

# IYKYK – Financial Forecasting in Uncertain Times

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Kevin Klosterboer, MPA, CGFO

Director of Finance, City of Cedar Park





# Agenda

- Financial Forecasting
- Communicating Risk
- Challenges of Uncertainty
- Questions

# GFOA Best Practice

## **Financial Forecasting in the Budget Preparation Process**

The GFOA recommends that governments at all levels forecast major revenues and expenditures. The forecast should extend several years into the future. The forecast, along with its underlying assumptions and methodology, should be clearly stated and made available to stakeholders in the budget process. It also should be concisely presented in the final budget document. The forecast should be regularly monitored and periodically updated.

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The GFOA recommends that governments at all levels forecast **major revenues and expenditures**. The forecast should extend **several years into the future**. The forecast, along with its **underlying assumptions and methodology**, should be **clearly stated** and **made available to stakeholders** in the budget process. It also should be **concisely presented** in the final budget document. The forecast should be regularly **monitored and periodically updated**.

# What is Financial Forecasting?

- A financial forecast is a fiscal management tool that presents estimated information based on past, current, and projected financial conditions.
- The purpose of the financial forecast is to evaluate current and future fiscal conditions to guide policy and programmatic decisions.



# Key Steps in Forecasting Process

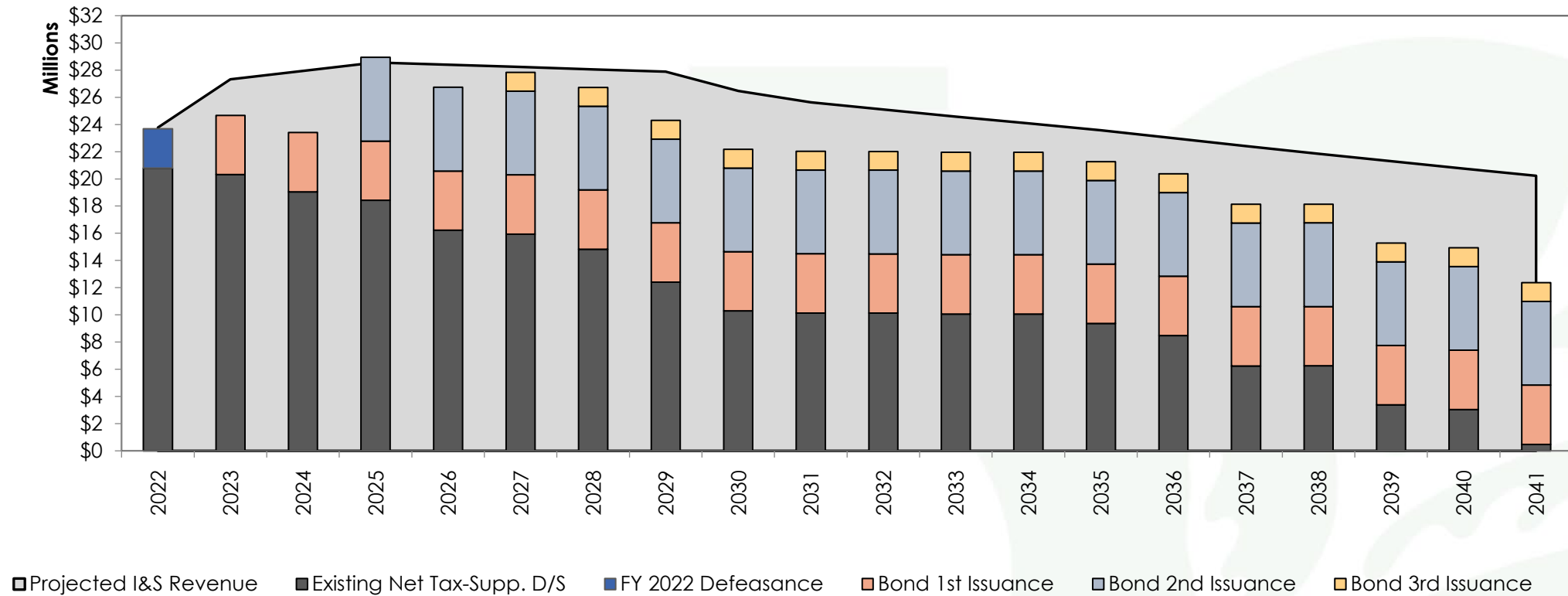


# Define Assumptions

1. What is the time horizon of the forecast?
2. What is the objective of the government's forecasting policy?
3. What are the political/legal issues related to the forecast?
4. What are the major revenues and expenditure categories?



# Debt Service Capacity Model



# Gather Information

- Use a variety of data
- Assumptions should be documented
- Forecasts should be based on other long-term planning efforts of the organization



# Development-Related Revenues

	A	B	C	D	E	F	G	H	I	J												
1																						
2	<div style="border: 1px solid #ccc; padding: 5px;"> <p><b>Category</b> <span style="float: right;">☰ ✖</span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">41 Tax</td> <td style="width: 25%; background-color: #e0e0e0;">42 Licenses and Fees</td> <td style="width: 25%;">43 Rentals</td> <td style="width: 25%;">44 Fees for Service</td> </tr> <tr> <td>45 Fines &amp; Forfeitures</td> <td>46 Miscellaneous Revenue</td> <td>47 Bond Proceeds</td> <td>48 Donation Proceeds</td> </tr> <tr> <td>49 Grant Proceeds</td> <td>80 Asset Transfers</td> <td>81 Transfers In</td> <td></td> </tr> </table> </div>										41 Tax	42 Licenses and Fees	43 Rentals	44 Fees for Service	45 Fines & Forfeitures	46 Miscellaneous Revenue	47 Bond Proceeds	48 Donation Proceeds	49 Grant Proceeds	80 Asset Transfers	81 Transfers In	
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3																						
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9																						
10																						
11	Row Labels	Sum of 2020	Sum of 2021	Sum of 2022 Actuals	Sum of 2023 Amended Budget	Sum of 2023 YTD	Sum of 2023 Projection	Sum of Over/Under	Sum of Pre Adjustment	Sum of FY2024 Budget												
12	☰ <b>42 Licenses and Fees</b>																					
13	4210 BUILDING PERMITS	876,488	653,443	800,656	800,000	212,489	600,000	(200,000)	(200,000)	600,000												
14	4246 SITE DEVELOPMENT P	35,435	110,583	124,079	100,000	48,247	100,000	-	-	100,000												
15	4232 CONSTRUCTION INSP	21,662	63,166	312,321	75,000	249,217	300,000	225,000	100,000	175,000												
16	4235 ENGINEER REVIEW FE	28,223	29,606	58,018	50,000	11,428	30,000	(20,000)	(20,000)	30,000												
17	4240 PLANNING & ZONING	19,895	64,557	73,253	40,000	56,125	75,000	35,000	20,000	60,000												
18	4251 FIRE CODE COMPLIAN	30,865	39,120	38,510	30,000	15,950	30,000	-		30,000												
19	4245 PROFESSIONAL FEE RE	17,200	29,200	35,600	20,000	14,425	30,000	10,000	10,000	30,000												
20	4249 OTHER-PERMITS & FE	7,941	1,240	1,839	2,000	50	2,000	-	(1,000)	1,000												
21	4297 CONTRIBUTIONS	-	-	-	-	-	-	-		-												
22	4215 OTHER FEES	-	-	-	-	-	-	-		-												
23	4230 ELECTRICAL LICENSES	-	-	-	-	-	-	-		-												

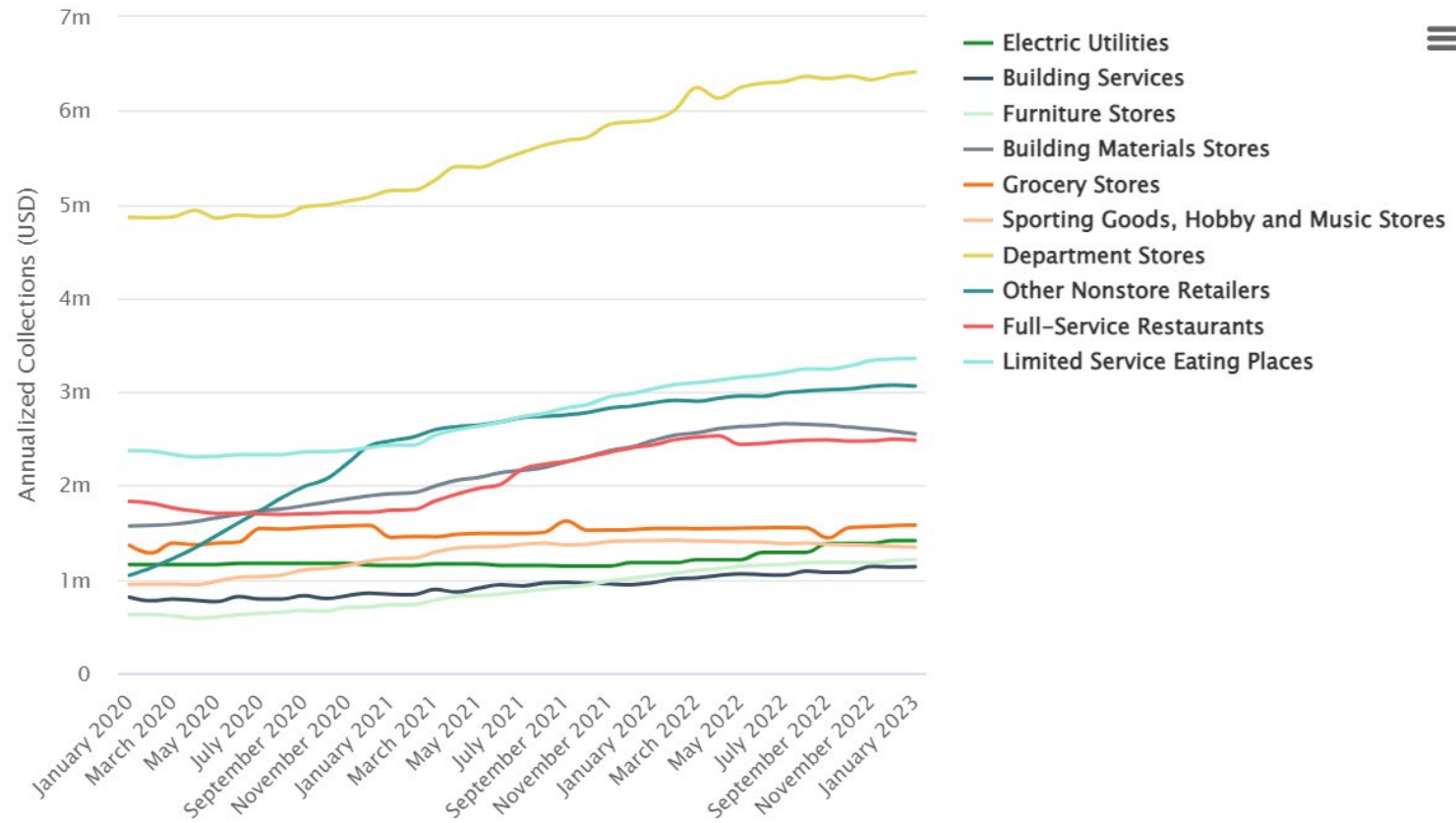
# Preliminary/Exploratory Analysis

- Business cycles
- Demographic trends
- Outliers and historical anomalies
- Relationships between variables



# Sales Tax – Industry Analysis

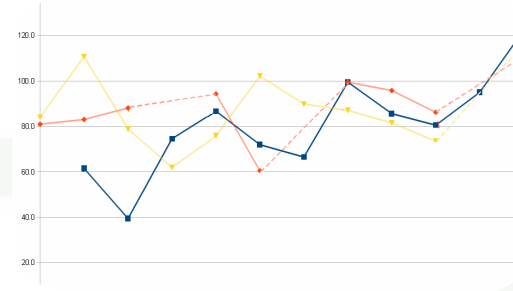
How have the top 10 industry codes performed over the past 3 years?



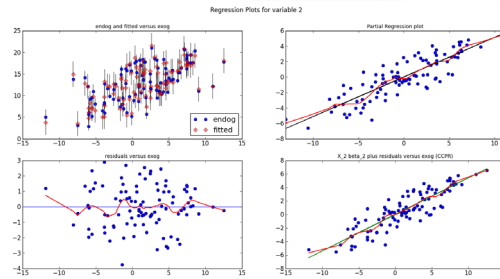
# Select Methods



Judgmental forecasting



Extrapolation



Regression/  
Econometrics



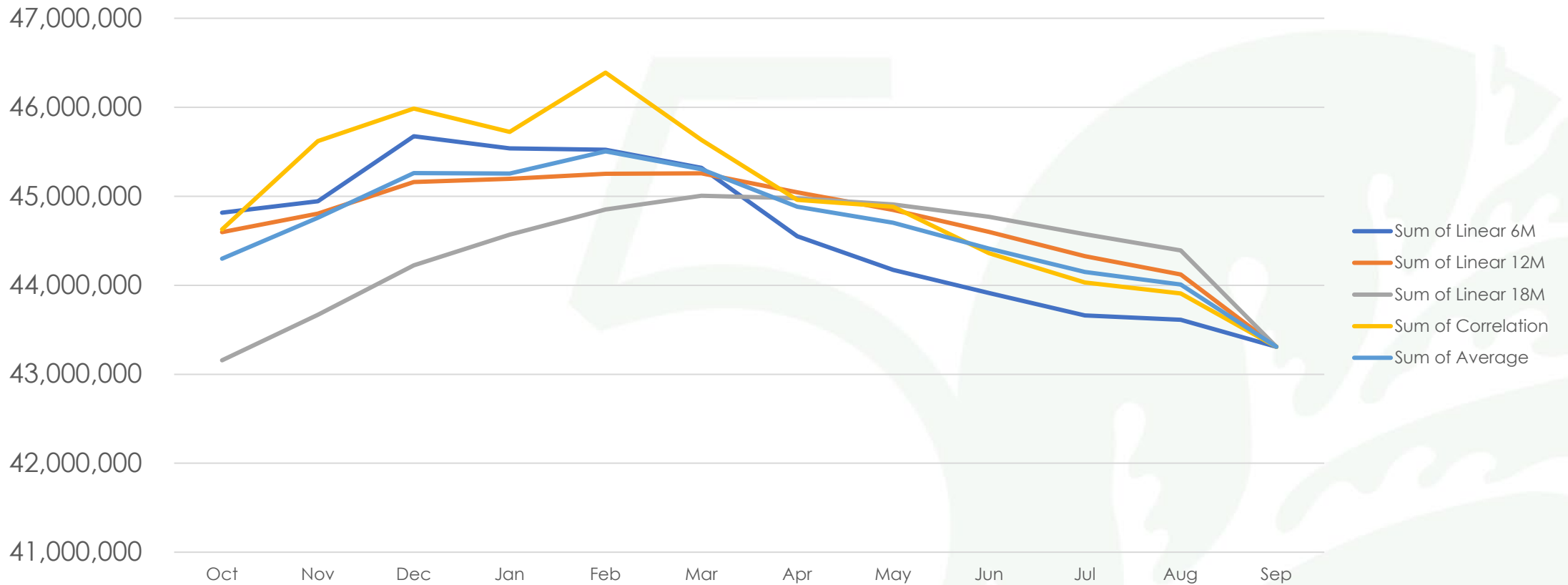
Hybrid forecasting

# Implement Methods

- Put into practice
- Forecast ranges



# Sales Tax Model





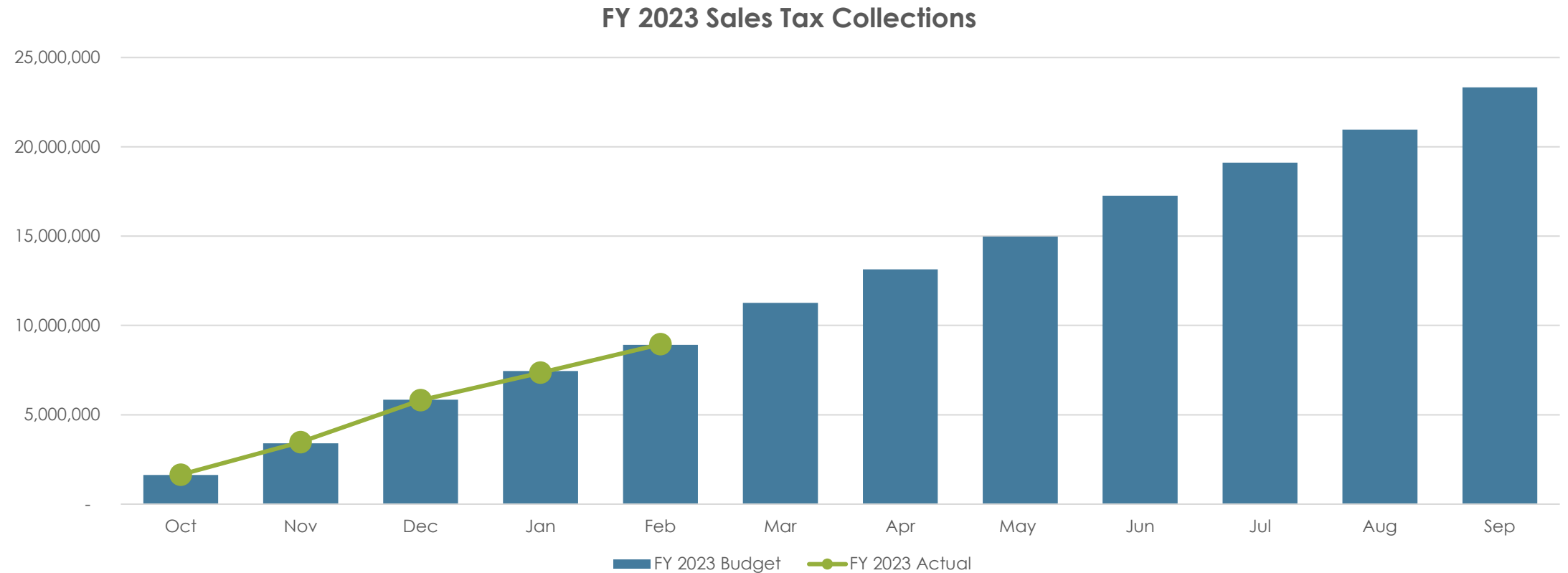
# Use Forecasts

1. Credibility of the forecaster
2. Presentation approach
3. Linking the forecast to decision making

# Type B Long-Range Forecast

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>TYPE B COMMUNITY DEVELOPMENT FUND FORECAST</b>											
2			<i>Net available after reserve met</i>		4,000,285	8,701,057	8,479,111	8,881,039	10,195,613	11,738,856	13,432,316	15,216,643
3	<i>Assumptions as of 2/26/2021</i>											
4					1	2	3	4	5	6	7	8
5			<b>FUND SCHEDULE SUMMARY</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>
				<b>Actual</b>	<b>Actuals</b>	<b>Actuals</b>	<b>Budget</b>	<b>Forecast</b>	<b>Forecast</b>	<b>Forecast</b>	<b>Forecast</b>	<b>Forecast</b>
6	<i>Line</i>											
7	1		<b>BEGINNING BALANCE</b>	1,263,208	5,246,050	6,802,103	9,390,444	13,511,832	11,891,325	13,255,605	14,847,539	16,592,891
8	2		Prior Project Savings adjustment	-	-	-	-	-	-	-	-	-
9	3		Net Balance	1,263,208	5,246,050	6,802,103	9,390,444	13,511,832	11,891,325	13,255,605	14,847,539	16,592,891
10	4											
11	5		<b>REVENUES</b>		2.50%	2.50%	2.50%	24.60%	2.50%	2.50%	2.50%	2.50%
12	6		Sales Tax	7,398,316	7,801,923	9,353,659	11,000,000	11,660,000	11,951,500	12,250,288	12,556,545	12,870,458
13	7		Additional Sales Tax	-	-	-	-	-	347,731	401,478	460,788	526,162
14	8		Lease Payments					-	276,361	351,732	427,103	433,510
15	9		Other Income				15,680,000					
16	10		Interest Income	97,641	76,190	1,544,850	10,000	10,000	10,000	10,000	10,000	10,000
17	11		<b>Total Revenues</b>	<b>7,495,957</b>	<b>7,878,113</b>	<b>10,898,509</b>	<b>26,690,000</b>	<b>11,670,000</b>	<b>12,585,592</b>	<b>13,013,498</b>	<b>13,454,436</b>	<b>13,840,130</b>
18												
19			<b>EXPENSES</b>									

# FY 2023 Sales Tax Collections



# Evaluate Forecasts

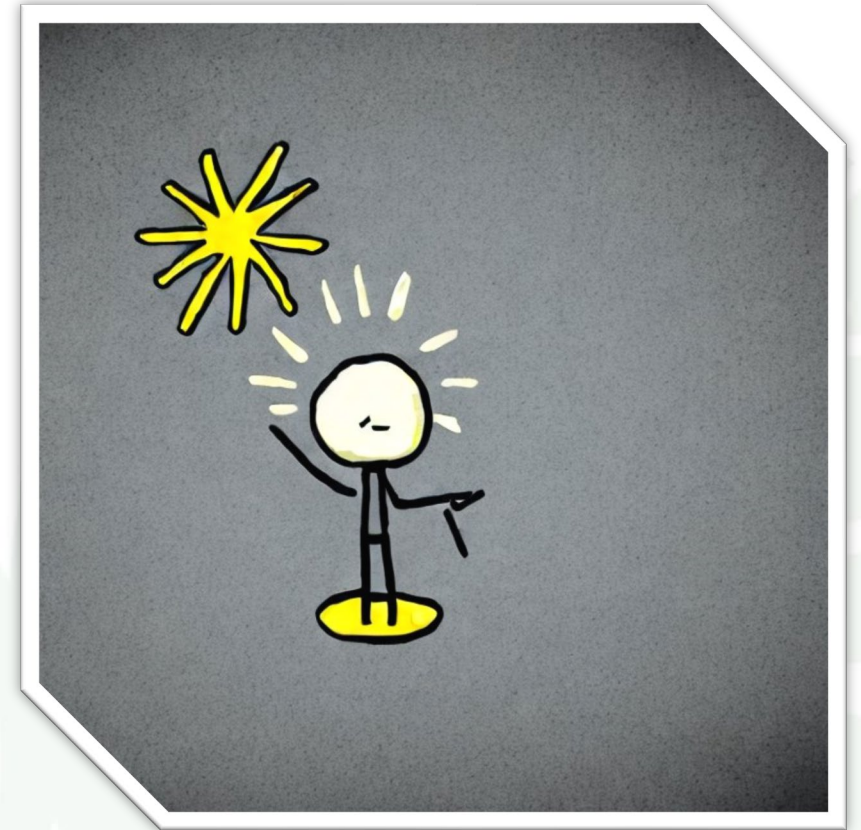
- Check for accuracy
- Monitor/Update
  - Short-term forecasts/budget-to-actuals
  - Leading indicators

# Communicating Risk

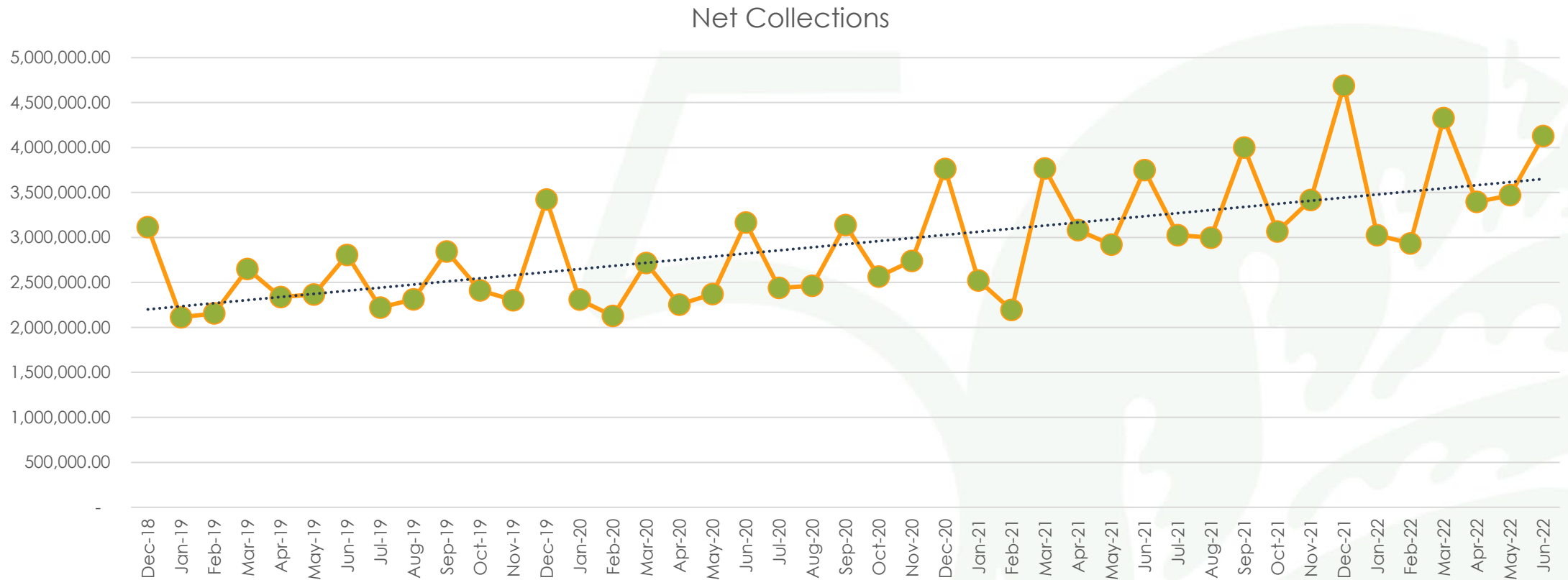


# Communicating Risk

- Predisposition of positive thinking
- Forecasting upward growth requires increased caution



# Sales Tax, net collections



# Challenges of Uncertainty





# Fallacy of Certainty



To be **uncertain** is to be uncomfortable, but to be **certain** is to be ridiculous. – Socrates

# Countering Uncertainties

- Be clear about limitations/assumptions
- Challenge assumptions
- Scenario planning
- Conservative approach
- Financial policies

# Financial Policies

- A **reserve policy**
- A policy on **maintaining structural balance**
- **Long-term planning policy**
- **Long range** capital improvement plan

# Reserve Policy

## RESERVE POLICIES

1. The City will maintain the General Fund unassigned fund balance at a level sufficient to provide for emergency expenditures and unanticipated revenue shortfalls. The City will maintain a fund balance at a minimum reserve level of 25% and a maximum of 50% of budgeted operations and maintenance expenditures. The right is reserved by the City Council to change the targeted reserve level by resolution, ordinance or budget adoption. When the reserve exceeds the maximum limits, opportunities should be identified to use the excess reserves to fund one-time expenses within the General Fund.
2. The City will maintain the Enterprise Fund (Water/Sewer Fund) unrestricted fund balance at a level sufficient to provide for emergency expenditures and unanticipated revenue shortfalls. The targeted reserve level will be a minimum of 25% of budgeted operations and maintenance expenditures. This amount is in addition to amounts that have been set aside or are being accumulated for Capital Expenditures. The right is reserved by the City Council to change the targeted reserve level by resolution, ordinance or budget adoption.

# Maintaining Structural Balance

## BUDGET POLICIES

1. The City Council shall adopt a structurally balanced budget for the ensuing fiscal year pursuant to the prevailing state and local law. A structurally balanced budget is defined as recurring revenues funding recurring expenditures and adherence to fund balance policies. Deferrals, short-term loans, or one-time sources will be avoided as budget balancing techniques. One-time revenues may be used to finance non-recurring expenditures.

# Expenditures Summary

	2022 Amended Budget	2023 Base	2023 Adj to Base	2023 Enhancement	2023 Proposed Budget
Salaries and Benefits	\$44,460,510	\$45,565,354	-	\$4,042,469	\$49,607,824
Materials and Supplies	2,830,859	2,829,970	25,857	626,500	3,482,327
Repairs and Maintenance	2,080,375	2,025,282	116,800	127,700	2,269,782
Occupancy	1,478,254	1,406,155	6,400	4,508	1,417,063
Contractual Services	9,762,350	8,937,527	404,022	938,538	10,280,086
Other Charges	2,105,537	2,133,368	118,081	147,676	2,399,145
Economic Development	1,485,000	1,485,000	165,000	-	1,650,000
Contingency	309,836	309,836	-	-	309,836
Capital Outlay	919,436	-	-	767,325	767,325
Transfers	6,558,587	1,890,505	-	770,000	2,660,505
<b>Total Expenditures</b>	<b>\$72,020,744</b>	<b>\$66,582,997</b>	<b>\$836,180</b>	<b>\$7,424,716</b>	<b>\$74,843,893</b>
			One-Time:	\$2,635,748	
			Recurring:	\$4,788,968	

# Long-Term Planning Policy

4. **Five-Year Forecast of Revenues and Expenditures:** A five-year forecast of revenues and expenditures shall be prepared in conjunction with the annual budget process for the following funds:
  - a. General Fund
  - b. Water/Wastewater Utility Enterprise Fund
  - c. Type A & Type B Funds (Economic & Community Development)

# Long-Range Capital Improvement Plan

5. **Six Year Capital Improvement Plan:** The City will annually prepare a six-year Capital Improvement Plan based on the needs for capital improvements and equipment, the status of the City's infrastructure, replacement and renovation needs, and potential new projects.
  - a. Any project with a cost of \$50,000 or more and with an expected life of at least five years will be classified as a Capital Improvement Project.
  - b. Project costs shall be estimated, funding sources identified and annual operation and maintenance costs computed.
  - c. All Capital Projects will be budgeted for using a project-life budget approach.



# Summary

- Financial Forecasting
- Communicating Risk
- Challenges of Uncertainty

Questions?

