

# Audit committee webcast 2024

Charting the course: Board governance in 2024  
and beyond

Feb. 01, 2024

# Agenda

Topic	Duration
Economic outlook	15 minutes
Generative AI overview	20 minutes
Highlights of SEC remarks from recent AICPA & CIMA conference	15 minutes
Q&A	10 minutes

# With you today



**George Casey**  
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Advanced Analytics Practice Leader  
Denver, CO



**Scott Wilgenbusch**  
Partner, RSM US LLP  
SEC Services Leader  
Chicago, IL



**Tuan Nguyen**  
Economist Sr Director, RSM US LLP  
New York City, NY

# Economic outlook

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# U.S. economy: Sustained expansion



Growth

## Resilient Economy

- Fed at terminal rate; interest rate cuts begin June '24
- Recession probability down to 15% (vs. 55% consensus)
- Strong job market and real income gains above inflation
- Excess savings, consumption and investment driving growth



Employment

## Strong Labor Market

- Unemployment Rate 3.7% and tight labor market
- Prime aged employment near record high
- Median duration of unemployment 8-9 weeks: Laid off workers finding employment quickly
- Wages increased 4.1% Y/Y through December 23



Inflation

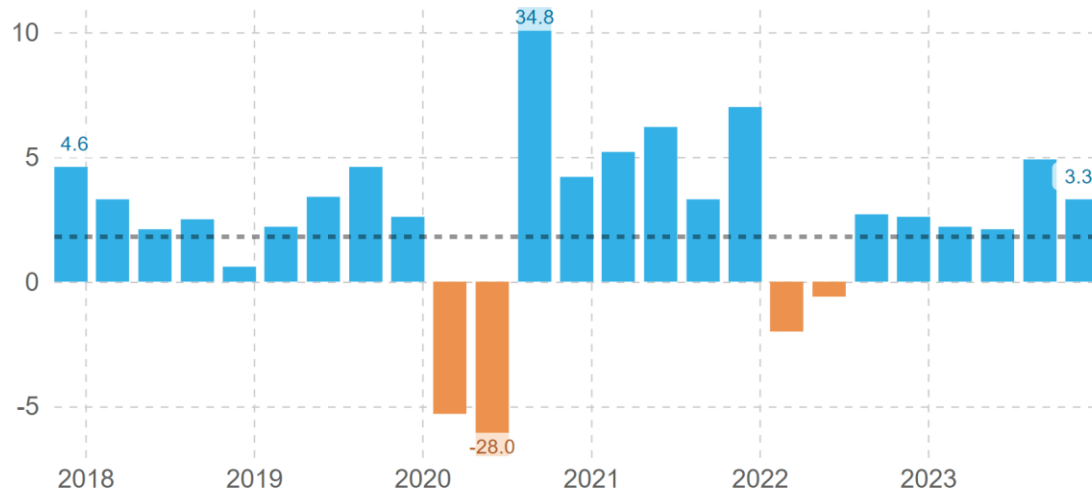
## Disinflation Extends Further

- Inflation peaked at 9.1% (June 22) for the cycle
- Back up in treasury yields worth 50 basis points of tightening
- CPI, PCE inflation falling notably, service inflation ex-energy has peaked
- 0.5% PCE inflation 3-month annualized, 1.5% Core PCE

# Soft-landing achieved?

## U.S. real GDP growth

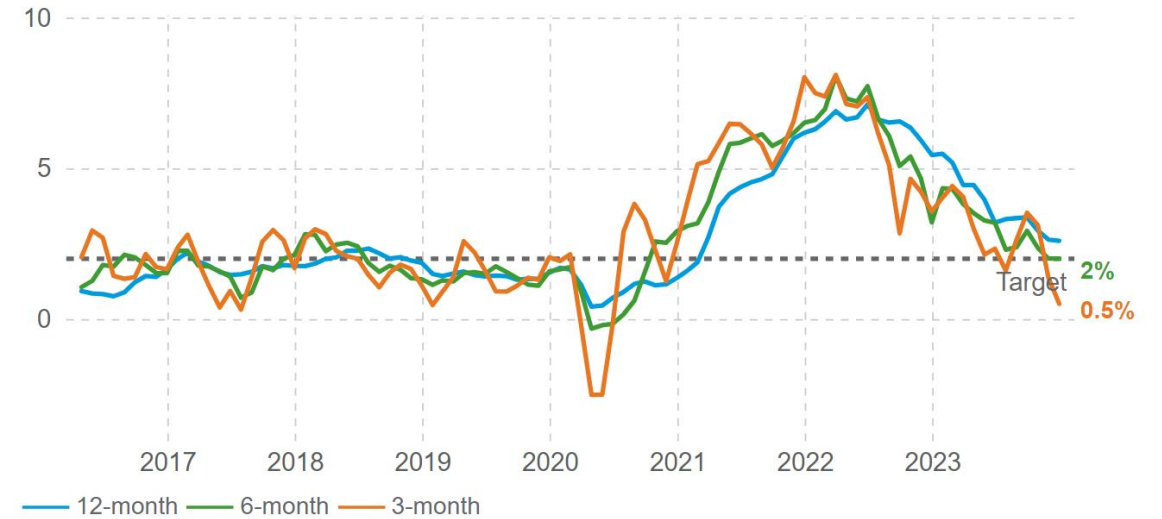
Quarterly %; annualized & seasonally adjusted; dotted line is long-run growth at 1.8%



Note: Q2 and Q3 2020 are truncated. Source: BEA, RSM US

## PCE inflation, monthly annualized

Seasonally adjusted; in percentages

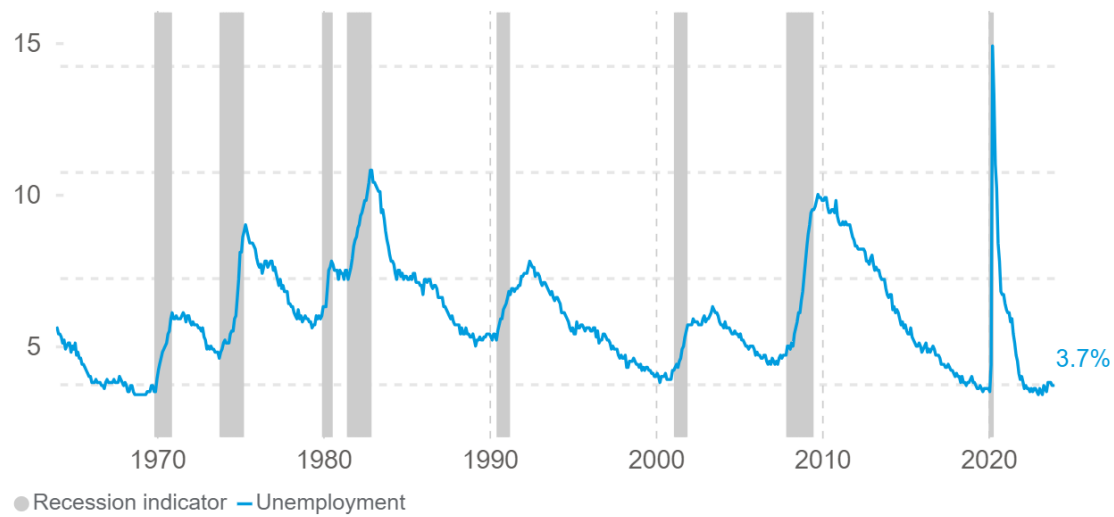


Source: BLS, RSM US

# Soft-landing achieved?

## Unemployment rate

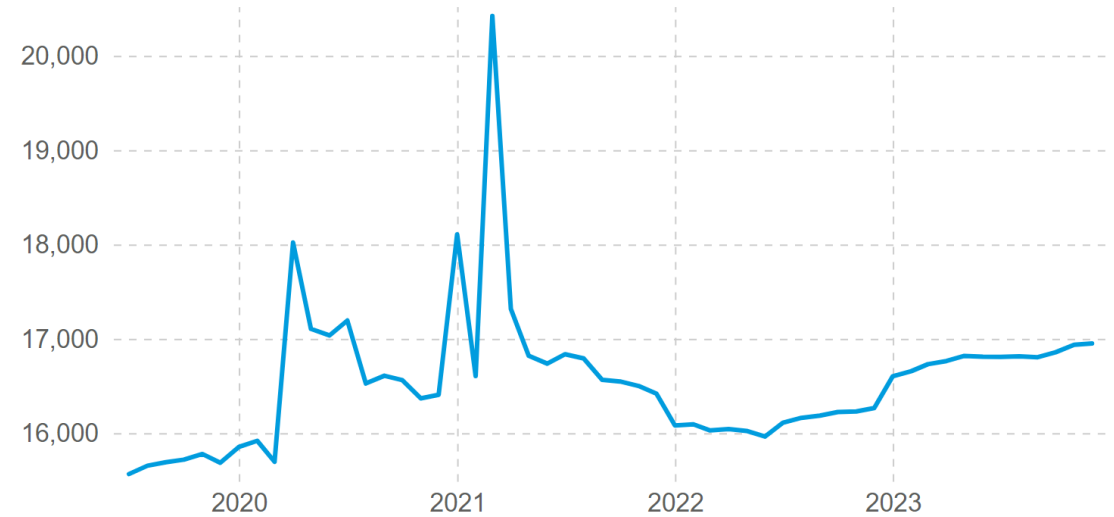
In percentages



Source: BLS, RSM US

## U.S. real personal income

\$ billions



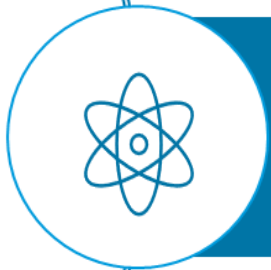
Source: BEA, RSM US

# Risks to the outlook



## Rising Interest Rates

- Sticky inflation and stronger than expected growth: Rates stay elevated
- MMBI Survey: Mid-market firms paying 10-15% to borrow by Q3'23 – which is unsustainable
- \$3 trillion corporate debt will roll over in the coming years



## Energy Market

- Geopolitical tension if war extends to neighboring countries



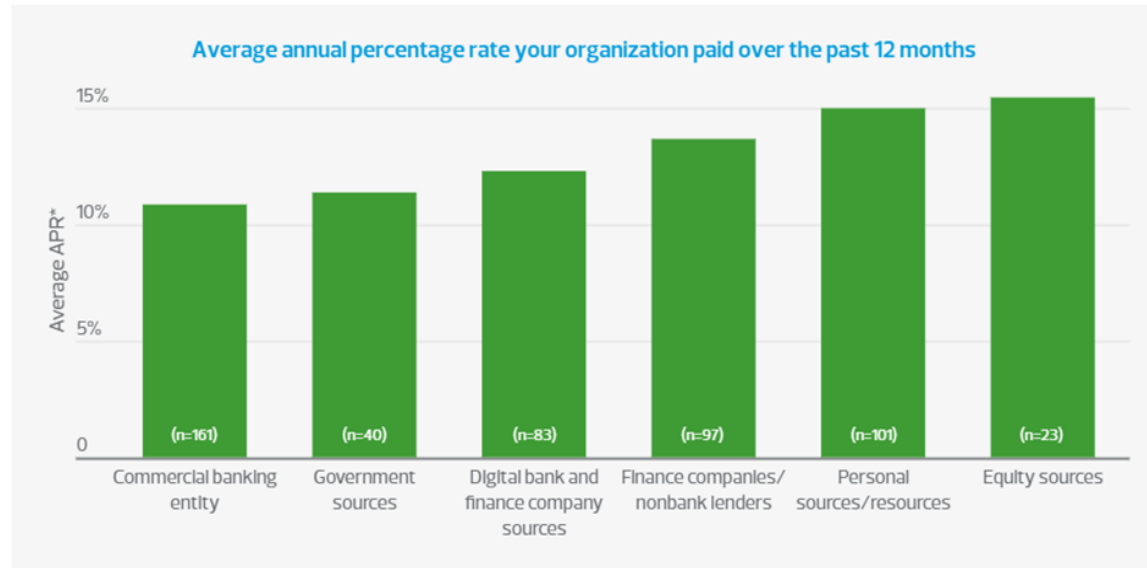
## Chinese Debt Crisis

- Not globally systematic yet, but will dampen Chinese growth for years



# Risks to the outlook

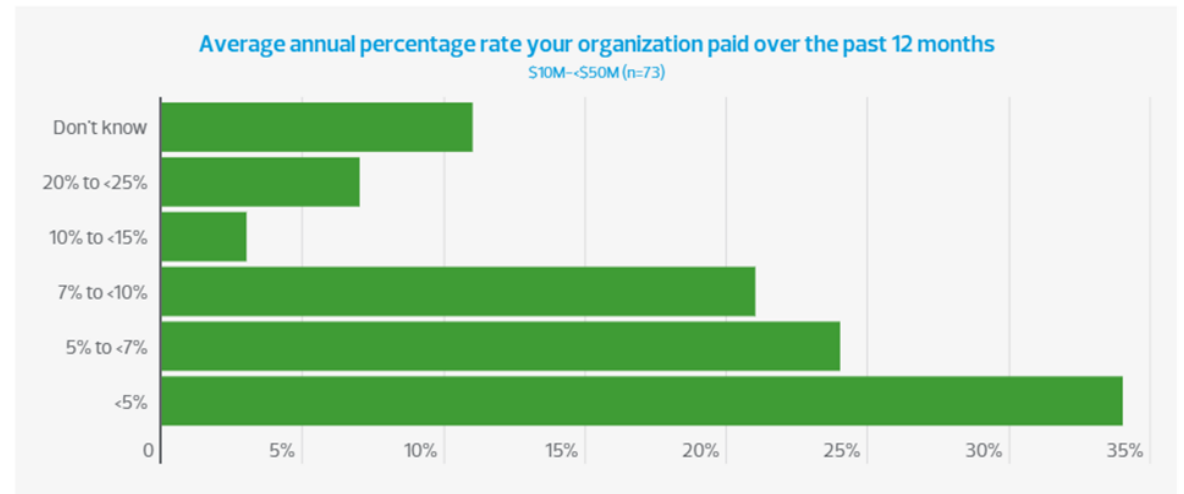
## Looking beyond traditional banks, but at a price



Source: RSM US Middle Market Business Index, Q3 2023

\*Average APR is calculated using the midpoint process; multiple sources of financing are possible

## Many smaller firms with loans from commercial banks have lower rates—for now\*

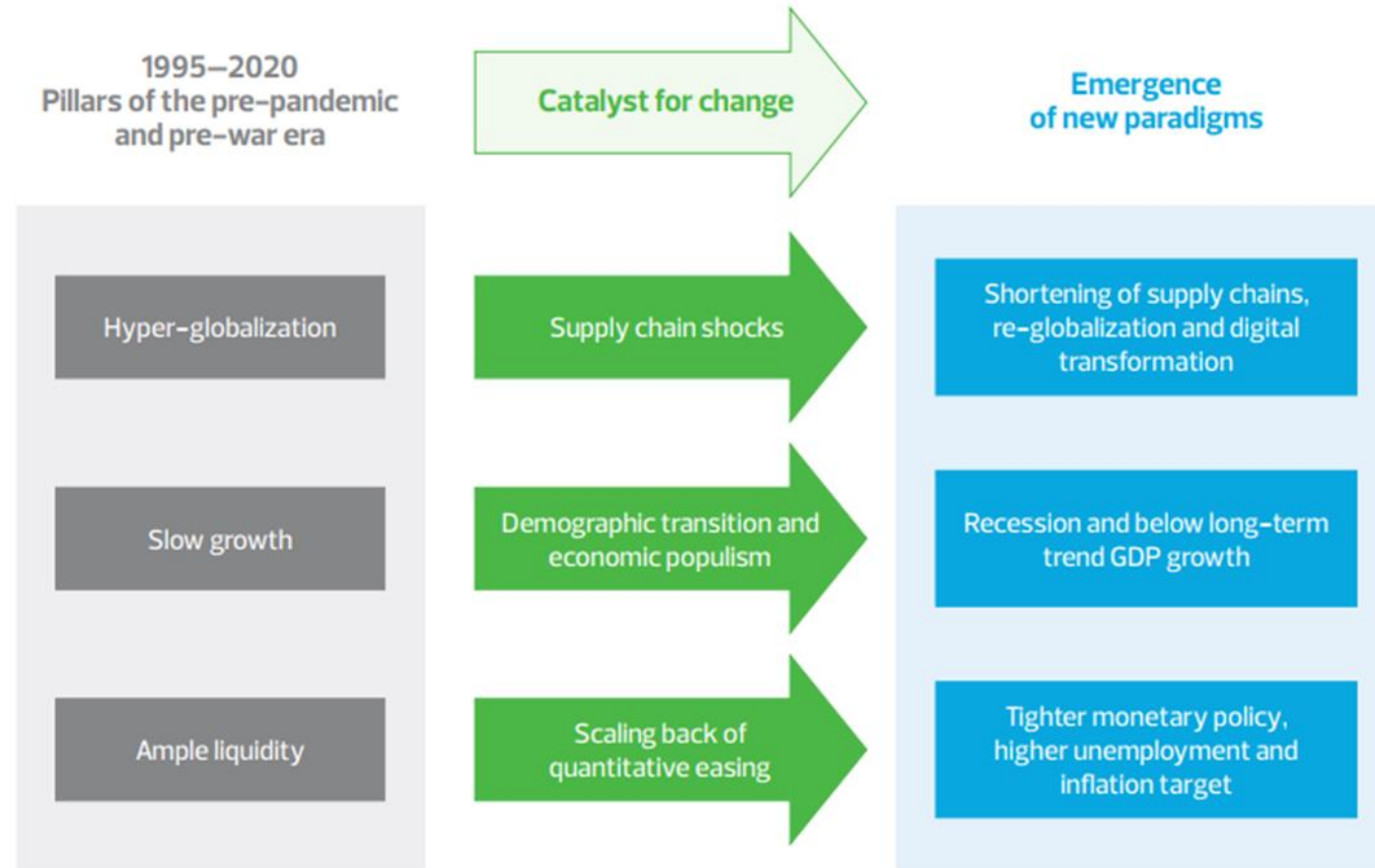


Source: RSM US Middle Market Business Index, Q3 2023

\*BASE = material sources of funding for investments or working capital during the past twelve months

## A break from the past

Regime change: Globalization, growth and liquidity to significantly change



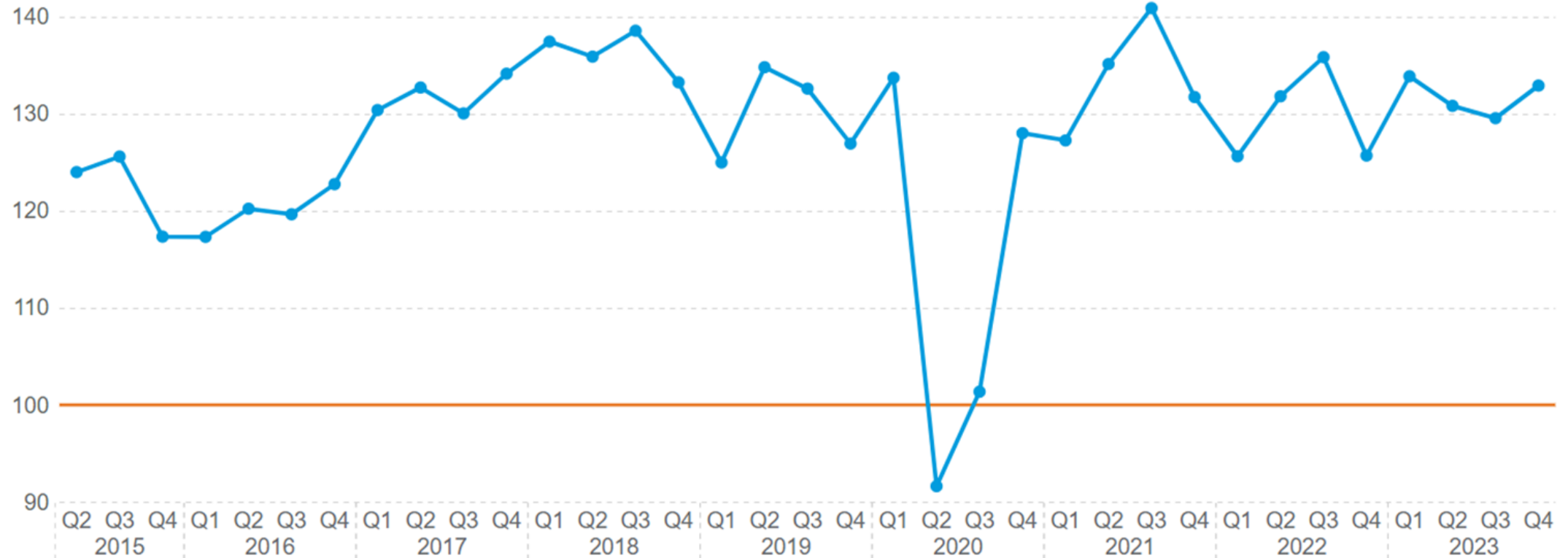
# Industrial policies in effect



Source: BLS, Census Bureau, RSM US

# Middle market pivot

**RSM US Middle Market Business Index**  
Seasonally adjusted; diffusion index with neutral = 100

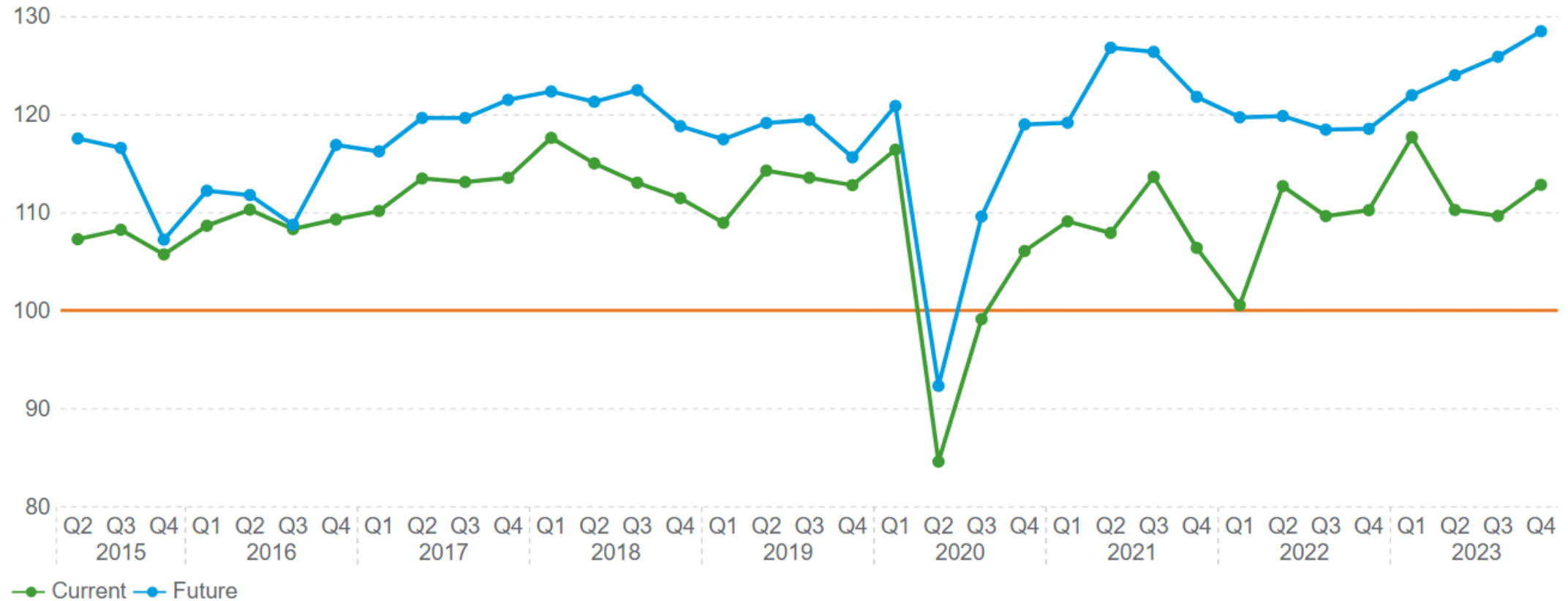


Source: RSM US LLP

# Middle market pivot

## Aggregate capital expenditures/investments performance

Seasonally adjusted; diffusion index with neutral = 100

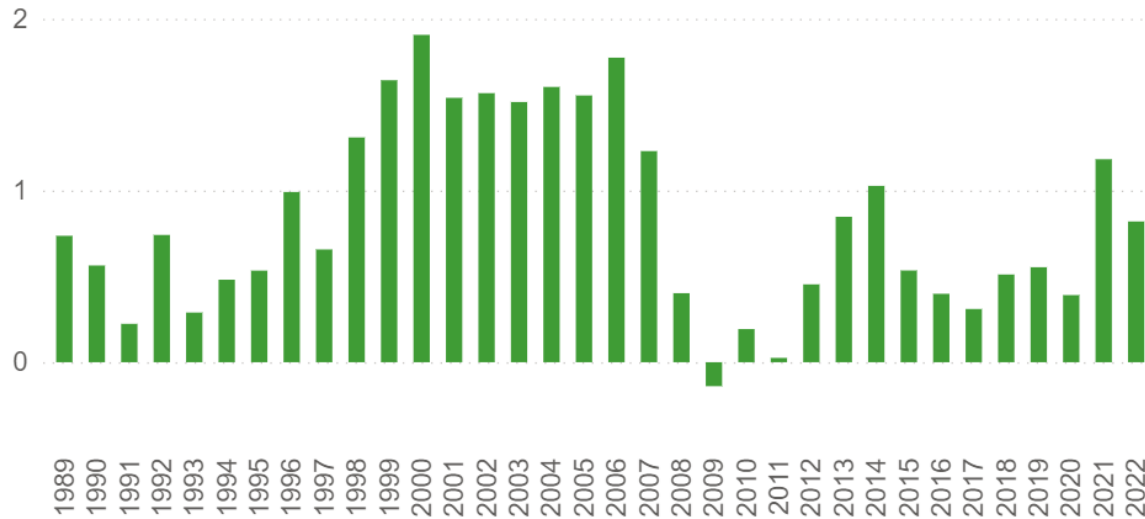


Source: RSM US LLP

# Investment in productivity-enhancing tech

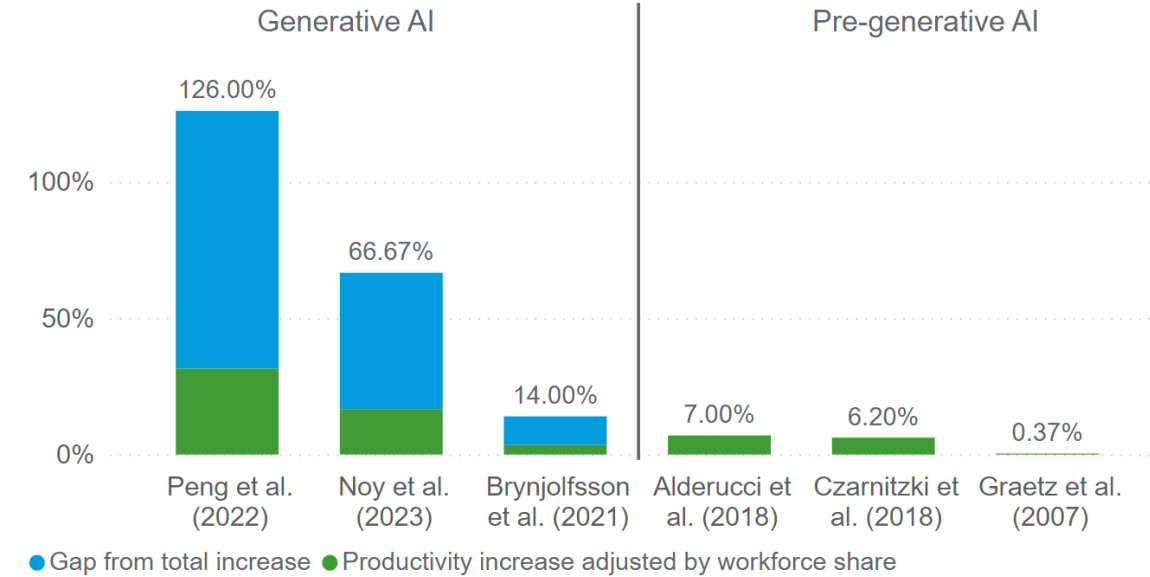
## Total factor productivity annual growth

Percentages



Source: San Francisco Federal Reserve, RSM US

## AI impact on productivity growth



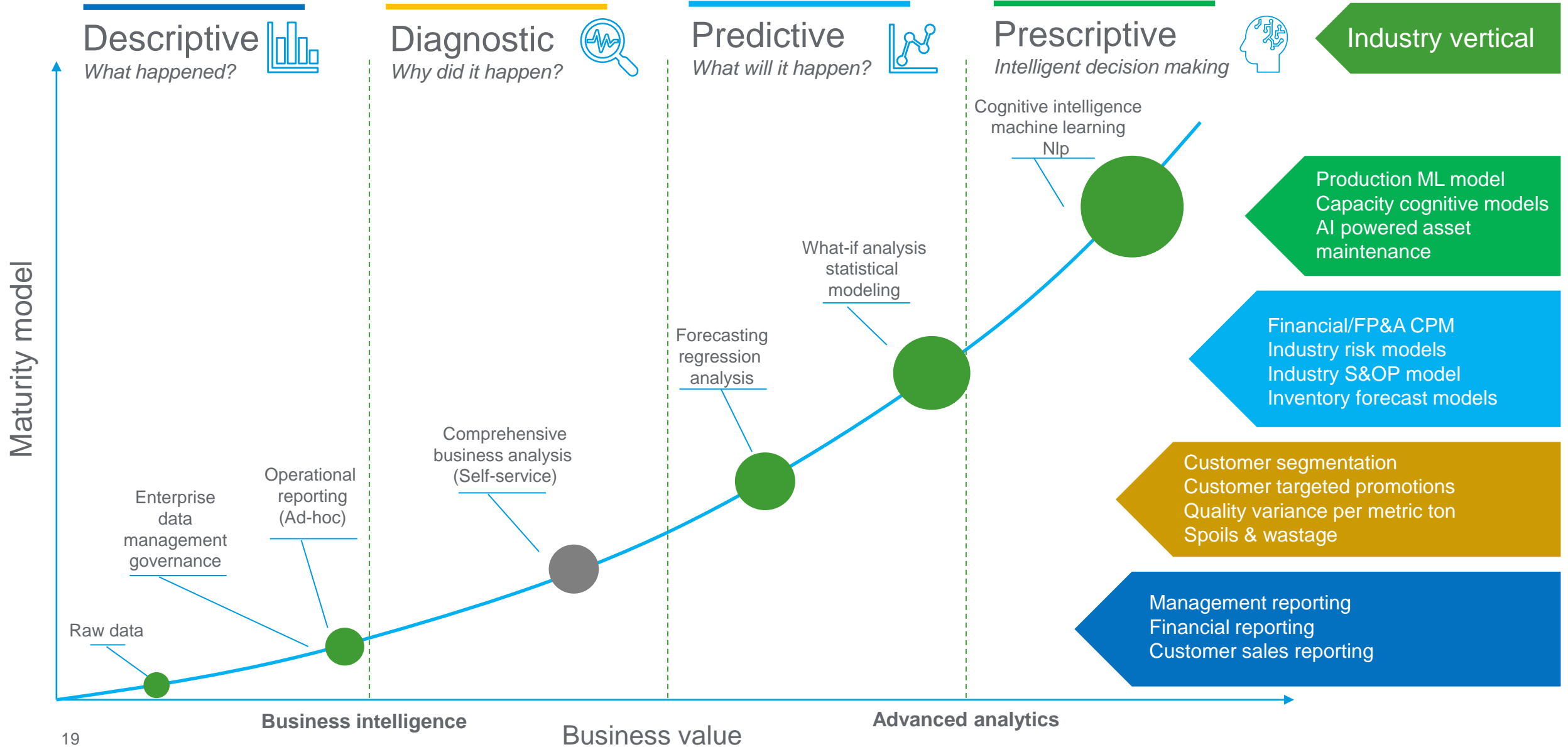
Note: The year information indicates the last date of data used based on available information. Source: RSM US

# Generative AI overview

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# Data analytics maturity model





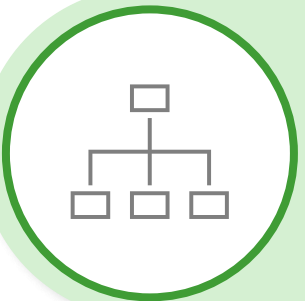
## Supervised



### Regression

Predicts the numeric value of an outcome.

*What is the value of A?*



### Classification

Answers simple two-choice question like yes/no.

*Is this A or B?*



### Time-series

Estimates the value for future time periods.

*What's the value of A in the next periods?*

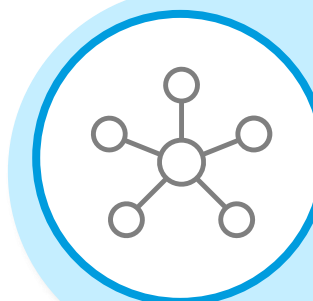
## Un-supervised



### Clustering

Makes groups of data based off similar characteristics.

*Which group does A most likely belong to?*



### Association

Groups data from tendencies of co-occurrence.

*Which items are usually bought together?*

## Supervised



### Natural language process

Uses text-only data types to classify new texts with user set labels.

*Is this text A, B, C...?*



### Computer vision

Uses image-only data types to classify new images with user set labels.

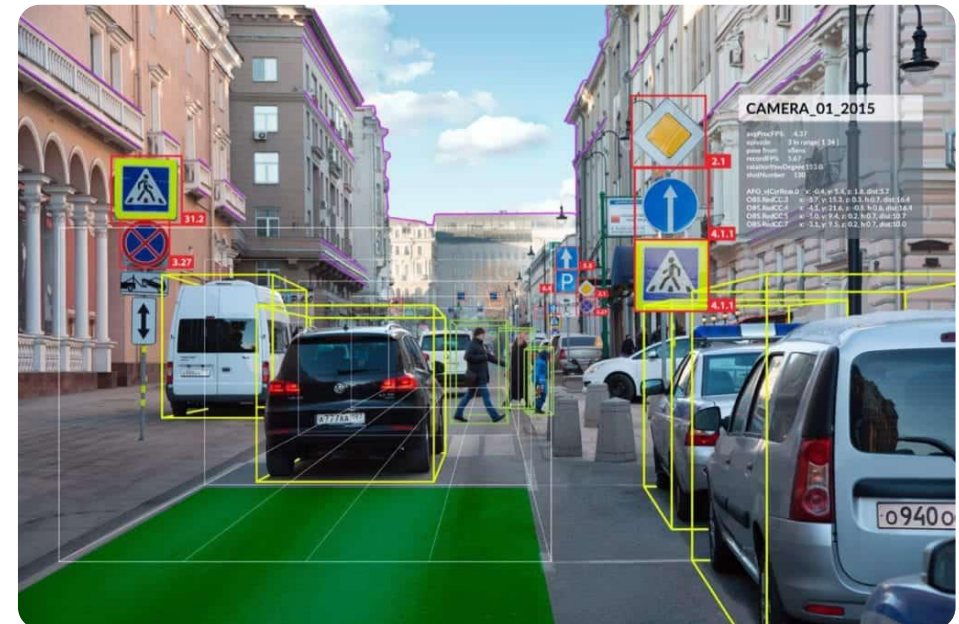
*Does this image contain A, B, C...?*

Terrible Service - I ordered a brand new computer from the web store. I'm furious to find out that the tracking number doesn't work and my order might be lost. Please respond ASAP.

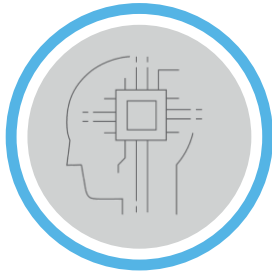
Order Issue

Negative

Urgent



# Potential impact – OpenAI research



Eighty percent of the U.S. workforce could have at least 10 percent of their work tasks affected by the introduction of GPTs



Nineteen percent of workers may see at least 50 percent of their tasks impacted



About 15 percent of all worker tasks in the U.S. could be completed significantly faster, at the same level of quality



Influence spans all wage levels, with higher-income jobs potentially facing greater exposure

# What is ChatGPT?

ChatGPT is an AI chatbot powered by an advanced large language model (LLM) developed by OpenAI. The model powering the chatbot is called a generative pre-trained transformer (GPT), which is based on architecture known for its ability to effectively process and generate natural language text. It has been specifically fine-tuned for generating human-like responses in conversational contexts.

## Enhancing client services



Quick access to information, insights, and perspectives



Accelerated idea generation and research



Enhanced productivity through automation

## Common use cases



Writing agendas



Building approaches



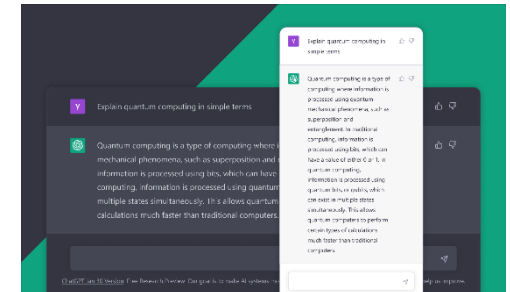
Writing proposals



High-level benchmarking

## Key capabilities

- Answering questions
- Providing explanations
- Generating ideas
- Offering suggestions



## Risks and considerations

**Outdated data:** Current data feeding algorithm is only up to 2021

**Data variability:** No guarantee on accuracy

**Privacy concerns:** All information typed into ChatGPT is part of the database (client privacy, sensitivity, IP issues, etc.)

# Generative AI application

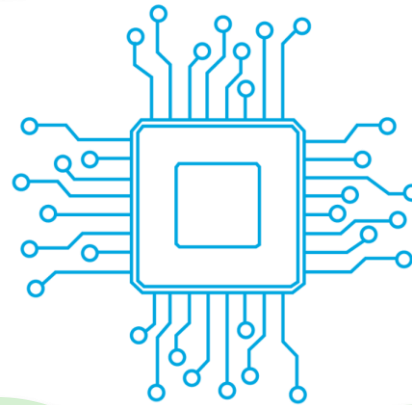
**Text generator** produces natural language text, ranging from simple sentences to entire articles.



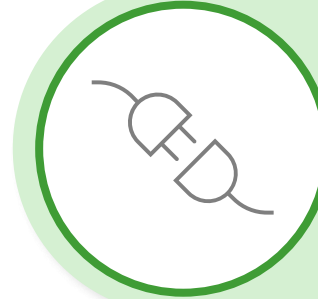
**Image generator** can generate new images based on input parameters, turning text prompts into images and artworks.



**Chatbot** can engage in conversations with users in a friendly interface, providing relevant responses based on learned knowledge.



**Plugins** (such as those deployed by OpenAI), can be integrated into other software products, allowing for powerful capabilities within applications.



**Summarization** automatically generates a concise and coherent summary of any text or document.



**Code generation** can create and explain functional code in multiple programming languages based on user input.



The following are two examples of how a law firm can use ChatGPT. Example A demonstrates how AI can quickly draft due diligence criteria. Example B shows how a law firm can draft a contract by refining outputs and asking clarifying questions to make the output more useable.

## Example A: Drafting due diligence criteria



YO

draft a list of due diligence questions for a teachers union with regards to employment law?



Certainly! Here is the list of due diligence questions for a teachers union with corrected numbering:

1. Employment Contracts:
  - 1.1 Are written employment contracts provided to all teachers?
  - 1.2 Do the contracts comply with applicable employment laws and include essential terms and conditions?
  - 1.3 Are there any variations in contract terms based on job positions or levels of seniority?
2. Compensation and Benefits:
  - 2.1 Are teachers' salaries and wages in line with industry standards and employment regulations?
  - 2.2 Are teachers receiving all legal benefits such as vacation pay, overtime pay,

 Regenerate response

## Example B: Drafting a contract



YO

can you give me a list of subheadings and content that I would include in an employment contract?



YO

can you draft a template of an employment contract based on this information in accordance with the Employment Standards Act in Ontario?

YO

thank you. can you add a clause that covers equity-based compensation?



Certainly! Below is an additional clause covering equity-based compensation that you can include in the employment contract:

1. Equity-Based Compensation:
  - a) Stock Options: Subject to the terms of the Company's Stock Option Plan, you may be eligible to receive stock options as part of your compensation package. The grant, vesting, and exercise of stock options will be governed by the terms of the Stock Option Plan and any applicable agreements between you and the Company.

 Regenerate response

# Hyper personalized campaign outreach – Generative AI

## Challenge



- Struggle to generate high-quality content while maintain a consistent voice across campaigns
- Manually creating campaign outreach is time-consuming

## Solution



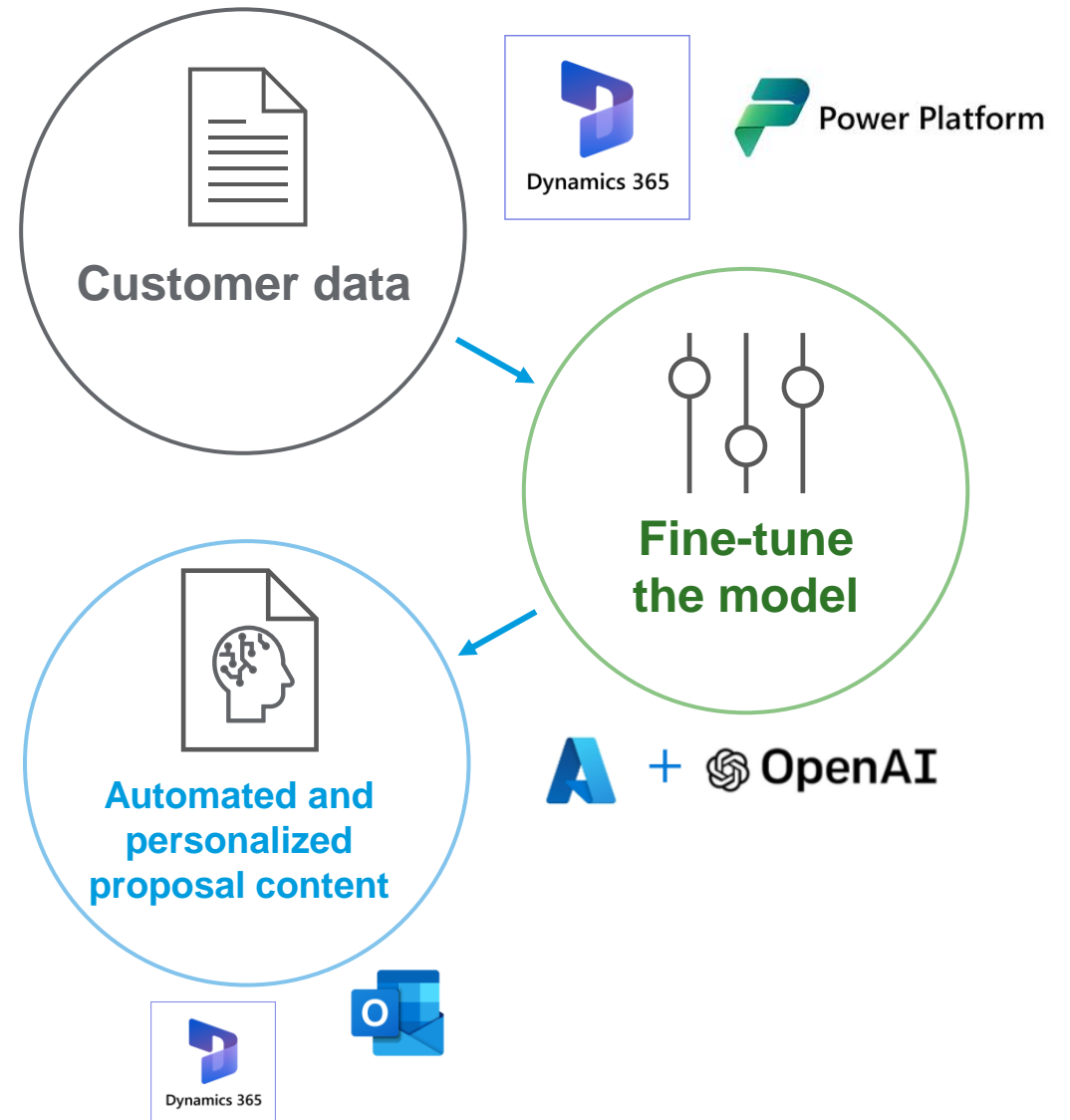
- Leverage generative AI to generate new material based on previous successful campaign outreach and specific customer criteria
- Capable of analyzing information and accurately formulating a high-quality campaign message

## Result



- Increased efficiency in the content generation (writing) process
- Improved quality of content
- Consistent messaging and voice across proposals leads to increased success rates
- Reduction in time spent creating content, allowing for more time to focus on other aspects of the proposal

## Workflow – Proposal content generator



# Customer churn – Machine learning with Azure ML (MLOps)



## Challenge

- The client was experiencing high customer churn
- Did not have a strong understanding of which customers were churning
- Client wanted to take ownership of the machine learning process and empower the “citizen data scientist” across the organization



## Solution

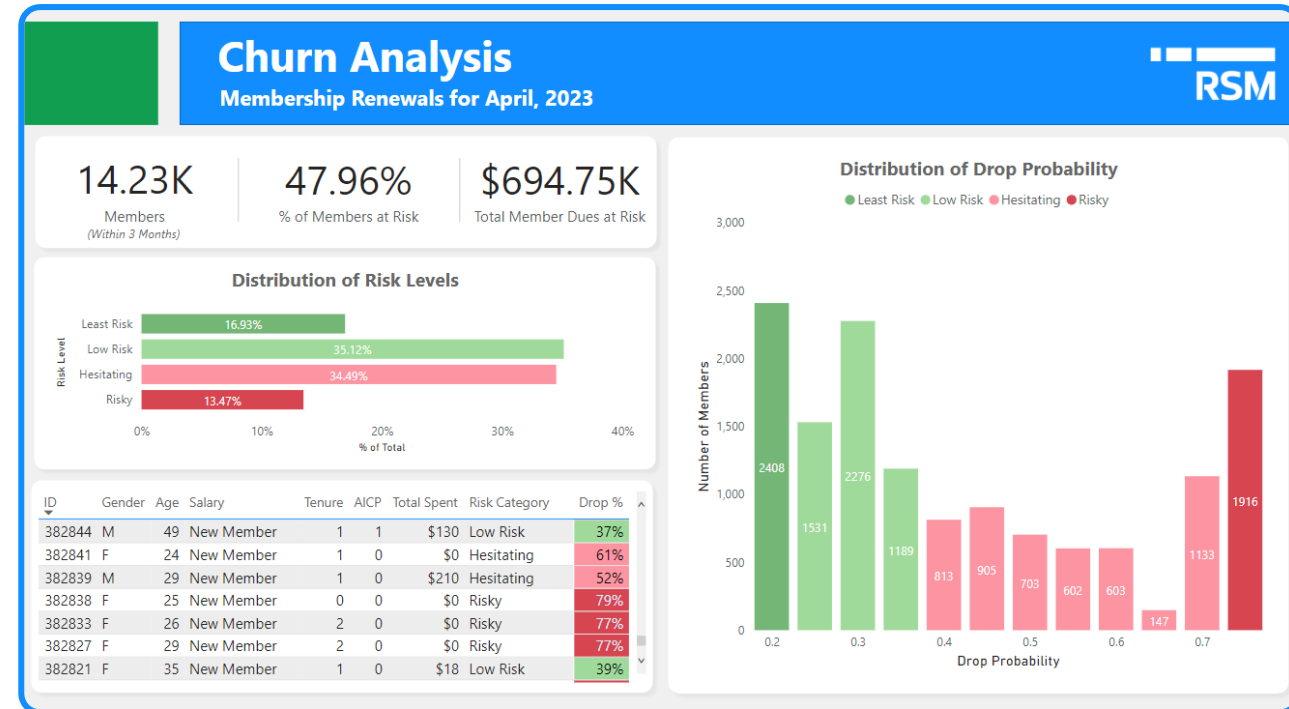
- The RSM team performed Exploratory Data Analysis (EDA) to find patterns, trends, and correlations in customer demographics and historic member interactions
- Developed a model with +85% accuracy and deployed to production



## Result

- The client is now able to proactively identify customers at risk of churning and can plan intervention activities accordingly
- EDA activities provide insight and documentation into model creation and bias observed (if any)
- Increased customer retention and revenues

## Churn analysis dashboard

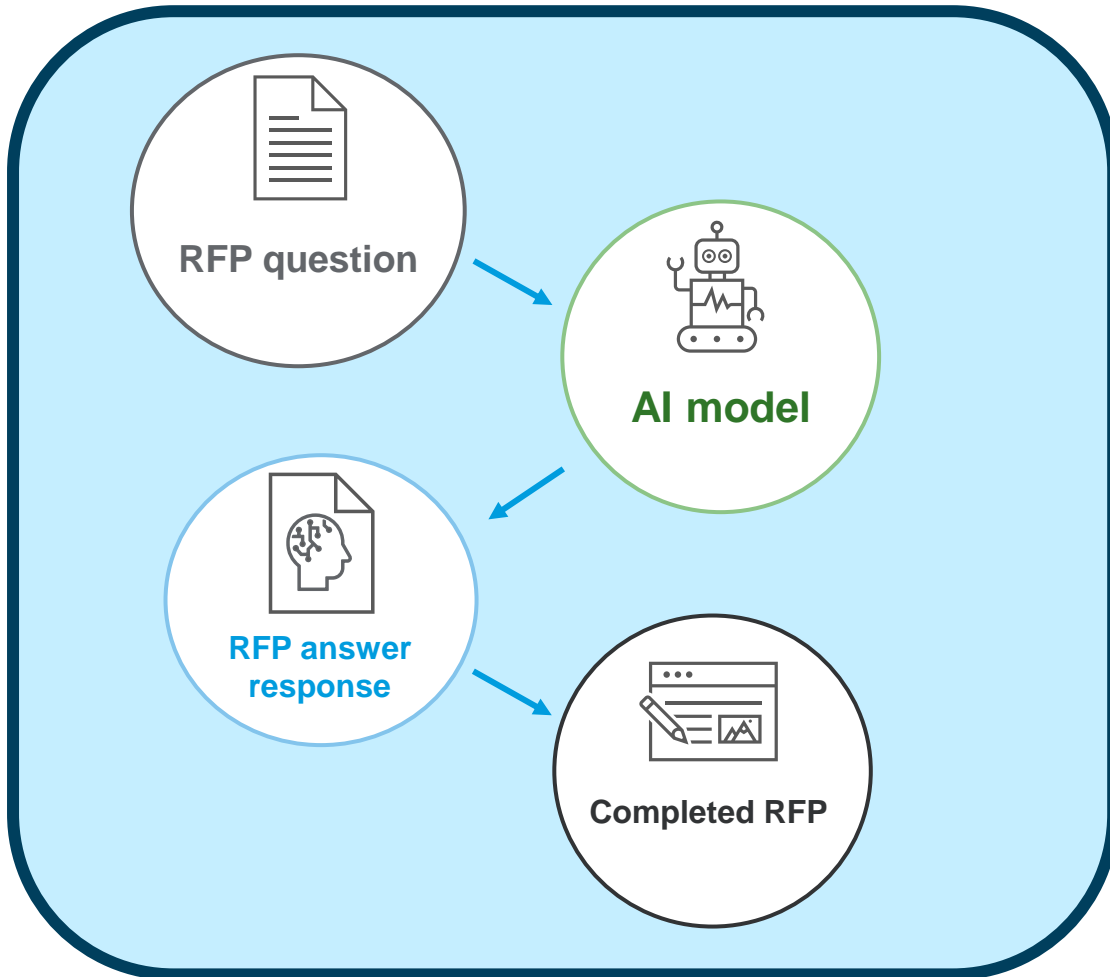


Dashboard to visualize ML model output and facilitate decision making



# Request for proposal (RFP) response app – Generative AI

Workflow – RFP response app



## Challenge

- High volume of RFP's received are not able to be responded to in a proper manner-
- Completing an RFP is a manual and time-consuming process
- Technical team members are not skilled RFP narrative writers



## Solution

- Utilize generative AI to generate responses to RFP questions with built-in governance controls
- Leverage historical question responses and user context to develop high quality answers
- Friendly user interface to facilitate a positive user experience



## Result

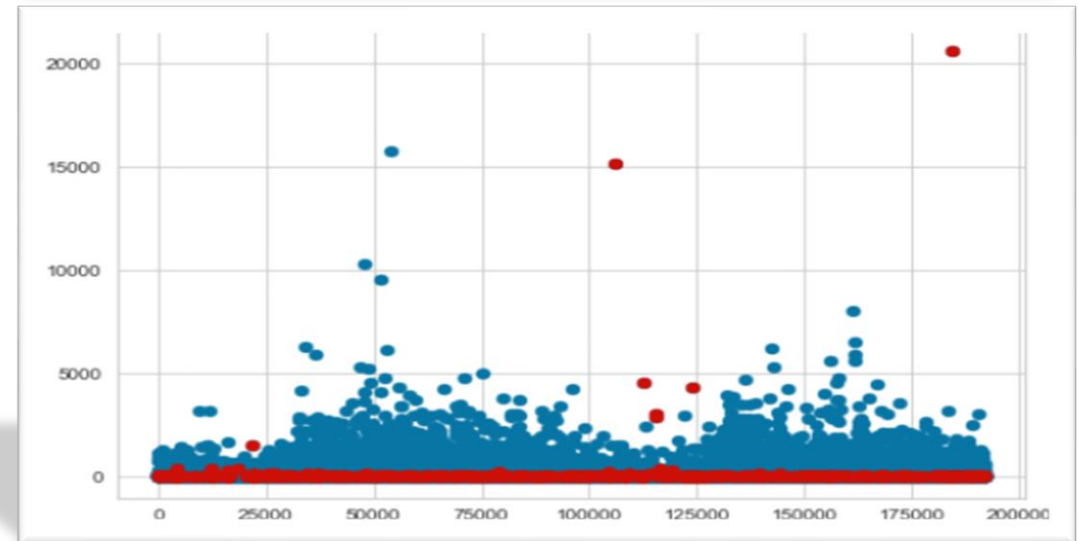
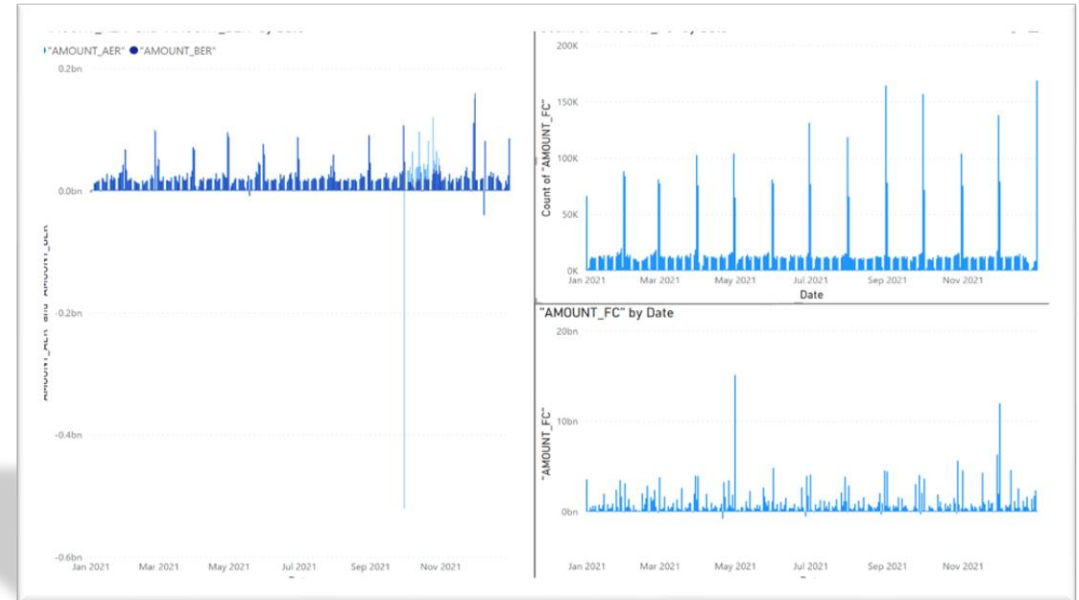
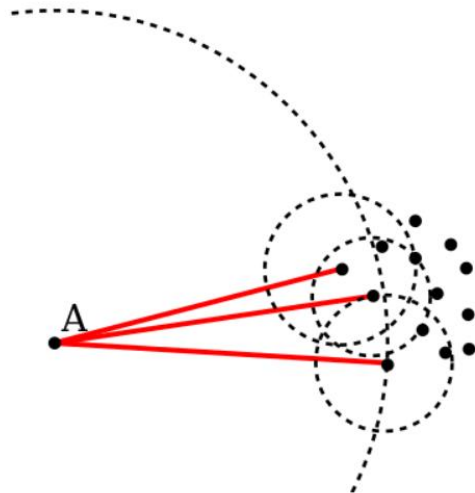
- Higher RFPs response rate
- 15-25+ hours saved per RFP
- Increased efficiency in the RFP writing and response process
- Higher volume of services able to be proposed on and completed



# Outlier/anomaly detection in finance

Local outlier factor (LOF) allows to define outliers by doing density-based scoring. Four aspects contribute to the algorithm:

- K-Distance and K-Neighbors
- Reachability distance
- Local reachability density
- Local outlier factor calculation





## Data bias

Explain how generative AI models can amplify and perpetuate biases present in training data

Discuss potential consequences, such as discriminatory outputs or reinforcing stereotypes



## Ethical dilemmas

Address the ethical concerns surrounding the use of generative AI, such as deepfake technology and its potential for misuse

Discuss the importance of responsible development and deployment



## Intellectual property

Explain the challenges of copyright infringement and ownership when generative AI is used to create content

Mention legal and ethical considerations for artists, designers, and content creators



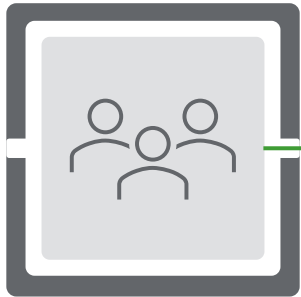
## Security threats

Highlight the potential for generative AI to be exploited for malicious purposes, such as creating fake identities or forging documents

Discuss the need for robust security measures to prevent misuse

## Revenue streams

Explore new revenue streams that are now available from unlocking the potential of AI



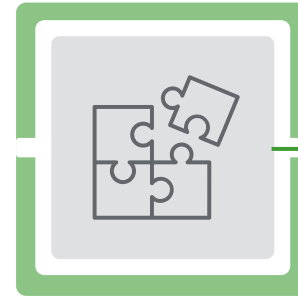
### People first

Identify tasks that could be enhanced leveraging generative AI and allow for more productivity



### Data strategy

Gain competitive advantage collecting access to proprietary datasets



## Integration

Consider options and best practices for merging generative AI with current workflows



### AI opportunities

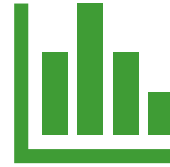
Identify areas that can benefit from other AI models and capabilities for further growth



Outcomes



Dimensions (“By analysis”)



Correlations



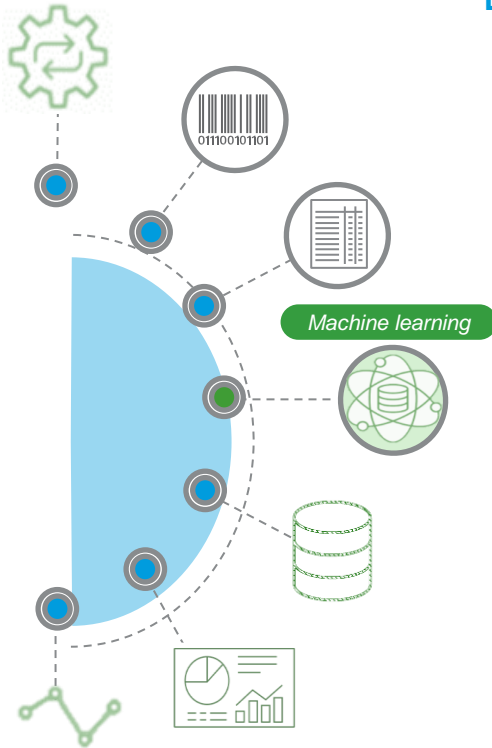
Explanatory variables



Research agenda

# Creating value with advanced analytics - Approach

Organizations are optimistic about investing in data and analytics but becoming more realistic in their journey for real value. RSM's advanced analytics practice provides a service offering covering strategy, design, solution development, governance and investment



## Business objectives & value hypothesis

- Targeted assessment of ability to start ML project covering people, skills, knowledge, technology and data discovery and readiness
- Formulate ML Vision
- ML, data literacy & workforce up-skilling

## Results that matter

- Clear understanding of organizational gaps that need to be resolved before starting an ML project
- Vision for use of ML
- Business case

## Research agenda

- Questionnaires, facilitated workshops and RSM use case catalog used to develop a prioritized list of client ML use cases

- Inventory of use cases (backlog) appropriate for ML and automation, prioritized based upon agreed criteria
- Repeatable tool and process to keep backlog evergreen

## Solution development

- Software engineers (RSM-only, Client Paired, or Client-only) develop pilot using prioritized use case, candidate data sets into test environment

- First model developed
- Time boxed implementation of the top prioritized use case, with training data provisioned and the model trained, evaluated and deployed to test environment

## Scale & mature

- Get model to 'live'
- Scaling and Maturing the ML Operating Model
- Prioritize additional opportunities, source and curate data, ensure proper resourcing and implement model governance

- Operating model in place with clear roadmap for –
1. Delivering additional use cases and data,
  2. Required people and domain expertise
  3. Model governance
  4. Continued investment

# Highlights of SEC remarks from recent AICPA & CIMA conference

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# Emphasis on importance of culture

- Not limited to audit practice
- Pervasive across the enterprise
- Pervasive to all member firms
- Key aspects of culture:
  - Tone at the top
  - How leadership incentives certain behaviors
  - Firm's systems and structures as key elements that impact culture

We recommend early and voluntary consultation on these and other challenging financial reporting matters

Appropriate classification within the Statement of Cash Flows

Financial arrangements such a backstop arrangements used in deSPAC transactions

Capitalization of deferred offering costs

# SEC comment letter trends

- SEC approach to reviewing registrant filings
  - Requirement under Dodd-Frank to review registrant filings at least every three years
    - Many LAF's filings are reviewed annually
    - Periodic “Dear CFO” letters concerning specific topics such as compliance with existing climate disclosures
  - Frequent topics for SEC comment letters
    - MD&A
      - Results of operations
      - Liquidity
      - Critical accounting estimates
    - Non-GAAP financial measures

# SEC comment letter trends

<b>SEC Comment Letter Trends</b>			
<i>Twelve months ended July 31, 2023</i>			
		<b>Current-year Rank</b>	<b>Prior-year Rank</b>
MD&A		1	1
Non-GAAP financial measures		2	2
Segment reporting		3	3
Revenue recognition		4	4
Business combinations, mergers and acquisitions		Tie - 5	10
Signatures, exhibits and agreements		Tie - 5	5
Internal control over financial reporting		7	7
Fair value		8	6
Inventory and cost of sales		9	9
Debt		10	12

**Source** – information derived from data provided by Audit Analytics based on the percentage of all comment letters on Form 10-K and 10-Q filing reviews that included a comment on the topic.

# Other matters discussed at the conference

- SEC and PCAOB enforcement activity acceleration
  - Continued emphasis on enforcement, resulting in record amount of fines
  - Accounting firms are the gatekeepers of effective financial reporting
  - Importance of firm culture in ensuring compliance
- Implementation of recent rule-making
  - Clawback rules related to incentive compensation
  - Cyber security breach disclosures
  - Pay for performance disclosures
- Status of SEC proposed climate disclosures
  - Expected issuance of final rule in Q1 or Q2 2024
  - Consideration of other climate reporting initiatives taken by CA and EU
- FASB updates
  - Segment reporting
  - Accounting for crypto assets

THANK YOU FOR  
YOUR TIME AND  
ATTENTION

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