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TOP *of* MIND

IPO SURGE: A RED FLAG FOR MARKETS?

The US IPO market has reopened in a big way in 2026, with issuance already at a record high. But this activity has raised two key concerns for the equity market: whether it's flashing a late-cycle warning sign and whether the market can comfortably digest so much new supply. So, how worried should investors be? The IPO Initiative's Jay Ritter, Acadian's Owen Lamont, and GS' Ben Snider agree that we're not in an "IPO wave" (yet) but differ on how much of a red flag the surge in issuance is signaling. Snider argues that the late-cycle warning signs of past IPO booms aren't evident today and digestion concerns are overdone. Ritter notes that while high new issuance volume has historically predicted lower future returns, the signal has been weak. But Lamont is more cautious, calling an IPO wave one of the "four horsemen" of a bubble (especially alongside a surge in debt issuance), but stresses that IPO waves don't necessarily signal the market top. Key to watch: first day IPO returns and the all-important AI outlook.

INTERVIEWS *with...*

Ben Snider, Chief US Equity Strategist, Goldman Sachs

"I'm less worried [about the surge in new issuance] than the average investor… the late-cycle warning signs that have historically accompanied IPO booms aren't evident today… [and] the equity supply-demand balance this year looks better than most investors intuit."

Jay Ritter, Director of The IPO Initiative and Professor Emeritus, The University of Florida's Warrington College of Business

"High new issue volume is a predictor of low future market returns. But, like most indicators, this signal works only slightly better than chance… So, I wouldn't view an IPO boom on its own as a sign that a market downturn is imminent."

Owen Lamont, Senior Vice President and Portfolio Manager, Acadian Asset Management

"Historically, issuance waves paired with capex waves… have generally resulted in disappointing returns for equity holders. So, while this time could be different, history argues for caution."

ALSO *inside...*

Allison Nathan | allison.nathan@gs.com **Jenny Grimberg** | jenny.grimberg@gs.com **Ashley Rhodes** | ashley.rhodes@gs.com

Macro news and views

We provide a brief snapshot on the most important economies for the global markets

US

Latest GS proprietary datapoints/major changes in views

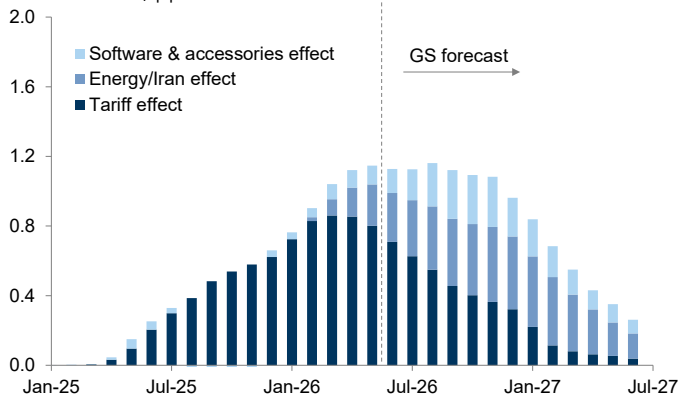
- No major changes in views.

Datapoints/trends we're focused on

- US inflation; we expect the recent improvement to continue, though the re-escalation of the Iran war poses renewed upside risk to inflation and Fed rate hike odds.
- US growth; we expect growth to slow in 2H26 as slowing real disposable cash flow weighs on consumer spending.
- Fed task forces; we see room for changes in communications and data but more limited change around the balance sheet.
- US labor market, which is more resilient than we expected at the start of the year but a tad cooler than normal.

US inflation: likely continuing to subside

Effect of tariffs, energy prices, and software prices on yoy core PCE inflation, pp



Source: Haver Analytics, Goldman Sachs GIR.

Japan

Latest GS proprietary datapoints/major changes in views

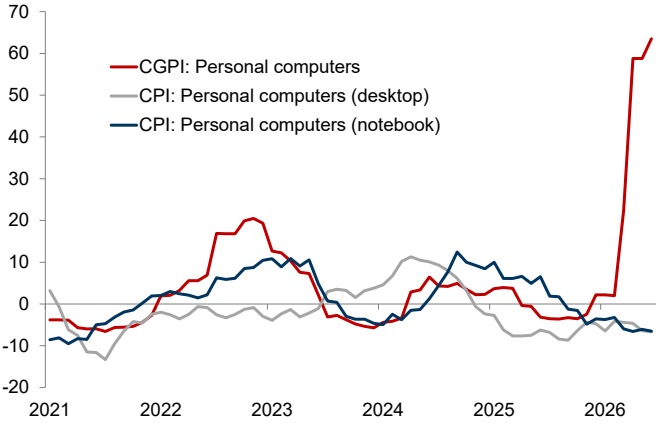
- We recently raised our FY2027 new core CPI inflation forecast to 2.3% (from 2.0%, yoy) to reflect a likely weaker Yen and higher memory chip and food prices.

Datapoints/trends we're focused on

- BoJ policy; we continue to expect the next rate hike in Jan 2027, though uncertainty about the timing remains high.
- *Shunto* final data release, which showed an agreed base pay rise of 3.5%, slightly below last year's 3.7% level but marking the third consecutive year of above-3% growth.
- Japanese consumer sentiment, which improved slightly in June, though it remains well below pre-Iran war levels.

Japan: surging PC prices on higher memory prices

Domestic corporate goods prices and CPI PC prices, % chg, yoy



Source: BoJ, Ministry of Internal Affairs and Communications, GS GIR.

Europe

Latest GS proprietary datapoints/major changes in views

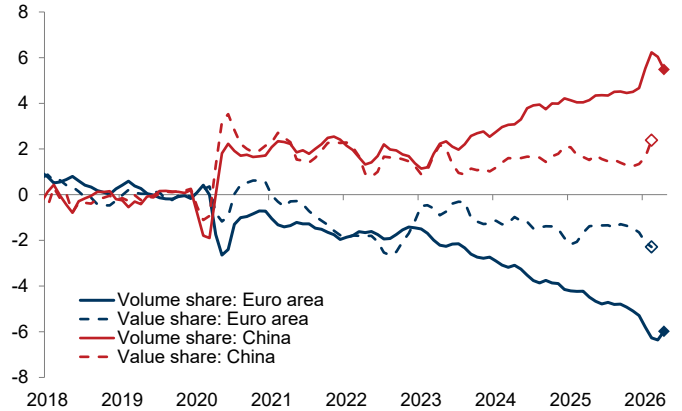
- We raised our 2026 EA GDP growth forecast to 0.7% (from 0.5%, yoy) after upward revisions to Q1 Irish and EA growth.

Datapoints/trends we're focused on

- UK politics; we expect several of newly appointed PM Andy Burnham's policy priorities to be helpful but not transformational for UK growth.
- ECB policy; the recent rebound in energy prices has raised our confidence that the ECB will hike again in September.
- EA political risk, which is on the rise as general elections in France, Italy, Spain, and Greece loom in 2027.
- EU trade policy toward China, which will likely turn more assertive as the EU continues to lose market share to China.

Europe: still losing market share to China

Market share in global exports, chg. relative to 2019 average, pp



Source: Eurostat, Haver Analytics, Goldman Sachs GIR.

Emerging Markets (EM)

Latest GS proprietary datapoints/major changes in views

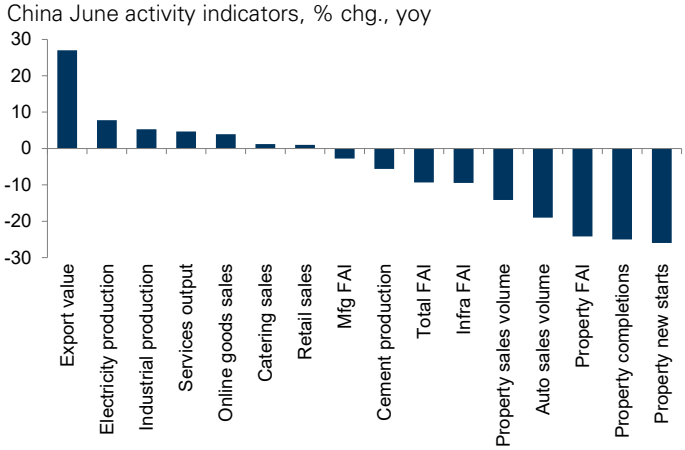
- We lowered our 2026 China GDP growth forecast to 4.6% (from 4.7%, yoy) following the larger-than-expected 2Q26 growth slowdown.

Datapoints/trends we're focused on

- China growth; we expect stronger easing rhetoric at the July Politburo meeting and use of remaining fiscal buffers to stabilize growth, which continues to be powered by exports alone, leaving China vulnerable to renewed global growth shocks from the Middle East or elsewhere.
- The prospect of Hungary joining the Euro area, which we think is realistic and could happen in January 2031.

China growth: (only) export powered

China June activity indicators, % chg., yoy



Source: CEIC, Goldman Sachs GIR.

IPO surge: a red flag for markets?

After several relatively quiet years, the US IPO market has reopened in a big way in 2026, with issuance to date rising sharply to a new record high (and this isn't just a US story—see pg. 17). But this resurgence has raised two key concerns for the equity market: whether it's flashing a late-cycle warning sign, and—even if it isn't—whether the market can comfortably digest so much new issuance. So, how worried should investors be?

We turn to several longtime market watchers for answers: Jay Ritter, Director of The IPO Initiative at the University of Florida's Warrington College of Business, Owen Lamont, Senior Vice President and Portfolio Manager at Acadian Asset Management, and Ben Snider, GS Chief US Equity Strategist.

We first ask whether the current moment constitutes an "IPO wave," which has often preceded market downturns (see pg. 8). All three agree that it doesn't (at least not yet). Snider argues that while dollar volumes are already at record levels, the number of deals to date—which is much closer to the long-term average than past boom levels—suggests the current reopening is more of a normalization of IPO activity, amplified by a few large deals, than a true IPO boom. Ritter also points out that deal count remains fairly modest by historical standards owing to both cyclical and structural factors. And Lamont similarly notes that the market remains in an "IPO drought" by deal count, though he sees signs that an IPO and broader issuance wave may be forming.

But with 2026 already a record issuance year, is this a red flag for the equity market? Snider says he is less concerned than the average investor, arguing that the late-cycle warning signs that have historically accompanied IPO booms aren't evident today. In addition to the relatively unremarkable deal count, he notes that IPO valuations are only modestly above their long-term average and well below prior boom levels. And Ritter adds that while high new issuance volume has been a past predictor of lower future market returns, the signal has been weak—working "only slightly better than chance."

But Lamont is more cautious. He acknowledges that higher issuance may simply reflect the capital demands of a transformative technology like AI. But he also points out that past bubbles have often been fueled by new technologies and have followed issuance and capex waves, as firms tend to sell equity when they believe it's overpriced. He therefore views an issuance wave as one of the "four horsemen" of a market bubble. That said, he stresses that IPO waves can last for years, so they "may mark the beginning of a bubble rather than the end." And he also takes some comfort from the lack of extreme first day pops for recent IPOs, suggesting the absence of speculative euphoria.

But perhaps the bigger concern is the market's ability to digest the new issuance. Snider views such concerns as overdone given that the ~$700bn of corporate equity issuance he expects this year is modest relative to the size of the US equity market and the demand for US equities so far remains healthy. While he cautions that the supply-demand math will become more challenging in 2027 as investor lockups expire, he explains that some investors will choose to maintain their positions and those that don't will likely buy other equities. He also notes a "self-limiting dynamic" to IPOs: they will come to market only as long as demand remains sufficient.

Ritter also views digestion worries as overblown. He says that the $1.6tn of cash that US firms have annually returned to investors in recent years via dividends and buybacks must be recycled, so the IPO market—even with large deals—is absorbing just a fraction of the available capital. And Lamont notes that a threshold does exist at which increased supply will pressure prices. But he argues that where exactly it lies isn't clear—for example, in the late 1990s, the market absorbed a large issuance wave for several years before prices began falling. (Note: the European equity market also faces indigestion concerns, but GS Global Equity Strategists Peter Oppenheimer and Guillaume Jaisson argue that Europe's bigger challenge is a weak domestic equity bid, which they believe will constrain Europe's IPO rebound).

But adding to digestion concerns is the fact that rising issuance is not just an equity story. Firms are also turning to debt—primarily to fund the AI buildout—raising broader indigestion worries. Amanda Lynam, GS Chief Credit Strategist, argues that while the USD investment-grade market can absorb some of this debt issuance, issuer concentration and market saturation constraints will become more binding ahead, which she believes is underappreciated. Lamont, for his part, doesn't view the AI-related debt boom as alarming on its own, but says the combination of a debt issuance wave and an equity issuance wave would be a negative sign for both credit and equity markets.

Whether or not the rise in issuance is flashing warning signs for the broader market, investors must contend with the historical reality that IPOs tend to underperform in their first few years. So, how should investors navigate this? Lamont's advice is simple: be patient. He says "IPOs are like bananas: they need to ripen before they're ready to eat." But Ritter cautions against generalizing the historical trend to the current IPO cohort. And Snider also argues for nuance, adding that investors can improve returns by owning a portfolio of IPOs rather than trying to pick a single winner.

The performance question is even more important now that some major index providers have implemented new rules giving investors earlier access to large IPOs (see pg. 16). Ritter argues that earlier access makes sense for large new listings as long as it doesn't create mechanical demand that distorts prices. But Lamont views the accelerated timeline more negatively, arguing that short seasoning periods could prevent proper price discovery.

So, what should investors watch from here? Lamont is focused on whether the recent increase in activity becomes a wave and first day pops become more extreme. Snider is also watching first day returns as a key sentiment gauge as well as the all-important AI outlook—if it were to shift dramatically, he cautions that the outlook for both the market and associated IPOs would likely also shift.

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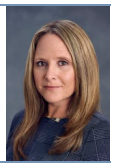


Interview with Ben Snider

Ben Snider is Chief US Equity Strategist at Goldman Sachs. Below, he argues that the current US IPO pickup reflects a return to normal rather than a true boom, with robust equity demand likely to absorb new supply and limit the risks to the broader market.

Ashley Rhodes: How does this year's reopening of the US IPO market compare to past IPO waves?

Ben Snider: In dollar terms, 2026 is already a record year for the US IPO market. New issuance has totaled around $125bn year to date, surpassing the previous full-year record of around $120bn in 2021. We expect that momentum to continue, with total US IPO volume likely to exceed $200bn this year.

However, in terms of the number of IPOs, the picture looks far less extreme. Roughly 60 US companies have gone public so far this year. While that represents a greater than 50% increase yoy and marks the strongest start to a year since 2021, it is much closer to the long-term average than to past boom levels. The 25-year median of IPOs per year is around 100, and the market is roughly on track for that in 2026. By comparison, over 250 companies went public in 2021, and nearly 400 did so in 1999 at the height of the Dot-Com Boom.

So, while dollar volumes are at record levels, the current reopening looks more like a normalization of IPO activity—amplified by a few very large deals—than the broad-based surge investors typically associate with an IPO boom.

Ashley Rhodes: Does the concentration of large deals suggest that only the biggest, most mature companies can come to market?

Ben Snider: No. The IPO market has reopened broadly, with deal activity happening across sectors—obviously including tech but also industrials and healthcare—as well as among smaller, earlier stage companies. But driving the outsized dollar volume to date is a handful of very large technology companies. So, the concentration of IPO dollars reflects a few very large deals and the strength of the tech/AI theme more than a market that's only open to the largest firms.

Ashley Rhodes: Why now for a pickup in IPO activity when the last several years have been relatively quiet?

Ben Snider: More than any other factor, the macro backdrop has become more supportive after several challenging years. In 2022, the sharpest Fed hiking cycle in history drove a sharp decline in valuations—particularly for the long-duration, high-growth companies that typically represent the majority of the IPO pipeline—making it very difficult for many private firms to go public. Since then, interest rates have stopped rising, equity valuations have recovered, and both the economy and corporate profits have continued to grow. So, companies are getting back to the high-water mark of a few years ago in terms of total value, making going public more viable. Our IPO Barometer—which measures how conducive the macro environment is to new issuance—reflects this improvement.

But, again, it's indicating a more normal environment for IPO activity rather than boom conditions.

Even so, the more supportive backdrop has also given private equity (PE) investors the opportunity to take a backlog of mature portfolio companies public. The motivation to do so has been in place for years given muted returns of capital and a growing desire for liquidity, but market conditions and valuations have been unfavorable. With a record $4tn in unrealized PE portfolio value and the IPO market now open for business, those investors are increasingly taking advantage.

There is also a micro overlay to the pickup, tied to AI. The AI boom is, in many ways, a capex boom and the enormous funding required to build AI infrastructure has driven unusually large deal sizes among a relatively small number of companies. This dynamic is also driving a large increase in equity and debt issuance among established public companies.

Ashley Rhodes: Would we be talking about an IPO boom at all if the AI phenomenon hadn't taken hold?

Ben Snider: Given the more supportive macro and market backdrop, we would likely still be experiencing the strongest IPO activity since 2021. But without the AI theme driving a handful of very large deals to date, dollar volumes would be much lower, and most investors would likely be characterizing the environment as a return to normal rather than as a boom.

Ashley Rhodes: Despite that, many investors seem to be viewing the pickup in IPO activity as a warning sign for the equity market. What are investors' main concerns?

Ben Snider: A tremendous amount of investor concern exists, some of it stemming from the inclusion of IPO booms on the checklist of warning signs that typically come late in the cycle. In 1999 and 2021, elevated IPO activity coincided with stretched valuations and exuberant investor sentiment, and market downturns followed. More broadly, periods of heavy IPO activity have often preceded below-average equity market returns. So, investors are understandably wondering whether the current pickup is a sign of market froth or a potential peak.

But the bigger and more universal investor concern revolves around the supply-demand balance in the equity market. The fear is that the substantial increase in equity supply will overwhelm the market and ultimately lead to lower prices.

Ashley Rhodes: Are those concerns warranted?

Ben Snider: I'm less worried than the average investor for a few reasons. First, the late-cycle warning signs that have historically accompanied IPO booms aren't evident today. As we've discussed, IPO activity is rising, but it's not extreme. And despite the relatively common narrative of stretched equity valuations, IPO valuations are only modestly above their long-term average and well below the elevated levels of prior IPO booms. To put some numbers on this, the median IPO last

year traded at 5x EV/sales versus the 30-year median of roughly 4x and compared to 9x in 1999 and 7x in 2021.

Second, while the dollar amount of incremental supply is large, it's modest relative to the overall size of the equity market. Our estimate for roughly $700bn of US corporate equity issuance in 2026—including IPOs, follow-ons, converts, and SPACs—equates to only around 1% of Russell 3000 market capitalization. This is in line with the 2015-2019 average and below the roughly 1.5% in 2021 and 2% at the height of the Dot-Com Boom.

Third, data to date suggests that broader demand for US equities remains healthy. On the corporate side, S&P 500 buybacks are up 4% yoy in 1Q26—continuing the recent trend of mid-single digit growth—and strategic M&A announcements have risen 100% yoy. On the household side, households were net sellers of equities during the Dot-Com Boom, but have shifted to net buyers in recent years via ETF and mutual fund inflows as well as robust retail trading activity. The share of the US equity market owned by foreign investors has also risen from 6% in 1995 to 18% today, with foreign investors continuing to add exposure despite last year's pullback concerns. All told, the equity supply-demand balance this year looks better than most investors intuit.

Ashley Rhodes: But aren't corporate buybacks slowing?

Ben Snider: A common misconception is that the AI capex buildout has essentially halted buybacks. It's true that hyperscalers have pulled back on repurchases to fund their AI efforts, and buyback growth has slowed as a result. Scaling buybacks to market cap, the buyback yield is on track to be the lowest in around 15-20 years outside of recessions. But it's still solidly positive, and, importantly, around 100bp higher than in the late 1990s. So, aggregate corporate demand remains healthy, with many companies outside of the hyperscalers—particularly Banks and AI capex beneficiaries such as semiconductors—still expanding repurchase programs. Nvidia, for example, recently added $80bn to its buyback authorization, and total US buyback announcements are running at a record $960bn year to date. Looking ahead, we expect roughly $1.3tn in gross corporate buybacks in 2026, which should more than offset the incremental equity supply from both direct corporate issuance and potential post-lockup supply this year.

Ashley Rhodes: How will the supply-demand picture shift ahead?

Ben Snider: The supply-demand balance is clearly moving in the wrong direction, and the math admittedly becomes more challenging in 2027 as the lockups from this year's IPOs expire. When a company goes public, typically only a portion of its shares becomes immediately available to trade. The rest remains in private hands, and those investors are restricted from selling in the public market for a designated period, traditionally for around six months after listing. Once that lockup period expires, those investors can sell, and the company's public float—or the shares available for sale—can increase quite dramatically. That consideration may help explain why recent IPOs have struggled more than usual in their first few months of trading as some investors appear reluctant to buy before the final supply impact becomes clear.

That said, concerns about the potential supply headwind are likely overdone. One reason is that unlocked shares don't automatically translate into new public supply. Many investors will choose to maintain their ownership. And even when they do sell, some of the proceeds will likely be recycled back into other equities, creating at least a partial offset to new supply.

Importantly, equity issuance also has a self-limiting dynamic. IPOs will continue to come to market only as long as demand remains sufficient, which requires equity prices and valuations to remain reasonably robust. If the market starts to struggle with too much supply, that will naturally limit future issuance and become self-correcting.

Ashley Rhodes: Historically, IPOs tend to underperform the broader market for a few years after listing. Do you expect a similar pattern, and what are the investor implications?

Ben Snider: While the median IPO has historically underperformed the broader market, the average IPO has outperformed the median, reflecting a right tail of firms that have delivered exceptionally strong returns. This is also why an equal-weighted portfolio of IPOs has generally outperformed the broader market over time—and why, if history repeats as I expect, investors are likely better served owning a portfolio of IPOs rather than trying to pick a single winner. Within that framework, investors should focus on the fundamental variables that have historically been linked to stronger post-IPO performance: valuation, revenue growth, and profitability. Firms that go public with lower multiples, higher revenue growth, and a shorter path to profitability typically post better returns.

Ashley Rhodes: What risks could derail the IPO market's current momentum?

Ben Snider: Beyond the obvious macro risk of an economic slowdown, the more specific micro risk is the one we've been discussing: that the supply of new equity exceeds the market's willingness to absorb it. A material deterioration in early post-IPO performance would indicate that the market is struggling with the supply-demand balance. In that sense, first day returns will be important to watch—IPOs that fail to deliver initial first day gains may signal weaker demand and a less favorable outlook for new issuance. Likewise, consistently poor returns in the early weeks of trading would likely disincentivize investors and corporate managements from participating in future deals and serve as a self-regulating constraint on further issuance.

It's also important to acknowledge the role of AI. Investor appetite for AI-exposed stocks and surging AI capex spending have been major tailwinds for the broad equity market and are key reasons to expect more large private companies to go public. If the AI outlook were to change dramatically—whether due to earnings disappointments, a shift in capex expectations, or a broader reassessment of valuations—the outlook for both the market and associated IPOs would likely shift as well.

Interview with Owen Lamont

Owen Lamont is Senior Vice President and Portfolio Manager at Acadian Asset Management. Below, he argues that the US market isn't yet in an IPO or broader equity issuance wave, but potentially on the verge of one, which warrants some caution.

The views stated herein are those of the interviewee and do not necessarily reflect those of Goldman Sachs.

Jenny Grimberg: Are we currently in an IPO wave?

Owen Lamont: Not yet. Over the past three years, the US market has experienced the opposite of an IPO wave: an IPO drought, measured both by the number of deals and dollars raised. And it remains in a drought this year by deal count. During the 1999 and 2021 IPO waves, several hundred operating companies went public, equating to roughly five IPOs every week. So, without that frequency of IPOs, it's hard to characterize the current activity as an IPO wave. That said, as an economist, I am more focused on IPO dollar amounts, which have already reached record-high levels this year owing to a very large deal. So, a few more sizable IPOs coming to market in 2026 would probably qualify as a wave even if the deal count remains muted. But just one such deal isn't enough. The 2019 Saudi Aramco IPO was the largest in history at the time but was an idiosyncratic event that signaled little about the market.

IPO waves also typically coincide with a wave of equity issuance by existing companies. In recent years, large cap US firms have been mostly share repurchasers, and they still aren't actively issuing equity except for occasional capital raises. So, the market isn't currently in an IPO or broader issuance wave. But it may be at the beginning of one as more large IPOs are reportedly in the works, a very large American depositary receipt (ADR) offering was recently issued in the US, and some mega-cap tech firms have announced that they will pause share repurchases and start issuing equity.

Jenny Grimberg: You have called a surge in equity issuance one of the "four horsemen" of a market bubble. So, if you see signs that a wave may be beginning, are you worried that a bubble could be forming?

Owen Lamont: If the recent increase in activity turns into a wave of issuance, I would view that as a symptom that the market is overvalued and in a bubble. If issuance clusters in a particular industry, as it typically does during IPO waves, that can also signal that the industry itself is overvalued. Firms are smart—they want to sell equity when equity is overpriced. While an issuance wave is just one symptom of a bubble, not a diagnosis on its own, it is a strong one. It worked well in 2021, when a huge wave of issuance, including IPOs and SPACs, proved a great time to underweight US equities.

But an issuance wave doesn't necessarily signal the market top, so relying on it too mechanically can lead investors to exit the market too early, as it would have in the 1990s. That IPO wave, like Japan's historic asset price bubble in the late 1980s-early 1990s, lasted for several years. So, an issuance wave may mark the beginning of a bubble rather than the end.

"If the recent increase in activity turns into a wave of issuance, I would view that as a symptom that the market is overvalued and in a bubble... But an issuance wave doesn't necessarily signal the market top."

Jenny Grimberg: But could the issuance-as-a-bubble signal be less reliable if companies are raising equity to fund investment in a transformative technology like AI?

Owen Lamont: Companies have plenty of good reasons to issue equity that have nothing to do with valuation. And AI is a fantastic new technology. I certainly agree that it will transform the economy and society more broadly. Companies undoubtedly need capital to invest in it, and raising money to fund good projects is a healthy and vital part of capitalism.

But fantastic new technologies have fueled many bubbles. The internet reshaped the world, but buying Pets.com in 2000 still wasn't a great idea, and the firms that went public during the bubble weren't necessarily the ones that benefited most from the internet. Companies like Netflix and Google, which went public much later, ultimately captured much more of the value. So, no guarantee exists that the current cohort of IPOs will be the ultimate "winners" of AI. And, historically, issuance waves paired with capex waves—like the Railroad Boom of the 1800s and, again, the Internet Boom—have generally resulted in disappointing returns for equity holders. So, while this time could be different, history argues for caution.

Jenny Grimberg: The other signals that typically precede a bursting bubble are speculative euphoria and retail enthusiasm. Are we currently seeing those?

Owen Lamont: One warning sign of speculative euphoria is large first day pops, or the difference between an IPO's offer price and its first day closing price. During past big IPO waves and bubbles, these pops far exceeded normal increases of 15-20%—pops of 100% weren't unusual during the 1999 boom. With only a handful of exceptions, we aren't seeing excessive pops today, which suggests that the IPO market isn't in a state of speculative euphoria.

But evidence of retail enthusiasm has appeared, especially in pockets of the market like quantum computing and space-related stocks. And retail participation in the stock market, retail trading as a share of volume, and flows into US equities from both US and foreign retail investors have all risen over the past few years. So, it's something to watch.

Jenny Grimberg: Should potential indigestion issues be a concern for the market given the large dollar size of IPOs?

Owen Lamont: Supply and demand determine prices: when supply rises, prices fall if demand doesn't rise enough to absorb it. The relevant supply in this case isn't just the shares sold on IPO day, but the total shares available for public trading, also known as the "float." Some very large IPOs have had very small initial floats, meaning that most shares aren't immediately available for sale but rather locked up for a period. As lockups expire, more supply enters the market.

The question is how much supply is enough to pressure prices. Over the past 20 years, US companies have generally reduced net equity supply by repurchasing shares to the tune of 1% annually, except during the Covid Bubble period. In the late 1990s, by contrast, a huge issuance wave led the number of technology and growth company shares to rise by around 3-5% annually, and the market absorbed that for several years before prices fell. So, a supply threshold exists, but exactly where it lies is unclear. In that sense, we are exploring the demand for shares, and firms will continue issuing until prices decline. Deng Xiaoping famously described the gradual nature of China's economic reforms as "crossing the river by feeling the stones." The same concept applies here.

"We are exploring the demand for shares, and firms will continue issuing until prices decline. Deng Xiaoping famously described the gradual nature of China's economic reforms as "crossing the river by feeling the stones." The same concept applies here."

Jenny Grimberg: While we may be just on the verge of a wave of equity issuance, a wave of debt issuance is already occurring. What does that signal?

Owen Lamont: Companies have indeed issued a substantial amount of debt, especially AI-related debt, while they are, for the most part, still actively repurchasing shares, as we've discussed. When firms issue debt and use the proceeds to repurchase equity, that suggests the debt is overpriced and the equity is underpriced, at least relative to the debt. From an equity holder's perspective, that's a positive signal.

The AI-related credit boom isn't necessarily alarming on its own. It partly reflects the nature of data-center investment: data centers involve land, and land is often financed with debt. Borrowing backed by solid collateral is less concerning, though rising leverage is still worth watching. But the combination of a broad debt issuance wave and an equity issuance wave would suggest that a company's whole enterprise value—debt and equity—may be overpriced. So, it would be a negative sign for both credit and equity markets.

Jenny Grimberg: Several index providers have changed their rules, giving investors earlier access to large IPOs. Are these changes a positive or negative development?

Owen Lamont: When a company goes public, index providers must make three decisions: whether to include it, when, and at what weight. Traditionally, most index providers required companies to have a minimum float—such as at least 10% of market cap—before they could be considered for inclusion. Several providers have relaxed or waived that requirement. We can debate whether having a liquidity rule based on dollar float rather than float as a percent of market cap is better, but a liquidity requirement in general is a good idea because stocks with very low floats can be extremely volatile.

The second decision is the "seasoning period." Many index providers historically required newly public companies to trade for several months before inclusion, but several have now shortened the seasoning period to as little as five or 15 days. That strikes me as a bad idea because establishing a fair, honest price in a liquid market is crucial and takes time.

The third decision is weighting. Most modern indices are float-weighted, meaning that a company's index weight is based on the amount of publicly tradable shares. Index providers have learned through bitter experience that weighting a company by its market cap—which can sometimes be much larger than the float—is a terrible idea. So, very large companies with limited floats will enter the index at a fairly small weight, ameliorating the issues created by the looser liquidity and shorter seasoning period rules.

The S&P 500 also requires a company to be profitable before it can join the index. It hasn't changed that rule, or its other eligibility requirements, so a very large newly public company may still have to wait years before entering the S&P 500.

Jenny Grimberg: How do IPOs tend to perform during waves?

Owen Lamont: As a general rule, IPOs on average underperform in the three years after listing, and that pattern has held for 60 years. IPOs are like bananas: they need to ripen before they're ready to eat. They especially disappoint during IPO waves. So, buying an IPO on average is a bad idea, but the worst possible time to buy an IPO is when everything is coming to market at once. Young and unprofitable firms, which are generally more overpriced, also tend to go public more often during IPO waves. That said, relatively mature companies with multi-year track records are better positioned to buck this trend.

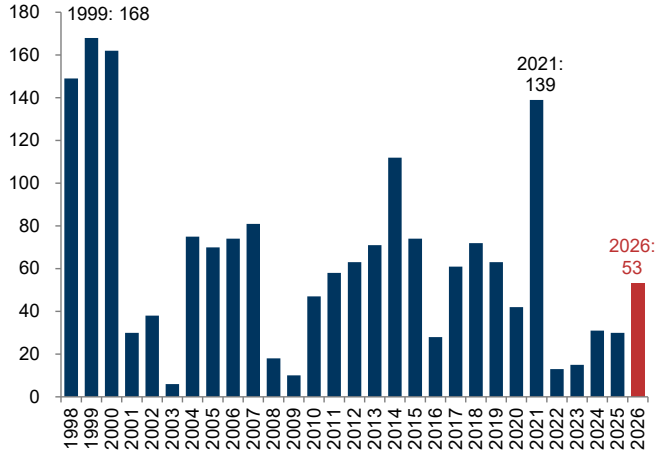
Jenny Grimberg: So, what's your advice to investors navigating this issuance landscape?

Owen Lamont: In general, I wouldn't be eager to participate in the latest and greatest IPO. Buying at the offer price can make sense given the average first day pop I mentioned. But for investors buying after trading begins, the evidence suggests that waiting one to three years is the better strategy. I would also advise keeping an eye on the IPO market for signs that it's becoming super hot, such as hundreds of IPOs, exceptionally high dollar issuance, and massive first day pops. That would be a negative signal and could argue for underweighting US equities. And I would watch whether existing firms are repurchasing or issuing equity, because that provides a more holistic picture of the US equity market. For now, companies mostly aren't issuing much equity on a holistic basis, which is a positive sign. But that could change.

US IPO pickup: reasons for concern…

US IPO activity has recently accelerated following four consecutive years of muted issuance

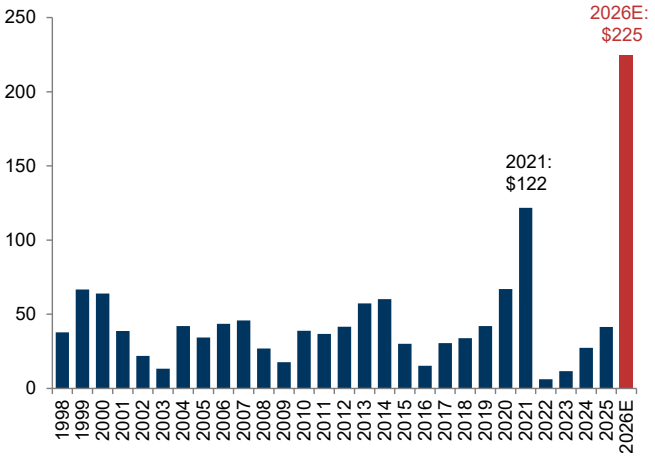
Number of US IPOs YTD vs. the same point in prior years*



*US deals greater than $25mn in value.
Source: FactSet, Goldman Sachs GIR.

And we estimate IPO gross proceeds will total a record $225bn in 2026

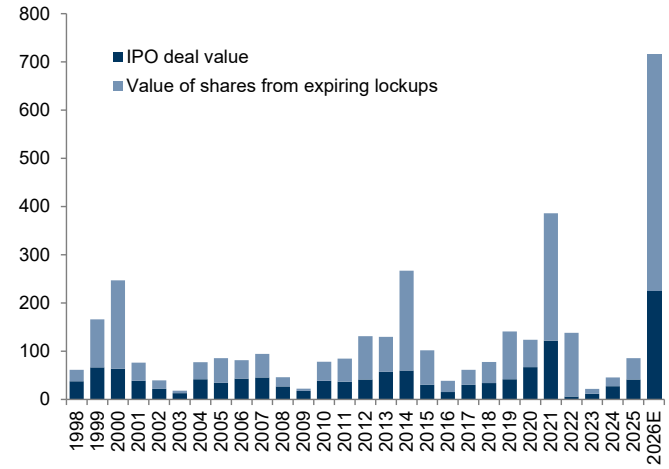
US IPO gross proceeds, $bn



Note: Universe consists of US deals greater than $25mn in value.
Source: FactSet, Goldman Sachs GIR.

In addition to shares floated at IPO, expiring lockups could further increase equity supply

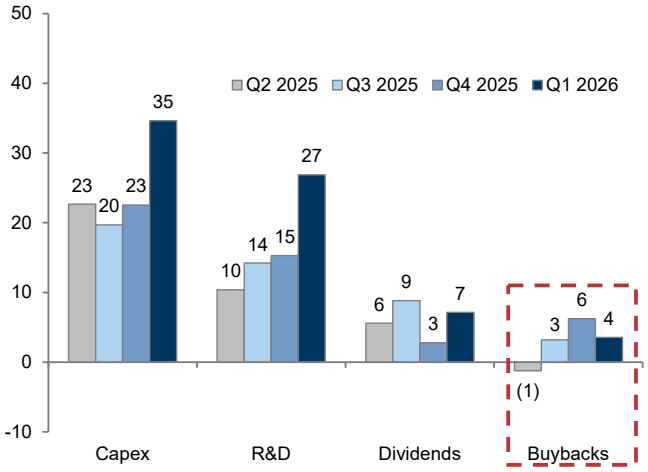
Equity supply from IPOs and expiring lockups, $bn



Source: Bloomberg, FactSet, Goldman Sachs GIR.

At the same time, corporate buybacks have slowed, raising concern about the equity market supply-demand balance

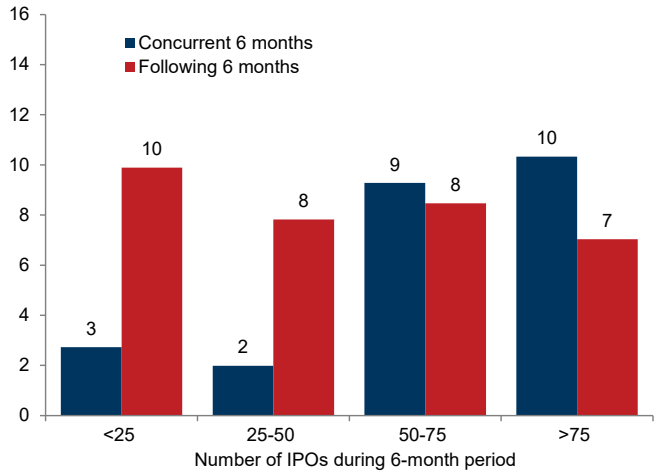
Year/year growth in S&P 500 cash use, %



Source: FactSet, Goldman Sachs GIR.

History suggests that elevated issuance often precedes below-average equity market returns…

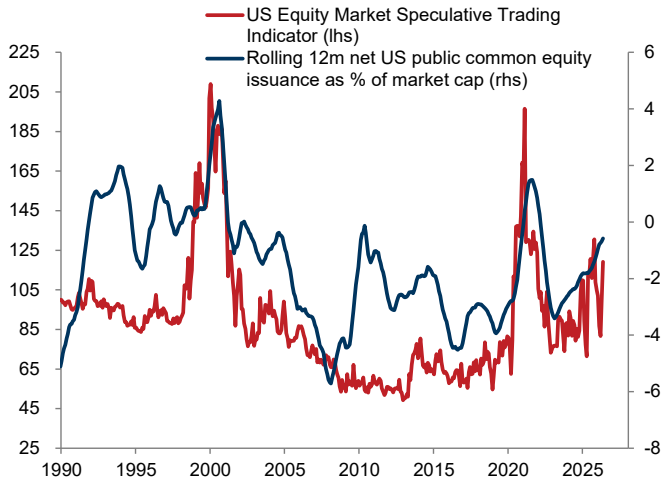
Median 6m S&P 500 return based on IPO activity, %



Source: FactSet, Goldman Sachs GIR.

…and has historically coincided with warning signs that typically come late in the cycle, including elevated investor sentiment

US Equity Market Speculative Trading Indicator (index, lhs) vs. US public equity issuance (%, rhs)

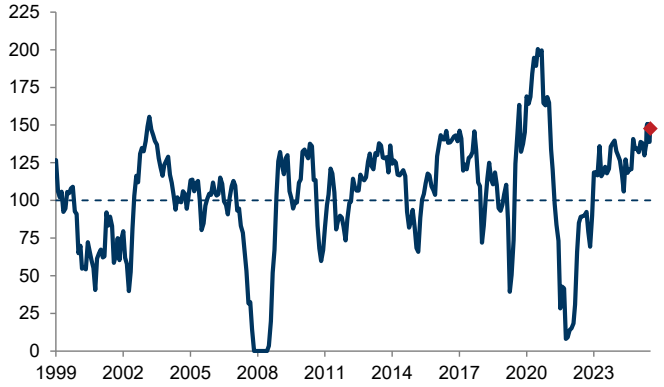


Source: Goldman Sachs GIR.

...and comfort

Our IPO Barometer combines five indicators that gauge the macro environment for IPO activity*

GS IPO Barometer, 100=median historical number of IPOs

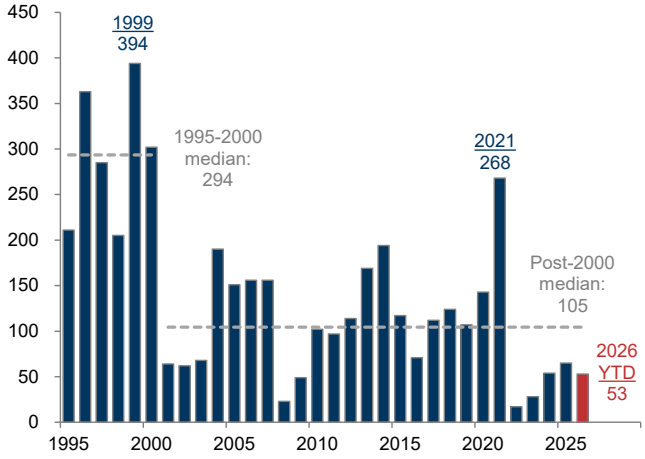


*The five indicators are: (1) S&P 500 drawdown, as measured by how far the index trades from its trailing 52-week high, (2) CEO confidence, (3) Change in the nominal 2-year Treasury note yield, (4) S&P 500 EV/sales, and (5) ISM Manufacturing Index.

Source: Goldman Sachs GIR.

The number of IPO deals this year is much closer to the long-term average than to past boom levels

Number of US IPOs per year*

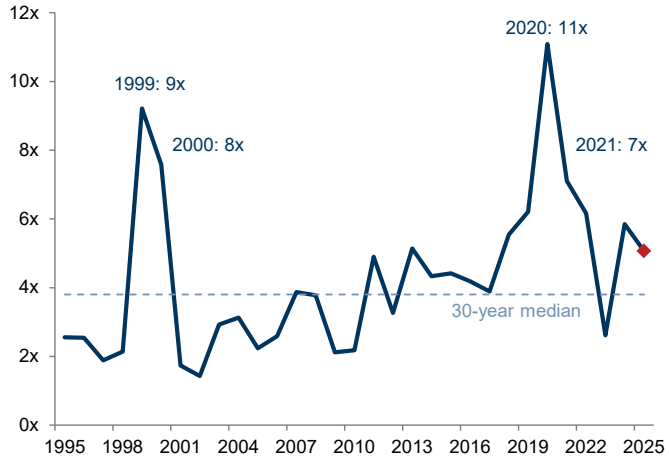


*US deals greater than $25mn in value.

Source: FactSet, Goldman Sachs GIR.

Valuations for recent IPOs are also near historical averages...

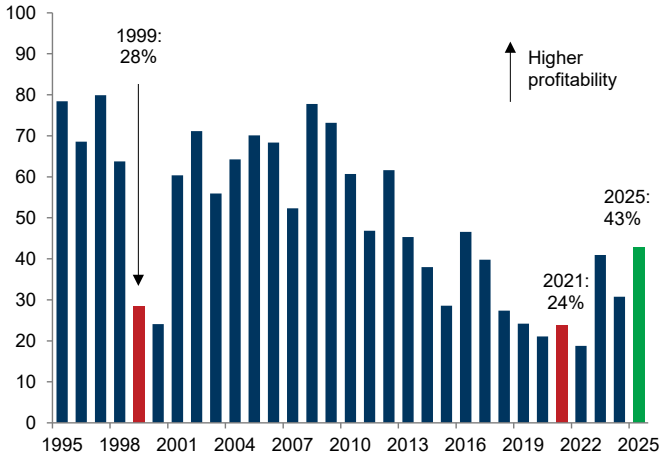
EV/sales of the median US IPO



Source: FactSet, Goldman Sachs GIR.

...and profitability among recent IPOs is higher than in prior IPO booms, which were often dominated by unprofitable firms

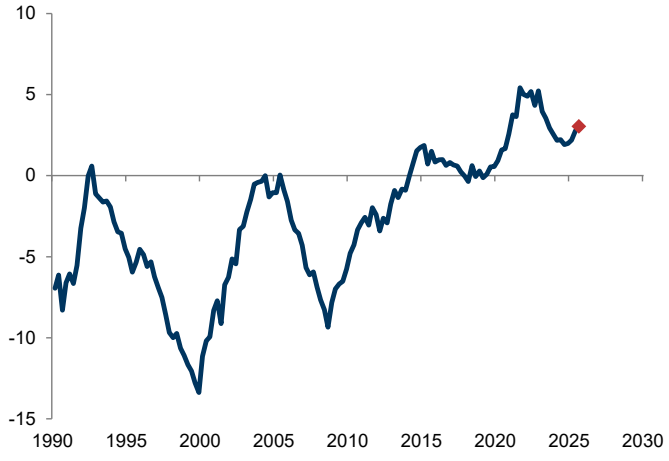
Share of IPOs with positive net income in their first public quarter, %



Source: FactSet, Goldman Sachs GIR.

US households have become net buyers of equities in recent years, unlike in prior IPO booms...

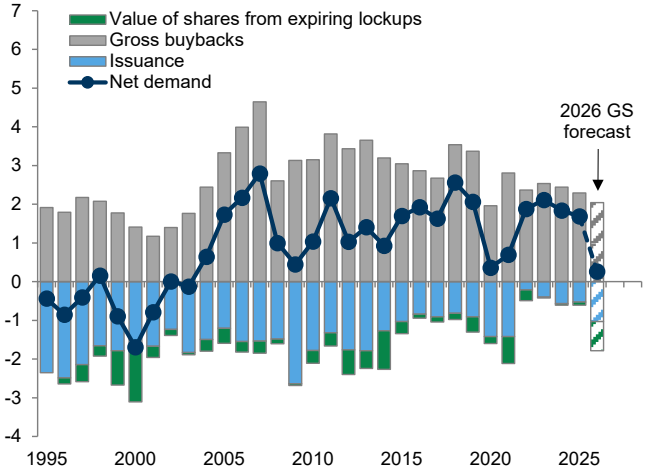
Rolling 3-year net household demand for US corporate equities as a percent of total US corporate equity value, %



Source: Federal Reserve, Goldman Sachs GIR.

...and buybacks by US companies are likely to exceed corporate equity supply this year even with the sharp increase in issuance

Annual US equity issuance and corporate buybacks as a percent of Russell 3000 market capitalization, %



Source: Goldman Sachs GIR.

Special thanks to GS US portfolio strategist Daniel Chavez for charts.

Interview with Jay Ritter

Jay Ritter is the Director of The IPO Initiative and Professor Emeritus at the University of Florida's Warrington College of Business. Below, he discusses the US IPO market reopening and why worries about high IPO volumes, market digestion, and valuations may be overdone.

The views stated herein are those of the interviewee and do not necessarily reflect those of Goldman Sachs.

Allison Nathan: The US IPO market has reopened in a big way in 2026 after a relatively quiet several years, prompting some to characterize this as an "IPO wave." Is it actually?

Jay Ritter: The total amount of proceeds raised this year has already set a record, but that mainly owes to a handful of very large deals. By deal count, IPO activity remains fairly modest, reflecting both cyclical and structural factors. Cyclically, two historically important sectors for the IPO market have been relatively quiet recently. Between 2013 and 2021, around 53 life science companies went public every year on average—accounting for roughly 30% of total IPO deal count—compared with an average of only 14 between 2022 and 2025, partly as the cost of capital rose and investor risk tolerance shifted. Software companies have also accounted for a smaller share of recent IPO activity as generative AI has pressured many software companies' valuations.

Structurally, the IPO market has never returned to its pre-Internet Bubble scale—operating company IPOs have averaged just over 100 per year since the bubble burst compared with over 300 in the 1980s and 1990s—for two likely reasons. First, the growth of venture capital (VC), private equity (PE), and other private capital has reduced the need for companies to go public, with hundreds of unicorns and thousands of firms valued at over $100mn staying private year after year.

Second, in many technology verticals, large economies of scale, network effects, or high fixed costs mean that getting big fast has become the value-maximizing strategy. Accordingly, successful VC-backed firms have increasingly chosen to exit via sales to strategic buyers rather than remaining independent and going public. So, I wouldn't say we're currently in an IPO wave.

Allison Nathan: Does the small number of large deals concentrated in one sector/theme—technology/AI—mean that the IPO market may not be as healthy as the headline figures suggest?

Jay Ritter: Not necessarily. Specific technologies that have captured investor imagination have often driven IPO booms. The rise of personal computers (PCs) drove the 1983 Tech Boom. In 1986, the spotlight shifted to software and PC operating systems, and Microsoft, Oracle, and Sun Microsystems all went public within just over a week of each other. Scores of internet-related companies went public during the Internet Boom of the late 1990s with little IPO activity elsewhere. And, in 2020-2021, a surge in growth company listings—especially in the technology sector—ushered in the largest IPO boom of the last 25 years.

AI is the industry in favor today, but relatively few pure-play AI companies are going public even as nearly every firm is incorporating the technology into its workflows. So, IPO supply is concentrated in a few very large, likely one-off deals. That suggests a narrower IPO reopening than the headline figures imply rather than a broad, speculative rush that some investors seem worried about. But capital flowing disproportionately into specific industries has happened many times in the past, too.

"AI is the industry in favor today, but relatively few pure-play AI companies are going public... So, IPO supply is concentrated in a few very large, likely one-off deals. That suggests a narrower IPO reopening than the headline figures imply rather than a broad, speculative rush that some investors seem worried about. But capital flowing disproportionately into specific industries has happened many times in the past, too."

Allison Nathan: Are concerns about the market's ability to digest so much new issuance, especially after equity lockups expire, warranted, or overblown?

Jay Ritter: They're overblown. US capital markets are large and deep enough to absorb these very large IPOs. In recent years, publicly traded US companies have paid out around $600bn in cash dividends and repurchased roughly $1tn of stock annually. That amounts to $1.6tn of cash that must be recycled each year, so the IPO market—even with these large IPOs—is absorbing just a fraction of the available capital.

Lockup expirations will undoubtedly increase public equity supply, but the market should be able to digest that as long as other equity continues to be retired through buybacks or acquisitions. In recent years, buybacks and acquisitions have more than offset new issuance, leaving net equity issuance negative. While that may not be the case this year because some large technology companies have shifted from being major repurchasers to net equity issuers, the overall size of the US equity market still makes major indigestion issues unlikely.

Allison Nathan: Past IPO booms have often preceded market downturns. Is that a reason to worry?

Jay Ritter: High new issue volume is a predictor of low future market returns. But, like most indicators, this signal works only slightly better than chance—around 52% of the time—so its predictability is limited. If predicting market turning points were easy, many trading strategies would reliably make lots of money. So, I wouldn't view an IPO boom on its own as a sign that a market downturn is imminent.

> "I wouldn't view an IPO boom on its own as a sign that a market downturn is imminent."

Allison Nathan: Several major index providers have implemented new rules giving investors earlier access to large IPOs. Is this a positive or negative development?

Jay Ritter: Nasdaq changed its seasoning period and float requirements, while S&P Dow Jones kept the S&P 500's index inclusion criteria unchanged, and both made the right decision. Many investors want exposure to these large IPOs, and earlier index inclusion provides it faster.

But indices with significant money tied to them—like the S&P 500, which has 30x more money indexed to it than the Nasdaq QQQ—risk creating disproportionate demand if they include large listings too early, which can distort prices if the newly listed company has a limited public float. Some De-SPAC companies, for example, had tiny public floats after most SPAC shareholders redeemed, and that scarcity temporarily drove prices sharply higher. Vietnamese EV company VinFast was an extreme case: its public float was so small that its market cap briefly eclipsed Volkswagen's. So, the current balance seems sensible—it gives investors earlier access to large new listings without creating the kind of mechanical demand that could undermine market health.

Allison Nathan: Your research shows that the average IPO underperforms the market over the three years after listing. How does that square with your relatively constructive view of this IPO reopening?

Jay Ritter: Since 1980, the average company that has gone public has indeed underperformed the market over the next three years, excluding the first day pop. Newly listed companies with very high price-to-sales ratios have also underperformed on average. But several caveats are important to note. Companies with $100mn+ in annual revenues have, on average, roughly matched the market after the first day. Technology has also historically been the best performing sector of the IPO market. And profitability at the time of listing hasn't been a reliable predictor of long-run returns for technology companies. So, I would be cautious about generalizing the broad historical underperformance trend to the current cohort of IPOs.

Allison Nathan: Many technology IPOs have used a dual-class structure in recent years, issuing two classes of common stock with different voting rights. Should investors be concerned about this voting structure?

Jay Ritter: This structure raises potential corporate governance concerns, but evidence shows that technology IPOs with dual-class structures have outperformed other technology stocks and the broader market, mainly because these structures are heavily correlated with extensive equity-linked compensation. The mechanism is that dual-class structures allow companies to issue large amounts of low-vote stock to incentivize talent while preserving founders' control through high-vote stock. Since poor stock performance can undermine the value of employee equity and create retention problems, management has a strong incentive to care about the stock price, aligning its incentives with those of public shareholders.

> "Since 1980, the average company that has gone public has indeed underperformed the market over the next three years, excluding the first day pop... [But] I would be cautious about generalizing the broad historical underperformance trend to the current cohort of IPOs."

Allison Nathan: Even if high IPO volume and index considerations aren't a concern, could high valuations tied to IPOs—as well as the broad equity market—be?

Jay Ritter: Investors have legitimate reasons to worry when companies go public at high valuations. Firms highly valued right out of the gate naturally have more limited percentage upside, and a lot has to go right for their operations and profits to grow into those valuations.

But the market is highly valuing a handful of companies because the technology industry has repeatedly produced firms with extraordinary revenues and profits. Think of Nvidia, which went public in January 1999 at a valuation of around $600mn and has since seen its market cap grow to around $5tn—generating a percentage return in the high six figures. Alphabet, Meta, Broadcom, Microsoft, and Apple also come to mind in this context. In certain technology verticals, powerful network effects and economies of scale allow a "winning" firm to generate large revenues and profits without competition eroding margins. That differs from traditional industries like restaurants, where competition tends to limit profitability. So, while high valuations are worth watching, I'm not especially worried about the IPO market.

That said, the broader equity market looks expensive by standard valuation metrics. The CAPE ratio, which measures the market's long-term valuation by dividing its current price by the average inflation-adjusted earnings over the last 10 years, is near all-time highs, and its inverse—the earnings yield—is low, pointing to lower future real returns than the historical average.

But valuation signals often fail to time markets. Robert Shiller and John Campbell famously warned the Federal Reserve Board about the market's "irrational exuberance" in December 1996 partly based on these metrics, and Alan Greenspan gave his irrational exuberance speech just two days later. But the market didn't peak for another 3.5 years, and at a much higher level.

High valuations also must be viewed in context. US companies have a long track record of growing profits, to the envy of the rest of the world. While some of the recent rise owes to lower corporate tax rates and so isn't repeatable, US corporate executives' focus on their fiduciary duty to maximize shareholder value has allowed public equity markets to thrive, and I don't expect that to change.

Europe: a smaller IPO rebound

Peter Oppenheimer and Guillaume Jaisson argue that too little domestic equity inflows—rather than too much corporate issuance—will lead to a smaller IPO rebound in Europe

Investor attention has increasingly focused on the risk of equity oversupply as issuance accelerates globally. Large US IPOs are re-emerging, issuance is rising across parts of Asia (see pg. 17), and Europe too is likely to follow, leaving all (debt and equity) issuers competing for the same pool of capital.

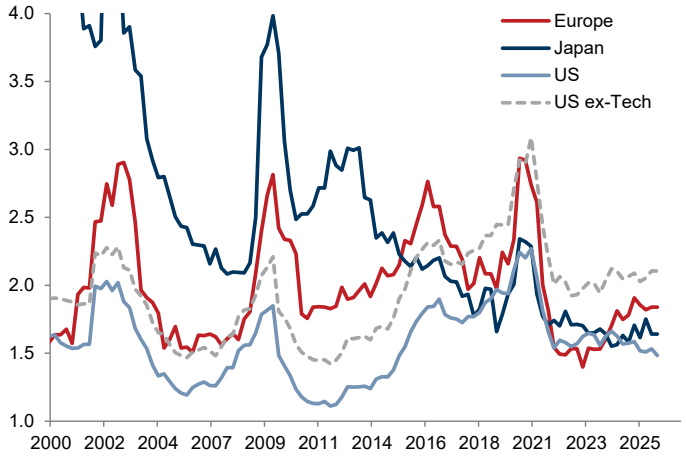
At the same time, governments continue to run sizable fiscal deficits linked to defense, infrastructure, and energy security, while corporates are financing an increasingly capital-intensive investment cycle. Notably, some of this competition is coming from outside of Europe, with US corporates—particularly the hyperscalers—becoming more active issuers in EUR, GBP, and CHF investment-grade debt markets (see pgs. 14-15). This combination of rising capital intensity and surging capital demand is a defining feature of the "Post Modern" Cycle.

In this context, concerns about rising issuance are understandable. But investors should take comfort that driving the issuance cycle is opportunity rather than stress and the broader supply-demand backdrop for issuance is not as worrying as it first appears.

That said, the bigger challenge for Europe is the lack of domestic equity inflows rather than an excess of corporate issuance. This suggests that Europe's IPO recovery will likely remain more selective and modest relative to the US.

Current balance sheets are not especially stretched

Net debt to EBITDA, ex financials



Source: FactSet, Datastream, Goldman Sachs GIR.

An opportunistic issuance cycle

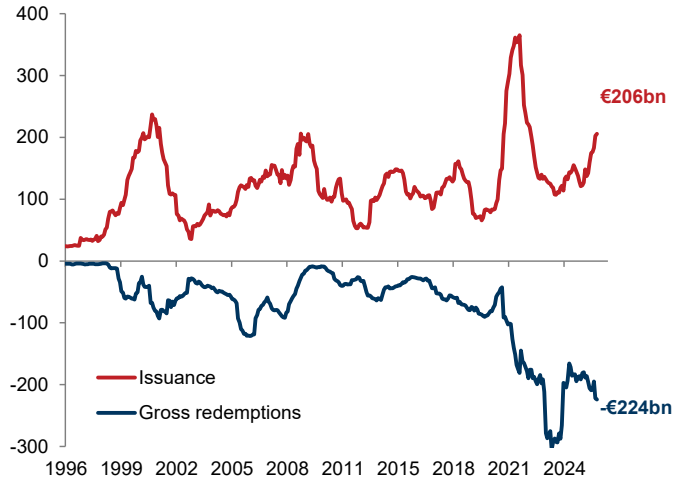
A crucial aspect of the European IPO rebound is that opportunity rather than stress is driving issuance. European balance sheets remain healthy across corporates, financials, and households. Corporate net debt-to-EBITDA ratios are not stretched by historical standards, and national accounts data point to generally resilient private-sector balance sheets. As a result, companies are raising capital from a position of strength, not necessity. Equity valuations—which are currently in the top quartile of historical experience—are allowing management teams to fund investment, accelerate strategic initiatives, and optimize capital structures. This is fundamentally different from periods when refinancing pressures or balance-sheet repair drove issuance.

Net supply remains scarce, unlike prior periods of excess

Even so, European companies have raised over €200bn of equity over the past 12 months, approaching levels last seen during the Tech Bubble. On the surface, this appears substantial. However, issuance stands at 1.7% of total market capitalization, only modestly above the long-run average of 1.4%. More importantly, headline issuance overstates the increase in investable equity. When factoring in redemptions, net supply remains marginally negative, a materially different backdrop from previous episodes of genuine equity excess such as the Tech Bubble, Global Financial Crisis (GFC) recapitalization period, and post-COVID issuance wave.

Equity issuance in Europe has picked up materially, with over €200bn raised over the past 12 months…

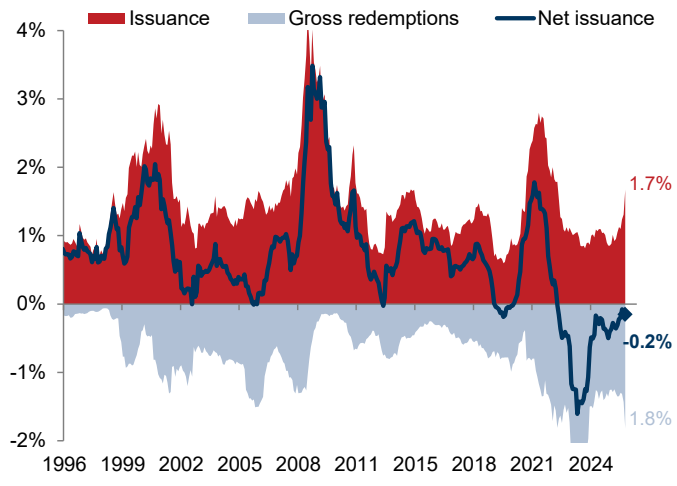
Euro area and UK equity issuance vs. gross redemptions, €bn



Source: Haver Analytics, Goldman Sachs GIR.

…but issuance represents only 1.7% of total market capitalization over the past 12 months

Euro area and UK share of market capitalization, %



Source: Haver Analytics, Goldman Sachs GIR.

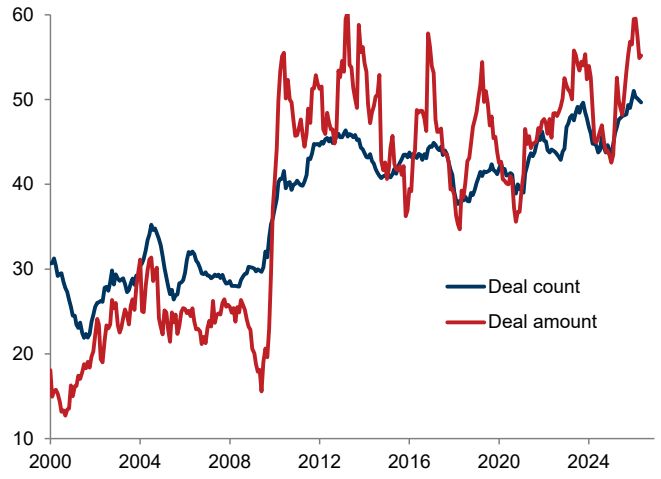
Corporate demand remains underappreciated

Buybacks, M&A, take-privates, and delistings continue to absorb a significant portion of new issuance. Buyback activity remains robust, even if moderating outside Financials, while companies across Europe are actively simplifying portfolios through disposals and restructuring strategies that aim to improve earnings quality and reallocate capital toward strategic priorities, particularly AI. A record proportion of UK CFOs now identify asset disposals as a key capital allocation priority.

M&A, in particular, is becoming an increasingly important source of equity demand. Global M&A is growing at a double-digit pace led by very large deals, with aggregate deal value rebounding faster than transaction count. M&A activity is also becoming more international. In Europe, foreign acquirers are increasingly driving transactions, highlighting the attractiveness of European assets to global buyers. International investors continue to view Europe as a source of valuation support and differentiated exposures, particularly to Value and HALO (Heavy Assets, Low Obsolescence) segments, relative to the US. In a market increasingly defined by factor concentration, European corporates remain attractive acquisition targets.

M&A activity is increasingly driven by cross-border flows

12m rolling sum of M&A deals in Europe: share of foreign acquirer of European targets, %



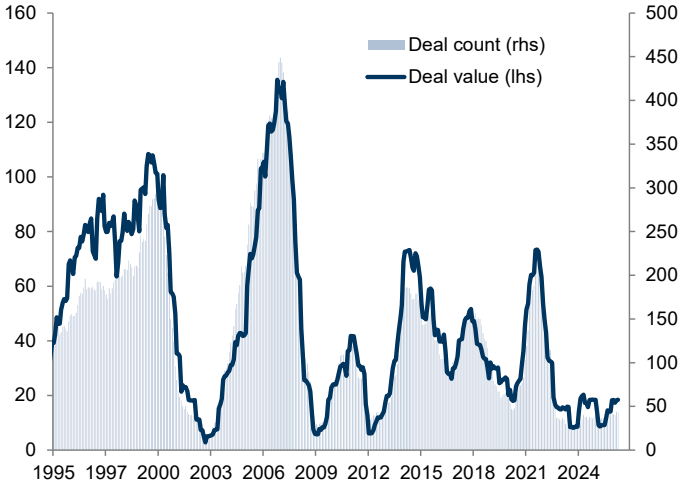
Source: Bloomberg, Goldman Sachs GIR.

The real weakness lies in investor demand

The key contrast between the US and European IPO landscape revolves not around issuance, but flows. US IPOs are reopening into a market supported by strong domestic participation, particularly from retail investors. Europe lacks that structural domestic bid. This helps explain why European IPO activity remains subdued despite improving corporate fundamentals and resilient balance sheets. The region has completed only around 40 IPOs over the past year versus a more normal pace of roughly 100. In some markets, particularly the UK, the dynamic has become self-reinforcing: domestic investors allocate away from local equities because growth companies are scarce, while many growth companies choose alternative listing venues to access deeper capital pools and stronger investor demand.

Europe has completed only around 40 IPOs over the past year

12m rolling sum of IPOs in Europe by deal value ($bn, lhs) vs. deal count (count, rhs)



Source: Bloomberg, FactSet, Goldman Sachs GIR.

A selective and smaller IPO market reopening

Investors remain selective. We note some European companies have postponed their planned listings. While capital remains available for new issuance, elevated equity valuations, sharp momentum rotations, geopolitical uncertainty, and a heavy global issuance calendar have raised the bar for successful execution. We continue to expect a gradual recovery in European IPO activity, lagging the US and remaining modest in scale relative to the large deals currently being absorbed by US markets.

No equity oversupply…yet

Overall, we see little evidence of equity oversupply—for now. Markets are continuing to absorb new capital efficiently, allowing companies to fund investment and sustain the capex upswing. We therefore remain firmly in the camp that the capex super cycle remains intact and continue to favor beneficiaries over spenders. Consistent with that view, our CAPEX Tracker has continued to improve.

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Guillaume Jaisson, Senior Global Equity Strategist

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Tel: 44-20-7552-3000

Mind the (financing) gap

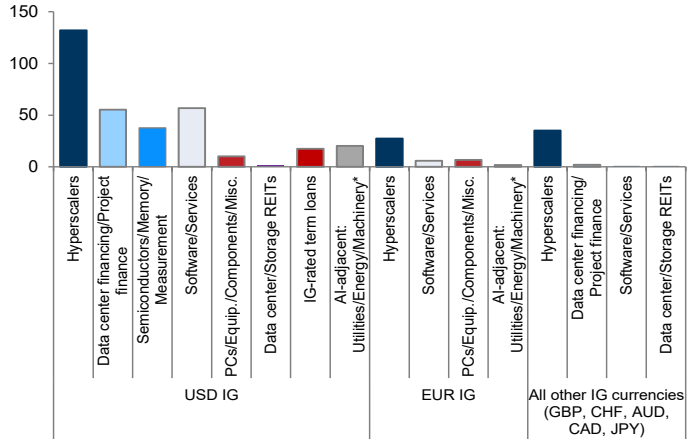
Amanda Lynam argues that issuer concentration and market saturation constraints will become more binding as AI-related debt issuance grows further

The AI-related investment cycle represents a paradigm shift for the corporate credit market given the scale of the financing need and the multi-year nature of the expected issuance cycle. GS equity research expects the five largest hyperscalers to invest a combined $5.8tn in AI capex over FY2025-30, and this year's consensus capex estimates already account for the majority of hyperscalers' operating cash flow. These figures also likely understate the *broader* AI-related spending across other sectors—which may require incremental debt borrowing.

We expect the corporate debt markets will play an important role in funding this AI-related capex. But understanding *which* debt market will do the "heavy lifting" has important implications for fundamentals, technicals, and performance.

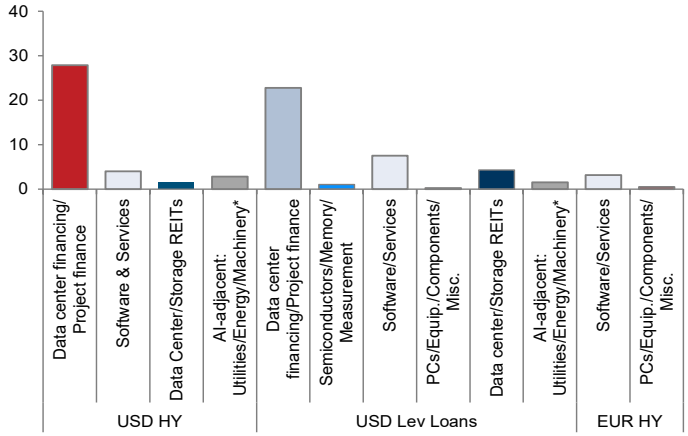
We estimate over $411bn of AI-related financing across the global IG markets so far this year already...

Gross AI-related issuance in the IG market, $bn



...and have tracked over $77bn of AI-related issuance in the leveraged finance market year to date

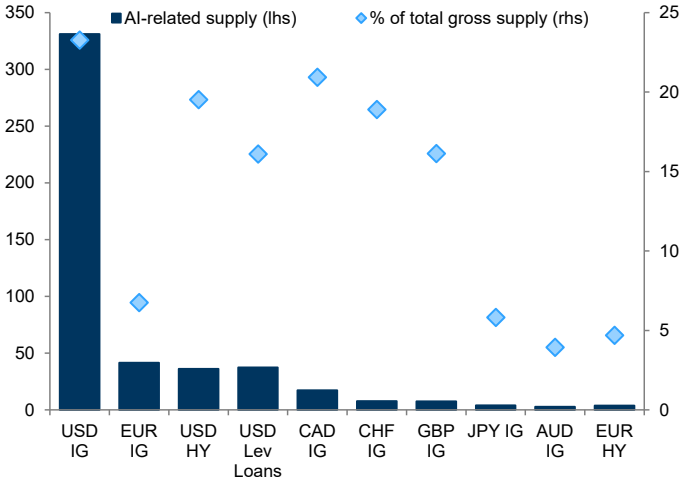
Gross AI-related issuance in the leveraged finance market, $bn



Note: Data as of July 18, 2026. Hyperscalers captures debt issued by these companies: Alphabet, Amazon, Microsoft, Meta, and Oracle. Excludes undrawn credit facilities and revolvers, includes term loans and certain non-syndicated loans. For AI-adjacent sectors (Energy & Utilities, Oil & Gas, Machinery, Chemicals, Metal & Steel), we assume only 30% of gross issuance is AI-related.
Source: Dealogic (ION Analytics), Goldman Sachs GIR.

In several markets, AI-related issuance has represented over 15% of total gross issuance so far this year

Amount of AI-related gross supply in each market for 2026 ytd ($bn, lhs) and the share it represents of total gross supply (%, rhs)



Note: Data as of July 18, 2026. For non-USD markets, we use USD-equivalent figures. Excludes undrawn credit facilities and revolvers. For AI-adjacent sectors (Energy & Utilities, Oil & Gas, Construction, Machinery, Chemicals, Metal & Steel), we assume only 30% of gross issuance is AI-related.
Source: Dealogic (ION Analytics), PitchBook LCD, Goldman Sachs GIR.

Debt issuance, but from where?

Many market participants expect the USD IG corporate bond market to absorb the lion's share of AI-related debt issuance given the market's size and depth. After all, the Bloomberg USD IG Corporate Index has a notional amount outstanding of $8.0tn. And the largest hyperscalers' extremely low levels of leverage provide ample "headroom" to add *much* more debt, while staying well within the typical credit metric "guardrails" of IG debt ratings.

But adding such large amounts of debt would push hyperscalers' USD IG index weights well above the current market convention. Some credit investors—who are more focused on downside risk vs. their equity peers—may not want to take outsized issuer concentration risk.

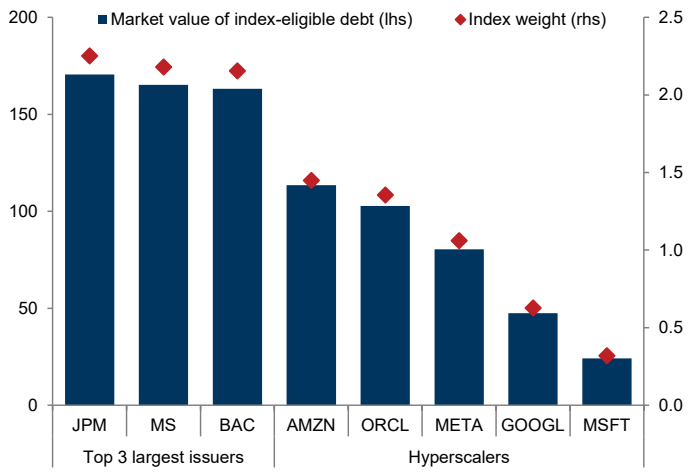
US Banks: a case study in debt saturation limits

US Banks—currently the largest issuers in the USD IG Index—offer a useful case study to frame hyperscalers' potential market saturation limits. But raising the five largest hyperscalers' individual index-eligible debt levels to that of the largest US Banks implies only an incremental $510bn of debt capacity—well short of the trillions of financing that will likely be required, after considering other sources of liquidity including future operating cash flow, existing cash on hand, and potential equity issuance.

And a comparison to US Banks may be overly generous. Given the sector weights of the US equity market, many investors already have large exposure to Tech equities, which may limit demand for hyperscaler debt (especially when evaluating risk holistically across the firm). The duration profile of hyperscaler issuance has also skewed longer relative to Banks, which makes dollar-for-dollar comparisons less relevant.

US Banks: a case study for concentration limits

Market value of index-eligible debt ($bn, lhs) and index weight (%, rhs)



Note: Data as of July 7, 2026 and proforma for AMZN's July 7, 2026 $25bn bond deal, which will enter the Bloomberg USD IG Corporate Index in August 2026.
Source: Bloomberg, Goldman Sachs GIR.

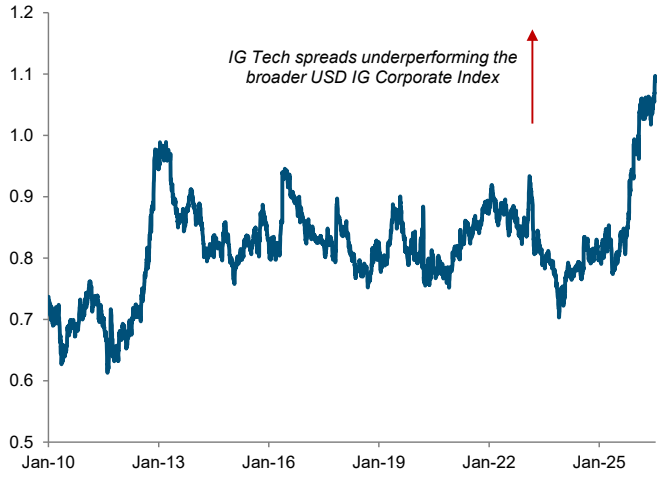
Accelerating issuance has already widened Tech spreads

Hyperscalers have already issued $194bn of IG-rated debt this year—well above the *full-year* 2025 issuance total of $108bn. Notably, one-third of the issuance has occurred *outside* of the USD market (in EUR, GBP, CHF, CAD, and JPY), suggesting these firms are already diversifying their financing sources across regions.

This acceleration in supply has weighed on sector spreads. Across all subsectors, Technology represents 20% of all YTD 2026 USD IG gross supply (a new record). The USD IG Technology sector now trades modestly *wide* to the broader USD IG market on spread terms—despite trading *tight* to it for the majority of the 2010-2025 era.

Tech sector spreads now trade *wide* to the broader IG market...

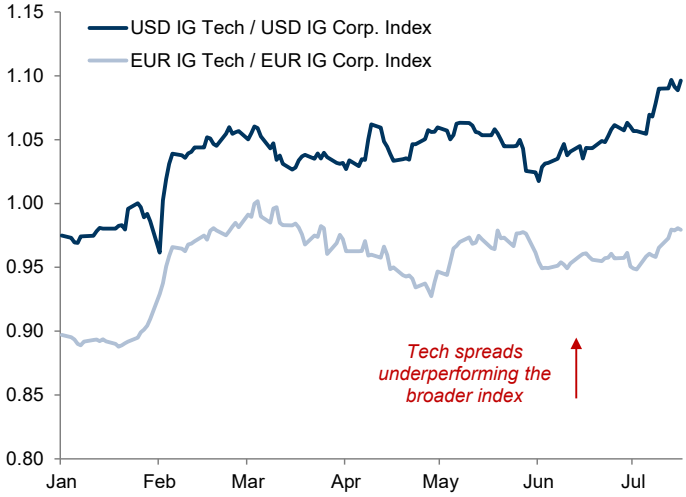
OAS ratio (x): USD IG Technology vs. the Bloomberg USD IG Corporate Index



Note: Data as of July 17, 2026.
Source: Bloomberg, Goldman Sachs GIR.

...with the recent weakness in the sector slightly more visible in the USD market relative to its EUR peer

Option-adjusted spread ratios for the Bloomberg USD and EUR IG Technology indices vs. the broader USD and EUR IG Corporate indices, ratio



Source: Bloomberg, Goldman Sachs GIR.

More binding saturation constraints ahead?

The range of investor debate about how much debt is too much remains wide. Some credit investors are comfortable taking outsized exposure to hyperscalers (and Tech broadly) as a way to participate in a transformative investment theme involving the largest and most profitable firms.

On net, however, we expect issuer concentration and market saturation constraints will become more binding in coming years—a view we believe is underappreciated. While the near-term runway for "traditional" IG debt issuance is still sizable (especially in USD), we expect other financing markets—including private lending channels and project finance structures—will play an increasingly prominent role in 2027 and beyond to fill the financing gap.

For example, in the private markets, the infrastructure sector has already financed more than $140bn of data center financing since early 2025. We see scope for the broad infrastructure asset class to exceed $3tn by 2030. And a new "project finance" asset class has been introduced into the IG and HY markets to finance data centers, which we expect will absorb another portion of the AI-related financing need.

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A guide to new index inclusion rules

Several major index providers have implemented changes to their index inclusion rules in recent months, while others considered changes but decided not to implement them

Index provider	Index	Rule area	Previous requirements	New requirements	Effective date
S&P Dow Jones Indices	S&P Composite 1500	Seasoning period	12 months	No change	N/A (announced June 4)
		Float	Companies must have a security-level float-adjusted market cap of at least 50% of the index's total company-level minimum market cap threshold		
		Other	GAAP net income must be positive for the most recent quarter and the sum of the most recent four consecutive quarters		
NASDAQ	Nasdaq-100 Index	Seasoning period	Three months for all companies	Companies ranked in the top 40 of the Nasdaq-100 by market cap will be eligible for fast entry after 15 trading days (average daily traded value of at least $5mn from time of listing still required)	May 1, 2026
		Float	10% minimum	10% minimum requirement eliminated. The index weight of a security is capped at the lesser of its full, eligible market cap or 3x its float-adjusted market cap	
FTSE RUSSELL An LSEG Business	Russell US Index Series	Seasoning period	Companies included only during quarterly review	Fast entry rule will make IPOs with investable market caps larger than the market-adjusted total market cap breakpoint for the Russell Top 500 eligible for inclusion after five trading days	May 26, 2026
		Float	5% minimum free float and 5% minimum voting-rights requirements for Top 500 companies	While the minimum free float and voting-rights requirements remain in place, a company may be eligible if it has a clear pathway to exceed these minimums within 12 months of listing (the "12-month grace period")	
CRSP (Center for Research in Security Prices)	CRSP US Market Indexes	Float	At least 10% of shares had to qualify as freely tradable ("float shares outstanding," or FSO) to fast-track IPO	New IPOs are eligible for index inclusion after five trading days, but they must have at least 10% FSO or a float-adjusted market cap of at least 0.001% of the index-eligible universe (~$3.3bn)	April 27, 2026

Key terms and definitions

Seasoning period	Period of time a newly public company must trade before it becomes eligible for index inclusion
Free float	The portion of a company's total shares held by public investors and available for trading, excluding restricted and locked-up shares
Investable market cap	The total market value of a company's shares available to public investors
Float cap	A mechanism designed to limit the index weight of a large company with a small public float

Sources: Nasdaq Global Indexes, FTSE Russell, CRSP, Morningstar, S&P Dow Jones Indices, Goldman Sachs GIR.

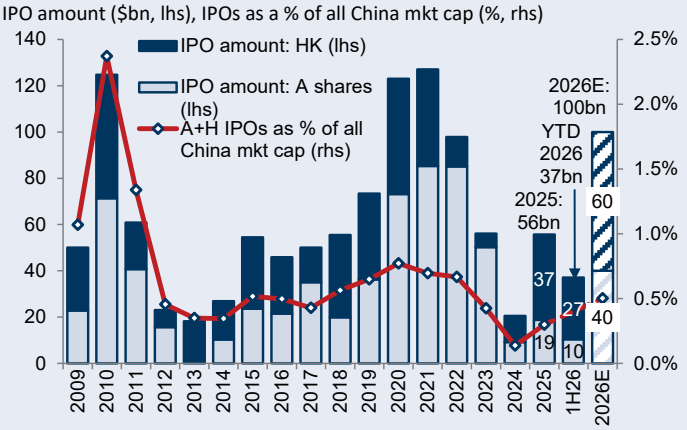
Hong Kong's IPO resurgence

Following a multi-year slowdown, Hong Kong's IPO market staged a powerful resurgence in 2025. Subdued activity between 2022 and 2024—when the market averaged just 75 listings and raised a modest $10bn annually—has given way to a robust rebound. The turnaround has been swift, with 119 listings raising $37bn last year. This momentum has continued in 2026: in the first half of the year, 84 companies went public, raising $27bn, putting the market on track for a projected full-year fundraising total of $60bn. A structural shift toward "Hard Tech" and "New Economy" companies (such as Biotech and "New Consumption") as well as a significant rise in A-to-H dual listings has underpinned the resurgence, with resilient appetite from both cornerstone investors—large institutional investors that commit to buying shares ahead of launch—and retail investors further supporting the IPO pickup.

A convergence of market forces...

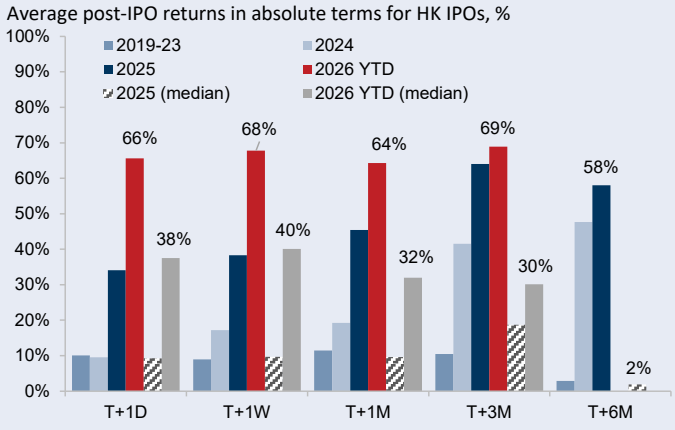
This resurgence is not merely cyclical. Rather, it owes to a convergence of macroeconomic, regulatory, and structural forces across both onshore and offshore markets. A policy pivot in late 2024 catalyzed a robust market rally in Hong Kong, reigniting corporate interest in raising capital. A significant deceleration in A-share IPO activity—owing to the China Securities Regulatory Commission's (CSRC) "Nine Measures"—has also prompted domestic companies to seek offshore listing channels, resulting in a surge of A-to-H dual listings. At the same time, the Hong Kong Exchanges and Clearing (HKEX) has adopted accommodative listing rules—including permitting confidential filings for specialist technology enterprises—and streamlined procedures with the Enhanced Application Timeframe to attract new listings.

Hong Kong's IPO activity recovered in 2025 and has further accelerated year to date



Note: Data as of June 30, 2026.
Source: Wind, Bloomberg, Goldman Sachs GIR.

IPOs over the past two years generated a median return of 20% and an average return of 60% in the first three months post-listing



Note: Data as of June 30, 2026.
Source: Wind, FactSet, Goldman Sachs GIR.

...with strong post-IPO performance...

The 2025–2026 cycle has delivered remarkable post-IPO performance. IPOs have yielded a median return of approximately 20% and an average return of 60% in the first three months post-listing, significantly outperforming those in preceding years. However, high dispersion has accompanied this strong performance. We find that standalone, large-cap listings consistently outperform dual-listed and small-cap peers. Sustainable outperformance is also heavily concentrated in growth companies and companies with meaningful cornerstone ownership of around 30-50%.

...amid an active pipeline and deep liquidity...

A pipeline of over 400 active applications and ample market liquidity should sustain heightened IPO activity. In 2026, we expect $110bn in total equity supply (comprised of $60bn in new H-share IPOs and $50bn in post-IPO secondary financing) will be comfortably absorbed by over $400bn in multi-channel demand. Specifically, demand should come from corporate distributions ($180bn through dividends and buybacks), global long-term capital reallocations ($20-30bn), and Southbound capital inflows ($200bn). While a record $230bn in lockup shares will expire over the next 12 months, potential index and Stock Connect inclusions could drive meaningful passive and onshore inflows, creating a vital liquidity buffer that helps mitigate potential selling pressure.

...creating various investment opportunities

The IPO market revival has effectively reopened the exit window for financial sponsors, mitigating the domestic liquidity crunch and triggering a re-acceleration of Chinese private equity investment. In the secondary markets, Hong Kong's primary listing activity recovery should drive growth for HKEX and Chinese brokers with significant offshore exposure while creating opportunities for institutional investors seeking to capture alpha and optimize portfolio returns. Historically, a resurgence in IPO activity bodes well for broader market sentiment, attracting substantial inflows from global asset allocators. This cycle is no different, with global sovereign wealth and pension funds increasingly participating as cornerstone investors in Hong Kong listings.

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Tel: 852-2978-0200

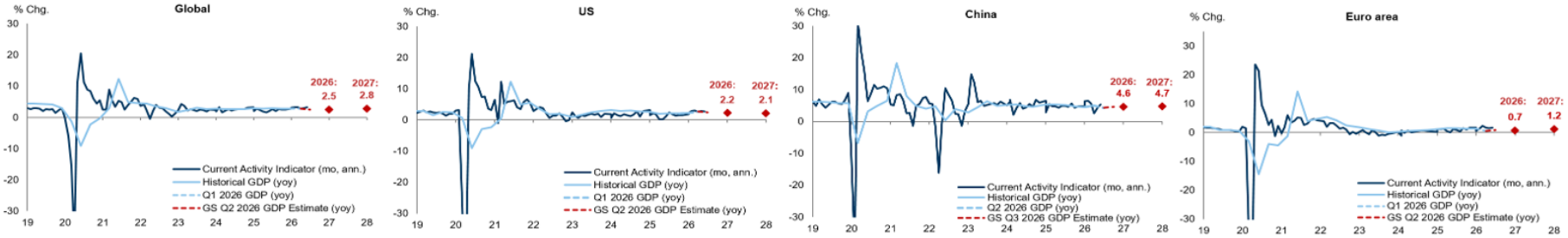
GS GIR: Macro at a glance

Watching

- **Globally,** we expect real GDP growth to slow to 2.5% yoy in 2026 amid lingering headwinds from the rise in energy prices from the Iran conflict. We expect global core inflation to end the year at 2.8%, reflecting a fading tariff boost and further normalization in shelter and wage inflation but a boost from energy price passthrough.
- **In the US,** we expect moderate real GDP growth of 2.2% on a Q4/Q4 basis in 2026, reflecting still-subdued consumer spending growth but a boost from the AI boom via higher equity wealth as well as strong capex. We expect core PCE inflation of 2.9% in December 2026 given the effects of tariffs, energy price passthrough, and AI demand exaggerated by measurement issues, with it falling closer to 2% in 2027 as those effects subside. We expect the unemployment rate to end 2026 at 4.4%.
- **We expect the Fed** to leave the policy rate unchanged at 3.5-3.75% for the rest of 2026.
- **In the Euro area,** we expect real GDP growth to improve in 2H26 given lower energy prices and easing financial conditions, for full-year real GDP growth of 0.7% yoy. We expect core inflation to rise to a peak of 2.6% yoy in 4Q26 amid lingering energy price passthrough before declining to 2.0% by end-2028.
- **We expect the ECB** to deliver one more 25bp hike in September to a peak policy rate of 2.5% before cutting back to 2% in 2027.
- **In China,** we expect sequential growth to rebound in 3Q26 from 2Q26 as the oil shock largely reverses and fiscal spending increases, for full-year real GDP growth of 4.6% yoy. We expect CPI/PPI inflation to rise to 1.0%/2.0% yoy this year largely owing to commodity price passthrough.
- **WATCH THE IRAN WAR.** The situation remains fluid amid the latest re-escalation and we will be closely watching how oil flows through the Strait of Hormuz continue to evolve from here.

Goldman Sachs Global Investment Research.

Growth



Source: Haver Analytics, Goldman Sachs Global Investment Research.
Note: GS CAI is a measure of current growth. For more information on the methodology of the CAI please see "Technical Updates to Our Global CAIs," Global Economics Comment, Sep. 01, 2025.

Forecasts

Economics

GDP growth (%)	2026		2027	
	GS (Q4/Q4)	Cons. (Q4/Q4)	GS (CY)	Cons. (CY)	GS (CY)	Cons. (CY)
Global	2.4	--	2.5	2.5	2.8	2.6
US	2.2	2.0	2.2	2.1	2.1	2.1
China	4.6	4.5	4.6	4.6	4.7	4.4
Euro area	0.8	0.6	0.7	0.6	1.2	1.2

Policy rates (%)	2026		2027	
	GS	Mkt.	GS	Mkt.
US	3.63	4.02	3.13	4.01
Euro area	2.50	2.63	2.00	2.74
China	1.40	1.39	1.30	--
Japan	1.00	1.21	1.50	1.66

Markets

Interest rates 10Yr (%)	Last	E2026	E2027
US	4.63	4.40	4.25
Germany	3.13	3.00	3.00
Japan	2.72	2.50	2.25
UK	4.90	4.50	4.35

Commodities	Last	3Q26	4Q26
Crude Oil, Brent ($/bbl)	91	84	80
Nat Gas, NYMEX ($/mmBtu)	2.87	3.50	3.50
Nat Gas, TTF (EUR/MWh)	59.62	60	53
Copper ($/mt)	13,898	13,600	13,700
Gold ($/troy oz)	4,052	4,600	4,836

FX	Last	3m	12m
EUR/$	1.14	1.14	1.12
GBP/$	1.34	1.33	1.28
$/JPY	163	162	165
$/CNY	6.75	6.80	6.50

Credit (bp)		Last	3Q26	4Q26
USD	IG	77	85	82
	HY	267	305	295
EUR	IG	89	91	88
	HY	250	320	315

Equities

S&P 500	E2026		E2027	
	GS	Cons.	GS	Cons.
Price	8,000			
EPS	$340	$344	$385	$402
Growth	24%	25%	13%	17%

Consumer	2026		2027	
	CPI (%, yoy)	Unemp. Rate	CPI (%, yoy)	Unemp. Rate
US	3.2	4.4	2.3	4.3
Euro area	2.8	6.3	2.3	6.2
China	1.0	--	1.0	--

Returns (%)	12m	YTD	E2026 P/E
S&P 500	10.5	9.7	22.8x
MXAPJ	26.2	18.5	13.1x
Topix	9.6	17.8	19.2x
STOXX 600	2.0	9.2	15.5x

Wage Tracker 2026 (%)	Q1	Q2	Q3	Q4
US	3.5	3.3	--	--
Euro area	--	--	--	--
China	--	--	--	--

Source: Bloomberg, Goldman Sachs Global Investment Research. For important disclosures, see the Disclosure Appendix or go to www.gs.com/research/hedge.html.

Market pricing as of July 21, 2026

Glossary of GS proprietary indices

Current Activity Indicator (CAI)

GS CAIs measure the growth signal in a broad range of weekly and monthly indicators, offering an alternative to Gross Domestic Product (GDP). GDP is an imperfect guide to current activity: In most countries, it is only available quarterly and is released with a substantial delay, and its initial estimates are often heavily revised. GDP also ignores important measures of real activity, such as employment and the purchasing managers' indexes (PMIs). All of these problems reduce the effectiveness of GDP for investment and policy decisions. Our CAIs aim to address GDP's shortcomings and provide a timelier read on the pace of growth.

For more, see our CAI page and Global Economics Comment: Technical Updates to Our Global CAIs.

Dynamic Equilibrium Exchange Rates (DEER)

The GSDEER framework establishes an equilibrium (or "fair") value of the real exchange rate based on relative productivity and terms-of-trade differentials.

For more, see our GSDEER page, Global Economics Paper No. 227: Finding Fair Value in EM FX, 26 January 2016, and Global Markets Analyst: A Look at Valuation Across G10 FX, 29 June 2017.

Financial Conditions Index (FCI)

GS FCIs gauge the "looseness" or "tightness" of financial conditions across the world's major economies, incorporating variables that directly affect spending on domestically produced goods and services. FCIs can provide valuable information about the economic growth outlook and the direct and indirect effects of monetary policy on real economic activity.

FCIs for the G10 economies are calculated as a weighted average of a policy rate, a long-term risk-free bond yield, a corporate credit spread, an equity price variable, and a trade-weighted exchange rate; the Euro area FCI also includes a sovereign credit spread. The weights mirror the effects of the financial variables on real GDP growth in our models over a one-year horizon. FCIs for emerging markets are calculated as a weighted average of a short-term interest rate, a long-term swap rate, a CDS spread, an equity price variable, a trade-weighted exchange rate, and—in economies with large foreign-currency-denominated debt stocks—a debt-weighted exchange rate index.

For more, see our FCI page, Global Economics Analyst: Our New G10 Financial Conditions Indices, 20 April 2017, and Global Economics Analyst: Tracking EM Financial Conditions – Our New FCIs, 6 October 2017.

Goldman Sachs Analyst Index (GSAI)

The US GSAI is based on a monthly survey of GS equity analysts to obtain their assessments of business conditions in the industries they follow. The results provide timely "bottom-up" information about US economic activity to supplement and cross-check our analysis of "top-down" data. Based on analysts' responses, we create a diffusion index for economic activity comparable to the ISM's indexes for activity in the manufacturing and nonmanufacturing sectors.

Macro-Data Assessment Platform (MAP)

GS MAP scores facilitate rapid interpretation of new data releases for economic indicators worldwide. MAP summarizes the importance of a specific data release (i.e., its historical correlation with GDP) and the degree of surprise relative to the consensus forecast. The sign on the degree of surprise characterizes underperformance with a negative number and outperformance with a positive number. Each of these two components is ranked on a scale from 0 to 5, with the MAP score being the product of the two, i.e., from -25 to +25. For example, a MAP score of +20 (5;+4) would indicate that the data has a very high correlation to GDP (5) and that it came out well above consensus expectations (+4), for a total MAP value of +20.

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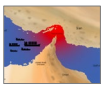

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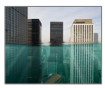

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Disclosure Appendix

Reg AC

We, Allison Nathan, Jenny Grimberg, Ashley Rhodes, Peter Oppenheimer, Amanda Lynam, CPA, Ben Snider, Si Fu, Ph.D., and Guillaume Jaisson, hereby certify that all of the views expressed in this report accurately reflect my personal views, which have not been influenced by considerations of the firm's business or client relationships.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

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