



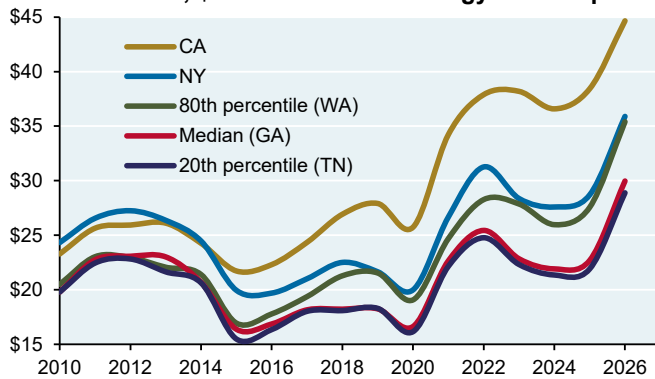
Califoreboding

I was on the West Coast seeing clients last week. California¹ is a strange place; despite energy costs that are 50% higher than the national median and even higher than Alaska (see chart), the highest individual income tax rate and 6th highest corporate income tax rate, the least affordable home ownership market, the largest number of state-level regulatory restrictions, the highest state unemployment rate at 5.1% and the highest rate of unsheltered homeless in the US at 66%, California has experienced the third highest state GDP growth over the last year at 3.6% behind only New York and Idaho, a result largely attributable to AI.

Many client questions I received were laden with a sense of foreboding: third rail questions about the US Federal debt as ten year yields blow through the Bessent Maginot line, the elevated share of market returns and growth attributable to AI, the sustainability of US equity markets close to all-time highs, Anthropic's dire warnings about open weight models and cyber risks, stress in private credit and European deindustrialization. This Eye on the Market walks through my responses to these questions.

What about the 2026 US midterms? There will be time enough to discuss all of that when they're over, although no matter the outcome, I doubt there will be substantial near-term impacts on financial markets. For now, just look at the second chart which I consider to be hilarious.

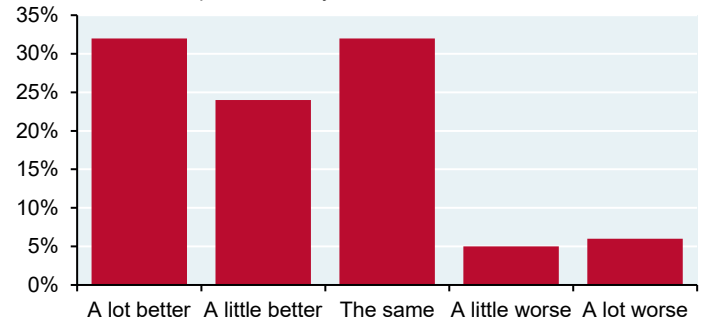
The cost of energy in California...and what that mix would cost elsewhere; \$ / mmbtu of final energy consumption



Source: EIA, LLNL, JPMAM, 2026

Do you think the level of corruption under the Trump administration is better or worse than other recent presidential administrations?

Percent of GOP respondents only



Source: Ipsos, August 2026

Michael Cembalest
JP Morgan Asset Management

Note: the energy chart above computes the cost of energy per mmbtu for California's actual fuel-sector mix (electricity, natural gas, distillates, renewable fuels, diesel and gasoline as consumed by transport, industrial, commercial and residential sectors). We then take that same fuel-sector mix and compute what it would cost in other states based on their respective energy prices. More to come in the 2027 energy paper.



Califoreboding

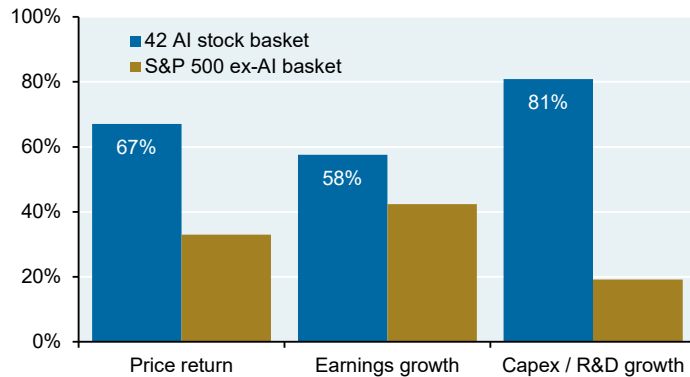
¹ Sources include the 2024 Mercatus StateReg Data Project, US Department of Housing and Urban Development, Public Policy Institute of California, EIA, Lawrence Livermore National Labs, Tax Foundation, HUD Office of Policy Development and Research



One trick pony: the concentrated contributions of AI to US markets and growth

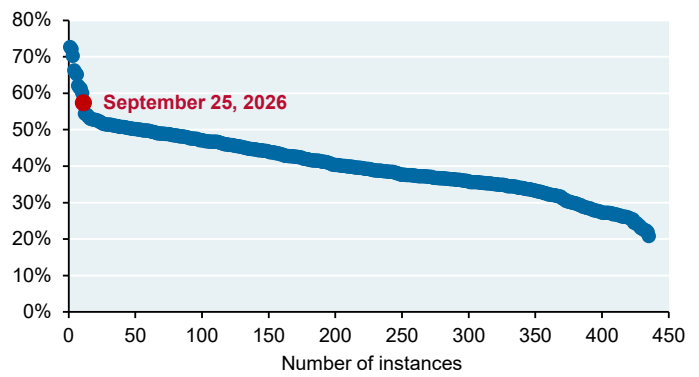
Anyone concerned about US reliance on AI, look no further. The charts below show that (i) a basket of 42 AI stocks accounts for 60%-80% of all S&P earnings growth, price returns and capital spending since Jan 2024; (ii) at the same time, 60% of S&P 500 stocks are down 20% or more from their all-time highs despite the market being close to all-time highs...

S&P 500 share of returns, earnings growth and capex growth from AI stocks since January 2024



Source: Bloomberg, JPMAM, October 7, 2026

% of stocks more than 20% below all-time highs when the S&P 500 was within 1% of its all-time high, 1990-2026



Source: FactSet, JPMAM, October 1, 2026

...(iii) only 30% of stocks are outperforming the S&P 500, one of the lowest figures since 1991; (iv) AI is primarily benefitting AI supply chain companies rather than the companies adopting it...

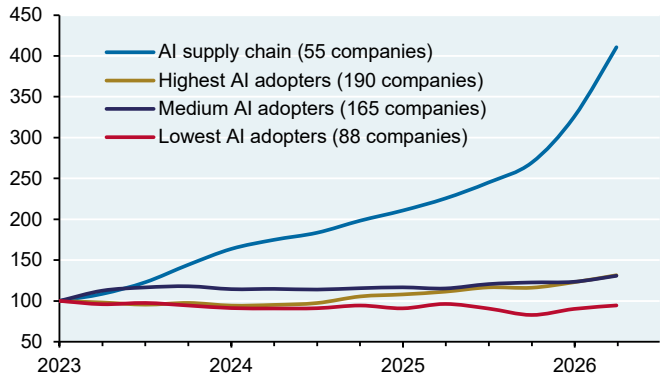
Share of S&P 500 companies outperforming the index on a 3 year trailing basis, Percent



Source: Bloomberg, JPMAM, September 30, 2026

S&P 500 AI supply chain, AI adopters and non-AI adopters

Trailing 12-month earnings, index (100 = March 2023)

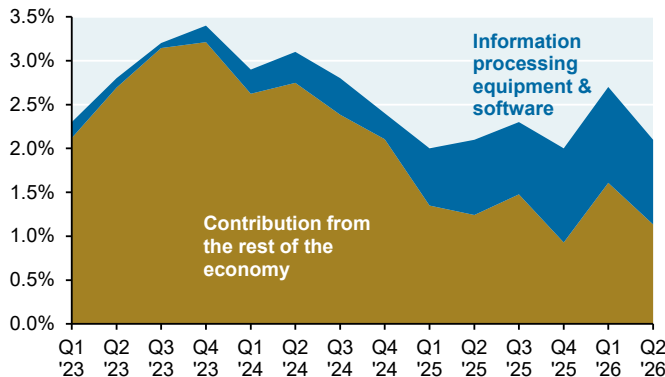


Source: Bloomberg, MIT FutureTech, JPMAM, Q2 2026

...(v) the technology share of GDP growth has risen from almost zero to 2022 to ~33%; (vi) only 20% of US states are growing faster than the national average, almost the lowest figure since 1979...

Contribution to real GDP growth

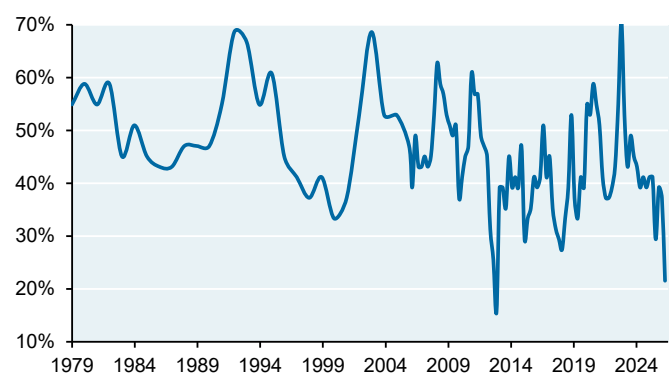
Percent, YoY



Source: Bloomberg, BEA, JPMAM, Q2 2026

Share of states with GDP growth greater than national avg

Percent



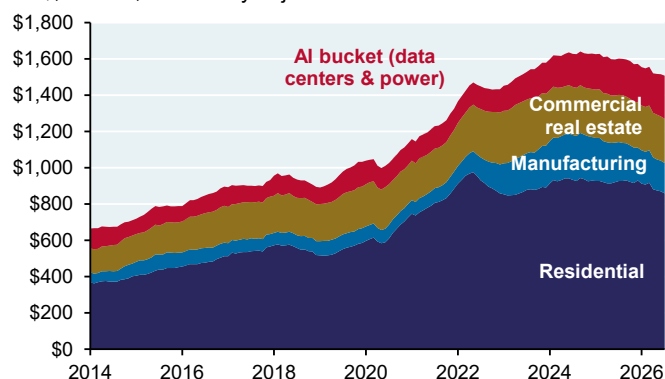
Source: BEA, JPMAM, Q2 2026


[US Economy and Iran War Tracker](#)

...and (vii) AI accounts for the only positive trend in US construction spending, having risen by 38% since January 2024. Unfortunately the other three main categories are down since then (manufacturing -28%, commercial real estate -13% and residential -6%). That's why the decline in planned data centers is something to watch.

US construction spending

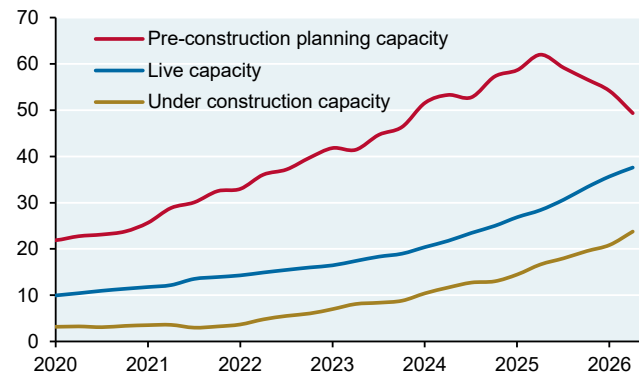
US\$, billions, seasonally adjusted annual rate



Source: Census Bureau, JPMAM, July 2026

Data center IT capacity by stage

GW



Source: BNEF, JPMAM, Q2 2026

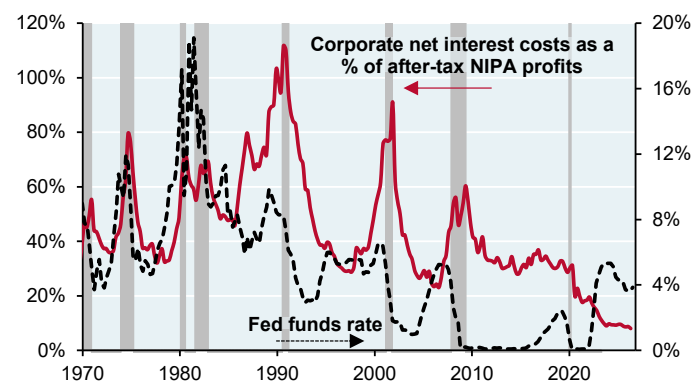
What about the rise in short term interest rates as a threat to corporate profits? I built the next chart a couple of years ago when financial markets were preoccupied with an inverted yield curve and the inevitable recession that never happened. When short term rates go up, there is usually a spike in interest costs as a share of profits. But this time around, we did not see that spike and this continues to be the case; net interest costs are still at an all-time low share of corporate profits. I could theorize as to why but the bottom line is that the US corporate sector seems more immune to rising short term rates than in the past, at least so far.

What about valuations and investor exuberance on AI? I would not say tech multiples are cheap, but since January 2024 when the AI boom began to take off, technology stocks around the world have mostly been driven by earnings growth rather than by P/E multiple expansion; that's the chart on the right. Markets driven by earnings growth are in my experience less susceptible to rapid declines than those driven mostly by multiples.

I had a sense of foreboding on the SpaceX IPO given the track record of other large IPOs since 2010 as lockup expirations approached, but as shown in the table, SpaceX is holding up better than most after 116 days. Maybe it's too early to judge since only ~20% of SpaceX shares have been released into the free float.

US nonfin. corporate net interest costs vs Fed funds rate

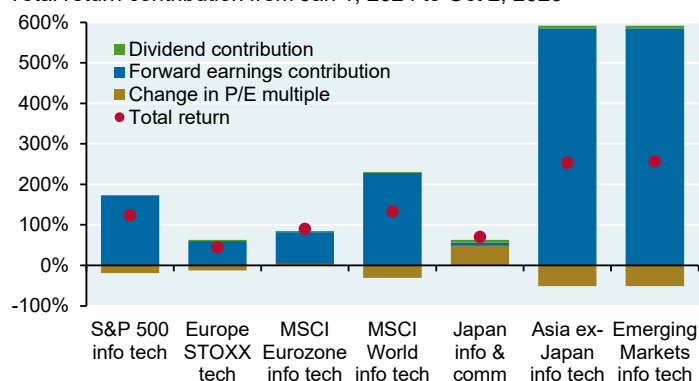
Percent



Source: Bloomberg, JPMAM, Q3 2026

Technology index return decompositions

Total return contribution from Jan 1, 2024 to Oct 2, 2026



Source: Bloomberg, JPMAM, October 2, 2026

Performance of major tech IPOs by Day 116

	Palantir	Airbnb	Snowflake	Doordash	SpaceX	Coinbase	Snap	Lyft	Uber	Rivian	Meta
Since IPO price	349%	175%	150%	31%	28%	3%	2%	-10%	-32%	-39%	-49%
	Palantir	Airbnb	Snowflake	SpaceX	Lyft	Coinbase	Uber	Snap	Doordash	Meta	Rivian
Since first close	243%	29%	18%	8%	-17%	-21%	-26%	-29%	-30%	-49%	-53%

Source: Bloomberg, JPMAM, October 6, 2026



What about the sick man of Europe? Over time, there has been competition in terms of which country this term applies to (UK, France, Germany, Italy and the Ottoman Empire originally). You can be forgiven for having a sense of foreboding about Germany given what's happening to European car markets. Using VW's auto plants as a proxy, labor costs, labor productivity, sick leave rates, unit costs and electricity costs in its China plants are a **fraction** of what they are in Europe, so no one should be surprised at the market share shifts on the right. Even the imposition of 17%-35% tariffs has done little to slow European imports of Chinese EVs.

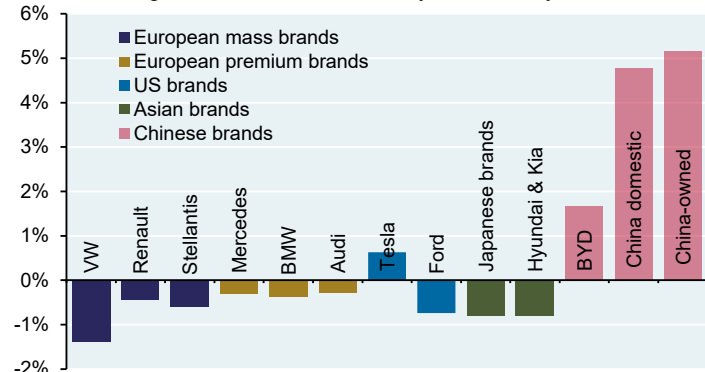
Volkswagen manufacturing economics by plant

	Emden, Germany	Palmela, Portugal	Tianjin, China
Manufacturing labor cost per hour	€ 74	€ 37	€ 12
Annual effective working hours	1,282	1,419	2,065
Sick leave rate	10.5%	4.1%	1.0%
Annual vehicle output per employee	29	39.9	51.3
Factory cost per vehicle	€ 4,850	€ 2,385	€ 1,078
Electricity cost per kWh	0.15-0.23 €/kWh	0.10-0.16 €/kWh	0.06-0.10 €/kWh

Source: BILD, Deutsche Welle, September 3, 2026

Chinese auto brands are gaining market share in Europe

Percent, change in market share from July 2025 to July 2026



Source: Goldman Sachs, August 10, 2026

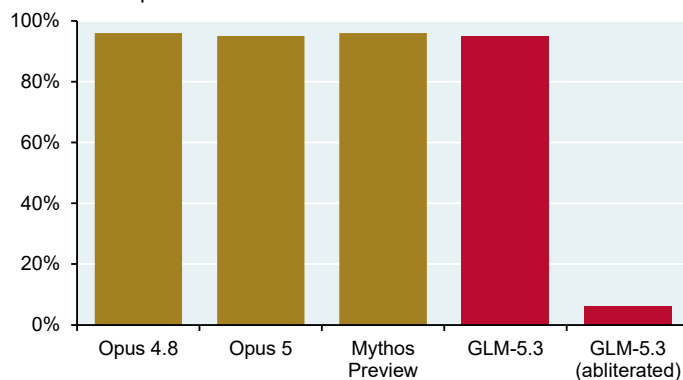
Europe is reportedly prepared to act against China with their own version of US Section 301 tariffs if China does not meet EU demands for voluntary export restrictions, more predictable rare earth export licenses, reduced industrial overcapacity and better market access to European companies. But China may have the upper hand: it exports even more rare earths and permanent magnets to Germany alone than to the US², and has begun to open anti-dumping investigations into European exports as trade tensions escalate.

More foreboding from Anthropic on cyber risks from open weight models, and a new AI word to learn

Anthropic authored a hit piece last week on open weight models, this time on Z.AI's GLM 5.3³, an open weight model that can generate similar performance at ~25% of the cost per task of frontier models⁴. For less than \$5,000, Anthropic engineers were able to "**abliterate**" Z.AI's GLM 5.3 model which is AI jargon for manipulating open model weights to remove restrictions on safety controls. As shown below, once ablation took place, GLM's bad action refusal rate plummeted to almost 0% (left chart) while suffering no degradation in performance (right chart). This is yet another pre-IPO signal flare from Anthropic urgently arguing for regulation of competitor open weight models; no clear sign yet on if/how the Administration plans to act on this issue.

Mean refusal rate on harmful request benchmarks

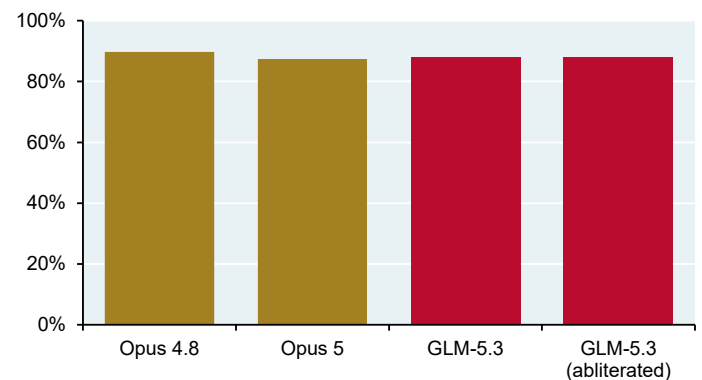
Percent of requests refused



Source: Anthropic, September 29, 2026

Performance on difficult reasoning benchmark

Score on GPQA-Diamond benchmark



Source: Anthropic, OpenRouter, September 29, 2026

² Gavekal Research Geoeconomic Monitor, October 2, 2026

³ "GLM-5.3 and the spread of advanced cyber capabilities", Anthropic, Sep 29, 2026

⁴ Artificial Intelligence estimates of cost per task: GLM 5.3 at \$2.00 vs Claude Fable 5.1 at \$7.63



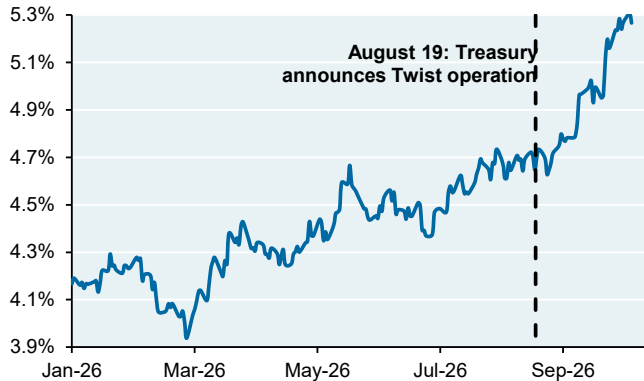
US Federal debt: are rising yields a foreboding of future budget restructuring options?

Now that the ten year US Treasury yield has blown through Bessent's Maginot Line from the August Twist operation, I'm getting more questions about the Federal debt. I don't think the "Final Act" is underway now; the current rise in yields appears to be a function of sticky inflation, hyperscaler debt issuance and US GDP growth above expectations. But if the fuse *were* lit under this Administration, I guess it would not surprise me: for the first time since 1970, the US budget deficit is worse than 5% of GDP and deteriorating during a period of economic expansion (defined as manufacturing PMI > 50 and unemployment rate less than NAIRU).

By 2030-2031, 100% of Federal tax revenues are projected by the CBO to be needed just to pay entitlements and interest on the Federal debt. Something may have to give by then, possibly after a riot in the bond market combined with a rating agency downgrade and signs of reduced Treasury demand from foreign official buyers.

10-year US Treasury yield

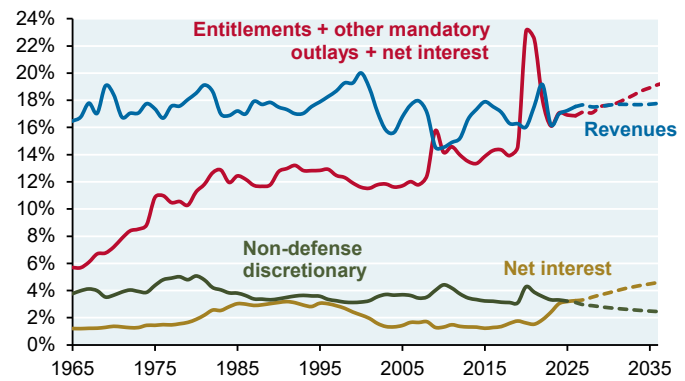
Yield, percent



Source: Bloomberg, JPMAM, October 6, 2026

Federal revenues and major spending components

% of GDP

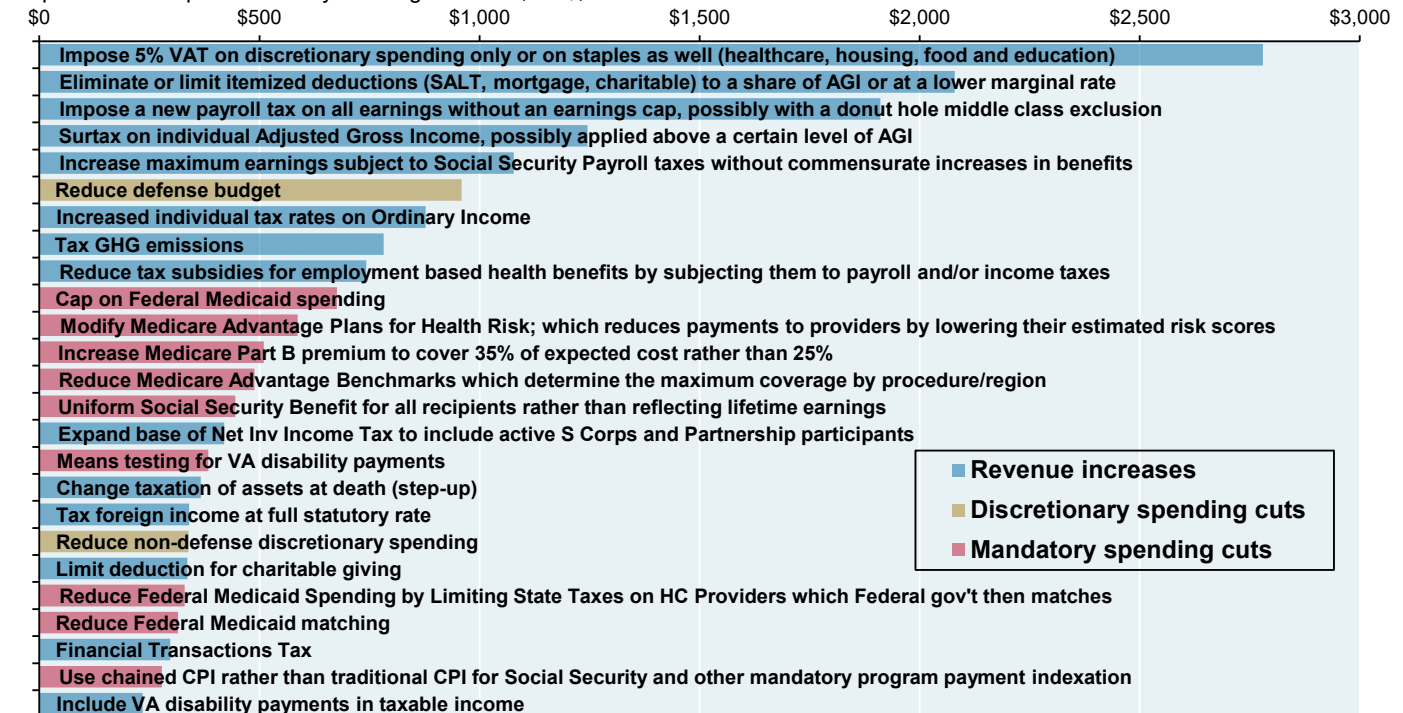


Source: CBO, JPMAM, 2026. Dots are CBO projections

So, here's a look at deficit reduction options. There's almost no discretionary spending left to cut; it's almost all tax increases and cuts to mandatory spending, many involving means-testing. The items below represent 80% of all budget action values in the most recent CBO report (click [here](#) for the full list). We will update this again in December since a new post-OBBA version is expected. The important point: I consider an eventual budget restructuring more likely than outright Fed debt monetization, which would be positive in the long run.

Budget options to reduce the Federal Debt

Midpoint deficit impact over ten year budget window, US\$, billions



Source: CBO, JPMAM, December 2024



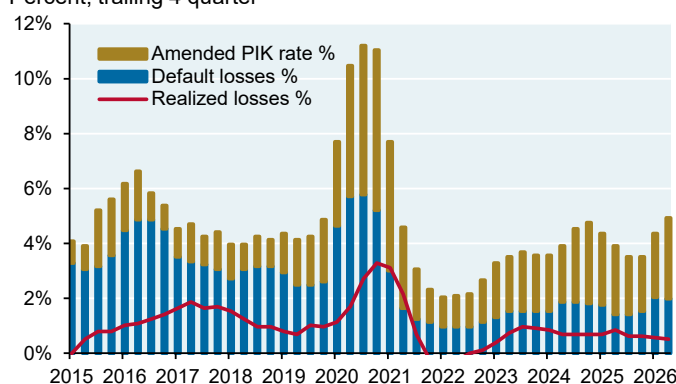
Foreboding in private credit: measuring stress is a combination of art and science

Stress in private credit is a precursor to realized defaults, which is why people track stress in the first place. But the level of stress in private credit is in the eye of the beholder. Some sources cite very low private credit default rates, on the order of 1%-3%. Examples include KBRA, Lincoln International, S&P, Houlihan Lokey and Proskauer Rose. The definitions of stress from each provider are different; some include covenant defaults and certain distressed restructurings while others do not.

At a minimum, stress should include loans that have been deemed impaired by the lender (i.e., non-accrual), and loans whose distress resulted in the exercise of a PIK (pay-in-kind) option that capitalizes part of the interest. The first chart from Cliffwater does exactly that: stress is defined as the dollar value of non-accruals plus PIK-exercised loans for which fair value is 96 or below⁵, divided by total loan balances. PIK loans are important to measure; according to Cliffwater's data, 70% of amended PIK loans never fully return to cash pay two years later. Using Cliffwater's definition, private credit stress is running at ~5%. Cliffwater compares this measure to actual realized losses which continue to be very low (below 1%) as the can is kicked the road.

Stress level on private credit loans

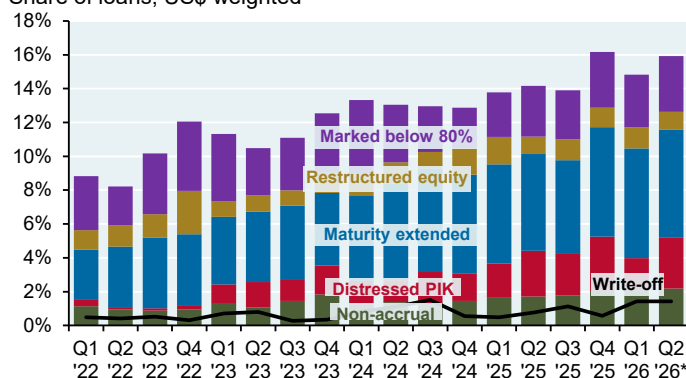
Percent, trailing 4 quarter



Source: Cliffwater Research, September 22, 2026

BDC shadow defaults by type

Share of loans, US\$ weighted



Source: PitchBook, JPMAM, Q2 2026 (final quarter is an estimate)

I asked our Asset Management Private Credit and Risk teams to derive their own measure of stress in private credit. Using Pitchbook data on BDC loans with consistent reporting of debt identifiers (around half of the BDC loan universe), excluding syndicated loans and non-senior tranches, the team tracked five categories of stress:

- Loans deemed non-accrual by the lenders
- Distressed PIK: loans with at least one year of seasoning with any PIK usage valued below 90% of par
- Maturity extensions of more than 2 years marked below 95% of par
- Loans that have been foreclosed upon and converted from debt into equity
- Loans valued below 80% of par for reasons other than those captured above

The results were then divided by the total loans in the analyzed BDC universe. The chart on the right looks quite different: stress in this BDC universe is closer to 15%. The black line shows the share of loans disappearing from BDC balance sheets entirely in each period, which we consider to be a proxy for total write-off with no recovery. As with Cliffwater realized loss data, the JP Morgan Asset Management actual write-off rate is low at 1%-2%.

The bottom line: measuring private credit stress is both art and science; stress measures should include non-accruals, PIK conversions, maturity extensions and debt-to-equity conversions; and the eventual investor return won't be known until more stressed positions are subject to greater price discovery. In other words, this is consistent with the findings on Private Equity and Venture Capital in our "Deep End" Alts piece from last December which cited the highest level of unmonetized investments in the history of both asset classes.

⁵ "Decoding defaults in private credit", Cliffwater Research, September 22, 2026

**IMPORTANT INFORMATION**

This material is for information purposes only. The views, opinions, estimates and strategies expressed herein constitutes Michael Cembalest's judgment based on current market conditions and are subject to change without notice, and may differ from those expressed by other areas of JPMorgan Chase & Co. ("JPM"). **This information in no way constitutes J.P. Morgan Research and should not be treated as such.** Any companies referenced are shown for illustrative purposes only, and are not intended as a recommendation or endorsement by J.P. Morgan in this context.

GENERAL RISKS & CONSIDERATIONS Any views, strategies or products discussed in this material may not be appropriate for all individuals and are subject to risks. Investors may get back less than they invested, and **past performance is not a reliable indicator of future results.** Asset allocation/diversification does not guarantee a profit or protect against loss. Nothing in this material should be relied upon in isolation for the purpose of making an investment decision.

NON-RELIANCE Certain information contained in this material is believed to be reliable; however, JPM does not represent or warrant its accuracy, reliability or completeness, or accept any liability for any loss or damage (whether direct or indirect) arising out of the use of all or any part of this material. No representation or warranty should be made with regard to any computations, graphs, tables, diagrams or commentary in this material, which are provided for illustration/ reference purposes only. Any projected results and risks are based solely on hypothetical examples cited, and actual results and risks will vary depending on specific circumstances. Forward-looking statements should not be considered as guarantees or predictions of future events. Nothing in this document shall be construed as giving rise to any duty of care owed to, or advisory relationship with, you or any third party. Nothing in this document shall be regarded as an offer, solicitation, recommendation or advice (whether financial, accounting, legal, tax or other) given by J.P. Morgan and/or its officers or employees. J.P. Morgan and its affiliates and employees do not provide tax, legal or accounting advice. You should consult your own tax, legal and accounting advisors before engaging in any financial transactions.

For J.P. Morgan Asset Management Clients:

J.P. Morgan Asset Management is the brand for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide.

To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at <https://am.jpmorgan.com/global/privacy>.

ACCESSIBILITY

For U.S. only: If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

This communication is issued by the following entities: In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients' use only, by local J.P. Morgan entities, as the case may be.; in Canada, for institutional clients' use only, by JPMorgan Asset Management (Canada) Inc., which is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon and is also registered as an Investment Fund Manager in British Columbia, Ontario, Quebec and Newfoundland and Labrador. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific ("APAC"), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), which this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number "Kanto Local Finance Bureau (Financial Instruments Firm) No. 330"); in Australia, to wholesale clients only as defined in section 761A and 761G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919). For all other markets in APAC, to intended recipients only.

For J.P. Morgan Private Bank Clients:**ACCESSIBILITY**

J.P. Morgan is committed to making our products and services accessible to meet the financial services needs of all our clients. Please direct any accessibility issues to the Private Bank Client Service Center at 1-866-265-1727

LEGAL ENTITY, BRAND & REGULATORY INFORMATION

In the **United States**, **JPMorgan Chase Bank, N.A.** and its affiliates (collectively "**JPMCB**") offer investment products, which may include bank managed investment accounts and custody, as part of its trust and fiduciary services. Other investment products and services, such as brokerage and advisory accounts, are offered through **J.P. Morgan Securities LLC ("JPMS")**, a member of [FINRA](#) and [SIPC](#). JPMCB and JPMS are affiliated companies under the common control of JPM.

In **Germany**, this material is issued by **J.P. Morgan SE**, with its registered office at Taunustor 1 (TaunusTurm), 60310 Frankfurt am Main, Germany, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). In **Luxembourg**, this material is issued by **J.P. Morgan SE – Luxembourg Branch**, with registered office at European Bank and Business Centre, 6 route de Treves, L-2633, Senningerberg, Luxembourg, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Luxembourg Branch is also supervised by the Commission de Surveillance du Secteur Financier (CSSF); registered under R.C.S Luxembourg B255938. In the **United Kingdom**, this material is issued by **J.P. Morgan SE – London Branch**, registered office at 25 Bank Street, Canary Wharf, London E14 5JP, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – London Branch is also supervised by the Financial Conduct Authority and Prudential Regulation Authority. In **Spain**, this material is distributed by **J.P. Morgan SE, Sucursal en España**, with registered office at Paseo de la Castellana, 31, 28046 Madrid, Spain, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE, Sucursal en España is also supervised by the Spanish Securities Market Commission (CNMV); registered with Bank of Spain as a branch of J.P. Morgan SE under code 1567. In **Italy**, this material is distributed by **J.P. Morgan SE – Milan Branch**, with its registered office at Via Cordusio, n.3, Milan 20123, Italy, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Milan Branch is also supervised by Bank of Italy and the Commissione Nazionale per le Società e la Borsa (CONSOB); registered with Bank of Italy as a branch of J.P. Morgan SE under code 8076; Milan Chamber of Commerce Registered Number: REA MI 2536325. In the **Netherlands**, this material is distributed by **J.P. Morgan SE – Amsterdam Branch**, with registered office at World Trade Centre, Tower B, Strawinskylaan

US Economy and Iran War Tracker

1135, 1077 XX, Amsterdam, The Netherlands, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Amsterdam Branch is also supervised by De Nederlandsche Bank (DNB) and the Autoriteit Financiële Markten (AFM) in the Netherlands. Registered with the Kamer van Koophandel as a branch of J.P. Morgan SE under registration number 72610220. In **Denmark**, this material is distributed by **J.P. Morgan SE – Copenhagen Branch, filial af J.P. Morgan SE, Tyskland**, with registered office at Kalvebod Brygge 39-41, 1560 København V, Denmark, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Copenhagen Branch, filial af J.P. Morgan SE, Tyskland is also supervised by Finanstilsynet (Danish FSA) and is registered with Finanstilsynet as a branch of J.P. Morgan SE under code 29010. In **Sweden**, this material is distributed by **J.P. Morgan SE – Stockholm Bankfilial**, with registered office at Hamngatan 15, Stockholm, 11147, Sweden, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Stockholm Bankfilial is also supervised by Finansinspektionen (Swedish FSA); registered with Finansinspektionen as a branch of J.P. Morgan SE. In **Belgium**, this material is distributed by **J.P. Morgan SE – Brussels Branch** with registered office at 35 Boulevard du Régent, 1000, Brussels, Belgium, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE Brussels Branch is also supervised by the National Bank of Belgium (NBB) and the Financial Services and Markets Authority (FSMA) in Belgium; registered with the NBB under registration number 0715.622.844. In **Greece**, this material is distributed by **J.P. Morgan SE – Athens Branch**, with its registered office at 3 Haritos Street, Athens, 10675, Greece, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Athens Branch is also supervised by Bank of Greece; registered with Bank of Greece as a branch of J.P. Morgan SE under code 124; Athens Chamber of Commerce Registered Number 158683760001; VAT Number 99676577. In **France**, this material is distributed by **J.P. Morgan SE – Paris Branch**, with its registered office at 14, Place Vendôme 75001 Paris, France, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB) under code 842 422 972; J.P. Morgan SE – Paris Branch is also supervised by the French banking authorities the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and the Autorité des Marchés Financiers (AMF). In **Switzerland**, this material is distributed by **J.P. Morgan (Suisse) SA**, with registered address at rue du Rhône, 35, 1204, Geneva, Switzerland, which is authorised and supervised by the Swiss Financial Market Supervisory Authority (FINMA) as a bank and a securities dealer in Switzerland.

In **Hong Kong**, this material is distributed by **JPMCB, Hong Kong branch**. JPMCB, Hong Kong branch is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission of Hong Kong. In Hong Kong, we will cease to use your personal data for our marketing purposes without charge if you so request. In **Singapore**, this material is distributed by **JPMCB, Singapore branch**. JPMCB, Singapore branch is regulated by the Monetary Authority of Singapore. Dealing and advisory services and discretionary investment management services are provided to you by JPMCB, Hong Kong/Singapore branch (as notified to you). Banking and custody services are provided to you by JPMCB Singapore Branch. The contents of this document have not been reviewed by any regulatory authority in Hong Kong, Singapore or any other jurisdictions. You are advised to exercise caution in relation to this document. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. For materials which constitute product advertisement under the Securities and Futures Act and the Financial Advisers Act, this advertisement has not been reviewed by the Monetary Authority of Singapore. JPMorgan Chase Bank, N.A., a national banking association chartered under the laws of the United States, and as a body corporate, its shareholder's liability is limited.

With respect to countries in **Latin America**, the distribution of this material may be restricted in certain jurisdictions.

Issued in **Australia** by JPMorgan Chase Bank, N.A. (ABN 43 074 112 011/AFS Licence No: 238367) and J.P. Morgan Securities LLC (ARBN 109293610).

References to "J.P. Morgan" are to JPM, its subsidiaries and affiliates worldwide. "J.P. Morgan Private Bank" is the brand name for the private banking business conducted by JPM. This material is intended for your personal use and should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission. If you have any questions or no longer wish to receive these communications, please contact your J.P. Morgan team.