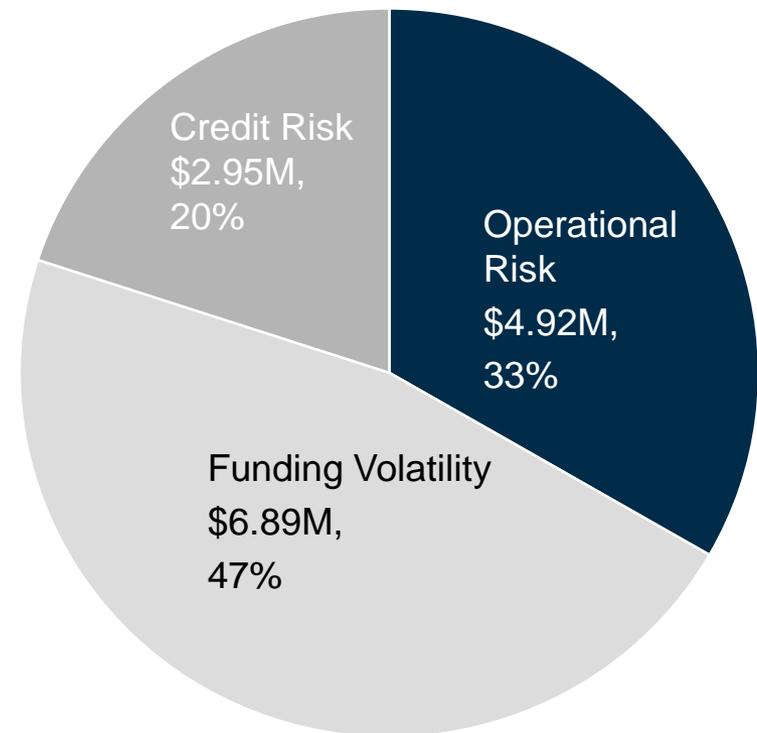
FFRM SOLVING FOR EXTERNAL ENDOGENITY AND INTERNAL OPERATIONAL RISK FACTORS

Case Study: Pell Grants

Cost of Funding

- ▶ Using Pell Grants as an example, we modeled the risks of three additional areas to determine the trade-offs for cost of funding including: operational risk, funding variability, and credit risk
- ▶ **Operational Risk:** This is the risk that an operational risk haircut is applied to the funding levels for Pell grants given the current operating scores for compliance and financial administration.
- ▶ **Funding Volatility:** Provides an estimate of potential federal allocation risk inherent in the program.
- ▶ **Credit Risk:** Is the risk associated with working capital credit enhancements.

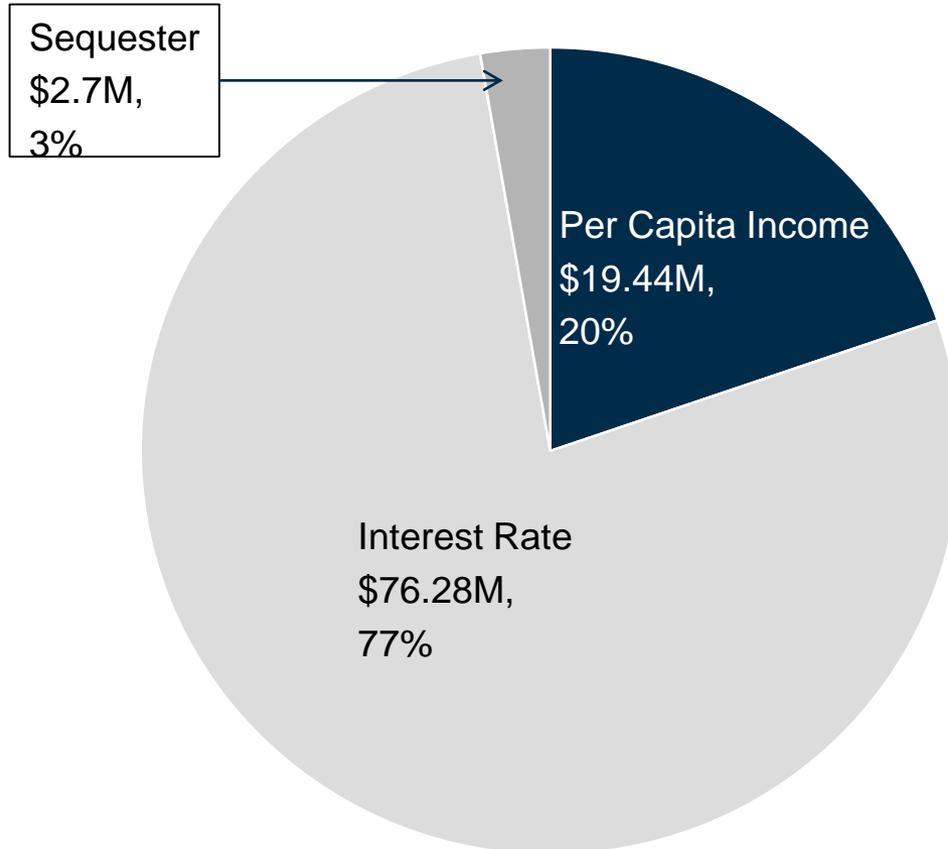
Example Cost of Funds by Risk Area for Total FSA Pell Grants - \$14.76M Total



FFRM SOLVING FOR EXTERNAL ENDOGENITY AND INTERNAL OPERATIONAL RISK FACTORS

External risk factors consider external funding risks add to our exposure

Example External Risks for FSA Pell Grants - \$98.42M Total



External Risks

- ▶ Using Pell Grants as an example, we are presenting external risk factors including macroeconomic risks such as per capita income and interest rates, as well as, other external risks like sequestration
- ▶ **Per Capita Income:** This is the risk that changes in per capita income in the state of Utah as a result of the loss of FSA Pell grants further exacerbate the state-wide impacts
- ▶ **Interest Rates:** Demonstrates the added risks that interest rates have on the FSA – Pell Grant program.
- ▶ **Sequestration:** Is the risk associated with the external Federal government budgetary actions

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