Financial networks on faster rails: The reach of the dollar and the limits of global finance in the age of AI

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The views expressed are my own and do not necessarily reflect official positions of the Federal Reserve Bank of Dallas or the Federal Reserve System.

Good morning, buenos días a todos, and welcome to Mexico City for the fifth CEMLA–Dallas Fed Financial Stability Workshop. Un saludo muy especial a quienes nos acompañáis aquí en CEMLA y también a quienes nos seguís en directo por internet. I am Enrique Martínez García, co-director of the Dallas Fed's Global Institute, and it is a pleasure to join you for this event.

My sincere thanks to Dr. Manuel Ramos Francia, General Manager of CEMLA, for his leadership and support; to Peter Karlström for his dedication to the workshop; and to our colleagues at CEMLA and the Dallas Fed who have made it possible. I am equally grateful to the scientific committee and especially to our speakers, discussants and participants. The dialogue between rigorous scholarship and policy experience is what makes this gathering so impactful.

It goes without saying that the views I express today are my own and do not necessarily reflect those of the Federal Reserve Bank of Dallas or the Federal Reserve System.

The dollar-based global financial system and its constraints

We meet at a striking moment for global finance. Money can increasingly move around the clock, assets can be tokenized, and artificial intelligence can process information and execute strategies at unprecedented speed. Meanwhile, the buildout of AI-related computing, energy, and data infrastructure is creating enormous new financing needs. These developments are changing both the machinery of finance and the demands placed upon it. Finance is being asked to move more quickly—and to mobilize more capital.[1]

I would like to offer one proposition to frame our discussions: the reach of a financial system is shaped by networks, but its resilience depends on the balance sheets supporting them. Finance is, fundamentally, a network of promises. The more widely financial claims are accepted, the more useful they become. Yet every claim must ultimately be funded, priced, and either honored or resolved under stress—with losses allocated when promises cannot be fulfilled in full. Network effects make the system powerful; financial constraints make its capacity finite. The tension between the two is where many questions about financial stability begin.

Faster transfers, whether through blockchain-based rails or conventional payment systems, do not, by themselves, create additional risk-bearing capacity. They change how financial claims circulate, but not the underlying obligations or balance sheets that support them. If many holders seek to redeem or convert their claims simultaneously, liquidity demand can surge at the issuing institution and across the intermediaries providing funding and settlement. When that demand strains available liquidity and balance-sheet capacity, funding costs can rise sharply, forced asset sales can amplify price declines, and financial stress spreads across markets and borders.[2]

The international dimension is essential in all of this. The dollar serves simultaneously as a unit of account, funding currency, settlement vehicle, and store of value. Firms invoice in dollars partly because they can borrow and hedge in dollars; dollar markets are deep partly because so many firms and investors use them. These complementarities create remarkable efficiencies, but also common exposures. A dollar-funding shock can propagate across borders even when neither side of a transaction is American. Offshore dollar liabilities, currency hedges, and dollar-denominated safe assets transmit that pressure through a network whose financial boundaries do not coincide with national borders. These pressures can also spill over to other currencies and financial arrangements—and feed back into dollar markets.[3]

Now consider a second factor: intermediation capacity is finite, but also state-dependent. Dealers face inventory limits; banks face regulatory, funding, and capital constraints; and investors face mandates and risk limits. When intermediaries have sufficient capacity to absorb new orders to buy or sell, prices may move little. Once that capacity is exhausted, however, the marginal buyer or seller may change—and the price response can become sharply nonlinear. In an orderly market, a dealer can absorb the flow; under stress, that same dealer may instead need to reduce positions, requiring larger price adjustments to attract other investors willing to absorb the risk. Margin calls and fire sales can then erode capacity further, amplifying the initial shock. Often, the crucial question is not just how large a shock is, but which balance sheet is marginal when it arises.[4]

The research we will discuss at this year's workshop sheds light on these mechanisms. Daniel Nathan and his coauthors show how foreign demand initially displaced Israeli banks' inventories of central-bank bills without much repricing; only after the banks' buffer was depleted did dollar-funded, currency-hedged intermediaries become influential in setting their yields. Jens Christensen and coauthors distinguish liquidity and term premia in Mexican government bonds and examine how monetary surprises in Mexico and the United States affect them. Together, they remind us that international transmission depends on the institutions and financial market structures through which shocks travel.[5]

Constraints can redirect risks well before a crisis. Melih Firat and coauthors find that tighter macroprudential rules can move credit within banking groups toward affiliated nonbanks. Andrés Schneider and coauthors show how low rates and compressed term premia may induce banks to extend asset duration to support earnings. Maximilian Grimm and coauthors document how credit-supply liberalization can initially support growth while increasing later crisis risk. And Marcin Borsuk and coauthors find that geopolitical uncertainty can contract lending near a conflict frontier without an immediate deterioration in borrowers' fundamentals. Put simply, risk need not vanish; it can migrate across portfolios, institutions, and borders.[6]

New payment rails add another layer of complexity to existing financial-stability challenges. Against that backdrop, consider a dollar-denominated stablecoin. It may circulate on a blockchain without passing through the traditional correspondent-banking network. Yet it still requires reliable dollar liquidity, safe backing assets, and credible mechanisms for redemption—or, when those obligations cannot be met, orderly resolution. Tokenization can change where these needs arise, who supplies them, and how quickly demand shifts. Xiang Fang and coauthors show why local blockchain liquidity and network depth and interoperability matter for stablecoin adoption; Marco Reuter and coauthors ask what makes an issuer's narrow-banking pledge to hold safe reserves credible. Let's be clear: a claim that moves faster is not necessarily a safer claim.[7]

Artificial intelligence, valuations and financial vulnerabilities

AI can further amplify vulnerabilities across the financial system. Fernando Pérez Cruz and coauthors show how AI may help identify and interpret emerging foreign-exchange-market dysfunction. But Yan Ji and coauthors find, in theoretical and simulated markets, that learning agents can discover trading strategies that magnify price swings without explicit instructions to coordinate. AI can strengthen the instruments we use to detect risk while changing the risks we need to detect. And financing the AI investment boom may create new concentrations, leverage, and maturity mismatches that cannot be overlooked.

The vulnerability extends well beyond trading at machine speed. The AI infrastructure boom involves long-lived investments, substantial borrowing, and interconnected financial and revenue commitments—including, for instance, circular financing arrangements. Their sustainability ultimately depends on uncertain future gains from AI and the cash flows it generates.[8]

That brings us to another vulnerability we cannot ignore: the risk of speculative bubbles. A high valuation is not itself evidence of a bubble: genuine productivity gains can justify expectations of substantially higher earnings. But expectations can become self-reinforcing. Rising prices attract investors and appear to validate optimistic beliefs; higher collateral values support additional borrowing; and that financing may push prices higher still, potentially distorting the allocation of capital. When expectations reverse, collateral values fall, and leveraged investors may be forced to sell just as market-making capacity becomes scarce. The same global networks that channel capital toward productive opportunities can also synchronize reversals across markets and countries. Unwinding the resulting misallocation of capital can require costly restructuring and impose substantial costs on the broader economy.[9]

The discussion of AI-related equity valuations therefore warrants closer scrutiny. Several international and multilateral institutions—including the IMF—have already highlighted stretched valuations, concentrated exposures, and interconnected financing arrangements. At the same time, strong earnings, uncertainty about future productivity gains, and the sheer scale of planned AI investment—potentially surpassing earlier infrastructure booms, from railroads and electrification to the dot-com-era telecommunications and fiber-optic buildout—complicate comparisons with past episodes. The key questions are what future cash flows current prices anticipate, how much financing rests on those expectations being realized, and who ultimately bears the losses if revenues disappoint. An upswing in the interest-rate cycle could also weigh on valuations, even if earnings expectations remain intact. A correction need not originate in banks to reach them through portfolio exposures, collateral calls, and dollar-funding markets.[10]

In my own research with Efthymios Pavlidis and Kostas Vasilopoulos, we developed the exuber toolkit to detect and date-stamp episodes of explosive asset-price dynamics. Such patterns can provide early-warning signals of speculative exuberance and potential asset mispricing, although that is not to say that these indicators are sufficient evidence of a bubble. Applying these diagnostics across financial markets reveals that these symptoms are not confined to a single asset class, even if today's AI-related valuations deserve particular attention.[11]

Why does this matter? Among other reasons, rising asset valuations can contribute to looser financial conditions, potentially reinforcing the very dynamics that sustain them. The Federal Reserve Board's Financial Conditions Impulse on Growth (FCI-G) provides a useful perspective: it captures not only the effects of interest rates on economic activity, but also those of equity and house prices, corporate borrowing costs, and exchange rates. Recent FCI-G decompositions suggest that equity prices have become a particularly important source of support for economic activity, beyond the direct contribution of interest-rate movements. This matters because rising asset values can stimulate spending through wealth effects, strengthen collateral and borrowing capacity, and encourage further credit expansion and risk-taking, including through private-credit funds and other nonbank financial intermediaries. If valuations subsequently reverse—say, following an AI-related correction—those same mechanisms can operate in the opposite direction, transmitting stress across nonbanks, banks, and markets and potentially threatening broader financial stability.[12,13]

Monetary-policy transmission and the fiscal anchor

Why does all this matter for central banks? The policy rate is not the entire transmission mechanism. Monetary policy operates through multiple instruments and channels, influencing a global network of funding decisions, asset valuations, hedges, and credit allocations. Within the dollar-based international monetary system, these effects run in both directions: monetary policy can affect foreign bond premia, dollar-funding costs, and the exchange rate of the dollar, while foreign demand for dollar assets can, in turn, reshape domestic financing conditions. Networks extend the reach and spillovers of monetary policy, but the financial constraints of intermediaries shape its transmission. The same shock may be absorbed with little disruption when balance-sheet capacity is ample, yet generate much larger adjustments when that capacity becomes scarce. Understanding these changing conditions is crucial for tracing how monetary policy affects investment, output, and inflation—and how its effects propagate across borders.

There may also be a crowding-out channel at play. Financing the AI investment boom could redirect capital and scarce resources toward data centers and electricity infrastructure, potentially at the expense of other investment. Growing AI-related debt issuance may also compete with government and other borrowing, although it remains unclear whether this has materially contributed to higher long-term interest rates.[14]

Underlying these financial networks is a public anchor too: the credibility of money and government debt. Our keynote speaker, David Andolfatto, will examine monetary policy under fiscal dominance. Without anticipating his argument, the topic reminds us that the stability of private claims also depends on the monetary and fiscal institutions supporting safe assets and settlement—a connection that becomes clearer when government and central bank balance sheets are considered jointly. This points to another major potential vulnerability: reduced fiscal space in advanced economies, where large debt stocks, persistent deficits and growing refinancing needs leave less room to absorb surprises. The IMF and other institutions warn that a sudden rise in sovereign term premiums could transmit stress

through collateral valuations, financial institutions and international funding markets. This risk is distinct from, but could interact with, the AI financing cycle.[15]

These questions lie at the heart of the Dallas Fed Global Institute's mission: understanding how technological change, global capital flows, trade, and the dollar-based monetary and financial system interact. This is not simply a story about trade or payments. It is a story about the organization of finance and its vulnerabilities, the propagation of financial risk, and the transmission of monetary policy across borders. The workshop gives us an opportunity to test these ideas, examine their limits and advance the evidence on the role of banking and finance in all of it.[16]

Bringing it all together

Three propositions, then, frame the 2026 workshop thematically. First, the reach of dollar-centered financial networks can expand with technology, but claims still need credible backing and ample risk-bearing balance-sheet capacity. Second, when funding and collateral capacity is scarce, international spillovers and monetary transmission can become nonlinear. Third, two prominent vulnerabilities today concern the valuations and financing of AI investment and the limited fiscal space available to major sovereign issuers. Both can propagate through asset prices, bond yields, and cross-border credit.

The papers and discussions over the next two days will not deliver one verdict. They should do something more valuable: clarify when new networks deepen liquidity, when valuations and funding constraints magnify stress, and how policy can preserve the benefits of innovation while strengthening resilience. Thank you all for taking part; I look forward to learning from our conversations.

And now it is my pleasure to hand the floor to Dr. Manuel Ramos Francia, General Manager of CEMLA, who will offer the perspective of our host institution. Muchas gracias.

Mexico City, Mexico

November 12, 2026

ENDNOTES

1. **New financial rails and the AI investment boom.** Two developments operate simultaneously: faster payment and trading technologies, and a capital-intensive buildout of computing, electricity, and data infrastructure. The IMF (2026) examines leverage, concentrated exposures, and financing links associated with the second development; the Bank of England (2026) assesses related valuation and funding vulnerabilities. Neither assessment presumes that financial innovation necessarily produces instability. References: IMF (2026), Global Financial Stability Report | Bank of England (2026), Financial Stability Report.

2. **Networks of promises and finite risk-bearing capacity.** Gopinath and Stein (2021) explain how dominant-currency invoicing, dollar financing, and safe-asset demand reinforce one another. Brunnermeier and Pedersen (2009) show how funding liquidity and market liquidity can reinforce each other when intermediary constraints bind. Together, these mechanisms motivate the distinction between expanding network reach and finite balance-sheet capacity. References: Gopinath and Stein (2021) | Brunnermeier and Pedersen (2009).

3. **Global dollar funding and cross-border spillovers.** The complementary roles of dollar invoicing, borrowing, hedging, and safe assets can expose financial institutions and firms outside the United States to common dollar-funding conditions. Du, Tepper, and Verdelhan (2018) document deviations from covered interest parity associated with constrained intermediation, illustrating how balance-sheet limits can affect cross-currency funding prices. References: Gopinath and Stein (2021) | Du, Tepper, and Verdelhan (2018).

4. **Intermediation constraints and marketwide liquidity.** The supply diagram illustrates how the cost of additional dollar funding may steepen as dealers or other intermediaries approach inventory, capital, or liquidity constraints. The location of the marginal intermediary then matters for the response to a given flow. In workshop research, Villatoro and coauthors (2026) find that Chilean fixed-income mutual funds can meet stressed redemptions individually, even though their simultaneous asset sales could be substantial relative to market trading volumes: up to 50% of average daily sovereign-bond transactions under a waterfall scenario and nearly 95% of corporate-bond transactions under pro-rata liquidation. The distinction is between fund-level resilience and marketwide liquidity, not a prediction that those sales will occur. Supplementary figure: Figure 1 (Dollar-funding capacity and nonlinear price sensitivity). References: Brunnermeier and Pedersen (2009) | Vayanos and Vila (2021) | Villatoro and coauthors (2026).

5. **Who sets the price of domestic safe assets?.** Nathan and coauthors (2026), in "When a Market Changes Hands," document how purchases of Israeli central-bank bills by foreign intermediaries first displaced domestic banks' holdings with limited repricing. After the releasable inventory was depleted, dollar-funded, currency-hedged intermediaries became influential in the bills' pricing; a separate 2011 tax reform provides evidence on the effect of foreign participation. Christensen and coauthors (2026), in "The Role of Liquidity and Term Premia in Emerging Bond Markets," distinguish liquidity from term premia in Mexican government bonds and examine their responses to monetary-policy surprises in Mexico and the United States. Both studies illustrate that the investors setting prices, and the funding conditions they face, can vary across markets and over time. References: Nathan and coauthors (2026) | Christensen and coauthors (2026).

6. **Regulatory incentives, risk migration, and resilience.** Firat and coauthors (2026), "Banking on Nonbanks," find that some loan-supply macroprudential tightenings induce banking groups to shift syndicated lending toward affiliated nonbanks; consolidated capital requirements work differently. Schneider and coauthors (2026), "Reaching for Duration," examine how profitability pressures may lengthen banks' asset duration when rates and term premia decline. Grimm and coauthors (2026) show that credit-supply liberalization can temporarily raise credit and activity while increasing subsequent crisis risk. Borsuk and coauthors (2026) study contractions in lending near the Ukraine conflict frontier despite limited contemporaneous changes in borrower fundamentals. Two further workshop contributions refine the policy dimension: Saurina (2026) proposes simpler bank solvency and resolution requirements without reducing resilience, while Gamboa Estrada and coauthors (2026) find that Colombia's maturity-based provisioning strengthened buffers without a significant aggregate lending contraction, although smaller lenders tightened credit terms for loans longer than 108 months. References: Firat and coauthors (2026) | Schneider and coauthors (2026) | Grimm and coauthors (2026) | Borsuk and coauthors (2026) | Saurina (2026) | Gamboa Estrada and coauthors (2026).

7. **Stablecoins, network depth, and credible backing.** The accompanying figure illustrates the rapid expansion of the stablecoin market since 2019 and the persistent dominance of USDT and USDC, with market capitalization broadly leveling off in 2026 after strong growth through late 2025. This pattern is descriptive and does not establish a causal effect of the GENIUS Act signed into law on July 18, 2025. Fang and coauthors (2026), "Global Reach, Local Depth," use cross-chain wallet transactions to show that adoption depends both on the characteristics of a stablecoin and on local blockchain liquidity, network depth, and interoperability. Greater interoperability could connect previously fragmented liquidity pools and alter the allocation of stablecoin use across chains. Reuter and coauthors (2026), "Banking with Stablecoins," analyze how issuers' incentives and regulation affect the credibility of narrow-banking commitments to hold safe assets. Together, these papers distinguish the technological circulation of dollar claims from the liquidity and institutional arrangements needed to redeem them; tokenization need not eliminate maturity, funding, or run risk. The BIS (2026) stresses the common unit of account and further emphasizes that trust in money rests on its singleness, supported by settlement at par, elastic liquidity, and financial integrity. These institutional foundations allow

the benefits of tokenization to extend beyond stablecoins to interoperable tokenized central bank reserves, commercial bank money, and other regulated arrangements. Supplementary figure: Figure 2 (stablecoin issuance and concentration). References: Fang and coauthors (2026) | Reuter and coauthors (2026) | BIS (2026) | CoinGecko (2026) | DeFiLlama (2026) | GENIUS Act (2025).

8. **AI monitoring, market behavior, and financing interdependencies.** Pérez-Cruz and coauthors (2025), in BIS Working Paper 1291, combine machine-learning detection with language-model interpretation to monitor possible foreign-exchange-market dysfunction. Ji and coauthors (2026), in "Financial Market Fragility in the Era of AI Planning," analyze and simulate markets in which learning agents discover price-destabilizing strategies without explicit coordination instructions; these are theoretical and simulated outcomes, not estimates of observed marketwide behavior. Separately, the IMF (2026) describes links among equity stakes, financing commitments, and expected AI revenues. The totals displayed in the accompanying chart concern selected transactions and overlap; they should not be added to calculate aggregate financial exposure. Supplementary figure: Figure 3 (AI financing interdependencies). References: Pérez-Cruz and coauthors (2025) | Ji and coauthors (2026) | IMF (2026), Global Financial Stability Report.

9. **Asset-price feedback, collateral, and deleveraging.** A high valuation alone is not evidence of mispricing. Nevertheless, expectations, borrowing against collateral, and intermediary funding constraints can create mutually reinforcing dynamics. Kiyotaki and Moore (1997) formalize collateral-related propagation, while Brunnermeier and Pedersen (2009) analyze feedback between funding and market liquidity. These models provide mechanisms through which a reversal in valuations might amplify stress; they do not establish the presence of a speculative bubble in any particular AI-related asset. References: Kiyotaki and Moore (1997) | Brunnermeier and Pedersen (2009).

10. **AI-related valuations, historical scale, and interest-rate sensitivity.** The Bank of England (2026) and IMF (2026) identify concentrated international equity exposures, stretched valuation measures (stretched excess CAPE earnings yields), and interdependent AI financing. Van Nieuwerburgh (2026a) estimates that the prospective U.S. AI infrastructure buildout could average about 3.6% of GDP annually over 2025–2032, compared with about 2.2% for the historical railroad boom, 1.1% for the internet-era telecommunications and fiber-optic buildout, and 0.5% for electrification; an updated NBER version estimates about 3.2% (Van Nieuwerburgh, 2026b). Historical estimates are not fully comparable, and projected spending is uncertain. An upswing in market discount rates could weigh on equity valuations even if projected earnings were unchanged. Long-term yields reflect both expected future short-term rates and term premia, which can be distinguished using term-structure models such as those favored by Christensen and Rudebusch (2012). Christensen and Rudebusch (2026), however, find that identifiable AI and fiscal news does not explain the recent increase in estimates of the U.S. equilibrium real rate (r*); this finding should not be read as evidence that changes in observed long-term yields have been causally attributed. This also underscores the importance of distinguishing interest-rate risk to AI-related valuations from claims that the AI investment boom itself is driving interest rates higher. Supplementary figure: Figure 4 (CAPE earnings yield relative to real Treasury yields). References: Bank of England (2026), Financial Stability Report, Chart 1.4 | IMF (2026), Global Financial Stability Report, Figures 1.2–1.3 | Van Nieuwerburgh (2026a) | Van Nieuwerburgh (2026b) | Christensen and Rudebusch (2012) | Christensen and Rudebusch (2026) | Robert Shiller public data | FRED FII10 | Treasury Yield Premiums (Center for Monetary Research, San Francisco Fed).

11. **The exuber toolkit and statistical signals of explosive prices.** Vasilopoulos, Pavlidis, and Martínez-García (2022) describe the public R package exuber, which implements recursive right-tailed unit-root tests for dating explosive price dynamics. In Figure 5, the tests use monthly real equity-price index levels (each deflated by its national CPI), with a fixed BIC-selected ADF lag for each market. Market-specific 95% critical sequences use 9,999 Monte Carlo draws calibrated to the selected lag. The accompanying charts show the real price-index levels on linear axes, shading months when BSADF exceeds the corresponding threshold. Crossings are statistical diagnostics, not proof of speculative bubbles. Supplementary figure: Figure 5 (real-equity BSADF diagnostics, U.S. and international panels). References: Vasilopoulos, Pavlidis, and Martínez-García (2022) | exuber reference and vignette | Dallas Fed International House Price Database | International Housing Observatory.

12. **Financial conditions beyond policy interest rates.** Ajello and coauthors (2023) construct the Federal Reserve Board's Financial Conditions Impulse on Growth (FCI-G) from seven variables: the federal funds rate, ten-year Treasury yield, thirty-year mortgage rate, BBB corporate bond yield, aggregate equity and house prices, and broad dollar index. The weights summarize model-implied effects on future real GDP growth. The quarterly decomposition in the accompanying figure, 1990–2026 Q3, shows that equity-price movements have become an important source of support to growth after the pandemic; negative contributions denote easier financial conditions, not negative equity returns. The FCI-G is neither a measure of monetary-policy stance nor a causal decomposition attributing recent equity valuation effects through the FCI-G solely to AI. Its relevance is that financing conditions encompass asset-price, exchange rate, and credit channels beyond the policy rate. Supplementary figure: Figure 6 (Seven FCI-G contributions and aggregate impulse). References: Ajello and coauthors (2023) | FCI-G public data and methodology | Public quarterly component dataset.

13. **Interpreting cross-market exuberance signals.** The tests cover Nasdaq-100, Nasdaq-100 Technology, PHLX Semiconductor, S&P 500, and broad equities for Japan, Germany, China, and Canada. All are CPI-adjusted using their own national consumer price indexes; the recursive tests are applied to real index levels. Samples begin in January

1995 except Nasdaq-100 Technology (March 2006), PHLX Semiconductor (September 2004), and China (January 1999). Robert Shiller's S&P 500 observations are monthly averages; the Nasdaq and Nikkei indexes use month-end observations. The semiconductor series has no observations for June–October 2008: estimation treats May and November 2008 as adjacent observations, while the corresponding price chart retains the missing calendar interval. The critical sequences are market- and lag-specific; crossings are not rankings of countries by bubble risk. Earnings, cash flows, leverage, and exposures, among other indicators, are needed for proper financial-stability interpretation. Supplementary figure: Figure 5 (real-equity BSADF diagnostics, U.S. and international panels). References: Vasilopoulos, Pavlidis, and Martínez-García (2022) | FRED market data.

14. **International monetary transmission and possible AI crowding-out.** Risk-bearing limits in international bond and funding markets help amplify monetary disturbances through hedging, liquidity and duration prices. Vayanos and Vila (2021) provide a preferred-habitat framework, while Du, Tepper, and Verdelhan (2018) study cross-currency pricing deviations. AI infrastructure investment could also compete for scarce financing and real resources with other activities. The IMF (2026) observes rising AI-related investment-grade bond issuance; the Bank of England (2026) reports limited evidence so far that it has curtailed other borrowers' access to funds. Christensen and Rudebusch (2026) find that identifiable AI news does not explain the recent rise in estimated U.S. r*. Potential reallocations of investment—sectoral crowding out effects—therefore should not be conflated with an identified AI-driven increase in long-term Treasury yields. The accompanying series describe outcomes, without assigning a causal contribution to AI or fiscal developments. Supplementary figure: Figure 7 (Advanced-economy sovereign yields). References: Vayanos and Vila (2021) | Du, Tepper, and Verdelhan (2018) | IMF (2026), Global Financial Stability Report | Bank of England (2026), Financial Stability Report | Christensen and Rudebusch (2026).

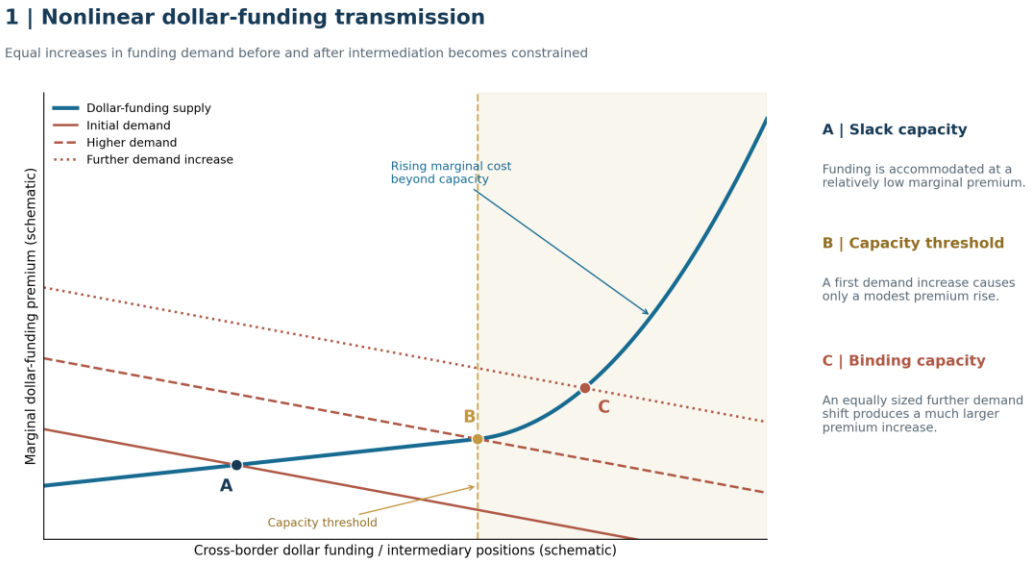
15. **The monetary-fiscal anchor and fiscal space.** Andolfatto (2026), in his CEMLA–Dallas Fed keynote "Between a Rock and a Hard Place," distinguishes monetary dominance (fiscal policy adjusts to support monetary objectives) from fiscal dominance (monetary policy must accommodate fiscal commitments). The distinction hinges on how the consolidated government's intertemporal budget constraint is satisfied. Building on the logic of Sargent and Wallace's "unpleasant monetarist arithmetic," his illustrative framework shows why raising interest rates under persistent fiscal dominance may initially lower inflation but ultimately increase it. Higher interest rates restrain aggregate demand and inflation in the short run, but they also increase government debt-servicing costs as outstanding obligations are refinanced and new debt is issued. If fiscal policy does not adjust through sufficiently higher future primary surpluses, the additional financing requirements must be accommodated. In his framework, this eventually translates into faster monetary expansion and higher steady-state inflation, potentially reversing the initial disinflation. This counterintuitive result is conditional on the prevailing fiscal regime, rather than a general implication of monetary tightening. Importantly, identifying that regime in real time is difficult. Andolfatto therefore emphasizes accounting for uncertainty about monetary–fiscal interactions when assessing policy responses, while communicating fiscal risks clearly without prescribing particular fiscal choices. Drawing on Latin American experience, he also notes that borrowing in one's own currency provides important protection against exchange-rate vulnerabilities but does not eliminate fiscal constraints. The broader lesson is that credible fiscal backing strengthens monetary-policy independence and the ability to maintain price stability. Complementary evidence from Colombia by Romero Chamorro and Vargas Herrera (2026) shows that deteriorating public-debt conditions and higher expected fiscal deficits increase the cyclical component of long-term real sovereign yields and steepen the yield curve, with stronger transmission following the pandemic. These findings underscore the importance of fiscal credibility for sovereign borrowing costs. The IMF (2026) similarly highlights risks associated with limited fiscal space and sovereign repricing. The accompanying figures place recent sovereign yields alongside internationally comparable general-government gross-debt ratios, consistently including all levels of government. They do not establish the causes of yield movements or directly measure fiscal space; gross debt is not adjusted for government financial assets. Supplementary figures: Figure 7 (Advanced-economy sovereign yields); Figure 8 (Comparable general-government gross debt). References: Andolfatto (2026), workshop keynote | Andolfatto (2021) | Romero Chamorro and Vargas Herrera (2026) | IMF (2026), Fiscal Monitor | IMF (2026), World Economic Outlook.

16. **Global Institute and the workshop perspective.** The Dallas Fed Global Institute's research spans three broad, interconnected themes: the future of globalization, encompassing international trade, supply chains, capital flows, and the evolving international monetary and financial system; technological transformation, including AI, digital assets, tokenization, and their implications for productivity, cross-border payments, and financial stability; and demographic change, particularly population aging and international migration. The research presented at this workshop advances this agenda by examining global financial linkages, stablecoins and payment innovation, and the monetary–fiscal foundations of monetary policy and macro stability. These contributions also illustrate how networks, financing constraints, and credible public monetary–fiscal anchors interact to shape financial stability across borders. By fostering dialogue between researchers and policymakers, the workshop supports the Institute's broader mission of understanding how global forces shape the U.S. economy and provides a solid foundation for continued research and collaboration. References: Dallas Fed Global Institute | Workshop program.

SUPPLEMENTARY CHARTS

Figures are numbered in order of first reference in the endnotes.

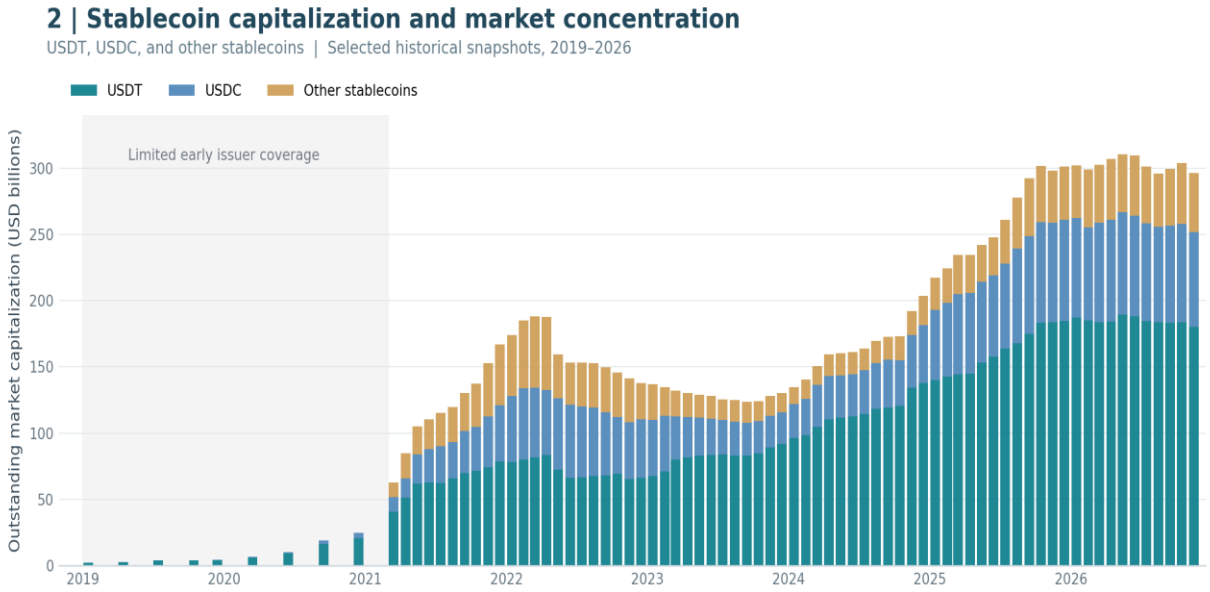
Figure 1. Financial capacity constraints and dollar-funding transmission



Interpretation. Three parallel demand schedules intersect the stylized dollar-funding supply curve at A (slack capacity), B (the capacity threshold), and C (scarce capacity). The two parallel shifts in demand are equal in size. Moving from A to B produces only a modest increase in the marginal funding premium; an equally sized further shift from B to C produces a substantially larger increase because marginal intermediation costs steepen after capacity binds. Stablecoins may affect deposit funding, Treasury-bill demand, and redemption liquidity; the net direction of the effect is ambiguous.

Research and data: Brunnermeier and Pedersen (2009) | Gopinath and Stein (2021) | Nathan and coauthors (2026).

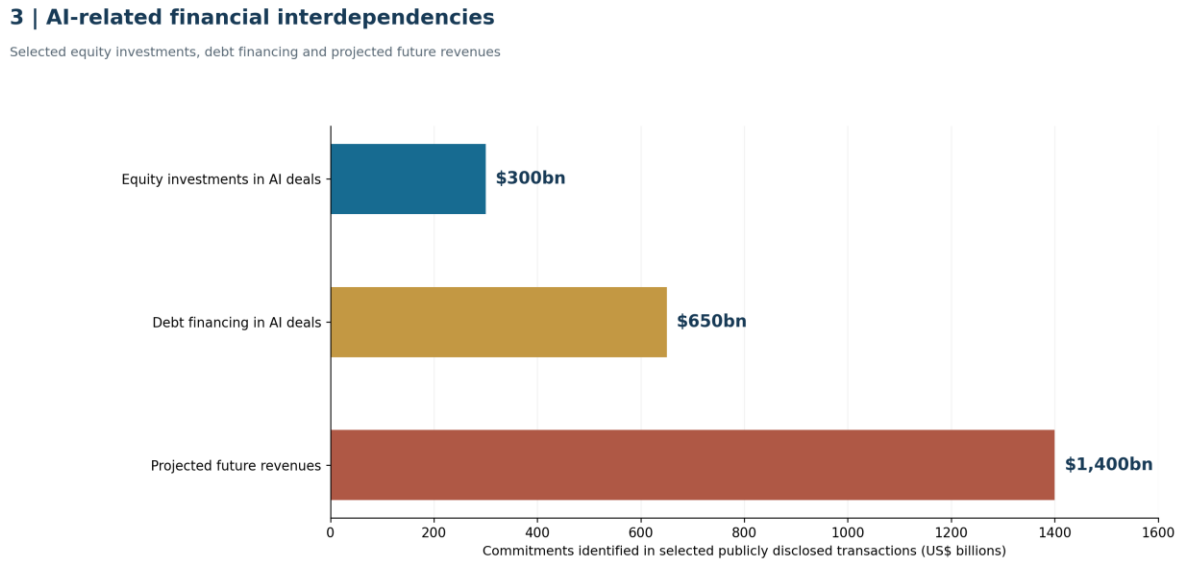
Figure 2. Stablecoin capitalization and market concentration, 2019–2026



Interpretation. Tether (USDT) and USD Coin (USDC) have remained the two dominant stablecoins across the period shown. Aggregate capitalization expanded substantially through late 2025 and was broadly stable during much of 2026. For 2019–2020 only selected historical issuer observations are available; the market-wide “other” series begins in March 2021. The figure describes market capitalization quoted in US$ billions (selected date per month), not transactions.

Research and data: CoinMarketCap historical issuer snapshots (2019–20; May–Oct. 2025) | archived DeFiLlama stablecoin market data (2021–26) | CoinGecko/USDC.org issuer observations (Nov. 2025–Nov. 2026) | Fang, Huber and Zhou (2026) | BIS (2026).

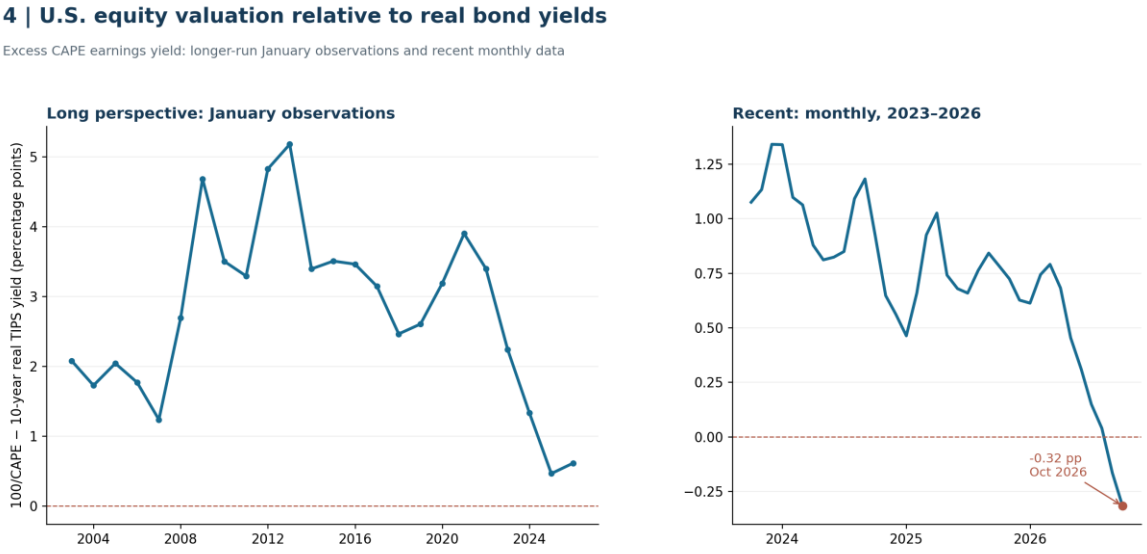
Figure 3. AI financing commitments and interdependencies



Interpretation. The amounts identified in selected publicly disclosed AI-related transactions cover equity investment commitments, debt financing, and projected future revenues. The third category reflects anticipated commercial revenue associated with these arrangements, rather than income already realized or guaranteed to materialize. Taken together, the figures illustrate interdependencies among investors, borrowers, and prospective AI customers; the categories overlap, are not additive, and do not measure aggregate outstanding exposure across the whole AI ecosystem.

Research and data: IMF (2026), Global Financial Stability Report | IMF discussion of AI financing.

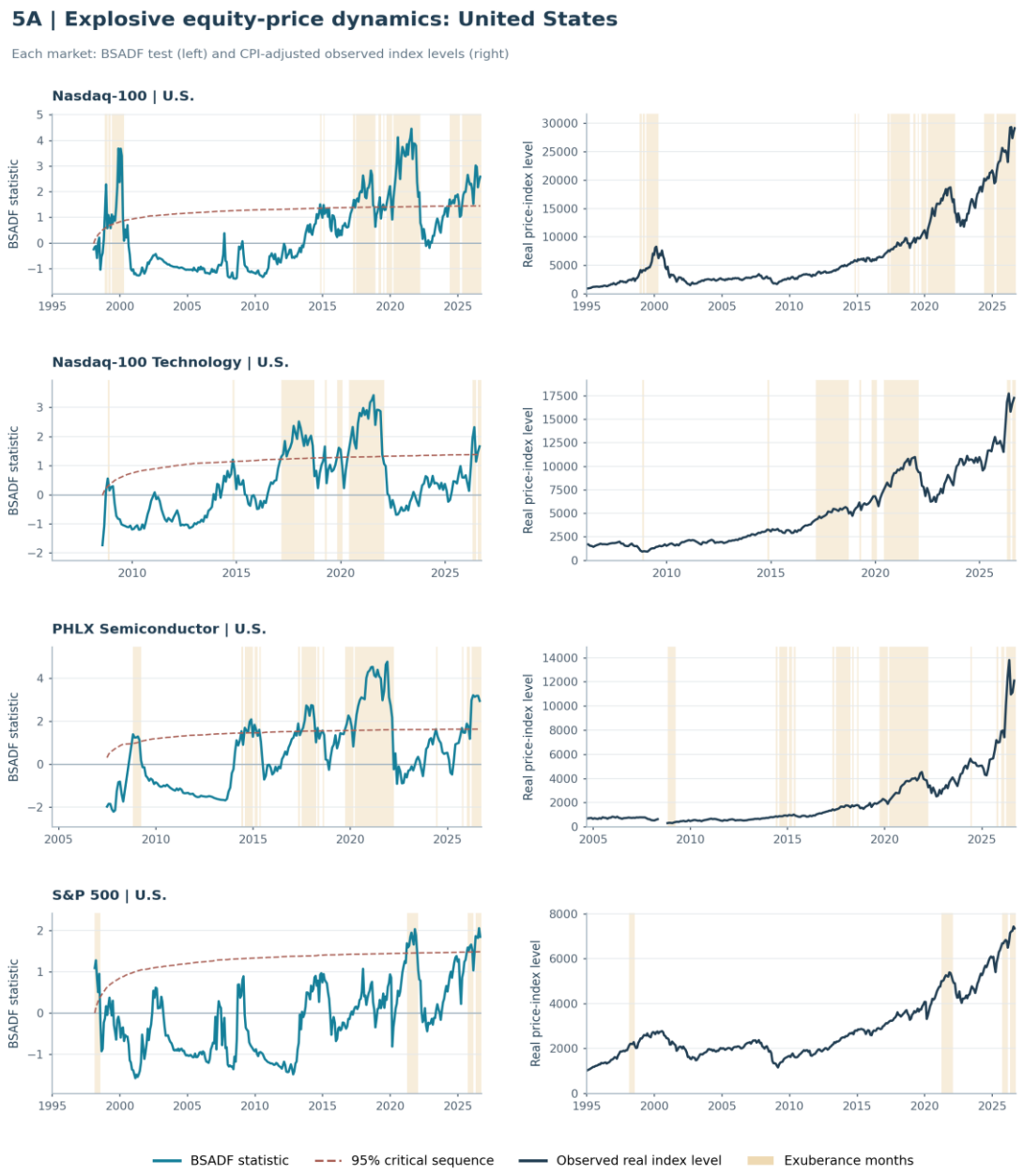
Figure 4. U.S. equity valuations relative to real sovereign yields, 2003–2026



Interpretation. The excess CAPE earnings yield—100/CAPE minus the real 10-year U.S. Treasury yield—compares a cyclically adjusted equity-earnings yield with a real sovereign benchmark. A low or negative spread may flag relatively stretched equity valuations and potential mispricing. However, the indicator is not a bubble test: future earnings expectations, equity risk premia, and real discount rates can all change the relative valuation, so the spread does not by itself establish fundamental mispricing. The historical panel uses January observations, while the recent enlargement uses monthly observations for 2023–2026.

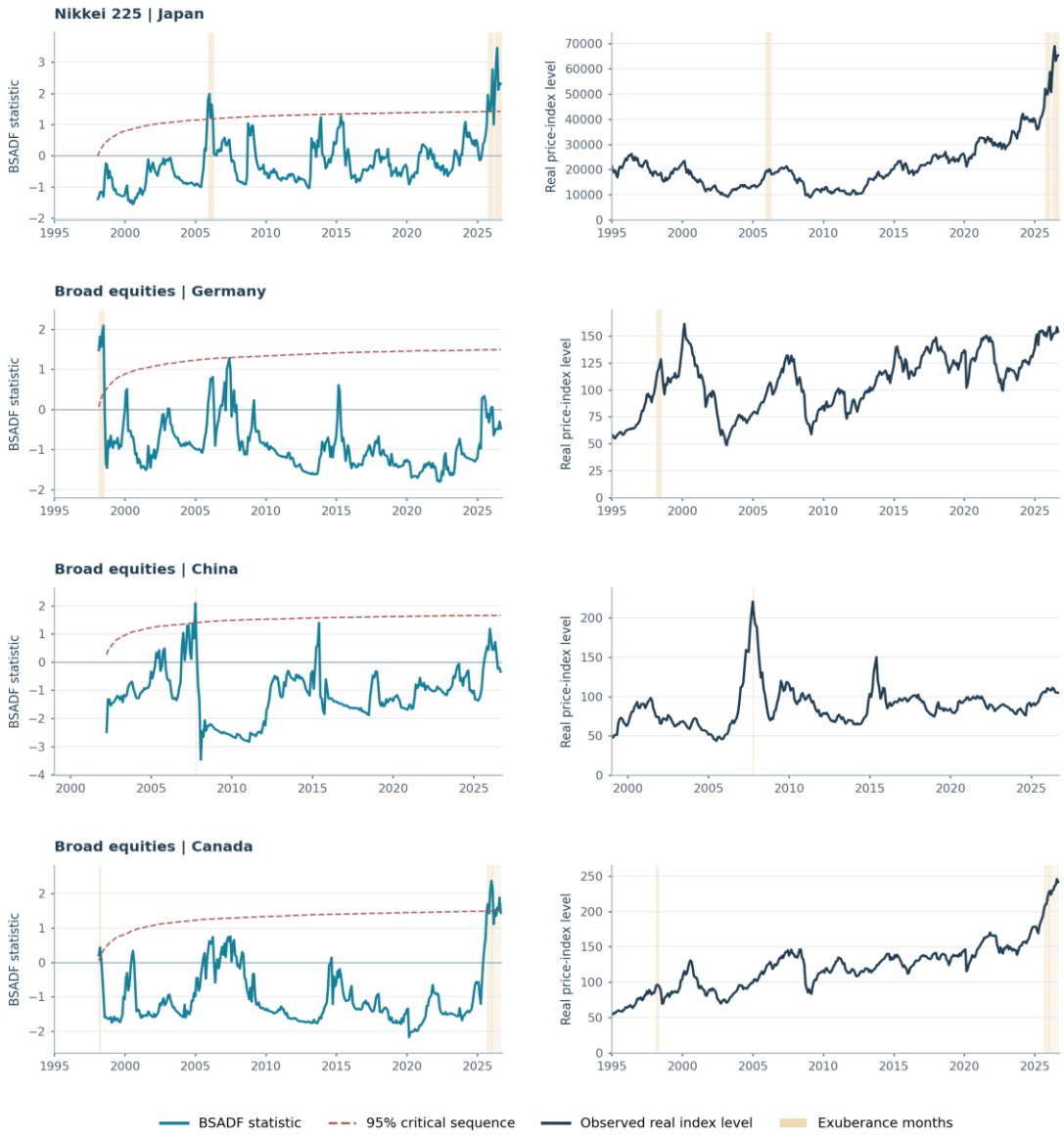
Research and data: Shiller, publicly available CAPE data | FRED, real 10-year Treasury yield (FII10) | Bank of England (2026), Financial Stability Report, Chart 1.4.

Figure 5. Explosive equity-price dynamics across eight markets



5B | Explosive equity-price dynamics: International

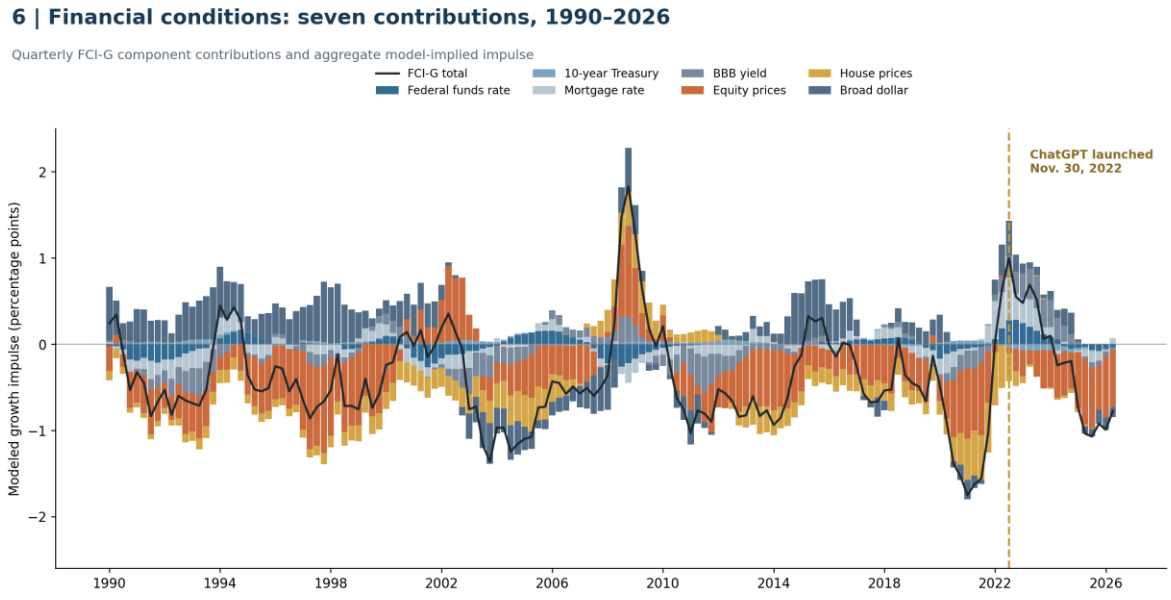
Each market: BSADF test (left) and CPI-adjusted observed index levels (right)



Interpretation. For each market, the left panel reports the monthly BSADF statistic and the 95% critical sequence, using 9,999 Monte Carlo draws matched to the BIC-selected ADF lag. The right panel displays the CPI-adjusted equity price-index level on a linear scale. The paired charts illustrate statistically explosive price dynamics, not established speculative bubbles or international spillovers. Identical gold-shaded months in both columns flag BSADF values above the 95% critical sequence. The PHLX Semiconductor series has a June–October 2008 gap, compressed for estimation but left blank in the observed-price chart.

Research and data: Vasilopoulos, Pavlidis, and Martínez-García (2022), exuber | exuber methodological documentation | Nasdaq-100 | Nasdaq-100 Technology | PHLX Semiconductor | Robert Shiller (S&P 500) | Japan | Germany | China | Canada.

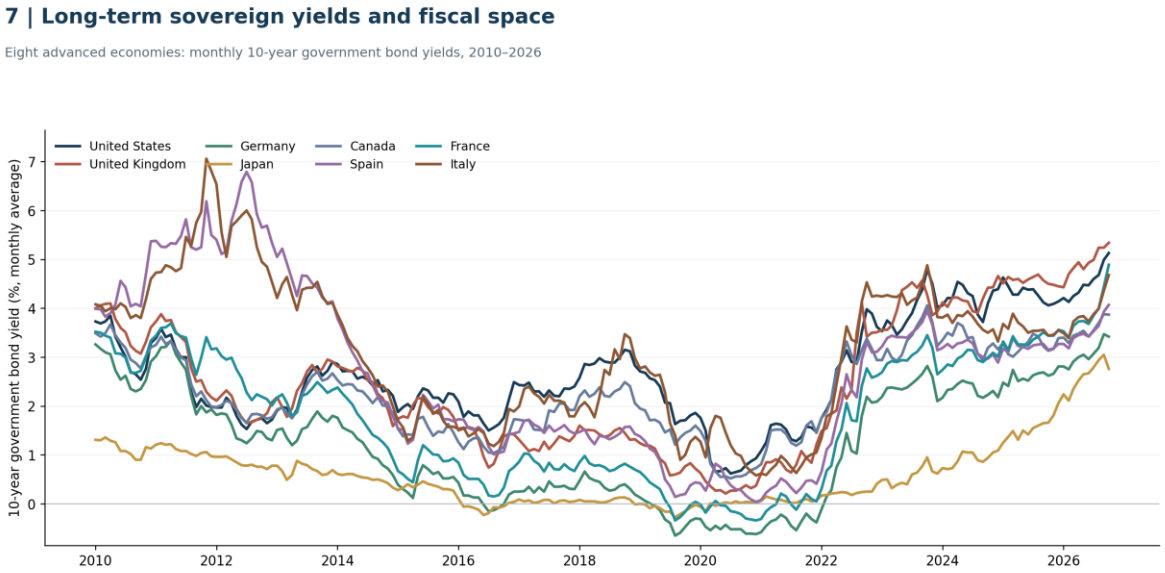
Figure 6. Seven components of the Financial Conditions Impulse on Growth, 1990–2026



Interpretation. The chart reports quarterly model-implied contributions from seven financial variables and the aggregate Financial Conditions Impulse on Growth (FCI-G). The marker is placed at 2022 Q4, when ChatGPT was publicly launched on November 30, 2022. Equity-price contributions became an important source of easier financial conditions during the subsequent expansion of generative AI and AI-related equity valuations. This timing is suggestive, not causal: the FCI-G cannot isolate how much of the equity-price contribution reflects AI. Negative contributions indicate a modeled tailwind to future real GDP growth, not negative equity returns.

Research and data: Ajello and coauthors (2023), FEDS Notes | Federal Reserve Board FCI-G data and method | Public component dataset.

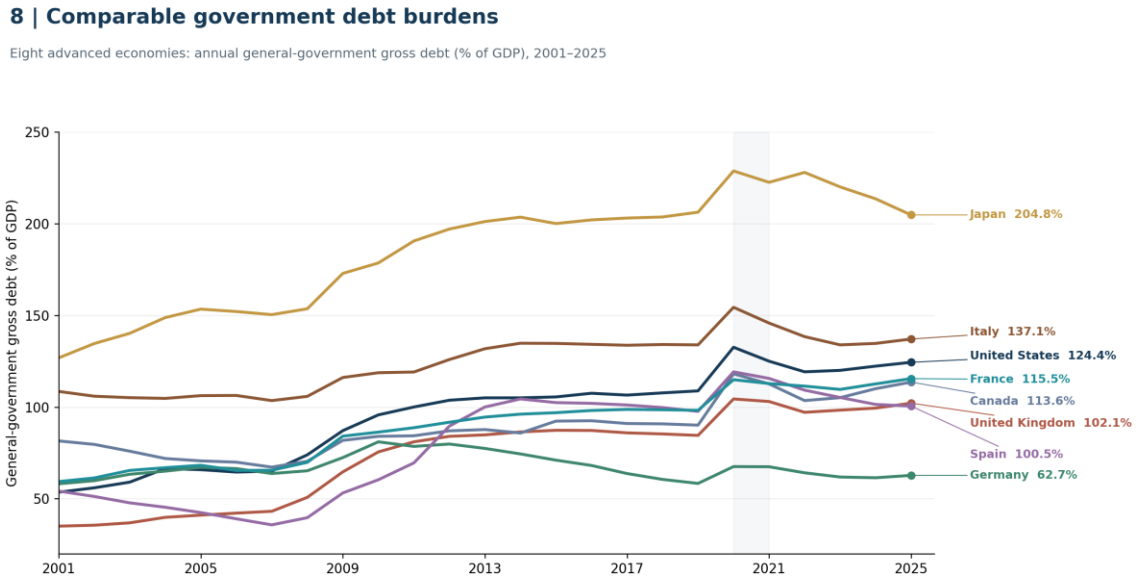
Figure 7. Advanced-economy 10-year sovereign yields, monthly 2010–2026



Interpretation. Monthly 10-year government bond yields are shown for the United States, United Kingdom, Germany, Japan, Canada, Spain, France, and Italy. Their movements can reflect expected policy rates, inflation expectations, term premia, and other factors; the series do not identify how much of any movement is attributable to fiscal conditions or AI financing. The latest available monthly observation across countries is October 2026.

Research and data: U.S. Treasury yield, FRED DGS10 | United Kingdom, OECD/FRED | Germany, OECD/FRED | Japan, OECD/FRED | Canada, OECD/FRED | Spain, OECD/FRED | France, OECD/FRED | Italy, OECD/FRED.

Figure 8. General-government gross debt: Eight advanced economies, 2001–2025



Interpretation. The figure compares annual general-government gross debt as a percentage of GDP for eight economies—Japan, the United States, Canada, the United Kingdom, Germany, Spain, France, and Italy—consistently including all levels of government. Gross debt is not net of government financial assets and is not itself a measure of available fiscal space. The comparisons provide fiscal context but do not establish the causes of sovereign-yield movements in Figure 7.

Research and data: IMF (2026), World Economic Outlook | IMF (2026), Fiscal Monitor | Government of Canada (2026), Fiscal Reference Tables, Table 55 | France historical IMF WEO/FRED | Italy historical IMF WEO/FRED.