Relating the Economy to the Company's Risk Profile

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Chicago

David Doney

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IIA Chicago Conference

Speaker Bio

David became the Chief Auditor for the Illinois Municipal Retirement Fund (IMRF) in April 2023. He is a career internal auditor with over a decade of experience as a Chief Auditor and SOX leader. David started his career in manufacturing with Ingersoll-Rand, then in retail with Sears rotating through various audit teams, and then services with Bally Total Fitness and SIRVA Worldwide.

David is a CPA, CIA, and passed the CISA exam. He has a bachelor's degree in accounting from Purdue University and MBA-Finance from DePaul University. This is his fourth presentation to the IIA Chicago Conference. He also presented at over 20 conferences for the MIS Institute and twice at the IIA International Conference.

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Learning Objectives

Part One

- How companies adapt to the economic environment

- Risks & responses to economic factors

- Audit strategies for economic risks

Part Two

- Analyzing the current economic situation

- Understanding the economic machine

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Economic Risks in Top 10

NC State ERM / Protiviti

World Economic Forum

2 years

Rank	Risk
1st	Misinformation and disinformation ⭐
2nd	Extreme weather events
3rd	Societal polarization
4th	Cyber insecurity
5th	Interstate armed conflict
6th	Lack of economic opportunity
7th	Inflation ⭐
8th	Involuntary migration
9th	Economic downturn ⭐
10th	Pollution

Top risks for 2024

1. Economic conditions, including inflationary pressures ⬇ ⭐
2. Ability to attract, develop and retain top talent, manage shifts in labor expectations, and address succession challenges ⬇
3. Cyber threats ⬆
4. Third-party risks ⬆
5. Heightened regulatory changes and scrutiny ⬆
6. Adoption of digital technologies requiring new skills in short supply ⬇
7. Existing operations and legacy IT infrastructure unable to meet performance expectations as well as "born digital" competitors ⬇
8. Change in current interest rate environment ⬇ ⭐
9. Increases in labor costs ⬇ ⭐
10. Ensuring privacy and compliance with growing identity protection expectations ⬇

Analysis of the Remote External Environment
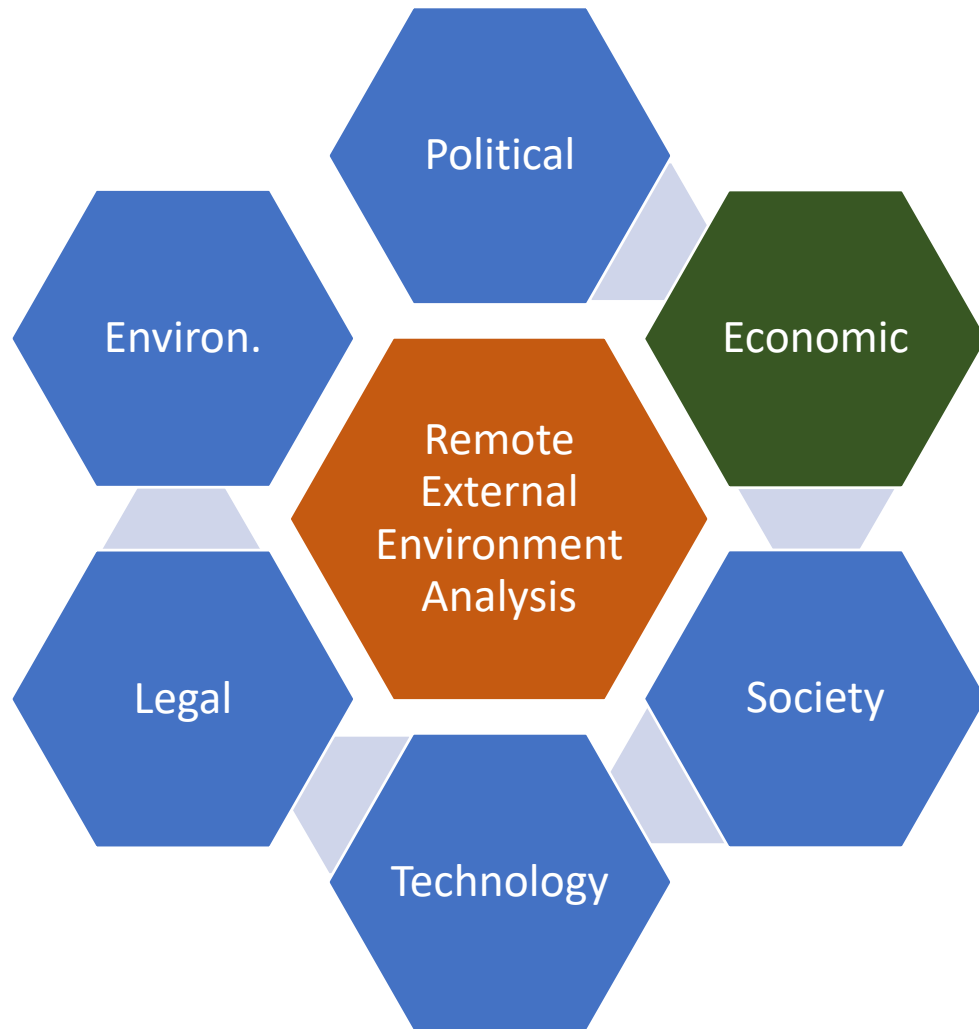
Strategic planning processes include analysis of the:

1. Remote external environment (PESTLE)
2. Industry environment (Porter 5 Forces)
3. Internal environment (SWOT)

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Economic Analysis Process

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Gather Economic Inputs  →  Develop Scenarios  →  Make Assumptions  →  Update Forecast Models  →  Review Impact on Results  →  Update Budget
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- Which economic measures correlate most strongly with company results?
  - What is the company's forecast for the key variables that matter?

- How might the economy impact the behavior or outcomes for each stakeholder group?
  - Customers, employees, suppliers, investors, etc.

- What economic assumptions are used in the sales/revenue model and budget income statement?
  - Are the models good predictors of reality?

- How close is the company forecast to CBO, Fed, or FRB Philadelphia forecast?
  - Why differences?

- Understand responses to economic risks
  - For example, if inflation is higher than forecast, how will pricing department respond?
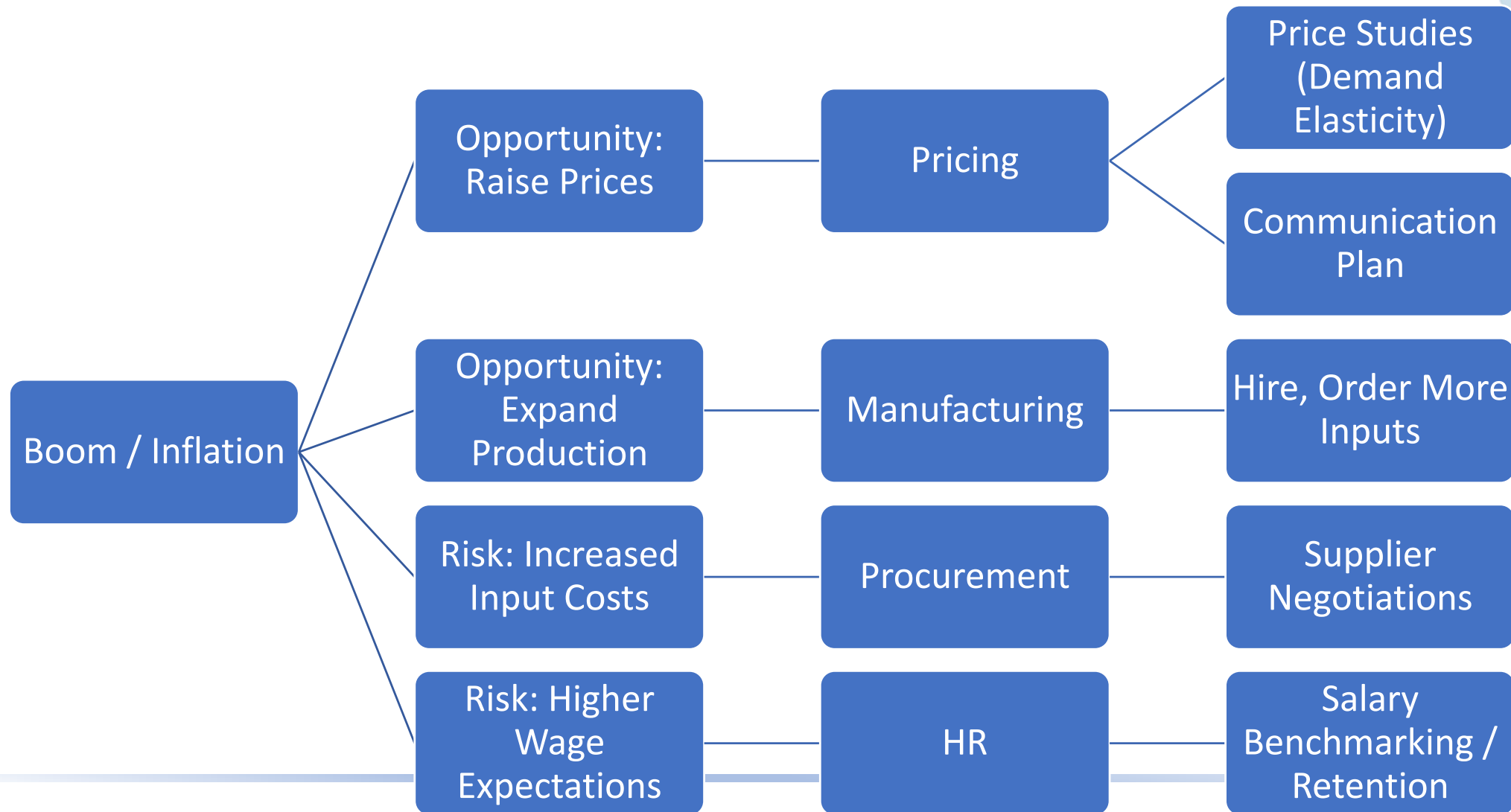
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Scenario: Inflation
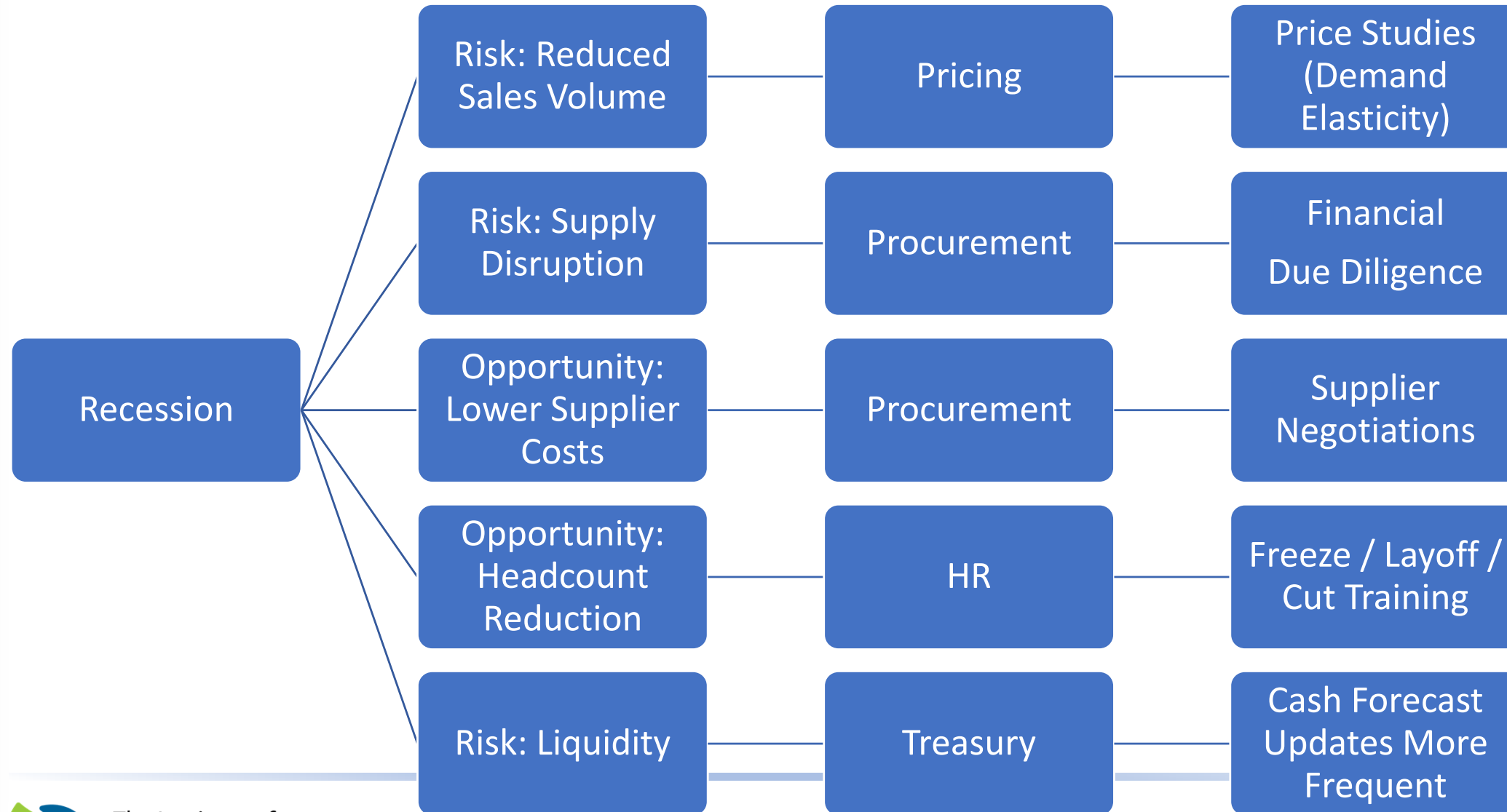
P&G Annual Report: Economy-Related Excerpts
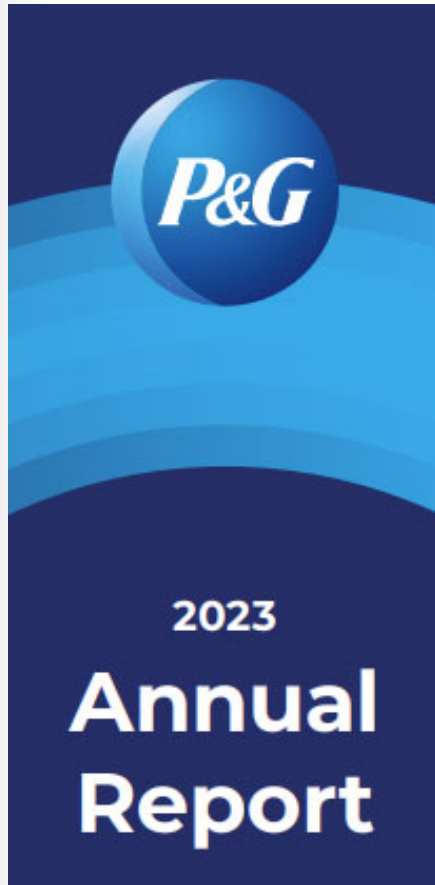
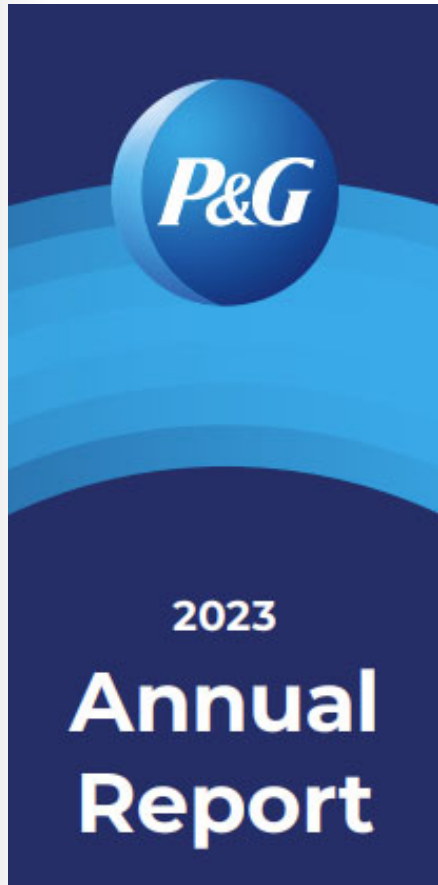**Risk Factors, Input Costs**: "Our costs are subject to fluctuations, particularly due to changes in the ==prices of commodities== (including certain petroleum- derived materials like resins and paper-based materials like pulp) and raw and packaging materials and the costs of labor, transportation (including trucks and containers), energy, pension and healthcare. ==Inflation pressures== could also result in increases in these input costs. Therefore, our business results depend, in part, on our continued ability to ==manage these fluctuations through pricing actions==, cost saving projects and sourcing decisions, while maintaining and improving margins and market share."

MD&A: "Overhead costs as a percentage of net sales increased 40 basis points due to ==wage inflation== and other cost increases, partially offset by the positive scale impacts of the net sales increase and productivity savings."

2023 Annual Report

June 30 FY

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Source: P&G 2023 Annual Report

P&G Annual Report: Economy-Related Excerpts

Accounting Policies & Estimates:

"Adverse changes in the business or in the macroeconomic environment, including ==foreign currency devaluation==, increasing global inflation, market contraction from an economic recession and the Russia-Ukraine War, could reduce the underlying cash flows used to estimate the fair value of the Gillette indefinite-lived intangible asset and trigger a future ==impairment== charge."

"The actuarial gain for pension plans in 2023 was primarily related to increases in discount rates, offset by ==inflation-related pension benefit increases==."

June 30 FY

Keyword search the financial statements of your company and the competition

Source: P&G 2023 Annual Report

P&G Annual Report: Economy-Related Excerpts

"Net sales increased 2% to $82.0 billion in fiscal 2023. The increase in net sales was driven by <mark>higher pricing of 9%</mark> and a <mark>favorable mix of 1%</mark>, partially offset by <mark>unfavorable foreign exchange of 5%</mark> and a <mark>3% decrease in unit volume</mark> versus the prior year."

Operating Costs

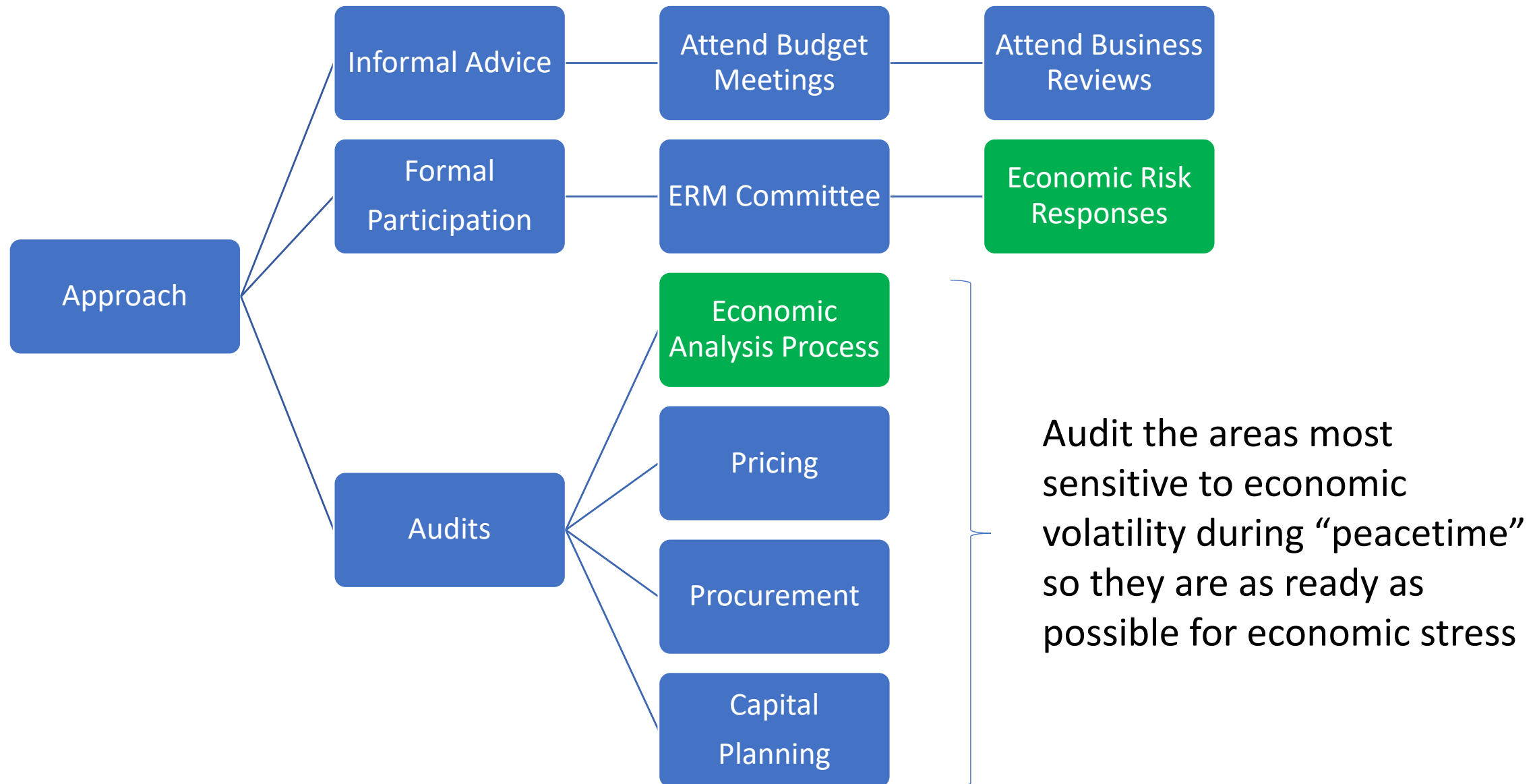| Comparisons as a percentage of net sales; fiscal years ended June 30	2023	2022	Basis Point Change
Gross margin	47.9 %	47.4 %	50 bps
Selling, general and administrative expense	25.7 %	25.2 %	50 bps
Operating margin	22.1 %	22.2 %	(10) bps
Earnings before income taxes	22.4 %	22.4 %	0 bps
Net earnings	18.0 %	18.4 %	(40) bps
Net earnings attributable to Procter & Gamble	17.9 %	18.4 %	(50) bps

Gross margin increased 50 basis points to 47.9% of net sales. The increase in gross margin was due to:

- a 430 basis-point increase from higher pricing and
- a 150 basis-point increase from manufacturing productivity savings.

These increases were partially offset by

- 320 basis points of increased commodity and input material costs,
- a 110 basis-point decline from unfavorable mix due to the launch and growth of premium products (which have lower than Company-average gross margins) and the disproportionate decline of the super-premium SK-II brand,
- a 50 basis-point decline from unfavorable foreign exchange impacts,

How Might We "Audit" Economic Risk?

Approach
- Informal Advice — Attend Budget Meetings — Attend Business Reviews
- Formal Participation — ERM Committee — Economic Risk Responses
- Audits
  - Economic Analysis Process
  - Pricing
  - Procurement
  - Capital Planning

Audit the areas most sensitive to economic volatility during "peacetime" so they are as ready as possible for economic stress

Portfolio Diversification at IMRF

Asset Allocation Summary

As of September 30, 2023

Asset Class	Market Value (in Millions)	% Target	% Actual
Domestic Equity	$17,422	34.5%	35.6%
International Equity	$9,087	18.0%	18.6%
Fixed Income	$11,827	24.5%	24.2%
Private Real Assets	$4,868	10.5%	10.0%
Alternative Investments	$5,525	11.5%	11.3%
Cash Equivalents	$193	1.0%	0.4%
Total	**$48,922**	**100%**	**100%**

- Diversification is the primary risk management approach for financial market volatility

- Board-approved targets

- Board-approved rebalance is required when actual % is outside +/- 4% range of target %

- Investment staff and investment consultants monitor and report on the allocations by manager (143 firms managing 323 mandates and/or separate funds).

- IA working with management on control matrix for Investment Ops

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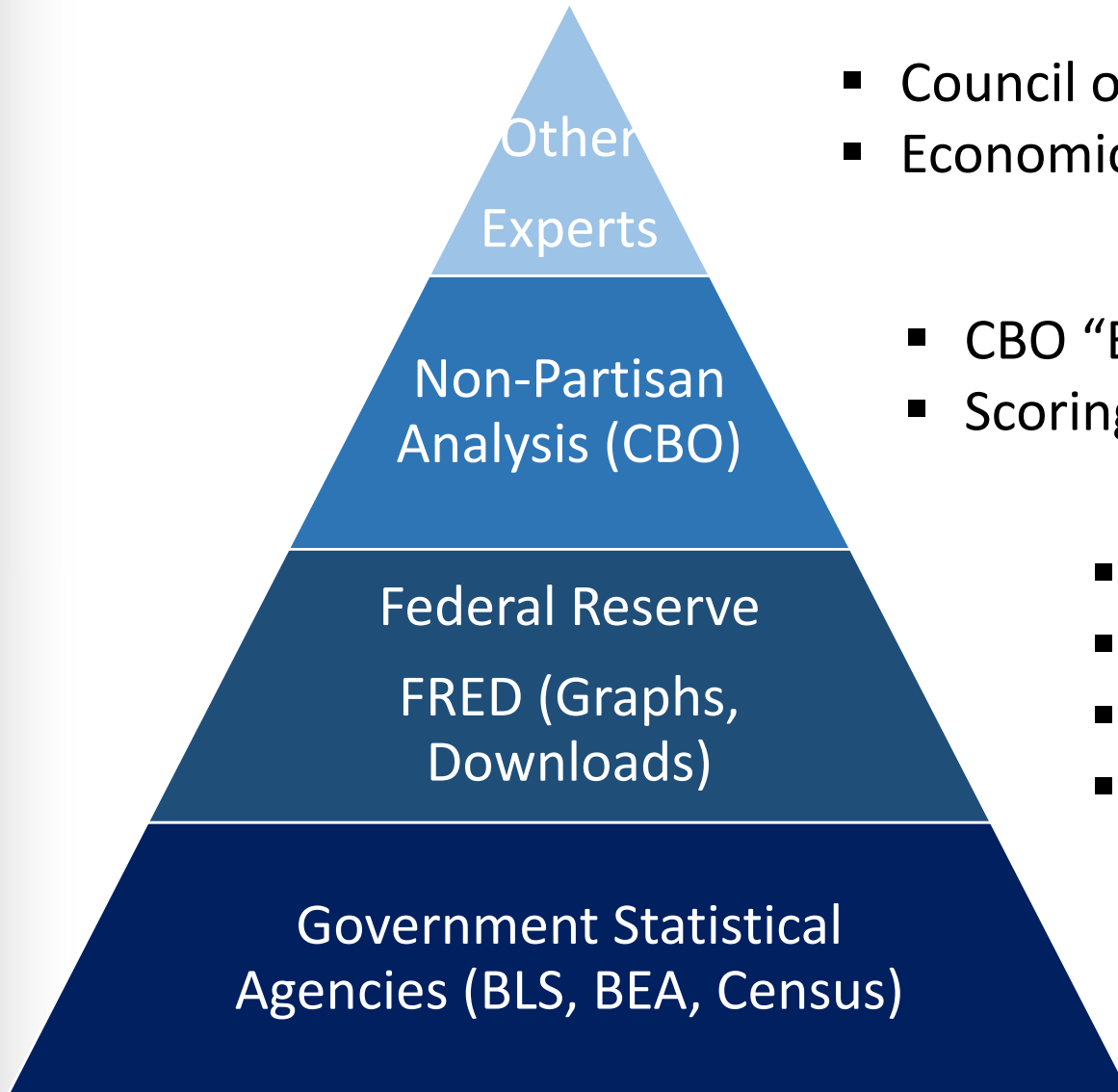**Internal Auditors**
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Obtaining Credible Data

Other Experts

- Council of Economic Advisors (CEA)
- Economics teams at major banks

Non-Partisan Analysis (CBO)

- CBO "Budget & Economic Outlook" (Annual, mid-year update)
- Scoring of major legislation

Federal Reserve FRED (Graphs, Downloads)

- Fed Chair Press Conference Transcripts (Quarterly)
- Summary of Economic Projections (Q)
- FRB Philadelphia Survey of Economic Forecasters (Q)
- *FRED graphical engine*

Government Statistical Agencies (BLS, BEA, Census)

- Bureau of Labor Statistics (BLS) Jobs Report
- Bureau of Economic Analysis (BEA) GDP News Release

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Monthly Jobs Report (Employment Situation Summary)

<u>When</u>

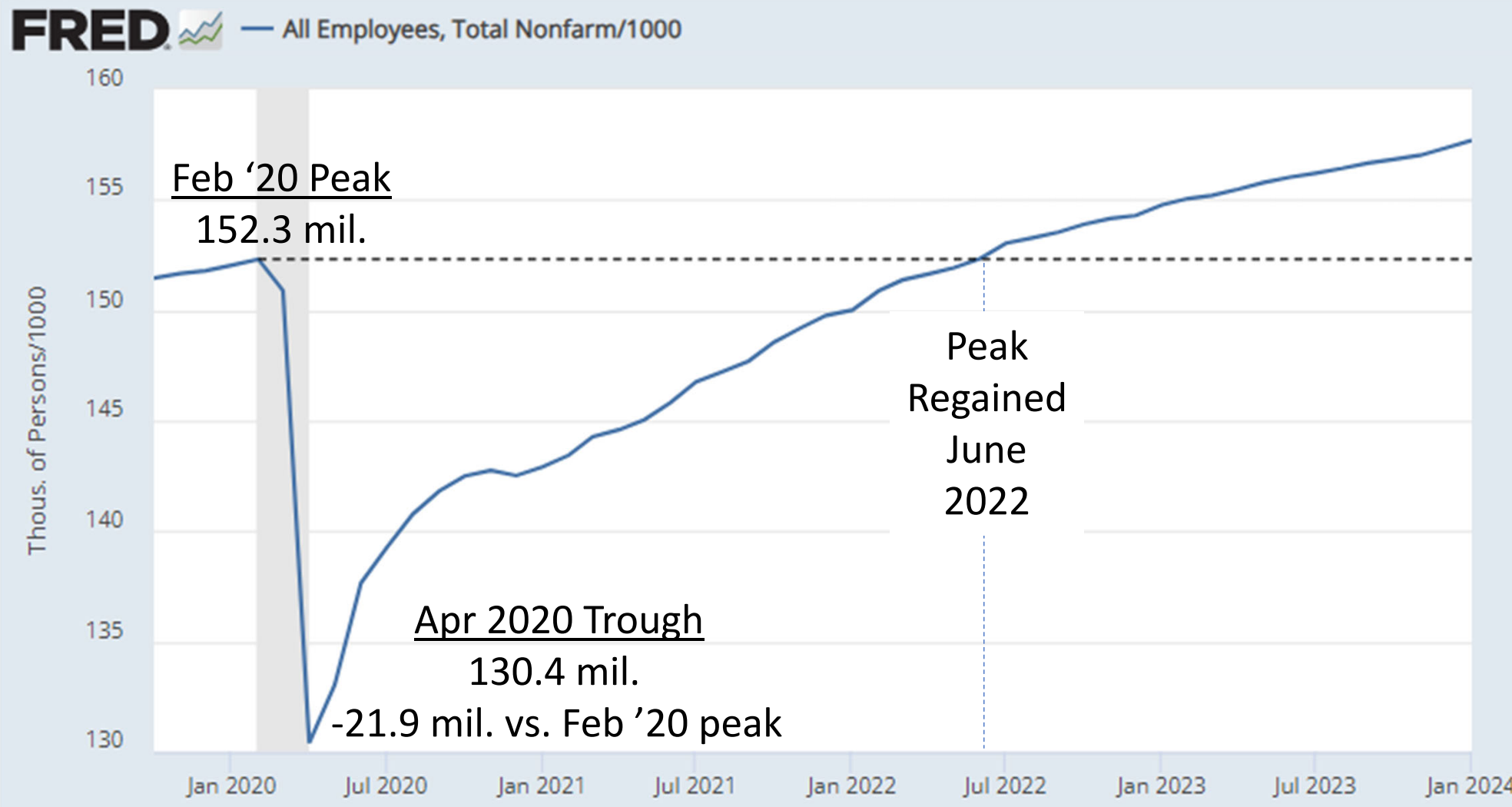- Published first Friday of each month

<u>Establishment Survey</u>

- Key metrics: Payroll jobs, hours worked, wages
- Jobs is non-farm payroll jobs, full- and part-time (W-2), private & govt, not gig/1099 jobs
- Jobs numbers are updated for prior two months as more data available
- Survey of 122,000 employers covering 600,000+ locations

<u>Household Survey</u>

- Key metrics: Unemployment rate, labor force, employed, unemployed
- Phone interviews with 60,000 households or about 110,000 individuals
- "Employed" includes both payroll and gig / 1099 jobs, private & govt.

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Jobs Level

FRED — All Employees, Total Nonfarm/1000

Feb '20 Peak
152.3 mil.

Apr 2020 Trough
130.4 mil.
-21.9 mil. vs. Feb '20 peak

Peak Regained June 2022

Jan '24
157.7 million
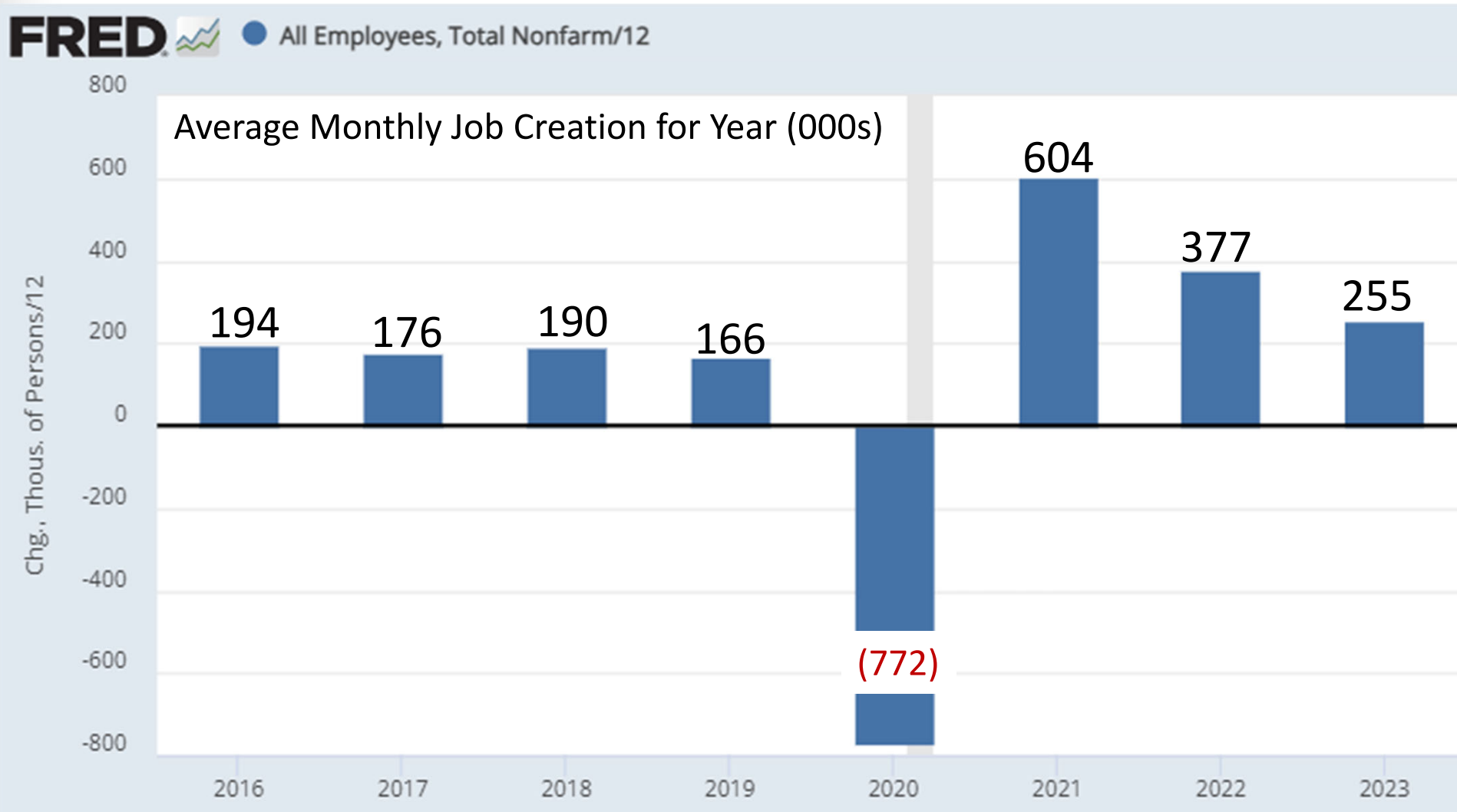+5.4 million jobs vs. pre-pandemic peak

Lower in 2023 vs. 2019 on average:
- % in govt jobs
- % in part-time jobs
- % in multiple jobs

- Take care with comparisons to 2020 & 2021; they were very distorted by pandemic

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Chart: FRED "PAYEMS" Series

Monthly Job Creation, Annual Average

Chart: FRED "PAYEMS" Series (Modify settings for Annual Average)

Unemployment Rate (Annual Avg.)

Chart: FRED "UNRATE" Series (Modify settings for Annual Average)
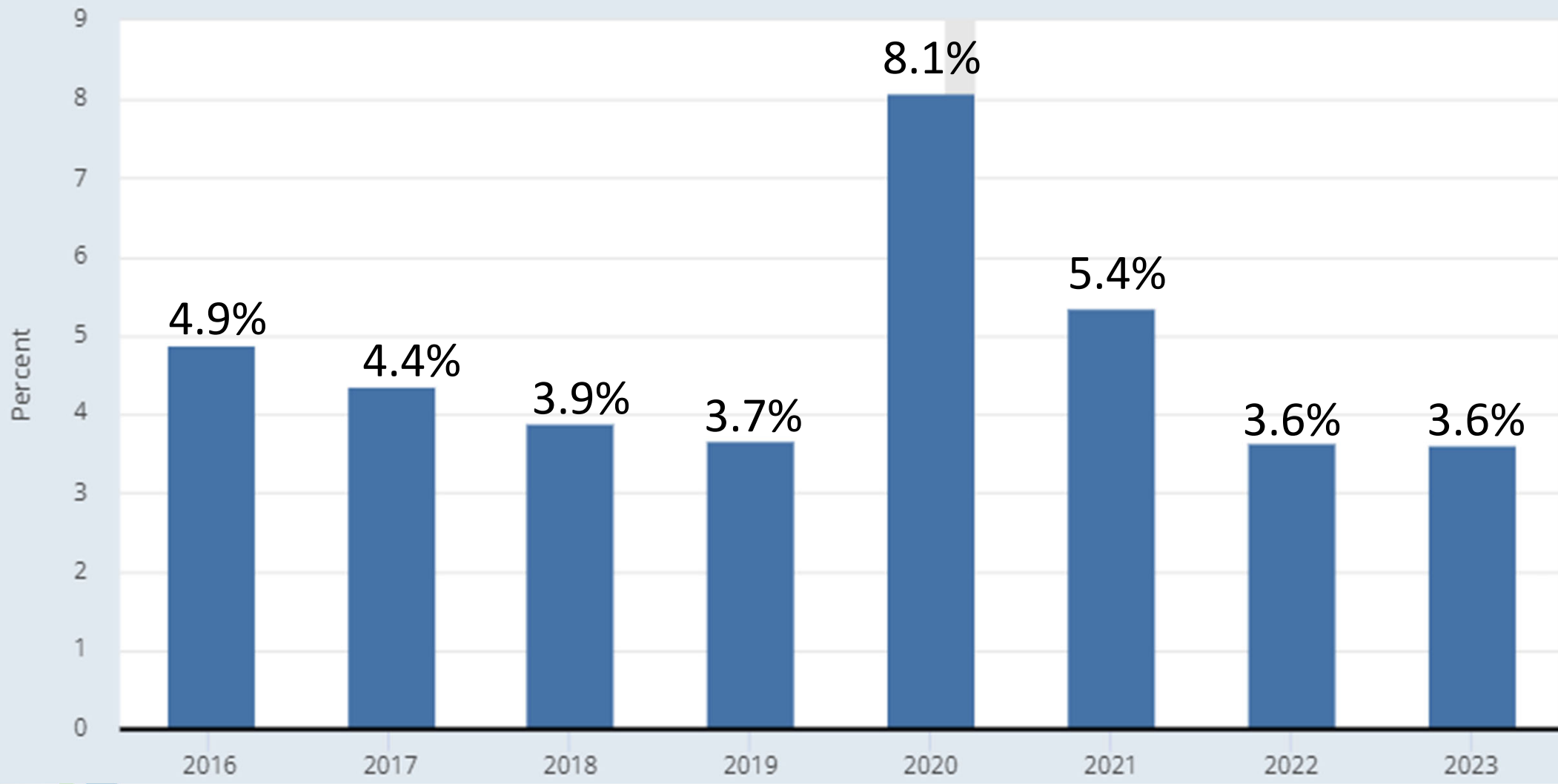
Quiz: When was the last year the U.S. had a 3.5% unemployment rate on average?

A. 1933

B. The same year a person first walked on the moon

C. 1998

D. Can I use a lifeline?

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Unemployment Rate / BLS Household Survey

As of December 2023

Civilian Non-Inst Population 16+
267,991

Civilian Labor Force (LF)
167,451

Not in Labor Force
100,540

Employed
161,183

Unemployed
6,268

Unemployment Rate
Unempl. / LF = 3.7%
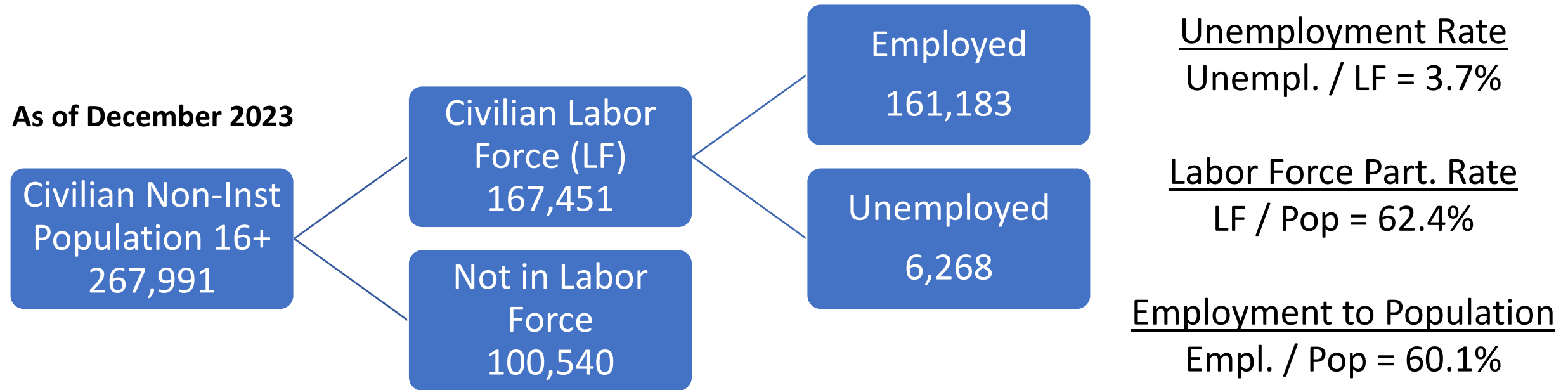
Labor Force Part. Rate
LF / Pop = 62.4%

Employment to Population
Empl. / Pop = 60.1%

Notes
- U.S. overall population around 335 million in 2023
- Civilian non-institutionalized population: Age 16+, not institutionalized (jail, mental, nursing home), not military
- Civilian labor force = Employed + Unemployed
  - Employed: Did work for pay during survey reference week (PT, FT) or have job but out that week (vacation)
  - Unemployed: Do not have a job, actively looked for work in past 4 weeks, currently available for work
- Not in labor force: No job, not looking (e.g., retired, school, caregiver). Less than 1 in 10 want a job.
- About 60,000 households in the monthly sample; 110,000 individuals; 1 in 4 households replaced monthly
- For participation measures, use the age 25-54 employment to population ratio, to avoid distortion from aging country

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Wages vs. Inflation (Starting Pre-Pandemic Feb '20)

FRED 〜
— (Average Hourly Earnings of Production and Nonsupervisory Employees, Total Private), Feb 2020=100
— (Consumer Price Index for All Urban Consumers: All Items in U.S. City Average), Feb 2020=100
— (Consumer Price Index for All Urban Consumers: All Items Less Food and Energy in U.S. City Average), Feb 2020=100

Index

Wages

CPI-All

CPI-Core (Excl. Food & Energy)
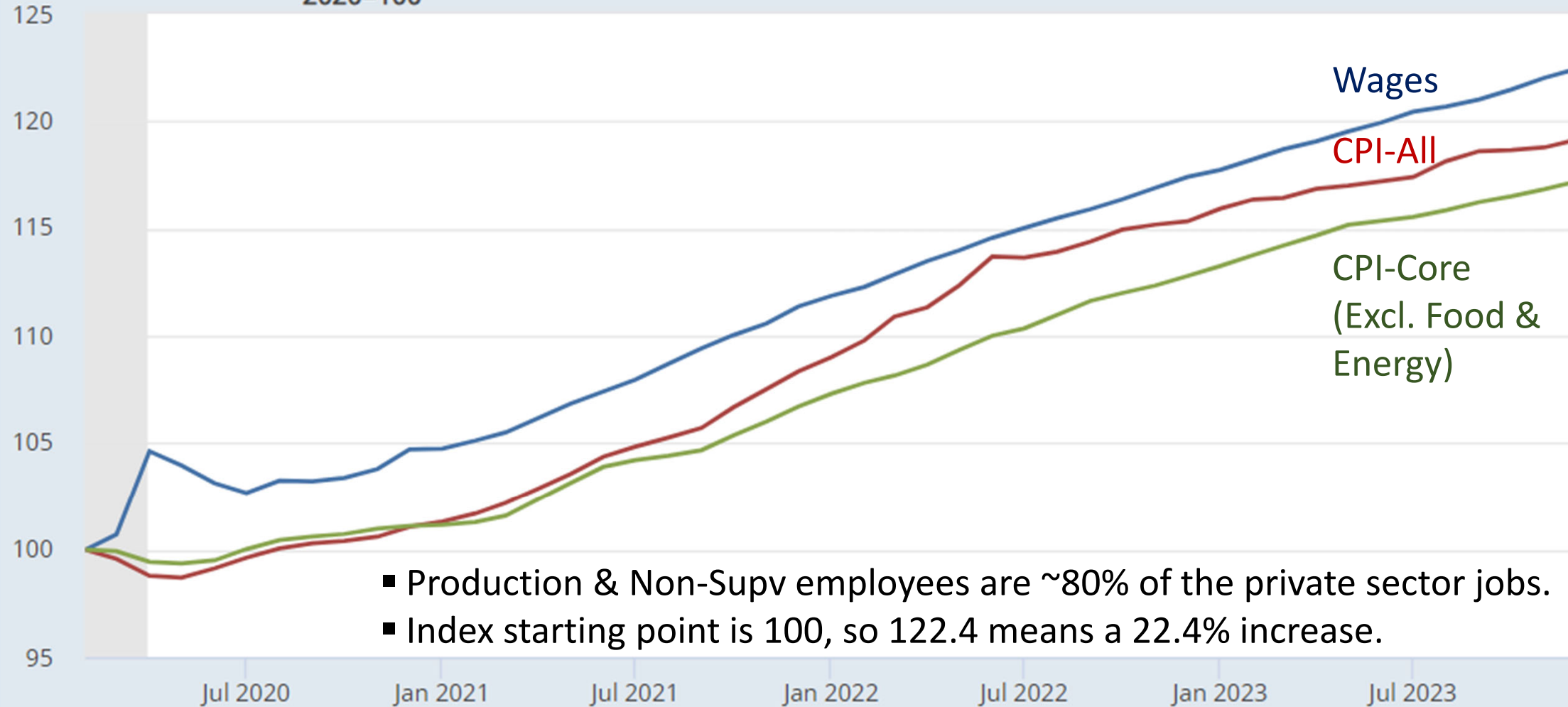
Dec '23 vs. Feb '20

+22.4%

+19.1%

+17.2%

- Production & Non-Supv employees are ~80% of the private sector jobs.
- Index starting point is 100, so 122.4 means a 22.4% increase.

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Wage increase % applies to gross income, while inflation applies to spending, a subset of after-tax income. So equal % increases in both leaves a worker better off.

Real Hourly Wages

Real = Inflation-Adjusted (Dec 2023 $)

FRED Real Hourly Wages, Production & Non-Supervisory Workers

$/Hour

This was an artificial peak created by lower-wage workers losing their jobs disproportionately in the pandemic, increasing the average of those remaining.

2019
$28.40

2023
$29.33

FRED formula: Real = AHETPI/CPIAUCSL * [Latest CPI reading = 308.85]
Official data adjusts using CPI-W (CWSR0000SA0)
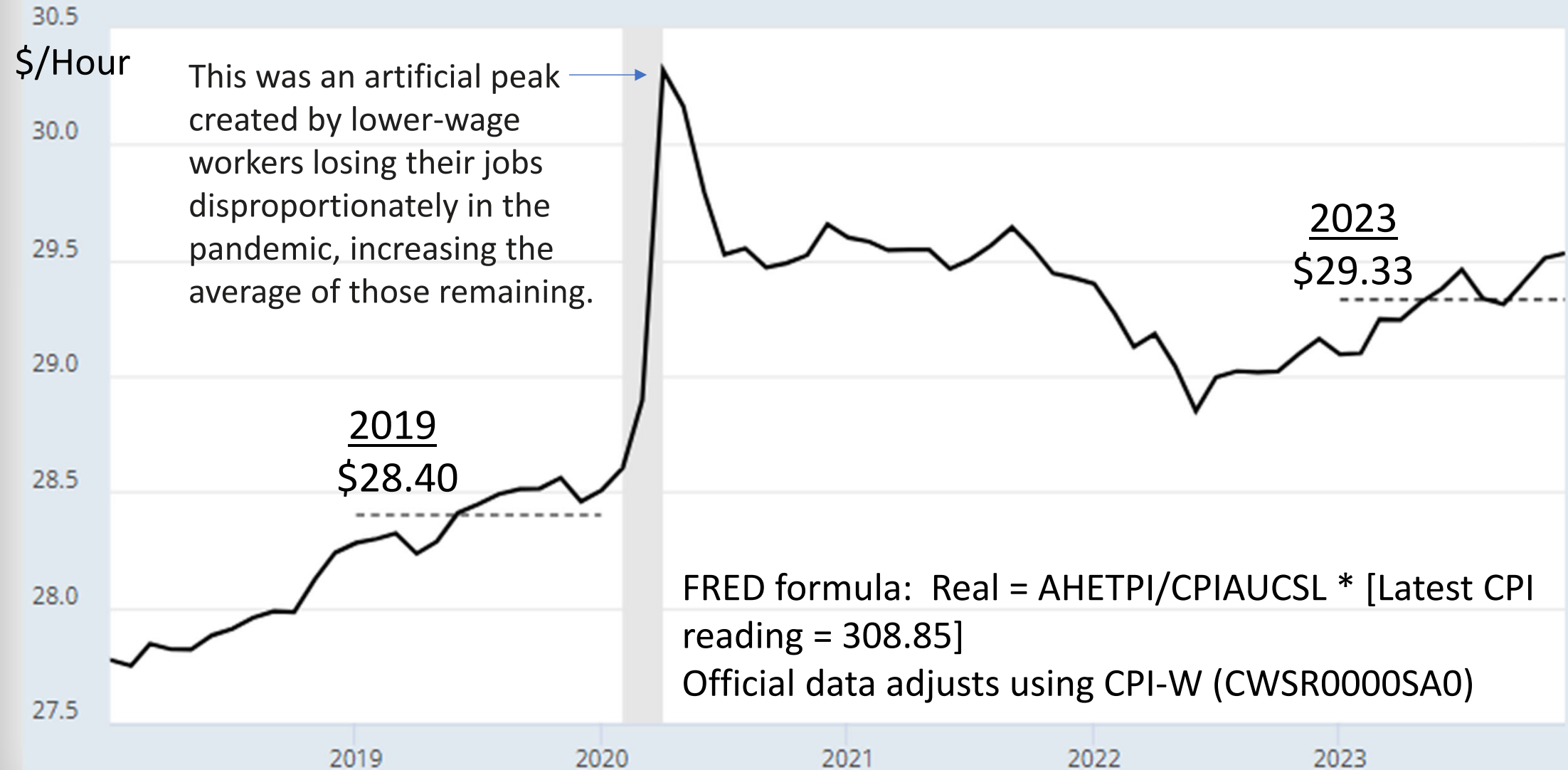
2023 level was 3rd highest year on average for records back to 1964.

2021 = record.

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Comparison of 2019 & 2023

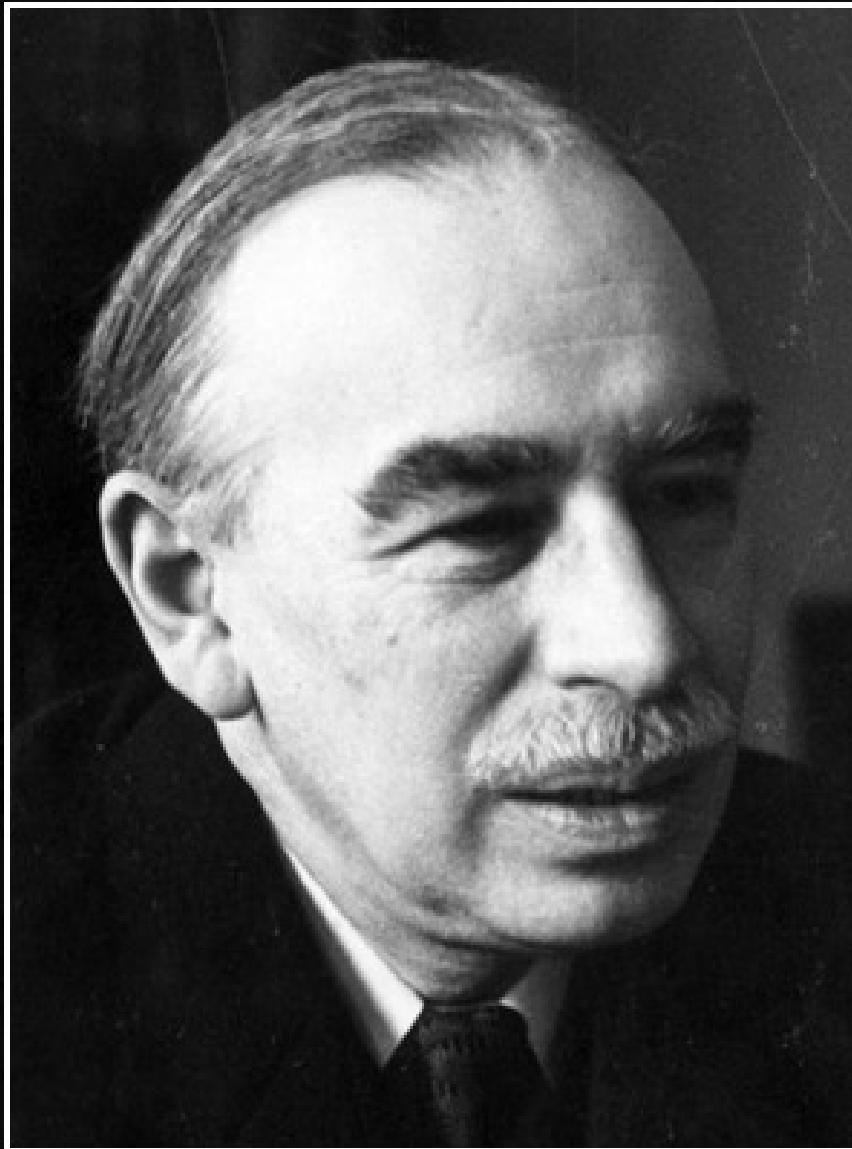| Variable	2019 Annual Average (Pre-Pandemic)	2023 Annual Average*
Jobs Level (000's)	150,906	156,069
Job creation rate per month (000s)	166	255
Unemployment rate	3.7%	3.6%
Employment to Population Ratio Age 25-54	80.0%	80.7%
Real Wage, Production & Non-Supervisory Workers (Dec 2023 $)	$28.40	$29.33
Real Net Worth Per Household for Bottom 50% (Dec 2023 $)	$33,713	$55,367
Real Net Worth Per Household For 50th to 90th Pct. (Dec 2023 $)	$704,919	$827,883
Real GDP Growth Rate (Annual)	2.5%	2.5%
Real Disposable Personal Income per Capita (After-tax $)	$47,226	$50,106

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Source Data: Federal Reserve Economic Data (FRED)
Real = Adjusted for inflation
*Latest 2023 data as of 1.25.2024; quarterly data through Q3 or Q4 2023

Why is the Economy Performing So Well?

The boom, not the slump, is the right time for austerity at the Treasury.

— John Maynard Keynes —

1883-1946

AZ QUOTES

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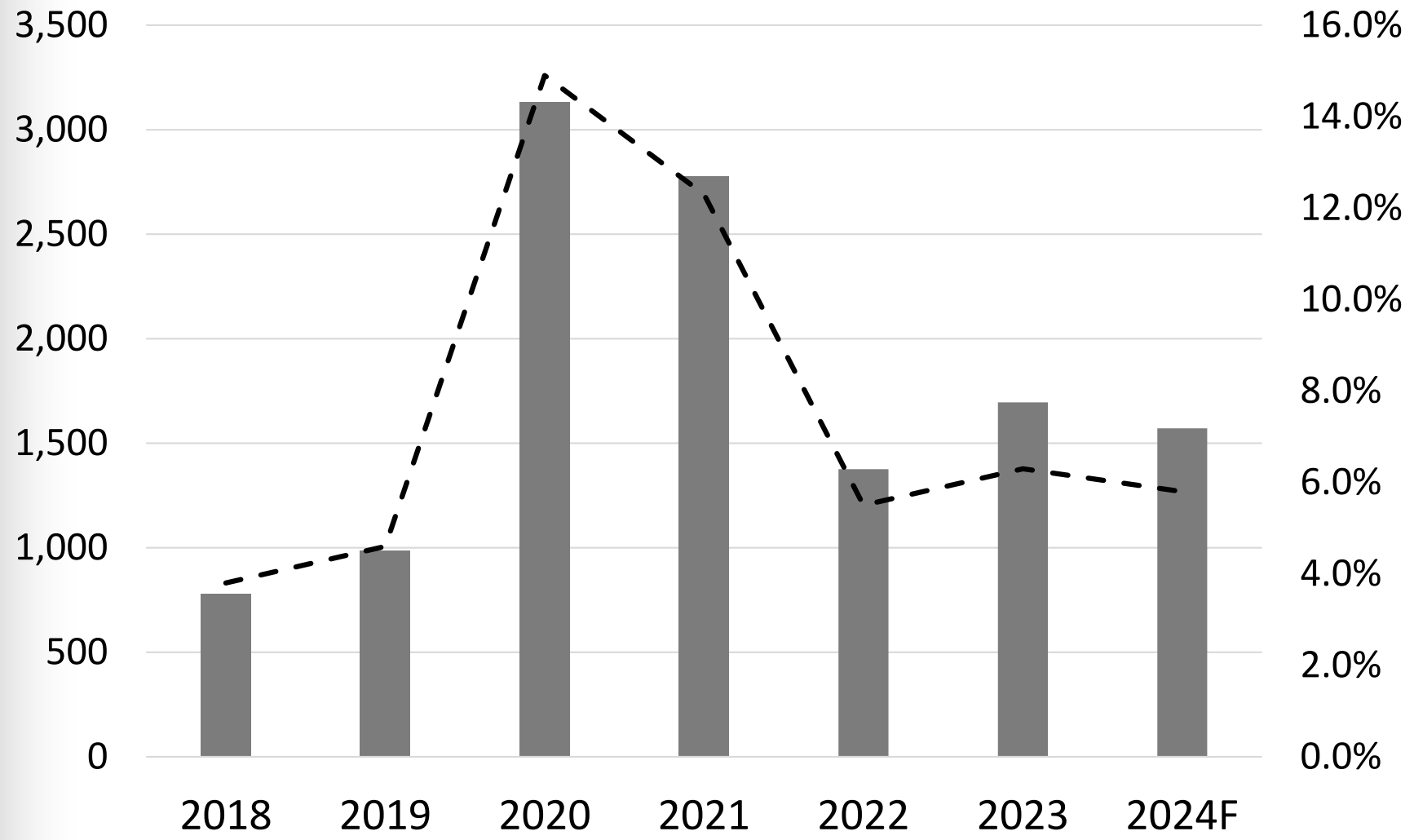**Internal Auditors**
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Reason #1: Big Fiscal Put Money in Pockets…

Federal Budget Deficit: $ Billions (Bars) and % GDP (Line)


Fiscal years run Oct 1 to Sep 30

2020: CARES Act $2.2T
2021: Rescue Act $1.9T

Key lesson: Checks, Child Tax Credit, and Unemployment Insurance expansion put $ rapidly into pockets

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Source Data: CBO

Households Saved in the Pandemic...
And Are Now Spending

Exhibit 2: Excess saving ($bn)

We estimate that excess savings were around $800bn in December
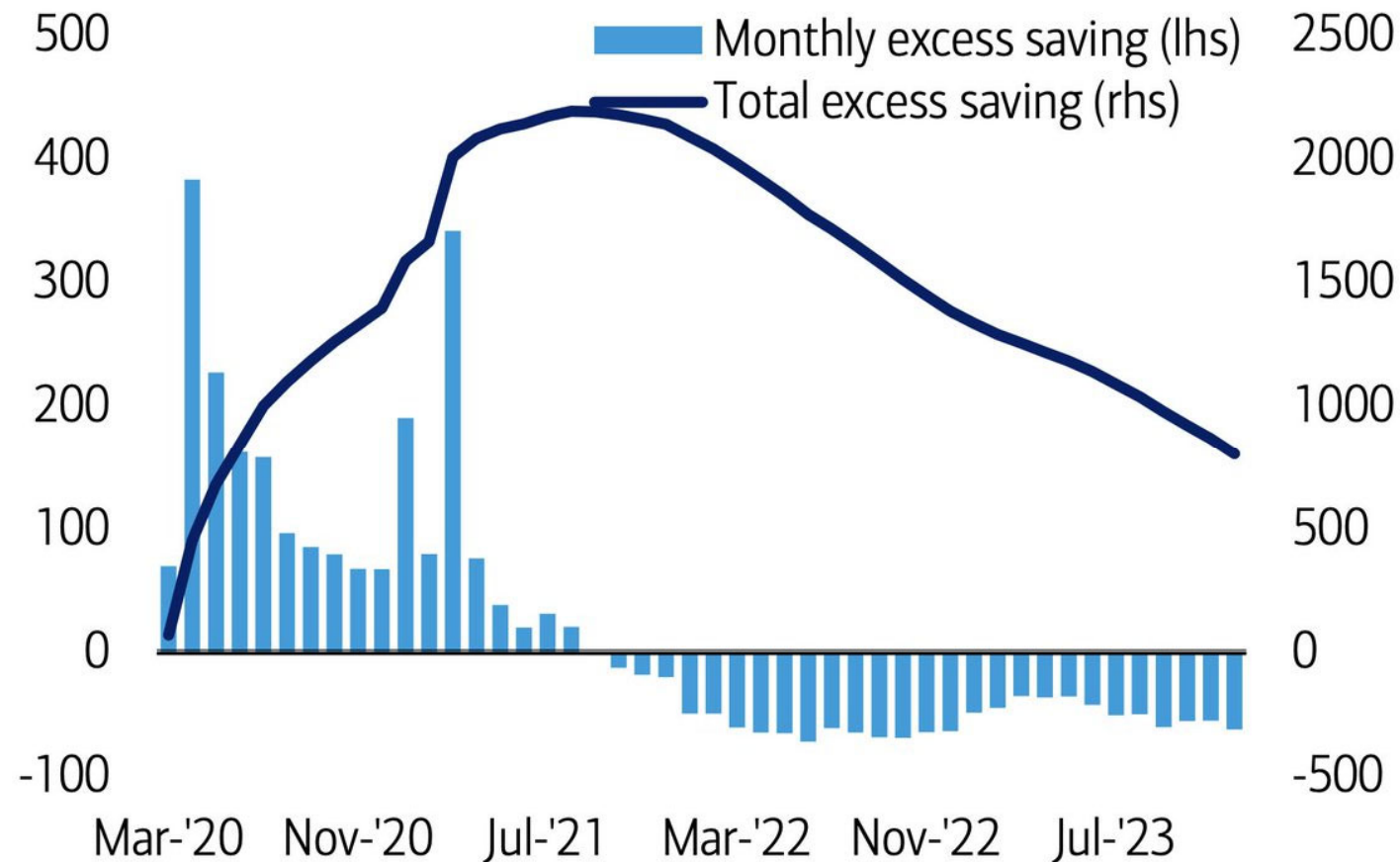
Source: BEA, Haver Analytics, BofA Global Research. Excess savings calculated by comparing actual savings to what savings would have been if the saving rate held at the 2019 average rate.

BofA GLOBAL RESEARCH

- Excess savings refers to savings above the pre-pandemic savings rate of ~6.5% (2017-2019 avg.)

- During 2020-2021, consumers saved on services, received government checks, Child Tax Credit, etc.

- This accumulated savings is being spent down, boosting consumption

Reason #2: Monetary Policy...

"Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output."

Inflation is a monetary phenomenon. It is made by or stopped by the central bank.

— Milton Friedman —

1912-2006

AZ QUOTES

Friedman also believed a key reason for the Great Depression was a one-third drop in the money supply.

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Trends in Money Supply, GDP and Inflation Since Pre-Pandemic (Q4 '19)
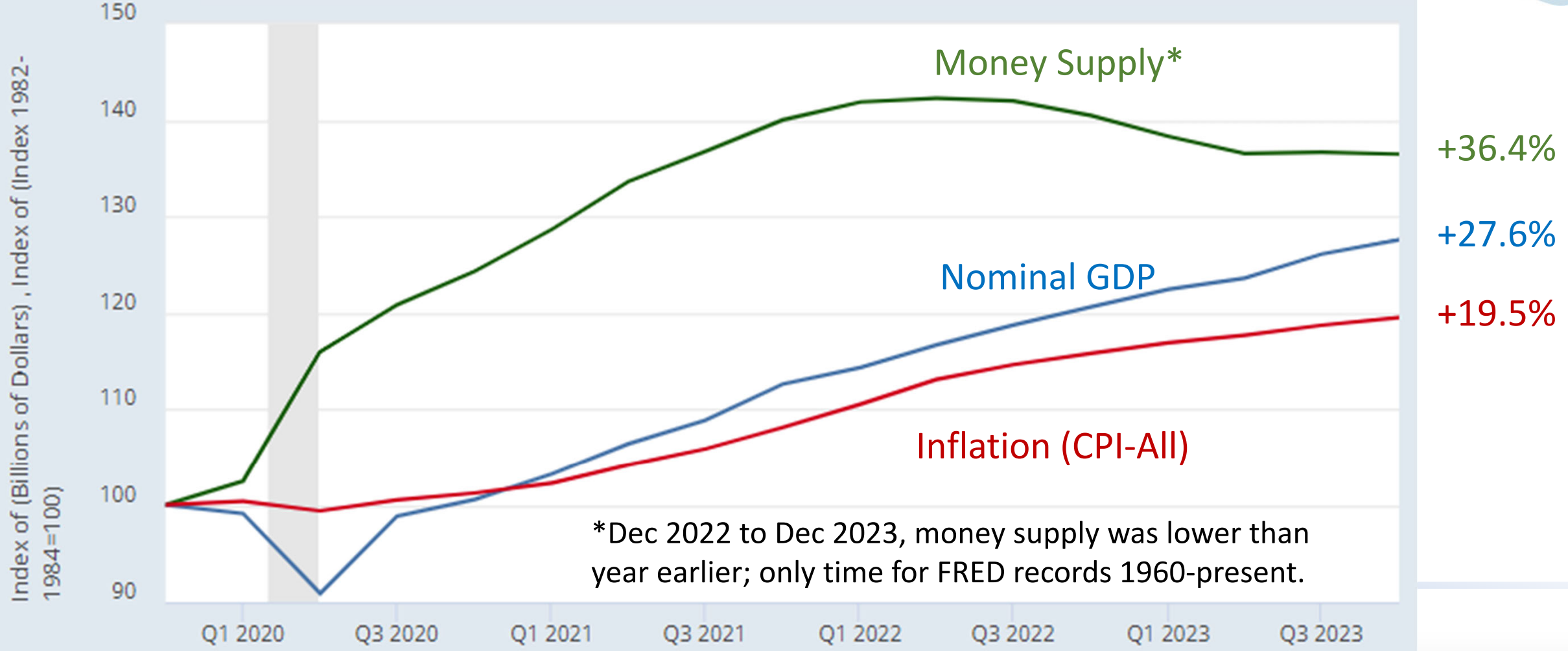
Fed Chair Powell: Inflation is the Fed's Job

"My colleagues and I remain squarely focused on our dual mandate to promote maximum employment and stable prices for the American people."

"Price stability is the responsibility of the Federal Reserve."

--November 1, 2023

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Sector Balances 1999-2022 (% GDP)

% GDP

Domestic Private (S-I)

Foreign (M-X)

Government (T-G)

2022

3.8%

1.7%

-5.5%
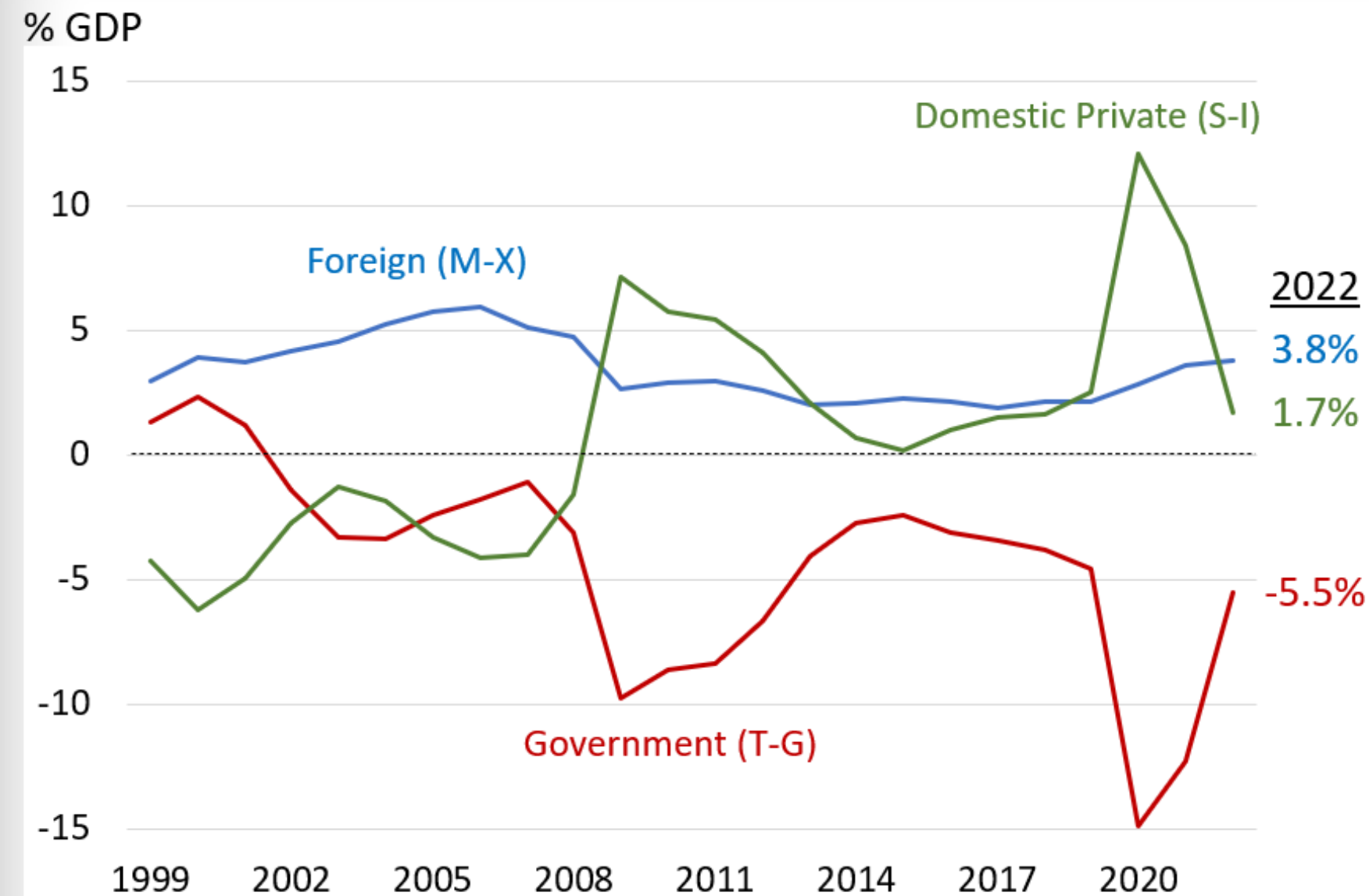
- The 3 balances net to zero in any given year ("savings identity")

- A sector in surplus is adding to its financial net worth; a deficit is a subtraction

- If you run an economy with a trade deficit (foreign surplus), you'll need to run a government deficit to avoid a private sector deficit

- A sustained private sector deficit (like 1996-2008) means an increasing household debt level, which increases risk of financial crisis (e.g., Great Recession)

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More information: CBO "An Update to the Economic Outlook" (August 2018)
Wikipedia: Sectoral Balances

CBO Economic Projections

Table 1.

CBO's Economic Projections for 2023 to 2025

	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Actual, 2022	2023	2024	2025
	Percentage change from previous quarter (annual rate)					Percentage change from fourth quarter to fourth quarter			
Gross domestic product									
Real[a]	0.8	1.3	1.4	1.7	1.7	0.7	2.5	1.5	2.2
Nominal	2.9	2.9	3.4	3.7	3.8	7.1	5.4	3.5	4.3
Inflation									
PCE price index	2.2	1.9	2.1	2.2	2.2	5.9	2.9	2.1	2.2
Core PCE price index[b]	2.6	2.4	2.3	2.4	2.4	5.1	3.4	2.4	2.3
Consumer price index[c]	2.5	2.1	2.7	2.7	2.5	7.1	3.2	2.5	2.5
Core consumer price index[b]	3.3	2.9	3.1	2.9	2.8	6.0	3.9	2.9	2.6
Employment cost index[d]	4.2	3.8	3.6	3.6	3.5	5.1	4.4	3.6	3.4
	Change in monthly average from previous quarter[e]					Change in monthly average from fourth quarter to fourth quarter[f]			
Payroll employment	194	155	99	38	45	427	235	84	178
	Quarterly average					Fourth quarter average			
Unemployment rate	3.9	4.0	4.1	4.2	4.4	3.6	3.9	4.4	4.4
Interest rates (percent)									
Effective federal funds rate[g]	5.3	5.4	5.2	5.0	4.7	3.7	5.3	4.7	3.7
10-year Treasury notes	4.5	4.2	4.6	4.8	4.8	3.8	4.5	4.8	4.3
Trade deficit (percentage of GDP)	-2.8	-2.9	-2.8	-2.8	-2.9	-3.3	-2.8	-2.9	-2.9

Data sources: Congressional Budget Office; Bureau of Economic Analysis; Bureau of Labor Statistics; Federal Reserve. See www.cbo.gov/publication/59837#data.

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Source: "CBO's Current View of the Economy from 2023 to 2025" (December 2023)

2024

Real GDP Growth
1.5%

CPI Inflation
2.5%

Jobs
85k/mo.

Unempl. Rate
4.4% in Q4

Economic Forecast 2024-2027 (Goldman Sachs)

(% change on previous period, annualized, except where noted)

	2022	2023 (f)	2024 (f)	2025 (f)	2026 (f)	2027 (f)	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4
OUTPUT AND SPENDING														
Real GDP	1.9	2.4	2.1	1.9	1.9	2.0	2.2	2.1	4.9	1.6	1.8	1.6	1.7	1.9
Real GDP (annual=Q4/Q4, quarterly=yoy)	0.7	2.7	1.8	1.9	1.9	2.0	1.7	2.4	2.9	2.7	2.6	2.4	1.7	1.8
Consumer Expenditures	2.5	2.2	2.1	1.9	1.9	2.0	3.8	0.8	4.0	1.9	1.9	1.9	1.9	1.9
Residential Fixed Investment	-9.0	-11.5	-1.5	2.6	3.2	2.4	-5.3	-2.2	3.9	-7.0	-4.0	1.0	2.0	2.0
Business Fixed Investment	5.2	4.2	2.2	2.7	3.7	3.6	5.7	7.4	-0.1	2.9	2.8	2.1	0.9	1.2
Structures	-2.1	11.4	1.7	0.1	3.2	3.0	30.3	16.1	1.6	3.3	4.0	0.8	-6.0	-6.0
Equipment	5.2	0.1	1.9	3.0	3.5	3.2	-4.1	7.7	-3.8	2.9	2.0	2.0	2.5	2.8
Intellectual Property Products	9.1	4.5	2.9	3.9	4.3	4.5	3.8	2.7	2.6	2.5	2.8	3.0	3.5	4.0
Federal Government	-2.8	4.1	1.3	0.0	0.0	0.0	5.2	1.1	6.1	2.0	0.6	0.0	0.0	0.0
State & Local Government	0.2	3.6	1.3	0.9	1.0	1.0	4.6	4.7	3.7	2.0	0.0	0.1	0.9	0.9
Net Exports ($bn, '17)	-1,051	-932	-899	-895	-900	-887	-935	-928	-938	-926	-907	-902	-894	-892
Inventory Investment ($bn, '17)	128	47	55	60	60	60	27	15	81	64	60	50	50	60
Industrial Production, Mfg.	2.7	-0.4	1.8	3.1	3.4	3.4	-0.3	0.3	0.0	1.7	2.1	2.3	2.7	3.1
HOUSING MARKET														
Housing Starts (units, thous)	1,551	1,388	1,335	1,430	1,515	1,535	1,385	1,450	1,359	1,358	1,335	1,325	1,325	1,355
New Home Sales (units, thous)	637	686	723	771	781	858	638	691	724	690	708	708	728	747
Existing Home Sales (units, thous)	5,081	4,093	3,838	4,244	4,372	5,005	4,327	4,250	4,023	3,773	3,740	3,796	3,863	3,952
Case-Shiller Home Prices (%yoy)*	7.5	3.5	0.6	3.8	4.9	4.9	2.3	-0.2	2.2	3.5	3.1	1.6	0.2	0.6
INFLATION (% ch, yr/yr)														
Consumer Price Index (CPI)**	6.4	3.3	2.5	2.3	2.4	2.3	5.8	4.1	3.6	3.2	3.0	2.6	2.5	2.5
Core CPI **	5.7	4.0	2.7	2.5	2.5	2.4	5.6	5.2	4.4	4.1	3.7	3.1	3.1	2.8
Core PCE** †	4.9	3.3	2.4	2.2	2.1	2.1	4.8	4.6	3.9	3.4	2.8	2.5	2.5	2.4
LABOR MARKET														
Unemployment Rate (%)^	3.5	3.8	3.7	3.6	3.6	3.6	3.5	3.6	3.8	3.8	3.7	3.7	3.7	3.7
U6 Underemployment Rate (%)^	6.5	7.0	6.8	6.8	6.8	6.7	6.7	6.9	7.0	7.0	6.8	6.8	6.8	6.8
Payrolls (thous, monthly rate)	399	222	115	80	75	75	312	201	233	142	130	130	100	100
Employment-Population Ratio (%)^	60	60.3	60.2	60.1	59.9	59.7	60.4	60.3	60.4	60.3	60.3	60.3	60.3	60.2
Labor Force Participation Rate (%)^	62	62.6	62.5	62.3	62.1	61.9	62.6	62.6	62.8	62.6	62.6	62.6	62.6	62.5
Average Hourly Earnings (%yoy)	5.3	4.3	4.0	3.6	3.6	3.6	4.5	4.3	4.3	4.2	4.2	4.1	3.9	3.8
GOVERNMENT FINANCE														
Federal Budget (FY, $bn)	-1,375	-1,700	-1,700	-1,900	-1,900	-2,050	--	--	--	--	--	--	--	--

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Source: Goldman Sachs Economics "2024 US Economic Outlook" (November 12, 2023)

Risks to U.S. Economy in 2024

- Fed maintains interest rates too high, tipping economy into recession

- Excess savings depleted sooner than anticipated, reducing consumption

- GS - Two key risks:
    1. "…geopolitical conflict and the risk of a spike in oil prices. While possible, we think this would more likely be a setback in the inflation fight than a gamechanger."
    2. "The second is the risk that something could "break" in the abrupt transition to a higher interest rate regime [e.g., commercial property, corporate debt maturing]. Our analysis suggests that the risks are real but manageable, in part because the Fed would be at liberty to cut in response next year and will have plenty of room."

- GS expects first interest rate cut in Q4 2024

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Source: Goldman Sachs "2024 US Economic Outlook" (November 12, 2023)

Learning Objectives

Part One

- How companies adapt to the economic environment

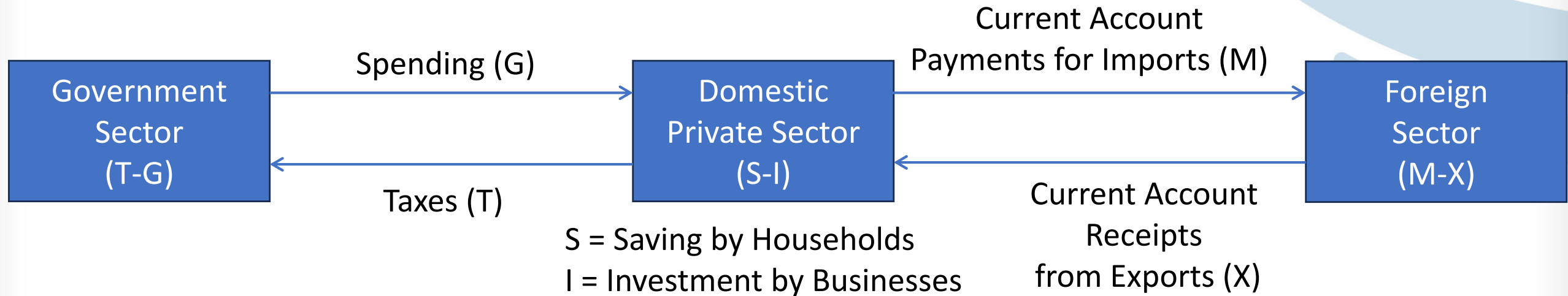- Risks & responses to economic factors

- Audit strategies for economic risks

Part Two

- Describing the current economic situation

- Understanding the economic machine

Appendix: 20 Useful FRED Series & Codes

SEQ #	Variable	FRED Series	Comments
1	Jobs ("All Employees, Total Nonfarm")	PAYEMS	Number of jobs. Select changes vs. prior period to match up with jobs report, or download level & compute manually in Excel.
2	Unemployment Rate (U-3)	UNRATE	The headline unemployment rate reported in the media.
3	Employment to Population Ratio, Age 25-54	LNS12300060	By using the 25-54 age rather than 16+, you avoid distortion caused by an aging country.
4	Average Hourly Earnings of Production and Nonsupervisory Employees	AHETPI	Bottom 80% of private sector workers both salary and hourly. Good proxy for the middle class. BLS uses CPI-W to convert this to real (FRED Series: CWSR0000SA0) but very similar result to using CPI-All.
5	Average hourly earnings of all employees, total private	CES0500000003	Hourly earnings for all private sector workers, including higher-paid management.
6	Real GDP Level	GDPC1	The headline GDP level, the main measure of the size of the economy. Real = adj. for infl.
7	Real GDP, quarterly growth rate annualized	A191RL1Q225SBEA	This series ties to the BEA press release for real GDP growth. "Percent Change from Preceding Period, Seasonally Adjusted Annual Rate".
8	Real GDP per capita	A939RX0Q048SBEA	Good measure of production & income per person.
9	Nominal GDP Level	GDP	Nominal = not adjusted for inflation. Useful for evaluating other data as % GDP.
10	Real disposable personal income (RDPI) per capita	A229RX0	RDPI is income after taxes.
11	Inflation - CPI All	CPIAUCSL	Main measure of inflation.
12	Inflation - CPI Core	CPILFESL	Excluding food & energy, which tend to be more volatile.
13	Inflation - PCE All	PCEPI	Fed's preferred inflation measure. PCE = Personal Consumption Expenditures
14	Inflation - PCE Core	PCEPILFE	Fed's preferred inflation measure. PCE = Personal Consumption Expenditures
15	Net Worth - Bottom 50% Group	WFRBLB50107	Use Household count (WFRBLB50300) to get figure per HH.
16	Net Worth - 50th-90th Group	WFRBLN40080	Use Household count (WFRBLN40301) to get figure per HH.
17	Median Sales Price of Houses Sold	MSPUS	Housing prices; measured by actual sales. Median = half sold above, half below this price.
18	Stock Market - S&P 500	SP500	S&P 500 Index
19	Trade deficit (goods & services), annual	BOPGSTB	Close, but not exactly the same as the Census historical data.
20	Number of U.S. households	TTLHH	Useful for measuring variables per household

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Appendix: Sector Balances & Economic Strategy

| Government Sector (T-G) | → Spending (G) → | Domestic Private Sector (S-I) | → Current Account Payments for Imports (M) → | Foreign Sector (M-X) |

Spending (G) →
← Taxes (T)

Current Account Payments for Imports (M) →
← Current Account Receipts from Exports (X)

S = Saving by Households
I = Investment by Businesses

- Saving Identity: Must hold true. The surpluses & deficits must net to zero across the 3 sectors.
        (T-G) + (S-I) + (M-X) = 0
- A sector in surplus is adding to its financial net worth (or reducing its net debt position)
    - A private sector deficit means households & businesses are getting poorer (net worth is falling)
    - Capital gains enter savings when realized; unrealized gains are outside the framework
- Arrows represent a money flow
- Think of the foreign sector from the foreigner's perspective; our trade deficit is their surplus
- Current account is the trade balance & some foreign investment-related flows (interest & dividends)

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More information: CBO "An Update to the Economic Outlook" (August 2018)
Wikipedia: Sectoral Balances

Q&A

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