

# Navigating the Next Decade: Forces Transforming Global Dairy



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U.S. DAIRY  
EXPORT COUNCIL

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# Future Economy



Growth  
Opportunities



**VENEZUELA**

**INTEREST RATES**

**CHINA**

**UNCERTAINTY**

**FED**

**TARIFFS**

**JOBS**

**CLIMATE**



# CONTEXT

*Economy, Govt. Policy & Trends*

# Application

*Growth Opportunities*



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# ECONOMIC PAST

*Chaos*

*Recap!*



COVID

Stimulus

War

Inflation

# ECONOMIC PRESENT



*Disruption*

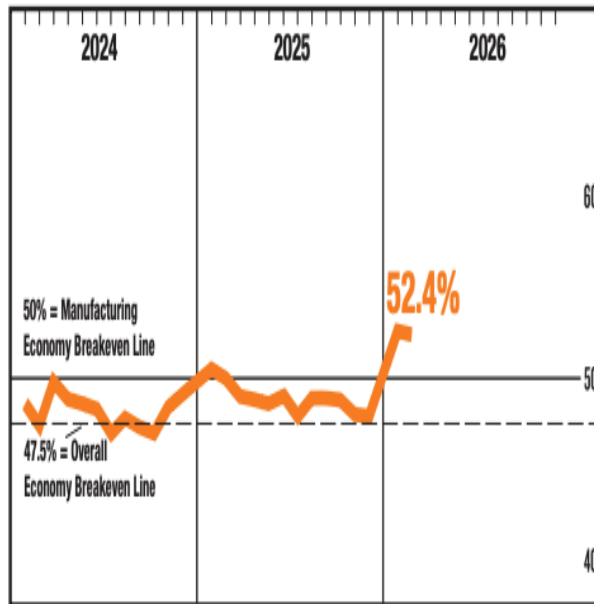
Rebalanced

# US Economy Growing

## MANUFACTURING

# PMI® at 52.4%

The U.S. manufacturing sector expanded in February for the second time since January 2025, registering 52.4 percent, a 0.2-percentage point decrease compared to January's reading of 52.6 percent. Of the five subindexes that directly factor into the Manufacturing PMI®, three (New Orders, Production and Supplier Deliveries) are in expansion territory, the same as in January. The Employment and Inventories indexes stayed in contraction, though both improved compared to January.

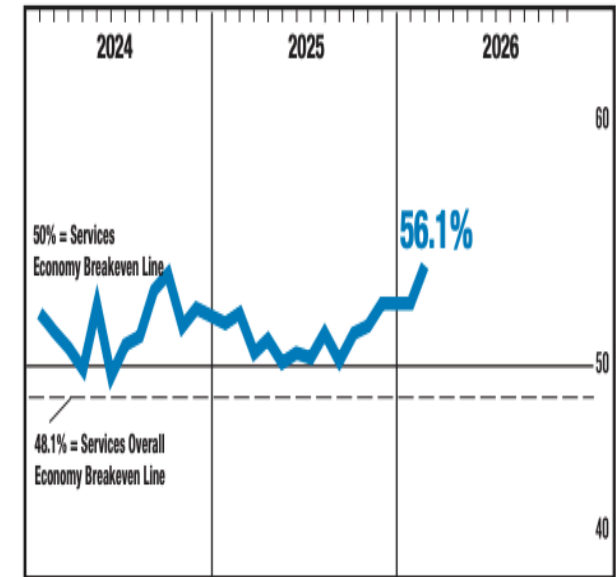


## SERVICES

# PMI® at 56.1%

Source: ISM

In February, the Services PMI® registered 56.1 percent, the index's highest reading since it registered 56.5 percent in July 2022. A reading above 50 percent indicates the services sector economy is generally expanding; below 50 percent indicates it is generally contracting. The past relationship between the Services PMI® and the overall economy indicates that the Services PMI® for February (56.1 percent) corresponds to a 2.5-percentage point increase in real gross domestic product (GDP) on an annualized basis.

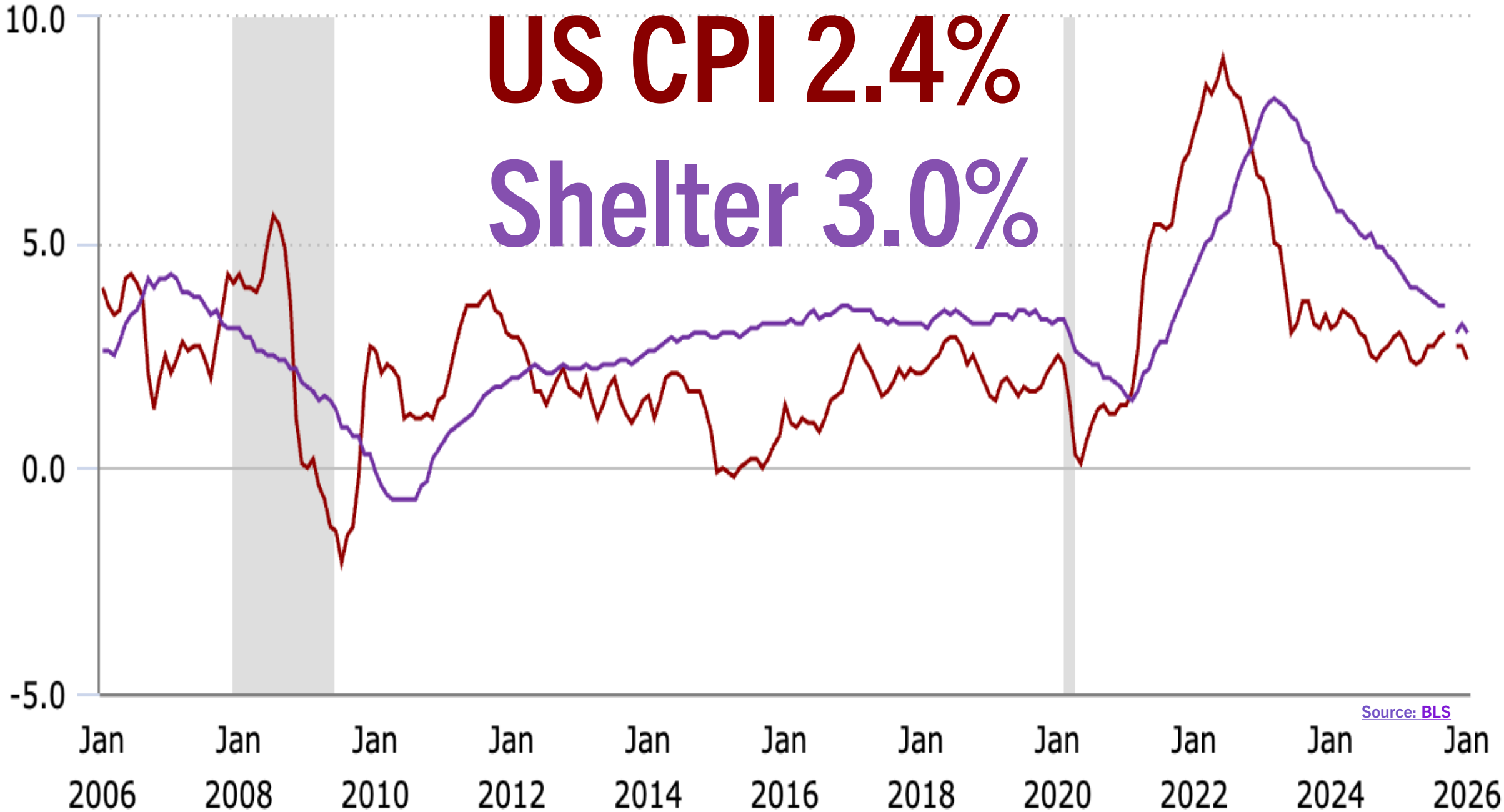


Slowed

*Temporarily*

# US CPI 2.4%

# Shelter 3.0%

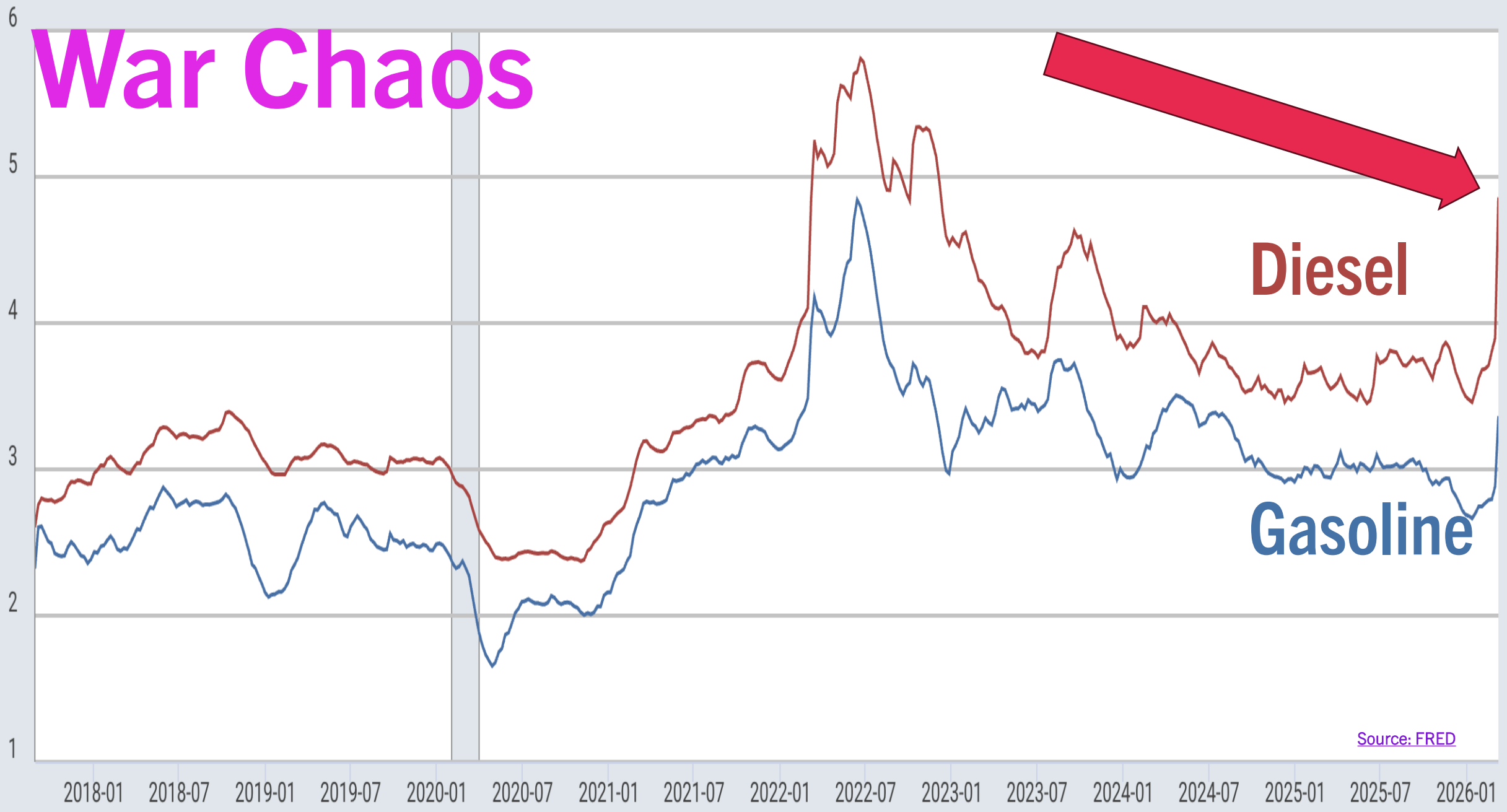


Source: BLS



Electricity Prices +35%

# War Chaos

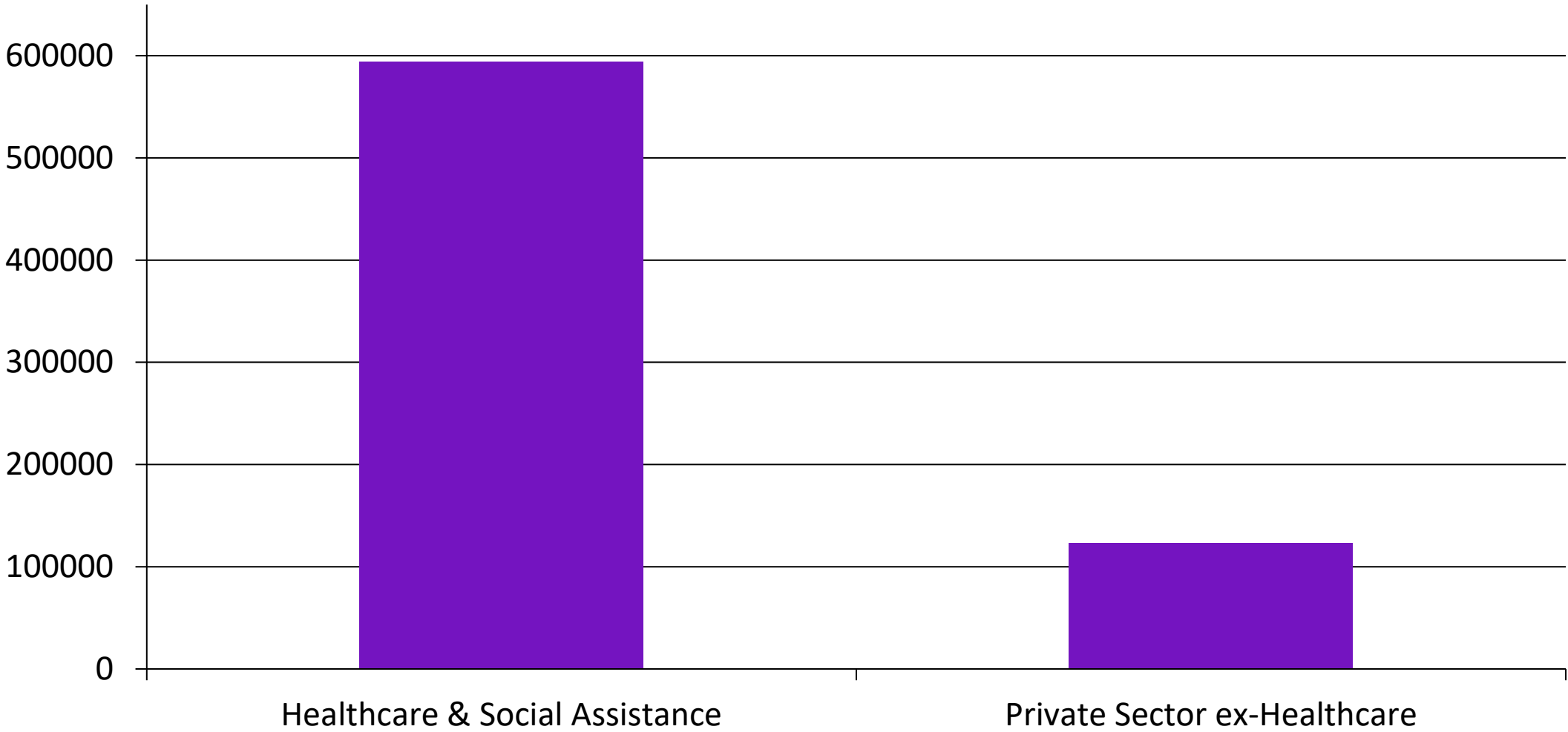


Source: FRED

Stalled

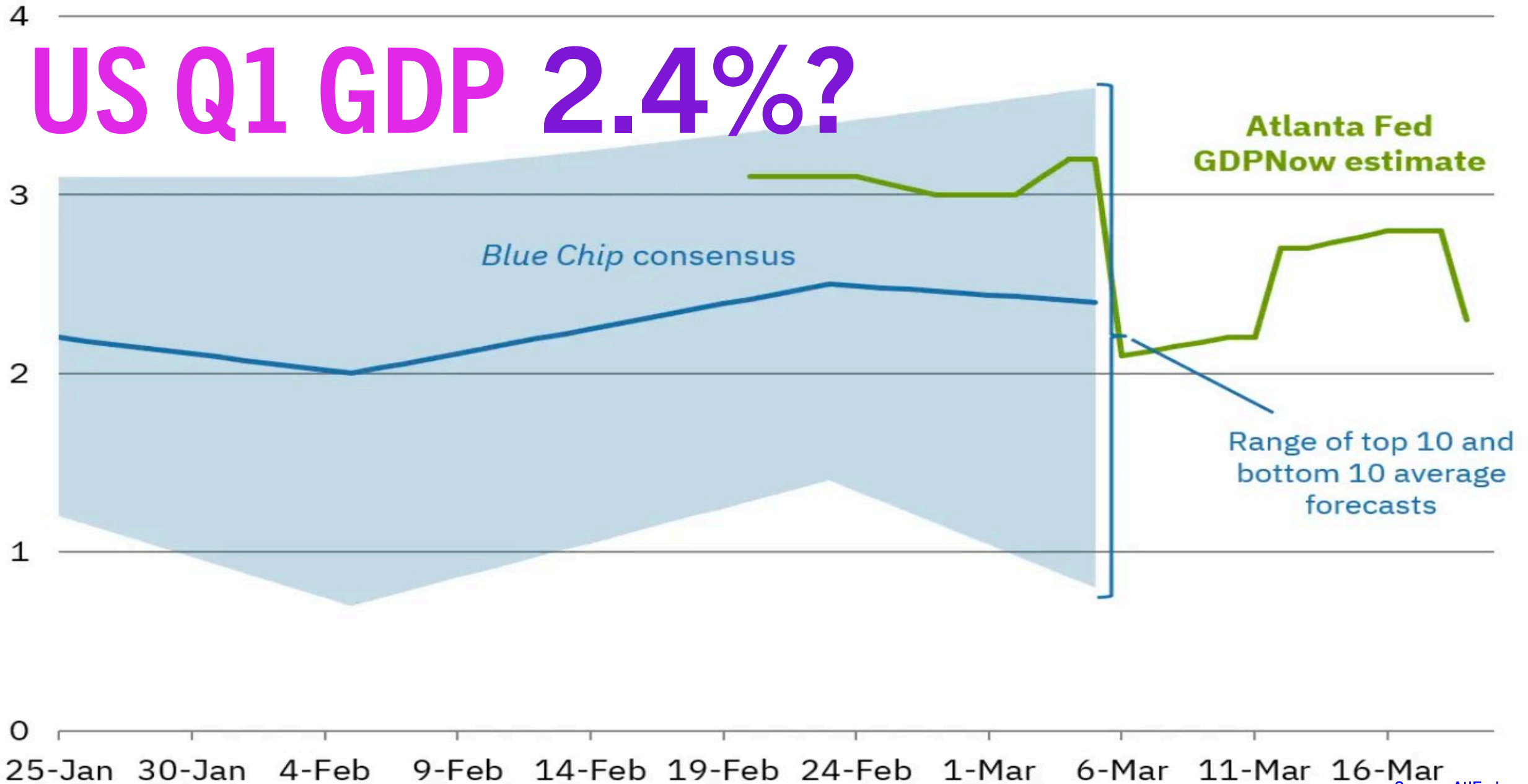
# Private-Sector Job Gains Since April 2025

## Net Jobs Added



Growing

# US Q1 GDP 2.4%?



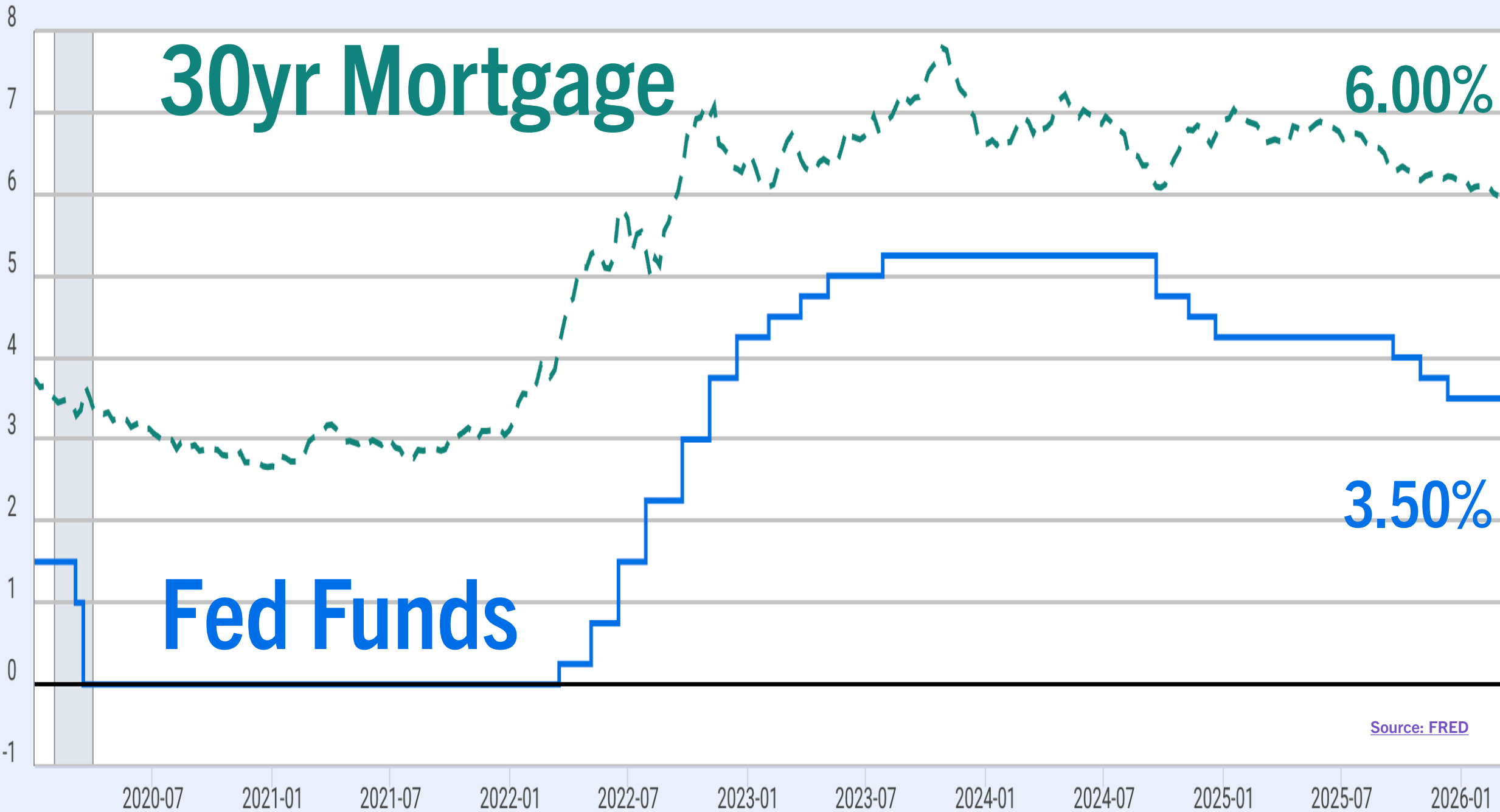
Stuck

# 30yr Mortgage

6.00%

# Fed Funds

3.50%



Source: FRED

# Why LT Rates Higher & Longer?

1. Demographics (\$ supply)
2. Debt (\$ demand)
  - a) Deglobalization
  - b) Data Centers
  - c) Defense
3. War inflation risk (uncertainty)

■ EURUSD:CUR -2.80%

■ NZDUSD:CUR -17.81% ✕



■ USDMXN:CUR -13.98%

■ USDCAD:CUR +8.76% ✕

Mar 6, 2026

20.0000%

7.5000%

-5.0000%

-17.5000%

-30.0000%

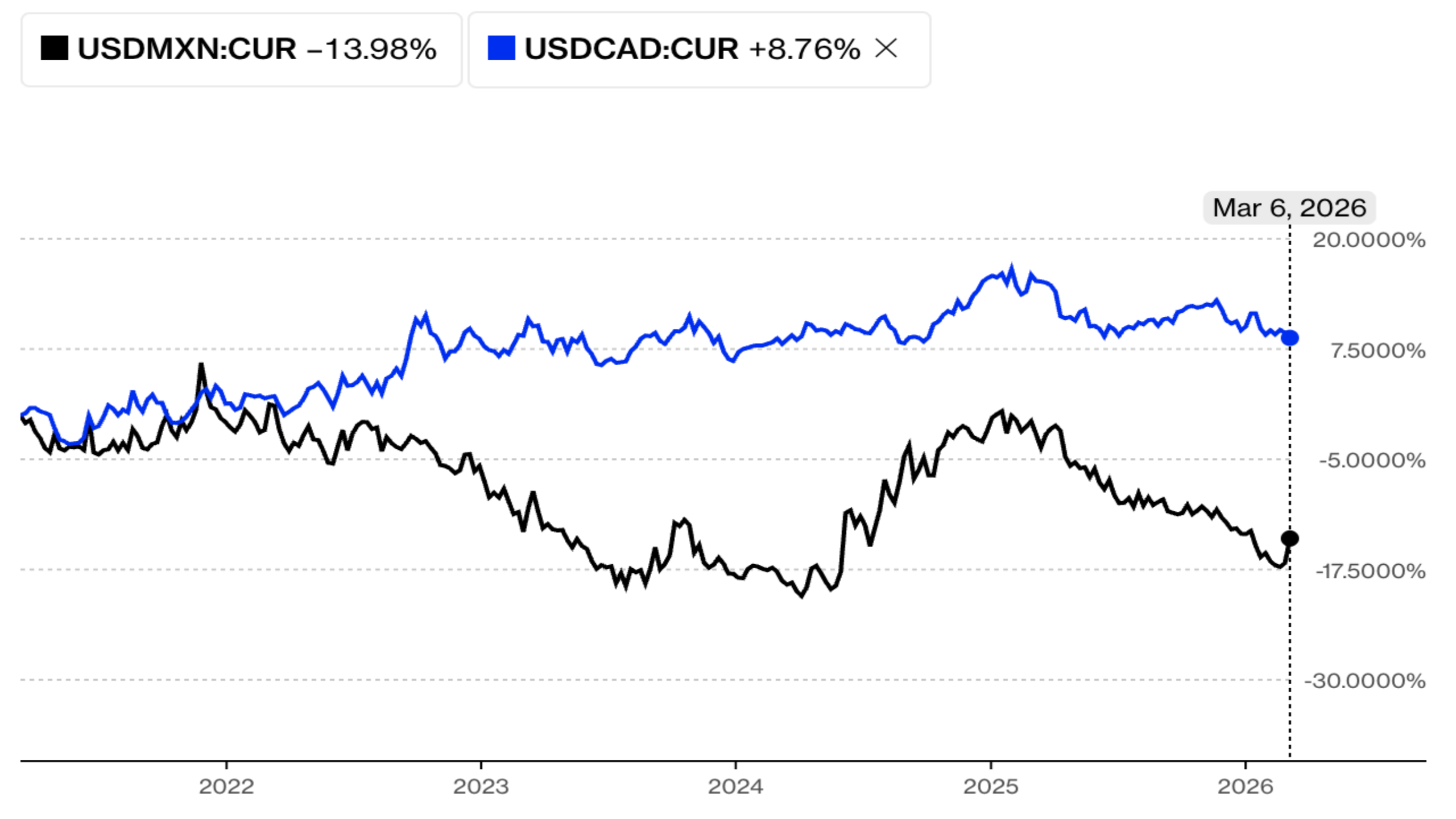
2022

2023

2024

2025

2026



# ECONOMIC FUTURE



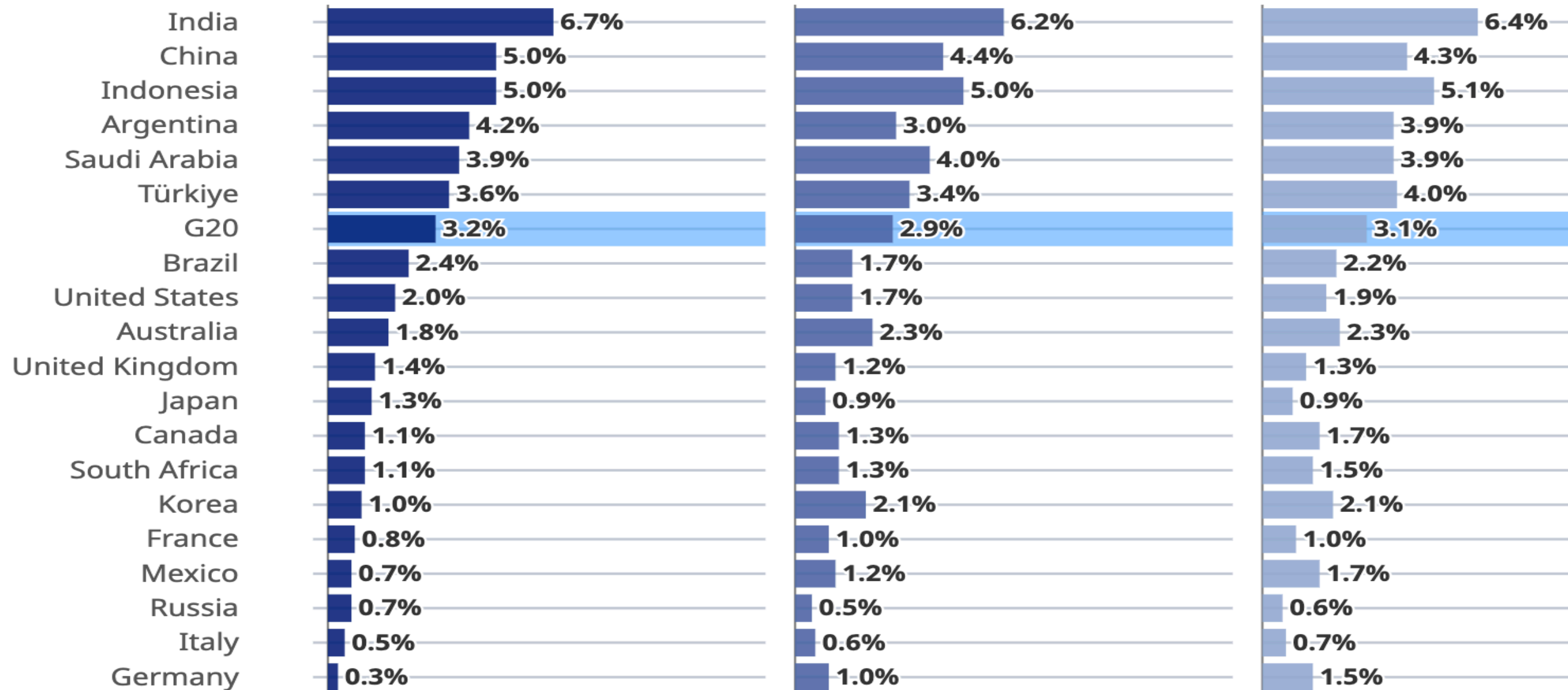
*Volatile*

# OECD GDP Estimates

2025

2026

2027



Big  
Economic  
Secret!

AI



# Top 10 2026 X-factors

**ST: 2-years**

1. Length of ME War
2. Chinese Exports
3. Extreme Weather
4. AI Capex Pullback
5. Societal Instability/  
Disputed Midterms

**LT: 3 to 10-years**

6. Adverse AI
7. Cyber/Cloud shutdown
8. Massive Solar Flare
9. Synthetic Pathogens
10. US Debt Crisis

# ST Economic Takeaways

*US inflation sticky @ 2.25%-2.75. Fed delays cuts due to war inflation risk*

*US 2026 GDP grows 2.0%-2.5% w/front loaded fiscal stimulus & less negative impact from tariffs.*

*2026/2027 Global GDP  $f(x) = \#CB \text{ rate cuts} + \text{China stimulus} + \text{US tax cuts/spending} - \text{Tariffs} - X \text{ factors (War)}$*



**GOVT. POLICY**

**&**

**POST-PEAK**

**TRUMP**

# Previous IEEPA

Area	IEEPA Exports
Mexico Dairy Exports (\$2.5B annually)	Initial 25% tariff (Feb 2025); largely exempted under USMCA; Mexico did not retaliate on dairy
Canada Dairy Exports (\$14B annually)	25% tariff (March 2025); exempted under USMCA; Canada retaliated with 25% on US butter, milk, cream, yogurt, whey
China Dairy Exports (\$10-800M annually)	Escalated from 0% → 20% → 84% → 100%; reduced to 10% under truce extended through Nov 10, 2025
Reciprocal Tariffs (All Trading Partners)	10% baseline (Applied to countries specific 10-41% on 83 countries; exempt from Section 232
Legal Status	Federal courts ruled Executive Order doesn't authorize tariffs; Supreme Court decision mid-2026; \$129B collected

# Section 122 (15% Tariffs)

Segment	Channel	Impact
Skim Milk Powder / NFDM	Retaliatory tariffs in price-sensitive emerging markets; benchmark price volatility	Export volume risk to Mexico, SE Asia & Africa; farm-gate milk price pressure
Cheese (Mozzarella / Cheddar)	Higher logistics and packaging input costs; restaurant demand sensitivity	Margin compression but branded products retain partial pricing power
Dry Whey & Whey Protein	China feed demand disruption; sports nutrition supply chain repricing	Protein premium narrows; inventory swings and contract renegotiation risk
Lactose & Dairy Ingredients	Regulatory tightening and sourcing diversification by infant-formula producers	Stable long-term demand but slower shipment cycles and working-capital strain
Butterfat / AMF	Global fat price cycle distortion from trade flow re-routing	Premium export margins volatile; niche markets more resilient

# Non-IEEPA

Area	Exposure
<b>Steel/Aluminum (50% tariff)</b>	<b>Affects processing equipment: tanks, refrigeration units, packaging machinery; capital expenditure costs 50% premium</b>
<b>Automotive (Section 232)</b>	<b>Affects logistics costs for refrigerated milk transportation; fleet replacement more expensive</b>
<b>Stacking Rules</b>	<b>Goods with Section 232 auto/automotive exempt from steel/aluminum tariffs AND IEEPA Canada/Mexico tariffs</b>
<b>Derivative Products</b>	<b>Commerce added 400+ product codes in Aug 2025; inclusions windows annually (May, Sept, Jan)</b>
<b>Retaliatory Measures</b>	<b>Canada: 25% on \$11B US steel/aluminum; EU: suspended retaliation pending framework agreement</b>

# OBBBA +/-

Positive Impacts	Negative Impacts
<b>100% bonus depreciation restored (permanent)</b>	<b>Multi-state compliance complexity (varying state conformity)</b>
<b>Section 179 increased to \$2.5M</b>	<b>Tips &amp; overtime deductions temporary (2025-2028 only)</b>
<b>Estate exemption \$15M permanent</b>	<b>Reporting requirements increase payroll burden</b>
<b>Clean fuels credit extended through 2029</b>	<b>State legislative uncertainty</b>
<b>Qualified Production Property 100% depreciation</b>	<b>Immediate deduction vs future depreciation shields</b>

# OBBBA Depreciation

OBBBA Provision	USDEC Impact
100% Bonus Depreciation	Equipment, land improvements, farm buildings qualify; immediate write-off
Qualified Production Property	Processing facilities receive accelerated depreciation
Section 179 Expensing (\$2.5M limit)	Smaller equipment purchases immediately expensed
Strategic Timing	Accelerate 2026 capex to capture deduction
Cash Flow Impact	Reduces taxable income immediately
Multi-State Considerations	State conformity varies

# US LT Fiscal Risks to 2033

Challenge	Econ Impact	Strategy
Rising federal interest burden	Higher LT rates; higher cost of capital	Lock in longer-duration financing; faster payback projects
Structural deficits	Limited fiscal stimulus; slower recoveries	Stress-test demand; diversify revenue
Social Security trust fund depletion	Consumer spending uncertainty; labor shifts	Adjust age exposure; workforce flexibility
Crowding out of discretionary spending	Slower federally funded growth	Reduce reliance on federal demand
Reduced fiscal flexibility	Weaker policy response to shocks	Liquidity buffers; fiscal risk planning

# TRENDS



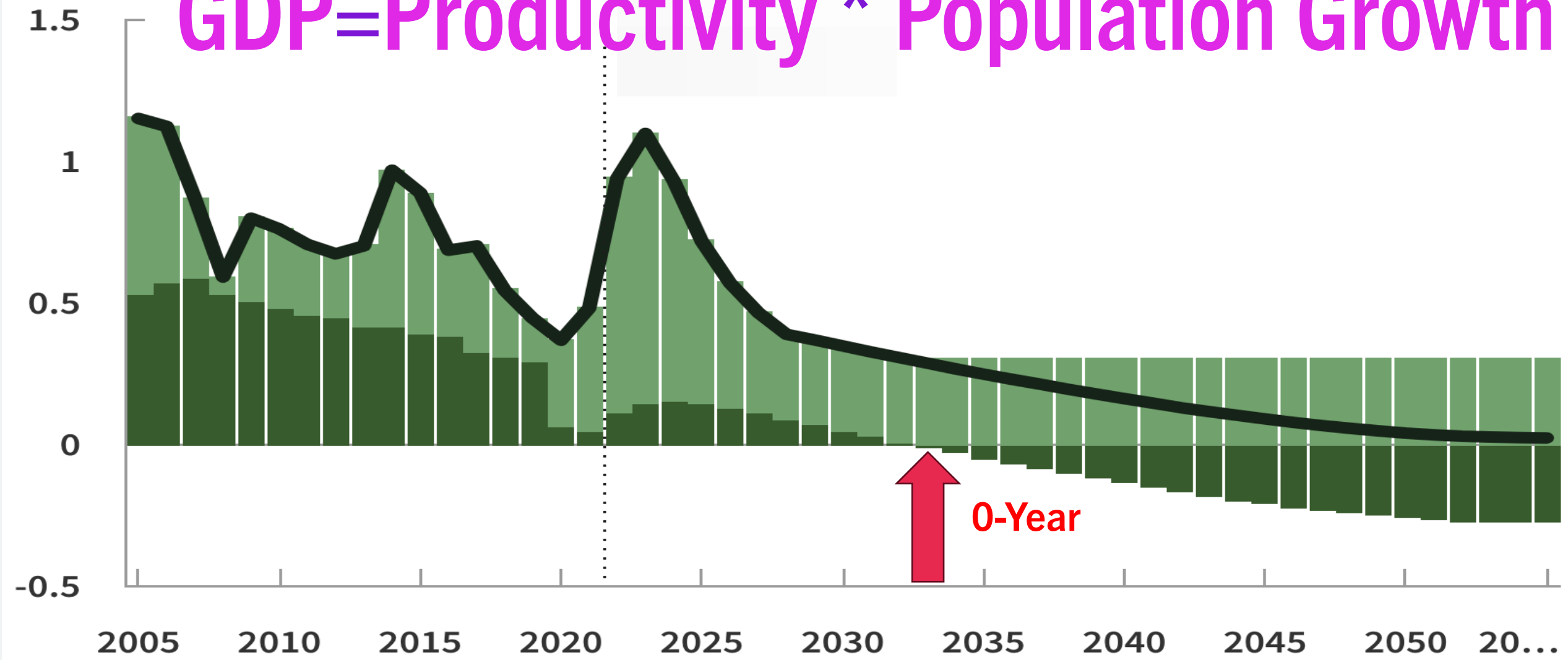
*Speeding Up*

# Population Growth and Contributing Factors



Percent

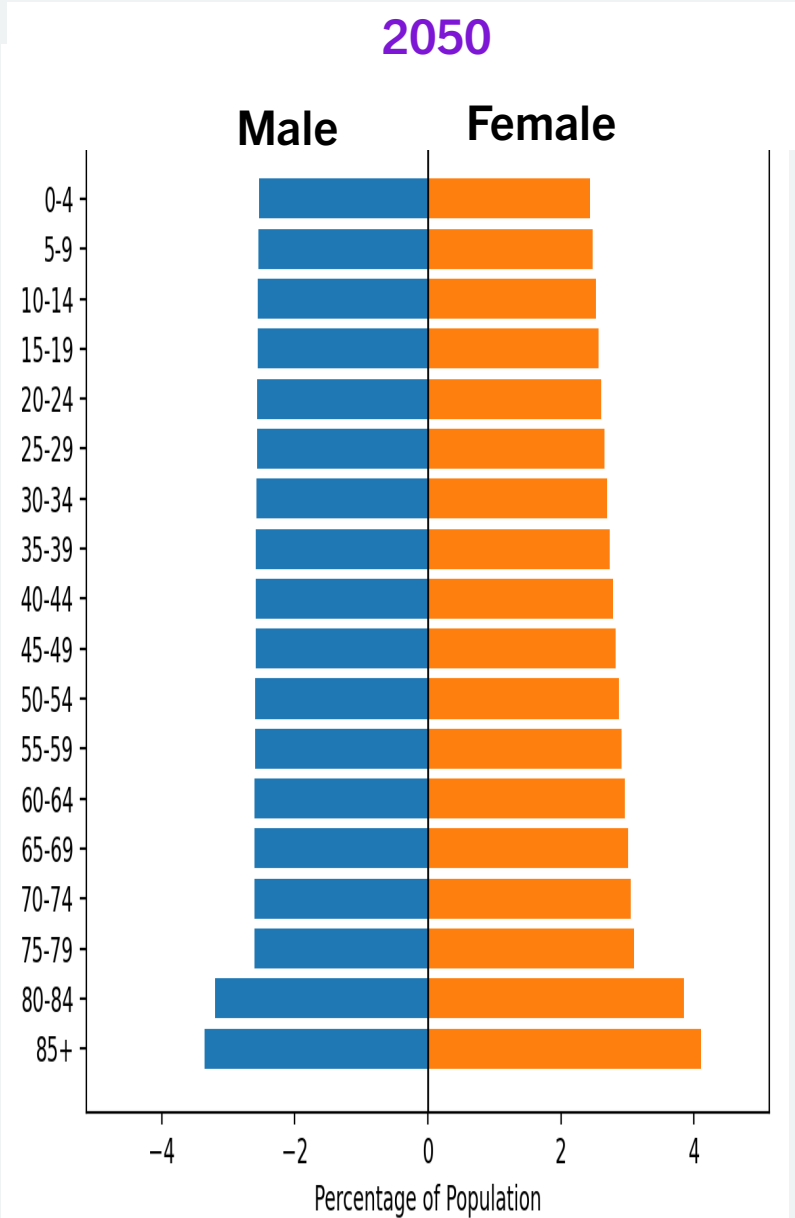
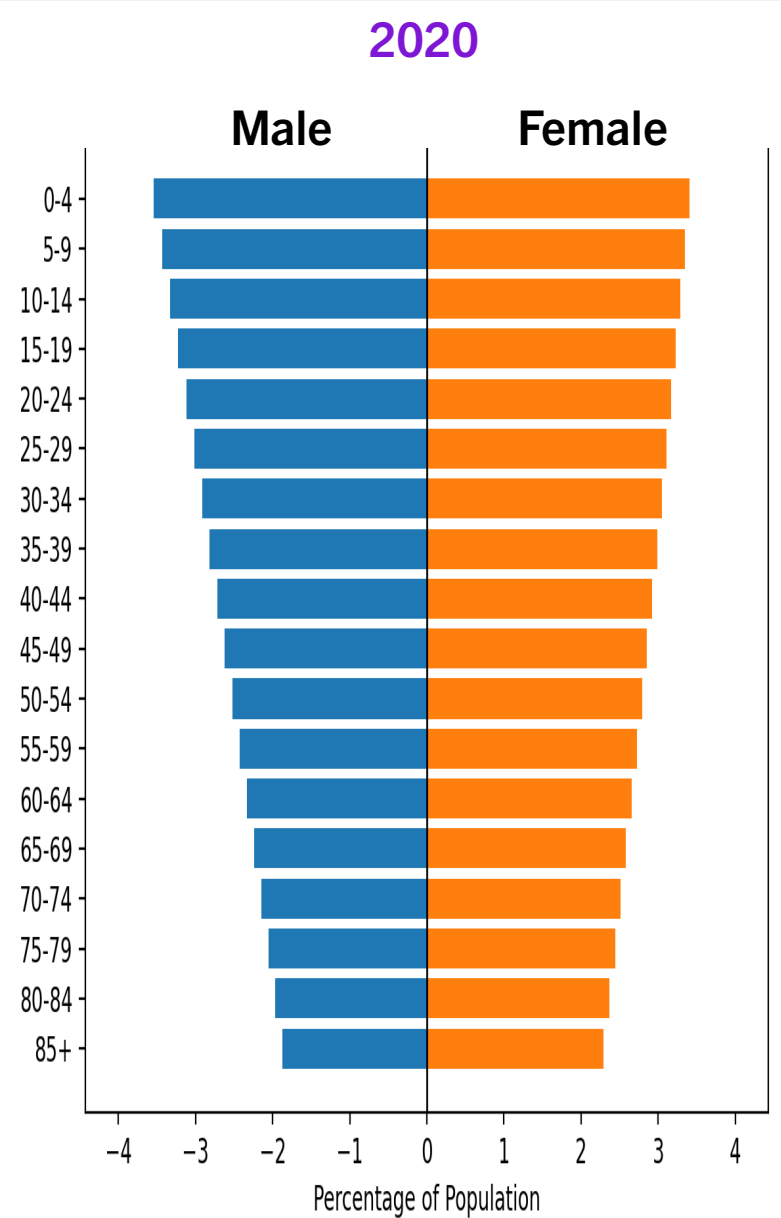
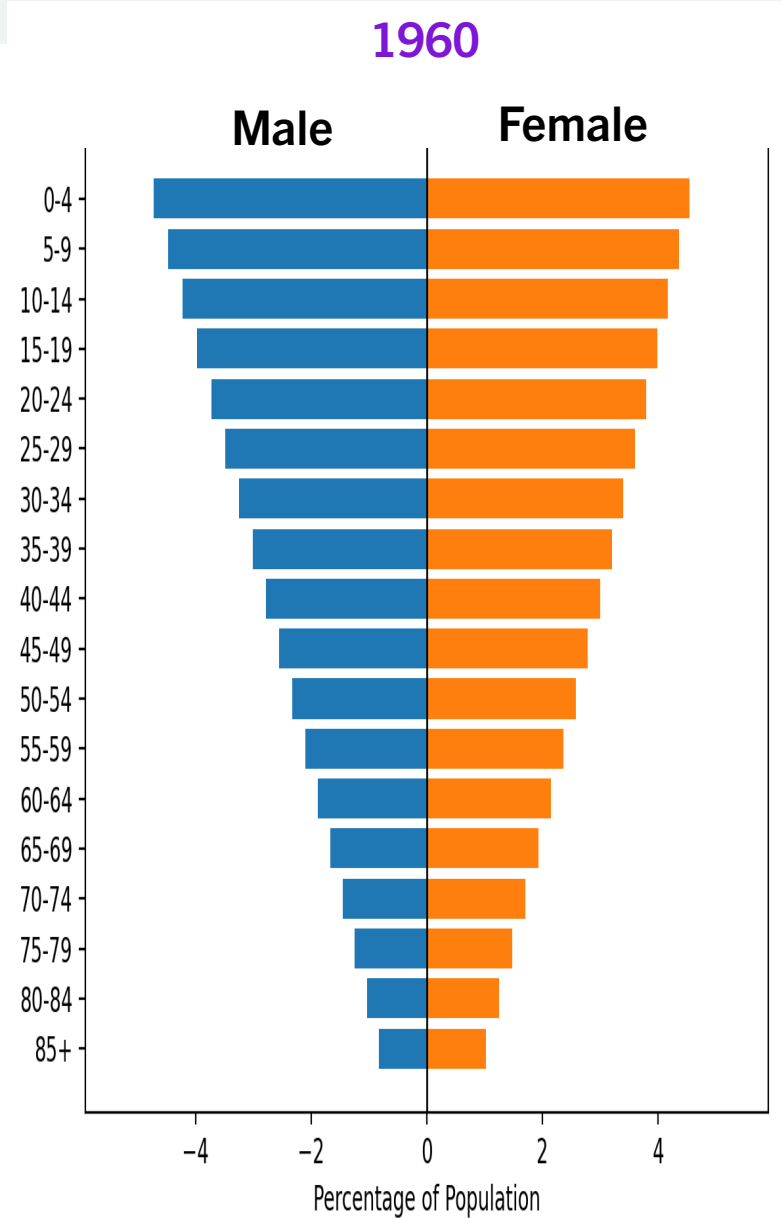
**GDP = Productivity \* Population Growth**



— Population growth    Net immigration    Births minus deaths

# U.S. Population Pyramids

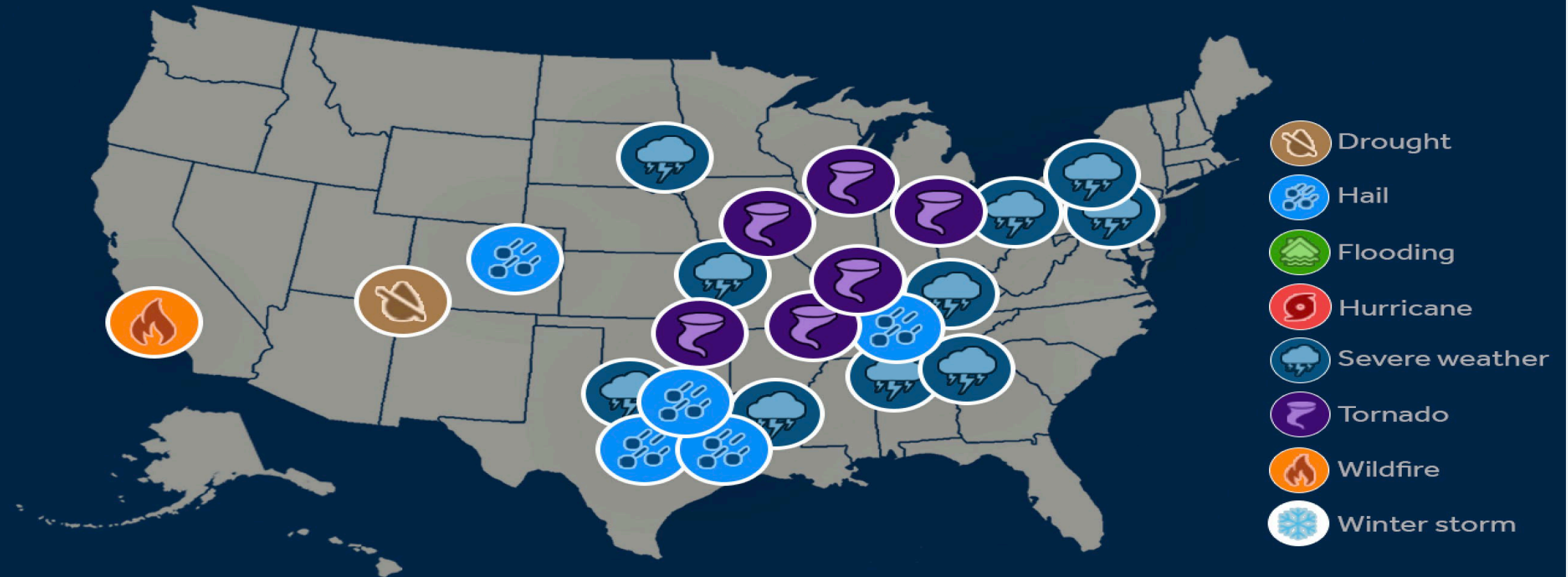
Source: UN



# Global Weather Disasters=\$224B

## BILLION-DOLLAR DISASTERS

January - December 2025



Approximate location of the 23 billion-dollar weather and climate disasters (CPI-adjusted) that impacted the U.S. from January-December of 2025. Source: Climate Central. Data as of December 31, 2025.

**CHALLENGES MET =**

***GROWTH***

***ACHIEVED***





# Get a Tattoo!

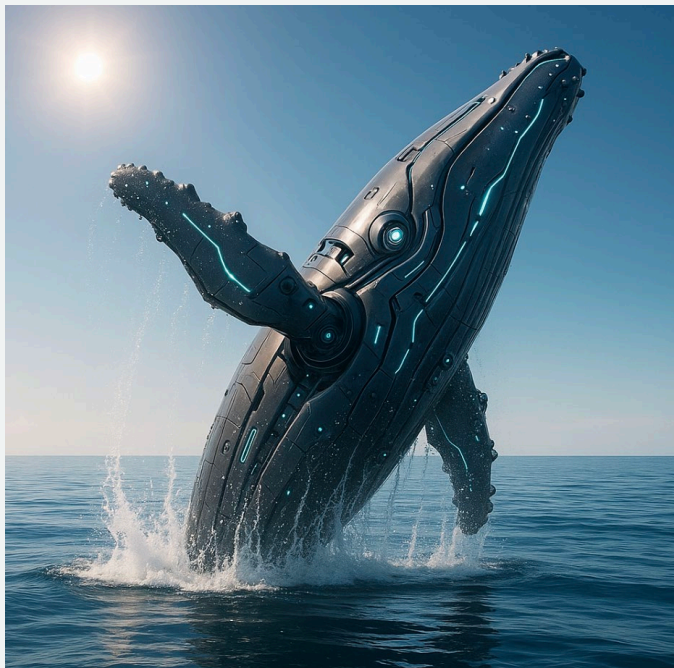


<b>Conflict / Shock</b>	<b>Initial Market Reaction</b>	<b>Oil / Energy Effect</b>	<b>12-Month Tendency</b>	<b>Key Lesson</b>
1973 Arab Oil Embargo / Yom Kippur War	Equities fell sharply; stagflation fears took hold.	Severe oil shock: inflation accelerated materially.	Weak performance as recession and inflation deepened.	Energy supply disruption can overwhelm the usual post-war rebound.
1990–91 Gulf War	S&P 500 sold off pre-invasion; recovered rapidly once the coalition response clarified.	Oil spiked, then retraced as military outlook improved.	Strong rebound after the conflict was clearly contained.	Fast resolution plus restored oil confidence can drive a relief rally.
2003 Iraq War	Markets weakened into the launch of operations, then improved as uncertainty fell.	Oil volatile but no lasting global supply embargo.	Equities generally improved over the following year.	Clarity on the military path can matter more than first headlines.
2022 Russia–Ukraine Invasion	Global equities fell; Europe underperformed materially.	Large energy and food shock, especially in Europe.	Uneven recovery because inflation and central-bank tightening persisted.	When war reinforces inflation, the rebound is slower and more selective.

War Risk	Implications	Impact	Strategy
Energy Price Spike	Conflict involving Iran or Strait of Hormuz disruptions push global oil and LNG prices higher; increases electricity, natural gas, fertilizer, feed, and refrigeration costs across dairy supply chains.	Margin compression for processors; higher farm production costs; increased cold-chain and processing expenses; pressure on export competitiveness.	Expand long-term utility contracts; invest in efficiency upgrades; hedge energy exposure; optimize processing energy intensity.
Global Freight & Shipping Disruption	Tanker security risks and rerouted shipping lanes raise freight costs; container shortages and port congestion affect refrigerated dairy shipments.	Higher export logistics costs; delivery delays to Asia and Middle East markets; working capital tied up in transit.	Diversify export shipping routes and ports; increase cold-storage buffers; negotiate indexed freight contracts.
Feed & Agricultural Input Inflation	Energy shock raises fertilizer, diesel, and feed grain costs globally affecting dairy farm operating expenses.	Higher milk production costs; potential herd contraction or slower production growth; tighter raw milk supply.	Encourage efficiency investments; optimize feed procurement; deploy productivity technologies.
Cyber & Infrastructure Risk	Iranian cyber retaliation may target U.S. energy infrastructure, ports, food supply chains, and industrial control systems.	Processing plant disruptions; cold-chain outages; export logistics interruptions; reputational and regulatory exposure.	Strengthen OT cybersecurity; conduct penetration testing; build logistics redundancy; expand cyber insurance.
Global Demand Shock	Energy-driven inflation weakens consumer purchasing power in import markets, particularly in developing economies.	Reduced dairy import demand; slower growth in cheese, whey, and milk powder exports.	Focus on resilient markets such as Mexico and Southeast Asia; expand value-added dairy exports; increase contract indexation.

<b>Growth Opportunity</b>	<b>Actionable Strategies</b>
<b>Massive FDI into the U.S.</b>	<b>Position U.S. dairy as the preferred supplier for foreign-owned food processing and manufacturing facilities expanding domestic production.</b>
<b>Supply Chain Resilience</b>	<b>Diversify export ports, cold-chain infrastructure, and logistics networks to reduce disruption risk and improve export reliability.</b>
<b>Internal U.S. Population Migration</b>	<b>Target high-growth regions such as the Southeast and Mountain West where population growth is increasing dairy consumption.</b>
<b>Protein Demand from GLP-1 Adoption</b>	<b>Expand high-protein dairy offerings including whey protein, functional dairy beverages, and protein-enhanced products as GLP-1 users increase protein intake to preserve muscle mass.</b>
<b>Agentic AI Adoption</b>	<b>Deploy AI-driven logistics, quality monitoring, and demand forecasting to improve supply chain efficiency and export competitiveness.</b>

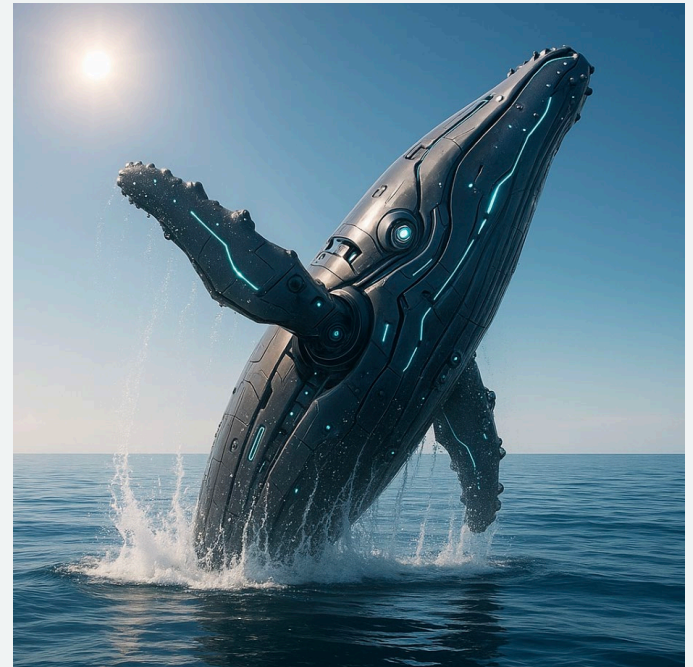
**\$9.0+ *Trillion!***



***Whale \$***

*(if true)*

Source: WH



# Supply Chain Challenges

Challenge	Strategy
Export Port Concentration	Diversify export gateways beyond West Coast ports; expand Gulf and East Coast routing.
Cold Chain Reliability	Expand cold storage near ports and deploy IoT temperature monitoring for shipments.
Perishability / Shelf Life	Increase production of shelf-stable dairy products such as whey and milk powders.
Supply Chain Visibility	Modernize ERP and logistics platforms to improve real-time inventory and shipping data.
Cyber & Infrastructure Risk	Strengthen cybersecurity and build operational redundancy across plants and logistics.

# Supply Chain Vendors To Check Out

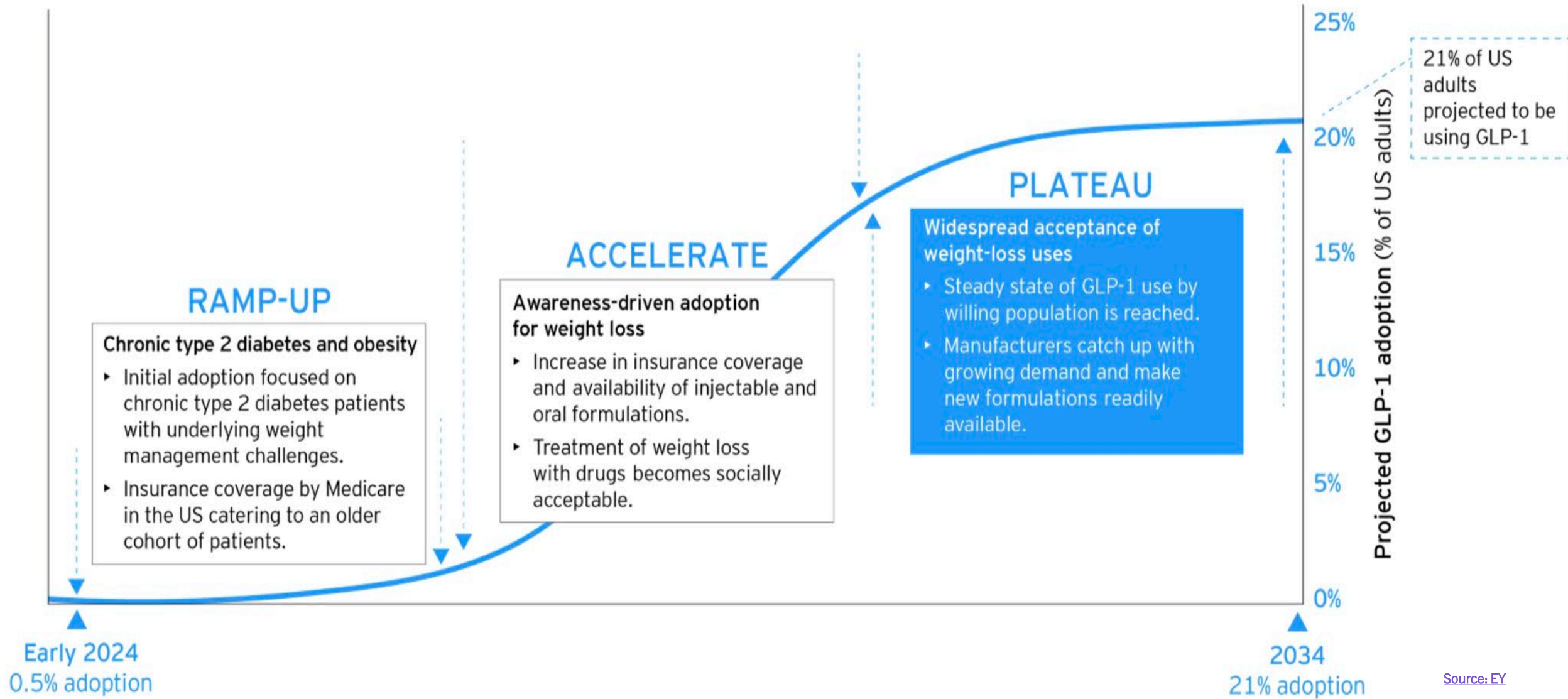
- **Logistics Visibility & Predictive Analytics:** Descartes Macropoint, project 44, Fourkites
- **Planning & Logistic Orchestration:** SAP IBP, FarEye, GoComet, Shipy
- **Risk Profiling & Supplier Health:** Bendi, RapidRatings
- **AI Supply Chain Network Optimization & Insights:** Altana, Throughput, Ameba
- **Decentralized Data Eco. & Traceability:** apheris AI, Flock, TrusTrace

# Internal US Population Migration

[Source: US Census](#)

Rank	Geographic Area	April 1, 2020 (Estimates Base)	July 1, 2024	July 1, 2025
1 <b>-200k</b>	California	39,555,703	39,364,774	39,355,309
2 <b>+2.6M</b>	Texas	29,149,498	31,318,578	31,709,821
3 <b>+1.9M</b>	Florida	21,538,207	23,265,838	23,462,518
4 <b>-201k</b>	New York	20,203,696	20,001,419	20,002,427
5 <b>+57k</b>	Pennsylvania	13,002,753	13,045,848	13,059,432
6 <b>-102k</b>	Illinois	12,821,741	12,703,033	12,719,141
7 <b>+101k</b>	Ohio	11,799,445	11,860,621	11,900,510
8 <b>+571k</b>	Georgia	10,713,861	11,204,208	11,302,748
9 <b>+756k</b>	North Carolina	10,441,392	11,052,061	11,197,968
10 <b>+48k</b>	Michigan	10,079,362	10,099,962	10,127,884

# GLP-1 Juggernaut: 21% by 2034



# Future GLP-1 HC Savings

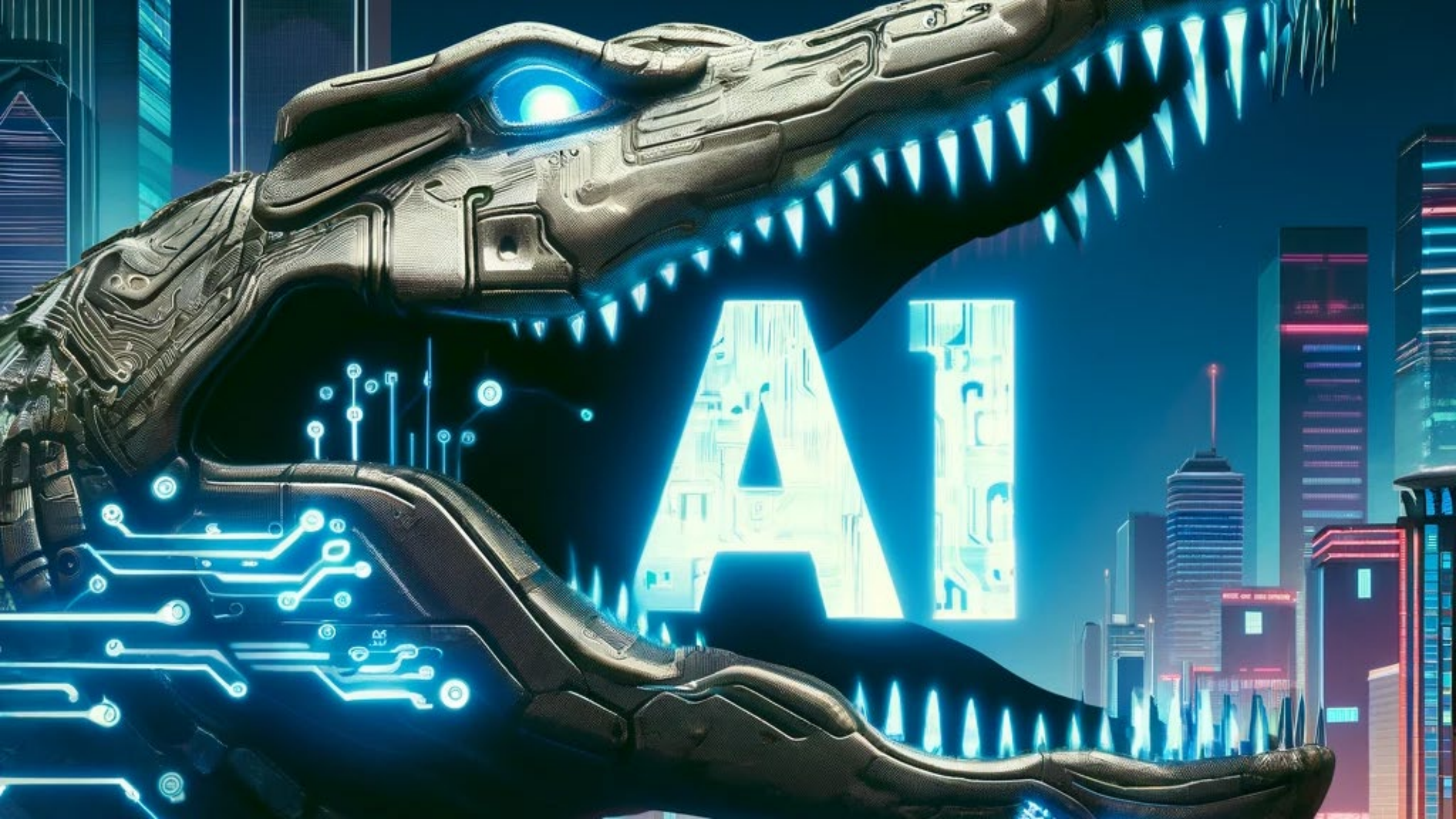
Category	Impact	Strategic Implication
Type 2 Diabetes Incidence	58% reduction with sustained weight loss	Major decline in Medicare and Medicaid treatment costs
Cardiovascular & Kidney Disease	Fewer events, hospitalizations, and dialysis	Avoidance of high-cost complications
Medicare Chronic Condition Spend	Up to \$50B in savings with partial adoption	Reinvest in prevention and support broader GLP-1 access
Federal Budget Scoring	CBO shows short-term costs, not long-term savings	Policymakers may need new models to fully assess impact

# Protein Up!



# Non-GLP-1 Country Opps

Region	Opportunity	Strategy
Mexico	Largest U.S. dairy export market driven by cheese and milk powder demand	Expand cheese capacity, deepen retail partnerships, strengthen supply chains
Southeast Asia (Indonesia, Vietnam, Philippines)	Rapid dairy consumption growth and expanding middle class	Scale milk powder, whey, and nutrition products through local distributors
China	High demand for whey, lactose, and infant nutrition ingredients	Position U.S. dairy as reliable ingredient supplier for food and formula sectors
Japan & South Korea	Premium dairy demand and strong cheese consumption growth	Target high-value cheeses and foodservice channels
Middle East & Africa	Growing population and limited domestic milk production	Invest in shelf-stable powders and strategic distribution partnerships



# Agentic AI Use Cases

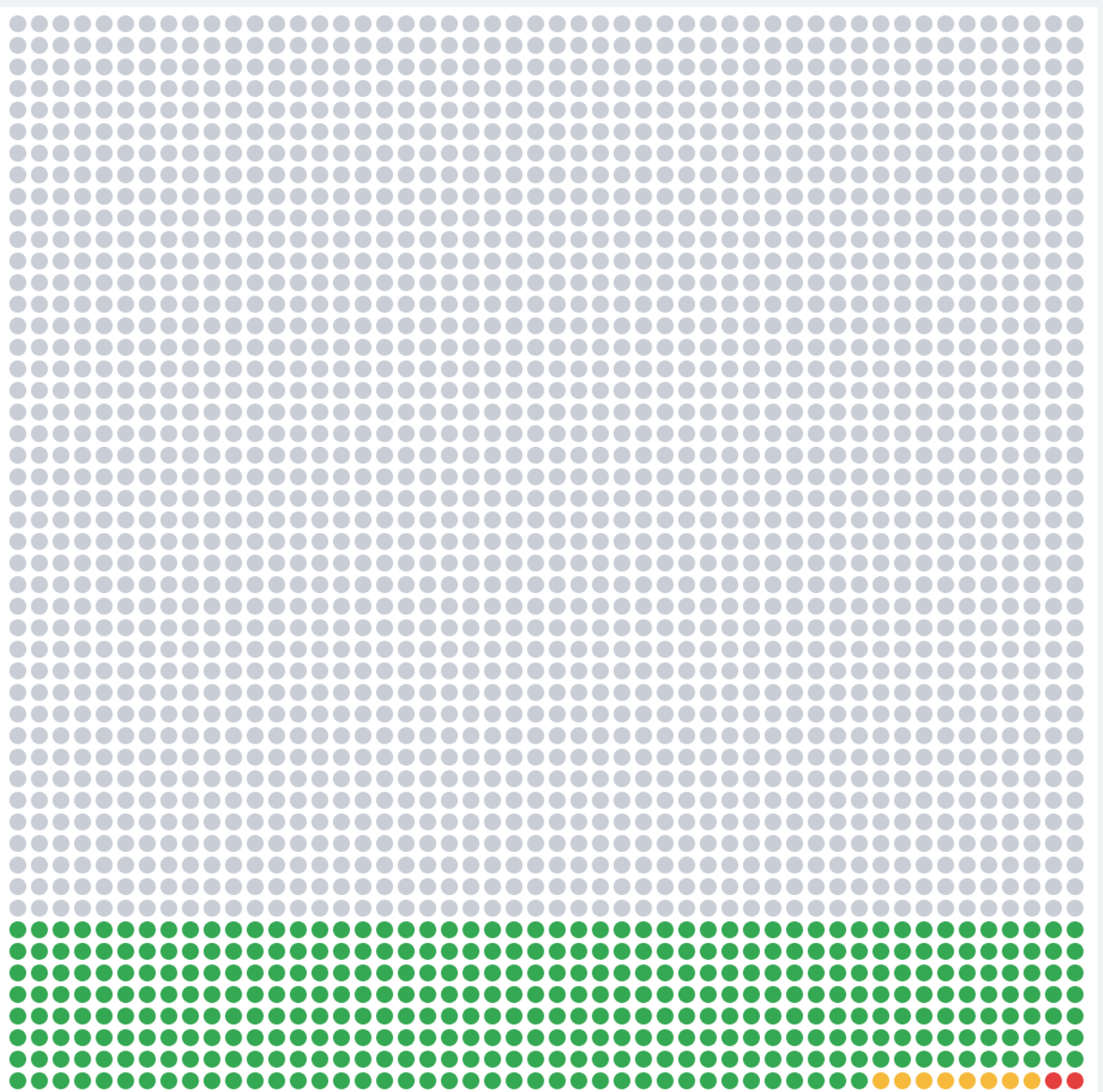
Area	Firms / Platforms	Impact
Milk supply & production optimization	AspenTech; Seeq; Microsoft (Industrial AI)	Higher powder yield; lower unit energy cost; improved plant throughput
Predictive maintenance (dryers / cold chain)	Siemens; Schneider Electric; AVEVA	Fewer export disruptions; improved shipment reliability; lower downtime
Export demand forecasting & pricing intelligence	Palantir; C3 AI; DataRobot	Earlier global demand signals; stronger contract pricing; margin protection
Trade compliance & tariff scenario management	Honeywell; Rockwell Automation, Altana (see Supply Chain slide)	Faster customs clearance; reduced admin burden; lower working-capital drag
Protein innovation & product mix optimization	Citrine Informatics; Uptake; GenAI copilots	Faster whey formulation cycles; higher-value export mix; competitive positioning

**LT Question To Be Answered:**

**How Will You Compete  
With An *AI-Only* Firm?**

# Each Dot=3.2M People

- Never used AI (~6.8B / 84%)
- Free chatbot users (~1.3B / 16%)
- Pays for AI (~15-25M)
- Uses coding AI (~2-5M)



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# Future Economy



Growth  
Opportunities

