

Welcome and Introductions

Sue Perez

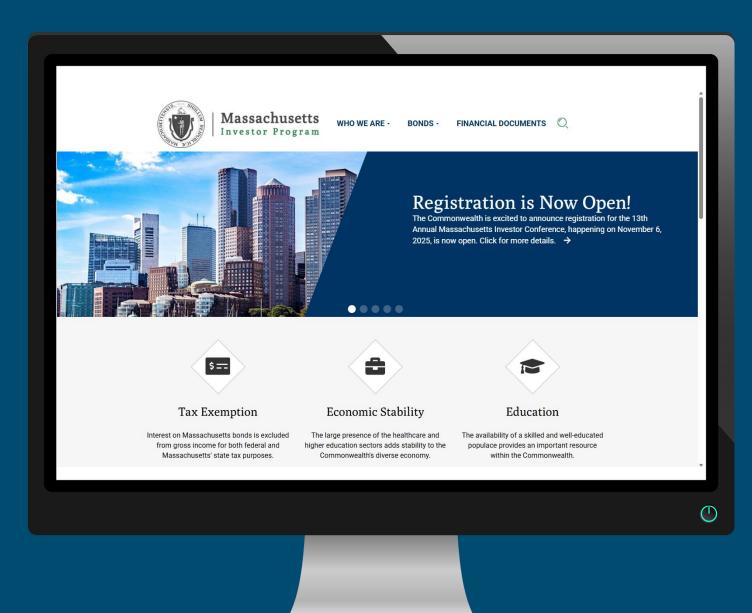
Deputy Treasurer
Office of the State Treasurer

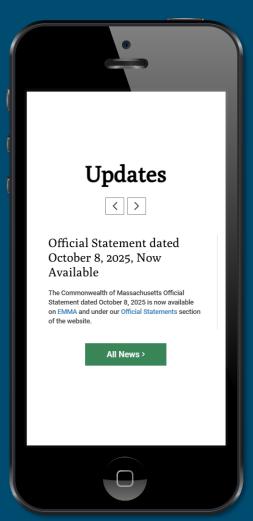
Massbondholder.com

Scan the QR code to view conference materials & more online!





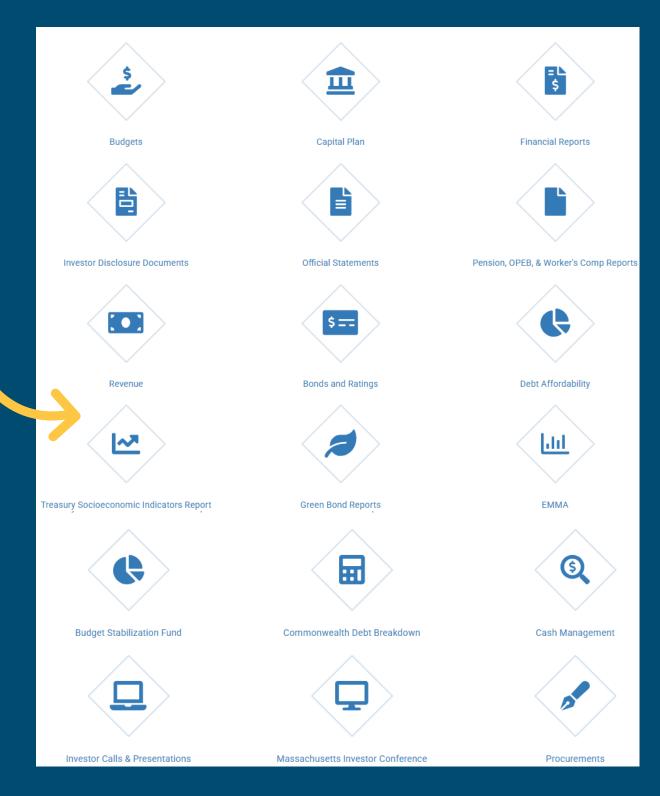




Massbondholder.com

Our offerings:

- Financial Documents such as Commonwealth Investor
 Disclosure Documents, Official Statements, Bonds and
 Ratings Reports, Treasury Socioeconomic Indicators
 Reports, and more.
- Investor Calls and Presentations
- Bond Sale Announcements from MA Issuers
- ...And more!



2025-2026 Massachusetts New Issue Calendar*

*Timing and amounts are preliminary and subject to change.

Issuer	Par Amount	Structure	Туре
Fourth Quarter 2025 Issuances			
Commonwealth, GO	\$750 MM	Fixed-Rate, Tax-Exempt	New Money
Commonwealth, GO	\$250 MM	Fixed-Rate, Tax-Exempt	Refunding
First Quarter 2026 Issuances			
Massachusetts Clean Water Trust	\$425 MM	Fixed-Rate, Tax-Exempt	New Money, Refunding
Commonwealth, GO	\$750 MM	Fixed-Rate, Tax-Exempt	New Money
Second Quarter 2026 Issuances			
Massachusetts Educational Financing Authority	\$300 - 400 MM	Fixed-Rate, Taxable, Tax-Exempt	New Money, Refunding
Massachusetts Water Resources Authority	\$400 - 500 MM	Fixed-Rate, Tax-Exempt	New Money, Refunding
Commonwealth, GO	\$750 MM	Fixed-Rate, Tax-Exempt	New Money
Third Quarter 2026 Issuances			
Commonwealth, GO	\$750 MM	Fixed-Rate, Tax-Exempt	New Money
Commonwealth, CTF and GANs	TBD	Fixed-Rate, Tax-Exempt	New Money

"Somebody's Watching Me"

Cybersecurity, AI Use, Ease of Use Technology for Improving Services and Efficiency

Secretary Jason Snyder, Commonwealth Chief Information Officer Executive Office of Technology Services and Security

"Love That Dirty Water"

Ensuring Clean Water and Resilience

Nathaniel Keenan, Department Director Massachusetts Clean Water Trust

Matt Horan, Deputy Director, Finance/Treasurer Massachusetts Water Resources Authority

Undersecretary Katherine Antos, *Decarbonization & Resilience* Executive Office of Energy and Environmental Affairs

Moderator: Sue Perez, Executive Director

Massachusetts Clean Water Trust

"If I Had \$1,000,000"

Impact of Surtax Revenue

Secretary Matthew Gorzkowicz

Executive Office for Administration and Finance

Doug Howgate, President

Massachusetts Taxpayers Foundation

Barbara Kroncke, Executive Director

University of Massachusetts Building Authority

Moderator: Chris Marino, Assistant Secretary for Budget

Executive Office for Administration and Finance



Treasurer's Address

State Treasurer Deborah B. Goldberg

Commonwealth of Massachusetts

Governor's Address

State Governor Maura Healey

Commonwealth of Massachusetts

"Build Me Up"

Protecting and Preserving Our Assets

Adam Baacke, Commissioner

Division of Capital Asset Management and Maintenance

Abi Vladeck, Acting Deputy Commissioner, Office of Real Estate Management Division of Capital Asset Management and Maintenance

Sean Foley, *Director of Facilities Resources*Division of Capital Asset Management and Maintenance

Moderator: Timur Yontar, Capital Budget Director Executive Office for Administration and Finance

"My Flometoun"

The Massachusetts Economy

Dr. Michael Goodman, Professor of Public Policy University of Massachusetts Dartmouth



Resilience and Vulnerability: The Economic Outlook for Massachusetts

Michael D. Goodman, Ph.D.

Professor of Public Policy
University of Massachusetts Dartmouth

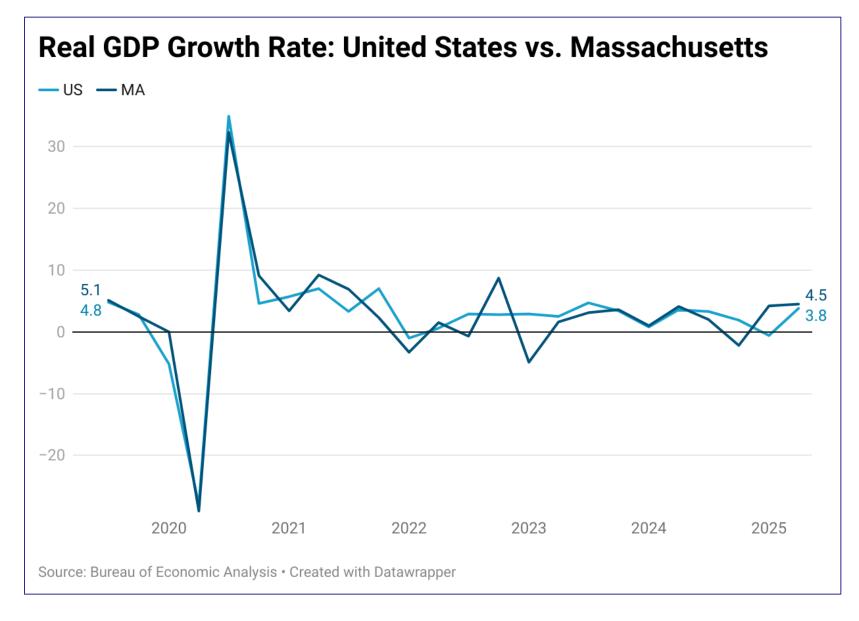
Co-Editor, MassBenchmarks

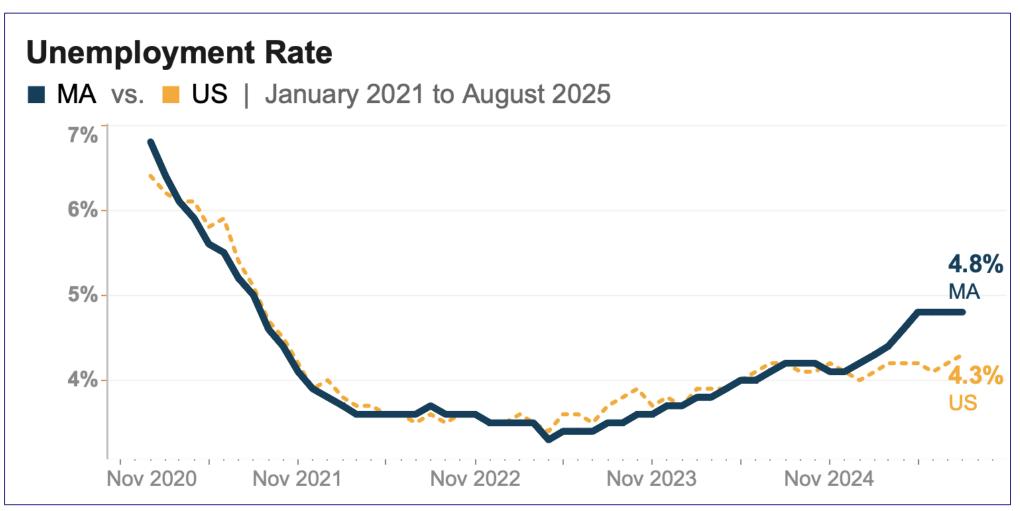
November 6, 2025

The following reflects my personal and professional assessment of the available evidence. It does not necessarily represent the views of my employer.



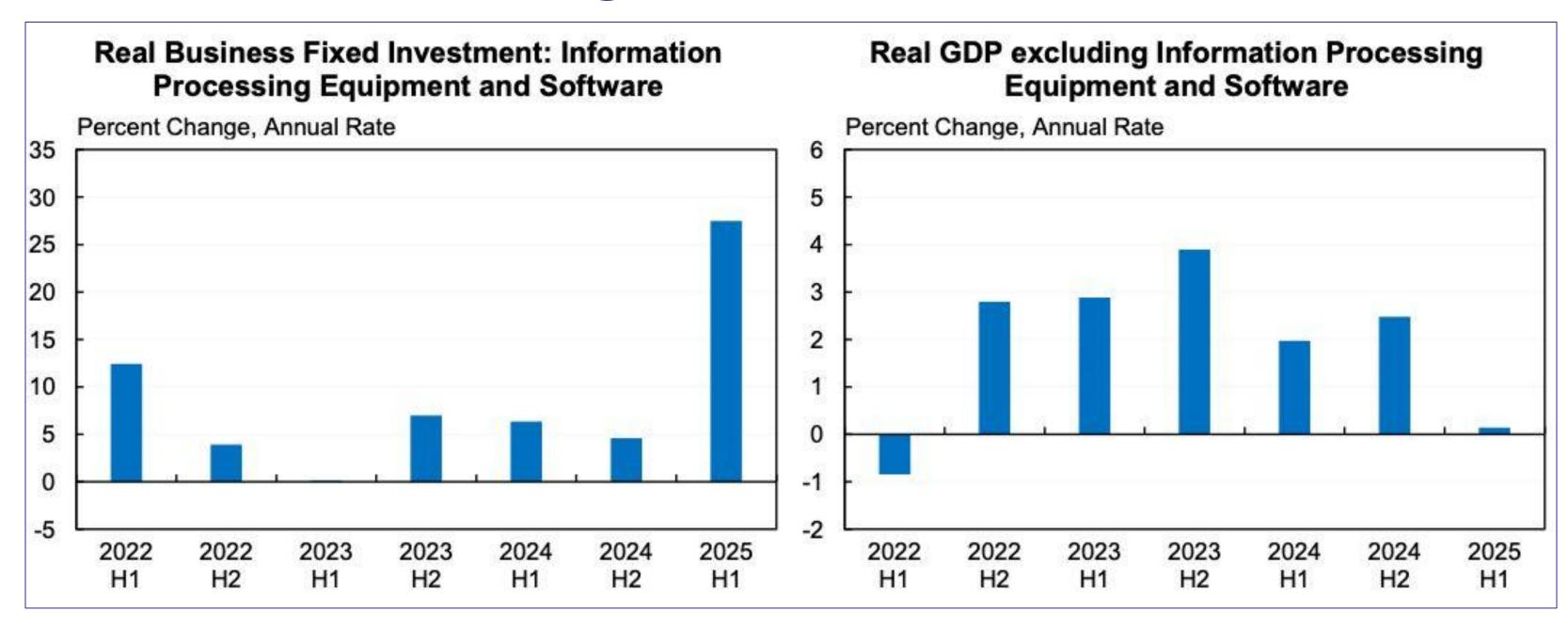
The state economy appears to be remarkably resilient despite numerous issues that weigh heavily on the outlook





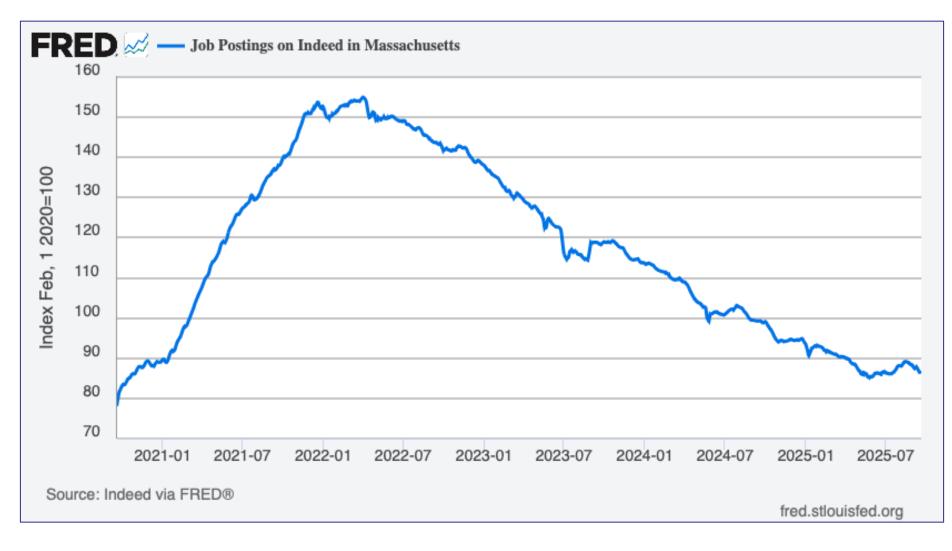


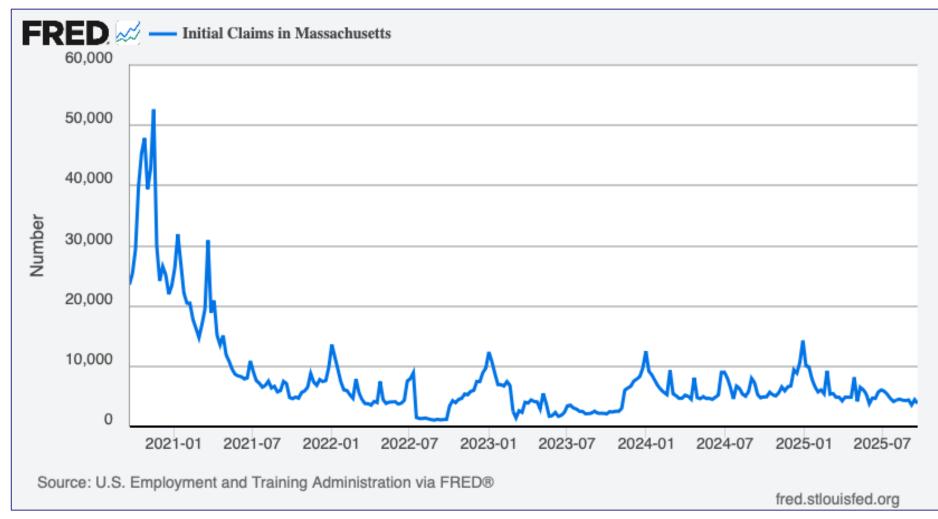
Technology investment was responsible for the vast majority of national GDP growth in the first half of 2025





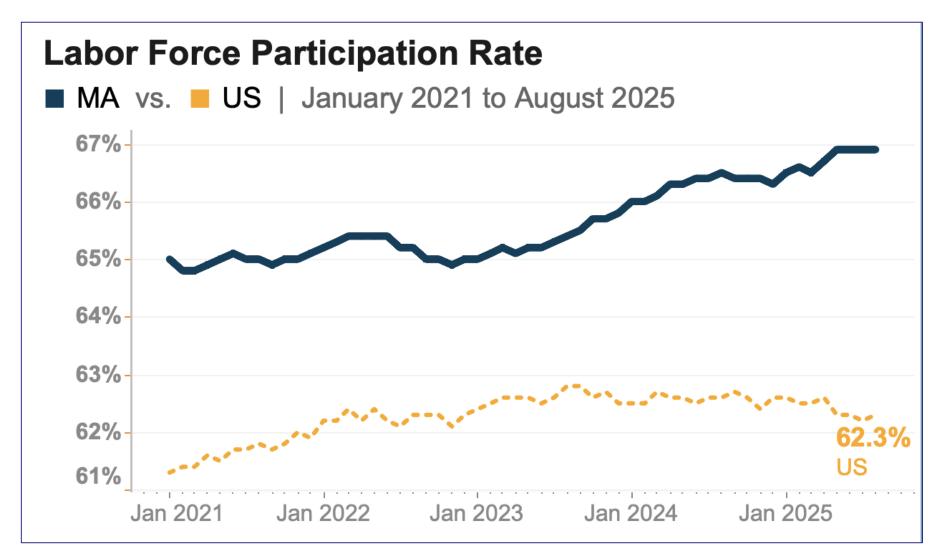
The labor market is cooling, but so far due to fewer job postings rather than widespread layoffs

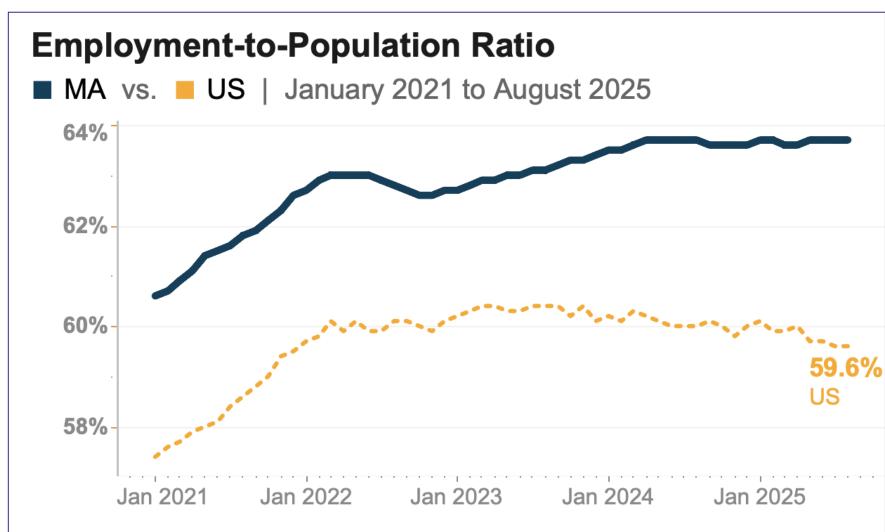






While labor supply remains a concern, labor market weakness is demand-driven – at least for now







Federal immigration policies hit us where we live

Table 4. Estimated Components of Change for the United States, U.S. Regions, and Northeast States,	
2024	

2024						
	Vital Events		Migration			
Geography	Births	Deaths	Natural Increase	International Migration	Domestic Migration	Total Net Migration
United States	3,605,563	3,086,925	518,638	2,786,119	(X)	2,786,119
Northeast Region	574,868	515,524	59,344	567,420	-192,109	375,311
Midwest Region	735,023	682,282	52,741	406,737	-49,214	357,523
South Region	1,471,082	1,252,515	218,567	1,144,168	411,004	1,555,172
West Region	824,590	636,604	187,986	667,794	-169,681	498,113
Connecticut	34,609	32,778	1831	36,214	-6,060	30,154
Maine	11,609	16,766	-5,157	5,196	5,329	10,525
Massachusetts	67,851	61,133	6,718	90,217	-27,480	62,737
New Hampshire	11,777	14,140	-2,363	4,290	4,889	9,179
New Jersey	101,199	75,189	26,010	130,692	-35,554	95,138
New York	205,289	161,588	43,701	207,161	-120,917	86,244
Pennsylvania	127,571	136,882	-9,311	82,101	-11,500	70,601
Rhode Island	9,924	10,286	-362	9,525	-305	9,220
Vermont	5,039	6,762	-1,723	2,024	-511	1,513

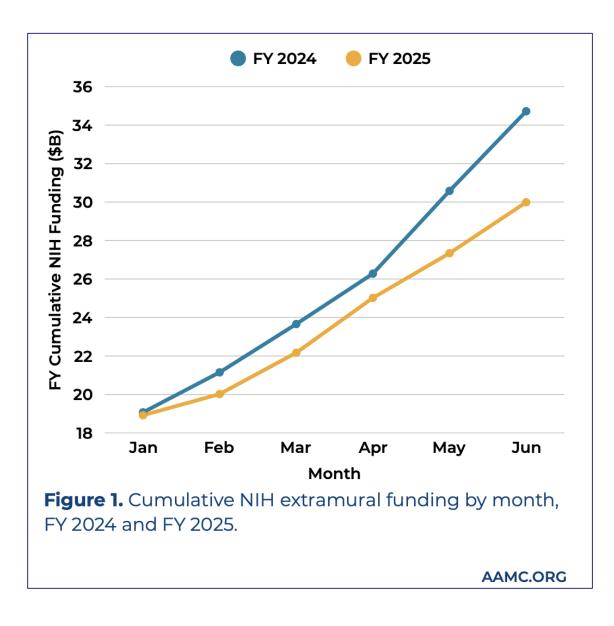
UMass Donahue Institute. Source U.S. Census Bureau Population Division NST_EST2024_ALLDATA. Release Date December 19, 2024. Immigrants have become an essential source of labor as our birth rate has declined, and our population has aged

- ICE enforcement actions (discourage participation)
- Student visa difficulties (harm higher ed institutions)
- H1B Visa "reforms"
 (harm hospitals and the innovation ecosystem)

Cutbacks to federal R&D strike at the heart of the

Commonwealth's innovation economy





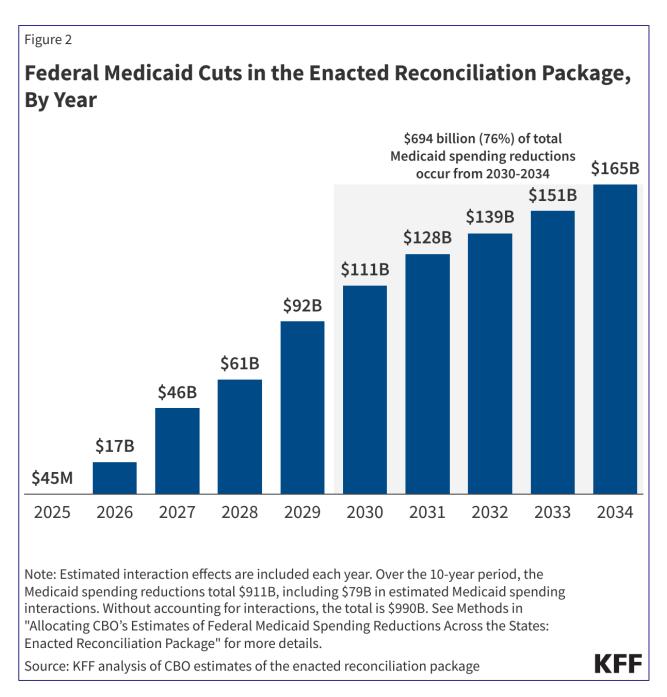
NIH Funding to MA

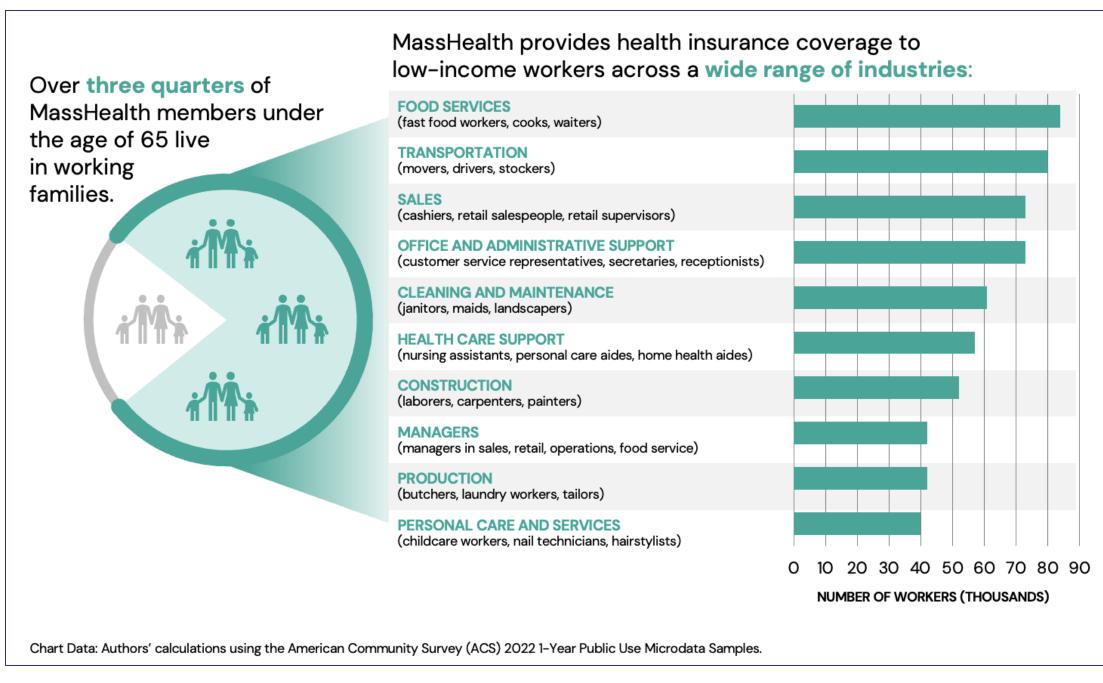
FY24	FY25	Difference
\$3,372,023	\$2,816,854	-\$555,168,389

Source: https://www.aamc.org/media/85501/



Medicaid/MassHealth cuts will require very difficult choices







Changing tax and regulatory policies undermine state climate investments & decarbonization efforts

Code section	Section title	Termination date
25C	Energy efficient home improvement credit	The credit will not be allowed for any property placed in service after December 31, 2025.
25D	Residential clean energy credit	The credit will not be allowed for any expenditures made after December 31, 2025.
25E	Previously-owned clean vehicles credit	The credit will not be allowed with respect to any vehicle acquired after September 30, 2025.
30C	Alternative fuel vehicle refueling property credit	The credit will not be allowed for any property placed in service after June 3 2026.
30D	New clean vehicle credit	The credit will not be allowed for any vehicle acquired after September 30, 2025.
45L	New energy efficient home credit	The credit will not be allowed for any qualified new energy efficient home acquired after June 30, 2026.
45W	Qualified commercial clean vehicle credit	The credit will not be allowed for any vehicle acquired after September 30, 2025.
179D	Energy efficient commercial buildings deduction	The deduction will not be allowed with respect to any property the construction of which begins after June 30, 2026.

Trump's policy on wind power generates frustration, concern

Sector had reinvigorated New Bedford. Now workers fear loss of jobs.

By Yogev Toby CLOSE CORRESPONDENT

he wind howled as Sonia Brito, clad in a white hard hat and yellow vest, looked out at scallopers, lobster boats, and trawlers crowding the waterfront of New England's premier fishing port.

Not long ago, the fishing fleet was one of the few sources of good-paying jobs in New Bedford for blue-collar workers such as Brito. But here at the top of a white, 250-foot pillar, Brito had found a different way to earn a living as a millwright: connecting massive



COUNTERY OF SONIA BRITO

Sonia Brito doubled her pay when becoming a millworker apprentice. blades and tower sections for wind farms off the coast of Massachusetts.

"For kids like myself who went to a vocational school, this is a perfect industry that the United States needs," said Brito, 22, of New Bedford. "All we really have here is fishing, so you either become a fisherman or leave. This gives people another option."

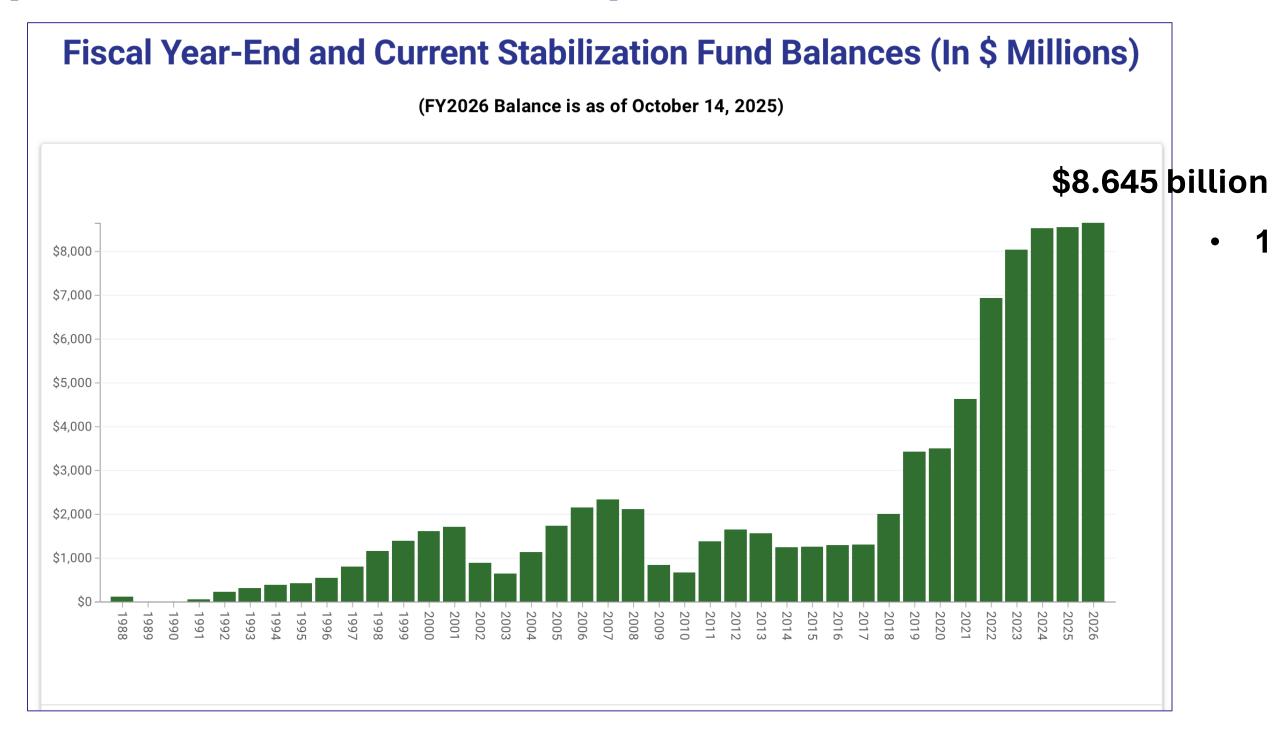
That option, however, may not be available as long as President Trump's assault on offshore wind energy threatens to unravel tens of millions of dollars invested here to build a hub of docks, terminals, and training programs to support the burgeoning indus-

WIND, Page A10

Sources: Internal Revenue Service; Boston Globe



The Commonwealth is in a very solid fiscal position and well prepared in the event of a pronounced economic downturn

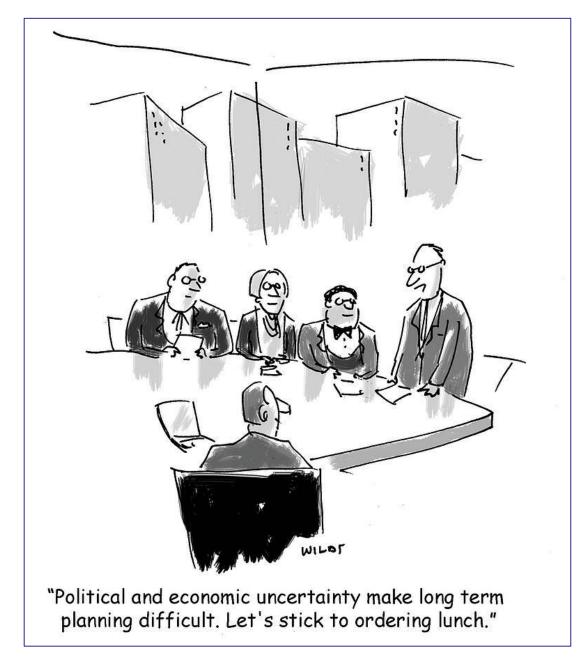


14% of FY26 budget



Federal policy uncertainty and economic volatility are weighing heavily on the economic outlook







Please note: Wages are not -- in fact -- down

Michael D. Goodman, Ph.D.

Professor of Public Policy
University of Massachusetts Dartmouth

Co-Editor, MassBenchmarks

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"Taking Care of Business"

Mass Leads – Leading Future Generations

Navjeet Bal, *President and CEO*MassDevelopment

Juan Vega, Assistant Secretary for Communities & Programs Executive Office of Economic Development

Naomi Berlin, Assistant Secretary for Business Growth Executive Office of Economic Development

Moderator: Bran Shim, Senior Advisor

Executive Office for Administration and Finance

"Taking Care of Business"

Why Massachusetts? Leading for Future Generations

Naomi Berlin, Assistant Secretary for Business Growth Executive Office of Economic Development

Our Commitment: We're dedicated to business growth



The Healey-Driscoll administration is focused on empowering innovative companies to start, scale, and succeed in Massachusetts



Governor Healey



Lt. Governor Driscoll



Secretary Paley

We are committed to investing in our businesses, lengthening our lead across key sectors, and ensuring Massachusetts continues to be the best place for talent from all backgrounds to start and grow fulfilling careers.

National Leadership: A top state for work and life











Venture Capital Investment

US News 2025



Top **Business Environment**

US News 2025



Top Innovative State

WalletHub 2025



R&D Expenditure

Per Capita



Best State to **Live in**

WalletHub 2025



Best **School System**

WalletHub 2025



Best Place to Raise a Family

WalletHub 2025



in **Healthcare**

US News 2025



Most **Educated** State

WalletHub 2025

World-Class

Colleges &

Universities



NIH Award

Funding

Per Capita

SBIR & STTR*
Award
Funding

Per Capita

*Small Business Innovation Research & Technology Transfer

Doubling Down on Our Strengths



Mass Leads Act

- Bill signed November 2024 to create jobs, support business growth, and expand workforce development programs
- Includes to establish global leadership in **climatetech** and **applied AI** and build on success of state's renowned **life sciences** sector



Climatetech



- **~\$1 billion**, 10-year initiative to make Massachusetts the **climate innovation lab for the world**.
- New programs including climatetech workforce and facilities tax incentives.

Life Sciences



- ~\$1 billion, 10-year reauthorization to ensure Massachusetts remains the global epicenter for the industry.
- New programs including BioBoost capital and site readiness grants.

Tough Tech/AI



 \$440+ million in capital authorization for new & existing programs to support advanced manufacturing, robotics, the Applied AI Hub, Massachusetts TechHub Program, and Small Business Technology Grants.

Team Effort: Our Superpower





























Team MA Programs: All Industries

Commercialization Support: Technology & Manufacturing



SBIR Targeted Technologies **Program (START)**

- Avg. Award: \$100,00 -\$500,000 (Stages I-III)
- Profile: SBIR Phase II startups



Deep Tech Venture Capital

- Avg. Award: \$500,000
- Profile: Academic spinouts, early-stage deep tech startups



MA Manufacturing Innovation **Initiative (M2I2)**

- Avg. Award: \$550,000
- Profile: Hard tech manufacturers at TRL 4-6

MA Manufacturing Accelerate Program (MMAP)

- Avg. Award: \$175,000 for capital equipment
- Profile: Small medium mfrs.



Emerging Technology Fund

- Ava. Award: \$2.75M for expansion, working capital, equipment purchases
- Profile: Growing tech cos.

Commercialization Support: Climatetech



2030 Fund

- Avg. Award: \$200,000 -\$500,000
- Profile: Seed/early-stage climatetech startups



Catalyst & DICES

- Avq. Award: \$75,000
- *Profile:* Early-stage startups advancing research-stage tech & prototyping (TRL 2-4)



AmplifyMass

- Avg. Award: \$300,000 (adder to prime award, federal or non-federal)
- Profile: Startups (TRL 2-8)



InnovateMass

- Avg. Award: \$350,000, technical support to accelerate commercialization
- *Profile:* Startups (TRL 5-8)



CriticalMass

- New Award: \$1M, plus services & partnerships
- Profile: Growth-stage startups at TRL 8+

Commercialization Support: Life Sciences



MassNextGen

- Avg. Award: \$100,000, plus 1-year lab bench space
- Profile: Cos. led by underrepresented entrepreneurs



Digital Health Sandbox Challenge

- Avg. Award: \$75,000 via accelerator competition
- Profile: Digital health cos.



bigital Health Sandbox Rolling **Grant Program**

- Ava. Award: \$40,000 to subsidize sandbox project
- Profile: Digital health cos.



KEY

BioBoost

- New Award: Up to \$3.5M for capital investments
- Profile: Cos. building/scaling MA mfg. operations

Capital Grants & Loans: Industry-Agnostic



Business Builds

- New Award: Up to \$4.3M in capital grants
- Profile: Cos. expanding or relocating in MA



Biz-M-Power

- Avg. Award: \$30,000 to offset capital costs
- Profile: Small businesses with fewer than 20 employees



Micro Loans

- Avg. Award: \$75,000 for working capital or equip.
- Profile: Co. with 12-month+ operating history



MassDevelopment Loans, **Bonds, Guarantees**

Range of financial offerings including commercial real estate and equipment loans

Tax Incentives & Workforce Support



Economic Development Incentive Program (EDIP)

• Avg. Award: \$15,000 per job for projects that create and retain jobs in MA



MLSC Tax Incentives

- Avg. Award: \$20,000 per new job created
- Profile: Life science cos. with at least 10 FTE in MA



MassCEC Climatetech Tax Incentives Program

 New program to develop and expand climatetech-related employment opportunities



CommCorp Workforce Training Fund

• Avg. Award: \$85K (General) or \$6K per training (Express for small businesses)



MLSC, MassCEC, MassTech **Internship Programs**

• Avg. Award: \$3,200 -\$19,200 per intern in life

Tax Credits

Later Stage

sciences, climatetech, tech

Award **Subsidies** Grants Equity Inv. Loans Type: Company Any Stage Early & Growth Stage:

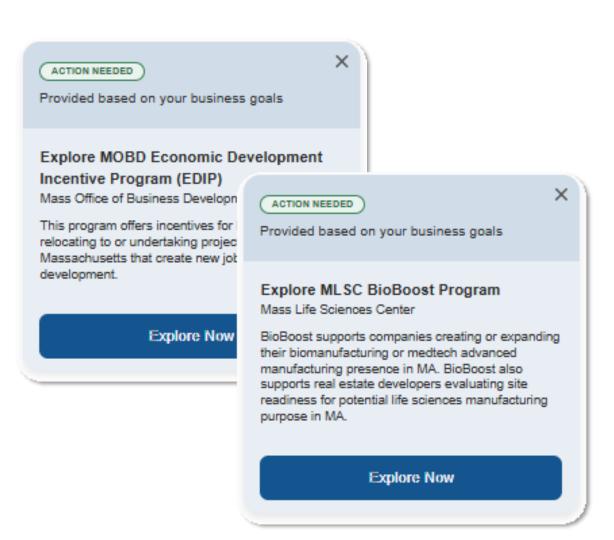
New Tools for Business Growth



New Incentives to Increase Competitiveness

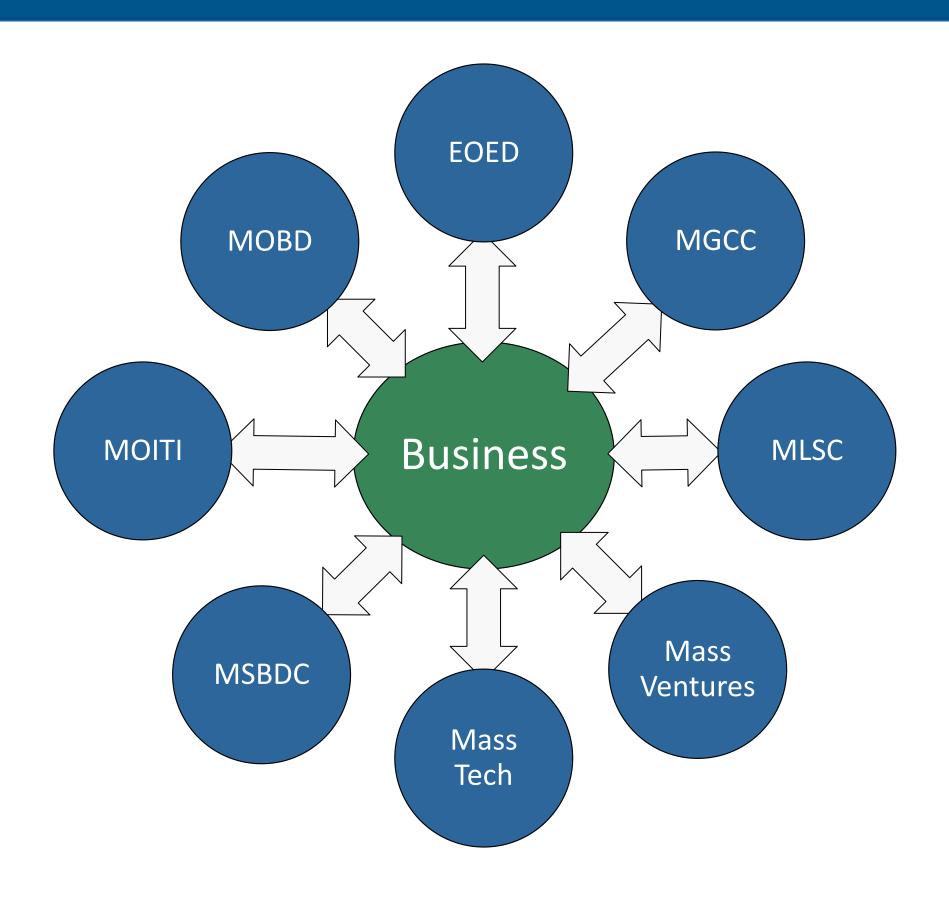
- Economic Development Incentive Program (EDIP): <u>Tax credits</u> (avg. \$15k per job) for projects that create and retain jobs in Massachusetts
- Business Builds: New <u>capital grant program</u> for companies expanding in or relocating to Massachusetts
- Mass Life Sciences Center Tax Incentives: Tax credits (avg. \$20k per job) for new jobs created by Massachusetts life sciences companies
- Mass Life Sciences Center BioBoost: New <u>capital grant program</u> for life sciences companies building or scaling manufacturing operations in Massachusetts – *includes up to \$500k per project for real estate* developers to support site readiness
- Mass Clean Energy Center Job Creation Tax Incentives: Tax credits (avg. \$15-20k per job) for climatetech companies creating 5+ new jobs
- Mass Clean Energy Center Facilities Tax Incentives: Tax credits to cover up to 100% of rent paid by climatetech companies for facilities where owner has invested at least \$5M in upgrades over last 2 years

Explore these programs & more through the Business Front Door!









Full Concierge Service @ Mass.gov/BFD



Start & Build Your Business

Business Front Door

Funding & Resources

Explore Top Rankings

Business Front Door

Massachusetts is here to support you every step of the way as your business grows.

Through the Business Front Door, we can connect you to the latest and most relevant resources available for businesses looking to start, grow, or relocate to Massachusetts.

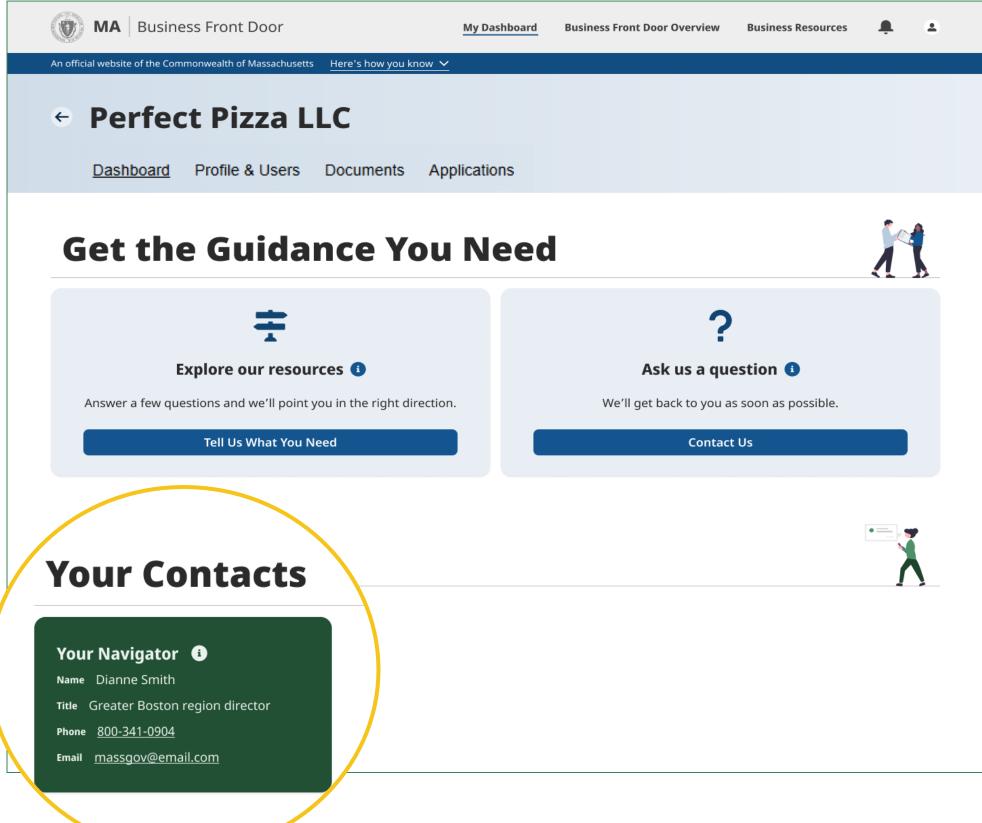


Enter the
Business Front
Door >

Get Your Dedicated Point of Contact



Businesses in the Business Front Door receive a **personal Team MA Navigator**, a dedicated single point of contact to address business needs.



At Any Point, Ask Team MA for Guidance

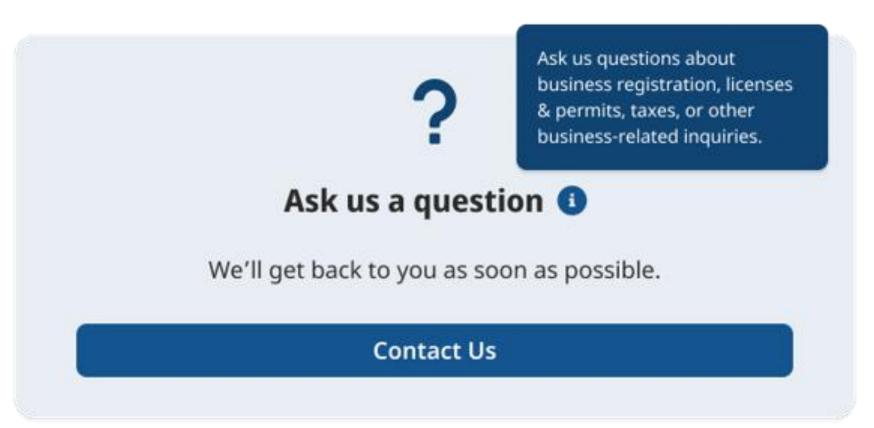


Get the Guidance You Need





Tell Us What You Need



Business Benefits of the Business Front Door





Designated
Point of
Contact

A tailored list of business opportunities

Pathway to ask questions and flag issues

More easily contact
Team MA

See all available business resources

Streamlined
page about
doing business
in MA

Team Massachusetts





"Taking Care of Business"

Community One Stop for Growth

Juan Vega, Assistant Secretary for Communities & Programs Executive Office of Economic Development







Mass Leads Economic Development Plan: Leading Future Generations

- Invest in fundamentals
- Be the Global Talent Magnet
- Lengthen our Lead in Key Sectors



Mass Leads Economic Development Bond Bill

- Life Science
- Al Development
- Climate Tech



Innovations to Increase Access to State Resources

- Business Front Door
- Community One Stop for Growth



One Stop Overview: Brief History

Launched in January of 2021, the Community One Stop for Growth is a single application portal and collaborative review process designed to streamline the experience for the applicant and better coordinate the state's economic development programs and staff on engagement and grant making.

The One Stop was created in response to feedback our offices received during the 2019 economic development planning process. Communities and project proponents voiced frustration with not knowing about, and the challenges in accessing, state funding resources to help them advance their goals for economic growth.



The process reoriented the Commonwealth from a passive reviewer of funding requests to an active partner in economic development strategy, priorities, and investment.





Executive Office of Economic Development

- MassWorks Infrastructure Program
- Rural Development Fund
- Massachusetts Downtown Initiative
- Massachusetts Vacant Storefront Program

Executive Office of Housing and Livable Communities

- HousingWorks Infrastructure Program
- Housing Choice Grant Program
- Community Planning Grants Program.
- MBTA Catalyst Fund

MassDevelopment Finance Agency

- Underutilized Properties Program
- Site Readiness Program
- Brownfields Redevelopment Fund
- Real Estate Services Technical Assistance
- TDI Equity Investment Program



Commonwealth of Massachusetts

Executive Office of Economic Development

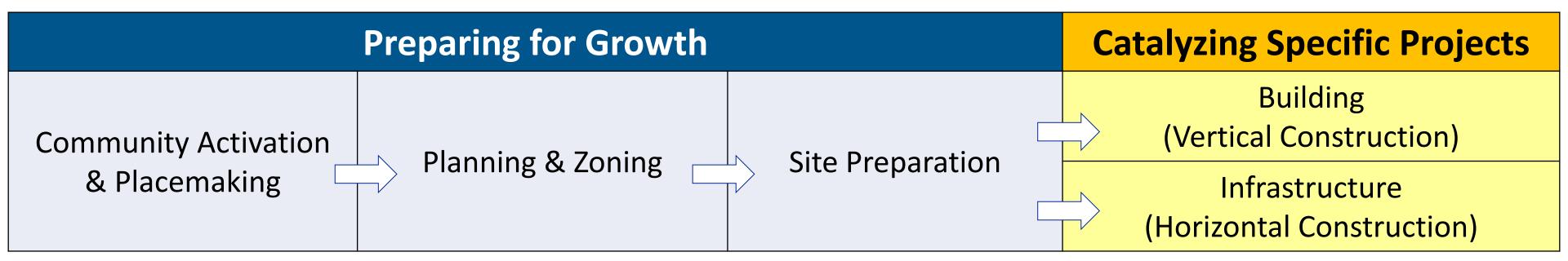






One Stop Overview: Development Continuum

- To help guide applicants, the One Stop uses a Development Continuum that describes how a typical economic development project moves from concept to reality within diverse communities.
- All projects submitted through the One Stop will fit within one Development Continuum category.
- This continuum separates economic development activities into two broad categories:
 - Preparing for Growth Grants to support activities and initial steps by community-based actors to attract and guide private investment in a community.
 - Catalyzing Specific Projects Grants to support the private development of commercial, industrial and residential investment projects that further the community vision.







Guidance Phase

Opportunity for applicants to receive guidance on project ideas through the Expression of Interest (EOI), Webinars, and Virtual Office Hours prior to submitting a Full Application.



Designed to guide applicants to apply based on what their projects aims to do within the development lifecycle, on a scale that we call the Development Continuum.



Collaborative Review

Applications are not submitted to specific grant programs, but rather categories that are reviewed by multiple programs that best fit the funding needs of the project.



Award Decision

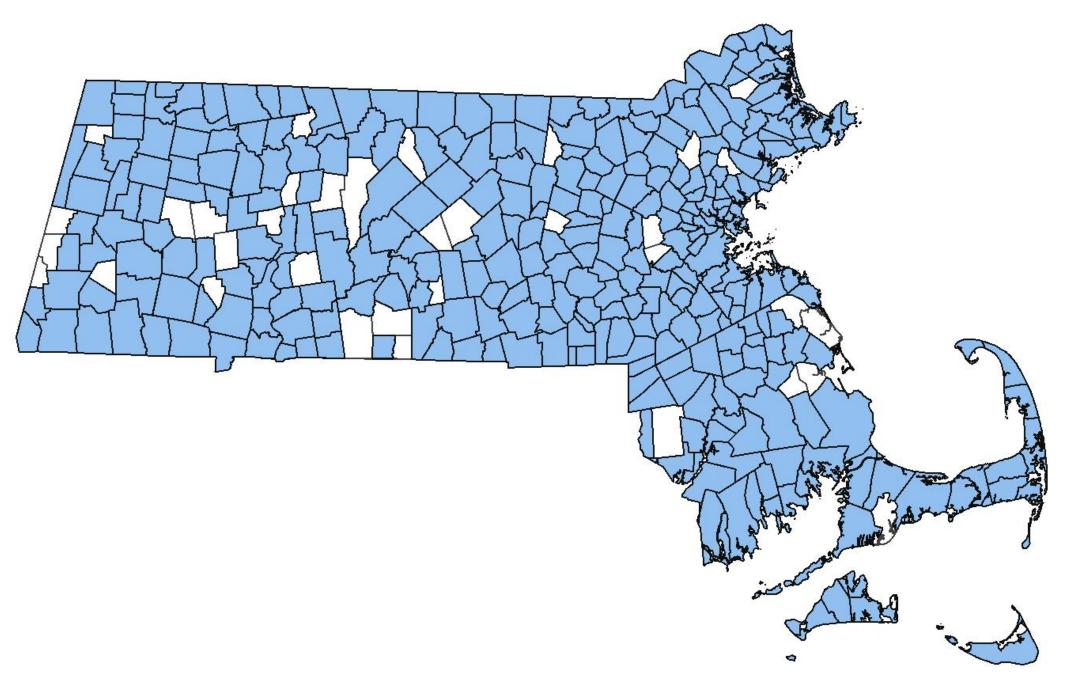
The multifaceted collaborative review process results in the recommendation of the most impactful projects across the state.

45



Opportunity: One Stop Coverage

Since its launch in 2021, the One Stop has received applications for projects in **316 of the 351 communities** in Massachusetts.





Evaluation of MassWorks Applications

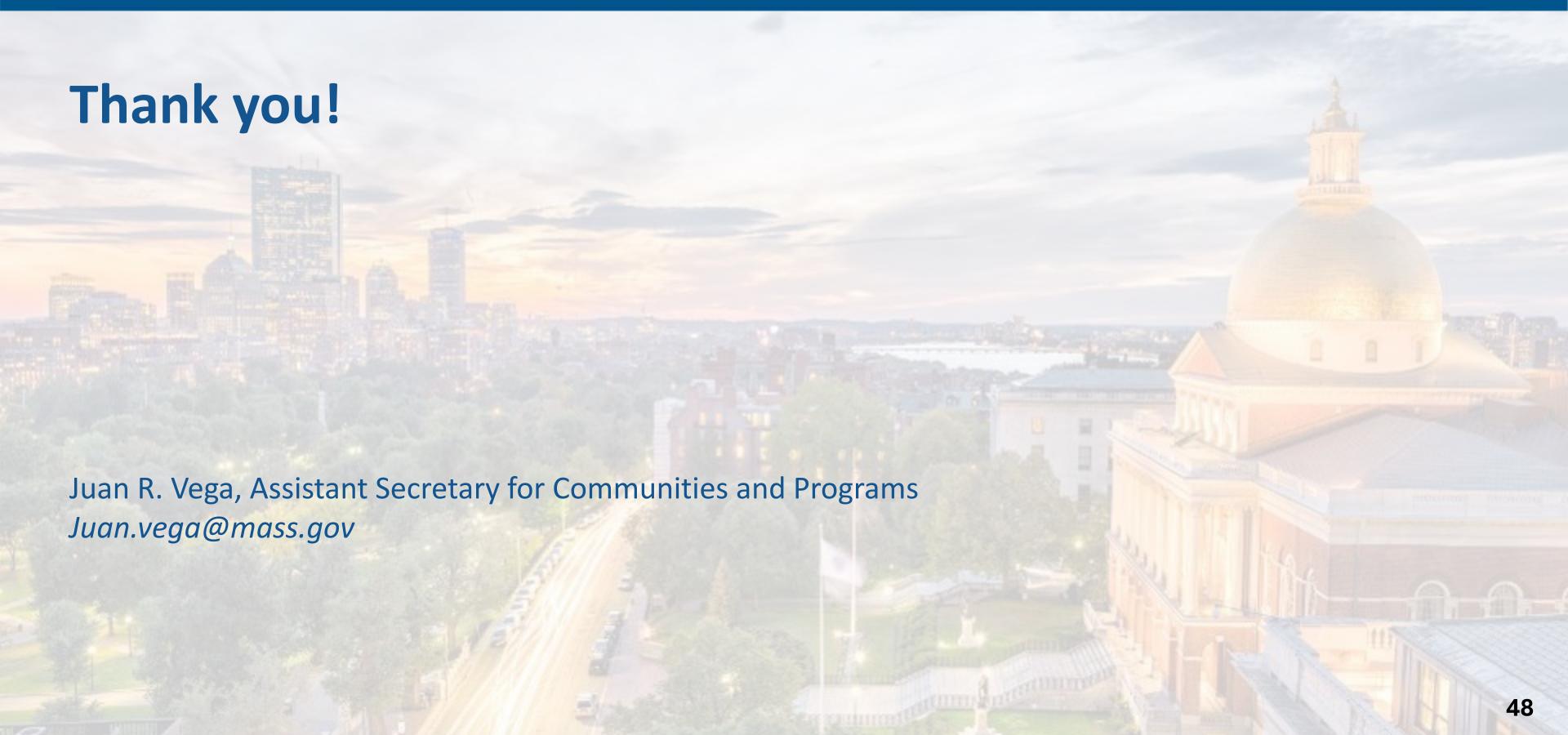
EOED evaluates each complete MassWorks application through the collaborative review process of the One Stop. The team relies on input from the corresponding regional planning agencies, as well as other key state agencies, such as the Executive Office of Energy and Environmental Affairs, MEPA, and the Department of Transportation.

Due to the high volume of competitive projects each year, applicants are advised to submit proposals only for projects that are <u>shovel ready</u>, meaning they are prepared to start in the upcoming construction season. In measuring shovel-readiness, EOED assesses the extent to which the proposed public infrastructure project meets the following criteria:

- Public ownership or all rights of way have been secured or can be secured in a reasonable timeframe.
- The project has been vetted locally and has the support of key stakeholders in the community.
- All required permits have been obtained or can be obtained in reasonable timeframe.
- Project design is at least at 25 percent, or the timeline and funding source(s) for completing design will allow
 bid documents to be issued in time for the upcoming construction season.
- Demonstration that other sources needed to fully fund the project have been committed.
- The project as conceived can be completed within a 3-year performance period.

Team Massachusetts





"Taking Care of Business"

Mass Leads – Leading Future Generations

Navjeet Bal, President and CEO MassDevelopment







MassDevelopment is the Commonwealth's economic development finance agency and land bank, delivering financing solutions, real estate expertise, and other assistance to strengthen and grow the Massachusetts economy. We are committed to achieving three goals: **stimulating business**, **driving economic growth**, and **helping communities thrive** across Massachusetts.

During FY2025, MassDevelopment financed or managed 409 projects generating investment of more than \$4.65 billion in the Massachusetts economy.

These projects are estimated to create or support **25,246 jobs** and build or preserve **2,867 housing units**.

How We Work





Real Estate

• Asset Management & Real Estate Planning – We own and/or manage real estate, including three state piers in Gloucester, New Bedford, and Fall River. We also provide planning and development advisory services to communities that are seeking to redevelop a downtown or commercial district.

Devens

We own and manage the former Army Base at Devens, and have redeveloped it over the past 30 years into
a thriving, mixed-use community of businesses, residents, and recreational use.

Finance Programs

 We provide working capital loans, mortgages, mortgage guarantees, tax-exempt bonds, and green financing solutions to support a range of organizations and industries across the Commonwealth.

Community Development

• Our Community Development team works with Gateway Cities to increase and unlock economic potential and vibrancy in communities across Massachusetts and runs several large grant programs on behalf of the state.

Tax-Exempt Bond Financing





As the Massachusetts issuer of private activity taxexempt bonds, MassDevelopment provides access to tax-exempt interest rates to borrowers such as nonprofits, affordable housing developers, manufacturers, municipal and public entities, and environmental enterprises.

The bonds can finance capital project costs including site development, new construction, land, building and equipment purchases, building renovation, and facility expansion.



Brandeis University Uses \$134.5 Million Tax-Exempt Bond to Expand its Waltham Campus with New 631-Bed Residence Hall





Certain Key Sectors

Small Businesses

 Our capacity has expanded this year following our successful merger with Mass Growth Capital Corporation, another quasi-governmental agency that supports small businesses in Massachusetts.

Gateway Cities

• The Transformative Development Initiative (TDI) is MassDevelopment's signature partnership-driven, place-based economic development program for Gateway City downtowns and commercial districts, and it recently celebrated its 10-year anniversary.

Underutilized Site Redevelopment

 We support cities and towns and private developers with grant funding to clean up contaminated, underused, or abandoned and vacant properties. The grant funding support is through two programs – the Brownfields Redevelopment Fund and the Underutilized Properties Program – both supported by Commonwealth general obligation bond proceeds.

"Taking Care of Business"

Mass Leads – Leading Future Generations

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Moderator: Bran Shim, Senior Advisor

Executive Office for Administration and Finance

Keynote Presentation

Mark Cabana

Managing Director, Head of US Rates Strategy
BofA Securities Global Research

02 November 2025

US Rates Outlook

Life of a shutdown

US Rates Research BofAS +1 646 855 8846 Mark Cabana, CFA
Rates Strategist
BofAS
mark.cabana@bofa.com
+1 646 743 7013



Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

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Summary: long belly, long inflation, long Jan '26 SOFR/FF



- Duration: long SOFR Z7 with eventual Fed cuts & economic risks (Z7 = 3.175%)
- Curve: H6H7 flatteners (-49bp) with cautious Powell & more cuts in future
- TIPS: long 10Y B/E (2.32%) for US growth & future Fed independence concerns
- Front end: long Jan '26 SOFR/FF (-8bps) with higher FF & Fed QT end
- Spreads: back end = neutral into Nov refunding; front end = limited cheapening
 - See final page for complete list of trades, rationale, & risks

US Rate Forecasts

	4Q25	1Q16	2Q26	3Q26	4Q26	4Q27
2y	3.30%	3.30%	3.30%	3.35%	3.45%	3.45%
5y	3.50%	3.55%	3.55%	3.60%	3.70%	3.75%
10y	4.00%	4.05%	4.10%	4.15%	4.25%	4.25%
30y	4.70%	4.75%	4.80%	4.90%	5.00%	5.05%
2s10s	70	75	80	80	80	80
2s30s	140	145	150	155	155	160
5s30s	120	120	125	130	130	130

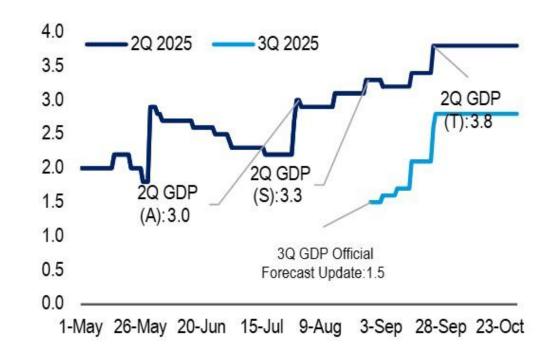
Source: BofA Global Research

US growth: strong with resilient spending, shutdown is risk





US GDP tracking (% q/q saar)

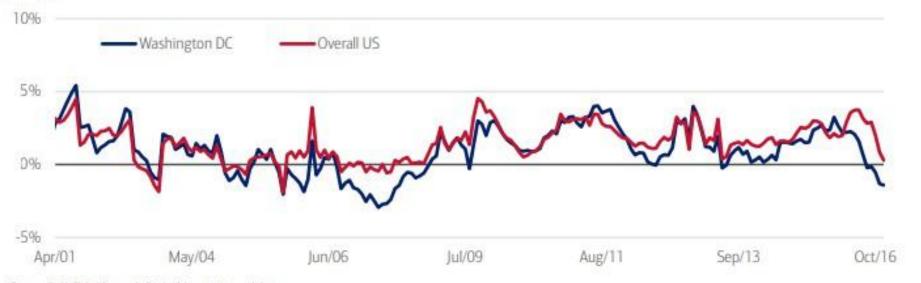


Source: BofA Global Research

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Year-over-year (YoY) card spending growth was down 1.4% in the week ending October 18 in Washington DC, likely due to government shutdown uncertainty

Total card spending per household by DC metropolitan statistical area (MSA) and overall, based on Bank of America aggregated card data (YoY, 7-day moving average)



Source: BofA Global Research, Bank of America Internal data

Note: Washington DC is a metropolitan statistical area (MSA) including Washington DC and portions of the surrounding Virginia and Maryland areas.

US growth: spending uneven, deposit buffer solid



Exhibit 5: Lower-income households' spending growth was 0.6% YoY in September, compared to 2.6% YoY for higher-income peers

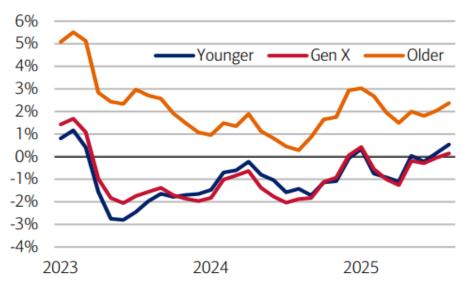
Total credit and debit card spending per household, according to Bank of America card data, by household income terciles (3-month moving average, YoY%, SA)



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Exhibit 5: Gen X spending growth has fallen below that of younger generations throughout 2025

Total credit and debit card spending per household, based on Bank of America data, by generation (three-month moving average, % YoY)



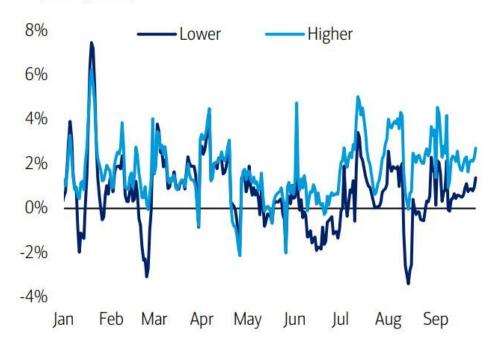
Source: Bank of America internal data

Note: Younger: Gen Z and Millennials; Older: Baby Boomers and Traditionalists. Analysis excludes multi-generational households.

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Exhibit 4: Y/y higher income total card spending growth (+2.7%) outpaced lower income (+1.4%) in the week ending Sep 27

Total card spending per HH by income group (y/y % change of the 7-day ma of spending levels)

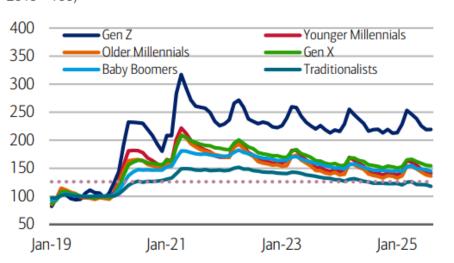


Source: BAC internal data. Note; see the report: <u>BofA on USA: Weekly spending update through Sep 27</u> for methodology, limitations, and disclaimers related to BAC aggregated credit and debit card data.

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Exhibit 16: Except for Traditionalists, median deposits levels remain significantly elevated compared to inflation

Monthly median household savings and checking balances by generation for a fixed group of households through August 2025 (monthly, indexed 2019 = 100)

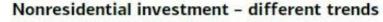


Source: Bank of America internal data

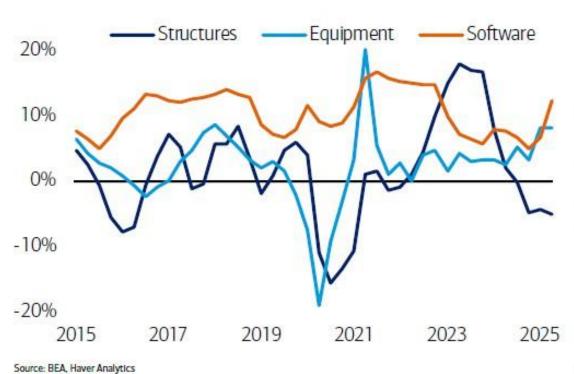
Note: Monthly data includes those households that had a consumer deposit account (checking and/or savings account) for all months from January 2019 through August 2025. Dotted line represents 2019 level adjusted for CPI inflation through July 2025.

US growth: investment in structures weak, AI strong



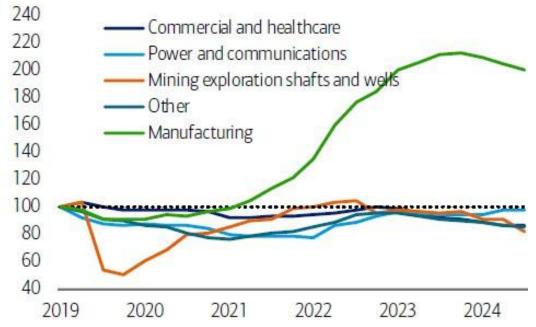


Nonresidential investment by type (% y/y)



Nonresidential investment in structures has been buoyed by manufacturing and fiscal policy in recent years

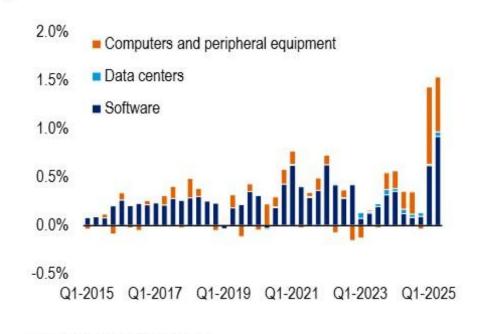
Nonresidential structures investment by type (4Q 2019 = 100)



Source: BEA, Haver Analytics

Exhibit 1: AI and technology-related investment has been a key driver of growth this year

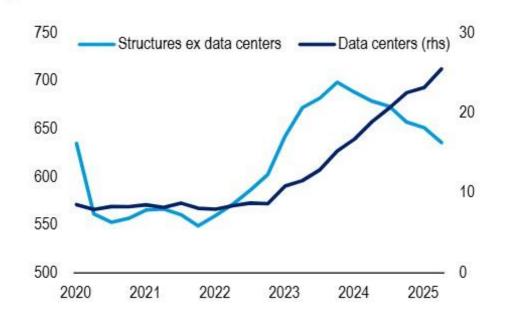
Contribution to % q/q GDP growth by category



Source: BofA Global Research, Haver

Exhibit 2: Data centers is one of the only positive structures investment categories, but note the tiny magnitude

Structures investment by type (\$2017bn SAAR)



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Source: BofA Global Research, Haver

60

US employment: BofA data reflects slower hiring but wage pickup



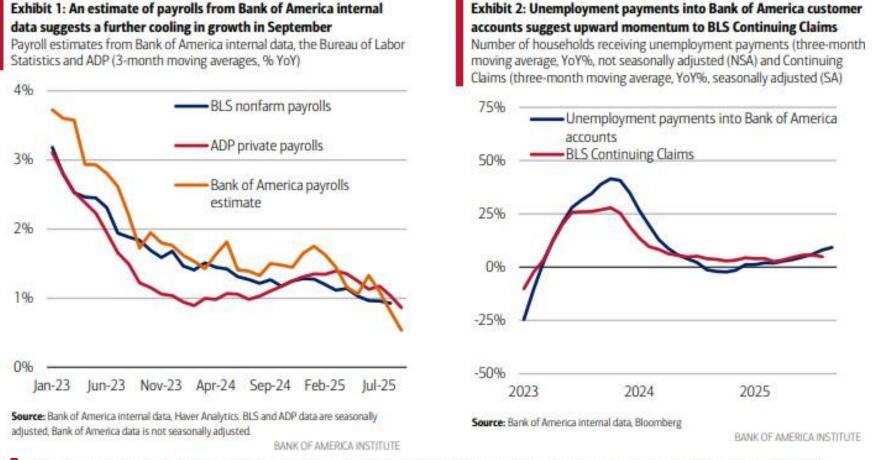
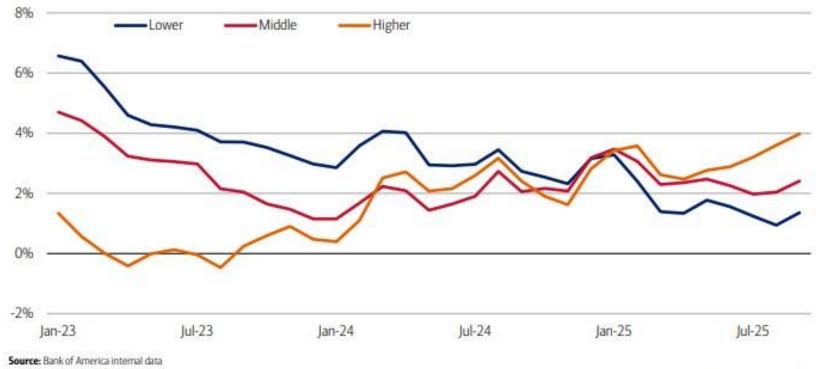


Exhibit 3: In September, higher-income household wage growth rose to 4.0% YoY, while for lower-income households it ticked up to 1.4% YoY

After-tax wage and salary growth by household income terciles, based on Bank of America aggregated consumer deposit data (3-month moving average, YoY%, SA)



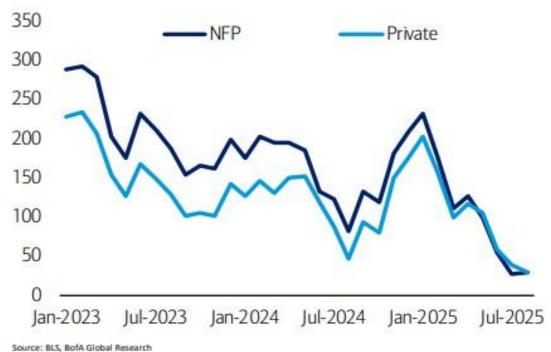
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US employment: moderating, labor ratios show low hire / low fire



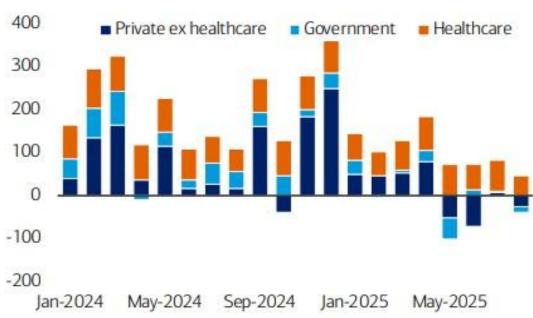
Nonfarm and private employment growth have slowed this year

Change in nonfarm and private payrolls (3m moving average, m/m thous SA)



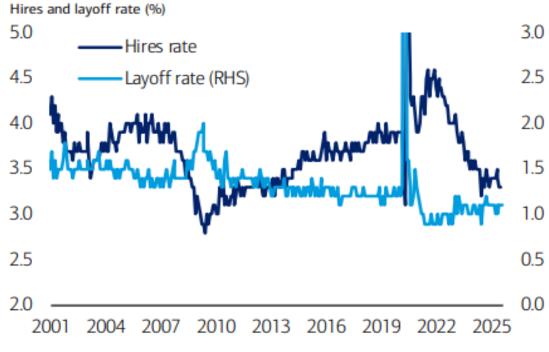
Healthcare has been the only source of positive job growth in recent months

Nonfarm payrolls, by category (m/m change)



Source: BLS, BofA Global Research

Layoffs rate remains below pre-pandemic levels, but hiring has slowed much more dramatically



Source: BLS, Haver Analytics

Wage growth is only cooling gradually indicating a stable labor market

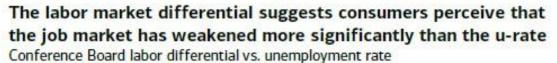


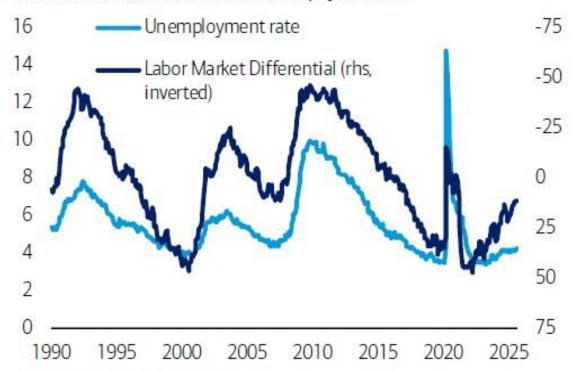
2015 2018 2021 2024

Source: BLS, Haver Analytics, BofA Global Research

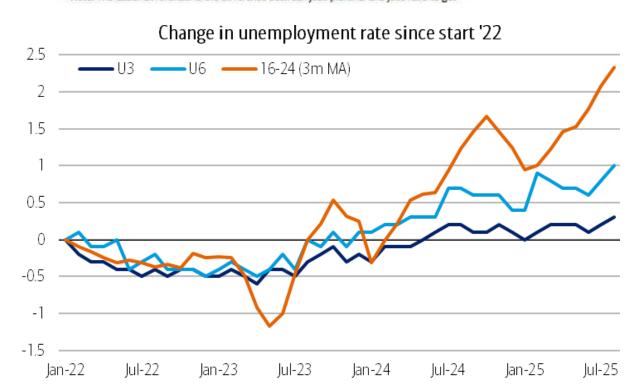
US employment: downside risks, spending may limit softening



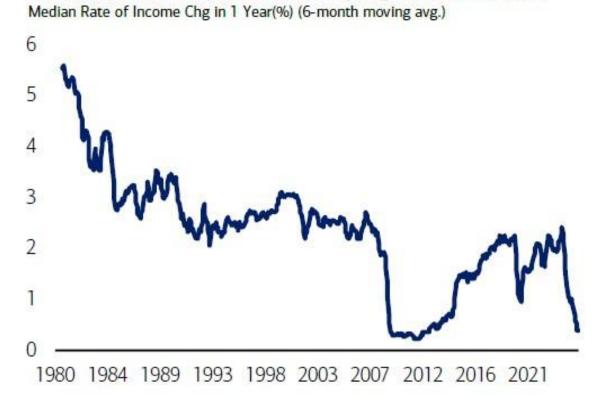




Source: BLS, Conference Board, Haver Analytics
Note: The Labor differential is the difference between jobs plentiful and jobs hard to get

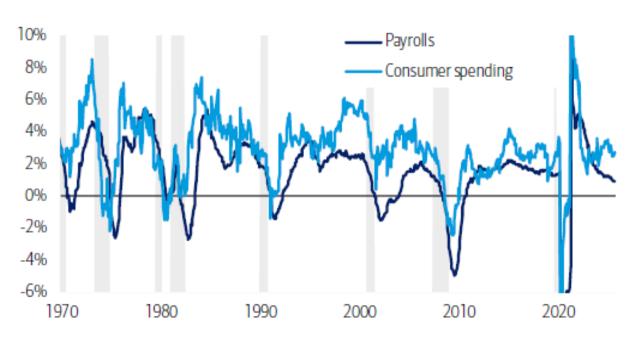


Household income expectations have plunged since mid-2024



Spending has historically led jobs

Nonfarm payrolls and consumer spending and (% y/y)



Source: BEA, BLS

US inflation: stuck above target, tariffs likely mean slow fade

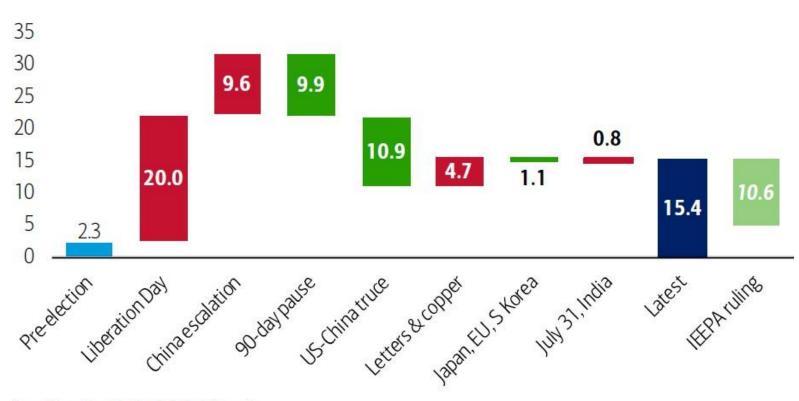




Source: BEA, Cleveland Fed, Dallas Fed, NY Fed, Haver Analytics

Source: BEA, Cleveland Fed, Dallas Fed, NY Fed, Haver Analytics

The July tariff announcements pushed the effective tariff rate to 15%, but the IEEPA case could result in a big drop Effective tariff rate (%)

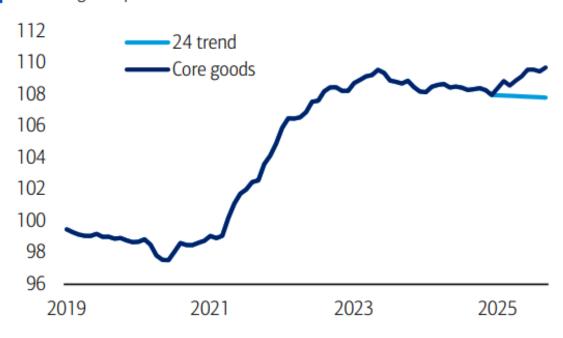


US inflation: good prices show evidence of tariff pass through



Exhibit 2: Core goods prices are running well above a linear trend based on last year's price changes

PCE core goods price index vs. a 2024 linear trend

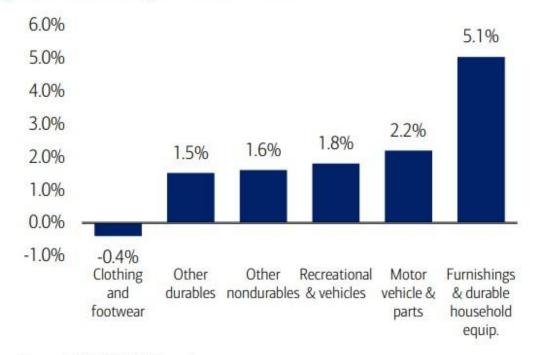


Source: BEA, BofA Global Research

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Exhibit 5: Most major goods categories have risen this year compared to a simple linear trend counterfactual.

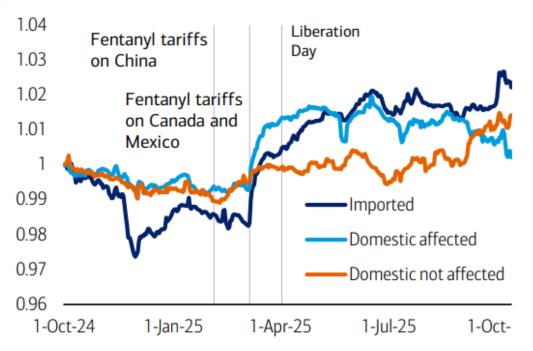
Cumulative price change compared to a 2024 linear trend based on expectations for September PCE inflation



Source: BEA, BofA Global Research

Exhibit 3: Goods prices have risen since October, especially for imported goods

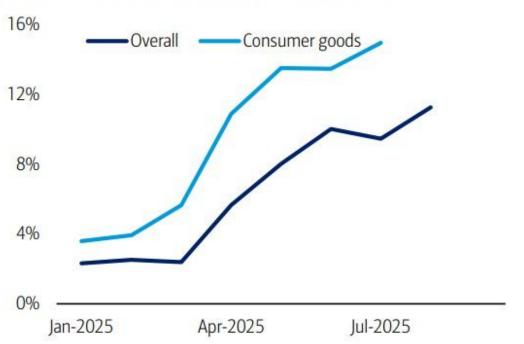
Daily price indices for imported goods, domestic goods unaffected by tariffs, and domestic goods affected by tariffs (October 1 2024 = 1)



Source: Tracking the Short-Run Price Impact of U.S. Tariffs (Cavallo, Llamas, Vazquez, 2025)

Exhibit 6: The overall tariff rate and tariff rate on consumer goods have risen by 9pp and 11pp respectively this year

Effective tariff rate for all imports and for consumer good imports



Source: Census Bureau, Peterson Institute for International Economics, BofA Global Research

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Deficit & tariffs: IEEPA ruling risk for increased fiscal concern



Exhibit 2: If the Supreme Court finds IEEPA tariffs illegal, the White House could likely use other trade authorities to enact tariffs

Statutory authorities that the executive branch can use to impose tariffs

	Section 232	Section 201	Section 301	Section 122	Section 338	
Subject Matter	Threats to national security	Injury to domestic industry	Trade agreement violations; certain other practices	International payments problems	Discrimination against U.S. commerce	
Agency Required to Make Findings	Secretary of Commerce		USTR	None	None	
Limit on Duration of Action	None	4 years; may be extended to 8 years in total	4 years; may be extended with no upper limit	150 days	None	
Limit on Tariff Rate	None	50%; note phasedown requirement	None	15%	50%	
Selected Tariff Examples	Steel and aluminum, 2018-;	Solar cell products, 2018-2026	Certain imports from PRC, 2018-	Never used to impose tariffs	Never used to impose tariffs	

Source: Compiled by CRS based on *U.S. Code* and CRS analysis of selected tariff actions

Deficit reduction from tariffs help lower the debt-to-GDP trajectory

Tariff revenue and associated interest savings (\$bn)

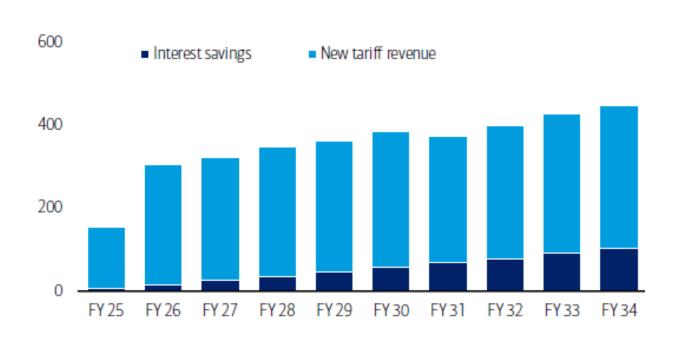
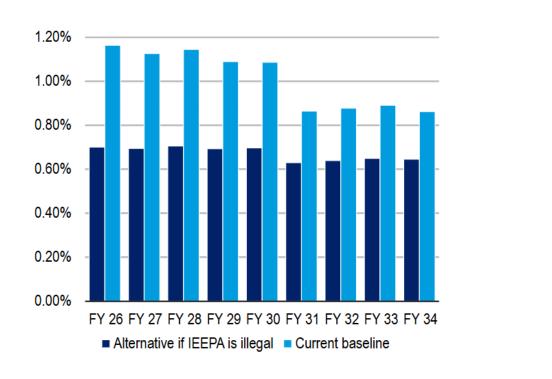


Exhibit 5: Tariff revenue (% of GDP) for different scenarios

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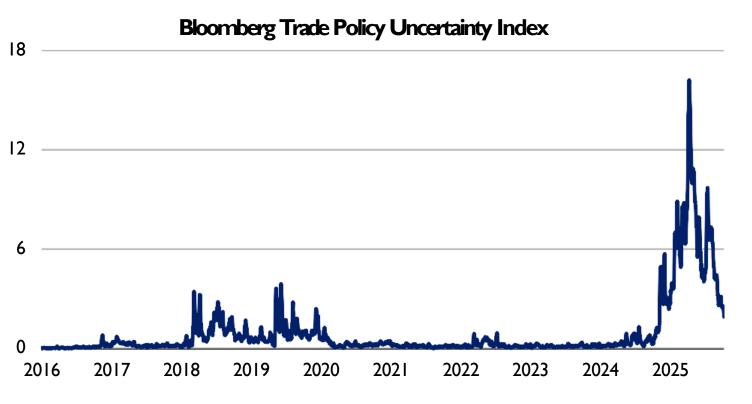
If IEEPA tariffs are ruled illegal, tariff revenues would likely drop by up to 0.4pp of GDP relative to baseline assuming an effective tariff rate of 10%.



Source: BofA Global Research, Haver

Tariff uncertainty declining, price pass through expected to be partial

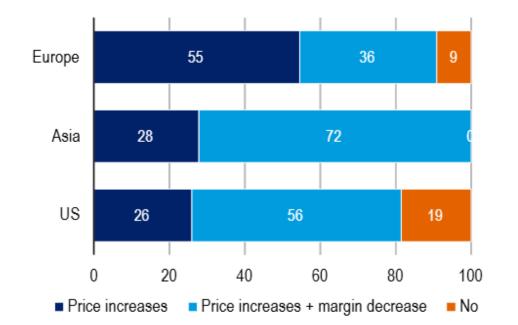




Source: Bloomberg

Exhibit 16: Do you expect your companies to raise prices because of tariffs?

Prices increases absorb tariffs, with some also expecting margins erosion...

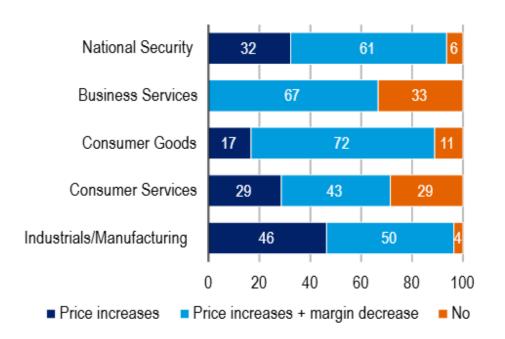


Source: BofA Global Research. Note: Responses are expressed as share of respondents.

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Exhibit 17: Do you expect your companies to raise prices because of tariffs?

...mainly in Consumer Goods, National Security and Manufacturing sectors



Source: BofA Global Research. Note: Responses are expressed as share of respondents.

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Fed outlook: cautious cutting Fed, independence risk high

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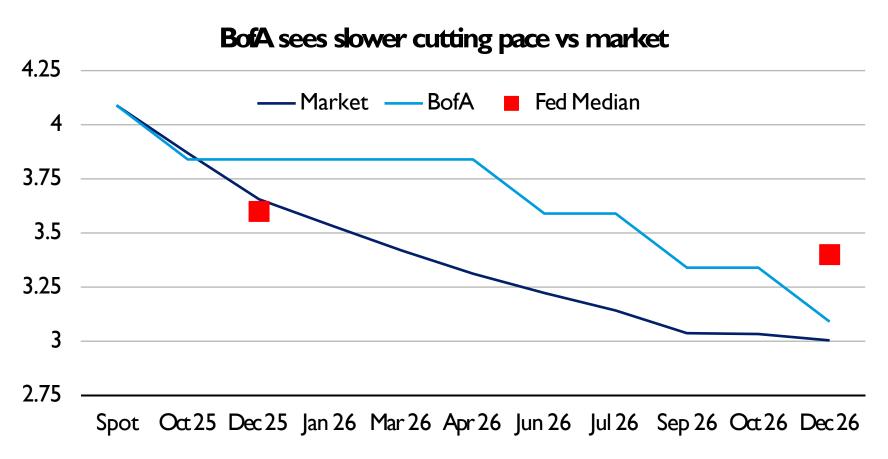
- BofA econ sees cautious Fed cuts w/:
- Fed to shift reaction if:

Inflation miss > labor miss

- U3: outside of 4.4-4.5%
- Base case: 50bps total in '25, 75bps in '26
- Core PCE: outside of 3-3.2%

- Cuts: Oct '25, Jun / Sept / Dec '26
- Fed independence '26 vs '25 issue

• Trough: 3-3.25%



Source: BofA Global Research, Bloomberg

Fed outlook: stretch arguments to cut will grow stronger in '26



Exhibit 4: Core PCE Actual vs Bloomberg Quarterly Forecasts

Bloomberg forecasts undershot realized inflation in '21 – '23

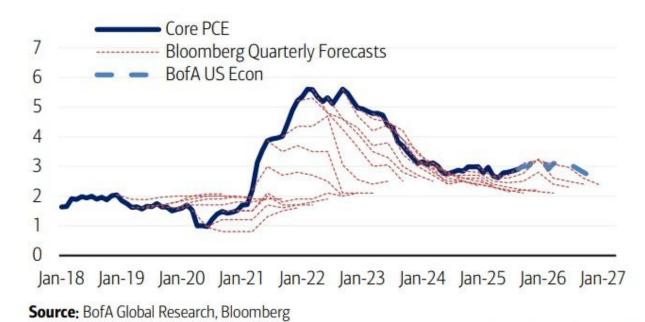
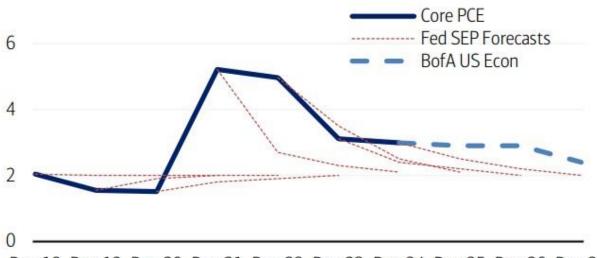


Exhibit 5: Core PCE Actual vs Fed SEP Annual Forecasts Fed SEP also undershot realized inflation in '21 – '23



Dec-18 Dec-19 Dec-20 Dec-21 Dec-22 Dec-23 Dec-24 Dec-25 Dec-26 Dec-27

Source: BofA Global Research, Federal Reserve

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Exhibit 6: Taylor implied policy rate using end '27 Fed median variables

Taylor would imply a 2.35% policy rate using end '27 Fed median variables & a 3.5% NAIRU estimate

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		3%	3.25%	3.50%	3.75%	4%	4.25%
tion	3%	1.35%	1.60%	1.85%	2.10%	2.35%	2.60%
pti	2.75%	1.48%	1.73%	1.98%	2.23%	2.48%	2.73%
Assump	2.50%	1.60%	1.85%	2.10%	2.35%	2.60%	2.85%
SS	2.25%	1.73%	1.98%	2.23%	2.48%	2.73%	2.98%
*	2%	1.85%	2.10%	2.35%	2.60%	2.85%	3.10%

Source: Federal Reserve, BofA Global Research; note: assumes r* = 1%, core PCE = 2.1%, U3 = 4.3%

Duration: US gov't shutdown historically has small impact, firings risk



Exhibit 1: US government shutdown recent history + 1W price response

Historically, US government shutdowns are relatively short-lived and have modest price impact

Net Change (1w prior to 1w post)

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Shutdown Period	Full Days	White House	Senate	House	Full/Partial Shutdown	SPX	VIX (pts)	DXY	10Y (bps)
12/22/18 to 1/25/19	35	Rep	Rep	Rep	Partial	6%	-8	-2%	-17
1/20/18 to 1/22/18	3	Rep	Rep	Rep	Partial	2%	4	-2%	15
10/1/13 to 10/17/13	16	Dem	Dem	Rep	Full	3%	-1	-2%	-14
12/16/95 to 1/6/96	21	Dem	Rep	Rep	Full	-3%	4	0%	1
11/14/95 to 11/19/95	5	Dem	Rep	Rep	Full	3%	-1	1%	-10
10/5/90 to 10/9/90	3	Rep	Dem	Dem	Partial	-5%	3	-3%	2
\$.					Average	1%	0	-1%	-4

Source: Bloomberg

Exhibit 5: UST 10y yield around previous shutdown dates (bp chg)

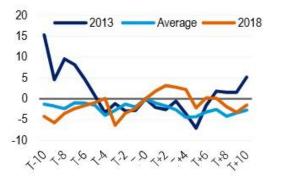
UST 10yr was little changed around shutdowns



Source: BofA Global Research, Bloomberg. Note: T-0 = shutdown start date, '13 & '18 shown b/c most recent 2 shutdowns that lasted >3 days

Exhibit 6: 2s10s spread around previous shutdown dates

2s10s curve is neutral after start of shutdown



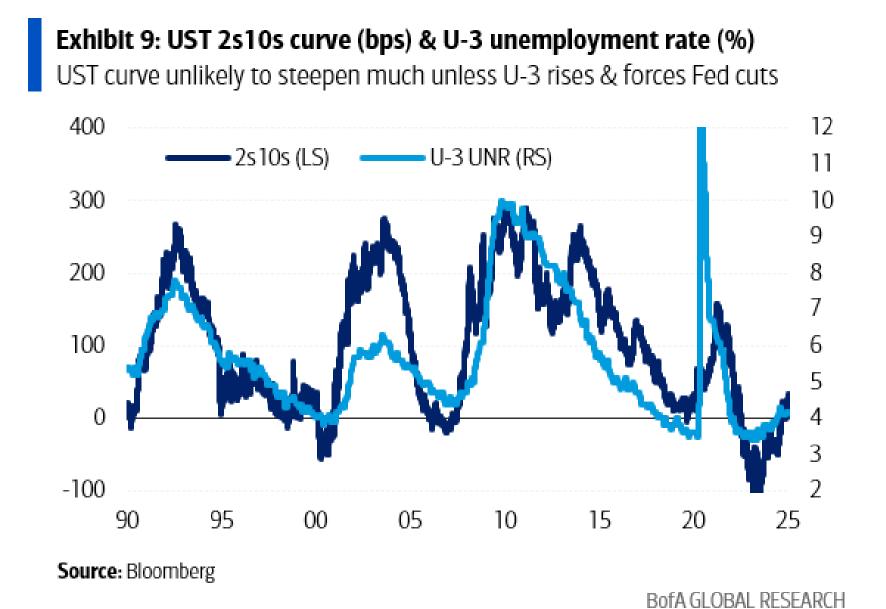
Source: BofA Global Research, Bloomberg. Note: T-0 = shutdown start date, '13 & '18 shown b/c most recent 2 shutdowns that lasted >3 days

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Curve: timing & pace of rate cuts key



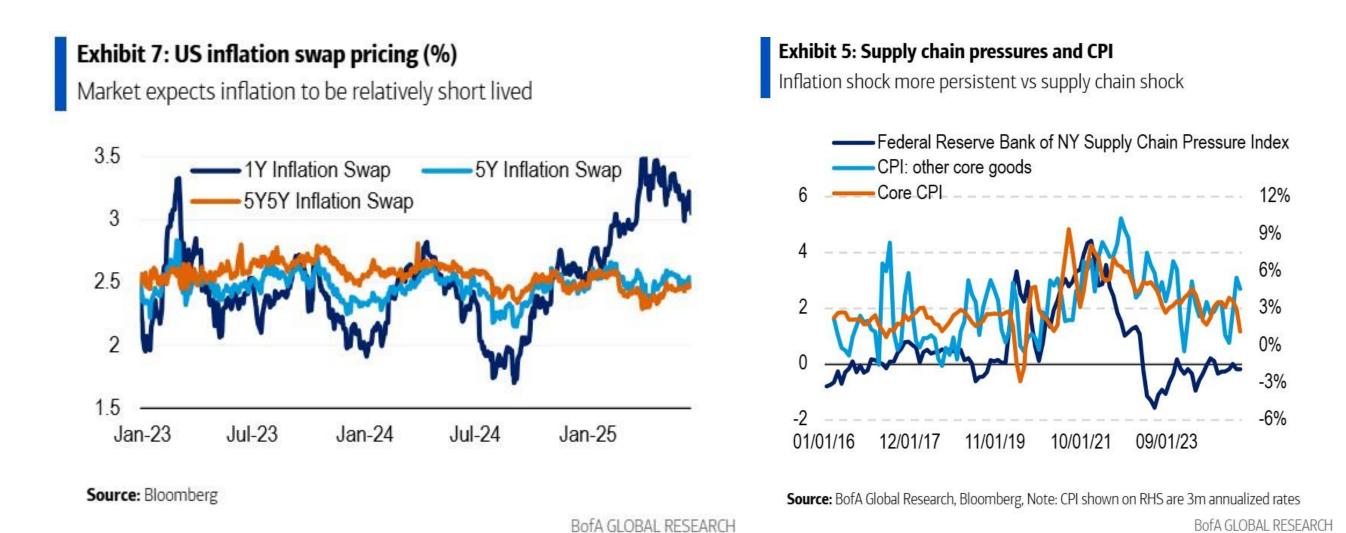
- Curve will steepen as U3 rises; the higher U3, the steeper the curve
- If Fed on path towards cuts, curve will likely maintain steepening bias
 - Fed independence risk = steeper curve in '26



TIPS: long 10 B/E w Fed independence risk



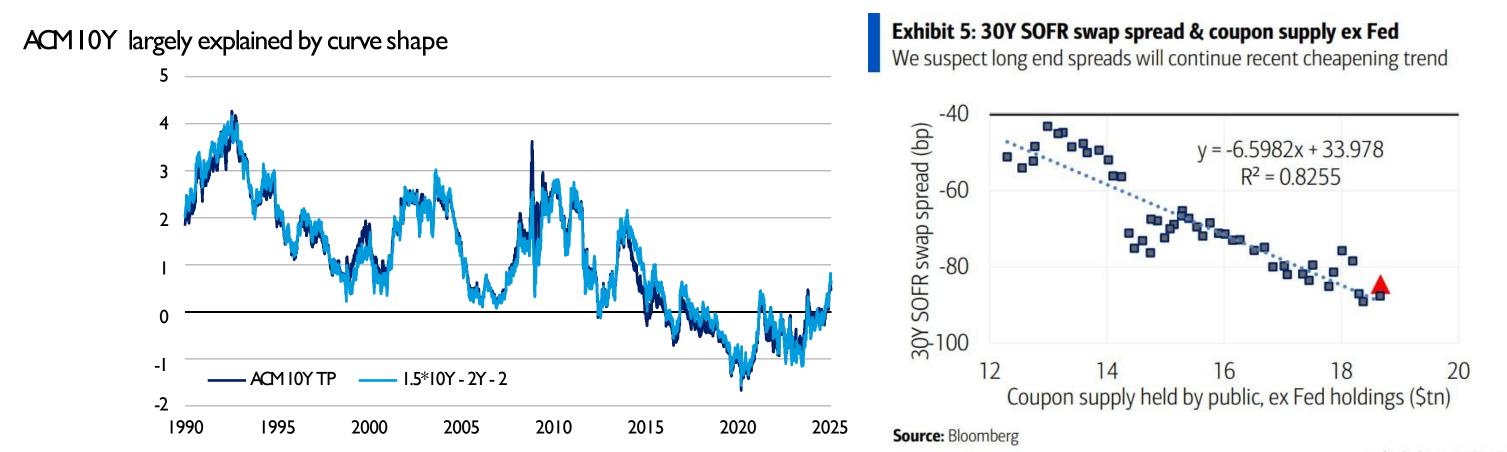
- Fed independence risk should mean higher inflation risk premium
- Long belly US inflation vs EU given persistent inflation risk
- Inflation to remain elevated as tariff adjustment spread over time
 - Inflation has proven persistent despite supply chain improvement



Spreads: neutral into refunding, 30Y risk supply / demand imbalance



- Fed term premium models largely capture UST curve shape
- UST supply / demand better reflected through asset swap spread
- Nov refunding may support long end, we see longer run challenges b/c:
 - (1) questionable natural demand base (2) periodic liquidity concerns (3) risk-off cheapening vs swap potential



UST funding: financing estimates by fiscal year



Exhibit 13: Financing estimates by fiscal year through FY'27 (\$bn)

If UST keeps coupons steady as we expect in our base case, bills as a share of marketable debt will rise towards 25% over the next two years

	2026	2027
1 Baseline deficit	1,875	1,925
2 Other adjustment	(87)	175
3 Financing need (1 + 2)	1,788	1,925
4 Change in cash balance	(15)	25
5 Note: cash balance end period assumption	875	900
6 Marketable borrowing need (3 + 4)	1,773	1,950
7 Gross coupon auctioned	4,395	4,395
8 Total coupon maturing	3,325	3,615
9 Fed coupon rollover	488	459
10 Public coupon maturing (8 - 9)	2,836	3,156
11 Expected buybacks*	364	364
12 Net coupon supply (7 - 10 - 11)	1,195	875
13 Coupon runoff from Fed bal sheet	5	-
14 Net coupon supply to public (12 + 13)	1,200	875
15 Net bill supply (6 - 12)	578	1,075
16 Bill runoff from Fed bal sheet	(1)	20 19 1 1
17 Net bill supply to public (15 +16)	578	1,075
18 Net supply issued (12 + 15)	1,773	1,950
19 Net supply to public (14 + 17)	1,778	1,950
20 Starting assumed coupons	23,318	24,513
21 Starting assumed bills	6,397	6,975
22 End assumed coupons (12 + 20)	24,513	25,388
23 End assumed bills (15 + 21)	6,975	8,050
26 Bills as % of coupons + bills (23 / (22 + 23))	22.2%	24.1%

Source: BofA Global Research, US Treasury, Federal Reserve. We assume QT ends in Dec '25

UST funding: coupon sizes stable thru end FY '26, WAM shorter



75

Exhibit 1: Actual and expected weighted average maturity (WAM) through FY '27 (months)

WAM expected to decline as Treasury relies heavily on bill supply to meet net new financing need



Source: BofA Global Research, US Treasury

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Exhibit 4: WAM of Fed UST holdings vs WAM of total UST debt outstanding (months)
Fed UST WAM is more than 3 years longer than marketable debt outstanding

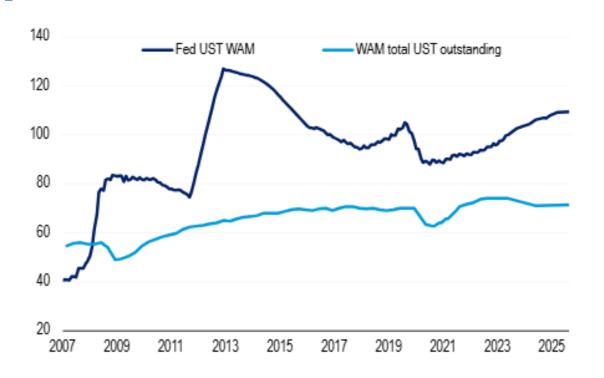
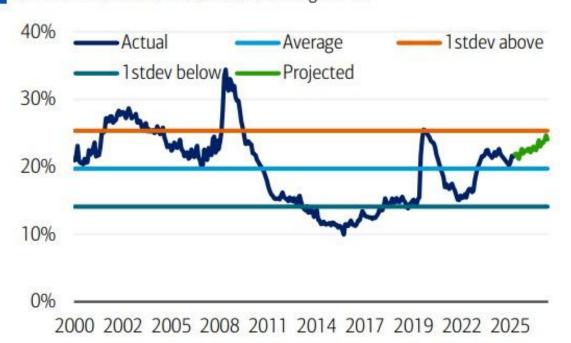


Exhibit 2: Bills as a % of marketable debt

Given our expectations for deficit and QT ending at Oct FOMC, bills as a share of marketable debt should increase through FY '27

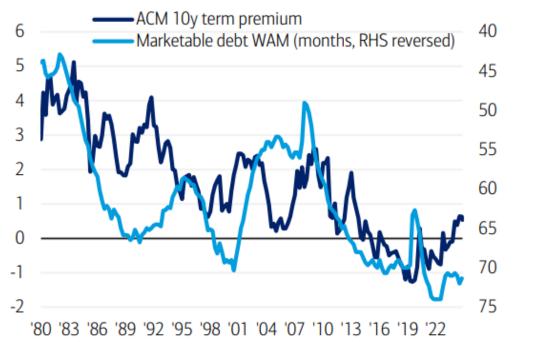


Source: BofA Global Research, US Treasury

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Exhibit 6: ACM term premium (PPTS) & UST marketable debt WAM

WAM shows lose negative relationship with term premium



Source: BofA Global Research, Bloomberg

UST financing: bill supply still substantial in late '25

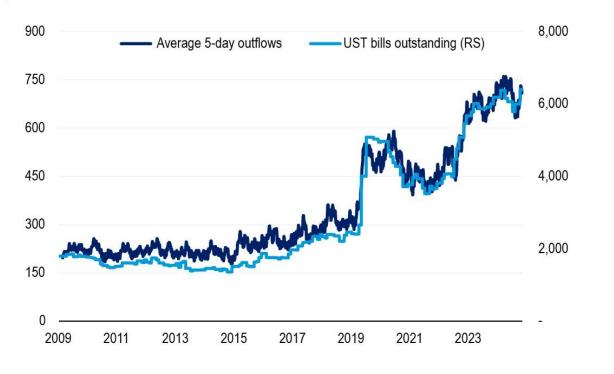


Exhibit 14: Bill and coupon issuance estimates by month
We expect \$271b in bills in Q3, \$27b in Q4 as we head into another debt limit episode on Jan 1 2025

	Financing Need	TGA EOP	TGA Change	Other sources*	Marketable Borrowing	Buybacks	Net Coupon	Net Bills	Fed Coupon Maturities	Fed Bill Maturities	Net Coupons to the Public	Net Bills to the Public	Net Supply to the Public
	1		2	3	3 = 1 + 2	4	5	6	7	8	9 = 5 + 7	10 = 6 + 8	11 = 9 + 10
Oct-25	255	850	-40	-32	215	19	74	141	5	0	79	141	220
Nov-25	234	850	0	-32	234	15	142	91	0	0	142	91	234
Dec-25	6	850	0	-32	6	45	150	-144	0	0	150	-144	6
Jan-26	-84	852	2		-82	16	29	-111	0	0	29	-111	-82
Feb-26	495	854	2		497	12	119	378	0	0	119	378	497
Mar-26	410	856	2		413	48	137	275	0	0	137	275	413
Apr-26	-269	859	2		-267	65	5	-272	0	0	5	-272	-267
May-26	342	861	2		344	12	133	211	0	0	133	211	344
Jun-26	134	863	2		136	48	134	2	0	0	134	2	136
Jul-26	185	865	2		187	18	47	140	0	0	47	140	187
Aug-26	153	867	2		155	15	98	57	0	0	98	57	155
Sep-26	-72	875	8		-64	48	127	-191	0	0	127	-191	-64

Exhibit 3: 30d MA sum of 5 days of TGA outflows vs T-bills outstanding (\$bn)

Higher reliance on bill issuance drives up higher TGA outflows due to larger and more frequent UST maturities vs coupons



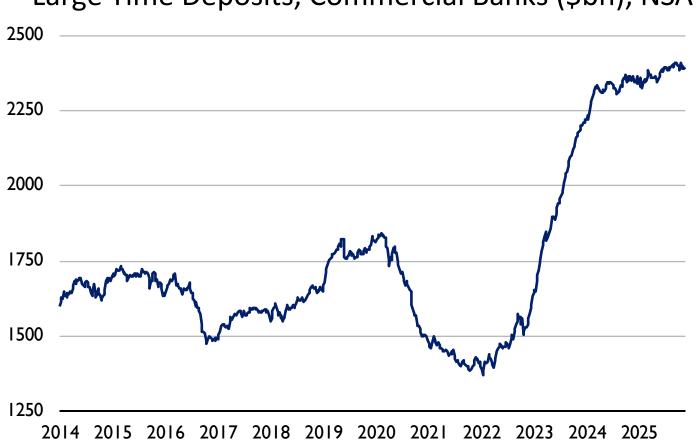
Fed QT: stable reserves = banks fighting for liquidity



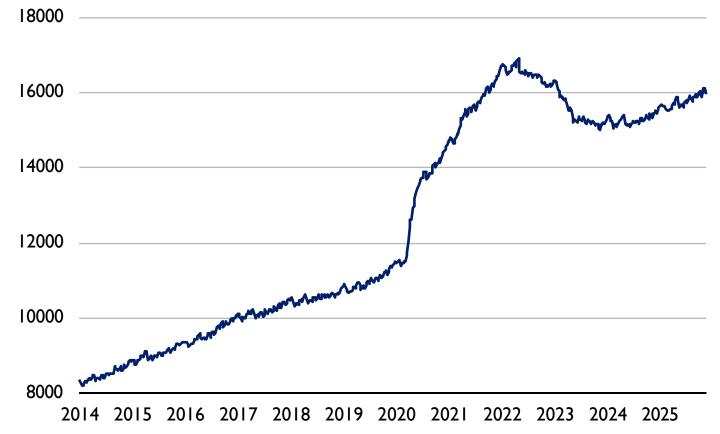
Federal Reserve Select Balance Sheet Items (\$bn)

			Assets			Liabilities				
	Total	USTs	Agy MBS	Other	Reserves	UST Cash Balance	ONRRP	Foreign RRP	Currency	Other
5/25/2022	8964	5769	2707	487	3315	802	1996	262	2276	313
10/29/2025	6637	4197	2070	370	2828	984	20	348	2418	40
Post $QT\Delta$	-2326	-1573	-637	-116	-487	182	-1976	85	142	-273
. 333 Q		1 1000			Global Research,				–	_, _

Large Time Deposits, Commercial Banks (\$bn), NSA



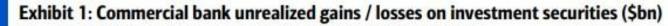
Other Deposits, Commercial Banks (\$bn), NSA



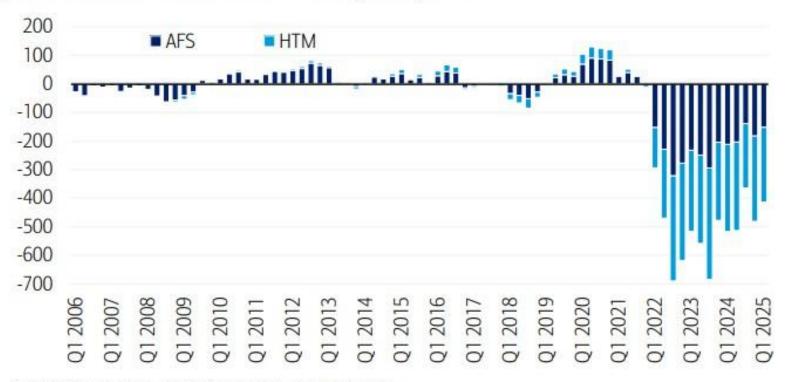
Source: Federal Reserve

Fed QT: banks fighting for reserves b/c unrealized loss buffer





Commercial bank unrealized losses are much larger today vs '19



Source: FDIC; note: AFS = available for sale, HTM = hold to maturity

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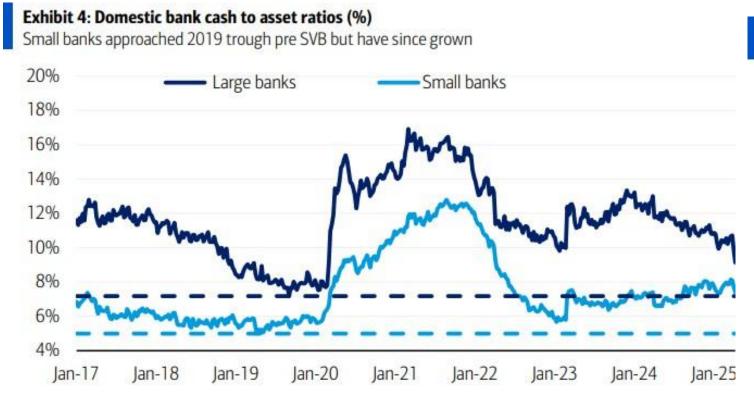
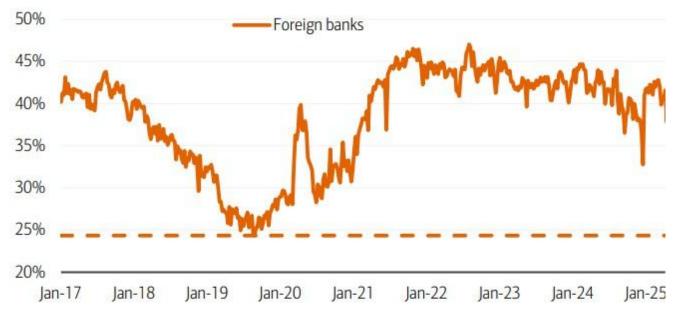


Exhibit 5: Foreign bank cash to asset ratio (%)

Foreign banks remain well above the trough in their cash to asset ratio



Source: Bloomberg. Note: dotted line indicates the 2019 trough for foreign bank cash/asset ratio

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Source: Bloomberg. Note: corresponding dotted line indicates the 2019 trough for each variable

Fed QT: historic cash / asset suggests limited excess, esp w/ FHLB use



Exhibit 6: Bank cash to asset ratios current vs Sept '19 analysis (\$bn)

Applying '19 cash/asset ratio to today's bank assets, imply banks have some excess cash remaining, but may overestimate overall "excess cash"

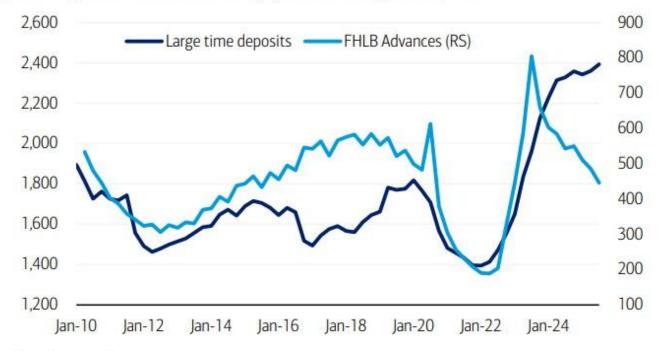
		Total	Large Domestic	Small Domestic	Foreign
	Cash	3,212	1,448	496	1,308
Current	Assets	23,403	14,252	6,735	3,354
	Cash/Assets	14%	10%	7%	39%
	Cash	1,563	767	249	535
Sep-19	Assets	17,379	10,692	4,536	2,198
	Cash/Assets	9%	7%	5%	24%
Cash	implied by '19 ratio	2,104	1,022	369	816
Imp	olied excess cash	1,108	426	127	492
Cash imp	lied by '19 ratio + 2ppts	2,572	1,307	504	883
+ 2ppts	implied excess cash	640	141	(8)	425
Cash imp	lied by '19 ratio + 4ppts	3,040	1,592	639	951
+ 4ppts	implied excess cash	172	(144)	(143)	358

Source: BofA Global Research, Bloomberg

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Exhibit 7: Bank FHLB advances and large time deposits (\$bn)

Historically FHLB advances have been highly correlated to large time deposits



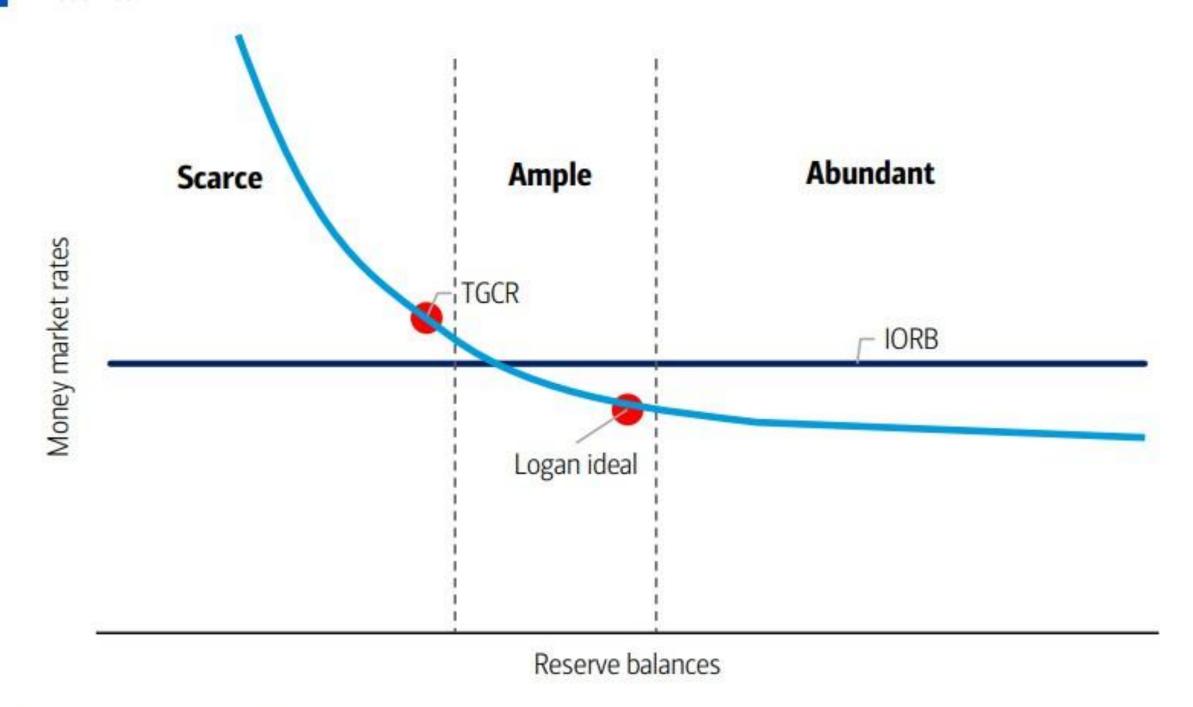
Source: Bloomberg

Fed has likely over-drained, needs to add cash back



Exhibit 3: Stylized reserve balance demand curve in Fed's ample reserve regime

As reserves drain from abundant to ample, money market rates will become increasingly sensitive to changes in reserves



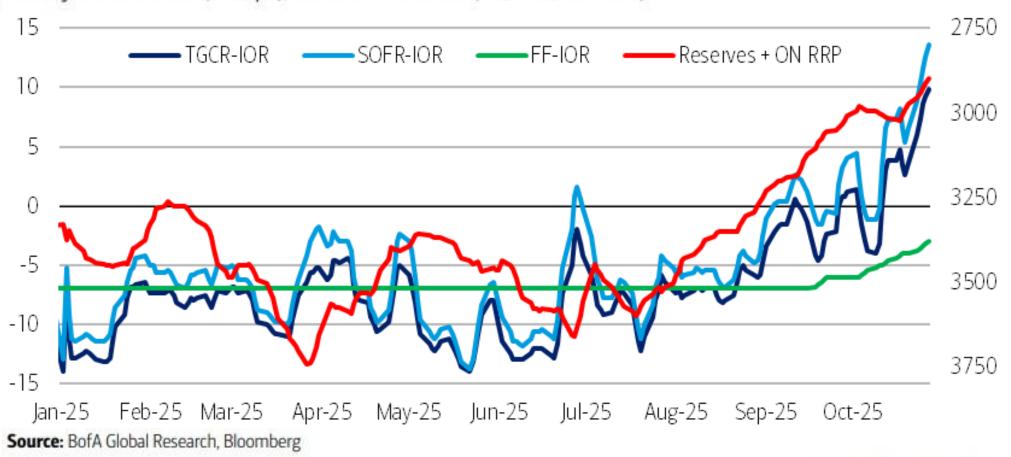
Source: BofA Global Research

Fed QT end: money markets pressure early end



Exhibit 1: Money market rates relative to IORB and reserve balances + ON RRP (1w MA)

Money market rates (LS, bps), reserves + ON RRP (RS, \$bn, inverted)



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Exhibit 2: Average money market rates spreads over recent months (bps)

Money market rates have risen quickly post debt limit resolution

Start	End	TGCR-IOR (bp)	SOFR-IOR (bp)	FF-IOR (bp)	Reserves + ON RRP (\$bn)
6/1/2025	7/1/2025	-10.0	-8.0	-7.0	3557.7
7/1/2025	8/1/2025	-7.9	-6.3	-7.0	3526.6
8/1/2025	9/1/2025	-7.0	-5.6	-7.0	3366.6
9/1/2025	10/1/2025	-1.8	0.6	-6.7	3134.9
10/1/2025	10/31/2025	3.1	6.3	-4.5	2971.4

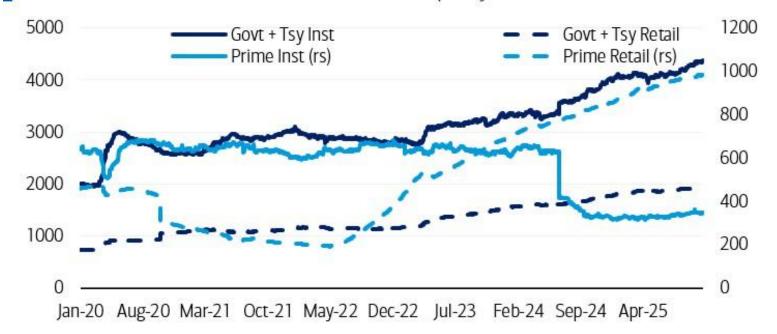
Source: BofA Global Research, Bloomberg

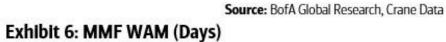
MMF themes: gov't MMF WAM & WAL longer vs prime



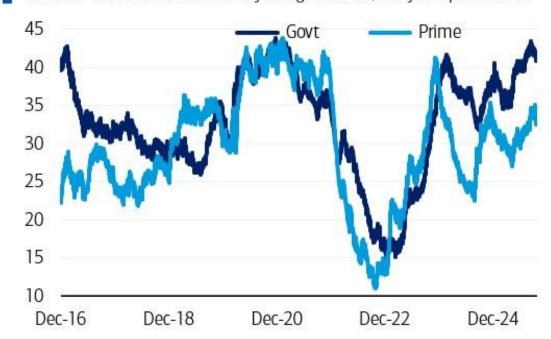
Exhibit 3: Prime & gov MMF AUM broken down by retail and inst'l funds (\$bn), '23-'25 ytd

Prime inst'l AUM has been flat since the Oct '24 regulatory deadline but prime retail has continued to see sizeable inflows. Gov't inst'l funds tend to be more volatile, especially around month-ends and tax dates





YoY MMF WAM has extended 7 days for gov't funds, 2 days for prime funds

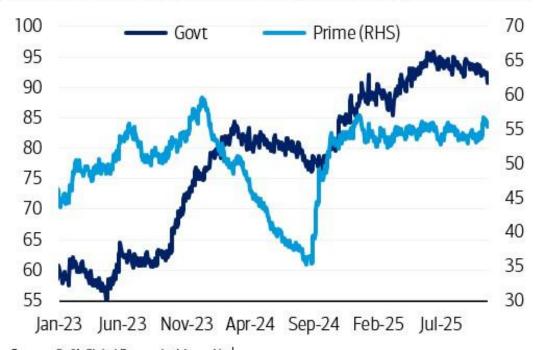


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Source: BofA Global Research, iMoneyNet

Exhibit 7: MMF WAL (Days)

YoY MMF WAM has extended 11 days for gov't funds, 3 days for prime funds



Source: BofA Global Research, iMoneyNet

MMF themes: inflows a function of rates. watch stablecoins & ABCP



Exhibit 5: Historical avg change in MMF yield at different 3m bill yield levels shows for a 3.5% terminal, AUM growth historically around 12% on avg

Avg change in MMF yield at different 3m bill yield levels (%)

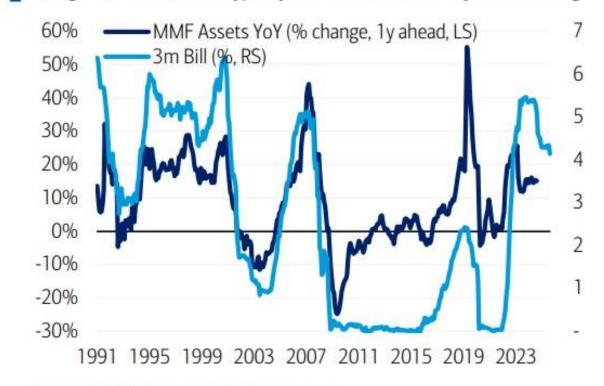
3m bill yield %	Avg MMF %change
6.00	15.70%
5.00	17.48%
4.00	13.89%
3.50	11.67%
3.00	9.77%
2.00	13.66%
1.00	-0.20%
0.00	1.83%

Source: BofA Global Research, Bloomberg

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Exhibit 6: Change in MMF assets and 3m bill yield

Change in MMF assets are typically correlated to front-end yields with a lag

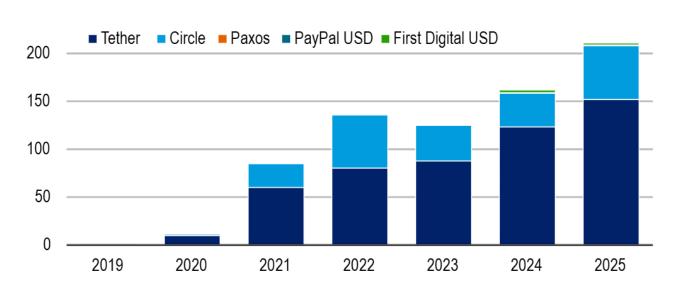


Source: BofA Global Research, Federal Reserve, Haver

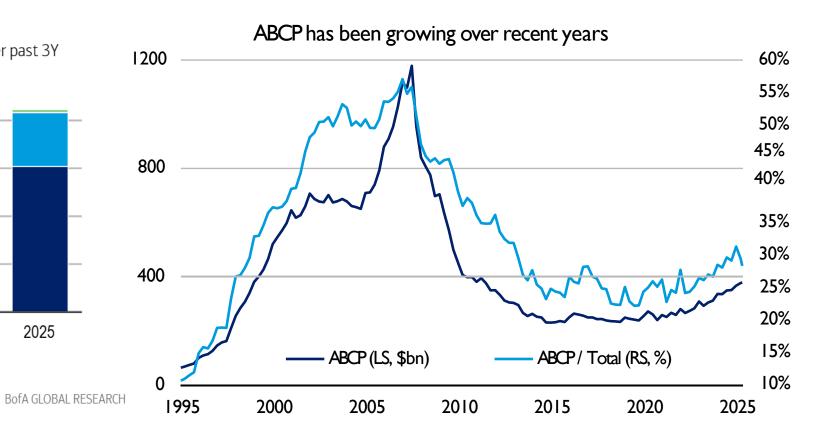
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Exhibit 1: USD-related average stablecoin supply over recent years (\$bn)

USD-related stablecoins dominated by Tether & Circle; total size has grown 17% over past 3Y



Source: Visa, Allium - Stablecoin Supply



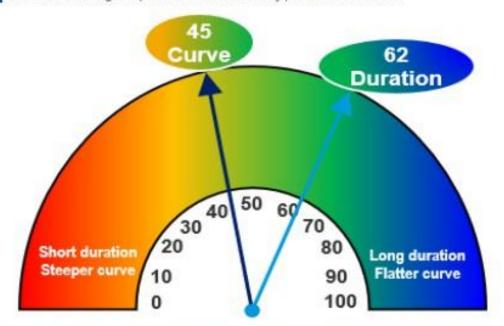
Source: Federal Reserve

UST positioning: long & slightly steep



Exhibit 1: Curve-o-meter

Funds are modestly long duration & neutral curve, CTA momentum suggests funds should be longer than betas indicate, longs are predominant in the money position across curve

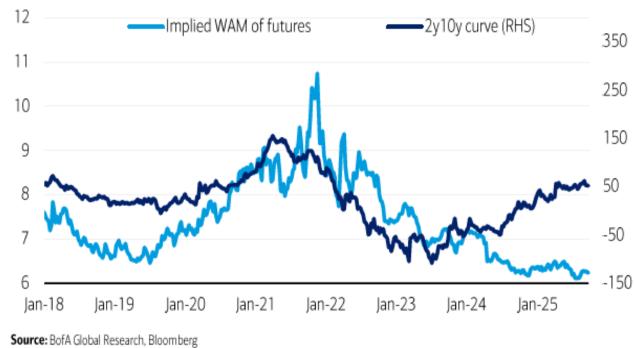


Source: BofA Global Research, Note: dial shows duration - average Sy percentiles of CTA positioning + net OTM position implied from Futures positioning proxy + CFTC non-comm ex LF + fund regression duration beta. Curve - avg 5y percentiles of CTA betas + futures positioning proxy + fund regression curve beta

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Exhibit 7: WAM of asset manager futures holdings (years) & 2s10s curve (BPS)

Despite curve steepening WAM of futures positions are historically shorts



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Exhibit 36: US fixed income fund flows (\$million)
US FI funds saw net inflows on the week across all fund types ex high yield corp funds

	Oct 22 '25	Rolling 4w average	Rolling 8w average	Rolling 12w average	Rolling 52w average
Gov: short	(62)	(698)	749	1,155	1,376
Gov: intermediate	1,806	1,357	850	733	183
Gov: long	1,364	926	648	458	(66)
Corp: IG	961	1,227	973	1,732	534
Corp:HY	(2,762)	(461)	363	533	422
Corp: all quality	73	107	127	87	69
MBS	(34)	556	601	580	513
Inflation	410	225	349	307	226
Muni	2,212	1,568	1,356	1,288	688
Mixed allocation	6,890	7,442	7,002	7,193	4,336
All US FI	10,441	11,915	12,657	13,903	8,374

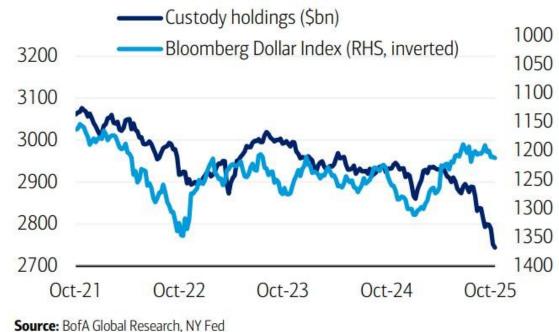
Source: BofA Global Research, EPFR

Overseas UST demand: official sector demand has weakened



Exhibit 27: Weekly UST custody holdings, foreign official (\$bn)

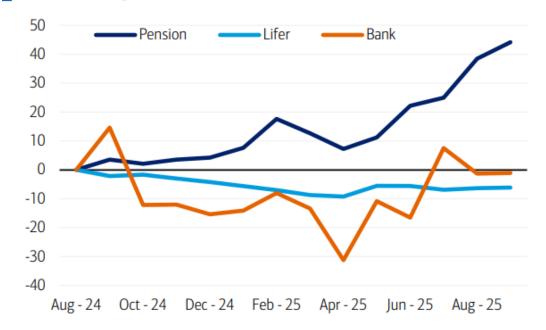
Custody holdings declined \$8bn on the week



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Exhibit 35: Cumulative change in Japanese investor foreign bond holdings (\$USD, bn)

Pension holdings have increased in recent months

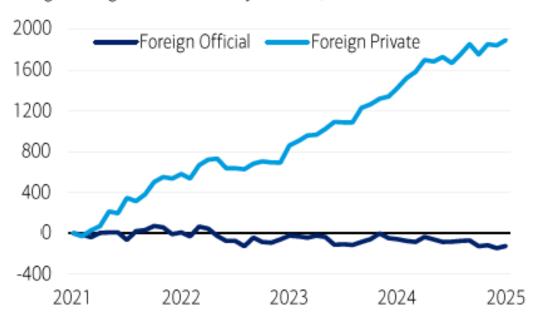


Source: BofA Global Research, Japanese MoF

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Exhibit 30: Cumulative UST flows from foreign investors (\$bn)

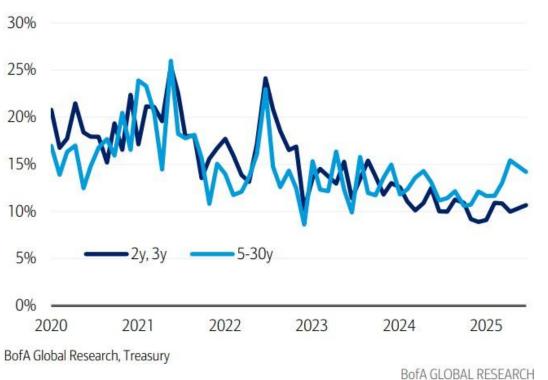
Foreign holdings declined modestly overall in June



BofA Global Research, Bloomberg, TIC, note: references the valuation-adjusted flow BofA GLOBAL RESEARCH

Exhibit 60: Avg foreign investment at auction (all nominal coupons)

Foreign participation increased for 5-30y tenors

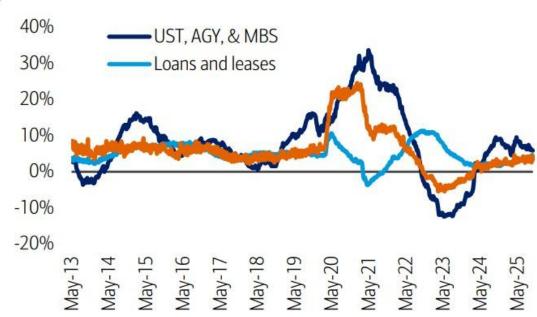


Bank & pension demand: solid despite headwinds





Securities growth usually only positive when deposit growth is positive



Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 64: Milliman index and 12-month increase in USTs held in stripped form

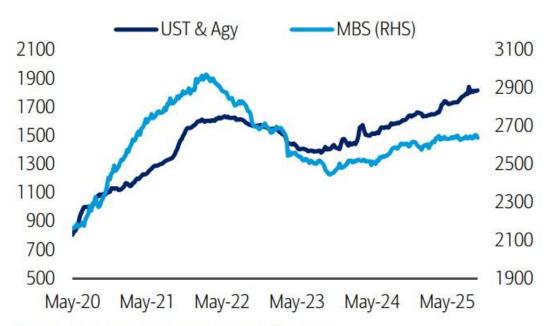
Stripping activity has moderated from end '24 peak while Milliman funds are still well funded



Source: BofA Global Research, Bloomberg

Exhibit 51: Domestic bank holdings of UST& Agy, MBS (\$bn)

Domestic banks' UST & AGY holdings have seen a faster pace of increase in recent weeks while MBS has been relatively flat



Source: BofA Global Research, Bloomberg, Federal Reserve

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Exhibit 65: Change in USTs held in stripped form (\$bn)

UST stripping activity remained firm in September



Source: BofA Global Research, Note: dashed line is 1stdev over last 15y

BofA econ: strong US growth & high inflation, global resilience



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Economic forecasts											
	2025Q1	2025Q2	2025Q3	2025Q4	2026Q1	2026Q2	2026Q3	2026Q4	2025F	2026F	2027F
Global and Regional Aggregates, %											
United States											
Real GDP growth ¹	-0.6	3.8	2.7	1.6	1.6	1.7	1.7	1.8	2.0	1.9	1.9
CPI inflation	2.7	2.5	2.9	3.0	2.9	2.9	2.8	2.5	2.8	2.8	2.4
Policy Rate (EoP)	4.38	4.38	4.13	3.88	3.88	3.63	3.38	3.13	3.88	3.13	3.13
Euro area											
Real GDP growth ¹	2.3	0.1	-0.8	-0.3	1.6	1.9	1.6	1.5	1.0	0.9	1.4
CPI inflation	2.3	2.0	2.1	2.0	1.6	1.8	1.6	1.6	2.1	1.6	1.8
Policy Rate (EoP)	2.50	2.00	2.00	2.00	1.75	1.75	1.75	1.75	2.00	1.75	1.75
China											
Real GDP growth ²	5.4	5.3	4.5	4.0	4.0	4.0	4.6	4.4	4.7	4.3	4.1
CPI inflation ³	-0.1	0.0	-0.2	0.0	0.0	-0.2	-0.1	0.2	-0.1	0.0	0.7
Policy Rate (EoP)	1.50	1.40	1.40	1.40	1.40	1.30	1.20	1.20	1.40	1.20	1.20
Japan											
Real GDP growth ¹	0.6	1.0	-0.4	-1.8	1.3	1.6	1.3	0.6	0.9	0.5	0.8
CPI inflation	2.8	3.4	2.7	1.9	1.5	1.5	1.8	2.0	2.9	1.7	2.0
Policy Rate (EoP)	0.50	0.50	0.50	0.50	0.75	0.75	1.00	1.00	0.50	1.00	1.50

Markets forecasts

	spot	2025Q4	2026Q1	2026Q2	2026Q3	2026Q4
Exchange Rates (EoP)				- 110008		
EUR/USD	1.16	1.20	1.20	1.22	1.23	1.25
USD/JPY	154	155	154	153	152	150
JSD/CNY	7.11	7.10	7.00	6.90	6.80	6.80
GBP/USD	1.32	1.40	1.41	1.44	1.46	1.51
Interest rates (% EoP)						
US 10yr	4.10	4.00	4.05			4.25
Germany 10-year	2.64	2.05	2.05			2.00
apan 10yr	1.66	1.65	1.75	1.80	1.90	2.00
Commodities ¹						
Oil - Brent (\$/bbl)	65.0	61.0	64.0	68.0	72.0	76.0
Oil - WTI (\$/bbl)	60.3	57.0	64.0	66.0	66.0	68.0
Gold (\$/oz)	4053	3750	3750	4000	3750	3500
Equities (EoP)						
5&P 500	6822	6300				
Stoxx 600	575	520				490
Source: RofA Global Research						

BofA rates open trades, rationale, & risks



Rates Alpha trade recommendations

Exhibit 45: Global Rates Trade Book - open trades
Open trades

Open Trades	Entry Date	Entry	Target	Stop	Latest Level	Trade rationale	Risk
Long 7y Finland vs Austria	30-Oct-25	4	-5	10	4	Better fiscal and rating outlook	Escalation of Russia-Ukraine War
Sell 2055 TIPS, buy 2056 BTPei	8-Oct-25	12	-20	28	-1	Net external asset trends	Contagion from adverse France moves
Receive Mar26 ECB €str	3-Oct-25	1.86	1.65	1.95	1.86	Weak outlook to prompt more cuts	Upside data surprises
Receive 10y5y 'real ESTR' rate	5-Sep-25	107	70	125	99	Lower neutral	Global bear market in rates
Sell OATei 47, buy BTPei 56 on z-spread	5-Sep-25	69	40	85	48	Extreme RV anomaly	Reduced France uncertainty
Long 10y Bunds	2-Sep-25	2.8%	2.4%	3.05%	2.64%	Downside in growth, pressure on risk assets	Upside data surprises
Pay Jun26 IMM 1y Euribor-Estr basis	7-Aug-25	23.7	30	19.5	24	Reserve demand-supply imbalance to worsen	Low reserve demand, structural operations
Short 5y German swap spreads	11-Jul-25	6.5	0	12	11	Seasonality, supply concerns, receiving in swaps	Risk-off move, program paying in 5y swaps
Short 6m2y rec ladder	7-Jul-25	Obp	25bp	-14bp	-0.5bp	Wide range of outcomes.	Rally to 1.5-1.9%
US-Euro 2y3y inflation widener	1-Jul-25	38	70	20	53	Historically narrow, roll-down	US recession
2y3y/5y5y Euro inflation steepener	2-May-25	20.0	35.0	10.0	16	Swift fall in inflation	Stalling disinflation
Long 30y Bunds vs Netherlands	24-Nov-24	14.5	25	8	13	Fade the cheapness of GE long-end	Change in German constitution
5y1y ATM-25/-100bp rec spread	8-Feb-24	25bp	60bp	0	19bp	Lower ECB terminal rate, without negative carry	Better than expected EUR data
Pay 1y1y "real Sonia"	24-Oct-25	11	30	0	24	Incompatible rates & inflation pricing	BoE prioritizing growth over inflation
1s2s RPI flattener	2-Oct-25	6.5	-25.0	25.0	2.8	RPI forecast, RV anomaly	Falling energy prices
Pay 10y Sonia vs long 30y Gilt	19-Sep-25	139bp	120bp	155bp	126bp	Gilt supply migrating to shorter-WAM	Sharp curve steepening from fiscal concerns
■ UKTi 2058/68 real curve flattener The statement of t	1-Jul-25	-12.7	-22	-7	-15	RV cheapness of '68s, convexity	Ultra-long supply poorly digested
Rec fivd UKTi real rates/pay fivd TIPS real rates	14-May-25	22	-40	50	-27	DMO Shortening its issuance	Poorly digested long-dated supply in Gilts
Long 30v Gilt on ASW	2-May-25	91	75	100	85	Expect BoE to at some point signal slower QT	UK fiscal worries
Receive SOFR Z7	31-Oct-25	3.18%	2.50%	3.65%	3.18%	Near-term Fed policy path more fairly priced	More hawkish Fed near-term on stronger data
6m10y payer ladder	22-Oct-25	0bp	20bp	-10bp	2bp	Scenarios of hawkish repricing of policy trough	Scenarios of Fed hikes
Long Jan SOFR/FF	15-Sep-25	-6.5bp	-2bp	-11bp	-8.5bp	Fed likely to step in on further funding pressure, end QT	Fed more tolerant of SOFR above IORB and FF
SOFR H6H7 flattener	11-Sep-25	-53bp	-75bp	-35bp	-47bp	Cautious Fed near-term-> more cuts post Powell	Frontloading of Fed cuts & steeper SOFR curve
Sell 1y1y vs 1y10y vol	14-Aug-25	+4bp Vega (v)	15bp Vega (v)	-5bp Vega (v)	3bp	Underperformance of left vs right side vol on soft landing scenarios	Higher uncertainty around the Fed policy near term
Long 10y BE	23-June-25	234bp	255bp	220bp	230bp	Fed independence threat hedge	Risk off flow that sees oil decline
6m5y payer ladder	23-May-25	Obp	27bp	-10bp	Обр	Scenarios of hawkish repricing of policy trough	Scenarios of Fed hikes
18m1y vs 6m1y rec	1-May-25	0bp	30bp	-15bp	73bp	< frontloaded cuts, > backloaded cuts	>frontloaded cuts with < medium term
6m fwd 2s10s floor ladder	1-May-25	46bp	17bp	-10bp	27bp	Underperformance of curve vs fwds	Flattening beyond the c.20bp BE
1y1y receiver 1x1.5	12-Dec-24	9bp	60bp	-15bp		Hedging slowdown scenarios	Aggressive hard landing scenarios
1y fwd 5s30s bear steepener	24-Nov-24	Obp	30bp	-15bp		[] [] [] [] [] [] [] [] [] []	Bear flattening on hawkish Fed
TyTy straddles vs strangles	24-Nov-24	+0.31%	20bp v	-10bp v		Long vol of vol	Lower vol of vol
Long 5y30y vol vs 2y30y vol	24-Nov-24	+5.5bp v	15bp v	-10bp v		Vega supported bearish tail scenarios	Outperformance of intermediate vs long vega
3y1y rtr spd a/-50bp	6-Nov-23	23bp	50bp	-23bp	10bp	Soft landing scenario	Capped to premium
Mar '26 (H6)/ Mar '27 (H7) IR steepener	30-Oct-25	Obp	25bp	-12bp		Market to price hikes in 2027 after RBA, jobs	RBA sounds dovish at Nov meeting, u/r rises
Pay Nov RBA OIS	20-Oct-25	3.415%	3.6%	3.35%		RBA to leave rates unchanged in Nov	RBA cuts rates in Nov
Long 6m5y payer spd USD vs KRW	23-Sep-25	Obp	25bp	-10bp		Underperformance of USD vs KRW rates	Underperformance of KRW vs USD rates
Long 6m20v payers IPY vs AUD	21-Aug-25	Obp	20bp	-10bp		Underperformance of JPY vs AUD rates	Underperformance of AUD vs JPY rates
Short 20y JGBs vs AUD semis	18-Aug-25	289bp	200bp	330bp		Fiscal risks underpriced into autumn Diet	JGBs could rally if risk sentiment deteriorates.
US 10y invoice spreads vs AU	30-May-25	40bp	60bp	25bp		Fiscal divergence	US reg reform, AU budget update
Pay 3v swap EFP (g/g)	28-May-25	-9.5bp	10bp	-19.5bp	3bp	** D. D. D. C.	Global spread tightening
Buy TCV 5.5% Sep 2039 vs 10v IRS	15-May-25	133bp	100bp	148bp		Fiscal convergence between AU and Victoria	Wider spreads likely in a risk-off event
JP 1y2y payers spd vs 1y10y payers	24-Nov-24	0bp	40bp	-15bp	2bp	Bear flattening of the curve	Lagging BoJ & curve bear steepening
IP 1y5y payer ladders	24-Nov-24	Obp	28bp	-10bp	14bp		Underperformance vs. downside b/e
KR 1y fwd 2s10s bull steepeners	24-Nov-24	Obp	2Sbp	-10bp	15bp	Dovish BoK and bull steepening	Hawkish shift for BoK
KR 1y5y receiver spd	24-Nov-24	-16bp	34bp	-15bp	7bp	Repricing of policy trough lower	Capped to upfront premium

For complete list of open trades & trades closed over past 1Y see: BofA - Global Rates Weekly

Options Risk Statement



Options Risk Statement Potential Risk at Expiry & Options Limited Duration Risk

Unlike owning or shorting a stock, employing any listed options strategy is by definition governed by a finite duration. The most severe risks associated with general options trading are total loss of capital invested and delivery/assignment risk... all of which can occur in a short period.

Investor suitability

The use of standardized options and other related derivatives instruments are considered unsuitable for many investors. Investors considering such strategies are encouraged to become familiar with the "Characteristics and Risks of Standardized Options" (an OCC authored white paper on options risks). U.S. investors should consult with a FINRA Registered Options Principal.

For detailed information regarding risks involved with investing in listed options:

http://www.theocc.com/about/publications/character-risks.jsp

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BofA Global Research Credit Opinion Key



BofA Global Research Credit Opinion Key

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