J.P.Morgan

North America Fixed Income Strategy
20 September 2024

U.S. Fixed Income Markets Weekly

Cross Sector *P. White, L. Wash*
The Fed delivered a hawkish 50bp cut. The Treasury curve bear steepened, TIPS breakevens widened, and credit spreads tightened, reflecting a higher probability of a soft landing. Given still elevated policy uncertainty we think outright duration or curve themes provide poor risk reward and favor looking for conditional trades and relative value. Spreads look snug but we do not favor shorting them.

Governments *J. Barry, P. White, A. Borges, L. Wash*
The curve decoupled from medium-term policy expectations this week, despite a hawkish 50bp delivery to kick off the easing cycle. This could reflect increased confidence the Fed's front-loaded cuts will extend the expansion. If this narrative persists the curve can steepen bullishly or bearishly, but we will be patient before adding back to steepener exposure. Intermediate valuations appear modestly cheap, but yields are in the lower 40% of their recent range: stay neutral on duration for now. Initiate 3.125% Nov-41/ 2% Nov-41 flatteners for RV. We review the July TIC data. While the backdrop has turned more bullish for TIPS, valuations are not compelling. Stay neutral but hold energy-hedged 5s/10s breakeven curve steepeners.

Interest Rate Derivatives *S. Ramaswamy, I. Ozil, P. Michaelides, A. Parikh*
Despite this week's policy action, policy uncertainty remains elevated, but forwards are now well below the dots in the Reds, causing us to favor asymmetric exposure to higher yields in the Reds - Initiate weighted Greens/15s flatteners and/or 1s/5s conditional bear flatteners. Stay neutral on swap spreads across the curve but initiate 2s/3s spread curve flatteners for relative value. Markets will likely enter a lull until the next Jobs report - we turn tactically bearish on short expiry vol in intermediate and longer tails. Initiate long exposure to second principal factor vol by buying 1Yx3Y straddles versus 1Yx10Y.

Short-Term Fixed Income *T. Ho, P. Vohra*
Despite the very front-end steepening this week, yield curves remain deeply inverted, challenging liquidity investors willingness to add duration. The yield spread between government and prime funds might narrow as we get further into the easing cycle. We provide a MMF holdings update.

MBS and CMBS *J. Sim*
Mortgage spreads had an excellent week and are rich in OAS terms, but wide ZV spreads should continue to draw in buyers focused on nominal spreads. This week's Fed cut was a welcomed move to the CRE/CMBS market participants. Also, we discuss potential extension risk in the CMBS market

See page 151 for analyst certification and important disclosures.

Fixed Income Strategy

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ABS and CLOs *A. Sze, R. Ahluwalia*
ABS spreads held firm with heavy supply packed in before, and some selling of short-dated paper after, the Fed's first rate cut of the cycle.

Investment-Grade Corporates *E. Beinstein, S. Doctor, N. Rosenbaum, S. Mantri*
The 50bp Fed combined with light bond issuance and strong fund inflows all contributed to spreads 6bp tighter on the week. With spreads now just 6bp from recent tights, valuation is less compelling.

High Yield *N. Jantzen, T. Linares*
High-yield bond yields and spreads declined 31bp and 29bp over the past week to 7.08% and 349bp, respectively. The HY index is up +1.5% in September with Cable/Sat (+4.7%), Telecom (+4.0%) and CCCs (+4.2%) outperforming.

Municipals *P. DeGroot, Y. Tian, R.Gargan*
Next week begins a gauntlet of tax-exempt supply expected to run up to the election, at the same time as reinvestment capital dips to the lows of the year. As such, levels and spreads are expected to be progressively cheaper moving through the fall. Certain pari tax-exempt debt is now 2 sigma cheap vs pari corporate bonds.

Emerging Markets *L. Oganes*
In EM fixed income, we are OW GBI-EM local rates, and MW CEMBI and EMBIGD. EM bond flows were +$541mn (+0.14% of weekly AUM, up from -$705mn).

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Summary of Views

SECTOR	CURRENT LEVEL Sep 20, 2024	YEAR END TARGET Dec 31, 2024	COMMENT
Treasuries			
2-year yield (%)	3.57	3.40	Hold 3s/30s steepeners
10-year yield (%)	3.73	3.55	Maintain 75:6 weighted 5s/10s/30s belly-cheapening butterflies to position for higher term premium
Technical Analysis			
5-year yield (%)	3.48	3.10	The rally has entered a more linear phase now
5s/30s curve (bp)	59	90	The curve has broken out of its multi-year base pattern
TIPS			
10-year TIPS breakevens (bp)	216	205	Initiate 5s/10s breakeven curve steepeners
Interest Rate Derivatives			
2-year SOFR swap spread (bp)	-19	-6	Policy uncertainty remains elevated, but forwards are now well below the dots in the Reds, causing us to favor asymmetric exposure to higher yields in the Reds - Initiate weighted Greens/15s flatteners and/or 1s/5s conditional bear flatteners. Stay neutral on swap spreads across the curve but initiate 2s/3s spread curve flatteners for relative value. Markets will likely enter a lull until the next Jobs report - we turn tactically bearish on short expiry vol in intermediate and longer tails. Initiate long exposure to second principal factor vol by buying 1Yx3Y straddles versus 1Yx10Y.
5-year SOFR swap spread (bp)	-30	-22	
10-year SOFR swap spread (bp)	-46	-37	
30-year SOFR swap spread (bp)	-81	-79	
Agency MBS			
FNMA 30yr 5% Front Tsy OAS (bp)	8	10	Mortgage spreads had an excellent week and are rich in OAS terms, but wide ZV spreads should continue to draw in buyers focused on nominal spreads
RMBS Credit			
CRT M1B/M2 (DM@10CPR)	1MS + 164bp	1MS + 175bp	Investors are starting to focus more on convexity risk in jumbo collateral as 6s start to shift more in-the-money. This could begin to pressure premium price spreads. Non-QM should offer a convexity advantage with a heavier investor share of loans and prepayment penalties.
RMBS 2.0 PT (6s)	1-08bk of TBA	1-12bk of TBA	
AAA Non-QM	I + 145bp	I + 150-175bp	
ABS			
3-year AAA card ABS to Treasuries (bp)	47	40	ABS spreads remained stable as the market absorbed heavy quarter-end supply.
CMBS			
10yr conduit CMBS LCF AAA	90	95	LCF AAAs look about fair to their corporate comps but we believe upper IG conduit mezz offer values.
10yr Freddie K A2	48	48	
Investment-grade corporates			
JULI spread to Treasuries (bp)	106	110	HG bond spreads are slightly through our YE forecast after this week's rally. So long as the economic data continues the balance that allows the Fed to keep cutting and no recession, spreads will remain tight.
High yield			
Domestic HY Index spread to worst (bp)	352	500	We believe spreads will widen into year-end amid slower growth and lower rates.
Credit Derivatives			
High Grade (bp)	48	50	Cash bonds outperformed relative to thier synthetic counterparts this week as investors turned bullish
High Yield	$107.6/307bp	350	
Short-term fixed income			
EFFR (%)	4.83	4.10	Funding conditions should remain benign, with liquidity remaining abundant, limiting any potential impacts to EFFR/SOFR, T-bills/OIS, and CP/OIS spreads. We do not expect MMF reform to have any outsized impact on money market credit spreads. Treasury repo clearing remains work in progress, though concerns about readiness are emerging.
SOFR (%)	4.82	4.10	
CLOs			
US CLO Primary AAA (Tier 1, bp)	135	SOFR + 150	We widened our base case CLO T1 AAA new issue spread forecast to 150bp (from 130bp prior) and introduced a 175-200bp risk case in the event of a hard landing.
Municipals			
10-year muni yield (%)	2.63	2.30	Finding sustained market consensus while navigating transition to an easing cycle may be difficult, but we suggest playing the long game, and buying municipal bonds with a longer term perspective, particularly in periods where Treasuries sell-off. We suggest adding idiosyncratic municipal risk opportunistically on market weakness, and highlight potential market cheapening in the period before the election.
30-year muni yield (%)	3.52	3.30	
Emerging Markets			
Hard currency: EMBIG Div (bp)	369	400	MW EMBIGD
Hard currency: CEMBI Broad (bp)	222	220	MW CEMBI Br
Local currency: GBI-EM yield (%)	6.10%	5.58%	MW local rates

Source: J.P. Morgan

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US Fixed Income Overview

End of the beginning or beginning of the end?

- **Economics**: The Fed delivered a 50bp cut at this week's FOMC meeting, in line with our expectations, bringing the policy target to 4.75-5.00%. We expect the Fed to deliver a 50bp cut in November before beginning a series of 25bp cuts in December. We revise higher our 3Q GDP growth forecast to 2.5% and 4Q24 to 1.25%
- **Treasuries**: The curve decoupled from medium-term policy expectations this week, despite a hawkish 50bp delivery to kick off the easing cycle. This could reflect increased confidence the Fed's front-loaded cuts will extend the expansion. If this narrative persists, the curve can steepen bullishly or bearishly, but we will be patient before adding back to steepener exposure. Intermediate valuations appear modestly cheap, but yields are in the lower 40% of their recent range: stay neutral on duration for now. While the backdrop has turned more bullish for TIPS, valuations are not compelling. Stay neutral but hold energy-hedged 5s/10s breakeven curve steepeners.
- **Interest Rate Derivatives**: Policy uncertainty remains elevated and we continue to prefer conditional trades which offer asymmetric reward in either bullish or bearish states of the world. To position for rising yields in the Reds, we like weighted Greens/15s flatteners. With low event risk on the horizon for the next two weeks, we turn bearish on shorter expiry and intermediate and longer tail volatility. We are more cautious on shorter tails, and recommend a neutral stance. While we remain broadly neutral on swap spreads for now, we now recommend positioning for a 2s/3s maturity matched swap spread curve flatteners
- **Short Duration**: Despite the very front-end steepening this week, yield curves remain deeply inverted, challenging liquidity investors' willingness to add duration. The yield spread between government and prime funds might narrow as we get further into the easing cycle
- **Securitized Products**: Mortgage spreads had an excellent week, responding favorably to the 50bp cut. That's put mortgages at new YTD OAS tights, but wide historical ZVs will continue to draw in buyers focused on nominal spreads
- **Corporates**: The 50bp Fed cut, combined with light bond issuance and strong fund inflows, contributed a 7bp tightening in spreads. With spreads now just 7bp from recent tights, valuations are less compelling
- **Near-term catalysts**: Aug Personal income (9/27), Aug JOLTS (10/1), Sep ADP (10/2), Sep employment (10/4), Sep CPI (10/10), Sep PPI (10/11)

Must Read This Week

An appropriate recalibration, Michael Feroli, 9/18/24
Flows & Liquidity: How low are term premia?, Nikolaos Panigirtzoglou et al., 9/18/24
What to expect when you're expecting (rate cuts), Nathaniel Rosenbuam et al., 9/18/24
US: Reaching U before r**, Murat Tasci, 9/17/24

And Now Hear This…

The Weekender: Stepping down, Bruce

After weeks of anguishing anticipation, the Fed delivered a 50bp cut on Wednesday to bring the Fed funds target to 4.75 – 5.00%, in line with our expectations. During the ensuing press conference Chair Powell described the outsized move as a "recalibration" to preserve the currently strong labor market from downside risks as well as a signal of "commitment not to get behind." To that extent, the median September FOMC dots indicate a cumulative 50bp of easing over the next two meetings, 100bp in 2025, and an additional 50bp in 2026. Meanwhile the SEP also showed the median unemployment rate projection for this year and next is 4.4%, up 0.4%-pt and 0.2%-pt, respectively, from the June projections but largely stable (**Figure 1**). Powell's characterization of the employment situation was more sanguine than expressed at the Jackson Hole Symposium, stating the labor market is "actually in solid condition" and "moving to a more sustainable level" with unemployment "in the low 4s

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Kasman and Jay Barry, 9/20/24

[indicating] a really...good labor market." Moreover the Chair recognized that the neutral policy rate is "probably significantly higher" than it was before the pandemic. In the aftermath of the meeting, price action across fixed income markets reflected a higher probability of a soft landing outcome, with a bear steepening of the yield curve, wider TIPS breakevens, and tighter spreads across corporate credit and mortgages.

These moves were also supported by economic data that have continued to surprise to the upside. Following this week's August retail sales report, our economists revise up their tracking of 3Q GDP growth to 2.5% from 1.5% and 4Q GDP to 1.25% from 1% (see *Economics*). If this forecast is realized and a step down in policy rates mitigate labor risks, alongside easier financial conditions and a boost to real consumption from lower inflation, this could keep recession risks in check heading into 2025. That said, we are cognizant that labor market data and growth data have been disconnected for a number of months and are likely to remain so into the fourth quarter. We continue to expect the unemployment rate to tick up to 4.5% by year end, above the Fed's median projection. However almost all of the recent U-rate rise can be explained by declining job finding rates, and not rising separations, which is not typical during recessions and could be consistent with a labor market normalizing around a higher NAIRU (see *US: Reaching u* before r**, Murat Tasci, 9/17/24).

Figure 1: The SEP showed upward revisions to unemployment rate projections, while inflation forecasts were revised somewhat lower

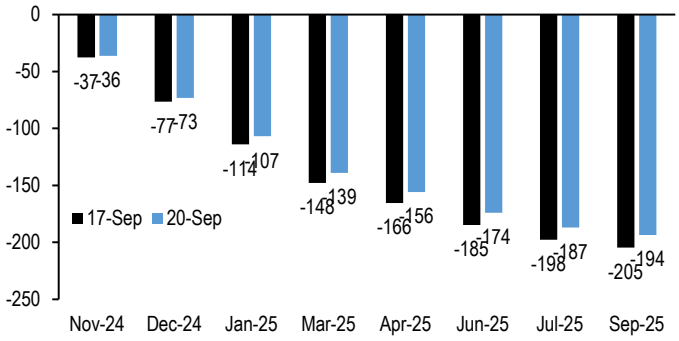
Federal Reserve Summary of Economic Projections, June 2024 vs. September 2024;

		2024	2025	2026	2027	Longer run
Real GDP	Sep 24	2.0	2.0	2.0	2.0	1.8
	Jun 24	2.1	2.0	2.0		1.8
Unemployment Rate	Sep 24	4.4	4.4	4.3	4.2	4.2
	Jun 24	4.0	4.2	4.1		4.2
Core PCE	Sep 24	2.6	2.2	2.0	2.0	
	Jun 24	2.8	2.3	2.0		
Fed funds rate	Sep 24	4.4	3.4	2.9	2.9	2.9
	Jun 24	5.1	4.1	3.1		2.8

Source: Federal Reserve

Figure 2: Following this week's Fed meeting, OIS forwards priced a less dovish path for policy

Expected change in Fed funds at FOMC meetings implied by OIS forward rates; 9/17/24 vs. 9/20/24; bp



Source: J.P. Morgan

Thus, we continue to forecast the Fed will cut by another 50bp at the November meeting before stepping down to a 25bp per meeting pace in December. However we recognize this is contingent on softening in the job reports between now and then, and more benign labor market data would seal the case for a 25bp at the next FOMC meeting (see *An appropriate recalibration*, Michael Feroli, 9/18/24). Against this backdrop of policy uncertainty, we think outright directional trading themes in duration or curve are likely to offer poor risk-reward. Moreover spreads look snug but we still see risks they could move tighter and we do not favor shorting them.

Following the outcome of the Fed meeting, we recommended unwinding our broad curve steepener trade, which we have held in some form since last November. Importantly, this trade was largely predicated on expectations that the front end of the curve would lead the way lower as the Fed approached its first ease, recognizing also that structurally higher term premium would anchor long-end yields at higher levels, given the rapid growth of the Treasury market continues to outstrip demand from its historically price-insensitive base. It's possible that if growth and inflation expectations continue to rise over the near term, the

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curve could steepen in more bearish fashion from here.

However, valuations no longer appear attractive, given that OIS forwards have more closely converged to our Fed forecast in recent weeks and as the broad curve now looks too steep after adjusting for the level of 1Yx1Y OIS rates. **Figure 2** shows that OIS forwards priced a less dovish path for policy following the Fed meeting, but still imply 73bp of cuts over the balance of this year and 124bp of cuts in 2025. This is particularly important given the negative carry of steepener positions and shorter-duration Treasury supply next week could bias the curve flatter in the near-term. Turning to duration, 10-year Treasury valuations also appear somewhat cheap after controlling for the market's medium-term Fed policy, inflation, and growth expectations, as well a the Fed's share of the Treasury market. While this skews us towards a more bullish lean, we remain neutral with money markets closely in line with our forecast and outright yield levels still in the lower 40% of the 40bp range they have traded over the past six weeks (see *Treasuries*). Consistent with this view, our technical strategists note the bond is already pressed into the 4.065-4.095% tactical support zone. We see other layers at 4.235-4.26% and then 4.315-4.345%. We suspect bear steepening will have a limit given its typical correlation with commodity price trends and inflation markets. Look for that dynamic to keep the bond yield capped at 4.25% through the fall (see *Technicals*).

In inflation markets, the fundamental backdrop has shifted more bullishly for TIPS over the last two weeks, given the strong action from the Fed combined with resilient growth data. However, breakevens have already retraced to their widest levels since just prior to the release of the July employment report, and we believe the Fed's data dependent stance likely leaves breakevens vulnerable to a correction lower, as we think the amount of easing currently priced in the forwards will only materialize alongside further cooling in labor markets. Additionally, our medium-term outlook on inflation remains unchanged. We believe core inflation will soften gradually, supported by core goods deflation and softening service price pressures. Fixings are priced close to our own forecasts, implying an average monthly pace of core CPI inflation near 0.27% in the next few months and near 0.25% through 1Q25. Additionally, breakevens appear fairly valued after adjusting for the repricing in the Fronts/Reds curve and broad commodity prices. Thus, we do not think breakevens are terribly compelling at current levels. For now, we recommend holding energy-hedged 5s/10s breakeven curve steepeners (see *TIPS*).

One way of illustrating the still elevated state of policy uncertainty is to show that weights derived from Z4 and M5 3-month SOFR futures on individual policy outcome scenarios remains largely the same after the FOMC meeting this week (**Figure 3**). During this period of uncertainty, we continue to prefer conditional trades which offer asymmetric reward in either bullish or bearish states of the world. Along the swap yield curve, we note that while OIS forwards are not inconsistent with our own Fed funds forecast, the Reds are well below levels indicated in the YE25 SEP median dot. To position for rising yields in the Reds, we like weighted Greens/15s flatteners which should remain insensitive to small moves locally but tend to flatten into an accelerated rate selloff. A variation of this theme is to initiate a flatter 1s/7s curve in a selloff, using 3M expiry payer swaptions. Additionally, with low event risk on the horizon for the next two weeks, we turn bearish on shorter expiry and intermediate and longer tail volatility. We are more cautious on shorter tails, and recommend a neutral stance.

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Figure 3: The passing of the FOMC meeting has not translated into better clarity on the path of the funds rate going forward

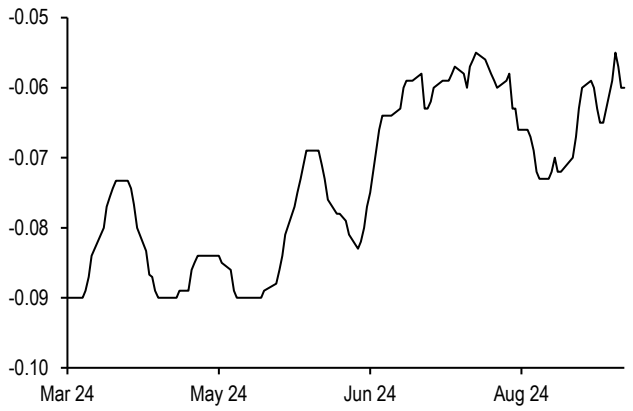
Total weights on YE24 and 1H25 policy rate scenarios representing a range of different Fed funds rates, as calculated from a decomposition of the implied probability distribution associated with Dec 2024 and June 2025 SOFR futures*; 9/17 (before FOMC) and 9/18 (After FOMC

	Dec 2024 weights		Mid 2025 weights	
Funds Rate	Before FOMC	After FOMC	Before FOMC	After FOMC
4.50	0.27	0.00	0.00	0.00
4.25	0.20	0.57	0.00	0.00
4.00	0.21	0.11	0.12	0.04
3.75	0.17	0.19	0.05	0.12
3.50	0.07	0.08	0.00	0.00
3.25	0.03	0.00	0.08	0.09
3.00	0.05	0.04	0.75	0.75

* We enumerate a list of scenario-specific Normal distributions with fixed standard deviations and means that are separated by 25bp, and then require the implied distribution to be a weighted combination of these individual distributions. The weights are then solved for, by fitting to the observed prices of calls and puts at various different strikes. For more details of our approach, see What's the rush?.
Source: J.P. Morgan., CME

Figure 4: SOFR has been steadily rising relative to the interest rate on Reserves

Rolling 2-week moving average of the O/N SOFR minus IOR differential, %; past 6 months



Source: J.P. Morgan

Turning to the Fed's balance sheet, there was minimal discussion on QT. However, when asked about balance sheet policy during the press conference, Powell noted that "reserves are still abundant and expected to remain so for some time. The shrinkage has come out of the overnight RRP." He also mentioned that "for a time, you can have the balance sheet shrink while also cutting rates," as both actions can be viewed as policy normalization. Importantly, we continue to see QT as being in its endgame, with perhaps a few more months left, and project the Fed's balance sheet to end the year at ~$7tn (see *Hopscotch*, Srini Ramaswamy, 8/16/24). Locally, we note that ON RRP balances fell to $239bn on September 16, marking its lowest level since May 2021, on the back of corporate tax date-related outflows and mid-month Treasury settlements. This likely contributed to the rise in SOFR, which increased by 5bp DoD to 5.38% on September 16. As we enter the GSE period and Treasury settlements work their way through the system, along with negative T-bill supply, ON RRP balances should trend back higher throughout this month, and SOFR should also move back lower (see *Short-term Fixed Income*). Nonetheless, beyond the next couple of weeks, we are steadily heading towards tighter liquidity conditions, with repo rates and SOFR likely to remain biased higher, even possibly necessitating an eventual reduction in IOR (**Figure 4**). Given these looming possibilities, banks will likely find it preferable to deploy their spread risk budget in 2Y spread wideners rather in 3s. Therefore, while we remain broadly neutral on swap spreads for now, we now recommend positioning for a 2s/3s maturity matched swap spread curve flattener (see *Interest rate derivatives*).

The combination of a Fed cut with a more hawkish-than-expected press conference against the backdrop of improving economic data was a positive for corporates, with the spread on our JULI declining 7bp w/w to 105bp, the lowest since mid-July. Given that spreads are already quite tight and the upcoming easing cycle is well anticipated, we do not think Fed easing will have a meaningful impact on spreads near-term and continue to look towards a YE target of 110bp. Looking back over previous easing cycles, we note that spreads tend to decline, returns turn positive, and fund inflows increase over the 6 months following the

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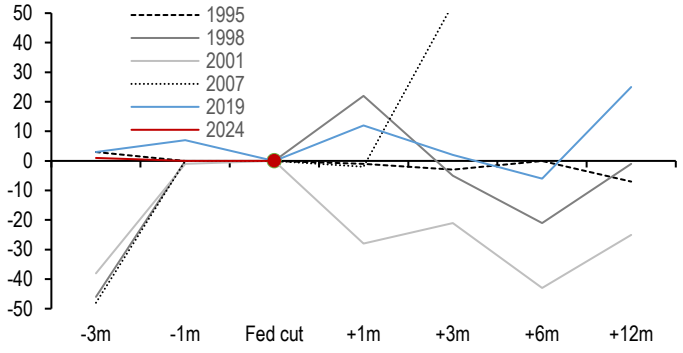
first Fed cut. However most of these episodes were when Fed decisions were partly driven by weakness in corporate results, and today's cycle more closely resembles the 1995 proactive easing experience in which spreads were stable over the next year (see *What to expect when you're expecting (rate cuts)*, Nathaniel Rosenbaum et al., 9/18/24, and **Figure 5**). Looking ahead, credit markets will continue to debate whether the recent payroll weakness represents the beginning of a material slowdown or simply a soft patch, with the risk to spreads that softer data raises recessionary concerns, and upcoming earnings season will be an important hurdle. On the technical front, questions remain if yield-based buyers will step away with long-end JULI yields now nearly 85bp below their YTD peaks. But we have yet to see a meaningful steepening of the spread curve which we would expect in this scenario, perhaps owing to the lack of long-end supply. Meanwhile, we would expect further rate cuts to bring stronger retail and foreign demand given the recent increase in fund inflows, the reduction in hedging costs, and more appealing relative value of front-end credit versus money market yields (see *Corporates*).

Figure 5: HG spreads tend to be tighter on average once the Fed cuts, though were roughly stable over the 1995 easing cycle

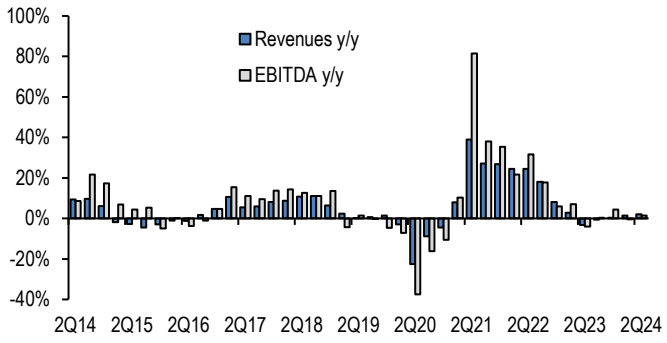
Change in spreads relative to the first Fed cut from 3 months prior to 12 months post, over the 1995, 1998, 2001, 2007, 2019, and 2024 easing cycles; bp



Source: J.P. Morgan, Bloomberg Finance, L.P.

Figure 6: High Yield company revenues and EBITDA growth remain subdued but are stabilizing

LQA EBITDA y/y growth; %



Source: J.P. Morgan

Similarly down the credit spectrum, a hawkish 50bp cut combined with more resilient consumer data was bullish for high yield bonds, as spreads declined 29bp over the week to 349bp. However if the Fed were to deliver on another 50bp cut in November, which is predicated on further labor market softening, we would expect spreads would widen materially as this would indicate a worsening economic outlook. Meanwhile if more benign labor data seals the deal for a series of 25bp cuts, we would expect spreads to remain near 350bp. Turning to fundamentals, we do not see much cause for concern among HY company balance sheets, with credit metrics largely stable in 2Q24. Indeed revenue and EBITDA expanded q/q following quarterly declines in 1Q and 4Q, while profit margins ticked higher off of a three-year low (**Figure 6**). While leverage continues to inch upward, 2Q24 marked the second quarter of mold increases and overall leverage remains comfortably below long-term averages (see *High Yield*).

This week's Fed cut is a reminder that the carry tailwind for CLOs will gradual fade as monetary policy loosens. Indeed we expect the carry/current yield for CLO AAA around 7% prior to this week's easing will fall to 4% by YE, based on our SOFR and Treasury yield forecasts. While not unattractive, it isn't much higher than UST yields, and not every investor is an absolute return or yield buyer. While T1 CLO AAA Primary spreads around 135bp remain below their non-recessionary averages, rising credit concerns bring focus back on CLO liability downgrades. Currently the percentage of US CLO bonds in CLOIE that have

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been downgraded over the past year stands at 2.3% by count and 0.4% by volume. Downgrades are concentrated in CCC bonds and among the 2012-15 vintages where the majority of bonds are currently out of reinvestment (see *CLOs*).

Mortgage spreads reached new year-to-date lows with the MBS market reacting positively to a 50bp rate cut and general risk-on attitude across spread products. Option-adjusted spreads look historically tight and the question remains whether technical dynamics can support further tightening. H.8 data show bank demand is starting to creep up after years spent in the doldrums (**Figure 7**). Importantly however, bank buying is no longer focused on parking unhedged fixed rates in HTM to pair off sticky deposits but instead far more spread-focused, as evidenced by CMO floater issuance and portfolio layer hedging. While it is unlikely we see the same level of strong demand as during the 2010-21 period, banks could take some comfort from the initiation of the cutting cycle to add mortgages even at very tight OASs. We think $50-100bn net add could be possible over the next year. That, coupled with potential for overseas buying as the US curve steepens, means more focus on ZVs or nominal spread than before. Some money managers have been waiting to rotate out of MBS into corporates, anticipating that IGs would eventually widen, but with the JULI still near its recent tights, it's not entirely obvious what to buy if you sell MBS. Moreover there could be some inertia in mortgage weights if managers look to keep yields high and respond to surging inflows. So, while we don't love mortgage spreads here, we understand why it's hard to really short them. We'd still recommend a barbell on the stack to stay away from the belly, at least for investors with flexibility on dollar price (see *Mortgages*).

Agency mortgage rates meanwhile are only a few basis points above 6% and the 30-year rate is poised to fall to 5.9% by year-end based on our Treasury yield estimates. Despite the 75bp reduction in mortgage rates, existing homes sales (demand) has not budged while borrowers remain less sensitive to the recent moves given just over 60% retain 4% or lower mortgage rates. Instead investors are more focused on convexity risk in jumbo collateral as 6% coupons shift more into the money. This could begin to pressure premium price spreads. Non-QM should offer a convexity advantage with a heavier investors share of loans and prepayment penalties. Meanwhile we have seen delinquencies rise in the non-QM and FHA segments while GSE and jumbo DQs remain subdued (**Figure 8**). This has been driven by recent vintages and by bank statement and 'other' documentation borrowers. Investors are not significantly concerned as current LTVs of delinquent borrowers are below 70% and the housing market remains supported by a lack of supply. That said, if delinquencies continue to rise at current pace, AA and A classes could face extension risk in certain deals for which delinquency triggers are breached (see *RMBS*).

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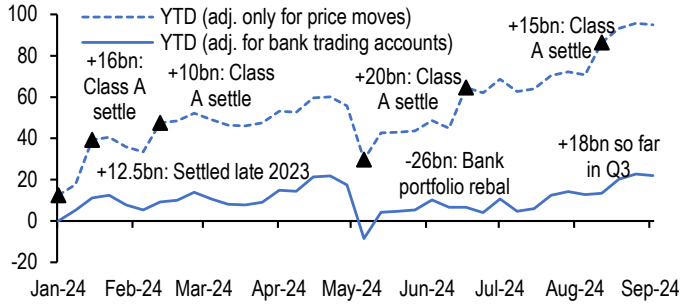
Figure 7: Bank buying appears to have picked up modestly ahead of the FOMC

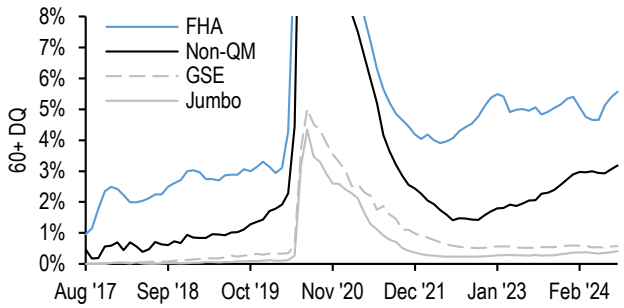
2024 YTD* changes in agency MBS holdings across all U.S. banks in amortized cost terms; $bn



*The "YTD (adj. for bank trading accounts)" series adds subtracts out the $12.5bn settled in 2023 and trading account changes, spread across Class A settle increases. In Q1, we subtract $26bn of settled Class A holdings to tie out with call report increases in bank trading accounts and match H.8. with AFS + HTM call report increases. In Q2, we subtract $20bn of settled Class A holdings to match H.8. changes with AFS + HTM call report changes
Source: J.P. Morgan, Federal Reserve, FFIEC

Figure 8: Delinquencies have continued to increase in non-QM

60+ DQ (%) for loans originated since 2017



Source: J.P. Morgan, CoreLogic, Freddie Mac, FHA

While this week's Fed cut was a welcome relief for CRE/CMBS markets, the cumulative impact of cuts to terminal will be more impactful for markets. Indeed CRE property prices seem to be bottoming, REIT stocks have rallied, and CMBS has rebounded well ahead of this cut in anticipation of the pause in rate hikes and an eventual cut. For now spreads can grind tighter on sentiment and the spread curve can bullishly flatten. We continue to believe the best relative value can be found in upper IG mezz, particularly in the AS bonds as they remain wide on both a historical basis and relative to spread comps while facing minimal extension risk (see *CMBS*).

ABS spreads continue to hold firm under heavy supply for another September week. In the secondary market, there was some selling of short dated ABS after Wednesday's highly anticipated first rate cut of the cycle by the Fed. The inverted yield curve, particularly at the front end, has provided a significant boost to short ABS returns. While some adjustment to yield curve shifts is expected, we do not anticipate a significant pull back in demand for ABS as there remains an attractive spread pickup over Treasuries and comparable credits. In addition, for investors concerned about recession risks, high-quality ABS has served as a relatively stable flight-to-quality safe haven during periods of broad credit sell-offs. Meanwhile we are still seeing strong subscription and solid pricing levels across sectors in the new issue market, with compressed spread tiering for sponsor risk. While YTD supply of $17.1bn lags the $18bn we witnessed by this time last year, tight spreads and lower rates should make all-in yields more attractive to issuers for incremental supply. We think FNMNT, SYNIT, WFCIT and WFNMT offer attractive spread pickup on the top bankcard ABS programs while Canadian banks offer attractive spread pickup versus their US peers (see *ABS*).

Finally, we note that over the past week J.P. Morgan hosted both its Global Macro and Securitized Products Real Estate and Consumer (SPREC) conferences. Readers can find summaries of the main takeways here and here, respectively.

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Figure 9: Cross sector monitor

Current levels, change since 9/13/24, 1-year average, minimum, maximum, and current z-score for various market variables; units as indicated

		Current	Chg from 9/13	1Y avg	1Y min	1-year range: ●9/20/24 ▲9/13/24 —1M range	1Y max	Z-score
Global equities (level)	S&P 500*	5703	1.4%	5027	4117		5703	1.6
	E-STOXX*	4872	0.6%	4700	4014		5101	0.5
	FTSE 100*	8230	-0.5%	7884	7291		8446	1.0
	Nikkei 225*	37724	3.1%	36528	30527		42224	0.4
Sovereign par rates (%)	2Y US Treasury	3.56	-0.9	4.58	3.55		5.21	-2.6
	2Y Germany	2.19	4.7	2.75	2.07		3.25	-2.0
	2Y JGB	0.37	0.4	0.18	-0.02		0.43	1.5
	10Y US Treasury	3.65	7.9	4.18	3.54		4.90	-1.8
	10Y Germany	2.23	6.1	2.43	1.91		2.97	-0.9
	10Y JGB	0.90	2.1	0.86	0.60		1.11	0.4
Funding spreads (bp)	2Y EUR par swap/gov't spd	118	-4.9	170	118		201	-3.0
	2Y USD par swap/gov't spd	-19	0.7	-14	-21		-7	-1.4
	EUR SOFR-OIS spd	168	-15.8	169	132		200	0.0
	USD SOFR-OIS spd	4	-0.9	1	-2		5	1.2
	1Y EUR-USD xccy basis*	11	0.1	7	-5		12	0.9
	#VALUE!	#N/A	#VALUE!	#DIV/0!	0		0	#VALUE!
Credit spreads (bp)	30Y FNCL 4.5% Front Tsy OAS*	18	-1.4	34	18		56	-2.1
	10Y AAA new issue CMBS spd to swaps*	107	-4.0	121	96		165	-0.7
	3Y AAA card ABS spd to SOFR	54	0	58	53		75	-0.7
	JULI portfolio spd to Tsy*	106	-6.2	113	99		144	-0.7
	JPM US HY index spd to worst*	344	-25.0	371	317		473	-0.7
	EMBIG Div spd to worst*	369	-15.8	392	322		459	-0.8
	CEMBI Broad spd to worst*	222	-9.0	259	214		336	-1.0
	iBoxx Euro HG spd to govies*	77	0.7	80	68		97	-0.4
	US Financials spd to Tsy*	96	-5.2	111	88		156	-0.8
	Euro Financials spd to govies	107	-6.7	124	101		162	-1.0
	10Y AAA muni spd to Tsy	-110	-7.9	-151	-193		-99	1.7
	10Y AA taxable muni spd to Tsy*	64	-1	77	60		99	-1.0
Currencies	EUR/USD*	1.113	0.4%	1.083	1.048		1.118	2.0
	USD/CHF*	0.848	0.0%	0.885	0.836		0.921	-1.7
	USD/JPY*	142.91	1.6%	150.42	140.45		161.67	-1.5
	JPM Trade-weighted USD index	131.10	0.0%	131.78	128.10		134.60	-0.5
	GBI-EM Global FX index	81.24	0.7%	79.82	78.63		81.34	2.2
	Bitcoin spot*	59462	0.0%	52991	26211		72911	0.5
Commod-ities	Gold futures ($/t oz)*	2591	0.2%	2201	1817		2591	1.9
	Brent oil futures ($/bbl)*	74.88	4.6%	82.55	69.19		96.55	-1.5
	LME Copper 3M rolling forward ($/tonne)*	9216	0.0%	8956	7899		10889	0.4

Source: J.P. Morgan, Bloomberg Finance L.P., ICE, IHS Markit
* 9/19/24 levels for 1yr EUR-USD xccy basis, 30Y FNCL 4.5%, 10Y AAA new issue CMBS, JULI, JPM US HY Index, EMBIG, CEMBI, iBoxx Euro HG, US Financials, 10Y AA taxable muni, EUR/USD, USD/CHF, USD/JPY, Bitcoin, gold, brent, copper; 9/20/24 levels for all others

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Figure 10: YTD returns on various fixed income indices; %

Index	Since last publication (9/13/2024)	Year-to-Date (as of 9/20/2024)
USD Cash	0.11%	4.1%
Aggregate GABI	0.53%	7.6%
UST Agg	-0.30%	4.2%
UST 1-5y	0.03%	4.2%
UST 5-10y	-0.33%	4.6%
UST 10y+	-1.10%	3.9%
UK	-0.08%	1.4%
Germany	0.04%	2.2%
Italy	0.29%	5.5%
Japan	-2.96%	-2.9%
EM Sovereign	0.60%	7.9%
Agencies	-0.02%	4.6%
FN 3.0%	-0.42%	5.2%
FN 2.5%	-0.53%	4.9%
FN 2.0%	-0.67%	4.6%
ABS Fixed	0.09%	5.9%
HG Bonds	0.04%	5.5%
AAA	-0.02%	4.2%
AA	-0.01%	4.6%
A	0.00%	5.3%
BBB	0.08%	6.0%
Fin	0.11%	6.4%
Non-Fin	0.01%	5.1%
HY Bonds	0.75%	7.9%
BB	0.55%	6.9%
B	0.80%	8.3%
CCC	1.63%	12.5%
EM Corporate	0.42%	7.9%
CLOIE	0.13%	6.1%
JUSTINE	0.11%	5.0%

Source: J.P. Morgan

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Economics

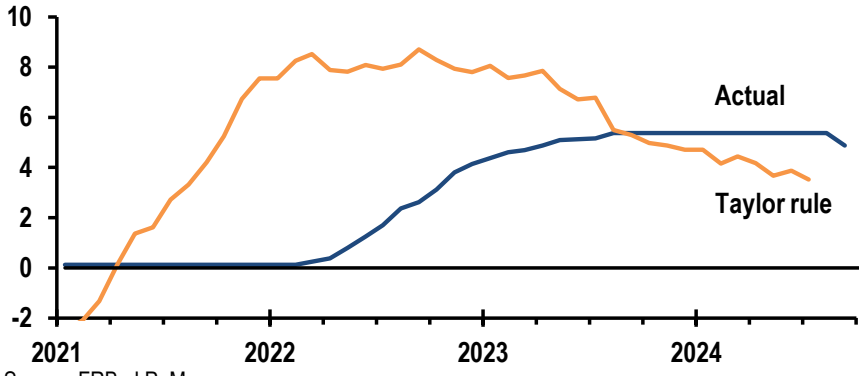
- **As we had expected, and against consensus, the Fed began easing with a front-loaded 50bp rate cut**
- **We think a continued 50bp recalibration is warranted, but the next move will depend on labor market data**
- **A solid consumer leads us to revise up 3Q growth to 2.5%ar, ahead of annual GDP revisions**
- **Mixed signals on manufacturing and housing, but lower mortgage rates should offer (eventual) support**

On Wednesday the FOMC delivered a forceful 50bp cut to kick off its easing cycle, with Chair Powell characterizing the move as a "recalibration" that shifted policy from bringing down inflation to safeguarding the soft landing. In addition to a greater focus on downside risks to the labor market, as presaged by Powell's Jackson Hole speech, the July FOMC minutes, and even Governor Waller's remarks before the blackout period, this move also reflected growing confidence in inflation returning to the Fed's 2% target more quickly than previously thought—something that Waller confirmed in subsequent remarks he gave the Friday following the decision—even as it remains "somewhat elevated."

While markets were about 65% priced for the move, consensus across the Street was nearly unanimously looking for a more modest 25bp cut. In his presser, Powell confirmed each of the reasons we anticipated the FOMC would choose the larger move they did. First, Powell called the move a "good, strong start" and posited that "the logic of this [action], both from an economic standpoint and from a risk management standpoint, was clear." We agree that the economic data have evolved to suggest that policy was—and arguably still is—too restrictive if , for example, viewed through a Taylor Rule lens (Figure 1). The risk management perspective also warrants a front-loaded easing. Additionally, given the dovish tone of the July minutes, a case could be made for moving 50bp in September to make up for not going in July. Powell conceded the Fed "might well have" cut in July had it seen the jobs report released 48 hours later.

Figure 1: US Fed funds rate

%; based on balanced Talyor (1999) rule and interpolated SEP targets



Source: FRB, J.P. Morgan

Data dependence continues

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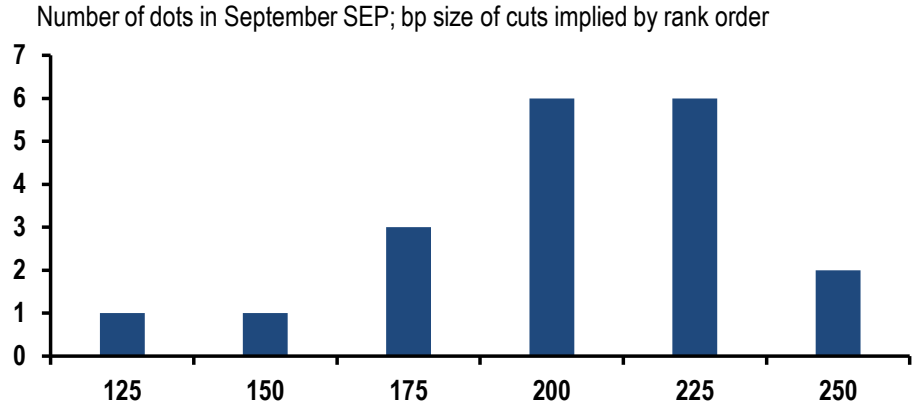
Powell also said that the Fed is "not in a rush," in part to signal that the Fed is making decisions meeting-by-meeting, considering the totality of the incoming data and its implications for the outlook. Nonetheless, our forecast anticipates some further slowing in the labor market that compels the Fed to again cut 50bp at the November meeting. Private payroll growth at 100,000 or less, or a further move up in the unemployment rate, would make a strong case for another 50bp ease, in our view. We readily concede, however, that it could once again be a close call—and this time the October jobs report occurs during the blackout period. But should the labor market stabilize, with some improvement in job growth and a stable unemployment rate, then the path should be clear for the Fed to take a more gradual path toward neutral and deliver a 25bp cut in November, as signaled by the median dot in the latest SEP.

That said, the skew of the distribution of the dots arguably is in a more dovish direction. While we obviously don't know which dots coincide with which FOMC participant, under the simplifying assumption that the rank order of participant's dots within each year remains the same over time, we can back out a distribution of expected policy paths. Figure 2 shows the extent of cuts implied by each participant through the end of 2025 per this exercise. While the median dots imply 200bp of cuts in total by then (including September's 50bp move), the histogram is clearly skewed toward greater easing.

Figure 2: Distribution of projected Fed easing through end-2025



Source: Federal Reserve, J.P. Morgan

We continue to look for the economy to avoid recession, and thus for the Fed to eventually cut to 3% by mid-2025. This would put policy in the vicinity of the neutral rate. In the SEP, the median longer-run dot again inched up slightly to now reside at just below that level. But as Powell noted in the press conference, estimates of neutral have wide uncertainty bands. Rather than looking to empirical or model-based estimates of neutral to guide policy, Powell once again suggested the Fed will "know it by its works."

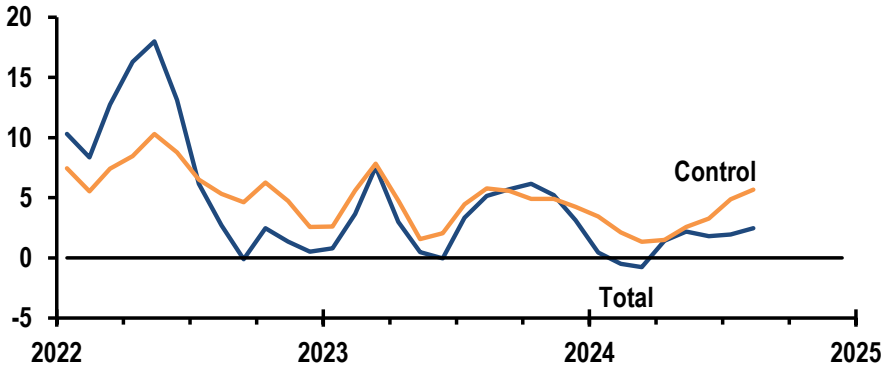
3Q GDP stronger on resilient consumers

The recalibration of policy via a front-loaded 50bp cut this week arguably was the best response to safeguard the soft-landing. The biggest support has come from the so-far resilient US consumer. This week brought another manifestation of that strength in the form of the retail sales report. The headline increased by 0.1%m/m, surpassing expectations due to a smaller-than-anticipated decline in motor vehicle sales (note however that weaker data on unit auto sales will be incorporated into the GDP report). The control category (ex-food services, autos, gas, and building materials) also rose 0.3%, which leaves it up a brisk 6.3%

annualized over the last three months (Figure 3). We now expect that real consumer spending rose 0.1% in August, which while slower than the recent average still sets up a strong quarter. We have raised our forecast for 3Q real spending to 3.5%q/q saar from 3.0%.

Figure 3: Retail sales and food services sales

%ch 3m/3m, saar



Source: Census Bureau, J.P. Morgan

On the back of this upgrade to consumer spending we have also raised our 3Q GDP forecast from 1.5%q/q, saar to 2.5%, and raised 4Q from 1.0% to 1.25%. We are still see labor market risks front and center, but looser financial conditions accompanied by momentum from the current quarter can bring slightly higher output growth through the remainder of the year. Preventing outright weakening in the labor market by a shift in the policy stance will, on the margin, help sustain consumer spending in coming months, albeit likely at a slower pace than the rapid clip in 3Q.

One important support for consumer spending has been the low savings rate, which was down to 2.9% as of July. Next week's final 2Q GDP report will also bring the annual revision to the GDP and GDI data, which might increase the saving rate, as we discuss in the forecast section below for next week's final release of 2Q GDP. The annual update will include revisions back to 2019, incorporating new data and minor methodology changes. Notable updates may affect GDI, the GDP-GDI gap (as we discuss here), and the personal saving rate, particularly through revisions in net interest payments and receipts. Additionally, the update will start using QCEW data for employee compensation estimates in 1Q, likely resulting in a downward revision to compensation due to weaker employment growth compared to CES data.

Mixed messages on housing, industry

Manufacturing output rebounded strongly in the August IP report, increasing 0.9%. This followed a 0.7% drop in July due to auto plant shutdowns and Hurricane Beryl. But in the context of weak June and July readings, the quarterly run rates look soft. Total IP is tracking a 1.2%q/q, saar decline while manufacturing in tracking a 0.7% decline in 2Q after this week's report, leaving both total and ex-auto manufacturing essentially unchanged from a year earlier. Information from regional surveys also were mixed this week. The ISM-weighted composite rose for the Empire survey but declined in the Philadelphia Fed survey, though their average in each of the last three months is the best since 2022. This is a more positive message than contained in the manufacturing PMI or ISM surveys, and we get the next flash report for the PMI this coming week. We also get the durable goods report then, where we expect the volatile aircraft segment to weigh on total orders and shipments while

core capital goods series (nondefense ex-aircraft) should see only small changes, consistent with the lack of growth in the past year.

Turning to the housing market, lower mortgage rates may improve conditions in coming months, but it is too soon to see much effect yet. Existing home sales fell 2.5%m/m to a 3.86mn pace in August, essentially retouching the cycle low from October. Existing home sales measure contract closings and so are a lagging indicator, and while we do not expect a major improvement in pending home sales next week, rising weekly mortgage applications provide a glimmer of hope. Also this week, housing starts showed a rebound in August, reversing the July decline. Residential investment will still be drag on 3Q GDP growth, tracking at -10%q/q, saar, but the pace of decline will likely moderate substantially in 4Q. We also get the August results for new home sales next week, where we expect a small pullback after a strong report in July.

All quiet on the claims front

Weekly initial jobless claims dipped to 219k in the latest report, the lowest since mid-May. We suspect some residual seasonality may have contributed to higher claims in the summer, and indeed last year there was also a similarly timed drop in claims after which they stayed low through this spring. We will be looking to see if this is repeated again in coming weeks, which would be a positive labor market sign. However, Boeing's recently announced furloughs could create a temporary rise in claims that will muddy the signal. Boeing announced that more than 50k workers could be furloughed, with workers off one out of every four weeks. This likely won't have much impact on the next weekly claims report, but could show up in the one after that.

Excerpted from, *United States Data Watch* , Michael Feroli, September 20, 2024

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Treasuries

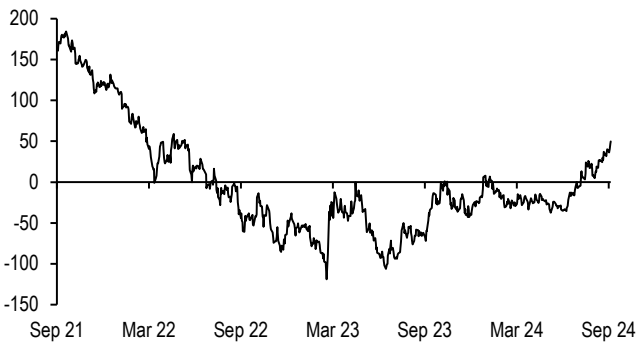
The first cut is the deepest

- The broad curve hit its steepest levels since early-2022 after the Fed delivered a larger 50bp cut, though the latest move has been in more bearish fashion than the bullish steepening that has defined the last 3 months...
- ...though the delivered ease was dovish, the SEP and the Chair's comments were more balanced, and would not necessarily support a steeper curve...
- ...and this "appropriate recalibration" is being driven by risk management concerns, front-loading easing, so as to not bring the current expansion to a premature end
- Should this action support better growth outcomes in the future it could steepen the curve. The reaction across a cross section of macro asset class this week indicates this burgeoning narrative could be gaining steam
- If this narrative persists, we unwound our steepeners prematurely, after holding them for the last 9 months, though we recommended these positions as a more bullish duration proxy. This could make the case for steepening in either direction, and is also supported by our view that term premium should rise over time
- We do not want to chase the curve given how it has decoupled from the market's terminal Fed expectations in recent days, and given that OIS forwards have more closely converged to our Fed forecast in recent weeks. With short-duration Treasury supply to be digested next week and these trades incurring negative carry, we will be patient before adding back to steepener exposure
- Intermediate valuations have begun to flag as somewhat cheap, but with money markets converging closer to our Fed forecast and yields still in the bottom 40% of their recent range, we do not feel compelled to add duration at current levels
- Initiate 91:100 weighted 3.125% Nov-41/ 2% Nov-41 flatteners
- Foreign investors purchased $56bn of long-term Treasuries in June, the most since April 2024. Demand was concentrated among investors domiciled in the Cayman Islands and the UK while net selling pressure emanated from Japan and China

Market views

Figure 11: The curve reached its steepest levels since early-2022...

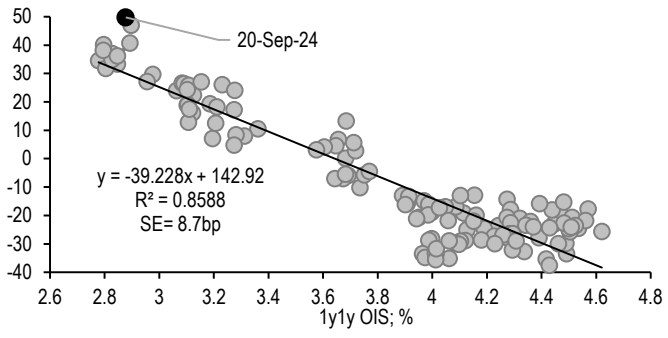
2s/30s Treasury curve; bp



Source: J.P. Morgan

Figure 12: ...but in a more bearish fashion this week, as the curve appears too steep given the level of 1y1y OIS rates

2s/30s Treasury curve regressed on 1y1y OIS (%), regression over the last 6 months; bp



Source: J.P. Morgan

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The Treasury curve made new steeps for the cycle, which should be of little surprise considering the Fed delivered its first ease in more than 4 years, and a bigger cut than most market participants had expected. Indeed, long-end yields rose 9bp and the 2s/30s curve steepened 6bp by a similar magnitude this week, moving back to levels last see in early-2022 (**Figure 11**). However, this week's steepening was in a bearish fashion rather than the bullish steepening that has defined the trend for the last three months or so. Given these moves, the yield curve now appears too steep relative to its primary driver: **Figure 12** shows 1y1y OIS has explained about 85% of the variation in the slope of the curve over the last 6 months, and the curve now appears 20bp too steep on this basis.

With the bulk of this curve move occurring after the FOMC decision, the natural question is whether the Fed's actions directly drove this subtle shift that we've noticed. From a headline perspective, the Fed leaned dovishly, delivering a 50bp ease, in line with our forecast but larger than the 25bp consensus, but many of the other details were more hawkish: the policy statement indicated that this move was motivated by progress on inflation and evolving risks to employment and inflation, it was accompanied by a hawkish dissent from Governor Bowman, the first dissent by a governor since 2005, and though the forward guidance indicates the Committee is biased to ease further, it didn't indicate the expected pace or timing (see *An appropriate recalibration*, Michael Feroli, 9/18/24).

Similarly, the SEP leaned less dovishly as well as the median dot for this year points to an additional 50bp of cumulative easing over the next two meetings, 100bp of easing in 2025, and an additional 50bp of easing in 2026 to bring policy rates back to neutral (**Figure 13**). The median unemployment rate projection for this year and next is 4.4%, up 0.4%-pt and 0.2%-pt, respectively, from the June projections. The inflation projections were generally revised lower by a few tenths. Dissecting the 2024 dots in greater detail, the distribution roughly shifted down by 50bp versus the June SEP, but it's notable now that still 9 of 19 participants see at most 25bp more easing this year (**Figure 14**).

Figure 13: The SEP showed upward revision to unemployment rate projections, while inflation forecasts were revised somewhat lower

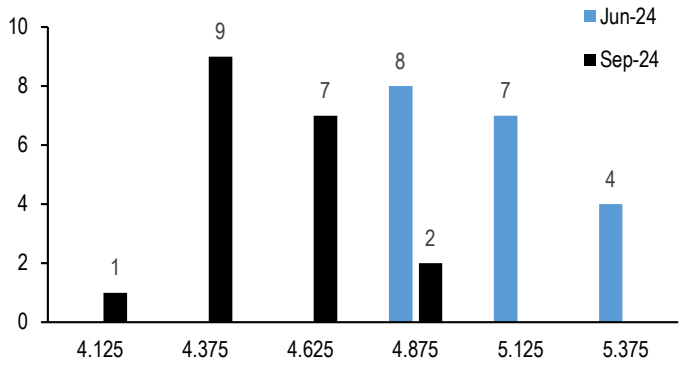
Federal Reserve Summary of Economic Projections, June 2024 vs. September 2024;

		2024	2025	2026	2027	Longer run
Real GDP	Sep 24	2.0	2.0	2.0	2.0	1.8
	Jun 24	2.1	2.0	2.0		1.8
Unemployment Rate	Sep 24	4.4	4.4	4.3	4.2	4.2
	Jun 24	4.0	4.2	4.1		4.2
Core PCE	Sep 24	2.6	2.2	2.0	2.0	
	Jun 24	2.8	2.3	2.0		
Fed funds rate	Sep 24	4.4	3.4	2.9	2.9	2.9
	Jun 24	5.1	4.1	3.1		2.8

Source: Federal Reserve

Figure 14: The dot plot shows 9 of 19 participants see at most 25bp more easing this year

Distribution of projected midpoint of Fed funds target range for 2024, June vs. September 2024; number of participants



Source: Federal Reserve

Finally, in contrast to what we've observed most FOMC days over the last year or more, yields drifted higher during Chair Powell's press conference. The Chair's remarks read outright dovish for the first time since 2021 according to our NLP-based Hawk-Dove Report (see *Fed, Powell: Press Conference*, Joseph Lupton, 9/18/24), but it's notable that he did not repeat the comments at Jackson Hole that the Committee does "not seek or welcome further cooling in labor market conditions." Indeed Powell offered, "The labor market is in solid condition. And our intention with our policy move today is to keep it there." Away from this,

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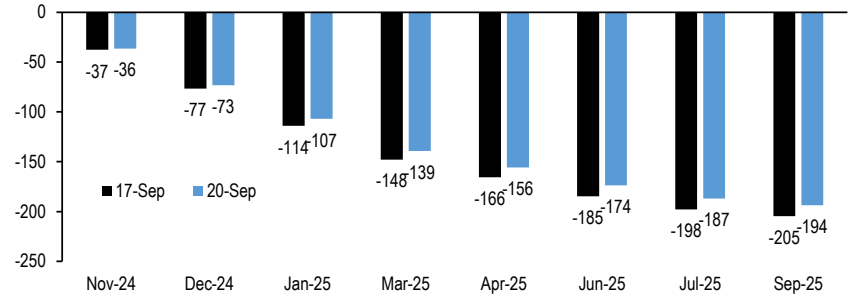
Powell offered no clues on the magnitude of future cuts, only saying "we're recalibrating policy down over time to a more neutral level." Finally, it's of no surprise that QT continued apace, as the Chair said "reserves are still abundant and expected to remain for some time...We know that these two things can happen side by side in a sense they're both forms of normalization. So for a time, you can have the balance sheet shrink, but also be cutting rates." We continue to think the sensitivity of SOFR to changes in total liquidity balances (reserves + RRP) indicates liquidity conditions are tightening and that QT is in its end state, likely to be completed by YE24 (see Interest Rate Derivatives, *US Fixed Income Markets Weekly*, 8/16/24). On balance, given these comments, OIS forwards priced a less dovish path for policy, implying 73bp of cuts over the balance of this year and 124bp of cuts in 2025, versus 77bp, and 133bp, respectively, prior to the FOMC (**Figure 15**). Overall, we are not surprised that the Chair took a more hawkish tone in the press conference, as this likely helped build consensus for the larger 50bp cut from more hawkish members of the Committee.

Figure 15: Following this week's Fed meeting, OIS forwards priced a less dovish path for policy

Expected change in Fed funds at FOMC meetings implied by OIS forward rates; 9/17/24 vs. 9/20/24



Source: J.P. Morgan

Against this backdrop, it seems unclear why the curve would steepen if Chair Powell poured cold water on the notion that this 50bp ease was the beginning of a front-loaded easing cycle. However, under the surface we can see how this makes sense, for a few reasons. **First**, it's clear the Fed's balance of risks have changed. **Figure 16** shows that 16 of 19 FOMC participants think the risks to inflation are broadly balanced, while 11 of 16 had seen upside risks as recently as June. **Second**, the Committee's balance of risks have shifted around the unemployment rate as well: while the broad majority of the FOMC saw balanced risks around the labor markets in June, 12 of 19 now see risks skewed to the upside (**Figure 17**).

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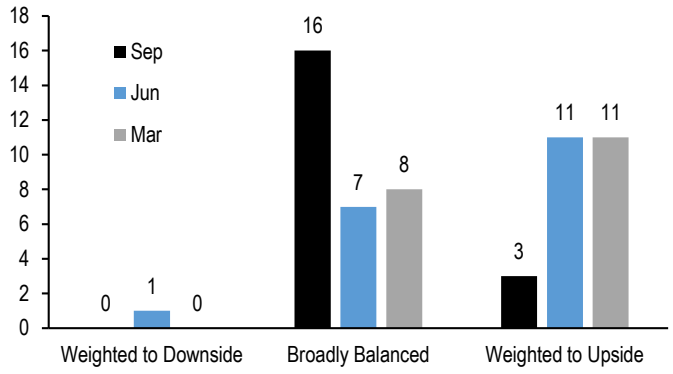
Figure 16: The Committee sees balanced inflation risks...

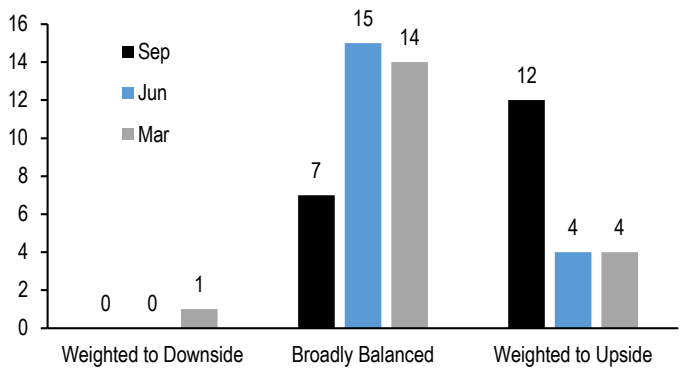
Risks to core PCE from Summary of Economic Projections; number of participants



Source: Federal Reserve

Figure 17: ...but is more concerned about a continued rise in the unemployment rate, suggesting a risk to more dovish action

Risks to the unemployment rate from Summary of Economic Projections; number of participants



Source: Federal Reserve

Accordingly, given this backdrop, one could argue that the Fed's "appropriate recalibration" is being driven by risk management concerns, as the Committee chooses to front-load easing, so as to prevent the premature end of the current expansion. In response to a question, on whether this 50bp cut was in order to catch up, Chair Powell argued " we think this is timely, but I think you can take this as a sign of our commitment not to get behind. So, it's a strong move." **Indeed, a cross-section of macro asset have all behaved similarly this week, pointing toward higher growth and inflation expectations: the market-implied terminal Fed funds rate has risen modestly, TIPS breakevens widened, HG spreads narrowed, broad equity indices, gold, and crude oil all rallied (Figure 18).**

Figure 18: A cross section of macro asset classes suggest the Fed's 50bp cut could be positive for growth and inflation outcomes in the future

Current levels, 1-week changes, and 1-month statistics for various assets; %

Asset	Last	1wk chg	1m low	1m high	%
1y1y OIS; %	2.877	8.2	2.778	3.207	36%
2s/10s curve; bp	15.40	8.9	-18.32	15.40	100%
10y TIPS; bp	215.1	6.0	202.2	216.3	77%
JULI; bp	105.5	-6.0	105.5	115.0	0%
S&P 500; pts	5703	69	5408	5714	95%
Gold futures; $/oz	2621.8	36.6	2493.5	2621.8	100%
Brent oil futures ; $/bbl	74.6	1.8	69.2	79.6	57%

Source: J.P. Morgan

If this new narrative persists, then it may have been inappropriate to reduce our curve steepening exposure earlier this week, after having recommended various forms of these trades for the last 9 months. However, our rationale for holding steepeners was predicated on money markets pricing a faster and deeper cutting cycle, thus driving the curve steeper in a more traditionally bullish fashion than the directionality observed in recent days. We are receptive to this new narrative, and it could mean steepeners are more of an "all-seasons" trade for now, where curves can steepen bullishly if labor markets weaken further and the Fed continues to front-load cuts, or bearishly if growth remains firm and the Fed eases less, pointing toward a higher neutral rate and better anchored inflation expectations. Moreover, in the background, the rapid growth of the Treasury market continues to outstrip demand from its historically price-insensitive base, pointing toward higher term premium and steeper curves over time (see *In the eye of the beholder*, 9/12/23). **We do not want to chase the curve given how it has decoupled from the market's terminal Fed expecta-**

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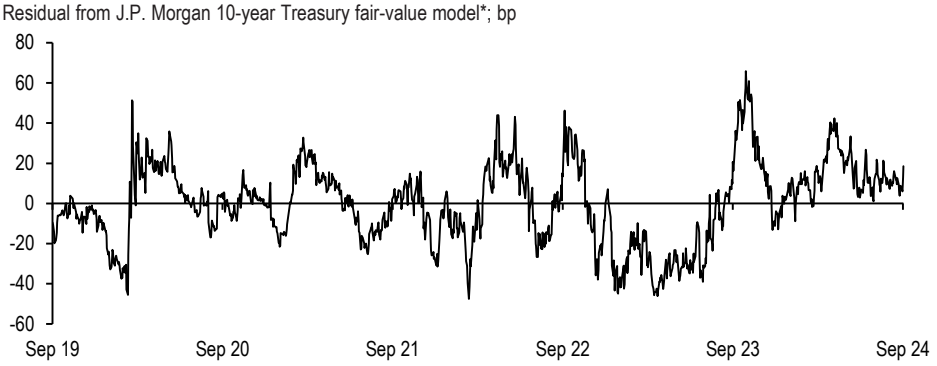
tions in recent days, and given that OIS forwards have more closely converged to our Fed forecast in recent weeks. This is particularly important given the negative carry incurred in holding broad steepeners, and knowing that there is shorter-duration Treasury supply to underwrite next week, which could bias the curve flatter over the near term.

Turning to duration, valuations now appear somewhat cheap: **Figure 19** shows that 10-year Treasuries appear 16bp too high after controlling for the market's medium-term Fed policy, inflation, and growth expectations, as well as the Fed's share of the Treasury market, a divergence of nearly close to one standard deviation. **On margin, this backdrop skews us toward a more bullish lean on duration, but with money markets more closely converging relative to our own forecast and 10-year yields still in the lower 40% of the 40bp range they have traded for the past six weeks, we are not compelled to add duration at current levels.**

Figure 19: Intermediate Treasury yields are somewhat high after controlling for their fundamental drivers, but with markets converging closer to our Fed forecast and yields below their recent averages, we are not compelled to add duration at current levels



* Regression of 10-year Treasury yields on 5Yx5Y seasonally-adjusted TIPS breakevens (%), 3m3m OIS rates (%), Fed policy guidance (months), J.P. Morgan US Forecast Revision Index (%), and SOMA share of outstanding marketable US Treasury debt, excluding T-bills (%). Regression over the last 5-years. R-squared = 97.8%, SE = 20bp
Source: J.P. Morgan, Federal Reserve, US Treasury

Turning to relative value, we've noticed that originally issued 20-year bonds maturing in late-2041 and early-2042 have cheapened relative to our par curve, whereas originally issued 30-year bonds with similar maturities have outperformed. Clearly, the recent steepening of the Treasury curve supports wider yield spreads between higher-coupon OI 30s, and lower-coupon OI 20s with the same maturity, given significant duration differences. However, this dynamic is not explained by duration profiles: **Figure 20** displays the securities in the 2040-2043 basket, sorted by modified duration and shows that late-41/ early-42 OI 30s appear rich relative to other securities with similar duration. In particular, the 3.125% Nov-41/ 2% Nov-41 curve appears 5.0bp too steep relative to the shape of the 15s/20s Treasury par curve (**Figure 21**). **Hence, we recommend initiating 91:100 weighted 3.125% Nov-41/ 2% Nov-41 flatteners (see Trade recommendations).**

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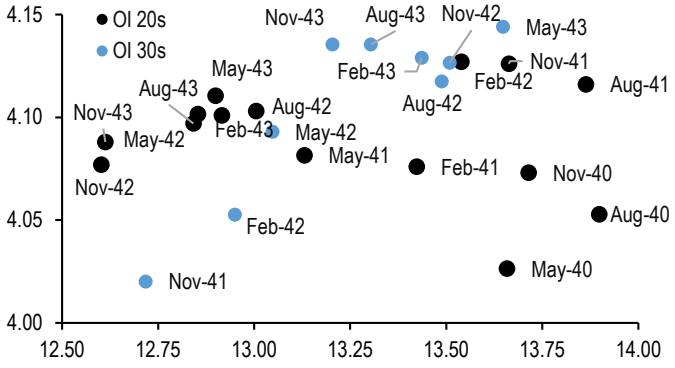
Figure 20: Late-41 and early-42 OI 30s appear too rich relative to surrounding securities

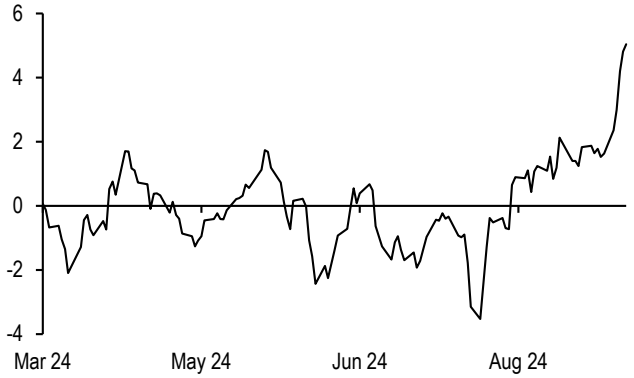
Yield and duration of select Treasury securities in the 2040-2043 basket plotted versus modified duration (years); %



Source: J.P. Morgan

Figure 21: The 3.125% Nov-41 / 2% Nov-41 curve appears 5bp too steep relative to our par curve

Residual of 3.125% Nov-41 / 2% Nov-41 regressed on 15s/20s Treasury par curve over the last 6 months; bp



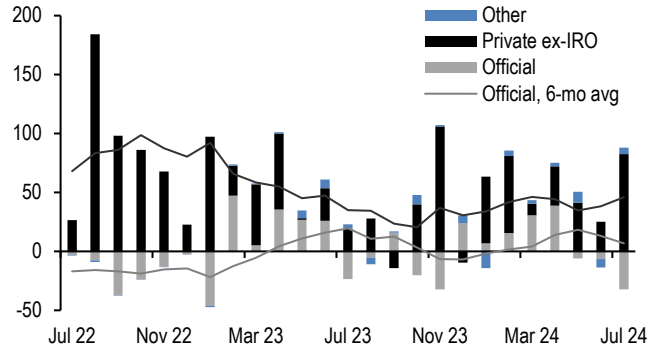
R-squared: 71.5%; S.E.: 1.4bp
Source: J.P. Morgan

July TIC update

Turning to the monthly TIC data, foreign investors purchased $56bn long-term Treasuries over the month of July, above the six-month average, and the strongest month of net purchases since April 2024. Private investors added $88bn, the firmest month of buying since November 2023, which includes $6bn of demand from International and Regional Organizations (IROs). Meanwhile foreign official investors net sold $32bn of long-term Treasuries, the most since November 2023 (**Figure 22**). Looking ahead, we expect demand from foreign private investors to moderate from the strong pace earlier this year, especially if some of the YTD demand was to position for the start of the Fed easing cycle (see Treasuries, *US Fixed Income Markets Weekly*, 9/13/24).

Figure 22: Foreign investors on net purchased $56bn of long-term Treasuries in July, the most since April...

Total net sales of long-term Treasuries by US residents by sector and 6-mo. moving average; $bn



Source: Treasury International Capital System

Figure 23: ...and geographically, demand was concentrated in the Cayman Islands and the United Kingdom

Net sales of long-term Treasuries by US residents from May- July 2024 by region as well as cumulative net sales year-to-date; $bn

Region	Jul-24	Jun-24	May-24	YTD 2024
Cayman Islands	50.3	-9.2	3.7	53.8
UK	8.1	-5.0	15.2	34.1
EM ex-China**	4.4	-2.3	13.1	56.0
Oil Exporters*	1.6	-2.2	2.1	11.9
Ireland	-2.6	0.2	5.7	10.6
Euro Area†	-5.0	20.7	10.0	78.1
Japan	-15.2	-30.1	-5.8	-6.4
China	-23.1	5.9	-23.9	-61.9

*Oil exporters include all OPEC members (excluding Equatorial Guinea & Angola) and also include Bahrain, Indonesia & Oman
**EM ex-China includes Russia, Brazil, African countries, Taiwan (China), South Korea and Mexico
† Euro area include Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, Spain
Source: Treasury International Capital System

Turning to geographical composition, **Figure 23** shows that demand in July was concentrated among investors domiciled in the Cayman Islands and the United Kingdom, who bought

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$50bn and $8bn of long-term US Treasuries, respectively. As a reminder, we tend to think of flows from these countries as largely reflecting hedge fund demand domiciled in these jurisdictions. Interestingly European investors net sold $5bn of Treasuries in July, though we would expect this outflow to reverse given that Treasuries remain somewhat attractive for Euro-funded investors on a FX-hedged basis. Meanwhile investors domiciled in Japan net sold $15bn of long-term US Treasury securities, their fourth consecutive month of outflows. While this is in line with the still significantly negative FX-hedged yield pickup Japanese investors face buying Treasuries, it contrasts with MoF data which indicate investors added roughly $1tn JPY of US bonds in July. Meanwhile, according to the MoF, Japanese investors appear to have bought $7.33tn JPY of foreign bonds in August, the largest monthly purchase over the past year, largely stemming from bank demand, though we do not yet know the regional composition of this net buying (see *Japan Flows in Pictures*, Takafumi Yamawaki, 9/9/24). Finally Chinese investors net sold $23bn Treasuries, and this comes even as gold reserves remain unchanged in recent months (see *China: Gauging exporters' "USD hoarding"*, Tingting Ge, 9/8/24).

Trade recommendations

- **Initiate 91:100 weighted 3.125% Nov-41/ 2% Nov-41 flatteners**

- Buy 91% risk, or $20mn notional of T 3.125% Nov-41s (yield: 4.02%; bpv: $1146/mn)
- Buy 100% risk, or $24.7mn notional of T 2% Nov-41s (yield: 4.121%; bpv: $1021/mn)
- Weighted spread is 46.3bp. One-month weighted carry is 0bp and roll is 0.1bp

- **Unwound 3s/30s steepeners**

- Unwound long 100% risk, or $180mn notional of T 3.75% Aug-27s
- Unwound short 100% risk, or $28mn notional of T 4.25% Aug-54s
- (*Unwound in US Treasury Market Daily, 9/18/2*: P/L since inception: 0.2bp)

- **Maintain** 75%/6% weighted 5s/10s/30s belly-cheapening butterflies

- Stay long 75% risk, or $43mn notional of T 4.625% Sep-28s
- Stay short 100% risk, or $33.3mn notional of T 3.875% Aug-33s
- Stay long 6% risk, or $1mn notional of T 4.125% Aug-53s
- (*US Fixed Income Markets Weekly*, 9/29/23: P/L since inception: -2.0bp)

- **Maintain** 23:84 weighted 2s/7s/10s belly-richening butterflies

- Stay short 23% risk, or $28mn notional of T 4.375% Jul-26s
- Stay long 100% risk, or $40.2mn notional of T 4.125% Jul-31s
- Stay short 84% risk, or $23mn notional of T 3.875% Aug-34s
- (*US Treasury Market Daily*, 8/21/24: P/L since inception: -2.5bp)

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Figure 24: Closed trades in last 12 months

P/L reported in bp of yield unless otherwise indicated

TRADE	ENTRY	EXIT	P/L
Duration			
5-year duration longs	10/03/23	11/02/23	14.9
7-year duration shorts	11/03/23	11/22/23	-7.9
30-year duration shorts	12/15/23	01/04/24	10.9
5-year duration longs	01/19/24	02/01/24	25.3
5-year duration longs	02/09/24	03/07/24	3.3
Equi-notional 2s/5s flatteners	05/31/24	06/06/24	16.0
5-year duration shorts	06/14/24	07/01/24	21.9
30% 2-year duration short	07/12/24	07/31/24	-1.8
Curve			
10s/30s steepener	12/16/22	09/29/23	3.0
10s/30s steepener	11/03/23	11/22/23	-7.3
2s/5s flatteners	12/08/24	05/17/24	6.0
5s/30s steepener	11/22/23	09/06/24	26.4
3s/5s steepener	09/04/24	09/06/24	3.1
3s/30s steepener	09/06/24	09/18/24	0.2
Relative value			
2.75% Aug-32/ 3.5% Feb-39 steepeners	01/10/24	01/26/24	5.2
20s/ old 30s flatteners	02/15/24	05/10/24	-2.6
100:97 weighted 3.75% Apr-26/ 4.625% Sep-26 flatteners	04/12/24	05/17/24	2.2
100:95 weighted 4% Feb-28 / 4% Feb-30 steepeners	02/23/24	05/31/24	-6.6
50:50 weighted 3s/5s/7s belly-richening buterflies	03/15/24	06/14/24	2.1
100:98 weighted 4.75% Feb 37s / 4.5% Aug 39s steepeners	06/14/24	07/12/24	2.6
100:95 weighted 0.625% Jul-26s / 1.25% Dec-26s steepeners	07/12/24	08/14/24	1.5
Number of positive trades			16
Number of negative trades			5
Hit rate			76%
Aggregate P/L			118.4

Source: J.P. Morgan

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Technical Analysis

- The post-FOMC price action within rates and across other asset classes reinforce the technically-derived bias we had favoring bull market consolidation going into the Sep meeting….
- ...The momentum divergence signals that triggered across multiple DM bond markets and across the respective points on the curves suggest an increased probability for backing and filling to higher yields into early-Oct and potentially more range trading through early-fall...
- ...Longer duration markets responded to those signals already as front-end yields just got sticky near key resistance levels. We suspect further risk-on trends across equity and commodity markets can help drive further bear steepening over the very near-term, but we also think those trends are self-limited via the likely TIPS breakevens widening that often correlates with all of the above. At some point, the market may rethink the Fed path to neutral if inflation markets widen too.
- We suspect 2-year note weakness will find buying interest near 3.75% and see an outside chance a backup extends as far as 3.85%. Look for the 30-year bond to find material buying interest near support surrounding 4.25%. All else equal, the recent developments reinforce the idea that 3.93-4.00% will put a floor under the long-end yield through the fall.

Longer-end US yields lead the retracement to higher levels; but the technical setup at the front-end leaves the front-end vulnerable as well

The post-FOMC price action reinforced our technically-derived bias going into the meeting— that the rally deceleration into key chart-based resistance levels favored a period of consolidation. Over the near-term, we think that setup, the associated pattern-based signals as shown in the charts point to additional backing and filling in the early-fall. We would view such price action as a consolidation within a developing bull market. For now, we are most interested in watching how the yield curves evolve, how risky markets respond to the rate decision and data, and how both of those impact inflation markets. The late-week price action saw an impulse of risk-on, bear steepening, and wider TIPS breakevens. We believe that market reaction represents one side of a very bifurcated macro-risk distribution. With the yield curve having been inverted for many quarters and the policy rate materially above what most assume to be neutral for most of that period, a sequence of policy eases has the potential to derail the inertia associated with weakening labor demand before that trend leads to a drop in consumption and/or layoffs. In that case, risky markets will eventually start to price in a rebound in the manufacturing data that has been under pressure for most of the last two years. The late-week price action gives some indication of that dynamic across markets— bear steepening, wider TIPS breakevens, rallying industrial commodities, and higher equities (specifically small cap and cyclicals). While we think that can extend over the very short-term, we do think the pass through to inflation markets and the likely resulting impact on the market-implied policy path creates a self-limiting dynamic.

At the other end of that very bimodal distribution profile, the convergence of the actual policy rate to neutral and lagged impact on the economy would trail the impact of shrinking labor demand, which in turn would lead to a sharp drop in end demand and/or layoffs. Naturally, that path would likely lead to a rapid repricing to an accommodative policy rate, a significant drop in equity markets given their high multiple and EPS growth expectations,

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lower commodity prices, and lower TIPS breakevens. In the absence of a sharp break in the labor data in the weeks ahead, or a rapid risk unwind for whatever reason, it is unlikely markets will get a clear answer as to which path the macro setup is heading toward in the early-fall. The overall setup bolsters the technically-derived near-term outlook for consolidation across many market trends. As such, we've already shrunken our 5s/30s curve trade, we suggest taking profits on the 2s/5s curve steepener, and closing out the 10-year Gilts long we entered earlier in the month. Our 10-year TIPS breakevens trade was stopped out for a wash after the post-Fed move. Lastly, we will hold the remaining 5s/30s steepener for now, as the S&P 500 attempted break to new highs is still tentative. As noted above, a continued risk-on move has the potential to help bear steepen the curve more over the very near-term. Additionally, an immediate failure to hold that breakout can damage sentiment and cause a re-focus on the risk associated with the negative tail outcome that could become self-feeding if equities start to build bearish momentum.

For key levels, we are looking for the 2-year note to trade mostly in a 3.55-3.75% range, and see an outside chance the front-end backs up as far as the 3.835-3.89% support zone in the weeks ahead (Figure 25). At the long-end, look for the 30-year bond backup to stretch as far as 4.25%, but at that point, we think buying interest will help stabilize the market. Unless the data deteriorates materially, this week's developments and the responses across asset classes reinforces the idea that 3.95-4.00% will likely keep a floor under the yield through the fall and potentially beyond (Figure 28).

Figure 25: The 2-year note rally stalls near 3.525-3.555% expected resistance, but has outperformed a more substantial post-FOMC setback further out on the curve. We see tactical support at 3.71-3.75% and think a backup into the 3.80s would find a meaningful amount of buying interest. In the absence of sharp equity weakness or an immediate deterioration in the labor data, we expect the front-end to trade in a tight range in the early-fall period.

2-year note yield, daily bars with momentum divergence signals; %

Source: J.P. Morgan, CQG

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Figure 26: The 5-year note hasn't traded as sticky as the very front-end, but the belly also looks set to get very sticky and trade in a very tight range in the early-fall period. The rally stalled near the Oct 2023 channel, now at 3.435%. Look for tactical support at 3.61% with other levels at 3.73% and 3.755%. We think that zone caps yields in the near-term.

5-year note, daily bars with momentum divergence signals; %

Source: J.P. Morgan, CQG

Figure 27: The 10-year note stages a more pronounced setback from the 3.60% yield low and nearby resistance at the 3.625% Apr 2023 78.6% retrace and 3.64% Mar-May 2023 pattern breakdown. Recent bearish momentum divergence sell signals (green arrows) point to an increased probability for further backing and filling into mid-Oct. We expect the 3.91% 50-day moving average, 3.91-4.02% Aug pattern cheaps, and 4.03% Apr 38.2% retrace to put a ceiling over yields through the fall.

10-year note yield, daily bars with momentum divergence and TY premium-weighted Put/Call z-score signals; %

Source: J.P. Morgan, CQG, CME

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Figure 28: The 30-year bond saw the largest response to the recent momentum divergence sell signals, rejection of the 3.94% Dec 2023 yield low, and FOMC decision. The bond is already pressed into the 4.065-4.095% tactical support zone. We see other layers at 4.235-4.26% and then 4.315-4.345%. We suspect bear steepening will have a limit given its typical correlation with commodity price trends and inflation markets. Look for that dynamic to keep the bond yield capped at 4.25% through the fall.

30-year bond yield, daily bars with momentum divergence signals; %

Source: J.P. Morgan, CQG

Figure 29: The 5s/30s curve steepening trend reaches the 59bp Mar 2021 50% retrace after the FOMC meeting. The outcome and market response bolsters our view that the curve can start to trade in a range below that level and above support at the 43bp 50-day moving average, 41.5bp early-summer 2023 peak, and 37bp Aug low. We suspect the current bear steepening dynamic will have a limit as it also pulls inflation markets with it and eventually can impact front end pricing. On the chart, we would view a fall range as a consolidation pattern after the summer 2022-2024 base pattern breakout. That formation favors an acceleration to the upside into 2025.

5s/30s curve, daily closes; bp

Source: J.P. Morgan, CQG

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Figure 30: 10-year TIPS breakevens widen from the 203bp cycle low and fully mean revert to the upper end of the recent range. That stopped us out of our recent tightening trade at breakeven. We still see the 218-224bp area as a likely ceiling and key bifurcation zone. If the market happens to widen back into the 2023-2024 pattern, we think the move can accelerate quickly and quickly move back to the 235-243bp resistance zone.

10-year TIPS breakevens, daily closes; bp

Source: J.P. Morgan, CQG

This report was excerpted from *Global Fixed Income Technical*, Jason Hunter, September 20, 2024

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TIPS Strategy

Two roads diverged in a wood...

- TIPS continued to outperform, supported by strong economic data and a favorable FOMC outcome. In the wake of the Fed meeting, Thursday's 10-year reopening auction was easily digested
- The fundamental backdrop has shifted more bullishly for TIPS over the last two weeks, given the strong action from the Fed combined with growth data that have driven upward revisions to our GDP forecasts and provided further conviction in our soft landing call
- That said, we are hesitant to chase the recent widening. The Fed's data dependent stance likely leaves breakevens vulnerable to a correction lower, as we think the amount of easing currently priced in the forwards will only materialize alongside further cooling in labor markets...
- ...Additionally, our medium-term outlook on inflation remains unchanged. We believe core inflation will soften gradually, supported by core goods deflation and softening service price pressures
- Fixings are priced close to our own forecasts, implying an average monthly pace of core CPI inflation near 0.27% in the next few months and near 0.25% through 1Q25. Additionally, breakevens appear fairly valued after adjusting for the repricing in the Fronts/Reds curve and broad commodity prices
- Thus, we do not think breakevens are terribly compelling at current levels. For now, we recommend holding energy-hedged 5s/10s breakeven curve steepeners

Market views

Over the past week, TIPS continued to outperform, with 5-, 10-, and 30-year breakevens 9bp, 7bp, and 6bp wider net of carry, supported by strong economic data and a favorable FOMC outcome. Specifically, Wednesday's 50bp cut was paired with Powell's optimistic message that progress on inflation allowed for a forceful "recalibration" of policy to preserve the currently strong labor market. In the wake of the FOMC meeting, Thursday's $17bn 10-year TIPS reopening auction was easily digested, clearing with just a 0.1bp tail as end-user demand rose to 93.4%, the highest since January (**Figure 31**). Despite the continued decline in real yields, 5-year breakevens are now 18bp wider over the last two weeks, trading near their widest levels since just prior to the weak July employment report released on August 2nd (**Figure 32**). IOTAs were broadly stable. Outflows from TIPS-focused funds continued but moderated from the heavy pace observed in recent weeks, with these funds recording $54mn of outflows in the week through Wednesday.

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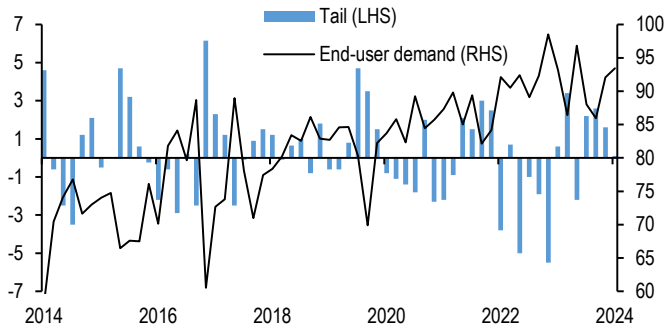
Figure 31: This week's 10-year reopening auction was easily digested with 93.4% end-user demand

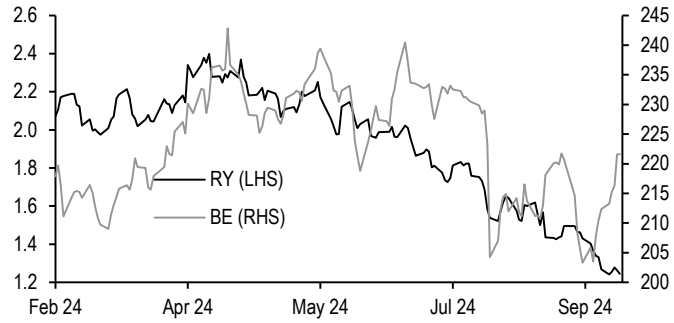
10-year TIPS auction tail (LHS; bp) vs. end-user demand* (RHS; %)



* Reflects the sum of indirect and direct participation
Source: US Treasury, J.P. Morgan

Figure 32: Front-end real yields were range-bound while breakevens widened sharply

1-month seasonally-adjusted forward 5-year TIPS real yield (LHS; %) vs. breakeven (RHS; bp)



Source: J.P. Morgan

Taking a step back, the fundamental backdrop for breakevens has shifted bullishly over the last two weeks. In recent months, we have argued that TIPS performance would largely depend on whether the Fed was perceived to be cutting rates preemptively to preserve the expansion or reactively in response to a weakening labor market (see *TIPS Strategy*, 8/23/24). The willingness of the Fed to act aggressively to bring policy closer to neutral this week reduces the risk that the Committee is caught behind the curve. In fact, Chair Powell stated more than once during the press conference that "you can take this as a sign of our commitment not to get behind." This strong action from the Fed also comes against a backdrop of continued upside surprises in the growth data, adding conviction to our soft landing view. Importantly, following this week's August retail sales report, our economists have revised up their tracking of 3Q GDP growth to 2.5%, from 1.5% previously, and take their 4Q GDP growth target from 1% to 1.25% (see *US Weekly Prospects*, Michael Feroli, 9/20/24). Moreover, if this forecast is realized, the step down in the policy rate to mitigate risks that don't materialize, alongside easier financial conditions and lower headline inflation, should provide a tailwind to real consumption, keeping recession risks in check heading into 2025.

That said, we are hesitant to chase the widening in breakevens for a few reasons. First, while the recalibration in policy rates arguably increases the probability of a soft landing, the Fed has made it clear that the pace and extent of future easing will depend on the evolution of the data. Thus, we think the easing priced into the forward curve through 2025 will only materialize in an environment in which labor markets continue to loosen, keeping growth risks weighted to the downside, especially given Powell's comment that he believes the neutral policy rate is likely "significantly higher" than it was before the pandemic. **Second**, this is likely to keep inflation markets vulnerable to a correction lower if labor market data disappoint, as we have seen in the aftermath of each of the last two employment reports. Despite our forecast for a soft landing, we recognize that labor market data and growth data have been disconnected for a number of months and are likely to remain so into the fourth quarter. Even as our economists have revised up their growth tracking, they still look for further slowing in payroll growth in coming months, and look for the unemployment rate to tick up to 4.5% by the end of the year, above the Fed's median projection. In a recent note, they show that almost all of the recent U-rate rise can be explained by declining job finding rates, and not rising separations, which is not typical during recessions and could be consistent with a labor market normalizing around a higher NAIRU (see *US: Reaching u* before r**, Murat Tasci, 9/17/24).

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Third, despite a stronger growth outlook, we also maintain a forecast of gradually cooling core inflation and our commodity strategists maintain a bearish outlook on energy prices in 2025. We recognize that core CPI inflation could stay somewhat elevated in the next couple of months supported by strength in used car prices and airfares, and we see the potential for firming early in 2025 as well, driven by residual seasonality, but this view is largely priced into the fixings curve, which implies an average monthly pace of core CPI near 0.27% through the fall and roughly 0.25% through 1Q25 (**Figure 33**). Meanwhile, we expect the broader trend of core goods deflation and softening price pressures from slower wage growth and looser labor markets to remain intact. Rent inflation, which Powell noted is "the one piece that is kind of dragging a bit," should gradually moderate, and we expect the underlying trend in rental inflation is likely around 4% annualized (see *TIPS Strategy*, 9/13/25). It's also worth recognizing that there is empirical evidence that contractionary monetary policy could have had a hand in keeping rent inflation elevated, given that high mortgage rates have kept housing mobility low and demand for rental units high.[1] It is therefore reasonable to expect the initial response of less restrictive monetary policy could support further slowing in rent inflation, on the margin.

Figure 33: Front-end fixings imply core CPI averaging near a 0.27% monthly pace in coming months

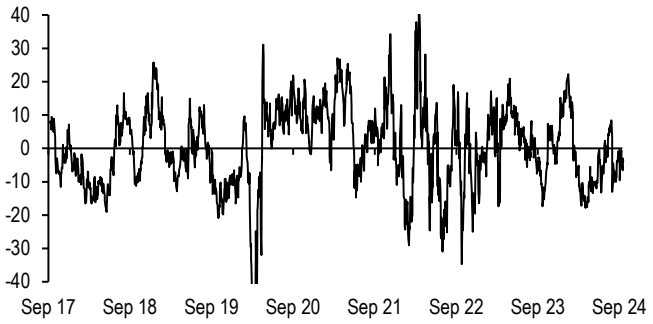
CPI fixings and implied inflation rates*; units as indicated

Month	Fixing	Implied headline % m/m sa	Implied headline % oya	Implied core % m/m sa	Implied core % oya
Sep-24	314.845	0.07%	2.29%	0.25%	3.19%
Oct-24	314.890	0.13%	2.35%	0.27%	3.22%
Nov-24	314.503	0.24%	2.43%	0.29%	3.20%
Dec-24	314.322	0.27%	2.47%	0.11%	3.03%
Jan-25	315.620	0.17%	2.34%	0.25%	2.88%
Feb-25	316.765	0.19%	2.07%	0.21%	2.73%
Mar-25	318.231	0.20%	1.89%	0.41%	2.78%
Apr-25	319.128	0.21%	1.78%	0.22%	2.70%
May-25	319.923	0.09%	1.86%	0.05%	2.59%
Jun-25	320.430	0.07%	1.99%	-0.05%	2.47%
Jul-25	321.001	0.22%	2.02%	0.28%	2.58%

* To derive market-implied core inflation rates, J.P. Morgan forecasts for food and energy CPI are used
Source: J.P. Morgan

Figure 34: Breakevens appear roughly in line with our fair value framework

Residual on J.P. Morgan 5-year breakeven fair value model; bp



* 1m-forward, seasonally-adjusted breakevens are regressed on the J.P. Morgan Commodity Curve Index (JPMCCI) as well as its square and the 3mx3m/15mx3m OIS curve; regression over the last 7years; R2=94%, SE=12.7bp
Source: J.P. Morgan

Against this backdrop, we think breakevens are not terribly compelling at current valuations. Figure 34 shows that 5-year breakevens are fairly valued after adjusting for the repricing in Fronts/Reds and broad commodities. Oil prices have rebounded from cheap levels toward our commodity strategists' year-end target, and the money market curve, which we use as a macro risk proxy, could revert flatter again if labor market data show further cooling as we expect. **Thus, we recommend waiting for cheaper levels before adding widening exposure. For now, we favor structures that offer asymmetric risk/reward.** Notably, we believe 5s/10s energy-hedged breakeven curve steepeners remain attractive. The front end of the forward curve has been most reactive to shifts in the macro narrative over the last couple of months, with 1Yx1Y, for example, leading the way higher

1. Dias and Duarte (2019), "Monetary policy, housing rents, and inflation dynamics", in Journal of Applied Econometrics, 34(5), 673-687.

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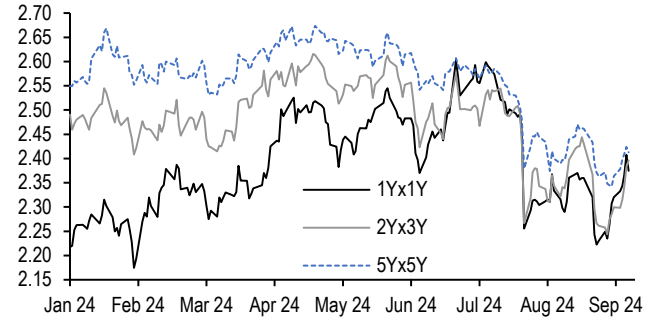
over the past two weeks (**Figure 35**). **Figure 36** shows that 5s/10s, as proxied by the 2Yx3Y/5Yx5Y inflation swap curve is back at the low end of its YTD range. With labor market data in early October likely to show further cooling, but solidify market expectations for further easing, we think this should drive the 5-year sector to underperform, while 5Yx5Y breakevens could richen further. Meanwhile, as noted above, we think the Fed's recalibration in policy is unlikely to drive near-term inflation higher, but further strength in risk assets and a belief that the Fed is tolerant of above-target inflation could also drive longer-run forwards to outperform along the curve. **Against this backdrop, we maintain 5s/10s breakeven curve steepeners paired with a long in Brent futures.**

Figure 35: The front end of the forward curve led the way higher…

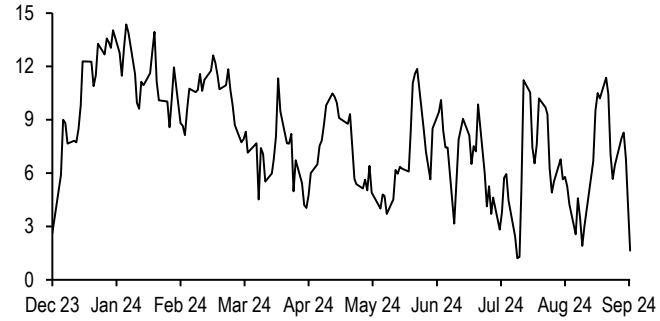
1Yx1Y, 2Yx3Y, and 5Yx5Y inflation swap rates; %



Source: J.P. Morgan

Figure 36: …and the 2Yx3Y/5Yx5Y curve is back near its flattest levels YTD

2Yx3Y/5Yx5Y inflation swap curve; bp



Source: J.P. Morgan

Trade recommendations

- **Maintain energy-hedged 5s/10s breakeven curve steepeners**

- Stay short 100% risk, or $110mn notional of TII 2.125% Apr-29s
- Stay long 100% risk, or $113.8mn notional of T 4.625% Apr-29s
- Stay long 100% risk, or $54mn notional of TII 1.875% Jul-34s
- Stay short 100% risk, or $59.6mn notional of T 3.875% Aug-34s
- Stay long 15 Brent futures (COZ4)

(See *TIPS Strategy*, 9/13/24). P/L since inception: -2.0bp

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Figure 37: Trade performance over the past 12 months

P/L reported in bp of yield unless otherwise indicated

TRADE	ENTRY	EXIT	P/L
5Yx5Y inflation swap longs	8/16/2024	8/28/2024	4.5
1Yx1Y inflation swap longs	6/14/2024	7/10/2024	17.5
Jul 24/Jul 25 BE wideners	5/10/2024	5/28/2024	11.7
10Yx20Y breakeven wideners	4/12/2024	4/26/2024	4.7
Long 5Y TIPS	3/20/2024	4/25/2024	-31.0
6mx1Y breakeven wideners	4/5/2024	4/19/2024	7.3
Old 10s/30s breakeven curve steepeners	2/23/2024	4/12/2024	-5.6
Long 1Y inflation swaps (hedged)	3/8/2024	4/5/2024	7.0
5-year TIPS longs	2/9/2024	3/7/2024	9.9
10-year energy-hedged BE narrowers	1/19/2024	1/30/2024	7.5
30-year breakeven narrowers	11/9/2023	12/7/2023	21.7
5Yx5Y inflation swap shorts	9/29/2023	10/13/2023	2.8
3Yx2Y breakeven narrowers	7/28/2023	9/12/2023	5.3
AGGREGATE:			
Number of trades	13		
Number of winners	11		
Hit ratio	85%		
Aggregate P/L (bp of yield)	63.3		

Source: J.P. Morgan

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Interest Rate Derivatives

From Dovish Pause to Hawkish Easing

- The Fed delivered its first rate cut of this cycle on Wednesday, and the magnitude of the cut was on the larger side of consensus expectations, but in line with our own. However, passing of the FOMC meeting has not translated into significantly better clarity on the path of the funds rate going forward
- With policy uncertainty still elevated, given the overall bearish sentiment emanating from this week's 50bp rate cut, and given upside risk to the terminal rate relative to current forwards, we continue to favor gaining asymmetric exposure to higher yields in the Reds ...
- … initiate weighted Greens / 15s flatteners. Empirical evidence suggests that this curve will likely be locally flat, but should outperform asymmetrically in a selloff ...
- … and initiate conditional exposure to a flatter 1s/5s curve in a sell-off using 3M expiry payer swaptions. The curve is weighted to make it premium-neutral at inception, while still maintaining directionality
- Macro drivers do not point to a clear directional bias in swap spreads and we maintain our neutral stance on swap spreads across the curve ...
- … but recommend initiating exposure to 2s/3s swap spread curve flatteners. This curve appears too steep, and we believe investors such as banks will find it attractive to deploy their spread risk budget on 2s versus 3s given the attractive pick over IOR relative to risk
- Markets are likely to remain in a lull until the next employment report, causing us to turn tactically bearish on short expiry volatility in intermediate and longer tails, and turn neutral on short expiry volatility on short tails
- At a more nuanced level however, we recommend initiating long exposure to the volatility of the second principal factor, by buying 1Yx3Y straddles versus 105% of the vega-weight in 1Yx10Y straddles. This weighted spread is at year-long lows, and the package is approximately carry-neutral, which makes it attractive to initiate in our view

From Dovish Pause to Hawkish Easing

As widely expected, the Fed delivered its first rate cut of this cycle on Wednesday. However, the magnitude of the cut was on the larger side of consensus expectations (but in line with our own). Expectations going into the meeting were roughly evenly split between a 25bp and a 50bp cut. But despite the larger-than-forwards rate cut, the broader themes emanating from the meeting were hawkish relative to expectations. The tone of the post-meeting press conference was somewhat hawkish, causing yields to rise rather than fall as has typically been the case in recent meetings. Fed Chair Powell offered little guidance regarding the magnitude of future rate cuts, and merely stressed the data-dependent nature of future policy actions. In addition, 9 out of 19 members of the FOMC project at most 25bp of additional rate cuts by year-end 2024, as indicated in the "dots". Moreover, this week's 50bp rate cut was not unanimous and came with a hawkish dissent from Governor Bowman.

Thus, all in all, the passing of the FOMC meeting has not translated into better clarity on the path of the funds rate going forward. In **Figure 1**, we resolve the implied probability density functions associated with Z4 and M5 3-month SOFR futures into a set of intuitive weights (that must sum to 1) on individual policy outcome scenarios (see What's the rush? for details). As can be seen there, except for a minor recalibration of YE24 weights in

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response to the realization of a 50bp rate cut, there is not much of a change in weights associated with tail outcomes. Thus, **we remain very much in a market environment that is dominated by the lack of policy path clarity.**

The theme of policy uncertainty is also echoed by the dot plots themselves. Taking a closer look at the distribution of the year-end dots and the long-run dots, it is clear that the bands are widening. In particular, dispersion (which we measure simply as the difference between the 75th and 25th percentile dots) has widened at the long-run and YE26 horizons, in each of the past two SEP meetings **(Figure 2)**. This too hints at rising uncertainty, but of a different kind that is centered around the terminal rate rather than near term actions by the Fed. Indeed, this week's bear-steepening of the curve is likely a reflection of the emergence of terminal rates as a second policy factor driving rates this week.

Figure 1: The passing of the FOMC meeting has not translated into better clarity on the path of the funds rate going forward

Weights on YE24 and 1H25 policy rate scenarios representing a range of different Fed Funds rates, as calculated from a decomposition of the implied probability distribution associated with Dec 2024 and June 2025 SOFR futures*; 9/17 (before FOMC) and 9/18 (After FOMC)

	Dec 2024 weights		Mid 2025 weights	
Funds Rate	Before FOMC	After FOMC	Before FOMC	After FOMC
4.50	0.27	0.00	0.00	0.00
4.25	0.20	0.57	0.00	0.00
4.00	0.21	0.11	0.12	0.04
3.75	0.17	0.19	0.05	0.12
3.50	0.07	0.08	0.00	0.00
3.25	0.03	0.00	0.08	0.09
3.00	0.05	0.04	0.75	0.75

* We enumerate a list of scenario-specific Normal distributions with fixed standard deviations and means that are separated by 25bp, and then require the implied distribution to be a weighted combination of these individual distributions. The weights are then solved for, by fitting to the observed prices of calls and puts at various different strikes. For more details of our approach, see What's the rush?.
Source: J.P. Morgan., CME

Figure 2: Policy uncertainty, as measured by the Fed dots, has widened at the long-run and YE26 horizons in each of the past two SEP meetings

Dispersion* in YE24, YE25, YE26, and long run Fed Funds rate projection by FOMC members at the past 3 SEP meetings; %

	Dispersion			
SEP meeting	YE24	YE25	YE26	Long Run
March	0.25	0.25	0.25	0.50
June	0.25	0.25	0.38	0.56
September	0.25	0.38	0.50	0.69

* Dispserion is defined as the 75th percentile minus 25th percentile dot projections
Source: J.P. Morgan., Bloomberg Finance L.P.

All of this influences our approach to trading the Rates markets in the near term. **First and foremost, continuing policy uncertainty means that outright directional trading themes such as duration or curve trades are likely to offer poor risk-reward in the current environment**. That said, OIS forwards in the Reds appear to be well below levels indicated by the YE25 median dot (**Figure 3**). To be sure, forwards are at levels not inconsistent with our own Fed funds rate forecast, and FOMC median projections have often lagged the market. Nonetheless, given the overall bearish sentiment emanating from this week's 50bp rate cut, **we believe it is worth exploring asymmetric ways to position for a rise in yield levels in the Reds**. One attractive way to do this is via **weighted Greens/15s flatteners**. As seen in **Figure 4**, the 2Yx1Y / 3Mx15Y swap curve (0.9:1.0 weighted) is empirically likely to be insensitive to small moves in Reds locally, but is likely to flatten at an accelerating rate in a selloff. **This makes it attractive as an asymmetric play on higher yield levels in the Reds and we recommend this trade** (see Trade recommendations).

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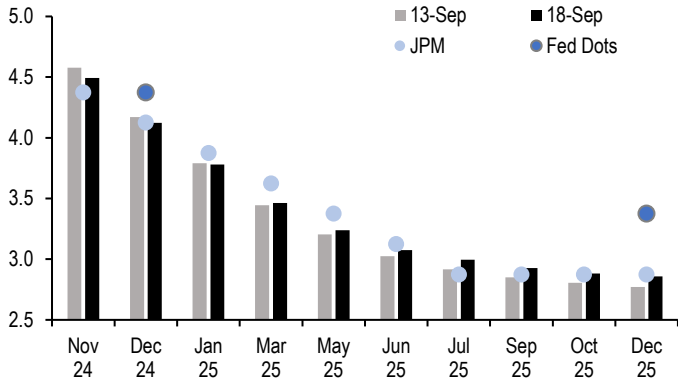
Figure 3: OIS forwards are at levels not inconsistent with our own Fed funds rate forecast, but are well below the Fed's dots in the Reds

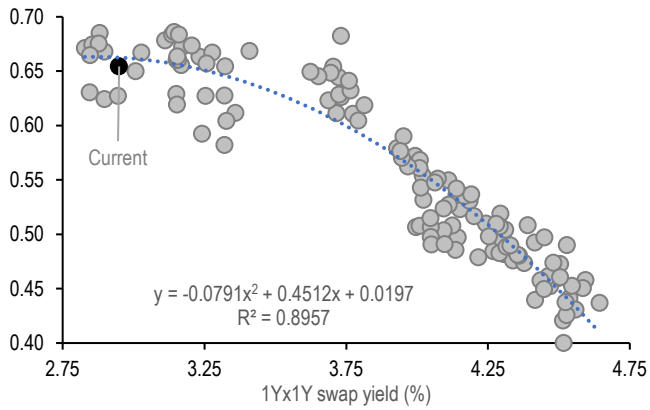
Forward 1M OIS rates at FOMC meeting dates in 2024 and 2025 as of 9/13 and 9/18, the JPM forecast for the Fed funds rate on those dates, and the YE24 and YE25 median Fed dots; %



Source: J.P. Morgan., Bloomberg Finance L.P.

Figure 4: The 0.9:1 weighted Greens/15s curve is likely to be locally stable but flatten at an accelerating pace in a selloff

3Mx15Y minus 0.9 * 2Yx1Y swap yield curve, versus 1Yx1Y swap yield; past 6 months, %

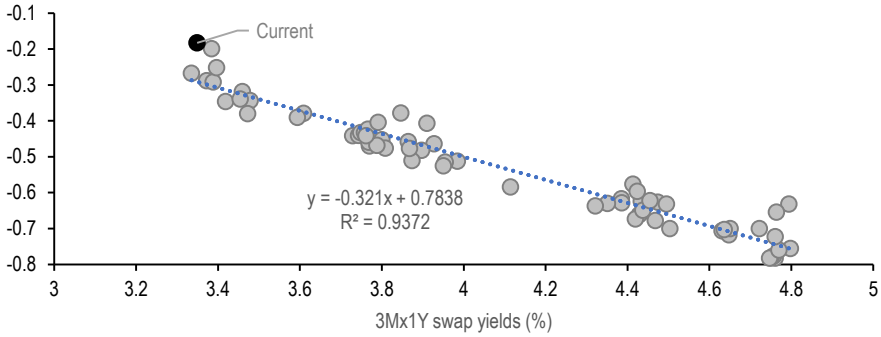


Source: J.P. Morgan.

A variation on this theme is to initiate conditional exposure to a flatter 1s/5s curve in a selloff, using 3M expiry payer swaptions. Given current implied volatility levels, doing this trade premium neutral requires selling ~2% more risk in the 3Mx5Y payer swaption leg, versus buying 3Mx1Y payer swaptions. But that additional risk is small relative to the recent beta of this curve versus front end yields; as a result, this 1:1.02 weighted 1s/5s curve is still highly directional with yields and likely to flatten in a selloff (**Figure 5**). Therefore, **we recommend initiating exposure to a flatter 1s/5s swap curve (100:102 risk weighted) in a selloff using 3M expiry payer swaptions** (see Trade recommendations).

Figure 5: The 1:1.02 weighted 3M forward 1s/5s swap curve is negatively correlated with front end yields and appears too steep relative to its recent empirical relationship

1.02 * 3Mx5Y minus 3Mx1Y swap yield curve, versus 3Mx1Y swap yield; past 3 months, %



Source: J.P. Morgan.

Swap spreads

Swap spreads are modestly wider across the curve, with the 20Y sector outperforming by the most. For instance, maturity matched (and roll-adjusted) swap spreads are roughly 0.5-1bp wider across most of the curve, but 2.5bp wider in the 20-year sector (**Figure 6**). The recent outperformance of the 20Y sector relative to both 10s and 30s is a reflection of relative value convergence - we had highlighted the cheapness of swap spreads in the 20-year sector two weeks ago (see Rates, unlike the economy, are not yet in "equipoise"), and

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these moves are in line with our expectations.

Figure 6: Swap spreads are modestly wider across the curve, with the 20Y sector outperforming

Selected statistics for maturity matched SOFR swap spreads, 9/13 - 9/20; bp

	Start	Change	End	Min	Mean	Max
2Y	-19.1	0.1	-18.9	-19.3	-18.8	-18.1
3Y	-22.3	0.7	-21.6	-22.4	-21.9	-21.0
5Y	-30.1	0.4	-29.7	-30.1	-29.8	-29.2
7Y	-39.0	0.2	-38.8	-39.2	-38.9	-38.4
10Y	-46.5	0.6	-45.9	-46.5	-46.1	-45.5
20Y	-75.1	2.5	-72.6	-75.1	-74.0	-72.6
30Y	-81.4	0.6	-80.7	-81.4	-80.7	-80.1

Source: J.P. Morgan.

Little has changed with respect to the drivers of swap spreads in the near term. As a brief summary, our approach to swap spreads begins with the term structure of swap spreads. As we have observed, if one examines the slope of a cross-sectional plot of maturity matched swap spreads at various benchmark maturities versus modified duration on any given day, the negative of the slope represents term funding premium (which tends to be driven by supply and demand), and the intercept (which we refer to as zero-duration spreads) is driven by factors influencing the front end. A detailed discussion of our framework can be found in Term Funding Premium and the Term Structure of SOFR Swap Spreads, and our recently revised model for zero-duration spreads can be found in Schrodinger's Cut. Looking ahead, term funding premium appears to have become quite stable recently, and zero-duration spreads are now only modestly narrow to fair value.

Thus, **macro drivers do not currently point to a convincing directional bias in swap spreads one way or the other, and we remain neutral on swap spreads for now**. However, on a relative basis, 2Y swap spreads appear far too narrow relative to 3Y swap spreads (**Figure 7**). We believe this is unlikely to be sustained, because it represents an attractive opportunity for investors such as banks, for at least three reasons. **First**, with OTR maturity 2-year notes now trading near SOFR+19bp, this translates into a pick-up of ~13bp over IOR, given that the 2-week moving average of SOFR minus IOR is around -6bp. The corresponding pickup is ~3bp higher in the 3Y sector, but spread volatility in 2s and 3s is rather similar and the spread duration in the 3Y point is about 50% greater, which makes the risk-reward ratio more favorable for 2Y spread wideners at inception in comparison to 3Y spread wideners. **Second**, the carry-to-risk ratio improves rapidly in the case of 2Y spread wideners as the position ages and spread duration falls. **Third**, asset swapping USTs leaves the investor in a receive-SOFR position, which is desirable as we approach the end-game of QT and a possible scarcity of liquidity. We recently discussed a Fed staff paper that analyzed the ampleness of Reserves by examining the sensitivity of the effective funds rate to shocks in the quantity of Reserves (see When Are Central Bank Reserves Ample?, Liberty Street Economics, 8/13/2024), and generalized it to include RRP balances in the definition of liquidity and study the response of SOFR instead of the effective funds rate (see Hopscotch). As we noted there, this suggests that we are steadily heading towards tighter liquidity conditions, which is why we continue to see QT as now likely in its end game. Indeed, SOFR has been steadily rising relative to IOR in recent months (**Figure 8**). As RRP balances continue to fall over the remainder of the year (they fell to a low of ~$240bn intra week), repo rates and SOFR will likely remain biased higher (even though it may tactically normalize in the next two weeks as our Short Term strategists expect), even possibly necessitating an eventual

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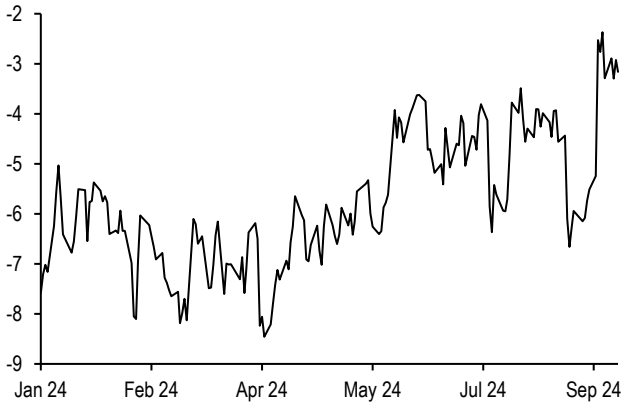
reduction in IOR if repo rates were to rise enough. **Given these looming possibilities, banks will likely find it preferable to deploy their spread risk budget in 2Y spread wideners rather in 3s**. Therefore, **we now recommend positioning for a 2s/3s maturity matched swap spread curve flattener** (see Trade recommendations).

Figure 7: The 2s/3s maturity matched swap spread curve is near its steepest levels of the year

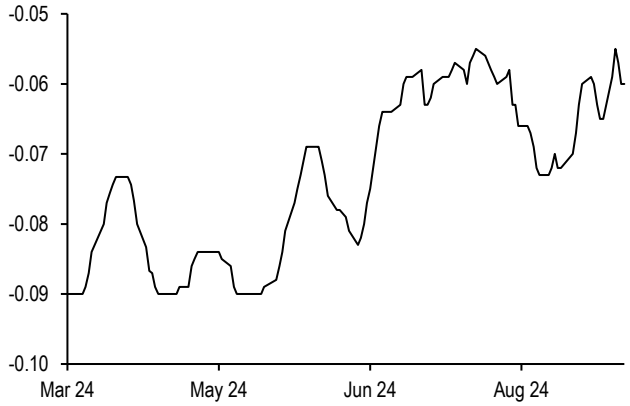
3Y minus 2Y maturity matched swap spread differential, bp; 01/2024 - present



Source: J.P. Morgan.

Figure 8: SOFR has been steadily rising relative to the interest rate on Reserves

Rolling 2-week moving average of the O/N SOFR minus IOR differential, %; past 6 months



Source: J.P. Morgan.

Options

It was a big week for fixed income markets as the Fed delivered its first rate cut of the cycle. Implieds underperformed and declined across the surface over the week, with the exception of 30-year tails. Shorter expiry and shorter tails led the move lower, with 6Mx2Y falling 0.6 bp/day over the week, while 6Mx30Y was up by about 0.1 bp/day (**Figure 9**). As Figure 9 also shows, the declines in implied volatility continue to be in excess of what would be expected by our longer term empirical model estimate of fair value (for details see our 2024 Mid-Year Outlook). However, even after these declines, shorter expiry volatility continues to appear rich with respect to our fair value model to the tune of 0.5 to 0.8 bp/day in 6M expiry swaptions and 0.4 bp/day in 1Y expiry swaptions.

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Figure 9: Implieds underperformed and declined across the surface over the week, with the exception of 30-year tails

Actual, Fair Value*, and Residual for various SOFR swaption structures, as of 9/13, 9/19, and changes between those dates; bp/day

	As of 09/13			As of 09/19			Changes		
Structure	Actual	FV	Residual	Actual	FV	Residual	Actual	FV	Residual
6Mx2Y	7.70	6.44	1.25	7.10	6.26	0.84	-0.59	-0.19	-0.41
6Mx5Y	6.97	6.15	0.82	6.67	6.08	0.59	-0.31	-0.07	-0.23
6Mx10Y	6.29	5.69	0.60	6.23	5.67	0.56	-0.06	-0.02	-0.04
6Mx30Y	5.68	5.24	0.44	5.77	5.23	0.54	0.09	-0.01	0.11
1Yx2Y	7.41	6.68	0.72	7.01	6.57	0.44	-0.40	-0.12	-0.28
1Yx5Y	6.72	6.15	0.57	6.48	6.13	0.35	-0.24	-0.02	-0.22
1Yx10Y	6.19	5.76	0.43	6.13	5.77	0.36	-0.06	0.01	-0.07
1Yx30Y	5.60	5.29	0.31	5.68	5.29	0.39	0.09	0.01	0.08
3Yx2Y	6.50	6.24	0.26	6.33	6.27	0.06	-0.17	0.03	-0.20
3Yx5Y	6.22	5.92	0.30	6.09	5.96	0.13	-0.13	0.04	-0.17
3Yx10Y	5.90	5.62	0.28	5.85	5.66	0.19	-0.05	0.04	-0.09
3Yx30Y	5.37	5.12	0.26	5.43	5.15	0.28	0.05	0.03	0.02

* For details on our fair value framework for SOFR swaption implied volatility, see Interest Rate Derivatives 2024 Mid-Year Outlook
Source: J.P. Morgan.

As we get past the FOMC meeting this week, **we turn bearish on short expiry volatility in intermediate and longer tails, and turn neutral on shorter tails**. There are now reasons to be tactically bearish on gamma. As we noted above, implieds continue to appear rich to our fair value estimate. To be sure, we had maintained a long gamma bias in the past few weeks despite rich valuations, because of elevated policy uncertainty and the potential for greater jump risk. Even though this week's FOMC meeting did little to clarify the medium term path of policy rates, we still think a tactical short gamma stance is warranted, as we discuss below.

One of the takeaways from Powell's press conference was the shift in focus from inflation to labor markets. Although Chair Powell was careful to not declare victory on inflation just yet, it seemed apparent that his focus was more on the labor markets. As our Economists have also noted (see An appropriate recalibration, M. Feroli, 9/18/2024), the size of the next cut is very much contingent on labor market data. **Given this heightened importance of the Jobs report, it is very likely that markets will simply remain in a lull until then**.

But given the significant event risk associated with Payrolls day, and the nonlinear nature of gamma returns, long gamma positions can remain in the black even with somewhat lower volatility in the quiet period leading up to the Jobs report. The question therefore becomes - how much is the event risk worth, and what amount of realized volatility is needed in the next two weeks for long gamma positions to breakeven. We can quantify this by noting that the event risk around Payrolls day has been worth ~12bp in the 5Y sector on average, as measured by the inter-dealer 1-day options market. Using this as an estimate of the event-day volatility, we can solve for the delivered volatility needed during the lead-up period in order for long straddle positions to break even based on current implied volatility levels. We do this for several different tails in **Figure 10** - as can be seen, such an analysis suggests **that markets must deliver 5.5 - 6bp/day in the pre-Payrolls period in order for long gamma positions to breakeven, assuming the event day itself proves as volatile as implied by the 1-day options market**.

Can markets deliver this level of volatility in the next two weeks? We think not, at least in the case of intermediate and longer tails. **Figure 11** shows the rolling 6-week realized volatility on 10Y swap yields, but calculated after excluding Payrolls day observations. In

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other words, it presents a reasonable sense of what non-Payrolls-day realized volatility might look like in the next two weeks as we head into the next employment report. As the chart indicates, **it appears rather unlikely that realized volatility in this quiet period can reach the required level for long gamma positions to break even**. Therefore, **we recommend a tactical short gamma bias in intermediate and longer tails going into early October, premised upon the view that we are likely to experience a lull in the markets until then**. **We are more cautious on shorter tails however and prefer to avoid shorts there**. Therefore, we turn neutral on short expiry volatility in the front end, but recommend bearish gamma exposure on longer tails as a tactical position for the next few weeks.

Figure 10: Markets have to deliver ~6 bp/day on non-Payroll days to breakeven given the current level of implieds

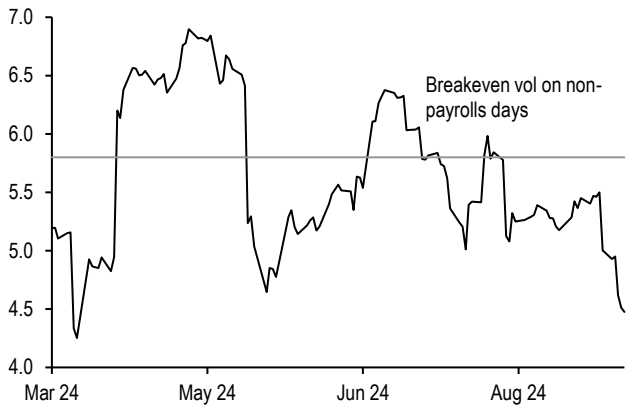
Current (9/20) implied volatility (bp/day), 1-day FOA implied vol* on payroll days (bp/day), and the level of realized volatility (bp/day) needed in the lead up to Payrolls day for long-gamma positions to break even

	Cur. Implied vol	Implied Payroll day vol	Rlzd vol needed on non-payrolls days
3Mx5Y	6.9	12.1	6.1
3Mx10Y	6.4	10	5.8
3Mx30Y	5.7	7.4	5.5

* A FOA or Forward Option Agreement is an inter-dealer 1-day options market from which one can observe event day implied volatility
**Realized volatility needed on non-Payrolls days in the next two weeks is calculated as the square root of current level of implied volatility, squared, times 10, minus the square of the 1-day implied vol on Payroll days, all divided by 9.
Source: J.P. Morgan.

Figure 11: The lead-up to the next employment report will likely be a lull in markets, and a look-back at non-payrolls-day realized volatility in recent months suggests that there is a high bar to break even

Rolling 6-week realized volatility on 10Y swap yields on non-payrolls days*, bp/day, past six months



*Calculated as the rolling 6-week standard deviation of daily changes in 10Y swap yields, with the payrolls-day observations being removed.
Source: J.P. Morgan.

Although we are bearish on short-expiry volatility in most sectors, at a more nuanced level, **we see value in being long second principal factor volatility**. Much as yield moves across the curve are commonly decomposed into moves that stem from moves in a set of principal factors, we may analogously decompose the volatility of yields into components that arise from the volatility of principal factors. In a recent note, we described a framework that allows an investor to create long or short exposure to just the volatility of the first or second factor, for instance (see Trading Principal Factor Volatility). After this week's FOMC meeting, **we believe this is an opportune time to initiate long exposure to the volatility of the second principal factor.**

Why is this attractive now? To answer this, we begin by noting that another takeaway from the FOMC meeting was the upward bias in the long run neutral rates in the SEP. Indeed, the bear steepening this week was in part a response to the prospect of a higher terminal rate. Intuitively, this suggests that rate volatility will stem not just from near term policy expectations (the first principal component) but also from shifting expectations surrounding the terminal rate (or a second principal factor). This is the thematic basis for our preference for long exposure to volatility of the second principal factor.

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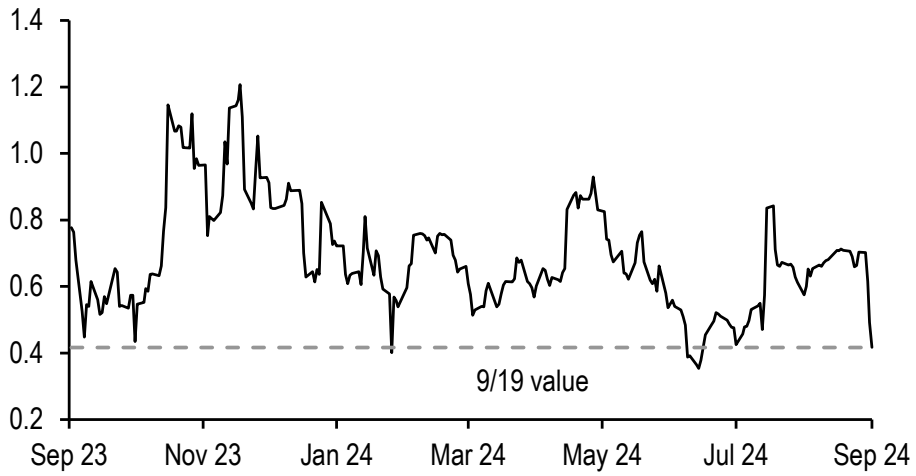
We will not repeat our methodology for constructing such exposure - details may be found in Trading Principal Factor Volatility. But the intuition behind the construction is as follows. If one assumes that the bulk of the variation in rates is explained by two principal components, which are uncorrelated by design, then it follows that the volatility of any given rate can be decomposed into some weighted combination of the volatility of the first and second principal factors. In general, these combination weights will be different for rates in different maturity points, and therefore we ought to be able to combine a long position in one tail with a short in another tail, to create long PC2 vol exposure while canceling out the PC1 vol exposure. Currently, one attractive way to do this is to **initiate longs in 1Yx3Y tails versus 105% of the vega-risk in 1Yx10Y tails**. As **Figure 12** shows, this weighted volatility spread has declined substantially in the past week and is at year-long lows, making entry levels attractive. Additionally, the package is approximately carry-neutral, in another reflection of its attractiveness. Therefore, **we recommend this trade** (see trade recommendations).

Figure 12: The weighted 1Yx3Y minus 1Yx10Y volatility spread has declined sharply in the past week, affording attractive entry levels to initiate long exposure to volatility of the second principal factor

1Yx3Y minus -1.05 times 1Yx10Y implied volatility, past 1 year; bp/day



Source: J.P. Morgan.

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Trading Recommendations

- **Initiate Greens / 3Mx15Y flatteners (0.9:1.0 weighted)**
  Given the bearish sentiment emanating from this week's 50bp rate cut, we look for asymmetric ways to position for a rise in yield levels in the Reds. The 2Yx1Y / 3Mx15Y swap curve (0.9:1.0 weighted) is empirically likely to be insensitive to small moves in Reds locally, but is likely to flatten at an accelerating rate in a selloff. This makes it attractive as an asymmetric play on higher yield levels in the Reds.
  -Pay-fixed in $1116.3mn notional of a 09/20/26x1Y SOFR swap at a yield of 2.989% (PVBP: $94.2/bp per mn notional). Receive-fixed in $100mn notional of a 12/20/24x15Y SOFR swap at a yield of 3.338% (PVBP: $1168.2/bp per mn notional). This trade uses risk weights of -0.9/1.0 on the 2Yx1Y/3Mx15Y swaps respectively. This trade is being initiated at a weighted yield spread of -64.8bp.
- **Initiate conditional exposure to a flatter 1s/5s swap yield curve (100:102 weighted) in a selloff using 3M expiry payer swaptions**
  Another way to create asymmetrical exposure to higher yields is initiate exposure to a flatter 1s/5s curve, using 3M expiry payer swaptions. Current implied volatility levels require selling ~2% more risk in the 3Mx5Y payer swaption leg, but that additional risk is small relative to the recent beta of this curve versus front end yields. Thus, this 1:1.02 weighted 1s/5s curve is still highly directional with yields and likely to flatten in a sell-off.
  -Buy $200mn notional 3Mx1Y payer swaptions. (Notification date: 2024-12-20, swap tenor: 1Y, ATMF: 3.35%, strike: 3.35%, spot premium: 21.1bp per notional, forward premium: 21.4bp per notional, bpvol at inception: 6.95bp/day). Sell $43.3mn notional 3Mx5Y payer swaptions. (Notification date: 2024-12-20, swap tenor: 5Y, ATMF: 3.105%, strike: 3.105%, spot premium: 98.3bp per notional, forward premium: 99.5bp per notional, bpvol at inception: 6.85bp/day).
- **Initiate 2s/3s maturity matched swap spread curve flatteners**
  OTR 2-year notes are now trading near SOFR+19bp, which translates into a pick-up of ~13bp over IOR, while the corresponding pickup is ~3bp higher in the 3Y sector. However, the spread volatility in 2s and 3s is rather similar and the spread duration in the 3Y point is nearly 50% greater, which makes the risk-reward ratio more favorable for 2Y wideners. Also, the carry-to-risk ratio improves rapidly in the case of 2Y spread wideners as the position ages and spread duration falls. Lastly, as RRP balances continue to fall in coming months, SOFR could be biased higher, and banks will likely find it preferable to deploy their spread risk budget in 2Y spread wideners rather than in 3s.
  -Pay fixed in 3.75% Aug 31 2026 maturity matched SOFR swap spreads. Buy $100mn notional of the 3.75% Aug 31 2026 (yield: 3.573%, PVBP: $185.9/bp per mn notional), and pay fixed in $96.8mn notional of a maturity matched SOFR swap (coupon: 3.385%, PVBP: $192.1/bp per mn notional) at a swap spread of -18.8bp.
  -Receive fixed in 3.375% Sep 15 2027 maturity matched SOFR swap spreads. Sell $66.4mn notional of the 3.375% Sep 15 2027 (yield: 3.464%, PVBP: $280.2/bp per mn notional), and receive fixed in $63.9mn notional of a maturity matched SOFR swap (coupon: 3.248%, PVBP: $290.9/bp per mn notional) at a swap spread of -21.6bp.
- **Buy 1Yx3Y versus selling 105% of the vega risk in 1Yx10Y swaption straddles**
  We recommend initiating long exposure to second principal factor volatility as rate volatility will likely not stem from just near term policy expectations but also from shifting expectations surrounding the terminal rate. 1Yx3Y versus weighted 1Yx10Y is also attractive because the weighted volatility spread is at year-long lows, and the package is approximately carry-neutral

-Buy $100mn notional 1Yx3Y ATMF swaption straddles. (Notification date: 2025-09-22, swap tenor: 3Y, ATMF: 2.991%, strike: 2.991%, spot premium: 237.8bp per notional, forward premium: 247.1bp per notional, bpvol at inception: 6.83bp/day). This trade assumes active delta hedging every business day. Sell $35.2mn notional 1Yx10Y ATMF swaption straddles. (Notification date: 2025-09-22, swap tenor: 10Y, ATMF: 3.235%, strike: 3.235%, spot premium: 625.7bp per notional, forward premium: 650.4bp per notional, bpvol at inception: 6.02bp/day). This trade assumes active delta hedging every business day.

- **Unwind longs in the USZ4 factor-weighted CTD basis (with repo termed out to 12/2)**
  This trade has outperformed our expectations and we recommend unwinding at a profit of 2.4 ticks. For original trade write up, see Fixed Income Markets Weekly 2024-09-13.
- **Unwind longs in the WNZ4 factor-weighted CTD basis**
  This trade has outperformed our expectations and we recommend unwinding at a profit of 1 tick. For original trade write up, see Fixed Income Markets Weekly 2024-09-13.
- **Unwind 100:80 weighted 20s/30s maturity matched swap spread curve flatteners**
  This trade has outperformed our expectations and we recommend unwinding at a profit of 2.3bp. For original trade write up, see Fixed Income Markets Weekly 2024-09-06.
- **Unwind 7s/20s weighted swap spread curve steepeners**
  This trade has outperformed our expectations and we recommend unwinding at a profit of 3.8bp. For original trade write up, see Fixed Income Markets Weekly 2024-08-23.
- **Maintain conditional exposure to a flatter 1s/3s swap yield curve in a selloff using 3M expiry payer swaptions** P/L on this trade is currently -3.5bp. For original trade write up, see Fixed Income Markets Weekly 2024-09-13.
- **Maintain conditional exposure to a steeper 2s/10s curve in a rally using 3M expiry receiver swaptions, financed by selling 24% risk-weighted receiver swaptions on 7-year tails**
  P/L on this trade is currently 0bp. For original trade write up, see Fixed Income Markets Weekly 2024-09-13.
- **Stay long 1Yx10Y swaption straddles on a delta hedged basis coupled with a weighted long in S&P 500 futures**
  P/L on this trade is currently -0.7abp. For original trade write up, see Fixed Income Markets Weekly 2024-09-13.
- **Maintain 3M fwd 2s/3s (1:1.1 weighted) swap yield curve flatteners**
  P/L on this trade is currently -2.7bp. For original trade write up, see Fixed Income Markets Weekly 2024-09-06.
- **Stay long 3Yx3Y versus short 10Yx10Y swaption straddles**
  P/L on this trade is currently -4.7abp. For original trade write up, see Fixed Income Markets Weekly 2024-09-06.
- **Maintain conditional exposure to a flatter 1s/7s swap yield curve in a selloff using 6M expiry payer swaptions**
  P/L on this trade is currently -5.9bp. For original trade write up, see Fixed Income Markets Weekly 2024-07-12.
- **Maintain 1:0.75 risk weighted 7s/10s maturity matched swap spread curve steepeners**
  P/L on this trade is currently -0.3bp. For original trade write up, see Fixed Income Markets Weekly 2024-05-31.
- **Continue to overweight 1Yx10Y straddles versus a gamma-neutral amount of**

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1Yx15Y straddles
P/L on this trade is currently -2.3abp. For original trade write up, see Fixed Income Markets Weekly 2024-05-03.

- **Continue to overweight 6Mx5Y and 6Mx30Y swaption volatility (vega weights of 0.32 and 0.76, respectively) versus selling 6Mx10Y swaption volatility**
  P/L on this trade is currently -0.8abp. For original trade write up, see Fixed Income Markets Weekly 2024-04-05.

Closed trades over the past 12 months

P/L reported in bp of yield for swap spread, yield curve and misc. trades, and in annualized bp of volatility for option trades, unless otherwise specified

Note: trades reflect Thursday COB levels, and unwinds reflect Friday COB levels

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Trade	Entry	Exit	P/L
Spreads and basis			
3Y spread widener	8/18/2023	9/22/2023	(0.2)
FV invoice spread wideners by buying FVZ3 and paying fixed in a forward starting swap	9/8/2023	9/29/2023	(2.2)
Initiate 10s/30s swap spread curve flatteners	9/15/2023	10/13/2023	0.3
2Y spread narrowers	10/13/2023	10/27/2023	1.2
5s/10s swap spread curve flatteners, paired with a 10% risk-weighted 5s/10s Treasury curve flattener	10/13/2023	12/8/2023	1.2
FV/UXY invoice spread curve flatteners , paired with a 10% risk-weighted FV/UXY Treasury futures curve flattener	10/13/2023	12/8/2023	1.7
Initiate swap spread narrowers in the 2Y sector	11/3/2023	12/8/2023	3.9
Initiate swap spread wideners in the 5Y sector	11/3/2023	12/8/2023	(3.2)
Initiate 20s/30s swap spread curve flatteners hedged with a 35% risk-weighted 20s/30s Treasury curve flattener	9/29/2023	1/5/2024	0.2
Initiate 3s/5s swap spread curve flatteners	12/8/2023	1/5/2024	0.9
Initiate swap spread wideners in the 5Y sector	1/5/2024	1/19/2024	4.2
Pay in 1.375% Nov '31 maturity matched swap spreads paired with 5% risk in 5s/10s OTR Treasury curve steepeners	1/10/2024	1/26/2024	2.4
Initiate 5s/30s swap spread curve flatteners	12/15/2023	2/2/2024	3.8
Initiate swap spread narrowers in the 30Y sector	1/5/2024	2/2/2024	0.2
Maintain a widening bias on swap spreads in the belly but switch to the 2.625% Feb 2029 issue	1/19/2024	2/23/2024	2.4
Maintain a widening bias on swap spreads in the belly using the 2.625% Feb 2029 issue, but hedge the narrowing risk from higher implied volatility with a long in 2Yx2Y swaption straddles	1/19/2024	2/23/2024	2.7
Initiate 2s/5s (100:60 weighted) maturity matched swap spread curve steepeners	1/26/2024	2/23/2024	(3.3)
Pay-fixed in 2.125% May '26 maturity matched swap spreads	3/15/2024	3/22/2024	3.6
Pay-fixed in 1.875% Jul '26 maturity matched swap spreads	3/22/2024	4/5/2024	3.4
Initiate 20s/30s 1.33:1 wtd maturity matched spread curve steepeners hedged with a 30% risk weighted 20s/30s steepener, but use an equi-notional blend of the Nov 53s and Aug 53s to create a synthetic approximate par bond in the 30Y leg	2/23/2024	4/12/2024	(2.5)
Initiate 30Y swap spread wideners	3/15/2024	4/12/2024	(0.1)
Pay in 4% Jan '27 maturity matched swap spreads	4/5/2024	4/26/2024	2.2
Initiate 10Y swap spread wideners using the Nov '33 issue	3/8/2024	5/17/2024	0.9
Initiate exposure to a steeper 7s/10s 1:0.75 weighted swap spread curve, and we recommend implementing the 7Y narrower leg with TYM4 invoice spreads	5/10/2024	5/28/2024	0.3
Initiate 1:0.9 risk weighted 20s/30s maturity matched swap spread curve steepeners	5/31/2024	6/14/2024	3.9
Initiate 5s/10s off-the-run swap spread curve steepeners (100:60 weighted)	3/8/2024	7/12/2024	(4.7)
Initiate 7s/10s swap spread curve steepeners paired with 25% risk in a 7s/10s UST curve steepener	3/22/2024	7/12/2024	(0.2)
Pay in Feb 2037 maturity matched swap spreads versus receiving in USU4 invoice spreads	6/14/2024	7/12/2024	0.8
Buy Feb 37s versus selling USU4 Futures	6/14/2024	7/12/2024	2.7
Pay-fixed in 1.875 Feb 2027 maturity matched swap spreads	4/26/2024	7/26/2024	(5.9)
Initiate 5s/30s spread curve flatteners	5/3/2024	7/26/2024	5.1
Pay-fixed in 4% Feb 2034 maturity matched swap spreads	5/17/2024	7/26/2024	(6.7)
Initiate 10s/30s swap spread curve flatteners	7/26/2024	8/2/2024	(0.8)
Initiate TU/TY invoice spread curve flatteners (1:0.35 weighted)	6/7/2024	8/23/2024	(6.3)
Pay-fixed in 4.625% Feb '26 maturity matched swap spreads	5/31/2024	9/6/2024	0.3
Pay-fixed in 4.375% Aug '28 maturity matched swap spreads	5/31/2024	9/6/2024	(1.8)
Initiate 10Y swap spread narrowers	8/16/2024	9/6/2024	2.5
Initiate 3s/7s swap spread curve flatteners	8/16/2024	9/6/2024	1.4
Initiate 0.875% June 2026 / 0.875% September 2026 swap spread curve flatteners	8/16/2024	9/6/2024	1.3
Initiate 5s/30s swap spread curve flatteners	8/23/2024	9/6/2024	(0.3)
Initiate 7s/20s weighted swap spread curve steepeners	8/23/2024	9/20/2024	3.8
Initiate 100:80 weighted 20s/30s maturity matched swap spread curve flatteners	9/6/2024	9/20/2024	2.3

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Duration and curve	Entry	Exit	P/L
Sell the belly of the U4/H5/U5 3M SOFR futures butterfly (-0.43:1:-0.64 risk weighted)	09/08/23	09/22/23	2.3
Initiate 3M forward 2s/10s swap curve steepeners paired with 110% of the risk in Reds/Greens flatteners	09/15/23	09/22/23	4.9
Initiate 3Y forward 2s/10s swap curve steepeners, paired with 1Y forward 1s/5s swap curve flatteners (33% risk weighted)	09/22/23	09/29/23	5.0
Initiate 2Y forward 2s/30s swap curve steepeners paired with equal risk in a 3M forward 2s/30s swap curve flattener	08/25/23	10/20/23	(32.1)
Initiate 3Y forward 3s/30s swap curve steepeners paired with 63% risk in a 3M forward 5s/30s swap curve flattener	09/08/23	10/20/23	(18.3)
Initiate M4/Z4 SOFR futures curve steepeners paired with 55% of the risk in H4/Z5 3M SOFR futures curve flatteners	09/22/23	10/20/23	(9.9)
Initiate conditional exposure to a flatter 2s/10s swap yield curve in a rally using 6M expiry receiver swaptions	09/29/23	11/03/23	(9.2)
Initiate 3M fwd 5s/10s swap curve flatteners paired with 2Y fwd 5s/10s swap curve steepeners (50:100 risk weighted)	10/27/23	11/03/23	4.6
Initiate conditional exposure to a flatter 5s/10s swap yield curve in a rally using 3M expiry receiver swaptions	10/27/23	11/03/23	0.8
Initiate 2Y fwd 2s/5s curve flatteners paired with 25% risk in a 1st/5th SOFR futures curve flattener	11/03/23	11/22/23	5.8
Initiate 6M fwd 5s/15s curve flatteners paired with equal risk in 3Y fwd 2s/15s steepeners	11/03/23	11/22/23	4.6
Buy the belly of a 40:65 weighted Z4/Z5/Z6 3M SOFR futures butterfly	11/03/23	11/22/23	5.6
Initiate 9M fwd 1s/10s flatteners paired with a 50% risk weighted long in March 2025 3M SOFR futures	11/09/23	11/22/23	15.8
Initiate 3Mx1Y / Greens weighted flattener (1:0.8 weighted) paired with 80% risk in a 3M forward 2s/10s swap curve steepener	01/05/24	01/26/24	2.9
Initiate U5/M6 SOFR futures curve flatteners paired with 110% of the risk in Z5/U6 3M SOFR futures curve steepeners	12/15/23	02/02/24	1.6
Buy the belly of a 35:65 weighted H5/H6/Z6 3M SOFR futures butterfly	12/15/23	02/02/24	1.9
Initiate 1Yx2Y / 3Mx30Y swap yield curve steepeners paired with 65% risk in a Reds / 10Yx5Y swap yield curve flattener	01/19/24	02/02/24	1.1
Receive fixed in the belly of a 6M forward 2s/7s/30s swap butterfly (40:69 weighted)	01/19/24	02/02/24	0.1
Initiate conditional exposure to a composite flattener in a selloff by buying 3Mx2Y payer swaptions (100% risk) versus selling 3Mx5Y and 3Mx30Y payer swaptions (24% and 100% risk respectively)	02/02/24	02/23/24	14.3
Buy H5 and Z5 3M SOFR futures contracts (30:100 weighted) versus selling U4 3M SOFR futures contracts (100% risk weight) and pay-fixed in 6M forward 10Y swaps (40% risk weight)	02/09/24	02/23/24	5.8
Initiate exposure to rising term premium by selling the belly of a 35/65 weighted 3M forward 5s/10s/15s butterfly	12/08/23	03/08/24	(1.5)
Initiate SFRM5 / Blues flatteners paired with a 110% risk weighted 3M forward 2s/10s steepener	03/01/24	03/22/24	3.3
Initiate 3M forward 3s/20s swap curve steepeners, paired with 85% of the risk in a SFRM5 / 3Mx10Y curve flattener	03/08/24	04/05/24	3.2
Initiate 2Y forward 2s/5s swap curve steepeners paired with 40% risk in 3M forward 2s/5s flatteners	01/26/24	04/12/24	(11.4)
Initiate conditional exposure to a flatter 2s/5s swap yield curve in a selloff using 3M expiry payer swaptions	03/22/24	04/12/24	5.2
Initiate conditional exposure to a flatter 18M/5Y swap yield curve in a selloff using 6M expiry payer swaptions	04/05/24	04/12/24	3.1
Initiate conditional exposure to a flatter 1s/5s swap yield curve in a selloff using 3M expiry payer swaptions	02/23/24	04/26/24	(9.4)
Initiate 1Y forward 2s/5s swap curve flatteners, paired with weighted longs in H5 and H6 3M SOFR futures (20% and 10% respectively)	03/22/24	04/26/24	(9.5)
Initiate SFRM5 / 3Mx5Y flattener, hedged with a 20% risk weighted long in Reds	04/05/24	04/26/24	(5.0)
Initiate 5th/9th SOFR futures curve flatteners hedged with a risk weighted amount 2Y forward 2s/5s swap curve steepeners	04/12/24	05/03/24	3.0
Receive in the belly of a 0.625/1.0/0.375 weighted 3M forward 2s/7s/20s swap butterfly, with an additional 15% risk weighted long in June 2024 3M SOFR futures	02/23/24	05/17/24	2.7
Initiate 3M forward 2s/3s swap curve flatteners hedged with a 14% risk weighted long in the M4 3M SOFR futures	02/23/24	05/17/24	0.4
Initiate 3M forward 5s/15s swap curve flatteners paired with 70% risk in a 2Y forward 2s/20s swap curve steepener	03/22/24	05/17/24	2.8
Buy the belly of a 2s/5s/15s weighted swap butterfly (50:50 weighted)	04/12/24	05/17/24	2.4
Initiate 3M forward 1s/3s swap curve flatteners, hedged with a 65% risk weighted long in the 3Mx3M sector and a 25% risk weighted short in the 15Mx3M sector	05/03/24	05/17/24	2.1
Buy the belly of a U5/M6/H7 SOFR Futures butterfly (-0.37:1:-0.63 risk weighted)	03/01/24	05/31/24	(0.7)
Initiate a Greens/Blues steepener paired with 55% of the risk in a SFRM5 / 3Mx5Y swap curve flattener	03/15/24	05/31/24	2.2
Buy the belly of a Z5/U6/H7 3M SOFR futures butterfly (-0.33:1.0:-0.67 risk weighted)	04/19/24	05/31/24	1.8
Initiate 12Mx3M / 3Mx10Y flatteners, paired with 33% risk in a 3Mx2Y receive fixed swap	05/17/24	06/06/24	5.7
Initiate 3M fwd 3s/15s flatteners paired with 85% risk in 2Y fwd 3s/30s steepeners	05/17/24	06/06/24	4.5
Initiate 3Mx1Y / 2Yx1Y forward swap curve flatteners as a bullish proxy	05/31/24	06/06/24	11.5
Initiate 3Mx1Y / 2Yx1Y swap curve flatteners paired with 45% risk-weighted pay-fixed positions in 3Mx5Y swaps	05/31/24	06/06/24	0.0
Initiate conditional exposure to a flatter 1s/2s swap yield curve in a rally using 1Y expiry receiver swaptions	04/05/24	06/14/24	4.0
Initiate Z5/U6 SOFR futures flatteners paired with H6/Z6 SOFR futures steepeners (0.85:1 risk weighted)	03/01/24	07/12/24	1.8
Initiate conditional exposure to a steeper 10s/20s swap yield curve in a selloff using 9M expiry payer swaptions	03/15/24	07/12/24	4.0
Initiate 3M forward 10s/15s swap curve steepeners paired with 25% risk in 3M forward 3s/7s flatteners	04/26/24	07/12/24	3.5
Initiate 3M forward 10s/30s steepeners (1:1.5 risk weighted) paired with M5/Z5 3M SOFR futures flatteners	06/07/24	07/12/24	2.9
Initiate 15Mx3M / 1YX1Y forward swap curve flatteners, paired with 20% of the risk in a long in 18Mx3M and a 24% risk weighted short in 3Mx5Y forward swaps	05/03/24	08/02/24	(1.3)
Receive in 3Mx3Y and 3Mx5Y swaps versus paying in 3Yx1Y and 12Mx3M swaps	06/14/24	08/02/24	(8.8)
Initiate a synthetic 6M forward 2s/10s swap curve steepener, constructed by replacing the 2Y leg with a 6Mx3M / 18Mx3M flattener	07/12/24	08/02/24	(28.9)
Initiate a synthetic 3M forward 5s/30s swap curve steepener, constructed by replacing the 5Y leg with a 3Mx3M / 3Mx2Y flattener	07/26/24	08/02/24	(18.1)
Initiate conditional exposure to a flatter 1s/2s swap yield curve in a rally using 6M expiry receiver swaptions	07/26/24	08/02/24	(8.8)

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Options	Entry	Exit	P/L
Buy 10Yx10Y straddles	03/17/23	09/22/23	1.9
Sell 2Yx2Y swaption straddles versus buying a vega-neutral amount of 1Yx10Y swaption straddles	08/25/23	09/29/23	3.4
Buy 1Yx10Y straddles versus selling 140% of the vega risk in 1Yx5Y straddles and buying 50% of the risk in 1Yx2Y swaption straddles	08/25/23	10/13/23	3.2
Sell 2Yx30Y swaption straddles versus buying a vega-neutral amount of 10Yx10Y swaption straddles	09/08/23	10/13/23	(4.5)
Sell 2Yx2Y swaption straddles versus buying a vega-neutral amount of 7Yx10Y swaption straddles	09/15/23	10/13/23	3.0
Sell 6Mx30Y swaption straddles with a pay fixed swap overlay	09/22/23	10/13/23	(11.6)
Sell 1Yx30Y swaptions straddles versus buying a vega-neutral amount of 5Yx30Y swaption straddles, paired with a 1Yx30Y pay-fix swap	09/22/23	10/13/23	(1.5)
Overweight 6Mx7Y swaption volatility versus a vega-neutral amount of 1Yx10Y swaption volatility	10/13/23	11/03/23	3.5
Buy 1Yx10Y swaption straddles paired with a receive-fixed swap overlay to hedge against a decrease in implieds due to lower yields	10/27/23	11/03/23	(1.1)
Initiate short gamma exposure in the 6Mx30Y sector	11/03/23	12/08/23	7.9
Sell 6Mx30Y swaption straddles versus buying a vega-neutral amount of 1Yx30Y swaption straddles	11/03/23	12/08/23	0.4
Initiate long gamma exposure in the 1Yx10Y sector	12/08/23	02/23/24	(2.1)
Initiate long exposure to 2Yx2Y volatility with a suitably weighted short in July Fed funds futures to hedge the downside risk from a fall in Fed-easing expectations	01/05/24	02/23/24	2.6
Overweight 2Yx2Y swaption straddles versus a vega-neutral amount of 5Yx5Y swaption straddles	01/19/24	02/23/24	3.2
Overweight 6Mx10Y swaption straddles versus selling 110% of the vega risk in 1Yx10Y swaption straddles	01/26/24	02/23/24	1.3
Buy 6Mx10Y straddles	03/01/24	03/08/24	(6.6)
Initiate longs in 6Mx10Y swaption implied volatility, delta hedged daily	03/15/24	03/22/24	(5.1)
Overweight 6Mx2Y swaption straddles versus a theta-neutral amount of 6Mx5Y swaption straddles	01/19/24	04/12/24	(8.8)
Sell 2Yx30Y swaption volatility versus buying 50% of the vega risk in 2Yx2Y swaption volatility , and pay fixed in 2Yx 10Y swaps to neutralize the bullish bias in this trade	02/23/24	04/12/24	1.5
Buy 6Mx10Y volatility versus 6M forward 6Mx10Y volatility, synthetically constructed via suitably weighted 1Yx10Y and 6Mx10Y swaptions	04/05/24	04/12/24	3.2
Buy 2Yx5Y swaption straddles on a delta hedged basis	04/12/24	04/19/24	1.0
Sell 6Mx10Y straddles on a delta hedged basis	04/26/24	05/03/24	3.1
Sell 6Mx15Y straddles on a delta hedged basis	05/03/24	05/10/24	(1.6)
Sell 1Yx2Y volatility versus buying a theta neutral amount of 1Yx5Y volatility	05/17/24	06/06/24	0.6
Initiate Fronts/Green curve flatteners, paired with delta hedged long volatility positions in the 1Yx10Y swaption sector	05/31/24	06/06/24	5.6
Initiate exposure to long curve volatility by buying 6Mx2Y and 6Mx10Y straddles (41:60 vega weighted) versus selling 6Mx5Y straddles	12/08/23	06/07/24	1.1
Buy 2Yx5Y swaption straddles on a delta hedged basis, versus 6Mx1Y / 18Mx1Y flatteners	06/07/24	06/14/24	3.6
Initiate outright shorts in 3Yx30Y swaption implied volatility, but delta hedge monthly or if rates move by over 25bp in either direction since the last delta hedge	03/08/24	07/12/24	(5.0)
Buy 1Yx30Y volatility versus 1Y forward 1Yx30Y volatility, synthetically constructed via suitably weighted 2Yx30Y and 1Yx30Y swaptions	03/15/24	07/12/24	(2.5)
Buy 65% risk weighted 1Yx10Y swaption volatility versus selling 1Y forward 2Yx10Y swaption volatility, synthetically constructed via suitably weighted 1Yx10Y and 2Yx10Y swaptions	04/12/24	07/12/24	(4.4)
Sell 6Mx10Y swaption straddles on a delta hedged basis, paired with a short position in Greens	06/14/24	07/12/24	2.2
Buy 1Yx5Y straddles versus selling vega-neutral amount of 5Yx5Y straddles	07/12/24	08/02/24	4.7
Buy A+100 1Yx5Y payer swaptions and sell A-100 1Yx5Y receiver swaptions, delta-hedged daily, to position for a correction in skew	04/19/24	08/23/24	(8.5)
Buy 6Mx5Y swaption straddles versus selling 150% of the vega risk in 6Mx30Y straddles	07/12/24	09/13/24	2.2
Initiate longs in 6Mx5Y swaption implied volatility on an outright basis, delta hedged daily	08/02/24	09/13/24	(8.5)
Others	**Entry**	**Exit**	**P/L**
Position for a widening in WN calendar spreads	11/9/2023	11/22/2023	1.8
Buy the USZ3/USH4 weighted calendar spread hedged with USZ3/WNZ3 Treasury futures curve flatteners	11/9/2023	11/22/2023	0.2
Position for a narrowing in FV calendar spreads	11/9/2023	11/22/2023	0.3
WN calendar spreads narrowers	2/13/2024	2/23/2024	(0.7)
UXY calendar spreads narrowers	2/13/2024	2/23/2024	(0.8)
TU calendar spreads narrowers	2/13/2024	2/23/2024	(0.3)
Sell the 4.75% Nov 2053 WNM4 basis, versus buying payer swaptions	3/8/2024	4/12/2024	1.0
Initiate calendar spread wideners in US Futures	5/17/2024	5/28/2024	(3.0)
Initiate calendar spread narrowers in UXY Futures	5/17/2024	5/28/2024	0.4
Initiate calendar spread narrowers in FV futures	5/17/2024	5/28/2024	1.0
Initiate calendar spread wideners in US Futures	8/16/2024	8/23/2024	(0.8)
Initiate calendar spread narrowers in FV Futures	8/16/2024	8/23/2024	(0.1)
Buy the USZ4 factor-weighted CTD basis	9/13/2024	9/20/2024	2.4
Buy the WNZ4 factor-weighted CTD basis	9/13/2024	9/20/2024	1.0
Total number of trades			**143**
Number of winners			**94**
Hit rate			**66%**

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Recent Weeklies	
13-Sep-24	Schrodinger's Cut
06-Sep-24	Rates, unlike the economy, are not yet in "equipoise"
23-Aug-24	False Fall
16-Aug-24	Hopscotch
2-Aug-24	Powell sees the data, markets see one data point
26-Jul-24	Joie de Louvre
12-Jul-24	The Evitable Conflict
14-Jun-24	Pardon my French
07-Jun-24	The BOC and ECB begin a game of BOCCE-Ball, likely without the Fed for now
31-May-24	The planets, if not the stars, are aligning
17-May-24	Another brick in the vol
10-May-24	The election enters the hearts and minds of options traders
3-May-24	R2-P2
26-Apr-24	Perfectly priced to patience
19-Apr-24	Should I stay or should I go?
12-Apr-24	A hairpin bend on the road to easing
5-Apr-24	Shaken, not stirred
22-Mar-24	The Fed, walking a tightrope, finds better balance
15-Mar-24	(P)PI day
08-Mar-24	The sun is the same, in a relative way, but vol is lower
01-Mar-24	Governor Vol-ler moves the market
23-Fed-24	What's the rush?
09-Feb-24	Soft landings, TouchdoWNs, and Safety in the End Zone
02-Feb-24	When it rains, it pours
26-Jan-24	All eyes on Washington
19-Jan-24	Polar vortex duration extension
05-Jan-24	Happy new taper
15-Dec-23	On the second day of FOMC, my true dove spoke to me
8-Dec-23	What I tell you three times is true
9-Nov-23	The tail that wagged the market
3-Nov-23	Descent towards a soft landing
27-Oct-23	Refunding, FOMC and Payrolls - a witch's brew awaits
20-Oct-23	Early Onset Volloween
13-Oct-23	Darkening skies, even before the solar eclipse
29-Sep-23	Bennu there, done that
22-Sep-23	Central banks line up in a holding pattern

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Outlooks	
28-Jun-24	Interest Rate Derivatives 2024 Mid-Year Outlook: Waiting for someone or something to show you the way
21-Nov-23	Interest Rate Derivatives 2024 Outlook: Goodbye Hard Times, Hello Great Expectations?
Recent Special Topic Pieces	
13-Aug-24	US bond futures rollover outlook: September 2024 / December 2024
10-Jul-24	Trading Principal Factor Volatility
15-May-24	US bond futures rollover outlook: June 2024 / September 2024
29-Apr-24	Term Funding Premium and the Term Structure of SOFR Swap Spreads
13-Feb-24	US bond futures rollover outlook: March 2024 / June 2024
9-Nov-23	Death cab for QT
8-Nov-23	US bond futures rollover outlook: December 2023 / March 2024

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Short-Term Fixed Income

- After more than four years, the FOMC delivered its first rate cut, lowering the Fed funds target range by 50bp to 4.75-5.00%
- Our economists still anticipate a faster pace of rate normalization than the median dot suggests, expecting another 50bp cut at the November meeting and a 25bp reduction in December
- Both SOFR and EFFR adjusted lower, aligning with the new Fed funds target range as expected. Yields at the very front-end of the money markets curve also shifted lower, leading to a steepening of the 1m12m and 3m2y curves. Even so, these curves remain deeply inverted, challenging liquidity investor's willingness to add duration
- Indeed, MMF WAMs moved lower YTD, particularly with respect to prime MMFs. Prime MMF reform could be a factor, though we suspect the lack of clarity on how the easing cycle will unfold and the inverted yield curves had more to do with it
- FRNs in prime MMFs rose from 15% at the start of the year to 20% as of 8/30, while that in government MMFs only increased by 2%-pts to 16% this year
- To the degree prime funds continue to position towards floaters, the yield spread between government and prime funds might narrow as we get further into the easing cycle
- Government portfolio holdings remained stable overall during August, with a $43bn decrease in Treasury, Agency, and other repo, and a $14bn decrease in Treasury coupons. However, allocations increased in RRP by $21bn, Treasury FRNs by $20bn, and T-bills by $90bn
- Prime AUMs declined slightly MoM, with reductions in holdings of Treasuries, ON RRP, and repo (excluding RRP) by $12bn, $11bn, and $7bn, respectively. They also slightly reduced their exposure to credit by $7bn during August
- **Near-term catalysts**: Aug Personal income (9/27), Aug JOLTS (10/1), Sep ADP (10/2), Sep employment (10/4), Sep CPI (10/10), Sep PPI (10/11)

Market commentary

After more than four years, the FOMC delivered its first rate cut, lowering the Fed funds target range by 50bp to 4.75-5.00%. This decision was made against a backdrop of progress towards the Fed's inflation goals and aimed at preserving the current strong labor market from downside risks. While the rate reduction was widely expected, the size of the cut was much debated. Since August, our economists had anticipated a 50bp reduction at this FOMC meeting, reasoning that, in hindsight, they should have cut rates in late July and this larger move helps get them back onsides.

In the SEP, the median dot indicated two additional 25bp cuts by year-end, a total of 100bp of easing in 2025, and an additional 50bp of easing in 2026. Meanwhile, the median unemployment rate projection for this year and next is 4.4%, up 0.4%-pt and 0.2%-pt, respectively, from the June projections. During the press conference, Chair Powell offered no clues on the magnitude of future cuts, only saying "we're recalibrating policy down over time to a more neutral level."

Our economists still anticipate a faster pace of rate normalization than the median dot suggests, expecting another 50bp cut at the November meeting and a 25bp reduction in Decem-

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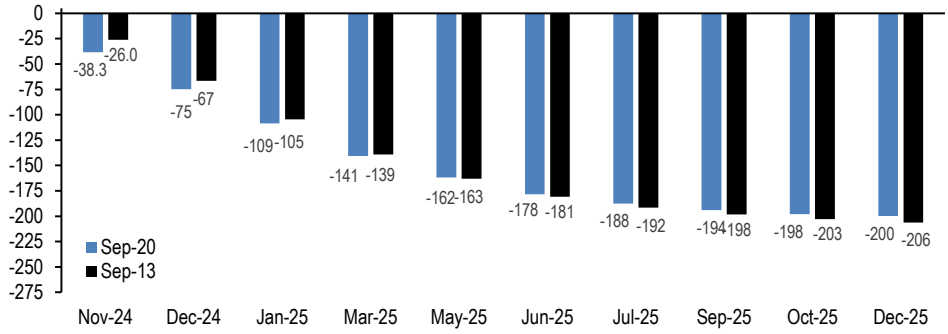
ber. However, this expectation largely depends on further softening in the next two jobs reports. If the labor data turns out to be more benign, it would support the FOMC's "Goldilocks" scenario of 25bp cuts per meeting for the rest of the year (see *An appropriate recalibration*, M. Feroli, 9/19/21). Markets also seem to be in two minds whether the Fed will follow with another 50bp at the November FOMC meeting, particularly a meeting immediately after US elections. By week's end, OIS forwards are pricing 38bp of cuts in November, another 37bp in December, and 200bp of total easing by the end of 2025 (Figure 38).

Figure 38: By week's end, OIS forwards are pricing 38bp of cuts in November, another 37bp in December, and 200bp of total easing by the end of 2025

OIS-implied change in fed funds effective rate by FOMC meeting, as of 9/20/24, and 9/13/24 (bp)



Source: J.P. Morgan

Turning to the Fed's balance sheet, there was minimal discussion on QT. However, when asked about balance sheet policy during the press conference, Powell noted, "In the current situation, risks have really been stable. They haven't come down. So reserves are still abundant and expected to remain so for some time. The shrinkage has come out of the overnight RRP." The Chair also mentioned, "We know that these two things can happen side by side; in a sense, they're both forms of normalization. So for a time, you can have the balance sheet shrink while also cutting rates." Importantly, we continue to see QT as being in its endgame, with perhaps a few more months left, and project the Fed's balance sheet to end the year at ~$7tn (see *Hopscotch*, S. Ramaswamy, 8/16/24).

Front-end update

Following the Fed's consequential rate cut, both SOFR and EFFR adjusted lower, aligning with the new Fed funds target range as expected. On 9/19, EFFR declined by 50bp to 4.83%, and SOFR decreased by 51bp to 4.82%. Similarly, yields at the very front-end of the money markets curve shifted lower, leading to a steepening of the 1m1y and 3m2y curves. Even so, at current levels, these curves remain deeply inverted at -74bp and -107bp, respectively (Figure 39). The inverted curves continue to challenge liquidity investors willingness to extend and add duration.

To be sure, despite expectations of rate cuts, MMF WAMs have moved lower this year, particularly with respect to prime MMFs. YTD, prime WAMs are down 9.13 days to 22 days. Arguably, MMF reform might have been one of the factors behind the decline as funds looked to add liquidity to meet potential redemptions, though we suspect the lack of clarity on how the easing cycle will unfold and the inverted yield curves had more to do with it. Indeed, a closer look at prime MMF holdings shows a meaningful increase of FRNs in their portfolios, rising from 15% at the start of the year to 20% as of 8/30 (Figure 40). As we have noted previously, FRNs offer better protection in the current interest rate environment while also ensuring higher yields. Importantly, exposure to FRNs avoids an immediate drag on

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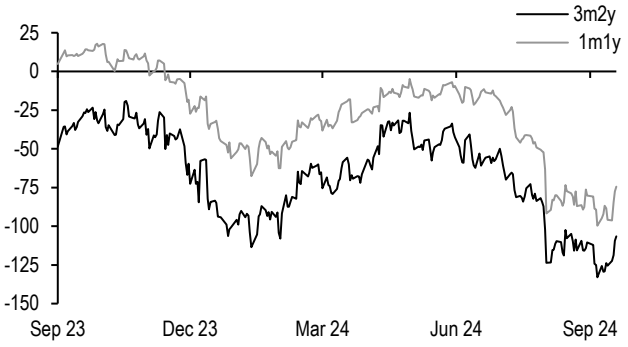
MMF yields, thus allowing prime funds to maintain some sort of yield advantage over government funds for the time being (see *Credit liquidity investors still prefer floaters over fixed*, T. Ho, 7/31/24).

Meanwhile, government MMFs have taken on a slightly less aggressive positioning with respect to their duration: government WAMs are down 6.2 days to 29 days YTD, and their FRN holdings have only increased by 2%-pts to 16% this year. In other words, they've been able to lock in slightly higher yields. To the degree that prime funds continue to position towards floaters, the yield spread between government and prime funds might narrow as we get further into the easing cycle.

Still, regardless of how prime funds perform relative to government funds, given the still inverted front-end yield curve and the yield advantage MMFs have over other cash alternatives, we expect MMF AUMs will continue to rise into year-end. Indeed, MMF balances have increased $77bn so far this month to a record $6.5tn, despite the $48bn outflows observed around the corporate tax date (see *MMF AUMs Rise Despite Upcoming Cuts*, T. Ho, 9/6/24).

Figure 39: Yields at the very front-end of the money markets curve steepened this week, but still remain deeply inverted

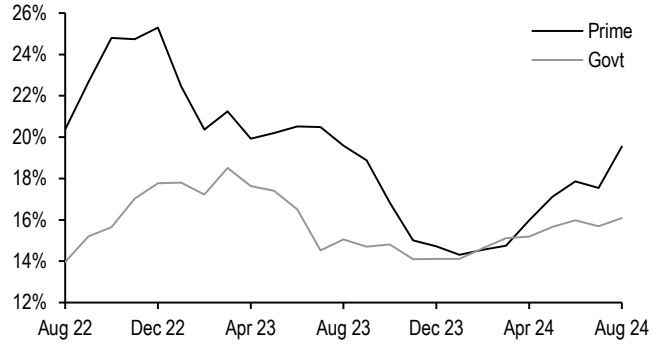
1m1y and 3m2y yield curve (bp)



Source: J.P. Morgan

Figure 40: Prime MMF holdings showed a meaningful increase of FRNs in their portfolios, rising from 15% at the start of the year to 20% as of 8/30

FRNs held by MMFs as a percentage of total AUMs (%)



Source: Crane Data, J.P. Morgan

August MMF Holdings

In August, taxable MMFs experienced a steady increase in balances, marking the highest net flows thus far this year. Total AUMs rose by $108bn, reaching nearly $6.5bn during the month (Figure 41). This rise in balances is not particularly surprising, as AUMs tend to increase ahead of an easing cycle, with yield-driven investors rotating away from other cash alternatives into MMFs (see *When will the front-end Treasury curve steepen?*, T. Ho, 9/14/24).

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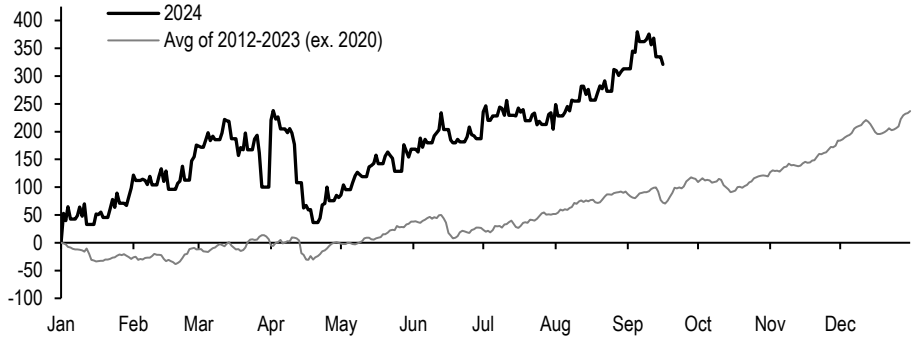
Figure 41: In August, total MMF AUMs rose by $108bn, reaching nearly $6.5bn during the month

Cumulative YTD change in taxable MMF AUMs ($bn)



Source: Crane Data, iMoneyNet, J.P. Morgan

Accordingly, government MMFs experienced a relatively strong month in net flows, with balances rising by $87bn. Even so, their portfolio holdings remained relatively stable month over month. In August, there was a $43bn decrease in Treasury, Agency, and other repo, and a $14bn decrease in Treasury coupons. Conversely, they increased their allocations towards RRP by $21bn, Treasury FRNs by $20bn, and T-bills by $90bn (Figure 42). Interestingly, government funds also increased their holdings of bills maturing within the 31–60 day range by $226bn MoM, while reducing their exposure to bills maturing in less than 30 days by $83bn and to those maturing in more than 60 days by $53bn (Figure 43). Furthermore, government and treasury WAMs were slightly reduced by 1.4 days during August, averaging 30 days and 38 days respectively (Figure 44).

Figure 42: In August, Treasury, Agency, and other repo decreased by $43bn, Treasury coupons by $14bn, while RRP increased by $21bn, Treasury FRNs by $20bn, and Treasury bills by $90bn

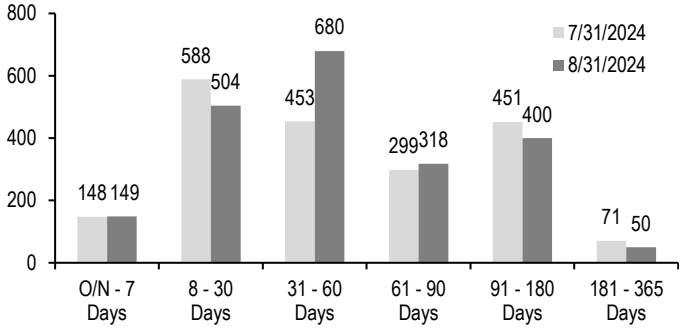
Asset allocation breakdown of government MMFs ($bn)

Sector	Aug-24	% of total	m/m chg	chg since Feb-24	m/m % chg	% chg since Feb-24
Treasuries	**2,513**	**47%**	**96**	**157**	**4%**	**7%**
Bills	2,101	39%	90	123	4%	6%
Treasury coupons	93	2%	(14)	2	-13%	2%
FRNs	319	6%	20	31	7%	11%
Agencies	**745**	**14%**	**4**	**70**	**1%**	**10%**
Discos	150	3%	(7)	31	-4%	26%
Agency Coupons	53	1%	(4)	(61)	-7%	-53%
Agency FRNs	542	10%	15	100	3%	23%
Repo	**2,081**	**39%**	**(22)**	**126**	**-1%**	**6%**
Treasury repo	1,189	22%	(40)	197	-3%	20%
Agency repo	598	11%	1	(13)	0%	-2%
Other Repo	0	0%	(5)	0	-96%	-
RRP	294	5%	21	(58)	8%	-17%
Other	**31**	**1%**	**8**	**14**	**34%**	**78%**
Total	**5,371**	**100%**	**87**	**366**	**2%**	**7%**

Source: Crane Data, J.P. Morgan

Figure 43: Government funds increased T-bill holdings the most in 31-60 day maturities by $226bn

Maturity profile of T-bills held by government MMFs, as of 7/31/24 and 8/31/24 ($bn)



Source: Crane Data, J.P. Morgan

Similarly, prime MMFs saw little change in their portfolio holdings. AUMs declined slightly MoM, with reductions in holdings of Treasuries, ON RRP, and repo (excluding RRP) by $12bn, $11bn, and $7bn, respectively (Figure 45). Additionally, they slightly reduced their exposure to credit by $7bn during the month, with the largest decline in CDs at $14bn, partially offset by an increased allocation towards CP by $8bn (Figure 46). Excluding the prime funds that have chosen to convert to another fund or liquidate completely, prime AUM out-

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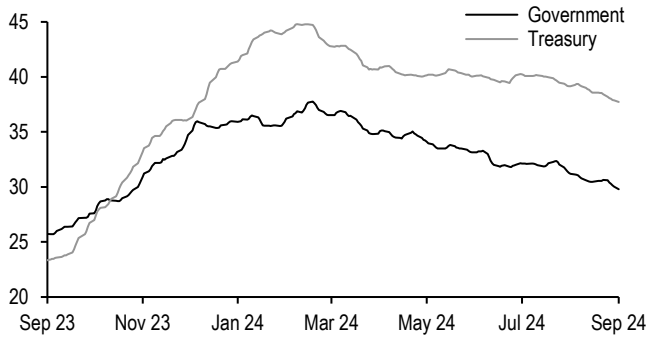
flows have been mostly limited throughout this year.

Figure 44: Government and Treasury WAMs were slightly reduced by 1.4 days during August, averaging 30 days and 38 days, respectively

5-day average of government and treasury WAMs (days)



Source: Crane Data, J.P. Morgan

Figure 45: Prime AUMs declined slightly MoM, with reductions in holdings of Treasuries, ON RRP, and repo (excluding RRP) by $12bn, $11bn, and $7bn, respectively

Asset allocation breakdown of prime MMFs ($bn)

Sector	Aug-24	% of total	m/m chg	chg since Feb-24	m/m % chg	% chg since Feb-24
Banks (US)	37	3%	(5)	(11)	-11%	-23%
Banks (Eurozone)	142	12%	2	(9)	2%	-6%
Banks (Other Yankee)	366	32%	4	(7)	1%	-2%
Repo	341	30%	(7)	63	-2%	23%
ABCP/CCP (Banks)	56	5%	(1)	(11)	-2%	-16%
ABCP (Non-banks)	20	2%	1	8	6%	66%
ABS	0	0%	(0)	(0)	-13%	-56%
Corporates (Financial)	5	0%	(1)	(3)	-21%	-35%
Corporates (Non-financial)	14	1%	(3)	(10)	-18%	-41%
US Treasuries	42	4%	(12)	(182)	-22%	-81%
US Agencies	4	0%	(0)	(43)	-7%	-91%
US S&L Govt/Munis	14	1%	1	2	7%	15%
Foreign SSA	5	0%	3	(7)	116%	-61%
Central Banks (Fed RRP)	96	8%	(11)	(16)	-11%	-15%
Other	0	0%	0	(17)	0%	-100%
Total	**1,143**	**100%**	**(30)**	**(244)**	**-3%**	**-18%**

Source: Crane Data, J.P. Morgan

While ON RRP balances remained mostly range-bound in August, between the low- to mid-$300bn range, the facility trended downward following the end of the month. Specifically, ON RRP balances fell to $239bn on September 16, marking its lowest level since May 2021. This decline was likely due to corporate tax outflows and mid-month Treasury settlements. This also likely contributed to the rise in SOFR, which increased by 5bp DoD to 5.38% on September 16. As we enter the GSE period and Treasury settlements work their way through the system, along with negative T-bill supply, ON RRP balances should trend back higher throughout this month. SOFR should also move back lower.

Figure 46: Prime funds slightly reduced their exposure to credit by $7bn during the month, with the largest decline in CDs at $14bn, partially offset by an increased allocation towards CP by $8bn

J.P. Morgan estimates of prime MMF exposure to banks ($bn)

	Aug-24										Change since Jul-24										Change since Aug-23									
	CP	CD	TD	ABCP	CCP	Agy RP	Tsy RP	Oth RP	Other	Total	CP	CD	TD	ABCP	CCP	Agy RP	Tsy RP	Oth RP	Other	Total	CP	CD	TD	ABCP	CCP	Agy RP	Tsy RP	Oth RP	Other	Total
Total	**187**	**186**	**166**	**49**	**7**	**119**	**134**	**88**	**6**	**941**	**8**	**(14)**	**8**	**(1)**	**(0)**	**(3)**	**(3)**	**(2)**	**(1)**	**(7)**	**12**	**(16)**	**47**	**2**	**3**	**31**	**102**	**23**	**(0)**	**203**
Eurozone	**42**	**43**	**57**	**14**	**2**	**8**	**10**	**26**	**0**	**202**	**4**	**(6)**	**4**	**0**	**0**	**(1)**	**2**	**0**	**0**	**3**	**5**	**(1)**	**4**	**(4)**	**0**	**(4)**	**7**	**6**	**0**	**13**
France	14	25	10	11	2	4	10	24	0	98	(0)	(4)	(1)	0	0	1	2	1	0	(1)	(1)	(3)	(1)	(7)	0	(6)	6	6	0	(4)
Germany	11	10	5	1	-	1	0	-	0	28	3	(1)	(1)	(0)	-	(2)	-	-	0	(2)	(2)	1	(2)	0	-	1	-	-	0	(2)
Netherlands	12	4	23	1	-	1	1	2	0	44	2	(0)	0	0	-	(0)	(0)	(0)	(0)	2	5	(1)	2	1	-	(1)	0	0	0	7
Belgium	-	1	3	-	-	-	-	-	-	3	-	(1)	1	-	-	-	-	-	-	0	-	(0)	1	-	-	-	-	-	-	1
Spain	3	1	2	-	-	3	-	-	0	9	1	(0)	(1)	-	-	(0)	(0)	-	0	(2)	2	(0)	(4)	-	-	2	-	-	0	(0)
Luxembourg	0	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0
Austria	3	0	8	-	-	-	-	-	-	11	(1)	-	2	-	-	-	-	-	-	1	0	(0)	2	-	-	-	-	-	-	2
Other Europe	**34**	**15**	**43**	**5**	**0**	**7**	**14**	**5**	**1**	**124**	**3**	**(1)**	**(2)**	**(0)**	**(0)**	**(1)**	**(1)**	**(1)**	**0**	**(3)**	**(9)**	**(8)**	**18**	**2**	**(0)**	**4**	**8**	**(1)**	**1**	**13**
United Kingdom	14	5	5	5	0	7	14	4	1	56	4	(1)	5	(0)	(0)	(1)	(1)	(1)	1	5	2	(1)	1	2	(0)	4	8	(1)	1	15
Sweden	10	9	22	-	-	-	-	-	0	41	(1)	0	(6)	-	-	-	-	-	0	(7)	(9)	(6)	3	(1)	-	-	-	-	(0)	(13)
Switzerland	5	1	-	0	-	-	-	0	0	6	(2)	0	-	0	-	-	-	-	(0)	(2)	(4)	1	-	0	-	(0)	-	-	0	(3)
Norway	5	-	16	-	-	-	-	-	-	21	2	-	(1)	-	-	-	-	-	(0)	1	2	(1)	13	-	-	-	-	-	-	14
Denmark	0	-	-	-	-	-	-	-	-	0	(1)	-	-	-	-	-	-	-	-	(1)	0	-	-	-	-	-	-	-	-	0
Other Regions	**110**	**128**	**67**	**30**	**5**	**104**	**110**	**57**	**5**	**615**	**0**	**(7)**	**6**	**(1)**	**(0)**	**(0)**	**(4)**	**(1)**	**(1)**	**(8)**	**16**	**(8)**	**25**	**5**	**3**	**30**	**88**	**18**	**(2)**	**177**
United States	12	21	0	9	-	67	96	41	4	250	(1)	(4)	-	(1)	-	2	(4)	(1)	(0)	(9)	1	(13)	(0)	1	-	25	80	13	(2)	105
Canada	54	32	17	15	5	21	6	10	0	159	4	(1)	2	1	(0)	1	(1)	1	0	6	9	(5)	8	4	3	4	2	4	0	30
Japan	10	62	23	6	-	16	8	7	0	132	(3)	(4)	5	(1)	-	(3)	1	(1)	(1)	(6)	(4)	3	9	(0)	-	1	5	2	0	15
Australia	23	3	9	0	-	-	-	-	0	35	(1)	(0)	(1)	(0)	-	-	-	-	-	(2)	8	1	3	0	-	-	-	-	0	12
Singapore	7	5	2	-	-	-	-	-	-	14	1	1	(1)	-	-	-	-	-	-	1	3	1	1	-	-	-	-	-	-	5
China	2	5	7	-	-	-	-	-	-	14	(0)	1	1	-	-	-	-	-	-	2	0	5	5	-	-	-	-	-	-	11
Abu Dhabi	2	0	7	-	-	-	-	-	-	9	-	(0)	0	-	-	-	-	-	-	(0)	0	0	(0)	-	-	-	-	-	-	(0)
Kuwait	-	0	-	-	-	-	-	-	-	0	-	0	(0)	-	-	-	-	-	-	(0)	-	(0)	-	-	-	-	-	-	-	(0)
Chile	-	-	-	-	-	-	-	-	-	-	(0)	-	-	-	-	-	-	-	-	(0)	(0)	-	-	-	-	-	-	-	-	(0)

Source: Crane Data, J.P. Morgan

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Excerpted from *Short-Term Market Outlook and Strategy*, Teresa Ho, September 20, 2024

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Agency MBS

Hindsight is 20/21

- **Mortgage spreads had an excellent week, with the MBS market responding quite favorably to the 50bp cut and the general risk-on trend across spread products**
- **That's put mortgages at new year-to-date tights. With FN 4.5 T-OAS at just 5bp in our beta model (and only modestly wider in YB), we have to admit we've had some flashbacks to early 2021**
- **To be fair, today investors are looking at assets that are undeniably spreadier and represent a way to sell volatility (which, while off the peaks, is still historically elevated); nonetheless, OAS looks historically snug**
- **Bank demand has started to edge higher and foreign demand should perk up with a steeper curve and lower funding rates, reintroducing two buyers more focused on nominal spread than money managers tend to be; the market seems to be leaning into the potential for a technical regime shift**
- **A few reports over the past week highlighted the risk of another run at GSE privatization under a second Trump administration; while the hurdles are still significant, we do think investors should take the discussion seriously**
- **Last week CFPB Director Chopra highlighted efforts to help more borrowers take advantage of refinancing opportunities; while cost reduction could help reduce the incentive elbow, rewriting QM to allow for streamline refi of GSE loans could have a larger impact**
- **We adjust our net issuance forecast up to $215bn for the full year from our initial November 2023 call of $175bn**
- **The market needs to absorb roughly 40% ($93bn) of this year's net issuance over the next four months; a sharp refi response could potentially re-arrange the exact timing of when the growth shows up**
- **Ginnie delinquency and buyout data still shows minimal impact from the FHA and VASP programs; on the VASP front, systems issues may be throttling servicer throughput, but with implementation required by October, we'll be watching carefully for more signs of buyouts**
- **TIC data implies that foreign MBS holdings are up $51.4bn through July, with changes in holdings being increasingly driven by private investors**
- **TIC data also implies that Japanese investors added in July, though early September net flows indicate Japanese investors may have shed foreign bond holdings**

Views

- **The belly of the stack (now the current coupon) looks rich on a historic basis; prefer a barbell of the wings on the fundamentals**
- **Low FICO pools provide good near-term call protection for investors worried about conventional speeds**
- **High MDS pools offer call protection via FTHB-only LLPA waivers**

Mortgage spreads had an excellent week, with the MBS market responding quite favorably to the 50bp cut and the general risk-on trend across spread products. That's put mortgages at new year-to-date tights. With FN 4.5 T-OAS at just 5bp in our beta model (and only mod-

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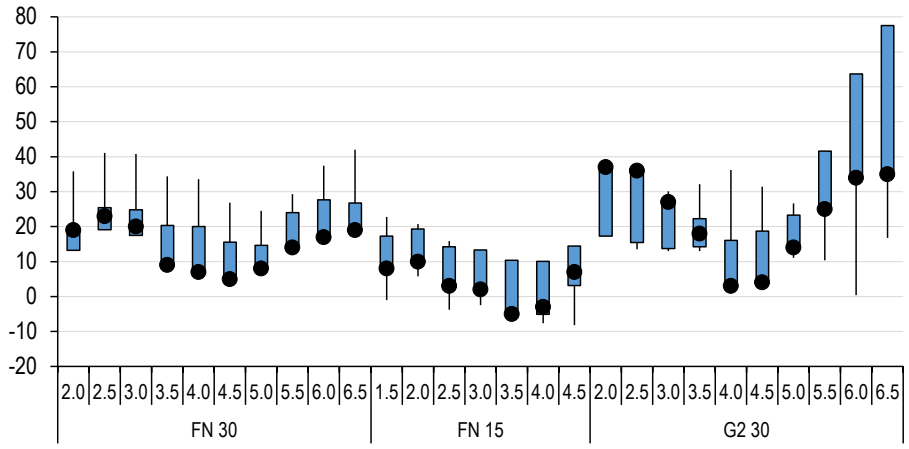
estly wider in YB), we have to admit we've had some flashbacks to early 2021. Now, to be fair, back then we were writing about why investors shouldn't buy 15ZV assets at -30OAS and instead should just look at a replicating basket of Treasuries. Today, investors are looking at 80-115ZV, 5-15OAS assets that are undeniably spreadier and represent a way to sell volatility (which, while off the peaks, is still historically elevated). Nonetheless, the option-adjusted spreads look historically snug.

Figure 47: Mortgage spreads had an excellent week on the back of the 50bp cut and a general risk-on trend across spread products

Current, 1m, and 6m Treasury OAS ranges across the TBA stack in our research beta model. The black dots represent the current OAS, the blue boxes represent the 1m range, and the black lines represent the 6m range (as of 9/19/2024)



Source: J.P. Morgan

The question, then, is whether the technical dynamics are set up such that these bonds can go even tighter. There are signs in the H.8 data (which must be heavily massaged to get a real sense AFS/HTM buying—see Figure 48) that bank demand is starting to creep up after years spent in the doldrums. The drivers of bank buying are clearly different today than they were back in QE4. Banks are no longer parking unhedged fixed rates in HTM as a way to pair off against a surge in sticky deposits. Instead, bank demand is far more spread focused, as evidenced by CMO floater issuance and, more anecdotally, the use of portfolio layer hedging. Still, we do get the sense that, just as back in QE4, many banks are still more focused on the nominal spreads that mortgages offer.

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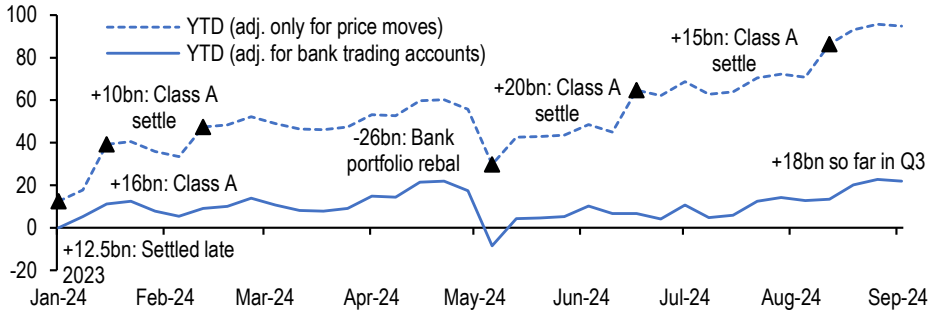
Figure 48: Bank buying appears to have picked up modestly ahead of the FOMC

2024 YTD changes in agency MBS holdings across all U.S. banks in amortized cost terms, where the "YTD (adj. for bank trading accounts)" series adds subtracts out the $12.5bn settled in 2023 and trading account changes, spread across Class A settle increases. In Q1, we subtract $26bn of settled Class A holdings to tie out with call report increases in bank trading accounts and match H.8. with AFS + HTM call report increases. In Q2, we subtract $20bn of settled Class A holdings to match H.8. changes with AFS + HTM call report changes.



Source: J.P. Morgan, Federal Reserve, FFIEC

Now, this is not to say that banks are going to load the boat on MBS at just any positive spread. But when we look at a long time series of current coupon ZV, it's notable that, even having come 70bp off of the 2023 wides, we're still 40bp above the 2010-2021 average (Figure 49). If banks are starting to feel a little more free to add securities, taking some comfort from the initiation of the cutting cycle (which likely helps lessen the chances of significant deposit outflows, even if it doesn't necessarily boost inflows), we can still see some finding mortgages attractive even at very tight OASs. We very much doubt that we are going back to the patterns of buying that we saw even before QE4, where deposit driven duration matching in HTM and the LCR buildup drove regular annual MBS demand of $100-200bn. But a more modest $50-100bn net add could be possible over the next year.

Figure 49: Current coupon ZV remains 40bp above the 2020-2021 average

Current coupon historical treasury ZV spread and latest level (bp)

Source: J.P. Morgan

That, coupled with the potential for more overseas buying as the US curve resteepens, means significantly more demand that's focused on ZVs or nominal spread versus the environment of the past two years. Some money managers have been waiting to rotate out of MBS into corporates, anticipating that IGs would eventually widen. But with the JULI still near its recent tights, it's not entirely obvious what to buy if you sell MBS. Rotating into Treasuries will give up a lot of yield, but do you want to rotate into corporates and sell credit risk instead of vol? There may be some inertia to mortgage overweights, given the spread product landscape and need to maintain a higher current yield to attract inflows. Relatedly, the recent rally should continue to support inflows into fixed income funds, which could mean that

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money managers can still net add MBS even without changing their weightings much (or letting them drift slightly down).

So, while we don't love mortgage spreads here, we understand why it's hard to really short them. We'd still recommend a barbell on the stack to stay away from the belly, at least for investors with flexibility on dollar price. This week, we look at two risks for conventionals, each coming from different ends of the political spectrum: GSE reform and streamline refis. We also revise our net issuance forecasts modestly higher to account for the rise in home prices and lower rates.

GSE privatization talk heats up again

Last Friday, the WSJ published an article titled "Trump Allies Are Working on Plans to Privatize Fannie and Freddie." Though it was somewhat light on the precise details of how much capital needed to be raised, the report reinforced our view that the probability of a GSE privatization effort is reasonably high under a second Trump administration. Back in March, we'd highlighted that former FHFA Director Calabria's book described how close he felt the GSEs had come to privatization at the end of the Trump administration (see our March 15 piece for more details on this, as well as the current state of the GSE capital stack). Calabria was himself quoted earlier this week by a report from HousingWire, saying that while the chance of the GSEs going private in 2025 is zero, "*by [2027] I would say there's maybe 70% chance. ... Almost every decision you think you have to make, we scoped out. All those millions of dollars with my go ahead, low-key actually produced documents. So, there are plans; there are options. You can get them out. It's all feasible, doable.*"

There are still clearly massive hurdles and unanswered questions regarding a privatization effort. However, investors should take seriously that there's a huge amount that can be done administratively—and that Calabria had drawn up the plans, which presumably are still lying around. A new administration would need to appoint both a Treasury Secretary and FHFA Director interested in furthering this effort.

In our view, administrative action will never get around the central conundrum of GSE reform—that the implicit guarantee, while officially disavowed, has been made good on before. It will always seem implausible to the market that the government could allow these institutions to fail, which necessarily means there is a tension between their public mission and potential status as private entities. But that doesn't need to be 'solved' for conservatorship to end; and there's a lot of unknowns about what could happen along the way.

How serious is the CFPB about streamlining refis?

Last week, CFPB Director Chopra gave a speech focused on expanding refinancing opportunities for borrowers. He confirmed that closing costs are a key area of interest for the agency—it's possible that there's some money to be saved on things like FICO scores or title insurance. Savings of this sort could shrink the incentive elbow caused by fixed costs, but we thought that Director Chopra's mention of how "*lenders are required to redo some of the same steps that were completed by the borrowers when they first purchased their home*" might be the most interesting part of the speech. If his comments are hinting at amending the QM definition to allow streamline refi (and we think they are), that could open the door for steeper GSE s-curves down the road.

For context, back in 2022, the CFPB put out an RFI regarding how streamline refis could benefit borrowers. At the time, they noted that "*mortgage refinancing can be harder to*

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access for borrowers with smaller loan balances. Black and Hispanic borrowers, who on average have smaller loans, have not participated in recent refinance booms at the same rate as white borrowers….New streamlined and automatic refinancing mortgage products could make sure that those buying a home now, or refinancing to cover other needs, are able to benefit from the next interest rate drop." Chopra's speech last week highlighted the same motivation, but doesn't explicitly call for 'automatic' refinancing and only obliquely brings up streamlines. Still, we think that it's the most meaningful focus for the agency.

For a loan to comply with the QM/ATR (Qualified Mortgage/Ability-to-Repay) rule, it needs to meet the CFPB's standards, which include documenting the borrower's ability-to-repay the loan. This generally requires re-underwriting the borrower at the time of origination of the new loan. There are a few exceptions—notably FHA and VA have streamline programs that are deemed QM simply because they are government promulgated rules—the 'verification safe harbor' loophole. The GSEs used to have a similar exclusion (the "QM patch"). However, former FHFA Director Calabria wanted the GSEs to operate under the same QM rules as the private industry, and so GSE underwriting currently requires full redocumentation on refis.

As an aside, this is the reason that the GSEs have had to shut off their High LTV Refi Offerings, which were designed to allow for >100LTV streamlined refinancing similar to the legacy HARP programs. The HLRO was built into the CRT language, and would have allowed the GSEs to maintain CRT coverage even when an underwater loan refi'd. Currently, however, the program is on ice, which also puts some limits on the GSE's ability to allow for underwater refinancing (a clear borrower benefit) and maintain their CRT coverage (which would be lost under another, non-HLRO loan).

If the CFPB were to rewrite QM to allow for streamline refis, we suspect that there would be pressure on the GSEs to more broadly implement a streamline program (beyond just the HLRO). The rulemaking process is lengthy, so the presidential election may determine whether this is pursued. Still, given that refis are picking up and this topic seems to have new legs and focus, it's a risk for conventional mortgages in the medium term.

We can see the argument for allowing borrowers to refi without reunderwriting, *so long as* their payments are strictly lower upon refinancing and their LTV ratio doesn't dramatically increase. A lower payment will reduce default risk, which would be particularly beneficial if the rally coincides with deteriorating economic conditions. The GSEs would also clearly benefit from this, since they're already on the hook for the credit risk. This was the rationale behind HARP; while the GSEs would never underwrite *new* risk at >100LTV, refinancing borrowers with extremely high MTM LTVs served to reduce default probability on loans with challenged recovery prospects.

But as always, there's no free lunch. Introducing streamline refis would raise option costs and lower mortgage prices (and thus raise mortgage rates for new borrowers). Moreover, CRT investors may be less comfortable buying new risk with potentially stale underwriting and appraisal information.

It's challenging to determine how much wider spreads would move if the GSEs introduced a streamline option. We used to point to speeds around the June 2009 HARP cutoff date as being a natural experiment in how much streamline refi could change speeds (Figure 50). The '20/'21 refi wave was at least partly fueled by the adoption of new electronic underwriting technology and the widespread use of AVMs instead of full appraisals; the difference between modern refi underwriting and streamline is surely narrower than it would have been

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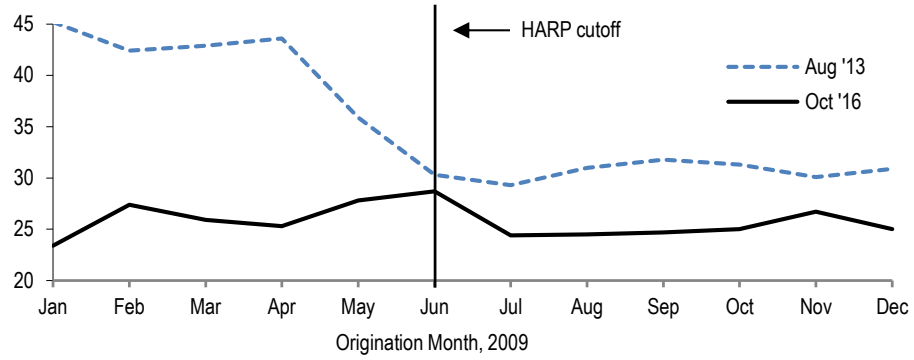
a decade ago. Still, given that spreads look relatively tight on conventional mortgages to us, we don't think that the market is priced to a streamline scenario. It's another policy risk that investors are exposed to that hinges on the outcome of the presidential election.

Figure 50: The HARP effect was clear, but may not be perfectly applicable today

3m CPRs observed in October 2016 and August 2013, for '09 vintage Freddie Mac 30-year loans with WAC between 5% and 6%, by loan origination month



Source: J.P. Morgan, Freddie Mac

Netting out the rest of the year

We last revisited organic net supply during our midyear outlook three months ago; at that time, mortgage rates were sitting at 7% and we had seen little evidence to move us away from our initial projection from the start of the year (+$175bn). After seeing sales activity remain relatively static from last year, and continued strength in HPA, we think it's time to move our forecast higher to $215bn. This means another $93bn for September to December (~$23bn a month). Figure 51 shows our month-by-month expectations and how they stack up against last year. That's in normal net terms (a month's gross issuance minus its pay-downs); it could be rearranged somewhat by rate/term refis but the overall real growth in market size isn't dictated by recycling loans at the same size.

Putting this revised net number into context against our forecast from almost a year ago, the main change in the components making up the forecast is an increase in the purchase contribution from -$25bn to +$20bn (Figure 52). One of the sensitivities in that forecast was HPA and its continued strength was worth $25bn based on our calculations at the time (+5.5% revision). The rest came from us revisiting how "much" each purchase loan adds to net due to re-sizing and home prices. As a reminder, we consider a closed-system of agency MBS for coming up with the net from purchase/cashout/amortization, while the securitization rate reflects that there can be movement into/out of agency MBS from other mortgage loan sources.

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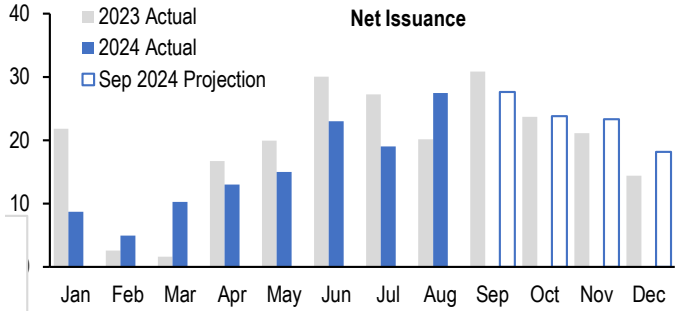
Figure 51: Net issuance will likely stay firmer throughout the rest of the year relative to 2023…

Monthly Agency MBS net issuance in 2023 and 2024, and our 2024 projections as of 6/28/2024, $bn



Source: J.P. Morgan, Fannie Mae, Freddie Mac, Ginnie Mae

Figure 52: …and we adjust up our full year forecast to $215bn (from $175bn) to reflect the growth in HPA and continued purchase activity

Expected change in issuance from this year to next by component, $bn

Issuance Forecast Component	2023 Total	2024 Total	2023 to 2024 Change
Purchase	504	523	20
Cashout	32	33	0
Amortization	-325	-330	-5
Securitization Rate	N/A	N/A	-35
Net total	**235**	**215**	**-20**

Source: J.P. Morgan

Speaking of purchase loans, the pattern of purchase buying has been abnormal since the start of 2020. Figure 53 gives a simple look at the timing of purchase loans issuance (not origination) throughout the year, with each cell reflecting the month's activity relative to the yearly average. Pre-2020, the peak typically occurred in August, and slowly decreased through the rest of the year before hitting the lows in January-March. The past few years, particularly 2022, bucked this trend as tight inventory and rate sell offs led to purchase issuance falling off more dramatically in the fourth quarter.

Figure 53: Is purchase issuance "seasonality" returning to normal after the disruptions and rate moves since 2020?

For all agency purchase loans, amount issued in a month overly the yearly average

Month/Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	17-'19
1	81%	79%	80%	95%	88%	80%	82%	99%	127%	87%	79%	88%
2	77%	73%	68%	72%	80%	66%	67%	77%	95%	68%	74%	73%
3	65%	68%	77%	73%	73%	68%	66%	79%	99%	79%	84%	72%
4	83%	87%	85%	86%	86%	87%	96%	103%	102%	93%	94%	86%
5	92%	94%	95%	95%	102%	103%	84%	100%	102%	111%	104%	100%
6	107%	110%	106%	110%	112%	109%	79%	106%	114%	126%	112%	110%
7	119%	132%	119%	119%	115%	121%	109%	111%	112%	118%	113%	118%
8	125%	121%	125%	123%	127%	138%	129%	117%	112%	114%	125%	129%
9	121%	133%	126%	112%	115%	120%	116%	112%	105%	115%	113%	116%
10	123%	120%	108%	110%	107%	108%	129%	105%	84%	104%	106%	108%
11	102%	91%	96%	107%	105%	101%	122%	94%	74%	98%	103%	104%
12	106%	93%	113%	98%	91%	99%	121%	97%	73%	89%	93%	96%

Source: J.P. Morgan

This year, the situation is reversed, with rates having fallen almost a full percentage point over the past couple months. Very roughly, our model thinks that such a change is worth a 10% increase in turnover, though the exact mechanism and timing of that increase can depend on other factors. At the least, it means we look for the 2024 pattern of issuance for the rest of the year to look more like the 2017-2019 average rather than 2022/2023, which helped guide the creation of our month to month issuance forecast. A more leading indicator, purchase applications, supports this notion as levels have now drawn nearly even year over year after lagging for most of it (Figure 54).

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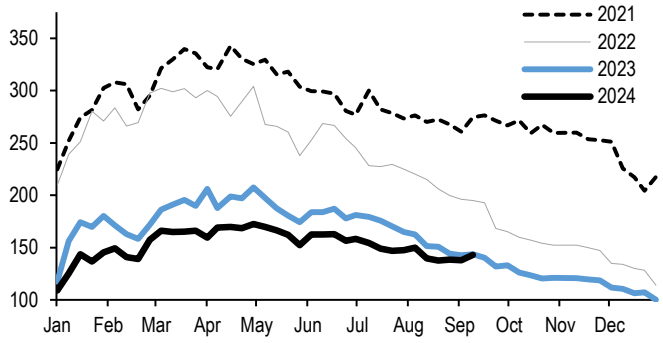
Figure 54: Purchase applications have caught up to last year, and might not drop as much into year-end if the rate move has any impact

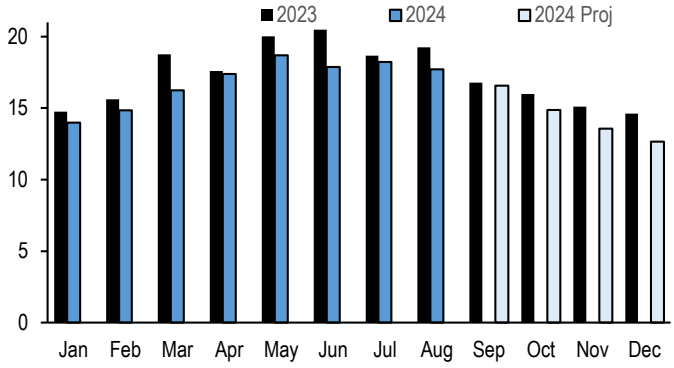
MBA Purchase Index, calendar year overlay with daycount adjustments



Source: J.P. Morgan, MBA

Figure 55: Fed runoff could end the year at $193bn, close to our original expectation of $180bn

Fed runoff by month for 2023 and 2024, along with a projection for the rest of the year



Source: J.P. Morgan, Federal Reserve

On a related note, we also took a glance at our projections for Fed runoff over the last four months of the year (Figure 55). Funnily enough, the year over year change in absolute pace has almost exactly mirrored the decrease in size of the Fed portfolio. Said another way, the Fed's portfolio going into 2024 was 8% smaller than it was going into 2023… and our new projection for paydowns ($193bn) is 7% smaller ($208bn). This equivalence reflects how the seasoned and/or deeply out-of-the-money bonds in the Fed's portfolio show little reactivity to rate moves. Looking ahead, it will be interesting to see if 6% (or lower) mortgage rates shakes loose more of these bonds due to loans sliding up the modestly sloped turnover s-curve.

Hints of VASP

FHA payment supplement

From May 1st to Jan. 1st, 2025, servicers can implement FHA's Payment Supplement option for eligible borrowers, which allows borrowers to tap into unused partial claim funds (up to 30% of the balance of the loan at time of first default, minus any partial claim draws in the intervening period) to temporarily reduce their mortgage payments, targeting a 25% reduction.

So far, we have not seen much evidence of the program being implemented, as we have not seen an uptick in cure rates in lower and belly coupons in aggregate or across large FHA servicers (Figure 56& Figure 57). We will continue to monitor increases in cures as a proxy for FHA payment supplement implementation through the end of the year.

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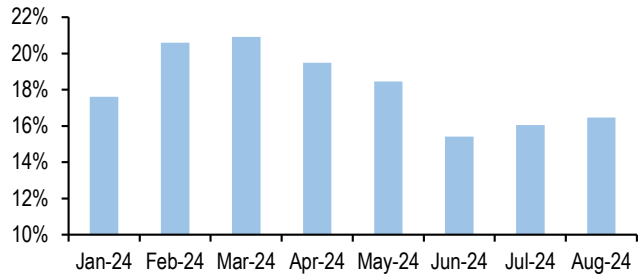
Figure 56: We have not seen an uptick in cures following the implementation of the FHA payment supplement …

FHA 90+D to current rolls as a share of all previously 90+D loans over time, 2-4.5 coupon, %



Source: J.P. Morgan, Ginnie Mae

Figure 57: … and even at the servicer level, its hard to say if any single one has seen an increase in cures that could be tied to the new program

FHA 90+D to current rolls as a share of all previously 90+D loans over time by top 20 FHA 2-4.5 coupon servicers as of Aug. 2024, 2-4.5 coupon, %

	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
All	18%	21%	21%	19%	18%	15%	16%	16%
Lakeview	15%	22%	25%	24%	24%	18%	18%	20%
Freedom	24%	28%	19%	15%	13%	13%	14%	15%
Pennymac	26%	25%	25%	23%	22%	16%	17%	18%
Rithm	16%	19%	24%	25%	25%	20%	21%	20%
Mr. Cooper	29%	26%	28%	24%	26%	25%	25%	22%
Carrington	20%	24%	19%	17%	16%	15%	14%	12%
Rocket	18%	17%	17%	18%	13%	14%	16%	15%
Wells	5%	6%	6%	6%	6%	6%	5%	6%
US Bank	18%	20%	25%	24%	21%	15%	14%	19%
Planet	8%	10%	11%	9%	13%	16%	18%	18%
M&T	14%	30%	36%	29%	24%	16%	17%	14%
LoanDepot	9%	12%	14%	15%	13%	12%	9%	14%
Money Source	13%	15%	15%	13%	16%	12%	15%	13%
Guild	19%	19%	21%	21%	24%	21%	18%	17%
IDHH	12%	20%	23%	31%	18%	15%	15%	16%
Cross Country	6%	23%	29%	27%	28%	25%	22%	20%
New American Funding	19%	19%	19%	20%	21%	19%	24%	22%
CMG	17%	21%	22%	21%	17%	13%	17%	18%
Citizens	12%	17%	14%	9%	14%	8%	9%	19%
Truist	15%	12%	20%	17%	15%	12%	15%	12%

Source: J.P. Morgan, Ginnie Mae

VASP

The VA Servicing Program (VASP) was officially activated on May 31st, and must be implemented no later than Oct. 1st, 2024. Unlike the FHA payment supplement, which would cure delinquent loans in pool, VASP aims to bring down delinquencies by buying VA loans out of pool upon modification (see *Agency MBS: Second Thoughts* for more details).

With a month of the program implementation remaining, we do not see any meaningful upticks in aggregate VA buyouts, and there are a handful of servicers (New American Funding, PennyMac, and Truist) for which buyouts of delinquent loans have crept up over the last month or two (Figure 58 & Figure 59). We've heard that some servicers have started testing the VASP pipes, but that operational difficulties may be throttling the throughput of these mods. With all servicers required to implement starting next month, we'd expect the pace of VASPing to pick up, but it remains to be seen whether the capacity exists to quickly process the backlog of delinquencies.

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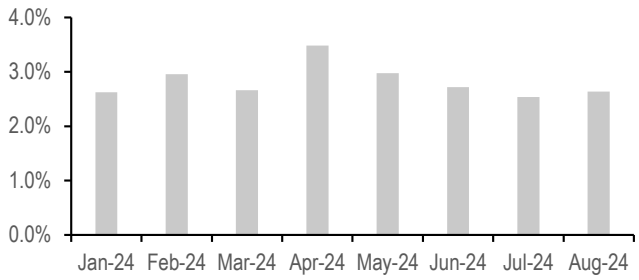
Figure 58: We have not seen any meaningful uptick in aggregate VA buyouts …

VA buyouts as a share of previously 90+D scheduled balances over time, %



Source: J.P. Morgan, Ginnie Mae

Figure 59: … though some servicers have started implementing the program

VA buyouts as a share of previously 90+D scheduled balances over time, by top 24 VA servicers, %

	Jun-24	Jul-24	Aug-24
All	2.7%	2.5%	2.6%
Carrington	3.2%	3.0%	1.5%
Citizens	4.3%	7.6%	3.7%
CMG	2.0%	1.3%	0.9%
Cross Country	4.9%	4.2%	1.5%
Freedom	1.6%	2.0%	1.0%
Guild	0.8%	1.1%	0.4%
Lakeview	2.3%	2.0%	1.6%
LoanDepot	3.9%	4.5%	2.3%
M&T	4.0%	1.2%	1.3%
Money Source	2.5%	2.4%	1.8%
Mortgage Research	3.9%	5.1%	2.8%
Movement	4.4%	4.3%	2.4%
Mr. Cooper	4.9%	2.9%	1.6%
NavyFed	7.3%	4.3%	6.4%
New American Funding	1.2%	1.8%	9.9%
Pennymac	3.7%	3.5%	6.4%
Pentagon	4.7%	3.4%	2.2%
Planet	0.8%	0.6%	0.7%
Rithm	1.9%	2.6%	2.8%
Rocket	3.1%	1.9%	1.0%
Sunwest	1.0%	0.2%	0.5%
Truist	5.4%	7.2%	11.8%
US Bank	3.7%	6.2%	3.2%
Wells	0.8%	1.1%	2.0%

Source: J.P. Morgan, Ginnie Mae

Foreign holdings sTICking at current levels

Foreign holdings of agency MBS are up +$51.4bn this year (through July), and only inched modestly higher month over month (Figure 60). The evolution of foreign holdings appears to be increasingly driven by foreign private investors, especially the sizeable uptick in June (Figure 61).

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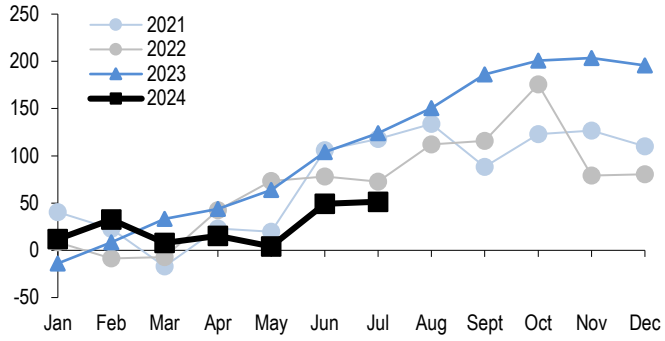
Figure 60: YTD purchases of agency MBS are implied to be +$51.4bn through July, increasing by $2.3bn month over month …

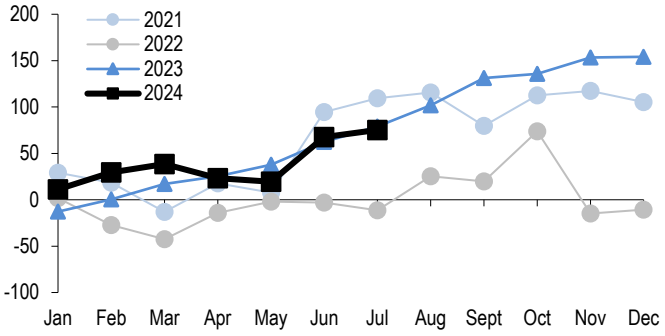
YTD purchases of MBS by foreign investors, manually price-adjusted with the index through January 2023, and adjusted using TIC-provided mark to market changes from February 2023 onwards, $bn



Source: J.P. Morgan, TIC

Figure 61: … with changes in holdings being driven by foreign private investors this year …

YTD purchases of MBS by foreign private investors, manually price-adjusted with the index through January 2023, and adjusted using TIC-provided mark to market changes from February 2023 onwards, $bn

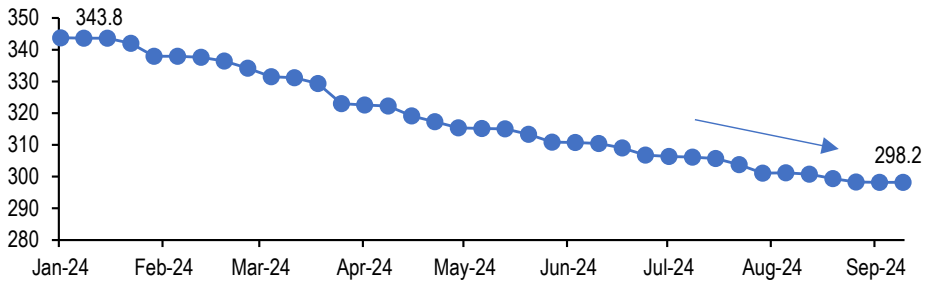


Source: J.P. Morgan, TIC

Meanwhile, foreign official holdings of agency securities have steadily declined so far this year (Figure 62).

Figure 62: … as foreign official holdings of agency securities have been decreasing

US Federal Agency Securities held in custody in foreign official accounts, $bn



Source: J.P. Morgan, Federal Reserve

At the country-by-country level, TIC indicates that Japanese investors beginning to add mortgages (Figure 63). However, recent Japanese purchases and sales of foreign bonds indicate a net outflow in early September, so we will monitor whether these additions persist in the TIC data (Figure 64).

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Figure 63: There are hints that Japanese investors are beginning to add mortgages …

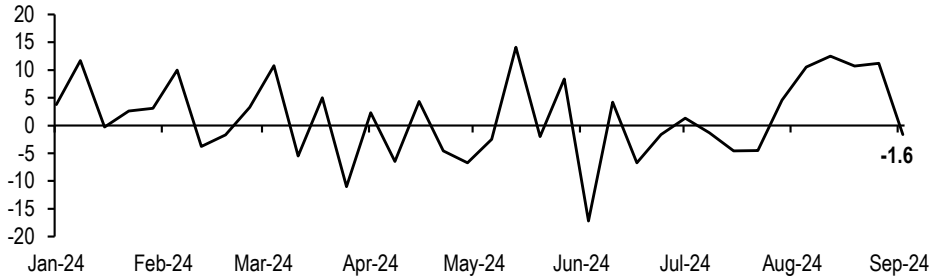
Agency MBS + agency debt holdings as of Dec. 2023 and Jul. 2024 (market value, $bn), monthly changes in agency MBS + agency debt holdings (market value, $bn), and YTD changes in agency MBS + debt holdings (market value and price-adjusted, $bn)

	Holdings ($bn)		Monthly changes (adjusted using TIC mark-to-market)							All changes
	Dec-23	Jul-24	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	
Mainland China	271.5	234.4	-2	-2	-5	-8	-8	-3	-4	-31
Japan	259.1	253.4	-2	1	-5	-1	-4	3	6	-2
Hong Kong SAR (China)	8.7	9.7	0	1	0	0	0	0	0	1
South Korea	38.4	36.7	0	-1	0	0	0	0	0	-1
Taiwan (China)	211.6	197.0	1	6	-7	8	-4	-1	0	2
Ireland	39.5	37.0	1	-5	7	-2	-1	1	-1	-1
Luxembourg	46.1	53.1	0	0	3	2	0	3	1	9
Belgium	11.5	19.2	0	0	0	3	5	0	0	8
Netherlands	17.1	19.3	0	0	0	0	0	2	0	3
Bermuda	25.5	27.7	0	0	0	2	0	1	1	3
Cayman Islands	42.4	43.0	1	-1	-1	0	0	-1	2	0
Switzerland	9.3	10.8	1	1	0	1	0	0	0	2
United Kingdom	39.7	48.9	11	10	-20	3	-2	7	1	9
Canada	133.7	156.2	-4	4	-1	0	5	24	-3	25
Grand Total	**1345.7**	**1343.8**	**9**	**16**	**-25**	**5**	**-12**	**47**	**0**	**40**

Source: J.P. Morgan, TIC

Figure 64: … though the Ministry of Finance data indicates that Japanese flows of foreign medium-to-long-term bonds started to dip in early September

Japan weekly securities investment abroad, medium-and-long term bonds, $bn



Source: J.P. Morgan, Ministry of Finance

Week in Review

- **MBA Weekly Survey:** For the week ending September 13, the purchase application index rose 3.6% w/w and was 0.4% lower than year ago levels, while the refinance index rose 24.2% w/w and was 38.9% higher than the 3-month trailing level (daycount-adjusted, not seasonally-adjusted) (Figure 65 & Figure 66).
- **Freddie Enhanced Primary Survey:** For the week prior to September 19, 2024, 30-year conventional conforming fixed-rate mortgages averaged 6.09%, down 11bp from the previous week (Figure 67)
- **Primary dealer specified pool positions** rose to $484.2bn (+$24.7bn w/w) as-of close trading September 11. Including TBA positions of -$429.0bn, dealers were long $55.2bn (-$9.1bn w/w) pass-throughs. Other agency MBS holdings rose $3.5bn to $35.3bn.
- **Fixed-rate agency gross and net issuances were $108.5bn and $27.4bn, respectively, in August.**September gross supply currently stands at $69.5bn (Figure 68).

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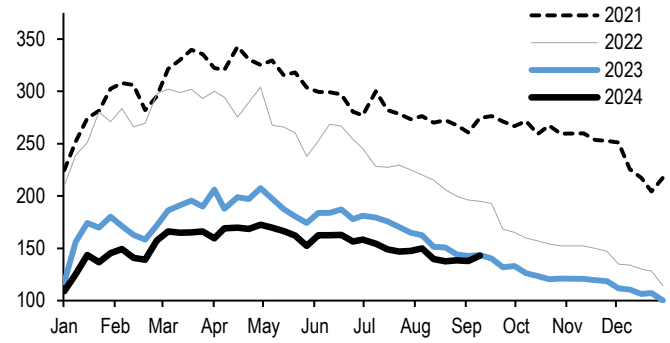
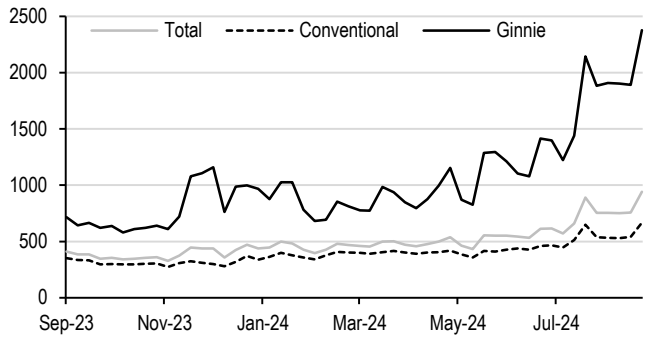
- **ICI Total Bond Long-term Mutual Fund and ETF Weekly Flows:** Inflows were +$8.7bn for the week of September 11 and +$43.3bn for the month leading up to September 11 (Figure 69).

Figure 65: MBA Purchase Index, calendar year overlay with daycount adjustments



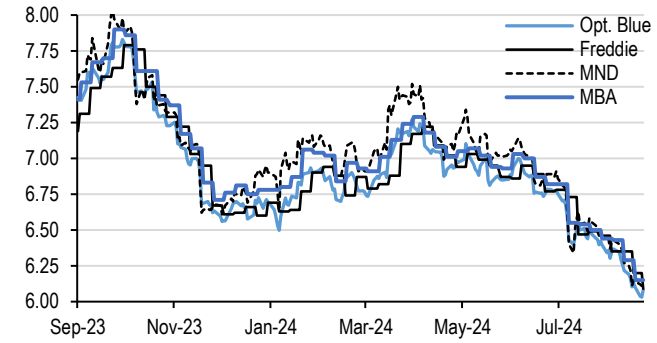
Source: J.P. Morgan, MBA

Figure 66: MBA Refi Indices, seasonally adjusted



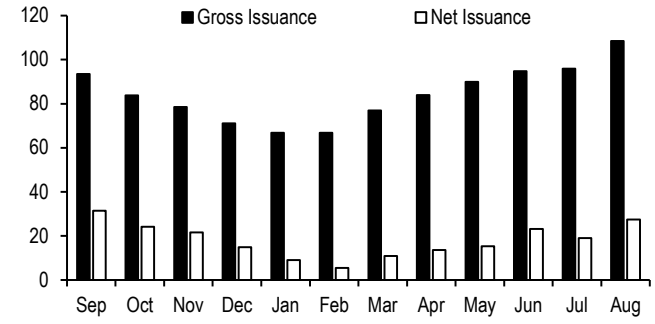
Source: J.P. Morgan, MBA

Figure 67: Primary mortgage rates, %



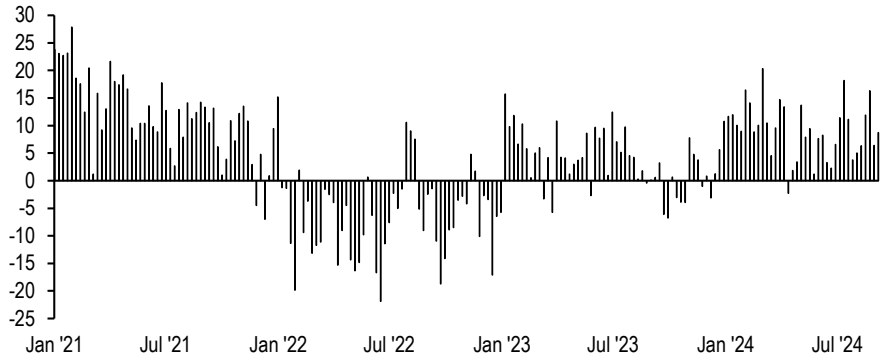
Source: J.P. Morgan, Optimal Blue, Freddie Mac, Mortgage News Daily, MBA

Figure 68: Gross and net fixed-rate MBS monthly issuance, $bn



Source: J.P. Morgan

Figure 69: ICI Total Bond Long-term Mutual Fund and ETF Weekly Flows, $bn



Source: J.P. Morgan, ICI

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RMBS Credit Commentary

DQs march higher in non-QM

- **The Fed gave the market what it wanted with a 50bp rate cut**
- **Investors are starting to focus more on convexity risk in jumbo collateral as 6% coupons shift further in-the-money. This could begin to pressure premium price spreads**
- **Our Securitized Products Real Estate and Consumer (SPREC) conference on Friday, September 13th, was well received by investors, with nearly 300 participants. See here for a full recap**
- **Delinquencies have continued to rise in the non-QM segment. FHA delinquencies are also higher, while GSE and jumbo borrowers have not experienced any significant increase**
- **Non-QM loans originated since 2Q22 are driving delinquencies higher**
- **Delinquencies have increased across all documentation types, but bank statement and 'other' borrowers have more significantly underperformed**
- **Within the 'other' bucket, loans underwritten using P&L statements and written verification of employment (WVOE) have the highest delinquencies, reaching almost 7% in August**
- **There is no significant difference in later-stage roll rates among different documentation types. The 30-to-60-day delinquency roll rates are consistently around 60%. Cure rates have also stabilized at approximately 20%**
- **Despite rising delinquencies, investors are not significantly concerned about losses**

Figure 70: RMBS credit issuance to date...

Issuance $mn	2023 FY	2023 YTD	2024 YTD
Jumbo 2.0	10,232	6,554	19,028
Agency Investor	976	976	3,349
CRT	9,313	6,826	7,731
Rental	4,024	2,622	7,558
RPL	10,852	8,144	12,785
NPL	1,063	758	3,171
Non-QM	31,099	23,098	32,155
Seasoned CRT	359	359	999
HELOC/CES	5,337	2,485	9,027
Other	6,751	4,187	12,821
Total	80,005	56,010	108,624

Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 71: ...and spreads

Spreads (bp)	Current	Δ 1 wk	Δ 1 mth	Δ YTD
Fannie CC 30YR	15	(0)	(2)	(14)
Jumbo PT	35	3	(31)	(24)
CRT M1	109	(0)	(4)	(18)
CRT M2(M1B)	164	1	(4)	(15)
CRT B1	192	(0)	(4)	(139)
CRT B2	387	1	(1)	(213)
Non-QM A1	145	5	5	(8)
Non-QM A2	165	-	-	(30)
Non-QM A3	175	5	-	(45)
Non-QM M1	215	5	(15)	(95)
Non-QM B1	360	50	20	(125)
SFR A	110	(5)	(15)	(40)
SFR B	145	-	(20)	(45)
SFR C	160	-	(15)	(60)
SFR D	190	-	(5)	(70)
HY Domestic	354	(19)	(5)	(29)
HG Domestic	95	(5)	(3)	(8)

Source: J.P. Morgan
Note: Includes our on-the-run indices. Jumbo is TOAS, non-QM and SFR are spread to treasuries. CRT is SOFR DM@10CPR. HG/HY are spread to treasuries.

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Market Commentary:

The Fed gave the market what it wanted with a 50bp rate cut. However, mortgage rates were already pricing in this move, so anything different would have meant a reversal of the recent trend lower in rates. We are already hearing of some borrowers getting rate locks at sub-6% levels. Headline agency mortgage rates are 6.08%. Interestingly, they were a few basis points lower before the Fed decision. Regardless, mortgage rates are poised to be below-6% by year end. Based on current 2y, 5y and 10y UST forecasts from our rates strategists, 30y mortgage rates should reach 5.9%. Of course, it's very possible that mortgage rates start to price in beyond end of year expectations. While mortgage rates are 75bp lower over the past 3 months, existing home sales (demand) has not budged. In fact, the most recent print was down -2.5% (more than street forecasts of -1.3%). Borrowers remain less reactive to the move in rates, with just over 60% of borrowers content with a 4% or lower mortgage rate. Interestingly, investors are starting to focus more on convexity risk in jumbo collateral as 6% coupons start to shift more in-the-money. This could begin to pressure premium price spreads. Non-QM should offer a convexity advantage with a heavier investor share of loans and prepayment penalties.

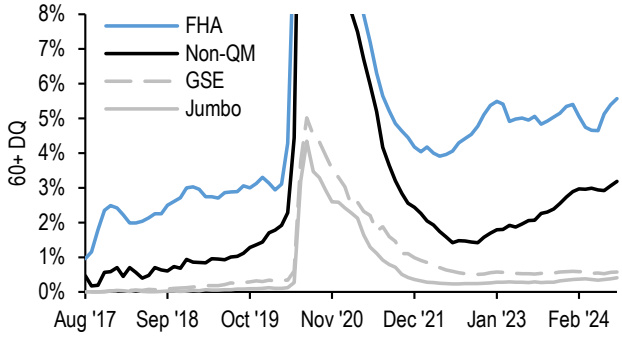
Our Securitized Products Real Estate and Consumer (SPREC) conference on Friday, September 13th, was well received by investors with nearly 300 participants. See **here** for a full recap.

DQs march higher in non-QM

Delinquencies have continued to rise in the non-QM segment. FHA delinquencies are also higher, while GSE and jumbo borrowers have not experienced any significant increase in delinquency rates. This is clear in Figure 72, which shows the share of loans that are 60+ days delinquent for those originated since 2017. The rapid increase in delinquencies has been driven by more recent vintages. Non-QM loans originated since Q2 2022 have particularly underperformed (Figure 73). It is challenging to attribute this higher level of delinquencies to any specific factor. Borrowers from these periods have slightly lower FICO scores and higher LTV ratios, but these differences are not substantial enough to explain the larger increases in delinquencies. However, we also observe a similar trend in other areas of consumer lending, such as subprime auto.

Figure 72: Delinquencies have continued to increase in non-QM

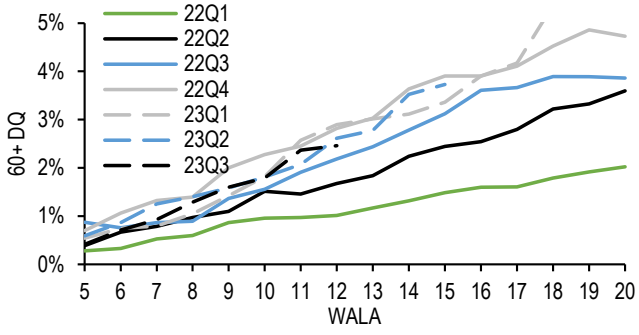
60+ DQ (%) for loans originated since 2017



Source: J.P. Morgan, CoreLogic, Freddie Mac, FHA

Figure 73: Non-QM loans originated since Q2 2022 have particularly underperformed

Non-QM 60+ DQ (%) by origination quarter/year and WALA



Source: J.P. Morgan, CoreLogic

Delinquencies have increased across all documentation programs, but bank statement and 'other' borrowers have more significantly underperformed (Figure 74). In 2022 vintage

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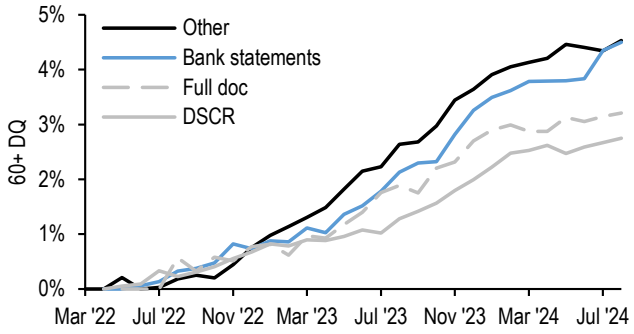
loans, bank statement and 'other' cohorts have 4.5% of loans that are 60+ days delinquent. Meanwhile, 60+ day delinquencies in full documentation and DSCR cohorts stand at 3.2% and 2.7%, respectively, as of the latest remittance. In the 'other' category, loans underwritten using P&L statements and written verification of employment (WVOE) represent the two largest cohorts. A significant share of loans have no documentation type reported, and these have relatively high DQs as well. Delinquencies are highest for P&L statement and foreign borrowers, reaching almost 7% in August.

Figure 74: Delinquencies have increased across all documentation programs, but bank statement and 'other' borrowers have more significantly underperformed

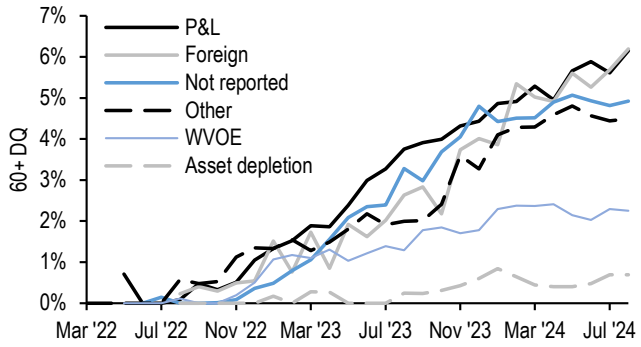
60+ DQ (%) for 2022 vintage non-QM broken out by doc type



Source: J.P. Morgan, CoreLogic

Figure 75: Delinquencies are highest for P&L statement and foreign borrowers within the 'other' category

60+ DQ (%) for 2022 vintage non-QM broken out by 'other' doc type

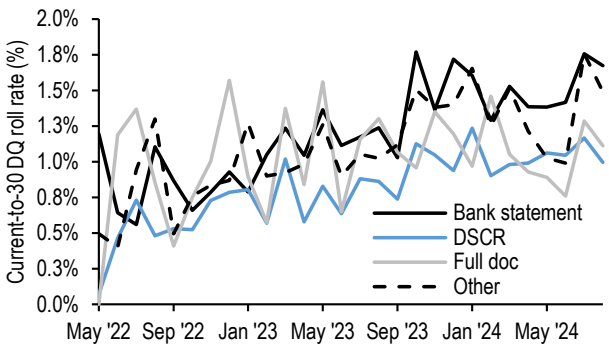


Source: J.P. Morgan, CoreLogic

Current-to-30 day delinquency rolls have gradually increased across all documentation programs. Approximately 1.5% of bank statement and 'other' loans are becoming delinquent each month (Figure 76). A smaller share of DSCR and full documentation loans are becoming delinquent. However, there is no significant difference in later-stage roll rates among different documentation types. The 30-to-60-day delinquency roll rates are consistently around 60% across the board (Figure 77). Cure rates have also stabilized at approximately 20% (Figure 78). Interestingly, despite strong HPA, the delinquency-to-payoff roll rates have not changed. About 2-3% of borrowers who are 90+ days delinquent pay off their loans each month (Figure 79), likely by selling their properties. We also note that aside from higher current-to-30-day rolls, other delinquency roll rates, such as cures, remain largely unchanged across vintages.

Figure 76: Bank statement and 'other' doc type borrowers have higher current-to-30 roll rates

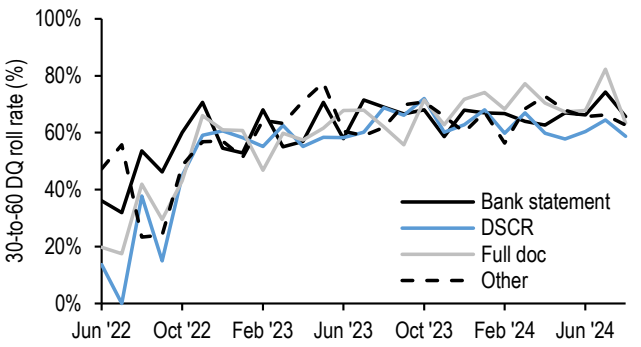
2022 vintage current-to-30 roll rate (%)



Source: J.P. Morgan, CoreLogic

Figure 77: The 30-to-60-day delinquency roll rates are consistently around 60%

2022 vintage 30-to-60 roll rate (%)



Source: J.P. Morgan, CoreLogic

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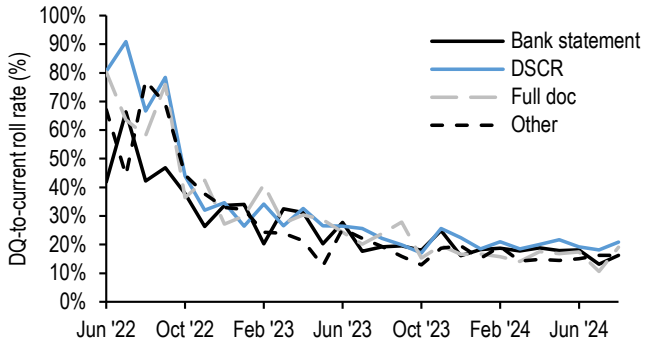
Figure 78: Cure rates have also stabilized at approximately 20%

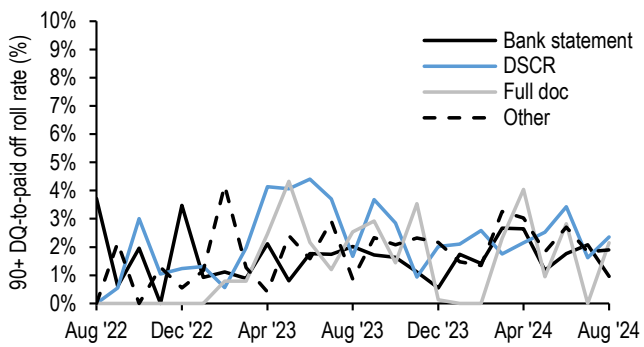
2022 vintage DQ-to-current roll rate



Source: J.P. Morgan, CoreLogic

Figure 79: About 2-3% of borrowers who are 90+ days delinquent pay off their loans each month, likely by selling their properties

2022 vintage 90+ DQ-to-paid off roll rate



Source: J.P. Morgan, CoreLogic

Despite rising delinquencies, investors are not significantly concerned about losses. Servicers have not been offering loan modifications. Roughly 20% of loans that are 90+ days delinquent have been transitioning to foreclosure each month. Even if liquidations increase, the current LTVs of delinquent borrowers are below 70%, and the housing market remains supported by a lack of housing supply. Loss severities on the few loans that have been liquidated have been under 2%. However, investors in pro-rata structures should be mindful of rising delinquencies potentially hitting the delinquency triggers. Most deals fail the trigger when the six-month average of 60+ day delinquencies and past 12 months of modifications exceed 10-15% initially. The failure of the trigger results in the senior stack shifting from pro-rata to sequential. At current delinquency levels, we do not anticipate many deals breaching the trigger. In our analysis, only CSMC 22-NQM6 is close to failing the DQ test. However, if delinquencies continue to rise at the current pace, AA and A classes could face extension risk in certain deals.

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CMBS Weekly

At long last

- At long last, the FOMC cut the funds target by 50bp to 4.75-5% in response to moderating inflation but weakening labor markets. It undoubtedly was a welcome move to CRE/CMBS market participants although this cut alone isn't too meaningful for the market in our view. The cumulative impact of cuts to terminal and how inflation/labor data evolves over the next several quarters will be more impactful on the forward path for CRE/CMBS. CRE property prices seem to be bottoming, REIT stocks have rallied, and CMBS has rebounded well ahead of this cut in anticipation of the pause in rate hikes and an eventual cut
- For now, spreads can grind tighter on sentiment, and the spread curve can bullishly flatten. Looking at the on-the-run conduit CMBS capital stack, we continue to believe the best relative value can be found in upper IG mezz, and particularly in the AS bonds
- Our securitized products research team in partnership with the businesses hosted our inaugural (and in-person only) Securitized Products Real Estate and Consumer (SPREC) conference on Friday, September 13th. We provide some high level takeaways from our CMBS investor panel
- Over the past couple of years, concern over potential extension risk for conduit CMBS bonds has grown due to increased rate volatility and fundamental challenges in specific sectors, namely the office sector. To further understand this risk, particularly in which part of the capital stack it is most prevalent, we reviewed the timing of when 2010-2013 vintage conduit CMBS bonds have paid off
- To gauge the prevalence of bonds paying off later than initially expected, we calculated the empirical WAL of each 2010-2013 vintage conduit CMBS bond that has *fully paid down* and compared it to its original WAL at issuance. For all outstanding bonds, we calculated WAL under five different scenarios. It becomes apparent that WAL drift increases as you go down the capital stack, particularly at single-As and below

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Figure 80: CMBS spread summary

	This Week	Change		
		1w	1m	YTD
Conduit New Issue (UST)				
5yr Super-Senior LCF AAA	108	-6	N/A	N/A
10yr Super-Senior LCF AAA	90	-4	-12	-35
10yr AS	142	-4	-13	-53
10yr AA	169	-5	-16	-64
10yr A	212	-7	-13	-153
Pre-COVID BBB-	519	-25	-51	-324
10yr BBB-	539	-25	-41	-339
10yr XA	128	-9	-12	-97
Agency CMBS (UST)				
Freddie K A1 (10yr)	48	-1	-2	-10
Freddie K A2 (10yr)	48	-3	-4	-12
Freddie K Floater (10yr)	61	0	-1	-9
Freddie K X1	135	-5	-5	-45
Freddie K X3	345	-5	-5	-80
FRESB A5H	115	0	0	-10
FRESB A10F	79	-2	-2	-16
FNA DUS 10/9.5 TBA	54	-1	-3	-13
FNA DUS SARM	64	0	-1	-9
GNR Project Loan (3.5yr)	125	-5	-5	-30

Source: J.P. Morgan

Figure 81: Summary of CMBS issuance and dealer holdings

YTD Issuance ($bn)	2024	2023	% Diff.
Conduit	21.7	14.0	55%
SASB	45.3	11.5	295%
CRE CLO	6.4	4.5	43%
Other	0.3	1.0	-73%
Total Private Label	**73.6**	**30.9**	**138%**
Freddie K	19.4	21.6	-11%
Freddie Multi PC	9.7	10.4	-7%
FRESB	1.0	1.4	-27%
Fannie MBS	27.8	35.5	-22%
GNR PL	6.6	6.9	-4%
Freddie Other	2.4	1.5	55%
Agency CMBS	**66.9**	**77.4**	**-14%**
Total CMBS	**140.5**	**108.3**	**30%**

YTD Issuance ($bn)	2024	2023	% Diff.
Private Label Fixed	33.2	22.2	49%
Private Label Floating	40.5	9.0	350%
Agency Fixed	63.2	70.1	-10%
Agency Floating	3.9	9.8	-60%

Dealer Holdings ($bn)	9/11/24	9/4/24	8/14/24
Private Label	4.91	4.88	5.21
Agency CMBS	12.93	12.84	13.41

Source: J.P. Morgan, Commercial Mortgage Alert, Federal Reserve Bank of New York, Fannie DUS Disclose
Note: Dealer holdings reported with a 1-week lag

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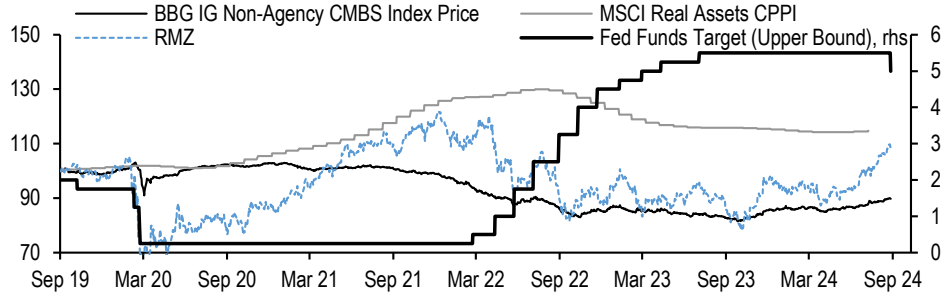
Weekly market snapshot

Market commentary - at long last

At long last, the FOMC cut the funds target by 50bp to 4.75-5% as our economists expected in response to moderating inflation but weakening labor markets. It undoubtedly was a welcome move to CRE/CMBS market participants although this cut alone isn't too meaningful for the market in our view. The cumulative impact of cuts to terminal and how inflation/labor data evolves over the next several quarters will be more impactful on the forward path for CRE/CMBS. CRE property prices seem to be bottoming, REIT stocks have rallied, and CMBS has rebounded well ahead of this cut in anticipation of the pause in rate hikes and an eventual cut (Figure 82).

Figure 82: CRE debt and equity started to rebound well ahead of this past week's rate cut. The cumulative impact of cuts and how inflation/labor data evolves over the next several quarters will be more impactful on the forward path of CRE/CMBS

IG CMBS price, CRE property price, and REIT equity price levels versus Fed Funds Target (upper bound) (%)



Note: BBG IG Non-Agency CMBS Index Price, MSCI Real Assets CPPI, RMZ all indexed to 100 as of September 2019. RMZ drawdown in 2020 is cut off to better visualize recent trends.
Source: J.P. Morgan, MSCI Real Assets, Bloomberg Finance L.P.

For now, spreads can grind tighter on sentiment, and the spread curve can bullishly flatten. Looking at the on-the-run conduit CMBS capital stack, we continue to believe the best relative value can be found in upper IG mezz, and particularly in the AS bonds. Figure 83 shows CMBS spreads as of Wednesday's close (spreads are flat to tighter post-FOMC) and their changes versus comparable spread products. The spread pair differences are levels at all periods. We also include 10yr averages and the current levels versus 10yr averages. This shows that AS and BBB-s stand out as bonds that remain wide to their 10yr averages. Further, they remain wide to their spread comps versus their 10yr average relationships. As we discuss below, the historical evidence of paydown timing for AS bonds for the earliest 2.0 vintages show there is minimal extension risk. From this perspective, we think these remain much too wide to LCF AAAs. BBB-s have been a great momentum trade this year and while higher WACs/debt yields on newer issue provide some comfort around default/extensions risks, these bonds have demonstrated that they, not only trade more like High Yield, but can trade very idiosyncratically. Class sizes are very small and while they can continue to tighten, they will be more susceptible to macro vol events.

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Figure 83: We continue to believe the best relative value can be found in upper IG mezz, and particularly in the AS bonds

Spreads to Treasuries (bp)

Spreads / Spread Pairs	9/18/2024	w/w chg / wk ago	m/m chg / mo ago	YTD chg / '23 YE	10yr Average	Diff. vs. 10yr Avg.
10yr Conduit CMBS LCF AAA	93	-2	-9	-30	101	-8
7-10yr Single-A Corporates (JULI ex-EM)	96	-5	-3	-4	112	-15
LCF AAA/Single-A Corp Diff.	-3	-7	3	19	-11	8
10yr Conduit CMBS AS	146	-2	-14	-47	137	**9**
AS/Single-A Corp Diff.	50	46	61	89	25	**25**
AS/LCF AAA Diff.	53	53	58	70	36	**17**
10yr Conduit CMBS AA	172	-4	-16	-57	173	-1
AA/Single-A Corp Diff.	76	74	89	127	61	15
AA/LCF AAA Diff.	79	81	86	108	72	7
10yr Conduit CMBS A	216	-4	-14	-145	249	-33
A/BBB REIT Diff.	76	73	88	209	75	1
A/LCF AAA Diff.	123	125	128	240	149	-26
Conduit CMBS BBB-*	525	-21	-70	-297	488	**37**
BBB-/CRE REITs Diff.	166	145	209	369	4	**162**
BBB-/LCF AAA Diff.	432	451	493	718	388	**44**
10yr Freddie K A2	51	0	-2	-9	55	-4
7-10yr AA Corporates (JULI ex-EM)	63	-6	-2	9	77	-14
Production Coupon Mortage Tsy ZV	87	5	-17	-18	81	6
Production Coupon Mortgage Tsy OAS	12	4	-1	-17	21	-9
K A2/AA Corp Diff.	-12	-18	-12	0	-22	10
K A2/PC Mtg ZV Diff.	-36	-31	-51	-40	-26	-10
K A2/PC Mtg OAS Diff.	39	43	40	35	34	5

Source: J.P. Morgan

Our securitized products research team in partnership with the businesses hosted our inaugural (and in-person only) Securitized Products Real Estate and Consumer (SPREC) conference on Friday, September 13th. I moderated a CMBS investor panel of real estate credit experts and here are some high-level takeaways.

CRE fundamentals. CRE property prices have bottomed or are close to bottoming for the most part with rate cuts ahead. Rent growth has held up for most of the major property sectors. Office remains a secular demand problem and credit issues here will take years to play out. But even for office, there are winners and losers. Green shoots are appearing in submarkets like the Manhattan Grand Central corridor, but areas are like downtown LA are still deeply challenged.

Multifamily will be on better footing in the coming quarters as construction deliveries are peaking and are set to decline rapidly. Meanwhile demand is likely to remain firm given housing affordability challenges.

Data centers are a fast-emerging sector with favorable near-term fundamentals given infrastructure-related constraints (power/cooling) that will limit construction supply relative to rapidly growing demand. Panelists favor debt backed by data centers leased to hyperscalers in primary markets. At least one panelist was cognizant of obsolescence risks for older stock that back longer duration debt given the exponential growth in the tech and costly buildouts.

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CMBS credit fundamentals. Panelists agreed that the relatively benign macroeconomic/rates setup is allowing the CMBS credit cycle to be a slow burn. Lacking a proper recession that causes significant cashflow impairment to CRE (other than office), the market continues to have incentive to modify/extend loans backed by assets that are not suffering from fundamental problems, delaying ultimate defaults and foreclosure liquidations. CRE CLOs have been one of the more stressed CMBS sectors, but the panelists viewed issues in this sector as largely a borrower equity impairment issue rather than a debt impairment problem.

The path forward for CRE financing. CMBS issuance has had a resurgence this year with year-to-date issuance up ~250%, led by large private equity-backed single asset/borrower refinancing deals. Benign macroeconomic conditions combined with lower rates ('soft landing') should benefit CMBS issuance going forward as acquisition financing makes a comeback in addition to refinancing deals. Regional banks remaining backfooted on new CRE lending also presents an opportunity for non-bank lenders/private credit. CMBS and non-bank lenders/private credit can grab a larger slice of the CRE financing pie over the coming years.

Underwriting trends. The new issue market slowed down into QT/Fed hikes but didn't experience a hard reset like it did in the aftermath of the GFC. Coming out of the GFC, the new issue machine put its best foot forward. That is, arguably, not what happened this time as a relatively slow mark-to-market of cap rates has generated new issue deals that have been met with some suspicion on quality. One panelist cautioned for investor vigilance on new issue underwriting and even among super senior buyers who drive a lot of deal execution.

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Ratings Tracker

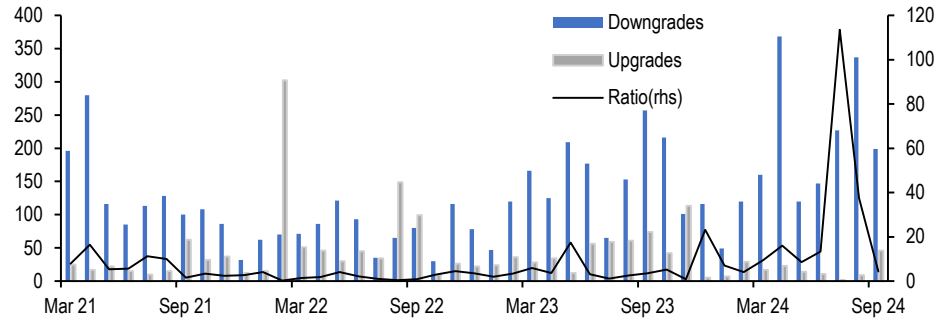
Figure 84: Summary of deals with ratings action

Summary of CMBS deals with ratings actions (upgrades and downgrades), September 13, 2024 to September 19, 2024

Deal Name	Deal Type	CMBX	Upgrade (+) / Downgrade (-)	# of Bonds w/ Ratings Changes	Senior Most Bond w/ Ratings Changes	Notches	Rating Agency
BANK 2018-BN13	Conduit	12	-	2	AA+	1-3	S&P
BANK 2019-BN20	Conduit	N/A	-	5	BBB	2-3	Fitch
BMARK 2019-B11	Conduit	13	-	9	AL	1-6	DBRS Morningstar
COMM 2014-UBS6	Conduit	8	-	5	BB	3-6	Fitch
COMM 2015-CR26	Conduit	9	-	5	AAL	1-3	DBRS Morningstar
COMM 2015-DC1	Conduit	N/A	-	7	AA-	3-4	Fitch
CSAIL 2019-C17	Conduit	N/A	-	5	BBB+	1-2	KBRA
DBJPM 2016-C1	Conduit	N/A	-	7	AAL	3-8	DBRS Morningstar
DBJPM 2017-C6	Conduit	11	-	4	BBB	1-2	DBRS Morningstar
FREMF 2019-K99	Agency	N/A	+	2	AA-	1	KBRA
GSCG 2019-600C	SASB	N/A	-	5	BB+	7-11	S&P
GSMS 2018-TWR	SASB	N/A	-	6	A	1-6	S&P
JPMBB 2014-C23	Conduit	8	-	5	BBB-	2-4	KBRA
JPMCC 2016-JP3	Conduit	N/A	-	5	AA-	2	Fitch
MSBAM 2012-C5	Conduit	6	-	5	Ba2	1-2	Moody's
MSC 2018-L1	Conduit	N/A	-	3	BB+	2-3	Fitch
NCMS 2017-75B	SASB	N/A	-	11	AA-	2-3	S&P
WFCM 2015-NXS3	Conduit	9	+	3	AA-	1	KBRA
WFCM 2016-LC24	Conduit	10	-	5	BBB-	6-7	Fitch

Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 85: CMBS ratings downgrades to upgrades ratio since March 2021



Source: J.P. Morgan, Bloomberg Finance L.P.

Primary Markets

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Figure 86: Summary of recently priced deals

Summary of CMBS deals that have priced between September 13, 2024 to September 19, 2024

Deal Name	Pricing Date	Deal Type	Deal Size ($mn)	Pricing Spread
BBCMS 2024-5C29	9/16/2024	Conduit CMBS	$1,065	A2: J+108 A3: J+110 AS: J+152 B: J+175 C: J+210
BX 2024-AIR2	9/16/2024	Fixed-rate SASB	$307	A: J+150 B: J+175 C: J+205 D: J+280 E: J+395
BSPRT 2024-FL11	9/16/2024	CRE CLO	$924	A: TSOFR+170 AS: TSOFR+215 B: TSOFR+235 C: TSOFR+270 D: TSOFR+400
FRETE 2024-ML24	9/16/2024	Freddie tax-exempt	$217	AUS: J+0
LEX 2024-BBG	9/17/2024	Fixed-rate SASB	$400	A: J+150 HRR: J+465

Source: J.P. Morgan, Bloomberg Finance L.P.

WALking the line

Over the past couple of years, concern over potential extension risk for conduit CMBS bonds has grown due to increased rate volatility and fundamental challenges in specific sectors, namely the office sector. To further understand this risk, particularly in which part of the capital stack it is most prevalent, we reviewed the timing of when 2010-2013 vintage conduit CMBS bonds have paid off. We focused our analysis on bonds originally rated LCF AAA to BBB-. In total, our analysis included 490 bonds with an original notional value of approximately $60.2 billion (Figure 87). As of August 2024, 361 of these bonds have been fully paid down, but 129 remain outstanding. Only one LCF AAA and 8 AM/AS bonds are outstanding today. However, as we move down the capital stack, the count of outstanding bonds increases. Currently, 66, or 56%, of 2010-2013 vintage conduit CMBS bonds originally rated either BBB+, BBB, or BBB- are still outstanding.

Figure 87: About 56% of 2010-2013 conduit CMBS bonds originally rated either BBB+, BBB, BBB- are still outstanding

Summary of 2010-2013 vintage conduit CMBS LCF AAA through BBB- bonds paydown status

	Total Bond Count	Count of Outstanding Bonds	% of Bonds Outstanding	Count of Paid Down Bonds	% of Bonds Paid Down	Original Bal. ($bn)	Outstanding Bal. ($bn)	Factor
LCF AAA	97	1	1.0%	96	99.0%	36.70	0.02	0.00
AM / AS	76	8	10.5%	68	89.5%	7.53	0.39	0.05
AA / AA-	96	20	20.8%	76	79.2%	5.96	1.13	0.19
A+ / A / A-	99	32	32.3%	67	67.7%	4.38	1.21	0.28
BBB+ / BBB / BBB-	122	68	55.7%	54	44.3%	5.62	2.64	0.47
Total	**490**	**129**	**26.3%**	**361**	**73.7%**	**60.18**	**5.38**	**0.09**

Source: : J.P. Morgan, Trepp, Bloomberg Finance L.P.

To gauge the prevalence of bonds paying off later than initially expected, we calculated the empirical WAL of each 2010-2013 vintage conduit CMBS bond that has *fully paid down* and compared it to its original WAL at issuance. Our methodology for calculating empirical WALs involved finding the weighted average of all principal paydowns and writedowns over the bond's life. The difference between a bond's original WAL and its empirical WAL

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is what we describe as "WAL drift." As Figure 88 highlights, the magnitude and direction of WAL drift vary greatly by original rating. 2010-2013 vintage LCF AAAs were, on average, about 4 months shorter than the average original WAL, and over 95% of LCF AAAs were paid off in a shorter period than their original WALs indicated. In fact, the LCF AAA of the **JPMCC 2011-C5** deal had an empirical WAL more than 2 years less than its original WAL at issuance, largely due to two loans, *Orland Park Place* and *Bird Creek Crossing*, prepaying 5 years early. As for AM/AS bonds, 99% of them saw WALs extend by no more than 3 months relative to their original WALs. However, as we move down the capital stack, particularly for originally A-rated and below bonds, we see the level of prepayments decline and empirical WALs extending more substantially beyond their original WALs. This dynamic is most apparent in bonds rated BBB+, BBB, or BBB-. On average, WAL drift for these bonds is about +3 months, and about 9% of these bonds have seen WAL extension of at least a year.

Figure 88: Positive WAL drfit increases as we go down the capital stack for bonds that have fully paid down

Original WAL, empirical WAL, and summary of WAL drift distribution of fully paid down 2010-2013 vintage conduit CMBS bonds split by original rating (years)

						WAL drift distribution						
	Bond Count	Orig Bal. ($bn)	Avg. Orig. WAL	Avg. Empirical WAL	Avg. Empirical WAL drift	Prepaid	+0-3 mo.	+3-6 mo.	+6-12 mo.	+12-18 mo.	+18-24 mo.	Greater than +24 mo.
LCF AAA	96	36.20	9.77	9.43	-0.34	95.4%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%
AM / AS	68	6.71	9.92	9.87	-0.05	72.5%	26.9%	0.0%	0.6%	0.0%	0.0%	0.0%
AA / AA-	76	4.43	9.91	9.93	0.02	54.0%	38.2%	5.2%	1.7%	0.8%	0.0%	0.0%
A+ / A / A-	67	2.90	9.90	10.03	0.13	42.4%	38.9%	10.3%	3.1%	5.2%	0.0%	0.0%
BBB+ / BBB / BBB-	54	2.41	9.88	10.11	0.22	28.3%	45.9%	9.0%	7.1%	7.8%	1.3%	0.6%

Source: J.P. Morgan, Trepp, Bloomberg Finance L.P.

As mentioned earlier, there are still about 129 outstanding 2010-2013 vintage conduit CMBS bonds that were originally rated LCF AAA through BBB-. These bonds represent 58 total deals, with 32 of the deals being from the 2013 vintage. A review of the underlying loans for each of these deals shows that the outstanding loan count per deal is low, ranging between 1 and 11. While the loan count might be low, the average loan balance is relatively high at $58mn. To put that in context, the average loan balance for all 2010-2013 conduit CMBS loans was just $23.4mn. Additionally, the underlying properties backing these loans are largely concentrated in the retail sector, specifically regional malls, and the office sector, at 60% and 26%, respectively. The underlying credit for these deals, which have now been outstanding for over 10 years, highlights the adverse selection that takes place in the conduit CMBS space as deals pay down. It appears that the longer conduit CMBS deals stay outstanding, the more likely they become concentrated with relatively large loans backed by fundamentally challenged properties that are difficult to refinance.

For the outstanding bonds that have experienced some principal paydowns, we've calculated empirical WALs to date and WAL drift to date, which are highlighted in Figure 89. Across the capital stack, we see that the average WAL drift to date is at least 6 months, except for the LCF AAA bond. The only outstanding 2010-2013 conduit CMBS LCF AAA is from the **COMM 2012-CR4** deal, but 87% of its original balance had already paid down by the time the bond was outstanding for 10 years, helping to limit its WAL drift. However, the empirical WAL to date figure we've calculated for these bonds doesn't fully capture how long it will take for them pay down entirely. To better estimate what the empirical WAL for these bonds may end up being, we ran each bond through four different scenarios which we describe below. We then used the forecasted principal paydowns and writedowns generated from each scenario run to compute a forecasted WAL.

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Scenario Descriptions

- **Zero**: Run each loan to its current balloon maturity date, which may be its original maturity date or its modified extended date or the next month for seriously delinquent or FC/REO loans.
- **1yr balloon extension**: Extend each loan's balloon maturity date by 1yr.
- **2yr balloon extension**: Extend each loan's balloon maturity date by 2yr.
- **3yr balloon extension**: Extend each loan's balloon maturity date by 3yr.
- **Debt yield based scenario**: For already modified extended loans with current debt yields less than 15%, balloon liquidate at 50% severity with a 2yr liquidation lag. For 90+ delinquent and FC/REO loans, balloon liquidate at 50% severity with a 3yr liquidation lag. For non-modified loans with debt yields less than 12%, balloon extend 2yr. All other loans pay off at their current maturity dates.

Figure 89: We calculated WAL for all outstanding bonds under five different scenarios

Original WAL, empirical WAL, and average forecasted WAL of outstanding 2010-2013 vintage conduit CMBS bonds split by original rating (years)

								Forecasted WAL (years)				
	Bond Count	Orig Bal ($mn)	Outstanding Bal ($mn)	Factor	Avg. Orig. WAL*	Avg. Empirical WAL to date*	Avg. Empirical WAL drift*	Zero	1yr Ext.	2yr Ext.	3yr Ext.	DY based
LCF AAA	1	499	16	0.03	9.88	9.76	-0.12	9.84	9.87	9.90	9.94	9.90
AM / AS	8	812	386	0.48	9.86	10.35	0.49	11.01	11.48	11.88	12.23	11.53
AA / AA-	20	1,524	1,131	0.74	9.94	10.65	0.71	11.60	12.34	13.04	13.73	12.67
A+ / A / A-	32	1,478	1,207	0.82	9.94	10.57	0.63	11.91	12.73	13.48	14.20	13.41
BBB+ / BBB / BBB-	68	3,219	2,639	0.82	9.97	10.79	0.81	12.16	12.97	13.74	14.49	13.75

Source: Source: J.P. Morgan, Trepp, Bloomberg Finance L.P., Intex
* Only includes bonds that have experienced some principal paydown. Bonds that received no principal paydowns (factor = 1) are excluded.

Focusing on our zero scenario, we see WAL drift increase as we move down the capital stack. For originally AA-rated or below bonds, average WAL drift reaches at least 1.7 years (Figure 90). Under this scenario, we estimate that over 43% of the outstanding originally AA-rated or below bonds will experience WAL drift of at least 18 months. Our debt yield-based scenario is even more punitive to these bonds, particularly for bonds originally A-rated or below (Figure 91). This scenario estimates that bonds originally A-rated will experience WAL drift of about 3.5 years, and that 34% of these bonds will experience WAL drift greater than 4 years. About half of the outstanding BBB-rated bonds will experience WAL drift of at least 4 years under this debt yield-based scenario as well.

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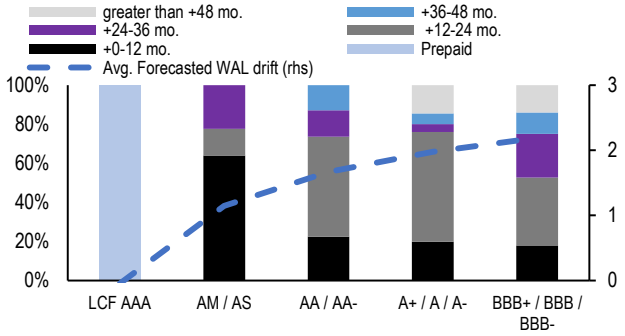
Figure 90: 43% of originally AA-rated or below will experience WAL drift of at least +18 months in our zero scenario

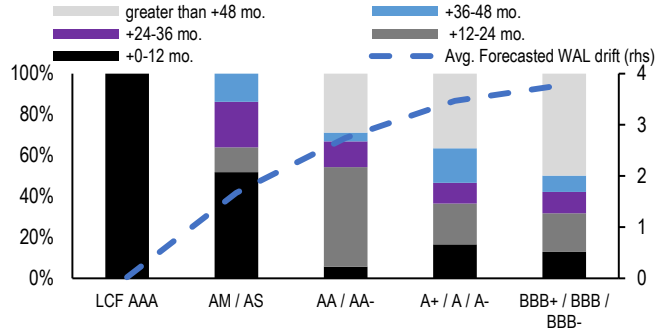
Forecasted WAL drift distribution under our zero scenario (lhs) and average forecasted WAL drift (rhs)



Source: J.P. Morgan, Trepp, Bloomberg Finance L.P., Intex

Figure 91: In our debt yield based scenario, positive WAL drift is more severe, particularly for lower IG mezz

Forecasted WAL drift distribution under our debt yield based scenario (lhs) and average forecasted WAL drift (rhs)



Source: J.P. Morgan, Trepp, Bloomberg Finance L.P., Intex

This analysis further emphasizes that the higher a bond is on the capital stack, the better protected it is from extension risk as we had alluded to in our refi success rate analyses throughout last year (see here). Reviewing the empirical data for LCF AAAs and AM/AS bonds highlights that these bonds have not seen many extensions and are more likely to experience prepayments. However, extension risk should be a greater concern as you go down the conduit CMBS capital stack, particularly A-rated bonds or lower. A significant portion of bonds originally rated A or below from the 2010-2013 vintage are still outstanding. An estimate of the WAL for this population of bonds can be achieved by taking a weighted average of the empirical data from bonds that have paid down and the data from our "Zero" scenario run. For A-rated bonds, we get a "blended" WAL of about 10.7 years, and for BBB bonds, we get 11.3 years, both greater than their original WALs at issuance. This highlights that this portion of the capital stack has shown a propensity to extend in the past, and it is something investors should be aware of when making investment decisions.

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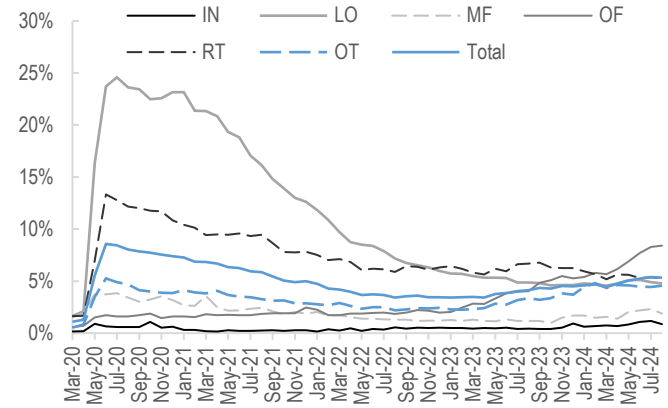
Weekly Tracker

Figure 92: Delinquency rate

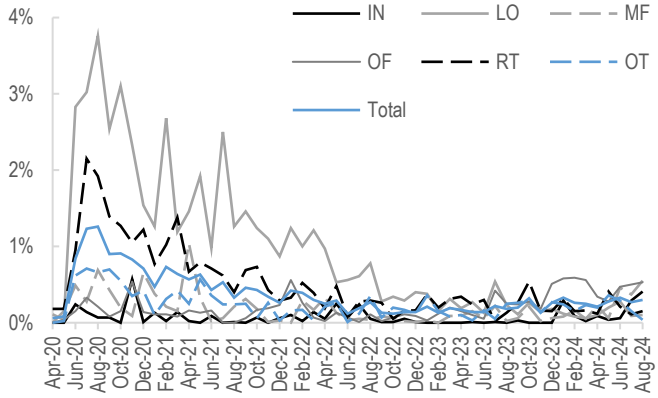
Conduit CMBS 30-day+ delinquency rate including FC/REO and NP matured (%)



Source: J.P. Morgan, Trepp

Figure 93: Delinquency cure rates

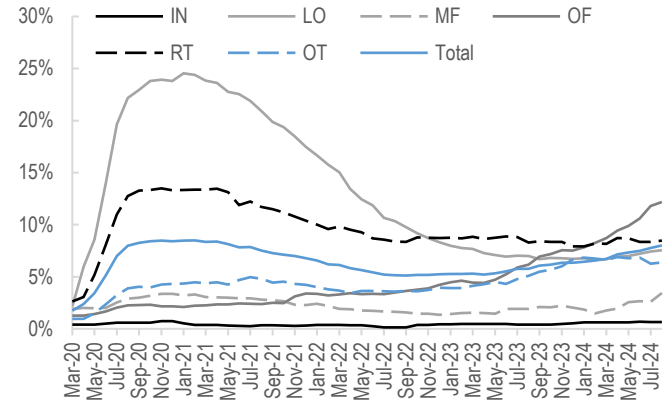
Conduit CMBS 30 day+ delinquency to performing transition rates (%)



Source: J.P. Morgan, Trepp

Figure 94: Specially serviced rate

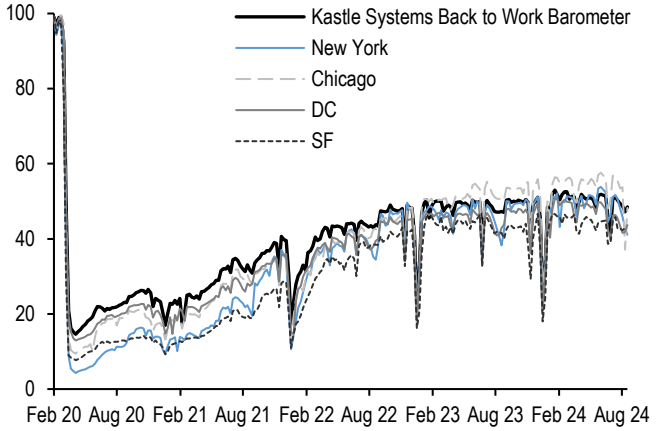
Conduit CMBS percentage of loans in special servicing (%)



Source: J.P. Morgan, Trepp

Figure 95: Office RTTO indexed to pre-pandemic levels

Kastle System Back to Work Barometer, weekly



Source: Kastle Systems, Bloomberg Finance L.P.

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Cross Sector Spreads

Product	Tranche / Bucket	Current 9/19/24	Changes -1w	-1m	-1y	5yr Trailing Min	Max	Percentile Rank 3yr	5yr	7yr
Conduit CMBS	3yr AAA	84	-4	-6	-51	26	463	17.1%	42.7%	59.2%
Treasury Spread (bp)	5yr AAA	130	-8	-10	-56	47	461	37.0%	57.4%	69.8%
	5yr LCF AAA	108	-6	-6	N/A	96	120	53.0%	52.0%	52.0%
	10yr LCF AAA	90	-4	-12	-50	59	340	10.4%	33.6%	45.2%
	10yr AS	142	-4	-13	-70	74	440	25.9%	48.8%	63.0%
	10yr AA	169	-5	-16	-83	90	565	26.0%	47.0%	62.2%
	10yr A	212	-7	-13	-210	123	756	20.5%	38.1%	54.1%
	10yr BBB-	539	-25	-41	-391	263	1354	19.1%	38.9%	46.8%
	XA	128	-9	-12	-147	90	535	10.6%	26.8%	42.1%
Freddie K	7yr A2	46	-2	6	-17	6	100	54.3%	70.2%	79.3%
Treasury Spread (bp)	10yr A2	47	-4	-5	-24	10	110	48.3%	66.7%	73.9%
	2020 Vintage B	153	2	0	-53	109	441	N/A	N/A	N/A
	2020 Vintage C	173	2	0	-66	158	593	N/A	N/A	N/A
	X1	135	-5	10	-50	50	400	10.6%	25.9%	46.5%
	X3	345	-5	10	-80	225	695	20.5%	34.5%	53.2%
	SOFR Floater (DM)	61	0	14	-14	19	90	49.0%	59.9%	59.9%
FRESB	A5H (5yr Hybrid ARM)	116	0	17	-7	2	131	74.2%	84.3%	88.2%
Treasury Spread (bp)	A10F (10yr Fixed Rate)	78	-3	5	-38	16	126	44.4%	63.5%	72.6%
Fannie DUS	7/6.5 TBA	52	-1	-2	-16	4	100	33.1%	55.8%	63.5%
Treasury Spread (bp)	10/9.5 TBA	53	-2	-4	-21	14	135	47.0%	67.1%	73.4%
	SOFR SARM (DM)	64	0	14	-14	22	95	47.7%	61.7%	62.2%
Fannie ACES	7yr A2	47	-4	4	-21	7	102	50.3%	66.1%	75.8%
Treasury Spread (bp)	10yr A2	50	-3	-4	-23	12	120	51.0%	69.0%	74.8%
GNR Project Loans	3.5yr	123	-7	14	-17	60	169	27.2%	56.9%	69.2%
Treasury Spread (bp)	7.5yr	149	-1	7	-32	69	202	33.8%	58.8%	70.6%
	12yr	141	-5	-9	-49	80	237	20.5%	52.9%	66.4%
Production Coupon	FN/FR 30yr PC (OAS)	12	-1	-4	-36	-35	115	13.4%	38.9%	27.9%
	FN/FR 30yr PC (ZV)	87	-4	-23	-54	-2	173	22.8%	53.0%	62.3%
ABS	3yr AAA Credit Card	47	0	-1	-11	12	207	34.9%	56.1%	68.1%
Treasury Spread (bp)	3yr AAA Prime Auto	68	0	-2	-17	15	207	42.1%	61.4%	72.2%
	3yr BBB Subprime Auto	162	0	-3	-53	72	566	32.0%	48.8%	62.6%
CLO	AAA	126	1	-6	-39	101	408	18.1%	31.8%	42.8%
Discount Margin	BBB	363	1	-6	-81	323	972	16.5%	29.0%	42.7%
	BB	780	-2	-8	-113	693	1,756	26.5%	39.7%	55.6%
JULI (ex-EM)	3-5yr	89	-4	-1	-28	58	407	23.5%	39.5%	41.1%
Treasury Spread (bp)	5-7yr	99	-4	-2	-28	71	372	20.5%	36.8%	29.6%
	7-10yr	112	-5	-3	-35	87	368	16.6%	33.9%	27.0%
	7-10yr A	96	-4	-4	-31	68	316	15.3%	34.7%	30.9%
	7-10yr REITs	128	-5	-1	-45	98	350	18.9%	34.7%	27.8%
High Yield	Domestic HY	354	-15	0	-58	317	1,139	16.6%	9.9%	7.1%
Spread to Worst (bp)	Energy	317	-11	39	-4	234	2,395	26.3%	15.8%	11.3%
Swap Spreads	3yr	6	0	1	-8	-5	24	7.8%	7.8%	7.8%
(bp)	5yr	-1	1	1	-7	-3	15	7.0%	7.0%	7.0%
	10yr	-17	1	-2	-16	-18	11	1.9%	1.9%	1.9%

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Cross Sector Spreads (continued)

Product	Tranche / Bucket	Current 9/19/24	Changes -1w	-1m	-1y	5yr Trailing Min	Max	Percentile Rank 3yr	5yr	7yr
CMBX (bp)	AAA17	80	0	-4	N/A	74	92	36.0%	36.0%	36.0%
	AAA16	76	0	-1	-23	70	119	16.6%	16.6%	16.6%
	AAA15	72	0	-3	-23	60	115	16.7%	16.7%	16.7%
	AAA14	69	0	-2	-22	45	109	30.5%	45.5%	45.5%
	AAA13	65	-1	-1	-21	42	167	36.4%	54.8%	54.8%
	AAA12	62	0	-1	-19	37	162	39.4%	59.0%	65.0%
	AAA11	59	-1	0	-17	32	146	43.9%	63.0%	67.2%
	AAA10	57	-1	1	-16	26	141	48.9%	67.4%	74.6%
	AAA9	51	-2	1	-17	21	127	39.8%	62.1%	71.3%
	AAA8	47	-4	-3	-14	18	117	43.2%	64.1%	74.1%
	AAA7	0	0	0	-50	0	107	13.0%	6.3%	2.9%
	BBB-17	496	3	7	N/A	481	583	36.6%	36.6%	36.6%
	BBB-16	582	2	3	-144	558	879	16.4%	16.4%	16.4%
	BBB-15	604	-1	3	-156	375	922	33.7%	33.7%	33.7%
	BBB-14	759	2	-6	-51	320	985	59.6%	68.3%	68.3%
	BBB-13	912	7	7	-37	339	1,151	72.8%	81.3%	81.3%
	BBB-12	927	-3	-6	-136	309	1,282	58.2%	73.6%	77.6%
	BBB-11	775	2	17	-155	302	1,174	59.7%	71.6%	79.5%
	BBB-10	1,302	5	27	-141	297	1,819	67.0%	80.2%	85.9%
	BBB-9	2,049	19	111	464	301	2,049	100.0%	100.0%	100.0%
CDX (bp)	5yr IG	50	-1	-2	-23	44	152	4.6%	10.7%	8.9%
	5yr HY	317	-11	-12	-127	267	882	7.5%	28.4%	22.9%

Source: J.P. Morgan

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Publication Date	Publication title	
	CMBS Weekly	
9/13/2024	CMBS Weekly: 5yr vs. 10yr LCF AAA relative value and CRE CLO August remit update	
9/6/2024	CMBS Weekly: August 2024 remit review	
8/23/2024	CMBS Weekly: 2023 CMBS financials update - operating expense growth moderates but still running hot	
8/16/2024	CMBS Weekly: Higher office delinquencies in July and more CRE CLO mods and buyouts	
8/2/2024	CMBS Weekly: Multifamily bottoming and lodging humming along	
7/26/2024	CMBS Weekly: Slow and steady is the name of the game	
7/12/2024	CMBS Weekly: June 2024 remit review	
6/28/2024	2024 CMBS Midyear Outlook: At the doorstep of the acceptance phase	
6/14/2024	CMBS Weekly: Has the interest shortfall recovery loophole been fixed?	
6/7/2024	CMBS Weekly: Issuance forecast revision and May 2024 remit update	
5/31/2024	CMBS Weekly: 2024 YTD CMBS underwriting trends	
5/17/2024	CMBS Weekly: FRESB - slow but still attractive	
5/10/2024	CMBS Weekly: Buyouts and mods - a feature, not a bug	
5/3/2024	CMBS Weekly: April 2024 remit review	
4/26/2024	CMBS Weekly: Should we stay another night?	
4/19/2024	CMBS Weekly: Renter nation	
4/12/2024	CMBS Weekly: Now, this is commitment	
4/5/2024	CMBS Weekly: March 2024 remit review - more of the same	
3/22/2024	CMBS Weekly: Freddie Mac Tax-Exempt Loans	
3/15/2024	CMBS Weekly: Tracking NYC return to office with location analytics	
3/8/2024	CMBS Weekly: February 2024 remit review	
3/1/2024	CMBS Weekly: How are CRE CLO managers managing? Part III	
2/23/2024	CMBS Weekly: How are CRE CLO managers managing? Part II	
2/9/2024	CMBS Weekly: How are CRE CLO managers managing? Part I	
2/2/2024	CMBS Weekly: Rude awakening?	
1/26/2024	CMBS Weekly: 5yr XAs can offer upside, updating our cash CMBS indices	
1/19/2024	CMBS Weekly: Cracks in limited segments of multifamily emerging, CMBX 17 initial thoughts	
1/5/2024	CMBS Weekly: December 2023 remit review	
12/15/2023	CMBS Weekly: 2024 CRE outlook - part II	
12/8/2023	CMBS Weekly: 2024 CRE outlook - part I	
	Other periodicals	Frequency
9/19/2024	CMBX Daily Analytics	Daily
9/13/2024	CMBS Weekly Datasheet	Weekly
9/6/2024	CMBS Credit Monthly	Monthly
9/6/2024	Agency CMBS Databook	Monthly
8/7/2024	CRE Observer Chartbook	Quarterly
8/8/2024	Office Market Monitor	Monthly
	Ad-hoc publications of note	
6/28/2024	Credit Watch: A Focus on the Consumer: Spending or Spent?	
6/27/2024	US Credit Research: Data Center Deliberations; Credit Implications of a Growing Mega-Trend	
5/14/2024	1740 Broadway note sold: A post mortem	
5/2/2024	The great debate: Macro and market questions by the dozen	
5/2/2024	Credit Watch: Rate-atouille – what's cooking in credit markets given recent rate moves?	
4/5/2024	Credit Watch: Private Credit Uncovered – uncovering even more	
2/12/2024	CMBS Special Topic: Servicer-Related Risks on the Rise As Market Conditions Remain Challenged	
11/21/2023	Thoughts from the CREFC conference: Hopeful in the absence of new negative catalysts	
11/21/2023	CMBS 2024 Outlook: Hope and dread	
9/15/2023	CMBS Note: 1740 Broadway note sale update	
6/23/2023	2023 CMBS Midyear Outlook: Just Keep Swimming	

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Asset-backed Securities

September 20, 2024

- ABS spreads held firm with heavy supply packed in before, and some selling of short-dated paper after, the Fed's first rate cut of the cycle
- The auto lease ABS segment has seen volumes, return rates, and residual value trends normalizing along with the aggregate leasing industry supply and used car values
- Auto lease ABS continues to offer an attractive spread pickup compared to prime auto loan ABS

ABS spreads holding up to September supply crunch

ABS spreads continue to hold firm under heavy supply for another September week. In the secondary market, there was some selling of short dated ABS after Wednesday's highly anticipated first rate cut of the cycle by the Fed (of 50bp). The inverted yield curve, particularly at the front end, has provided a significant boost to short ABS returns. While some adjustment to yield curve shifts is expected, we do not anticipate significant pull back in demand for ABS as there remains an attractive spread pickup over Treasuries and comparable credits. In addition, as far as an inverted curve typically signals heightened recession risks, high quality ABS has served as a relatively stable flight-to-quality safe haven during periods of broad credit sell-offs.

Figure 96: New issue AAA ~3-year card ABS versus indicative bankcard ABS spreads

Spreads (bp)

	2023							2024								
Issuer	April	May	June	Aug	Sep	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
AMXCA			69		60						48			46		
BACCT			69				70						48			
CHAIT					56			49								
COMET		72														50
DCENT	72		70													
DROCK	85															
FNMNT	130				115							80				
SYNIT				100		110				81				72		
WFCIT									57							
WFNMT		135										87			95	
Bankcard Indicative	69	65	65	52	57	70	56	52	49	48	49	47	48	48	48	47

Note: Spreads to I on new issue; indicative spreads averaged for the month
Source: J.P. Morgan

In the new issue market this week, we are still seeing strong subscription and solid pricing levels across sectors, with compressed spread tiering for sponsor risk. For example, in credit card ABS this week, a new issue printed at I+50bp, versus our benchmark AAA 3-year bankcard ABS steady at +47bp. The same bank sponsor issued back in mid-May 2023 at I+72bp, with a 7bp pickup on benchmark levels at the time. The issuance pace in card ABS this year has lagged the same period last year, $17.1bn versus $18.0bn. The tight spreads and lower rates should make the all-in yields more attractive to issuers, both programmatic and opportunistic, for incremental supply. We think FNMNT, SYNIT, WFCIT and WFNMT offer attractive spread pickup on the top bankcard ABS programs (Figure 96). Credit metrics on those master trusts are in line with overall sector trends with robust excess spread and credit

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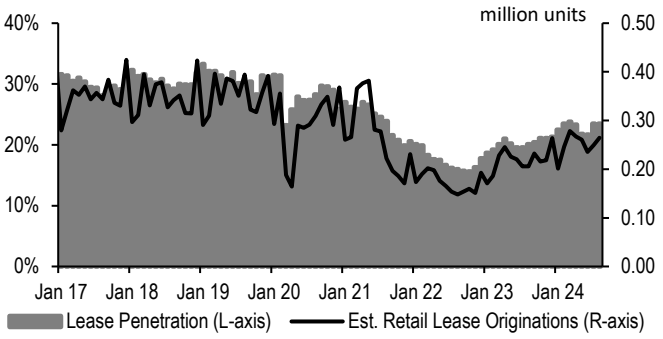
enhancement to protect AAA bondholders (for details please see our Credit Card ABS Monthly Update published earlier this week). Additionally, Canadian banks also offer attractive pickup versus their US peers in card ABS. Back in July, CARD2 (CIBC) and EVGRN (TD) issued AAA 2-year floaters in the primary market, both pricing at SOFR +68bp, a pickup of roughly 10bp over top US bankcard ABS at the time. In our opinion, the concession reflects no credit concern with the Canadian bankcard ABS given their solid trust performance and strong bank sponsor ratings, though some pickup is justified for the liquidity of the smaller 144A Canadian programs.

Auto lease ABS update

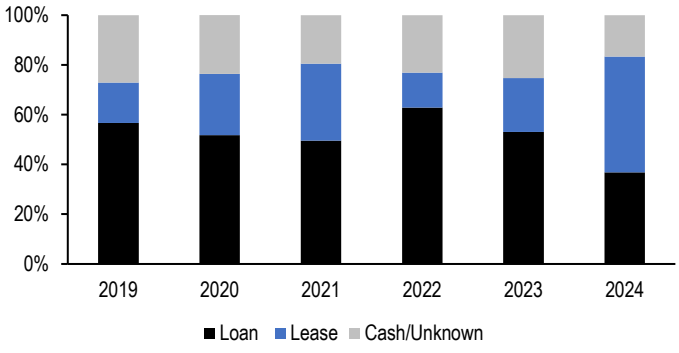
Herein, we review the auto lease ABS segment focusing on supply, collateral quality, performance trends, residual values and bond pricing. First, we start with auto leasing industry trends. With improvements in inventory and supply trends, along with the normalization and stabilization of transaction prices since the pandemic, lease volumes are recovering and have increased further in recent months. The lease penetration rate, which is the percentage of retail sales that were leased as opposed to paid in cash or financed via loans, has risen sequentially, reaching 23.5% in August from 20.2% in 2023 and 17.3% throughout 2022 (Figure 97). For context, this penetration rate averaged 30.6% pre-pandemic (2017 through 2019). According to Experian's "State of the Automotive Finance Market" 2Q24 report, the share of new vehicles leased increased to 25% from 21% in 2Q23 and 19% in 2Q22. Additionally, lease originations remain heavily concentrated in the prime credit segment, with 47% of new leases in 2Q24 classified as super prime (credit score 781-850) and an additional 40% classified as prime (credit score 661-780). The average credit score for new vehicle leases was 751, compared to 745 for loans, up from 748 and 743, respectively, in the prior year. The report also highlighted that electric vehicles (EVs) accounted for about 8.4% of all purchases in 2Q24, with over 47% of these EVs financed by lease, 37% through loans, and the remaining 17% through cash (Figure 98).

Figure 97: Retail lease penetration rate and volumes



Source: Autodata, Cox Automotive, Edmunds, Moodys Analytics and J.P. Morgan estimates

Figure 98: Breakdown of financing type shares for EV purchases



Source: Experian

Next, we analyzed the loan-level lease tapes for public SEC-registered auto lease ABS transactions to determine the share of terminated leases that were returned over time. Since the onset of the pandemic through the first half of 2021, there was a continuous sequential decline in vehicle return rates on terminated leases. This decline reflected supply constraints and an increase in used car prices. This trend of lower returns (and higher retentions) persisted through most of 2022 but has since started to normalize. Given that TESLA ABS deals are not public SEC-registered and do not provide loan-level data, we used Tesla Finance's lease servicing portfolio (aggregate book) as a proxy for EV return rates. We based our analysis on return rates from actual terminated leases for each year (Figure 99). Similar to the

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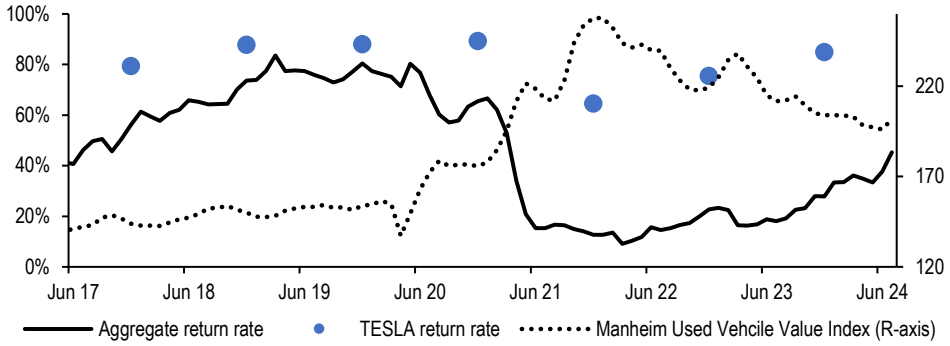
aggregate trend, TESLA return rates declined to 65% in 2022 from 90% in the prior year. However, these rates have since increased more rapidly, reflecting a steeper decline in used car prices for Tesla vehicles compared to the aggregate market. We expect this trend to continue normalizing in line with used vehicle prices, higher incentives on new purchases, and an improving supply and inventory backdrop.

Figure 99: Declining used car values resulting in higher lease return rates recently



Source: J.P. Morgan, ABS-EE via 1010DATA, ABS deal documents, Manheim
Note: Aggregate includes public SEC registered transactions for BMWLT, FORDL, GMALT, NALT, VWALT and WOLS lease ABS transactions; return rate calculated as a % of all leases terminated in the month. For TESLA return rate is from 'Residual Performance Experience of Tesla Finance's Lease Servicing Portfolio in deal documents; Base year January 1997 = 100 for Manheim Used Vehicle Value Index

With the aggregate uptick in lease volumes, year-to-date auto lease ABS supply is also incrementally higher at $25.8 billion, surpassing the full-year issuance of $22.9 billion in 2023 and $16.2 billion in 2022 (Figure 100). This accounts for about 20% of the auto-related ABS issuance this year. Lease ABS are generally issued by captive finance companies of automakers and are backed by leases of luxury vehicles to prime and high-prime consumers. So far this year, Santander Bank NA (SBNA) and Hyundai's HALST have led the issuance tally with $4.0bn each, followed by GM Financial's GMALT at $2.8bn. Notably, Porsche tapped the auto lease ABS market for the first time since 2015 with its PILOT 2024-1 $0.9bn transaction.

Figure 100: Auto lease ABS supply by sponsor and vintage

$million

Issuer	2019	2020	2021	2022	2023	2024 YTD
American Car Center	403	116	240	208		
BMW Vehicle Lease Trust	800		2,500	1,250	2,250	1,300
Ford Credit Auto Lease Trust	2,112	2,458	2,807	1,509	2,651	2,769
GM Financial Automobile Leasing Trust	3,436	4,107	3,967	4,256	3,693	2,801
Hyundai Auto Lease Securitization Trust	1,637	1,923	3,657	3,344	3,324	3,968
Mercedes-Benz Auto Lease Trust	2,397	2,235	2,299		1,034	2,025
Nissan Auto Lease Trust	2,500	2,533	1,000	939	2,046	2,409
Porsche Innovative Lease Owner Trust						850
Santander Retail Auto Lease Trust	3,661	2,303	5,190	1,995		
SBNA Auto Lease Trust					1,000	3,971
Tesla Auto Lease Trust	861	709	1,980		2,526	750
Toyota Lease Owner Trust			2,315	857	2,140	2,600
Volkswagen Auto Lease Trust	1,300	1,000		1,000	1,500	1,500
World Omni Auto Lease	1,613	1,621	816	820	769	875
Total	20,720	19,005	26,770	16,177	22,933	25,817

Source: J.P. Morgan

Auto lease ABS transactions are backed by very high-quality underlying collateral pools (Figure 101). For instance, the FICO score range for pools backing year-to-date auto lease

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ABS transactions ranged from 747 to 798. Porsche's PILOT 24-1 represents the upper tier of that range with a weighted average (wa) FICO score of 790, while HALST 24-B and GMALT 24-2 report (wa) FICO scores of 776 and 781, respectively. The pools for Mercedes and Porsche have average securitization amounts of $55,129 and $68,635, respectively, with the offset being lower residual value shares at 46% and 52% of the securitization value on a discounted basis. The original terms for most leases tracked around 35-38 months, except for MBALT 24-A, which has an original term of 42 months with 10 months of seasoning. AAA target credit enhancements remained largely in line with last year's structures, ranging between 12.5% for MBALT 24-A and 23.0% for FORDL 24-B.

Figure 101: Initial snapshots of 2024 auto lease ABS transactions

Pricing Date	Issuer	Series	Initial Deal Amount ($mn)	Average Securitization Amount ($)	Average Base Residual Value ($)	Residual as % of Initial Securitization Value	Discounted Residual as % of Initial Securitization Value	Discount Rate	Original Term (months)	Age (months)	Weighted Average FICO	AAA Target CE
9/10/2024	Toyota Lease Owner Trust	2024-B	1,400	34,981	23,611	67.5%	53.7%	10.17%	37	10	772	16.50%
8/20/2024	Hyundai Auto Lease Securitization Trust	2024-C	1,359	27,856	20,061	72.0%	56.1%	10.20%	37	8	776	19.50%
8/13/2024	Porsche Innovative Lease Owner Trust	2024-1	850	68,635	45,187	65.8%	51.7%	11.65%	38	13	790	14.25%
7/18/2024	Ford Credit Auto Lease Trust	2024-B	1,306	33,854	26,248	77.5%	62.4%	10.25%	36	10	764	22.95%
7/17/2024	Nissan Auto Lease Trust	2024-B	1,200	29,607	20,952	70.8%	54.7%	10.00%	36	6	761	18.15%
5/17/2024	Mercedes-Benz Auto Lease Trust	2024-A	1,019	55,129	33,773	61.3%	46.3%	11.35%	42	10	787	12.50%
5/14/2024	Hyundai Auto Lease Securitization Trust	2024-B	1,303	25,783	19,204	74.5%	59.4%	10.65%	37	10	776	19.50%
5/14/2024	SBNA Auto Lease Trust	2024-B	1,500	36,393	29,156	80.1%	63.5%	10.90%	38	12	768	21.50%
5/7/2024	GM Financial Automobile Leasing Trust	2024-2	1,300	32,067	24,083	75.1%	61.1%	9.50%	35	9	781	21.65%
4/9/2024	World Omni Auto Lease	2024-A	875	31,266	22,643	72.4%	54.5%	10.80%	38	6	747	18.75%
3/19/2024	Volkswagen	2024-A	1,500	32,769	22,128	67.5%	52.0%	10.70%	39	10	771	15.75%
3/5/2024	Tesla Auto Lease Trust	2024-A	750	37,680	29,341	77.9%	62.4%	10.78%	35	10	769	27.50%
2/21/2024	Toyota Lease Owner Trust	2024-A	1,200	32,432	22,082	68.1%	55.0%	10.50%	37	11	771	16.50%
2/8/2024	GM Financial Automobile Leasing Trust	2024-1	1,615	31,607	24,053	76.1%	62.0%	9.75%	36	10	781	21.65%
2/7/2024	BMW Vehicle Lease Trust	2024-1	1,300	52,511	35,027	66.7%	51.8%	11.40%	36	8	798	15.90%
1/23/2024	SBNA Auto Lease Trust	2024-A	1,708	35,472	28,413	80.1%	64.2%	10.75%	38	13	766	22.75%
1/17/2024	Ford Credit Auto Lease Trust	2024-A	1,625	32,761	26,329	80.4%	64.9%	11.35%	36	12	764	22.95%
1/17/2024	Nissan Auto Lease Trust	2024-A	1,209	31,344	21,215	67.7%	57.0%	7.00%	36	7	767	23.15%
1/17/2024	Hyundai Auto Lease Securitization Trust	2024-A	1,306	26,260	19,034	72.5%	57.3%	10.50%	37	9	774	19.50%

Source: J.P. Morgan, ABS deal documents
Note: Initial deal amount denotes offered amount

Given the prime to super prime collateral, default risk across lease transactions tends to be very low, with losses rounding to zero. However, the bulk of the credit risk in lease ABS stems from residual value, which makes up a significant portion of the securitization/asset base. Year-to-date, lease transactions have 46%-65% of total securitized value linked to residuals (on a discounted basis). Residual value losses arise when the actual car value at the end of the lease term is less than the base residual value securitized. In ABS structures, the base residual value is typically the lower of the stated/contractual residual value or the ALG (Automotive Leasing Guide) residual value, with the more conservative measure helping to mitigate the risk of inflated residuals.

Reflecting the broad auto industry trends (pandemic-driven inventory crunch, higher prices, lower returns, etc.), the actual residual value experience has been largely positive for most of 2021 and 2022. However, more recently, in line with declining used car prices, residual experience has drifted lower across sponsors (Figure 102). For example, Nissan recorded a 6.84% residual value loss for the twelve months ending March 2024 for vehicles returned to Nissan, versus gains of about 25% for the prior two years. The return rate (vehicles returned to NMAC as a share of total leases scheduled to terminate) tracked 15.2% for 2024 compared to 2.2% for 2023 and 13.2% for 2022. Based on the declines in used vehicle values from peaks in 4Q21, we do expect softer residual value prints across sponsors in the upcoming months. Historically, negative residual experience has been a frequent occurrence across sponsors and there has been no negative rating impact on lease ABS. Any negative

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value experience on residuals does not translate directly into stress on ABS pools, as residuals account for about 50%-60% of securitized pools, and the impact is further muted by the return rate. Furthermore, there is typically 15%-20% of hard AAA enhancement/support on the auto lease ABS structures to protect bondholders.

Figure 102: Auto lease ABS sponsor residual gain/loss experience

Year	Ford	GM Financial	Hyundai	Mercedes-Benz	Nissan	Volkswagen	World Omni	Santander	BMW	Toyota	Tesla
2007	-6.3%		-11.8%	-16.5%	2.3%	-6.7%	8.0%		-3.2%		
2008	-18.3%		-13.5%	-21.4%	-3.8%	-10.5%	-4.0%		-15.2%		
2009	-0.1%		-1.2%	-13.3%	-12.2%	-8.6%	-0.2%		-12.7%		
2010	11.9%		4.7%	-1.1%	-1.3%	3.7%	14.4%		-7.3%		
2011	23.1%		9.9%	8.6%	4.6%	9.1%	28.5%		7.8%		
2012	10.5%	-7.0%	8.4%	12.5%	5.6%	5.9%	26.1%		11.6%		
2013	4.8%	-6.0%	2.9%	5.5%	4.0%	2.1%	13.1%		0.4%		
2014	3.3%	-0.1%	-1.0%	-2.7%	-0.4%	0.5%	12.1%	6.4%	4.2%		
2015	4.0%	9.0%	-7.7%	-4.5%	-4.2%	2.8%	10.6%	3.0%	8.4%		
2016	-0.1%	6.3%	-7.2%	-5.5%	-9.5%	-3.2%	0.6%	3.4%	-4.4%	-5.7%	50.7%
2017	1.4%	8.0%	-7.0%	-2.7%	-12.8%	0.2%	2.9%	6.9%	-4.0%	-1.5%	8.7%
2018	4.9%	13.1%	-1.9%	-7.0%	-6.6%	-2.0%	8.2%	8.0%	-3.6%	4.0%	5.3%
2019	4.0%	7.6%	-0.2%	-7.1%	4.5%	0.1%	11.7%	8.5%	-4.0%	8.1%	13.2%
2020	14.1%	12.8%	7.2%	3.5%	4.4%	13.1%	14.5%	10.1%	3.7%	8.5%	33.8%
2021	47.9%	32.8%	25.4%	16.1%	13.2%	23.8%	30.3%	34.7%	26.1%	17.6%	32.4%
2022	42.5%	42.0%	35.9%	14.1%	25.3%	16.3%	39.7%	46.9%	31.7%	16.9%	30.9%
2023	21.7%	27.3%	26.5%	15.8%	25.5%	12.2%	43.8%	32.5%	26.6%	16.3%	18.2%
2024	12.8%	15.2%	13.9%		-6.8%					16.0%	

Source: J.P. Morgan, ABS deal documents
Note: FORDL and GMALT as of 3/31/2024, HALST and BMWLT as of 6/30/2024 and NALT as of March 31 for all years

In terms of relative value, auto lease ABS trades wider than comparable prime auto loan ABS. Historically, this differential has fluctuated from minuscule to notable concessions depending on overall credit spreads as well as used car value expectations and auto maker sponsor headlines. For instance, the spread concession for A-4 new issue lease ABS versus indicative benchmark prime auto loan ABS was 4bp in 2021, 18bp in 2022, 25bp in 2023, and 11bp year-to-date in 2024. Earlier this year, VWALT 24-A and WOLS 24-A priced with a 2bp spread pickup versus our indicative benchmark prime auto spreads. Recently, SBALT 24-C priced last week with its A-4, AAA-rated 2.37-yr tranche at I +85bp, offering a 17bp pickup over prime auto loan (Figure 103). We believe auto lease ABS offers an attractive spread pickup compared to prime auto loan ABS, considering the mostly prime to super prime collateral, solid credit performance trends and robust structures, despite slightly lower liquidity and higher sponsor/auto maker exposure.

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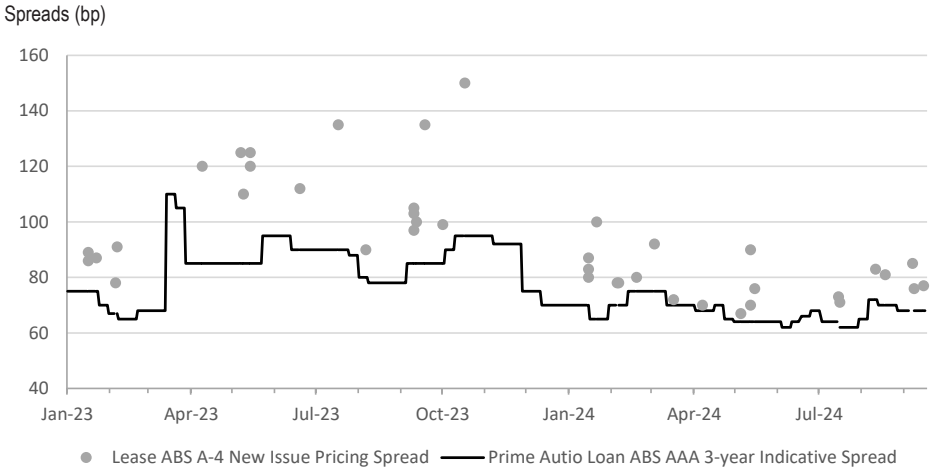
Figure 103: New issue auto lease ABS A-4 tranche pricing spread versus indicative prime auto loan ABS AAA 3-year spread



Source: J.P. Morgan

Week in review

Fifteen ABS transactions totaling $11.3bn across bankcard, auto loan, auto lease, motorcycle, aircraft, solar, rehabilitated FFELP, equipment, data center and aircraft priced this week. This brings 2024 year-to-date ABS supply to $251bn versus $200bn recorded over the same period last year. September month-to-date supply stands at $28bn versus $29bn for all of September 2023. Looking to the forward calendar, we see 8 deals totaling roughly $5bn currently in pre-marketing. ABS spreads were unchanged on the week.

On September 18th, KBRA downgraded tranches A-2 and B of HOA 2021-1, that were placed on watch negative on 27th June 2024, from BBB- to BB- and BB to B, respectively. The rating agency cited deteriorating performance of the Hooters system, including a declining trend in same store sales (SSS) and system-wise sales (SWS), the closure of roughly forty company owned locations and a noticeable dip in transaction DSCR.

TGIF 2017-1 A-2 was placed on watch negative by S&P on 11th September 2024 following the declaration of a manager termination event by the company on 3rd September 2024. The rating agency noted the $4.7million interest reserve, which currently appears sufficient for interest coverage on the upcoming 12 months. However, S&P also noted the potential disruptions that the termination event could trigger and believes that the tranche is unlikely to withstand significant cash flow disruptions at current rating level of 'B-'. Of note, the tranche has seen multiple negative rating actions previously, with the most recent one being in Feb 2024 wherein the notes were downgraded from B to B- due to poor sales performance, closure of 36 stores and continued deferral of company-owned restaurant royalty payments.

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Data appendix

Figure 104: ABS supply

$bn

	2020	2021	2022	2023	2023 YTD	2024 YTD
Credit Cards	4	17	32	23	18.0	17.1
Bank/Charge	*4*	*17*	*30*	*21*	*16.6*	*14.6*
Retail	*0*	*0*	*2*	*2*	*1.4*	*2.5*
Autos	98	132	110	146	111.9	131.8
Prime Loan	*46*	*50*	*50*	*73*	*52.5*	*59.8*
Non-prime Loan	*28*	*43*	*33*	*34*	*25.9*	*32.8*
Lease	*19*	*27*	*16*	*23*	*20.7*	*25.8*
Fleet & other	*6*	*13*	*11*	*16*	*12.8*	*13.4*
Student Loans	17	26	7	7	4.3	7.8
FFELP	*5*	*8*	*0*	*0*	*0.0*	*0.6*
Private Credit	*12*	*18*	*7*	*7*	*4.3*	*7.2*
Equipment	13	19	22	21	17.2	23.8
Floorplan	4	1	1	4	3.9	4.9
Unsecured Consumer	9	17	16	14	11.3	13.4
MPL	*4*	*8*	*9*	*8*	*6.0*	*5.2*
Branch & other	*5*	*9*	*7*	*7*	*5.3*	*8.3*
Miscellaneous	34	55	56	41	33.5	52.2
Total ABS	179	267	244	256	200.1	251.0
% 144A	57%	61%	50%	56%	56%	61%
% Floating-rate	4%	5%	4%	7%	6%	9%

Source: J.P. Morgan.

Figure 105: Other ABS supply

$bn

	2020	2021	2022	2023	2023 YTD	2024 YTD
Franchise/Whole Bus.	4.8	13.7	6.6	1.7	0.8	9.5
Device Payment	4.4	3.1	5.3	4.5	3.9	6.4
Data Center	2.6	6.2	1.0	5.9	4.8	6.0
Aircraft	2.6	8.5	1.1	0.7		4.6
Solar	2.7	3.2	4.0	4.2	3.7	3.9
Fiber	0.2	1.3	1.2	4.0	4.0	3.7
Stranded Ast		2.3	21.2	7.8	6.2	3.5
Timeshare	1.9	2.4	2.6	2.5	1.6	2.6
Insurance	2.2	1.1	2.3	2.4	2.2	2.2
Containers	7.3	5.6	0.8	0.3	0.3	1.7
SBL	0.4	1.0	1.7	1.1	0.7	0.8
Railcar	0.5	2.8	0.9	0.2		0.6
Trade Rec.		0.3				0.5
Taxes		0.5	0.1	0.3	0.2	0.5
PACE	0.3	0.8	0.5	0.7	0.6	0.4
Healthcare	0.4		0.4	0.4	0.4	0.3
Miscellaneous	4.0	2.3	6.3	4.1	4.1	5.2
Total Other ABS	34.4	55.2	56.0	40.8	33.5	52.2

Source: J.P. Morgan.

Figure 106: ABS spread performance

bp

	Benchmark	Current 9/19/2024	1-week Change	10-week Avg	10-week Min	10-week Max
Credit Card - Fixed Rate						
2-yr AAA	Treasury	44	0	44	42	47
3-yr AAA	Treasury	47	0	47	46	50
5-yr AAA	Treasury	52	0	53	51	57
10-yr AAA	Treasury	77	0	78	76	82
B-Piece (5-yr)	Treasury	84	0	84	81	88
C-Piece (5-yr)	Treasury	131	0	130	125	135
Credit Card - Floating Rate						
2-yr AAA	SOFR	47	0	46	43	48
3-yr AAA	SOFR	54	0	54	53	58
5-yr AAA	SOFR	79	0	79	78	83
10-yr AAA	SOFR	109	0	109	108	113
B-Piece (5-yr)	SOFR	104	0	108	104	113
C-Piece (5-yr)	SOFR	152	0	155	152	158
Auto - Prime						
1-yr AAA	Treasury	47	0	43	36	48
2-yr AAA	Treasury	60	0	58	52	62
3-yr AAA	Treasury	68	0	67	62	72
3-yr AA	Treasury	98	0	97	93	100
Student Loans (FFELP)						
3-yr AAA	SOFR	95	0	94	92	95
7-yr AAA	SOFR	112	0	111	110	112
Private Credit Student Loan						
3-yr AAA	SOFR	105	0	106	100	115
Unsecured Consumer MPL						
1-yr AAA	Treasury	90	0	87	80	95
3-yr AA	Treasury	140	0	138	130	150
3-4yr A	Treasury	180	0	179	170	190
3-4yr BBB	Treasury	260	0	257	245	275
3-4yr BB	Treasury	480	0	479	465	500
Auto - Subprime						
1-yr AAA	Treasury	63	0	61	55	65
2-yr AAA	Treasury	78	0	76	65	85
3-yr AA	Treasury	97	0	95	85	105
3-yr A	Treasury	117	0	116	107	130
3-yr BBB	Treasury	162	0	158	145	175
3-yr BB	Treasury	345	0	349	340	380

Source: J.P. Morgan.

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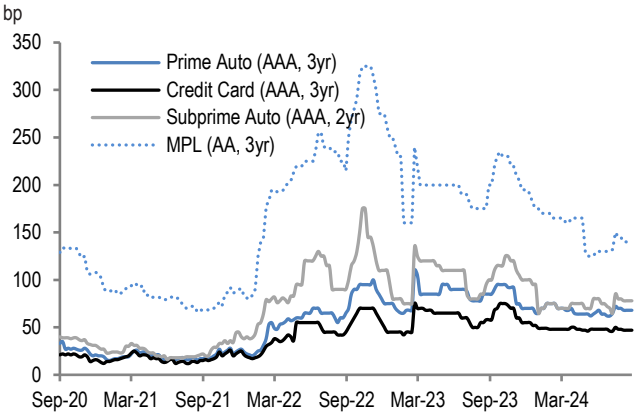
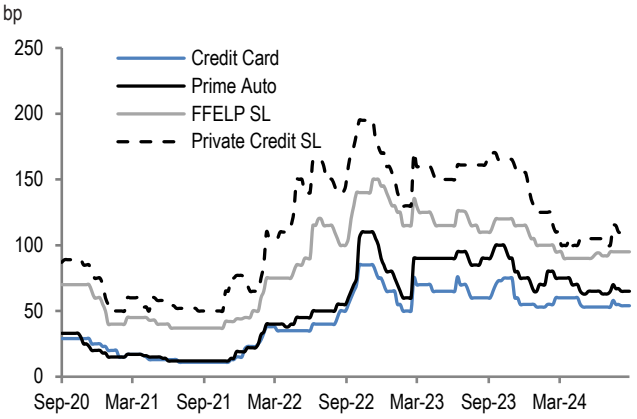
Figure 107: Fixed-rate AAA ABS (3-year) spreads to Treasury



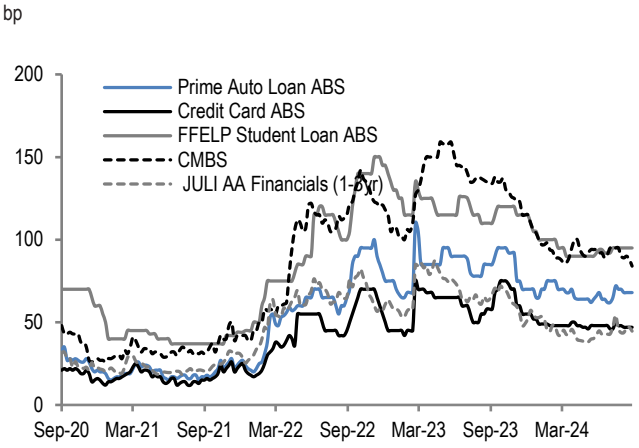
Source: J.P. Morgan.

Figure 108: Floating-rate AAA ABS (3-year) spreads to SOFR



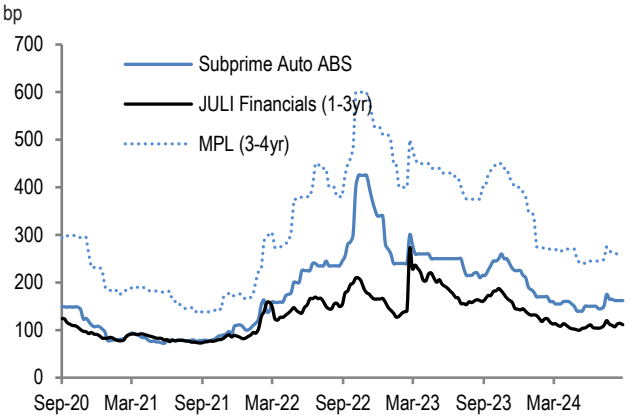
Source: J.P. Morgan. Note: Spreads to LIBOR till June 29, 2023 and to SOFR since then.

Figure 109: AAA cross sector spreads (3-year) to Treasury/SOFR



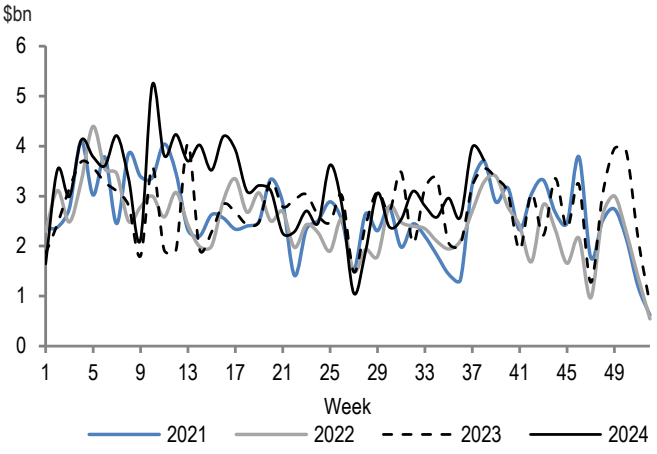
Source: J.P. Morgan. Note: FFELP Student Loan ABS spread to LIBOR till June 29, 2023 an to SOFR since then.

Figure 110: BBB subprime auto ABS (3-year) and MPL unsecured consumer ABS (3-4year) vs. BBB financials to Treasury



Source: J.P. Morgan.

Figure 111: ABS secondary trading weekly TRACE volume



Source: J.P. Morgan, TRACE

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Corporates

- The FOMC opted to cut the fed funds target by 50bp to 4.75-5.0%. We believe spreads had largely anticipated this cut. Treasury yields rose on Wednesday and Thursday, and the curve steepened due to a dovish cut offset by a slightly hawkish press conference. This is modestly positive for spreads in the near term. The market will now closely watch economic data for signs of slowing inflation and a weakening, but not weak, labor market, i.e., the 'Goldilocks' scenario, which could sustain the current tight spread environment. This aligns with our base case, with spreads near our YE forecast of 110bp.
- **Economic data - soft patch or slowdown?** Recent economic data, particularly employment figures, have worsened, likely prompting the Fed's cut. Powell indicated that July's NFP data might have led to a cut in the previous meeting. The persistence of this trend will influence future cuts. JPM anticipates another 50bp cut at the next meeting, contingent on payroll trends. Strong recent consumer data suggests the slowdown may be just a soft patch in retrospect.
- **Does the yield buyer take a material step back or not?** Long-end JULI yields at 5.18% are at an 18-month low, 82bp below the YTD peak in late April. The 10s30s credit spread curve has steepened modestly by 2bps to 20bps. If yield-based demand weakens as yields decline, the spread curve should steepen further, but evidence of this is limited, possibly due to constrained long-end supply (15% of MTD supply vs. 23% last month).
- **Foreign flows & retail flows: do they surge in tandem?** Strong total returns recently (1.8% MTD, 5.7% YTD) have driven significant inflows to mutual funds and ETFs and we expect this to continue as the market expects further Fed cuts. Lower hedging costs post-Fed and BoJ should sustain foreign demand, with JULI yields near two-year lows but still attractive when hedged to JPY. This should support overseas demand. Additionally, the improved relative value of front-end credit vs. money markets/cash should boost retail demand, though this may take time and potentially another rate cut to fully materialize.

The Fed has cut - long live the Fed cuts

The FOMC opted to cut the fed funds target by 50bp to 4.75-5.0%. We believe spreads had mostly priced in the Fed cuts as we discuss in more detail in our focus piece below. Treasury yields moved higher Wednesday and Thursday and the curve steepened as the more dovish than expected cut was offset by a modestly more hawkish than expected press conference. This is a modest positive for spreads near term. Going forward, the market will be looking closely at the economic data and if it can continue to deliver the 'Goldilocks' scenario of slowing inflation and a weakening but not weak labor market, such that the current tight spread environment can persist. This is our base case, with spreads now near our YE forecast of 110bp.

The three items we will be monitoring closely in the weeks ahead:

- Economic data - soft patch or slowdown? July and August economic data has been worse than was expected, on balance, especially with regard to employment, which is arguably what prompted the Fed to cut (as Powell noted, had he known about July's NFP at the time of the last meeting they may very well have cut at the July meeting). Whether or not this persists will determine the pace of cuts going forward. JPM currently anticipates another 50bp cut at the next meeting but this is subject to where payrolls go from here. Recent consumer-related data has been strong again, which suggests this slowdown may be just a soft

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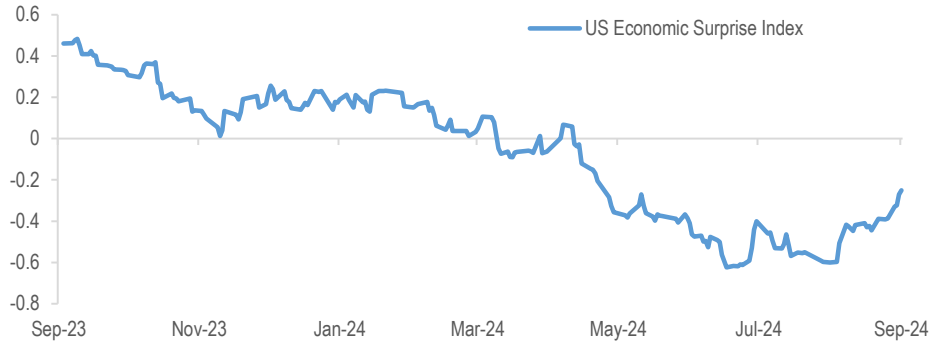
patch in retrospect.

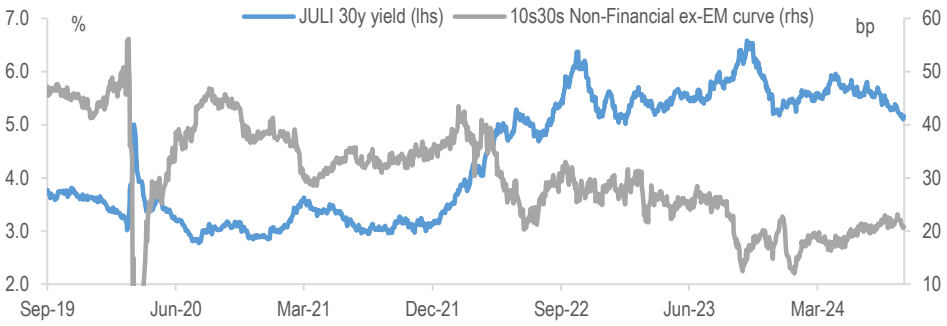
Figure 112: US Economy in Q3 - soft patch or slowdown?



Source: J.P. Morgan, Bloomberg Finance L.P.

- Does the yield buyer take a material step back or not? Long-end JULI yields at 5.18% are at an 18m low and 82bp below the YTD peak in late April. Alongside this, over the same time period we've seen the 10s30s credit spread curve steepen modestly (by 2bps). If yield-based demand is going to weaken as yields decline then the spread curve should steepen further but so far we haven't seen too much evidence of this, owing perhaps to the lack of long-end supply as of late with just 15% of supply in the long-end MTD vs. 23% last month.

Figure 113: If the yield buyer steps back, 10s30s spread curve should steepen, but little evidence of this yet



Source: J.P. Morgan.

- Foreign flows & retail flows: do they surge in tandem? With strong total returns over the last few months we've seen very strong inflows to mutual funds and ETFs. On the other hand, hedging costs are now decidedly lower post Fed and BoJ and thus we'd expect foreign demand to remain very resilient. As an example, while the JULI yield is near a 2 year low overall, when hedged back to JPY it is still very close to the highs (though still low in absolute terms, barely above 0%). This should continue to underpin overseas demand (see latest Foreign Demand Monitor here). As well, the now more appealing relative value of front-end credit vs. money markets/cash should bode well for retail demand in the coming months. However, this is starting from a negative base so it may take time (and another rate cut) for this demand to fully materialize.

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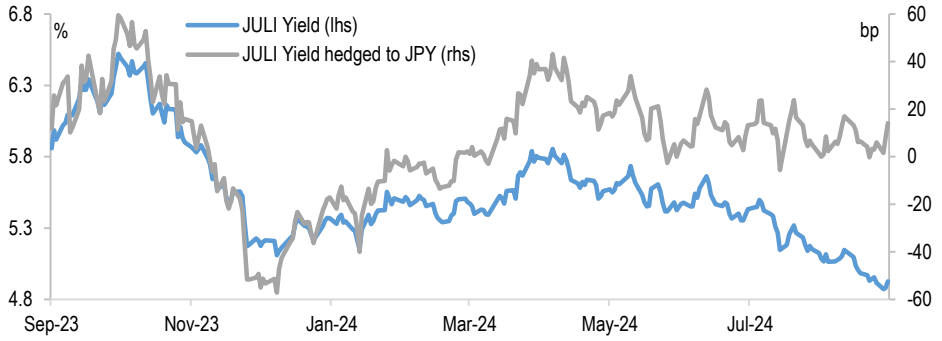
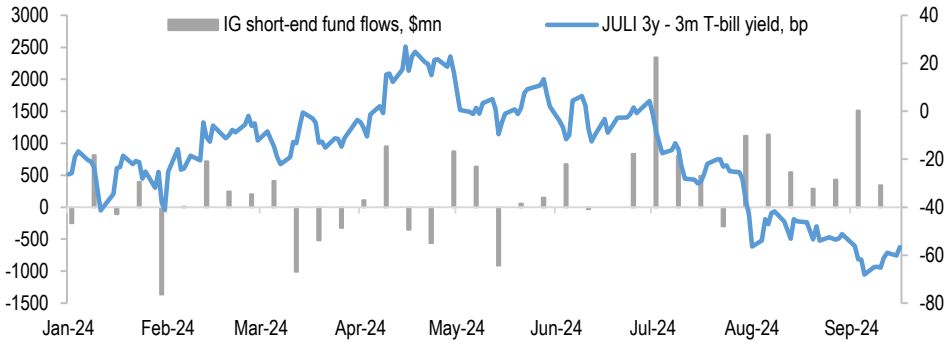
Figure 114: HG yields aren't dropping for everyone at the same pace - lower hedging costs a meaningful offset



Source: J.P. Morgan.,Bloomberg Finance L.P.

Figure 115: Front-end credit should become more attractive as the Fed cuts



Source: J.P. Morgan, EPFR.

The FOMC opted to cut the fed funds target by 50bp to 4.75-5.0%. This forceful move was characterized by Chair Powell as a "recalibration" to preserve the currently strong labor market from downside risks. This now begins the third phase of this Fed cycle. At the beginning of the first phase in March 2022 markets significantly underestimated the extent of the ultimate policy tightening. At the beginning of the second phase last summer (the pause) markets significantly underestimated the length of time before the first cut. Now there is a lot of discussion as to the pace at which the Fed will lower rates in phase III. JPM expects another 75bp this year while consensus and the Fed itself is suggesting 50bp. The reason that markets were too optimistic on the extent and timing of phases I and II is that they (and the Fed) were too optimistic on the path of inflation. The pace of cuts that the Fed suggested will follow yesterday's move in phase III is also dependent on the economic data including inflation but now more importantly the labor market. A risks going forward is that a weaker than expected labor market, while likely to result in a more aggressive Fed, is also likely to be a headwind for spreads as it will increase recession fears and lower yields. Please see here for more on the FOMC meeting from JPM US economist Michael Feroli.

What to expect when you're expecting (rate cuts) : A review of the interplay between past Fed cutting cycles and HG credit

Wednesday kicked off the first Fed rate cutting cycle in just over 5 years. Every Fed cycle is different in certain regards but there are nonetheless many similarities too. To tease these out as it relates to HG credit, we analyze how HG credit markets have behaved in the 5 prior easing cycles over the past 30 years for which we have adequate data (though apparently the first corporate bond was issued in 1623 so a follow-up note may be in order post a visit to

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the National Archives). We recognize that each cycle had its own nuances with different macro conditions. However, a quantitative analysis does reveal a few underlying patterns.

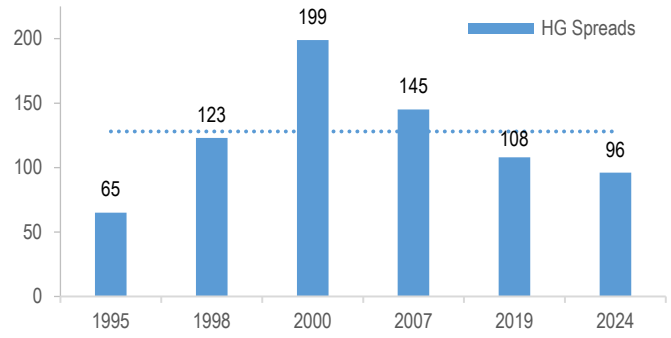
Our view on the pending start of the current Fed cut cycle is that it is mostly priced into HG bond spreads. Spreads today are tighter than they were when the Fed began cutting rates in these prior examples with the exception of 1995. This is a reflection of an economy and corporate credit metrics which are solid. Weakness in corporate results is not a driver of the Fed's decision to reduce rates in this cycle as they were (or was feared) when rate cuts were implemented previously. The pending Fed cuts are a negative for HG bond spreads if they spur a significant further decline in yields. On the other hand, if they spur further strength in equity markets this is a tailwind for spreads. Given that spreads are already quite tight historically and the upcoming Fed easing cycle has been widely anticipated we do not believe it will have a meaningful impact on spreads in the near term.

A brief history of recent Fed rate cut cycles analyzed (in reverse chronological order):

- **2019-20:** The Fed cut rates 3x by 25bp each time in 2019 in what Powell called a "mid-cycle adjustment." These came about against a backdrop of lower inflation and brewing trade wars and tariffs during the Trump administration. These rate cuts were closely followed by the COVID-related cuts in early 2020 (150bp in total over 2 weeks in March 2020).
- **2007-08:** The Fed cut rates 275bp from September 2007 to April 2008 in reaction to the housing bubble bursting. This was followed shortly thereafter by another 200bp of cuts in October and December 2008 as the Great Financial Crisis unfolded.
- **2001-2003:** The Dot-Com bust and the 9/11 terrorist attack led to 525bp of Fed cuts in 2001. This was followed by another 75 bp of cuts in 2002-03 as the Fed tried to counter deflationary forces following the 2001 recession.
- **1998:** The Asian and Russian FX crises led to the blowup of LTCM to which the Fed reacted with 75bp of cuts.
- **1995:** The Fed cut 75bp from July 1995 to January 1996 after economic data softened alongside inflation. This is widely viewed as the most recent example of a Soft Landing.

Figure 116: Spreads typically wider at time of first cut

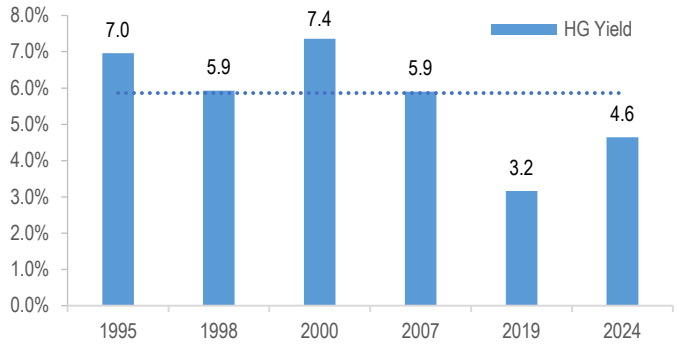
Dotted line represents the average spread ex-2024.



Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 117: Yields have also been higher on average into first cut

Dotted line represents the average yield ex-2024



Source: J.P. Morgan, Bloomberg Finance L.P.

Spreads: Excluding the 2007 cycle, spreads tend to widen leading up to a Fed rate cut, i.e., from 3m leading up to the Fed cut to a month prior, stabilize around the time of the cut, and then generally tighten over the following 6m. However, there has tended to be a modest widening in spreads at the 12m mark, suggesting some renewed market stress or risk aver-

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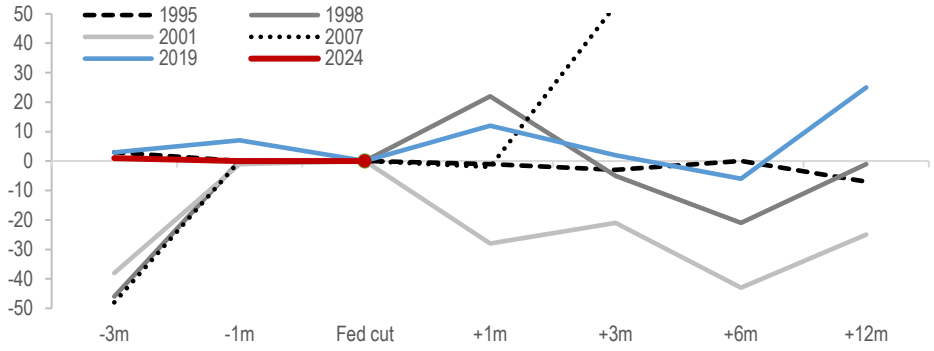
sion. This pattern indicates that the initial rate cut is typically well received by markets, but there may be some lingering uncertainties or macro pressures that cause spreads to widen anew after a year. Furthermore, recent economic data suggests that this Fed cycle corresponds the most closely to 1995 which was characterized by a proactive approach to monetary easing in response to mixed economic signals including moderate GDP growth, stable inflation and a weakening labor market. The credit market at the time was more or less stable throughout the cycle and was also punctuated with significant gains in stock indices over the following year, demonstrating the effectiveness of the Fed's preemptive measures in stabilizing and boosting the economy. HG spreads were 7bps tighter a year after the first cut of that cycle.

Figure 118: Spreads pre/post first rate cut: A little tighter on average once the Fed cuts



Source: J.P. Morgan, Bloomberg Finance L.P.

Total and Excess Returns: As well, analyzing the total and excess returns over the year following the first Fed rate cut, we see that with the exception of 2007, both excess and total returns suggest that markets generally respond positively to Fed cuts over time, with a clearer positive trend in total returns. Total returns are generally positive following the fed cut and continue to improve thereafter. On the other hand, excess returns are generally mixed following the first rate cut, show a modest positive trend over the medium term especially for 6m and continue to stay positive typically, but by a smaller degree over the 12m period.

Figure 119: Healthy HG Total Returns post Fed cut

Total Return	Fed cut	+1m	+3m	+6m	+12m
2019	0.0%	3.1%	3.1%	6.1%	12.4%
2007	0.0%	1.2%	2.0%	1.8%	-6.8%
2001	0.0%	2.9%	4.4%	5.5%	10.3%
1998	0.0%	-1.5%	0.6%	-0.1%	-1.4%
1995	0.0%	-0.4%	2.4%	7.4%	5.1%
Average ex-07	**0.0%**	**1.0%**	**2.6%**	**4.7%**	**6.6%**

Source: J.P. Morgan.

Figure 120: Decent HG Excess Returns post Fed cut

Excess Return	Fed cut	+1m	+3m	+6m	+12m
2019	0.0%	-1.1%	0.0%	1.1%	-1.6%
2007	0.0%	0.3%	-2.6%	-7.7%	-16.5%
2001	0.0%	1.8%	1.6%	3.0%	2.7%
1998	0.0%	-1.1%	1.0%	2.3%	1.7%
1995	0.0%	0.2%	0.5%	0.4%	1.1%
Average ex-07	**0.0%**	**0.0%**	**0.8%**	**1.7%**	**1.0%**

Source: J.P. Morgan.

Fund Flows: So what does this all mean for the demand dynamics of the asset class? We analyze the retail fund flows (ETFs & Mutual funds) for the two easing cycles for which we have the flows data available - 2019 and 2007: Inflows tend to increase during the month of the first rate cut when compared to flows in the month prior or after. As well, we've typically seen inflows ramp up over the following 3-6m time period.

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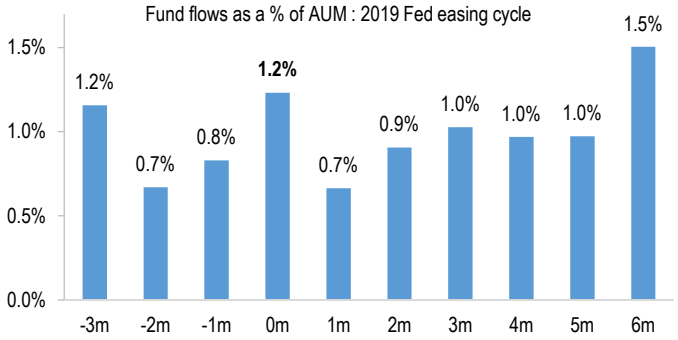
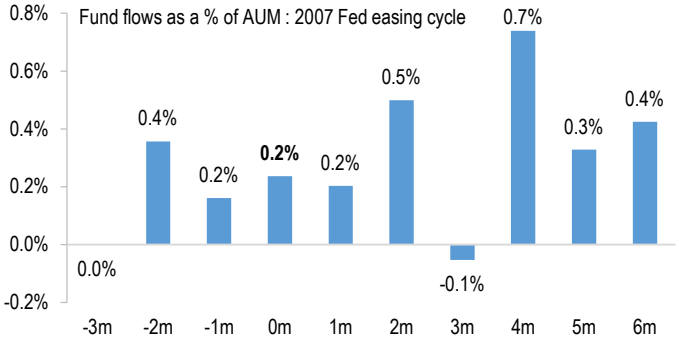
Figure 121: IG inflows stronger post the 2019 cut



Source: J.P. Morgan, EPFR

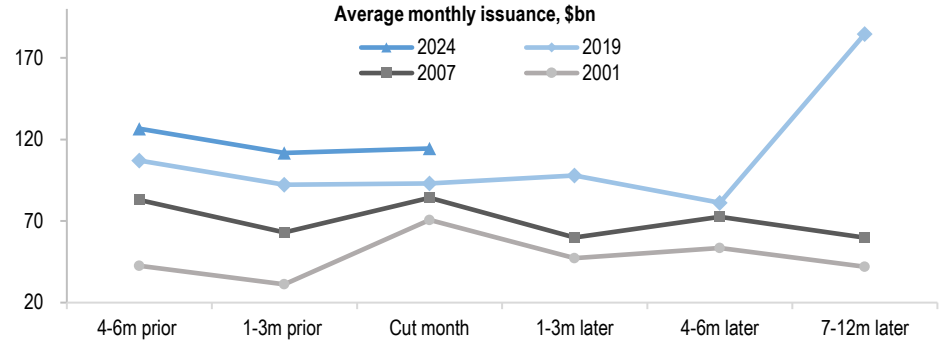
Figure 122: IG inflows volatile post the 2007 cut



Source: J.P. Morgan, EPFR

Issuance: HG bond supply was more or less unchanged in the months following the first rate cut. At a first glance, this seems to be at odds with the fact that since funding costs go lower, it should lead to a higher level of supply. However, the Fed has cut rates generally during periods of financial stress , or at least this has at least been the case for all 3 easing cycles since 2000 and for which we have corresponding issuance volume statistics. As well, the yield curve oftentimes prices in the rate cuts beforehand so issuers have been able to fund at lower coupons well before the actual first rate cut. Thus, supply coming into the market over the next 12m has tended to actually decline modestly with 2019 being a notable exception given the surge in supply tied to COVID.

Figure 123: Issuance volumes largely unaffected by rate cuts



Source: J.P. Morgan, Dealogic

The Energy sector is increasingly underperforming

HG bond spreads have traded in a narrow 6bp range for the past 4 weeks, as we discussed yesterday. The Energy sector has been an outlier though, underperforming the market by 3bp MTD and 5bp over the past month. This has coincided with a decline in both oil and gas prices but this doesn't fully explain the underperformance. The JULI Energy sub-sector is trading 16bp wide to the JULI index currently, yet a regression of this differential against oil and gas prices would suggest it should be trading about 12bp back of the index (on both a 3m and 1yr trailing basis). More broadly, we've seen a preference for As over BBBs so this may be part of what is causing the sector to lag given it is 62% BBB-rated versus 45% for the remainder of the index. For example, the overnight flows last week showed BBB buying was at 12% share vs. the 23% average YTD (see below for more details). Lastly, the Energy sector has seen an above average level of new issuance and we believe that this also weighed on spreads as newly issued bonds find homes and secondary trading levels stabi-

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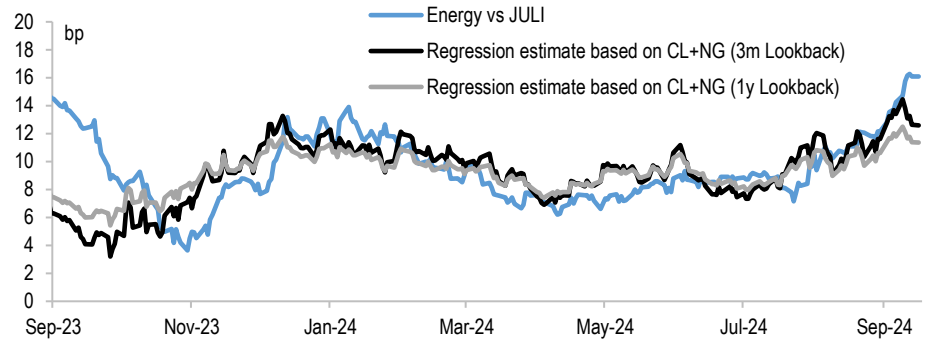
lize.These technical factors help explain this excess widening, in our view.

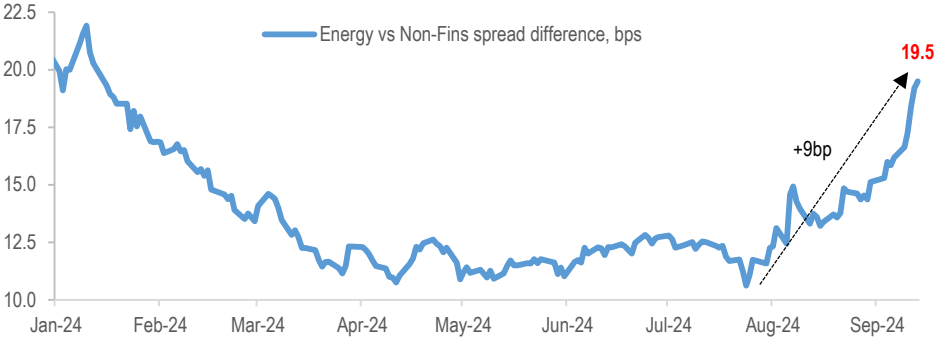
Figure 124: Energy spreads are underperforming even more than suggested by weakness in oil and gas prices



Source: J.P. Morgan; Bloomberg Finance L.P.

Oil prices are weakening on several factors: These include an expected increase in supply next year with additions coming from Brazil and Guyana as well the US as well as uncertainty as to OPEC's ability and willingness to continue to curtail supply and cede market share. They have agreed to not increase supply until YE 24 but the market is looking for indications that this curtailment will be extended beyond YE. And finally global growth concerns are impacting the price. To this regard JPM expects global GDP growth in 2025 to be modestly lower than this year (2.3% vs 2.6%). We have been recommending a Neutral position in the Energy sector, with an OW in pipelines/midstream and UW in Energy services. This has worked, with pipelines/midstream the best performing subsector in Energy and Energy Services along with refining the two worst performing subsectors. Our daily Relative Value Matrix report highlights that Energy is trading at the 95% percentile in its 3m range vs the JULI index, which is 2.3 standard deviations wide on a 3m regression and 3.2 on a 6m regression. These extremes highlight how sector dispersion in HG tends to be pretty mean reverting. It is notable too that the energy companies in HG have de-levered meaningfully over the past few years. The average leverage and interest coverage for the sector are 2.4x (vs. 3.3x for HG issuers overall; read more in our fundamentals report) and 11.4x vs 9.4x for the broader market, and yet spreads now trade 16bp wide to the market. The potential for even lower energy prices is a factor in this ongoing underperformance, but it does seem that a lot of bad news is priced in at this point relative to commodity markets.

Figure 125: Energy spreads have significantly underperformed over the past month



Source: J.P. Morgan.

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5yr underperformance leading to steeper 3s5s curve vs. flatter 5s10s

We published our Curveball: HG Credit Curve Opportunities 5yr underperformance leading to steeper 3s5s curve vs. flatter 5s10s on Tuesday:

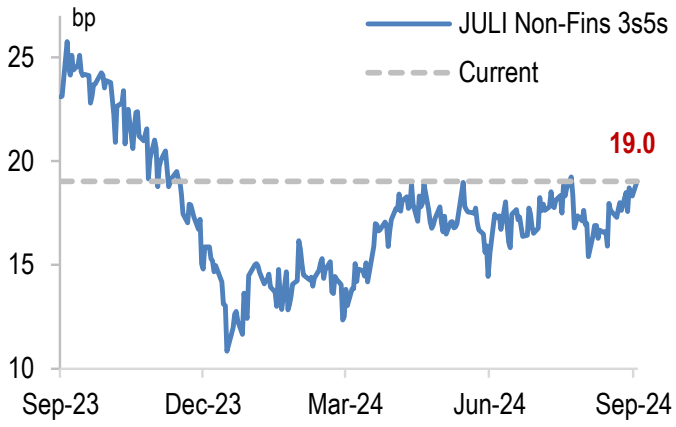
Spread curves flattened at the intermediate and long end with spreads tighter on lower rate volatility. By tenor, spreads at the 5yr point underperformed the rest of the curve last week. Consequently, the 5s10s curve flattened by 2bp to 27bp, to its flattest level since the end of April. On the other hand, the 3s5s curve steepened by 0.5bp to 19bp and is at 97% of its YTD range. The 10s30s curve flattened too by 1.4bp to 20bp and is now at 73% of its YTD range.

The **3s5s curve** steepened by 0.5bp WoW and 1.4bp MoM to 19.0bp, its steepest level in over a month. The 3s5s issuer curves for HON (18bp WoW) and SHW (13bp WoW) steepened the most while MTH (-12bp WoW) and VZ (-10bp WoW) flattened the most WoW. Currently, EQT (67bp, 100%) and HON (34bp, 100%) are at the steepest level while DGX (14bp, 0%) and SPG (6bp, 1%) are at the flattest level in their 6m range.

The **5s10s curve** flattened by 2bp WoW while was unchanged MoM at 27.0bp. The 5s10s issuer curves for SO (15bp WoW) and ROP (11bp WoW) steepened the most while TPR (-19bp WoW) and IMBLN (-18bp WoW) flattened the most WoW. Currently, EMN (46bp, 98%) and ET (40bp, 96%) are at the steepest level while GEHC (12bp, 0%) and TPR (29bp, 0%) are at the flattest level in their 6m range.

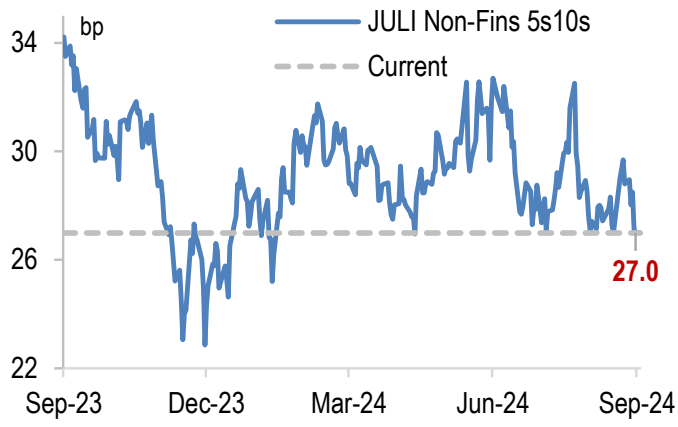
The **10s30s curve** flattened by 1.4bp WoW and 1.1bp MoM to 20.0bp. The 10s30s issuer curves for SYY (9bp WoW) and KMI (8bp WoW) steepened the most while KR (-13bp WoW) and BMY (-11bp WoW) flattened the most WoW. Currently, DELL (15bp, 99%) and OC (32bp, 95%) are at the steepest level while DVN (25bp, 0%) and ORCL (29bp, 7%) are at the flattest level in their 6m range.

Figure 126: JULI Non-Fins 3s5s curve



Source: J.P. Morgan

Figure 127: JULI Non-Fins 5s10s curve



Source: J.P. Morgan

USD IG yields down yet FAB is up as central bank convergence putting downward pressure on hedging costs

We published our HG Credit Foreign Demand Monitor: USD IG yields down yet FAB is up as central bank convergence putting downward pressure on hedging costs on Monday:

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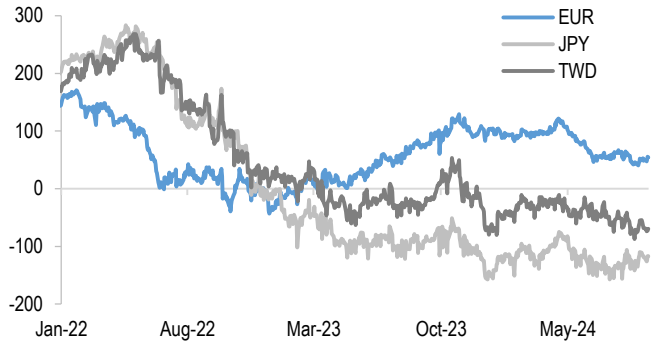
Our JPM Foreign Attractiveness of USD IG Bonds (FAB) index rose by 3bp WoW to 34bp or 9% of its 12m range. While USD IG yields moved 8bp lower, this was more than fully offset by the combination of a 5bp move lower in local government yields as well as hedging costs falling by 6bp, on average. Most of the improvement in the index was seen from EMEA currencies, while APAC and Americas were close to flat WoW.

Within EMEA, the USD IG Corp pickup rose for 8 out of 9 currencies, mainly due to declining hedging costs. For EUR investors, the yield pickup rose by 4bp to 54bp, as 3m hedging costs fell by 7bp after the ECB outlined a slower pace of cuts than what the market is currently pricing in for the Fed. That said, USD IG attractiveness rose only modestly, and overall RV has remained in favor of EUR IG for most currencies across all tenors.

In APAC, for JPY investors the yield give improved just 2bp despite another 9bp decline in hedging costs. This was because USD IG yields fell 8bp, while JGB yields were close to unchanged. Markets are pricing in more policy convergence: USDJPY has weakened to sub-140 levels for the first time since July 2023, and thus hedging costs are at their lowest since Jan 2023. The back-to-back Fed & BoJ meetings this week will be critical to this trajectory going forward – Fed cuts vs. BoJ hikes will lead to even lower hedging costs.

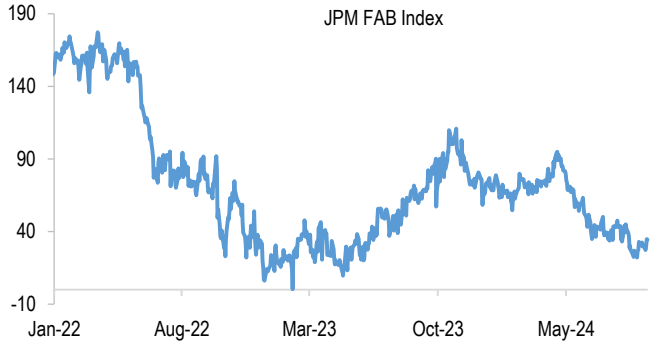
Overnight net buying slowed but remained active at $200mn/day, in line with the YTD pace. Activity was focused by and large in high-quality issuers across the curve, BBB buying was at 12% share vs. the 23% average YTD. By sector, buying was focused in Yankee Banks, Finance Companies and Healthcare, while there was modest net selling in Energy and Telecoms last week. Furthermore, there was elevated two-way activity in EM issuers last week.

Figure 128: 10y USD IG Corps FX Hedged Yield Pickup



Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 129: JPM Foreign Attractiveness of USD IG Bonds



Source: J.P. Morgan, Bloomberg Finance L.P.

This report was excerpted from Credit Market Outlook Strategy: The Fed has cut - long live the Fed, Eric Beinstein.

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High Yield

- **High-yield bonds rallied by the most since May as the Fed delivered "a good 50bp cut" with 3Q growth tracking above consensus amid a resilient consumer.** Our economists still look for a 50bp cut at the next meeting in early November which is contingent on further softening in the two jobs reports between now and then. While only pricing in 40% of odds of a 50bp cut at the November meeting, OIS Forwards are pricing in 71bp of rate cuts over the balance of the year. It is our view that should the economy soften enough to warrant a 50bp cut at either meeting (or deliver a "bad 50bp cut"), our forecast for wider spreads by year-end would likely materialize. More benign labor data would, instead, seal the case for the FOMC's goldilocks scenario of 25bp eases per meeting over the remainder of the year and support high-yield bond spreads of 350bp. **High-yield bond yields and spreads declined 31bp and 29bp over the past week to 7.08% and 349bp, respectively,** which are down -36bp and -10bp month-to-date, respectively. The HY index is up +1.5% in September with Cable/Sat (+4.7%), Telecom (+4.0%) and CCCs (+4.2%) outperforming.
- Despite the Fed's 50bp rate cut, **leveraged loan prices rose $0.15 over the past week to a 3-month high** amid receding growth concerns (strong retail sales, declining claims), balanced flows, and still elevated coupons. Note the average leveraged loan coupon eased to 8.69%, which is still 227bp above the average coupon for HY bonds. Leveraged loans are providing a 0.5% gain in September which boosts YTD gains to 6.6%. Meanwhile, September has produced the highest net loan issuance ($15.6bn ex-refi/repricing) in a year with **$17.7bn of LBO loan volume in 3Q a quarterly high since 2Q22.**
- This week we published 2Q24 High-Yield Credit Fundamentals. Balance sheets for US HY issuers are in a strong state heading into what could be a more challenging fundamental landscape. **In aggregate, high-yield corporates delivered a solid quarter in 2Q** albeit there was a q/q step up in negative guidance revisions. **Importantly, a review of 2Q24 credit metrics unveiled stability in credit metrics.** Specifically,Revenue and EBITDA expanded q/q following back-to-back declines in 1Q and 4Q. Of note, EBITDA experienced its second largest quarterly expansion since 3Q20 (+15% q/q). On a y/y basis, BBs experienced EBITDA growth (+3.4%) versus contractions for Bs (-0.9%) and CCCs (-2.6%). **Meanwhile, leverage for US HY issuers increased 0.03x q/q to 3.98x. Leverage is now 0.22x off 1Q23's record low albeit still well below the historical average of 4.30x.** Leverage for BB, B, and CCC-rated companies is 3.3x, 4.7x, and 6.8x, respectively. And LTM interest expense has risen 8% over the past 4Qs which is leading to an ongoing decline in coverage. **That said interest coverage metrics, which decreased -0.03x to 4.89x, are still above the long-term average (4.50x).** In a separate analysis (limited history), **we added 97 additional private HY companies** which brought total issuer coverage to 79% and produced weaker credit metrics. Of note, 21% of high-yield issuers have a coverage ratio below 2x which is well below the 47% of loan issuers. **Coupled with a full-turn of lower leverage, this underscores the high-yield market's strong balance sheets relative to the loan market.**

Credit Strategy Weekly Update

High-yield bonds rallied by the most since May over the past week as the Fed delivered "a good 50bp cut" with 3Q growth tracking above consensus amid a resilient consumer. With consumer spending strong post Tuesday's better than expected retail sales, there are material upside risks to our economists' 1.5% 3Q US GDP forecast (Atlanta Fed tracking

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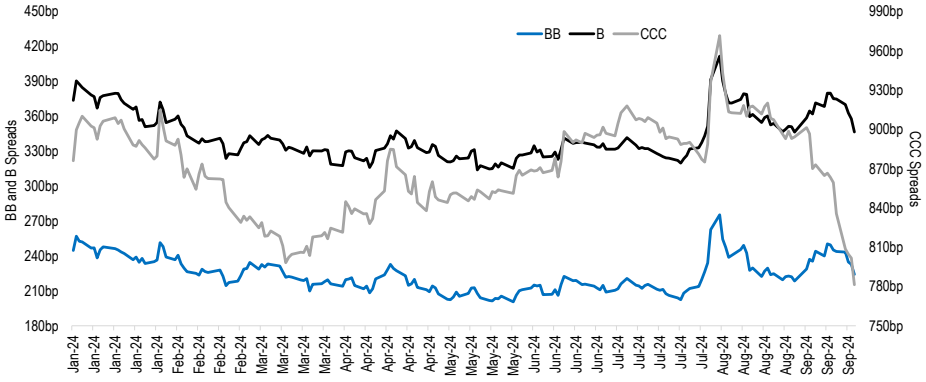
3%). **Meanwhile, Chair Powell characterized the Fed's actions on Wednesday as a "recalibration" to preserve the currently strong labor market from downside risks.** While the Fed delivered an outsized cut and the forward guidance indicates the Committee is biased to ease further, it did signal a stepdown in the future pace via the SEP. **Our economists still look for a 50bp cut at the next meeting in early November which is contingent on further softening in the two jobs reports between now and then.** While only pricing in 40% of odds of a 50bp cut at the November meeting, interestingly, OIS Forwards are pricing in 71bp of rate cuts over the balance of the year. **It is our view that should the economy soften enough to warrant a 50bp cut at either meeting (or deliver a "bad 50bp cut"), our forecast for wider spreads by year-end would likely materialize. More benign labor data would, instead, seal the case for the FOMC's goldilocks scenario of 25bp eases per meeting over the remainder of the year and support high-yield bond spreads of 350bp. High-yield bond yields and spreads declined 31bp and 29bp over the past week to 7.08% and 349bp, respectively, which are down -36bp and -10bp month-to-date, respectively.** Notably, spreads have tightened for seven consecutive sessions by a cumulative 35bp and are at a 7-week low. And yields as well have declined by 34bp over the last six sessions to a fresh low since May-22.

BB and B spreads are 6bp and 0bp wider apiece in September whereas CCCs are 113bp tighter amid outsized gains in select Telecom and Cable/Sat credits



Source: J.P. Morgan.

By rating, BB bond yields are now 5.83% (-22bp w/w), B yields are 7.06% (-30bp w/w) and CCC yields are 11.35% (-86bp w/w). **And BB spreads are now 224bp (-21bp w/w, -14bp YTD), B spreads are 347bp (-29bp w/w, -20bp YTD), and CCC spreads are 781bp (-78bp w/w, -91bp YTD).** BB, B, and CCC spreads are 51bp, 65bp, and 190bp off the early August wide. HY/IG spreads of 254bp (-23bp w/w, -18bp YTD) are 20bp below their 12M average and are at a 7-week low, while BBB/BB spreads of 106bp (-14bp w/w, -2bp YTD) are 5bp below their 12M average and 19bp above their low since April 2019. **The HY index is up +1.51% in September with Cable/Sat (+4.7%), Telecom (+4.0%) and CCCs (+4.2%) outperforming.** Amid sector specific strength, CCCs are outperforming by the widest margin since December-19. **And the HY index is providing a +8.23% gain in 2024 with CCCs (+14.37%) outperforming Single Bs (+7.53%) and BBs (+7.07%).** Industries outperforming year-to-date include Healthcare (+12.24%) and Telecom (+11.16%) and underperforming are Media (+5.12%) and Cable/Sat. (+5.82%). Meanwhile, five deals priced this week for $4.8bn which increased September issuance to a 4-month high $23.9bn ($6.8bn ex-refi). HY new-issue volume totaling $226.9bn ($51.1bn non-refi) year-to-date compares with $123.2bn ($45.0bn ex-refi) of issuance YTD23.

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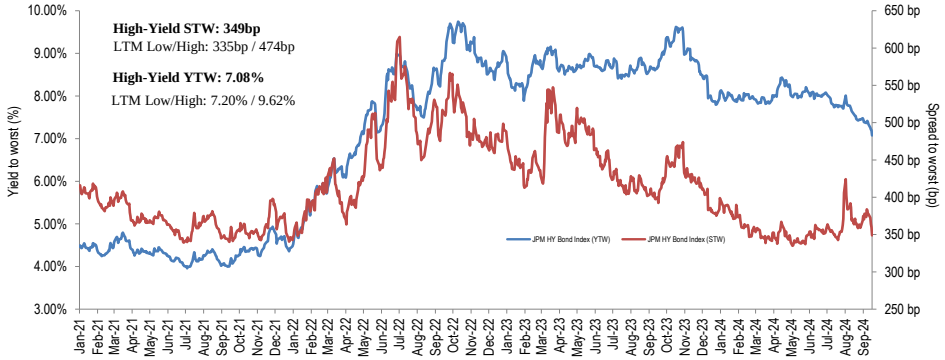
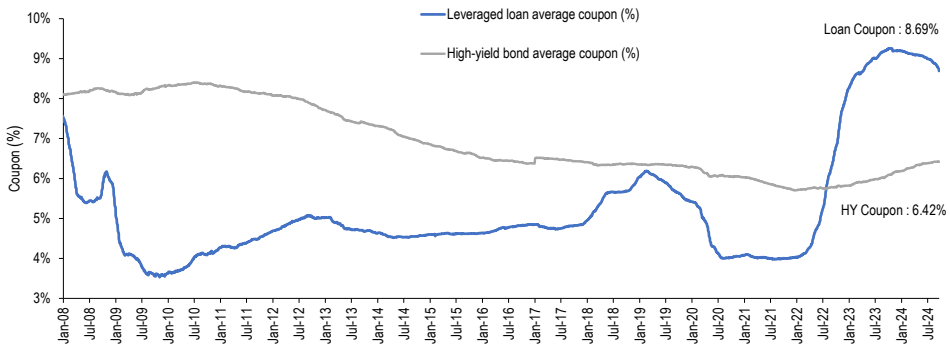
High-yield bonds rallied by the most since May over the past week



Source: J.P. Morgan.

Despite the Fed's aggressive 50bp rate cut, leveraged loan prices rose to a three-month high over the past week amid receding growth concerns (strong retail sales, declining claims), balanced flows, and still elevated coupons.Note the average leveraged loan coupon eased to 8.69% this week, which is still 227bp above the average coupon in high-yield bonds. As well, notably, retail loan funds reported a mild $116mn weekly withdrawal versus a far larger exodus surrounding the last Fed rate cut in July 2019. **Leveraged loan prices rose by $0.15 over the past week to $97.21** with Ba1/Ba2/Ba3 prices declining $0.01 to $99.64, B1 prices unchanged at $99.26, B2 prices rising $0.03 to $98.49, B3 prices increasing $0.08 to $96.18, and Caa1/C aa2/Caa3 prices rising $0.22 to $82.77. Loan prices are up +$0.16 in September and have recovered $0.86 off the 8/5 low.**Leveraged loan yields and spreads (to 3yr) declined 6bp apiece over the past week to 7.86% and 466bp, respectively, which are down -35bp and 7bp month-to-date.** Leveraged loan spreads (3yr) of 466bp compares to a 52-week low and high of 466bp and 573bp, respectively. And the yield-to-3yr for the leveraged loan index of 7.86% is now 78bp above the HY bond index (7.08%), which is comparable to an average 103bp above over the past year.Meanwhile, the % of leveraged loans trading above Par is 36.4%; other price bucket percentages are as follows: sub-$80, $80-$89.99, $90-$94.99, $95-$97.99, $98-$98.99, and $99-$99.99 are now at 2.63%, 3.24%, 4.61%, 10.55%, 5.79%, and 36.78%.

Leveraged loan coupons averaging 8.7% are still 230bp above high-yield bonds post the Fed



Source: J.P. Morgan.

The Leveraged Loan index is up +0.49% in September with BB, B1, B2, B3, and CCC-rated loans returning +0.28%, +0.32%, +0.40%, +0.66%, and +2.30%, respectively. And loans continue to underperform HY for the fifth consecutive month by a cumulative

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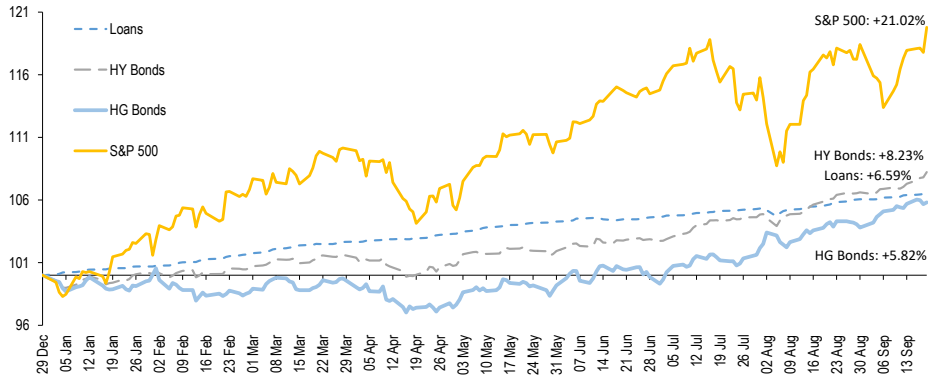
409bp. **The Leveraged Loan index is providing a +6.59% gain in 2024** which compares to a +5.82% gain for High-Grade.YTD, Moody's rated BB, B1, B2, B3, and CCC-rated loans are returning +5.71%, +6.32%, +6.11%, +7.27%, and +12.95%, respectively.Industries outperforming year-to-date include Telecom (+10.12%) and Utility (+8.41%) and underperforming are Broadcasting (+3.19%) and Cable/Sat. (+4.86%). Meanwhile, CLO volume totals $22.2bn in September ($5.4bn ex-refi/resets) and totals $132.9bn ($313.3bn gross) YTD. **And 20 deals priced over the past week for $21.1bn which increased September issuance to $61.3bn ($15.6bn ex refi/repricing).Notably, this is the highest net issuance in a year and the second most April 2022. LBO volume totals $7.7bn in September which has QTD volume at $17.7bn, the most since 2Q22.**As such, year-to-date, institutional loan issuance totals $872bn which includes $452bn of repricing (52%), $312bn of refinancing (36%), and $108bn of non-refi/repricing (13%).

Leveraged loans are now lagging HY bonds year-to-date by 160bp following five consecutive months of underperformance



Source: J.P. Morgan.

This report was excerpted from, *Credit Strategy Weekly Update*, Nelson Jantzen, September 20th, 2024

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CLO

Breaking up with high front-end carry is never easy

- **This week's jumbo 50bp Fed rate cut (in line with JPM's view) is a reminder that the carry tailwind from a period of tight monetary policy will gradually fade, with the Fed now on a path back to neutral.** CLO floating-rate investors are, in a way, effectively short the Powell Put now. To illustrate, at current spreads and prior to this week's easing, the carry/current yield for CLO AAA was not far from 7%, attractive for a risk-remote asset. But assuming unchanged spreads and JPM's SOFR and 10Y UST forecasts (2.85%, 3.4%) for 3Q25 implies CLO yield drops to around 4%, which isn't unattractive but isn't much higher than UST yields, acknowledging the simplification here and that not every investor is an absolute return or yield buyer (relative value to spread products will vary).
- **Back in August we had widened our YE24 spread forecast to 150bp (from the prior 130bp), as we felt the prior target was too Goldilocks-like as the Fed focuses on the dual nature of its mandate to stem deterioration in the labor market.** Policy moves going forward are contingent on labor market health and continued softening could indicate larger cuts ahead, whereas stabilizing job growth and unemployment would suggest 25bp cuts over the remainder of the year (link).Notably, spreads across CLOs, HG, HY, and Loans remain below their non-recessionary averages. T1 CLO AAA Primary spreads, which have remained at 135bp for the last twelve weeks, are -24bp below their non-recessionary average and CLO BB spreads are -126bp below (Table 1).
- **With the rise in credit concerns, we focus on rating downgrades on the CLO liabilities which have remained fairly low.** The percentage of US CLO bonds in the CLOIE Index (~$780bn) that have been downgraded since August 2023 is 2.3% by count and 0.4% by volume. Of the 2.3% of the CLOIE index (or 183 bonds) that has been downgraded by count since August 2023, 98% of bonds are no longer reinvesting. **By rating, 0.1% of Single-A, 0.3% of BBB, 3.4% of BB, 20.5% of Single-B, and 53.8% of CCC bonds in the CLOIE index have been downgraded over the last year (by count) (Figure 133)**.
- We also capture CLO ratings migration over the life of each bond in the CLOIE index using the original vs current rating. There have been considerable changes in the ratings composition in both mezzanine and senior tranches. **Currently, 32% of originally rated Single-Bs are now rated CCC or lower. This compares to 2020YE when 50% of originally rated Single-Bs had migrated to CCC or lower (link).** Looking at a current snapshot of the CLOIE index, there have been no downgrades for originally rated AAAs or AAs since 1Y prior.
- **By vintage, downgrades have primarily occurred across the 2012-2015 vintages (Figure 134). This makes sense given that 84% (or 938 bonds) of the 2012-2015 vintage cohort are currently out of reinvestment period.** This rises to 100% for those bonds (within the 2012-2015 vintage cohort) that have been downgraded. There is more dispersion for upgrades, but they are mainly concentrated within the 2013-2018 vintages.

CLO: Breaking up with high front-end carry is never easy

This week's jumbo 50bp Fed rate cut (in line with JPM's view) is a reminder that the carry tailwind from a period of tight monetary policy will gradually fade, with the Fed now on a path back to neutral. CLO floating-rate investors are, in a way, effectively short

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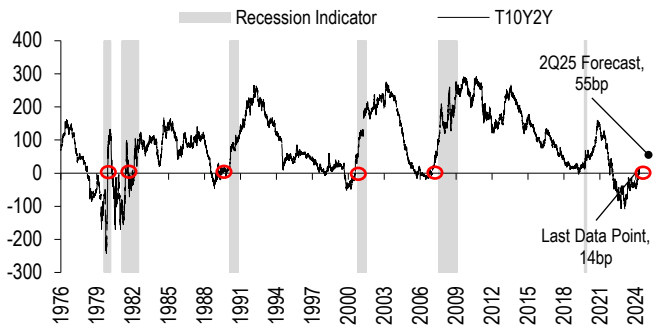
the Powell Put now. To illustrate, at current spreads and prior to this week's easing, the carry/current yield for CLO AAA was not far from 7%, attractive for a risk-remote asset. But assuming unchanged spreads and JPM's SOFR and 10Y UST forecasts (2.85%, 3.4%) for 3Q25 implies CLO yield drops to around 4%, which isn't unattractive, but isn't much higher than UST yields, acknowledging the simplification here and that not every investor is an absolute return or yield buyer (relative value to spread products will vary).

Back in August we had widened our YE24 spread forecast to 150bp (from the prior 130bp), as we felt the prior target was too Goldilocks-like as the Fed focuses on the dual nature of its mandate to stem deterioration in the labor market. Policy moves going forward are contingent on labor market health and continued softening could indicate larger cuts ahead, whereas stabilizing job growth and unemployment would suggest 25bp cuts over the remainder of the year (link).Notably, spreads across CLOs, HG, HY, and Loans remain below their non-recessionary averages. T1 CLO AAA Primary spreads, which have remained at 135bp for the last twelve weeks, are -24bp below their non-recessionary average and CLO BB spreads are -126bp below (Table 1).

Figure 130: Yield curve dis-inversion has tended to be associated with recessions

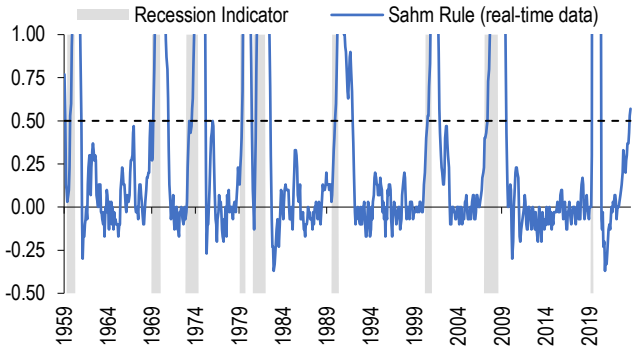
2s/10s US Treasury yield curve



Source: J.P. Morgan, Federal Reserve Bank of St. Louis, Bloomberg Finance, L.P.

Figure 131: Weakening US labor market suggests rising recession risk

% deviation of 3mma u-rate from prior 12-month low, 1959 to present



Source: J.P. Morgan, Federal Reserve Bank of St. Louis, Bloomberg Finance, L.P. Sahm Recession Indicator signals the start of a recession when the three month moving average of the national unemployment rate (U3) rises by 0.50 percentage points or more relative to the minimum of the three month averages from the previous 12 months.

Table 1: Cross-Asset spreads during and outside of recessions since 2000

9/19/2024	Current Spreads (bp)	Current Percentile (based on historicals)	Historical Max (bp)	Historical Min (bp)	Avg spread during recessions (past three)	Avg spread outside of recessions
US HG Credit	106	4%	567	89	294	153
T1 CLO AAA	135	11%	276	118	173	159
Mid-Tier CLO AAA	143	12%	826	49	272	147
US HY Credit	349	6%	2020	251	971	508
Loans	451	18%	1485	222	792	475
Mid-Tier CLO BB	670	11%	3026	366	1451	796

Source: J.P. Morgan, Bloomberg Finance, L.P. CLO spreads adjusted to SOFR. Loan data available beginning in 2006, T1 CLO AAA data beginning in 2014.

Rating Downgrades

In the broader loan market, loan ratings actions continue to remain negative, with the number of downgraded loan issuers surpassing upgrades for the twenty-seventh time in the last

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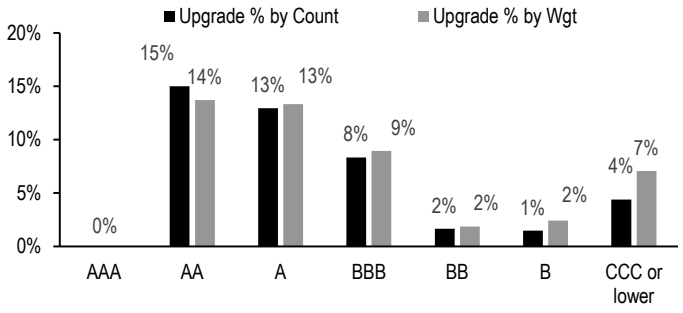
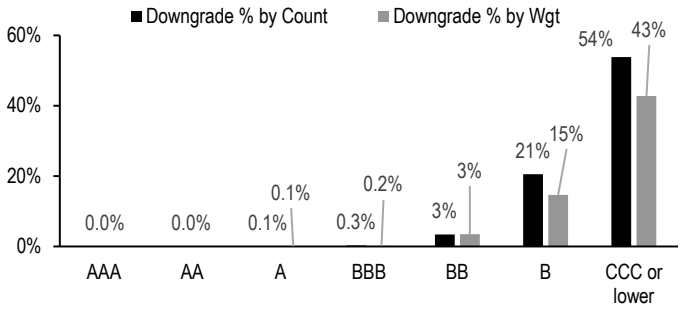
twenty-eight months (link). **With the rise in credit concerns, we focus on rating downgrades on the CLO liabilities which have remained fairly low.** The percentage of US CLO bonds in the CLOIE Index ($779.2bn) that have been downgraded since August 2023 is 2.3% by count and 0.4% by volume. Of the 2.3% of the CLOIE index (or 183 bonds) that has been downgraded by count since August 2023, 98% of bonds are no longer reinvesting while only 2% are currently in their reinvestment period. There have been no AAA or AA downgrades over the last year and activity has largely been concentrated lower down the capital stack. **By rating, 0.1% of Single-A, 0.3% of BBB, 3.4% of BB, 20.5% of Single-B, and 53.8% of CCC bonds in the CLOIE index have been downgraded over the last year (by count)(Figure 133)**.

Figure 132: CLO Tranche Upgrades over the past 1 year



Source: J.P. Morgan. Based on current rating from August 31st, 2023 and August 30th, 2024 CLOIE constituents.

Figure 133: CLO Tranche Downgrades over the past 1 year



Source: J.P. Morgan. Based on current rating from August 31st, 2023 and August 30th, 2024 CLOIE constituents.

We also capture CLO ratings migration over the life of each bond in the CLOIE index using original vs current rating. There have been considerable changes in the ratings composition in both mezzanine and senior tranches. **Currently, 32% of originally rated Single-Bs are now rated CCC or lower. This compares to 2020YE when 50% of originally rated Single-Bs had migrated to CCC or lower (link).** At the top of the capital structure, 9% of originally rated Single-As have been upgraded to AA (7.5%) or AAA (1.9%). Meanwhile, 9.5% of originally rated AAs have been upgraded to AAA. Looking at a current snapshot of the CLOIE index, there have been no downgrades for originally rated AAAs or AAs. There are overall no shifts across 100% of originally rated AAAs, 90.5% for AAs, 90.5% for Single-As, 97% for BBBs, 89% for BBs, and 66% of Single-Bs (based on CLOIE rebalance weight) (Table 2).

By vintage, downgrades have primarily occurred across the 2012-2015 vintages (Figure 134). This makes sense given that 84% (or 938 bonds) of the 2012-2015 vintage cohort are currently out of reinvestment period. This rises to 100% for those bonds (within the 2012-2015 vintage cohort) that have been downgraded. There is more dispersion for upgrades, but they are mainly concentrated within the 2013-2018 vintages.

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Table 2: CLOIE Index Rating Migration from Original to Current Rating

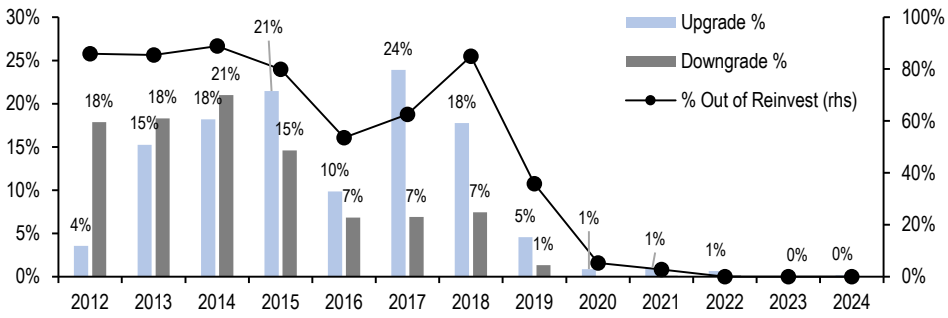
Rebalance Weight %

		Original Rating					
		AAA	AA	A	BBB	BB	B
Current Rating	AAA	100.00%	9.47%	1.89%	0.13%		
	AA		90.53%	7.54%	0.34%		
	A			90.53%	1.27%	0.01%	
	BBB			0.04%	97.00%	0.14%	
	BB				1.27%	88.94%	0.44%
	B					10.18%	66.39%
	CCC					0.56%	31.97%
	CC				0.00%	0.13%	1.15%
	C					0.02%	0.01%
	D					0.01%	
	NR					0.01%	0.04%

Source: J.P. Morgan, as of August 30th, 2024. Snapshot of bonds currently in CLOIE index. Values refer to the percentage of tranches by market weight that have had a rating shift.

Figure 134: CLO Tranche Upgrades & Downgrades over the life of each bond by Vintage

% by Bond Count



Source: Based on CLOIE constituents' original and current rating as of August 30th, 2024.

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North America Fixed Income Strategy
U.S. Fixed Income Markets Weekly
20 September 2024

J.P.Morgan

Municipal Markets Weekly

Easing Cycle and Flow, Pari Credit/Pre-Pay Rel Val, 2Q24 Fed Flow of Funds, S&L Tax Receipts

- The Fed delivered our forecasted 50bp rate cut, characterized as a "recalibration" to preserve the strong labor market from downside risks. Our expected 50bp November cut is contingent on further softening in the next two jobs reports. More benign labor data would, instead, seal the case for the FOMC's goldilocks scenario of 25bp eases per meeting over the remainder of the year.
- More dovish Fed action over the medium term should support lower front-end yields and steeper curves over time. **In the nearer term,** our rates team think the Treasury curve is likely to become more **rangebound.**
- The central assumption underpinning our belief that **ratios will cheapen leading up to the election** is the expectation of accelerated supply as we approach November. Indeed, tax-exempt (TE) issuance is expected to surge to **$14.1bn next week,** or 2.2x the trailing 5yr average for the equivalent week. If realized, this would mark the highest weekly level of TE issuance since the first week of June ($14.8bn), which was the highest volume since TE induced issuance in December 2017.
- We expect **TE issuance will remain elevated through October**, **averaging ~$11-$13bn/week.** This level of supply, particularly in a period where reinvestment capital is expected to average just $6bn/week, will be difficult for the market to digest without even larger new issue concessions, supporting our thesis that **this and next month could offer the best opportunity to buy** bonds of the year and possibly the rate cycle.
- LSEG Lipper data showed municipal fund inflows for weekly reporters for the **12th consecutive week (+$716mn),** bringing YTD inflows for weekly and monthly reporters to approximately +$24.7bn (+$17.1bn open-end funds/+$7.6bn ETFs).
- We find that municipal mutual funds experienced **sustained inflows in all six easing cycles**, dating back to 1992. Easing cycles that were reversed in relative short order such as in 1992, 1995, and 1998, saw relatively low inflows as a proportion of AUM at 13%, while periods where the funds rate held lower for longer (2007, 2019) saw higher average inflows as a proportion of AUM at 25%.
- We believe the **inflow cycle is now in its early stages,** with the broadest representation of municipal market fund flows according to LSEG Lipper, showing year-to-date inflows of $24.7bn. Our current view on the easing cycle calls for a cumulative 250bps of cuts, with 125bp of easing expected in 2024 and 2025. If this plays out as expected, it would suggest **a sizable inflow cycle through 2025.**
- At least some of the inflows are expected to come from tax-exempt money market funds, as their AUM shows a -83% correlation to long-dated municipal bond fund AUM.
- With IG corporate spread close to historic tights and muni/UST ratios close to YTD highs, **tax-exempt gas prepay bonds and IDR bonds appear cheap vs. corporate pari debt**. Specific examples provided herein.
- BLS data released today showed **unemployment rates increased in 40 states last month relative to Aug 2023**, 16 at a faster pace than the nation (+0.4ppt). On the positive side, unemployment rates in 78% of states in Aug 2024 were below the trailing 10yr average for the month (ex-2020).
- Census Bureau data showed **continued strength in S&L tax receipts in 2Q24**.

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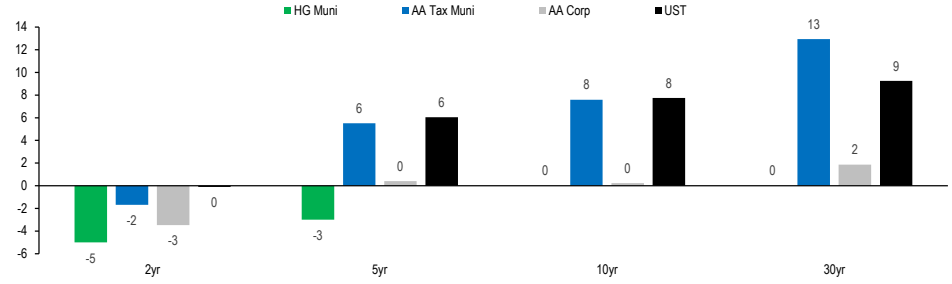
Beginning next week, and increasingly as we progress through the fall, investors may find cheaper tax-exempt levels as supply peaks and reinvestment capital plummets

The HG municipal scale was unchanged today, save for a 1bp bump in 3-4yrs, leaving yields over the week **lower by 5-3bps in 2-5yrs, respectively, and unchanged in 10-30yrs. These moves occurred in a backdrop of muted Fed-week supply ($6.5bn) and sustained inflows (29 consecutive positive sessions based on our daily observations and 12 straight positive weeks for weekly reporters, based on LSEG Lipper), and resulted in outperformance versus Treasuries by 5-9-8-9bps, respectively.**

Figure 135: HG municipal yields ended the week down by 5-3bps in 2-5yrs, respectively, and unchanged in 10-30yrs, outperforming Treasuries by 5-9-8-9bps, respectively

WTD yield change, bps



Source: Refinitiv, ICE, J.P. Morgan. Note: as of 9/20/2024, 3pm

Thus far this week, **tax-exempt secondary purchases rose approximately 11%** versus the 5-week average, while **bidwanteds fell by 9%,** against the Fed meeting induced pause in supply ($6.5bn). Customer purchases were up 4% in 0-5yrs, dipped 2% in 5-10yrs, but were higher by 16-23% in 20yrs and longer on the curve. Bidwanted volume was up 3% in 0-5yrs, but 12-18% below the 5-week average in 5yrs and longer on the curve.

The central assumption underpinning our belief that ratios will cheapen leading up to the election is the expectation of accelerated supply as we approach November (*Municipal Markets Weekly*, 9/13/24). Indeed, **tax-exempt issuance is expected to surge to $14.1bn next week, or 2.2x the trailing 5yr average for the equivalent week,** on the heels of this week's Fed-driven lull in supply. If realized, this would mark the highest weekly tax-exempt issuance since the first week of June ($14.8bn), which was the highest volume since tax-reform induced issuance in December 2017.

Over the next six weeks (through October), we expect tax-exempt volume will average $11-$13bn/week. In our view, this level of supply, and particularly coming in a period where **reinvestment capital is expected to average just $6bn/week,** matching the April-May low for the year, will be difficult for the market to digest without even larger new issue concessions, supporting our thesis that the next two months could offer the best opportunity to buy bonds of the year and possibly the rate cycle.

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Figure 136: Muni heat map

Period	Redemption and Coupon Payments ($bn)	Tax-Exempt Supply ($bns)	10yr UST Yield Change (bps)	Fund Flow ($bn)	10Yr Ratio Change (%)	IG Muni Total Return (%)
May 1-14	17	18	-24	0.5	1.4%	1.1%
May 15-31	11	24	7	-0.3	7.5%	-1.3%
June 1-15	20	23	-30	0.7	-2.7%	1.8%
June 16-30	9	21	27	-0.4	-2.1%	-0.2%
July 1-14	28	11	-25	1.1	2.1%	0.6%
July 15-30	7	24	3	1.7	-0.4%	0.3%
August 1-15	27	24	-18	1.4	0.3%	0.7%
August 16-31	15	18	-2	2.8	0.0%	0.1%
September 1-14	17	21	-26	2.2	2.8%	0.7%
September 15-30	5	19	9	0.6	-1.7%	0.2%
October 1-14	20	21				
October 15-30	4	23				

Source: : Refinitiv, Bloomberg Finance L.P., LSEG Lipper Fund Flow, J.P. Morgan. Note: as of 9/19/2024. Tax-exempt muni bonds only. Please note that the above figures will not foot to our monthly estimates for net supply as they do not consider cash flows from called securities.

Figure 137: Next week's economic calendar

23 Sep	24 Sep	25 Sep	26 Sep	27 Sep
Manufacturing PMI(9:45am) Sep flash **Services PMI**(9:45am) Sep flash Atlanta Fed President Bostic speaks(8:00am) Chicago Fed President Goolsbee speaks(10:15am) Minneapolis Fed President Kashkari speaks(1:00pm)	**Philadelphia Fed nonmanufacturing**(8:30am) Sep **FHFA HPI**(9:00am) Jul **S&P/Case-Shiller HPI**(9:00am) Jul **Richmond Fed survey**(10:00am) Sep **Consumer confidence**(10:00am) Sep Auction 2-year note $69bn	**New home sales**(10:00am) Aug Auction 2-year FRN (r) $28bn Auction 5-year note $70bn	**Real GDP**(8:30am) 2Q final **Durable goods prelim**(8:30am) Aug **Initial claims**(8:30am) w/e Sep 21 **Pending home sales**(10:00am) Aug **KC Fed survey**(11:00am) Sep Auction 7-year note $44bn Fed Chair Powell speaks(9:20am) New York Fed President Williams speaks(9:25am) Fed Vice Chair for Supervision Barr speaks(10:30am) Minneapolis Fed President Kashkari and Fed Vice Chair for Supervision Barr speak(1:00pm)	**Personal income**(8:30am) Aug **Advance economic indicators**(8:30am) Aug **Consumer sentiment**(10:00am) Sep final

Source: J.P. Morgan Economic Research

Yield and Spread Charts

Tax-exempt ratios suggest a solid entry point for corporate buyers. Investors may find value as supply pressure builds beginning next week, and in longer dated bonds in particular, amidst weaker reinvestment proceeds. MTD HG municipals are lagging Treasuries in 2-5-10-30yrs by 20-12-10-5bps, respectively. Absolute yields continue to look attractive in the context of the trading range over the past three years and our longer-term projections for lower rates this year.

		Current	WTD Chg	MTD Chg	3y Min	3-year YIELD range: ● Curent ▲ Last Month End — 1yr range	3y Max	z-score	Historical Averages: 1yr Avg	3yr Avg	5yr Avg	10yr Avg	20yr Avg	30yr Avg
HG Yield (%)	2yr	2.30	-5	-15	0.11		3.70	0.0	2.94	2.32	1.56	1.30	1.43	2.05
	5yr	2.31	-3	-11	0.41		3.51	0.0	2.72	2.28	1.60	1.52	1.83	2.51
	10yr	2.63	0	-8	0.94		3.61	0.3	2.76	2.44	1.88	1.96	2.49	3.15
	20yr	3.24	0	-8	1.29		4.33	0.3	3.49	3.02	2.41	2.53	3.18	3.86
	30yr	3.52	0	-8	1.48		4.57	0.4	3.78	3.24	2.62	2.72	3.42	4.06
UST Yield (%)	2yr	3.57	-0	-35	0.21		5.22	0.0	4.59	3.65	2.38	1.90	1.89	2.81
	5yr	3.48	+6	-23	0.83		4.96	0.0	4.23	3.46	2.38	2.13	2.35	3.28
	10yr	3.73	+8	-18	1.32		4.99	0.3	4.27	3.45	2.55	2.42	2.90	3.77
	20yr	4.11	+7	-18	1.76		5.33	0.4	4.57	3.78	2.94	2.77	3.36	4.26
	30yr	4.07	+9	-13	1.67		5.10	0.5	4.45	3.63	2.92	2.88	3.49	4.30
AA Corp Yield (%)	2yr	3.86	-1	-35	0.40		5.65	-0.1	4.91	3.98	2.71	2.28		
	5yr	3.90	+2	-25	1.16		5.55	-0.1	4.69	3.97	2.90	2.71		
	10yr	4.28	+2	-22	1.82		5.68	0.1	4.85	4.14	3.27	3.21		
	20yr	4.80	+1	-20	2.51		6.08	0.2	5.24	4.62	3.84	3.77		
		4.79	+2	-16	2.64		5.83	0.4	5.11	4.51	3.89	3.99		
AA Taxable Muni Yield (%)	2yr	3.99	+1	-37	0.49		5.61	0.0	4.95	4.02	2.83	2.32		
	5yr	3.98	+8	-26	1.14		5.61	-0.1	4.77	4.07	3.03	2.74		
	10yr	4.38	+9	-18	1.73		5.89	0.1	5.01	4.32	3.40	3.29		
	20yr	4.95	+7	-16	2.48		6.30	0.1	5.41	4.82	4.00	3.95		
	30yr	4.83	+11	-12	2.54		6.17	0.1	5.28	4.75	4.02	4.03		

Source: Refinitiv, ICE, J.P. Morgan.

Note: HG muni and UST yields as of 3pm 9/20/2024, other data as of 9/19/2024

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MTD muni/UST ratios are ~1-2ppts cheaper. While we expect even cheaper ratios as we proceed into the fall, **current levels on tax-exempts represent value versus taxable municipals and corporates in most areas of the curve** versus 1-3-5-10yr average ratios. **Ratios on 30yr AA tax-exempts are closest to the cheaper end of the range versus taxable alternatives.**

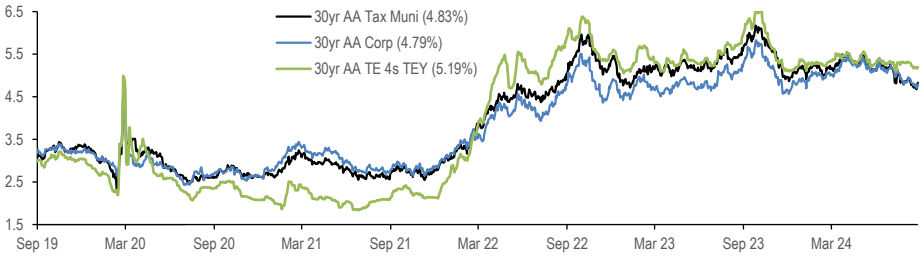
		Current	WTD Chg	MTD Chg	3-year RATIO range: 3y Min	3y Max	z-score	Historical Averages: 1yr Avg	3yr Avg	5yr Avg	10yr Avg	20yr Avg	30yr Avg
AAA HG/UST Ratio (%)	2yr	64.4%	-1.4%	+1.9%	31.7%	90.8%	0.1	64.0%	62.6%	84.7%	81.2%	89.1%	83.7%
	5yr	66.3%	-2.0%	+1.1%	43.9%	92.1%	0.1	64.1%	65.2%	75.5%	76.3%	81.8%	80.0%
	10yr	70.6%	-1.5%	+1.3%	56.4%	105.2%	-0.2	64.5%	71.9%	81.6%	85.5%	88.8%	86.4%
	20yr	78.8%	-1.4%	+1.4%	64.1%	99.6%	-0.2	76.2%	79.8%	86.1%	94.2%	96.8%	93.4%
	30yr	86.5%	-2.0%	+0.7%	73.3%	110.2%	-0.4	85.0%	89.3%	91.9%	95.4%	98.6%	95.9%
AA TE Muni/Taxable Muni Ratio (%)	2yr	61.5%	-1.6%	+2.5%	30.6%	84.2%	0.2	62.3%	59.3%	52.9%	57.5%		
	5yr	62.7%	-1.8%	+1.0%	42.9%	81.3%	0.4	61.2%	60.1%	55.5%	60.0%		
	10yr	63.3%	-1.0%	+0.5%	48.9%	85.0%	0.2	58.5%	62.0%	61.8%	66.1%		
	20yr	70.1%	-0.8%	+0.3%	49.0%	81.8%	0.4	68.5%	67.9%	64.5%	68.5%		
	30yr	78.8%	-1.5%	-0.5%	54.8%	87.7%	0.6	77.8%	74.9%	70.9%	73.2%		
AA TE Muni/Corp Ratio (%)	2yr	63.6%	-1.4%	+2.4%	32.4%	82.9%	0.4	62.9%	60.0%	61.4%	61.1%		
	5yr	64.0%	-1.0%	+0.9%	41.3%	81.5%	0.4	62.2%	61.3%	59.3%	60.9%		
	10yr	64.6%	+0.1%	+1.2%	52.3%	86.1%	0.1	60.3%	64.1%	64.0%	67.7%		
	20yr	72.3%	+0.1%	+1.0%	49.9%	84.0%	0.2	70.8%	70.7%	67.4%	71.9%		
	30yr	79.5%	-0.2%	+0.3%	54.0%	91.4%	0.1	80.3%	78.6%	72.8%	73.8%		

Source: Refinitiv, ICE, J.P. Morgan. Note: conditional formatting is based on current value and historical averages. Red indicates rich and green indicates cheap

Note: HG/UST ratios as of 3pm 9/20/2024, other data as of 9/19/2024

Based on a 21% tax rate, the taxable equivalent yield for 30yr AA 4% tax-exempts provides40bps of spread pickup over similar structure corporates. 30yr AA taxable munis also only offer modest spread versus similar structure US Corporates.

Figure 138: Based on a 21% tax rate, the taxable equivalent yield for 30yr AA 4% tax-exempts provides a pick-up over similar structure corporates

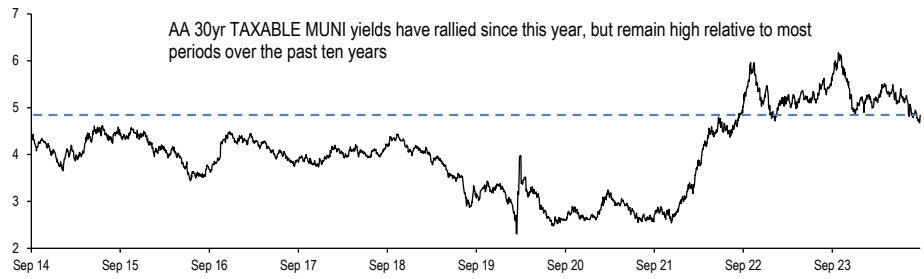


Source: ICE, J.P. Morgan. As of 9/19/2024

Taxable municipal market spreads to corporates have narrowed considerably in 2024. 30yr AA taxable and A rated taxable munis offer modest spread versus similar structure US Corporates. **The yield on 30yr AA taxable municipals (4.83%)has rallied since October but remains high relative to most periods over the past ten years.**

Figure 139: The yield on 30yr AA taxable municipals has rallied since October, but remains high relative to most periods over the past ten years

Yield, %



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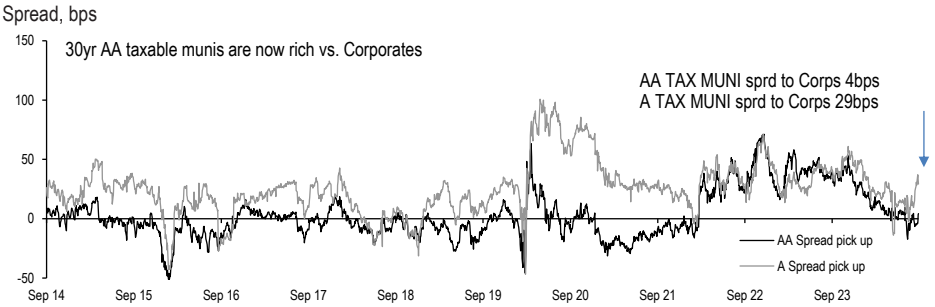

Source: ICE, J.P. Morgan
Note: As of 9/19/2024

This week's economic data pointed to a healthy U.S. consumer and labor market. The FOMC opted to cut the fed funds target by 50bps in a "recalibration" to preserve the currently strong labor market from downside risks

The section below contains excerpts from J.P. Morgan's Daily Economic Briefings (latest here) and our economists' commentary linked herein.

The Fed delivered our forecast for a 50bp rate cut, characterized by Chair Powell as a "recalibration" to preserve the currently strong labor market from downside risks. Looking forward, neither the post-meeting statement nor Powell's press conference gave guidance on the size or pace of rate cuts, though both indicated a bias to continue easing. Powell at times pointed to the latest dot plot, where **the median dot for this year points to two additional 25bp eases**, and **four more 25bp cuts next year**. In terms of our outlook, **we are still expecting a faster pace of rate normalization than the median dot**. **Our expectation for a 50bp cut at the next meeting** in early November is **contingent on further softening in the two jobs reports between now and then**. More benign labor data would, instead, seal the case for the FOMC's goldilocks scenario of 25bp eases per meeting over the remainder of the year (*An appropriate recalibration*, Michael Feroli, 9/18/24).

The view from our rates team: More dovish Fed action over the medium term should support lower front-end yields and steeper curves over time. In the nearer term, our rates team think the Treasury curve is likely to become more rangebound (*US Treasury Daily*, Jay Barry et al., 9/19/24).

Prior to the Fed meeting, Tuesday's **retail sales report reaffirmed that the US consumer is alive and well**, pointing to an above consensus 3%ar gain in real consumption this quarter. **A combination of solid wage gains and moderating inflation has generated a real purchasing power lift, fueling spending**. In the details, the closely watched control category rose 0.3%, and an upside surprise in motor vehicle sales brought the headline number above our expectations. **With consumer spending strong**, there is **material upside risk to our 1.5%ar 3Q24 GDP forecast**. The Atlanta Fed's GDPNow tool is tracking a 3%ar gain (*Retail sales – slower real PCE gains in Aug, strong 3Q*, Abiel Reinhart, 9/17/24).

Against the backdrop of a slowdown in hiring, **another good jobless claims report suggested that the labor market remains healthy**. In terms of the detail, initial jobless claims for the week ending September 14 fell to 219k from 231k and continuing claims for the week ending September 7 fell to 1.829mn from 1.843mn. **The four-week average for initial claims is now at its lowest level since early June**. That said, we are cautious about implying too much signal for payroll growth, which has been trending toward slower job gains (*Jobless claims still pretty good*, Abiel Reinhart, 9/19/24).

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In terms of manufacturing activity, the September Philadelphia Fed manufacturing survey sent mixed signals (*Mixed messages on manufacturing from Philly*, Abiel Reinhart, 9/19/24). While the ISM-weighted composite fell from 52.7 to 49.9, both the general business activity index and the employment index improved. Weaker new orders and shipments led the composite lower. **These readings contrast with Monday's Empire State survey**, which saw shipments post a big gain but employment stay weak (*A mostly strong Empire survey, but employment still soft*, Abiel Reinhart, 9/16/24). Neither Fed regional manufacturing survey lines up well with the manufacturing PMI and ISM surveys.

Turning to the housing market, existing home sales fell 2.5%m/m to a 3.86mn pace in August, close to the cycle low of 3.85mn. **While sales should soon find some support from the decline in mortgage rates, measures of pending sales from Redfin and Zillow still look soft.** On a more positive note, weekly mortgage applications have improved in each of the last four weeks (*Existing home sales sales yet to see a boost from rates*, Abiel Reinhart, 9/19/24). Meanwhile, housing starts rebounded 9.6% in August to a 1.356mn annualized pace. The rebound was concentrated in single-family starts (+15.8%), which reversed a large 12.8% plunge in July possibly influenced by Hurricane Beryl. Permits also increased 4.9% in August to 1.475mn. While **the August data somewhat tempers concerns following July's report that builders were slashing new projects to reduce inventory**, we are still tracking 3Q real residential investment near -10%q/q saar given **weakness in new structures investment and brokers commissions** (*Housing starts quickly rebounded after July plunge*, Abiel Reinhart, 9/18/24).

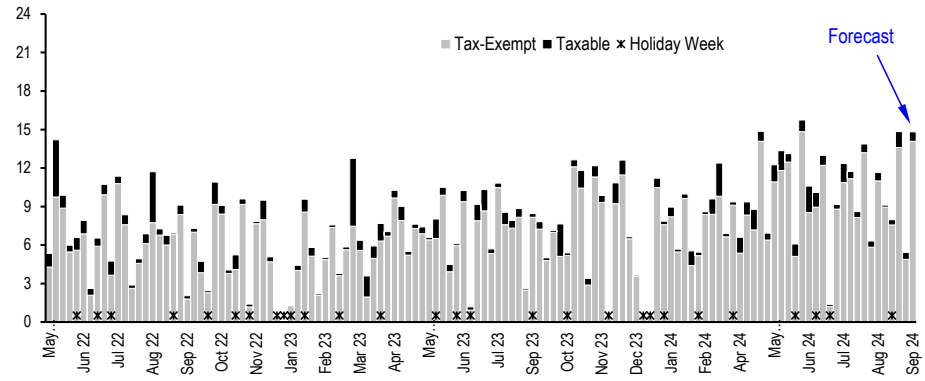
We expect tax-exempt supply to reaccelerate following this week's Fed-driven lull

Tax-exempt issuance is expected to surge to $14.1bn next week, or 2.2x the trailing 5yr average for the equivalent week, following this week's Fed-driven lull. If realized, this would mark **the highest weekly level of tax-exempt issuance since the first week of June ($14.8bn),** which was the highest volume since tax-reform induced issuance in December 2017. Meanwhile, expected taxable issuance of $0.7bn next week would be just 25% the average, bringing expected gross issuance to $14.8bn, or 1.6x the average.

The largest deals on next week's negotiated calendar currently include Texas Water Development Board, Los Angeles Unified School District, and the Port Authority of New York and New Jersey.

Figure 140: Historical and forecast weekly municipal issuance

Weekly Issuance, $bn's



Source: IPREO, Bloomberg Finance L.P., J.P. Morgan

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LSEG Lipper reported municipal fund inflows for a 12th consecutive week

LSEG Lipper reported weekly municipal fund inflows for the 12th consecutive week, totaling +$716mm for the period ending September 18, on inflows into both open-end funds (+$532mm) and ETFs (+$184mm). Long Term funds continued to drive the inflows (+$628mm), with Intermediate funds (+$107mm) also positive on the week. Meanwhile, flows out of Short/Intermediate funds (-$13mm) and Short Term funds (-$6mm) were relatively flat. In terms of credit quality, inflows were split pretty evenly between Investment Grade funds (+$327mm) and High Yield funds (+$389mm).

Weekly Only Reporters	Fund Flows ($mn)		
Week ended Sep 18, 2024	Total	Open-end Funds	ETF Funds
All term muni	716	532	184
Investment Grade	327	177	149
High Yield	389	355	35
Long Term (10yr+)	628	489	139
Intermediate (5-10yr)	107	43	64
Short / Intermediate (3-5yr)	(13)	(10)	(3)
Short (1-3yr)	(6)	9	(15)
National funds	608	454	154
New York	13	10	3
California	105	77	27
Tax-exempt money market	892		
Taxable money market	(29,376)		
Taxable Fixed Income	7,092	192	6,900
US & Global Equity	(1,859)	(4,608)	2,748

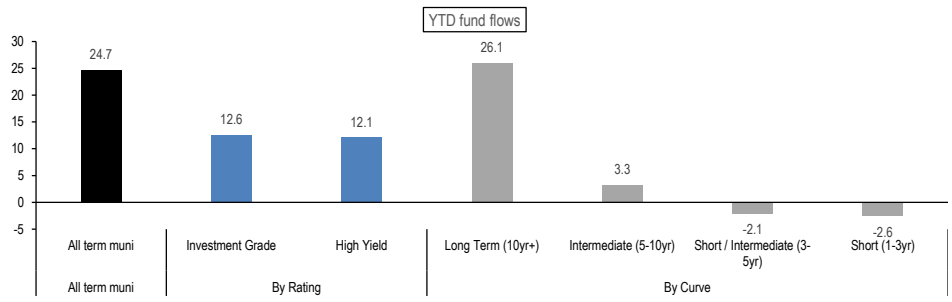
Source: LSEG Lipper Global Fund Flows, J.P. Morgan. Note: Figures shown on this table are weekly reporters only. Data refreshed on 9/19/24, 2pm read.

Inflows for the full month of August are tracking around +$5.0bn (+$3.5bn open-end funds/ +$1.5bn ETFs), unchanged from last week's read. This brings year-to-date inflows to approximately +$24.7bn (+$17.1bn open-end funds/+$7.6bn ETFs). Please see our *Municipal Weekly Fund Flows Update* for additional detail.

Weekly and Monthly Reporters	August Monthly Flow $mn			YTD Flow $mn		
	Combined	Open End Mutual Fund	ETF	Combined	Open End Mutual	ETF
All term muni	4,994	3,488	1,506	24,697	17,093	7,604
Investment Grade	3,043	1,608	1,435	12,555	5,065	7,490
High Yield	1,952	1,880	71	12,142	12,027	114
Long Term (10yr+)	5,177	3,885	1,292	26,059	20,176	5,883
Intermediate (5-10yr)	351	83	269	3,294	1,574	1,720
Short / Intermediate (3-5yr)	(151)	(88)	(62)	(2,103)	(1,537)	(567)
Short (1-3yr)	(384)	(391)	8	(2,553)	(3,121)	568
National funds	4,289	2,882	1,407	22,980	16,050	6,930
New York	120	109	11	361	239	121
California	517	431	86	2,274	1,724	550

Source: LSEG Lipper Global Fund Flows, J.P. Morgan. Note: Figures shown on this table are combination of weekly and monthly reporters. Figures are as reported on 9/19/24 at 2pm, and may evolve as more month-end data is reported.

YTD fund flow, $bn



Source: LSEG Lipper Global Fund Flows, J.P. Morgan. Note: Figures shown on this table are combination of weekly and monthly reporters. Data refreshed on 9/19/24 at 2pm. Includes all weekly and monthly flows recorded to date. Data may be updated in future business days of the month.

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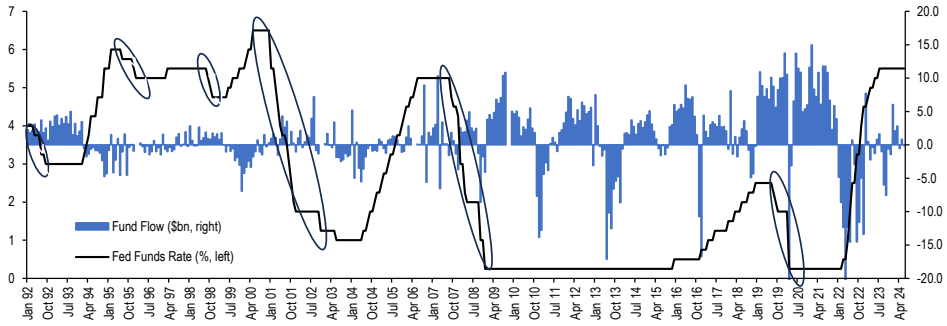
We expect that the easing cycle will induce some flow of capital out of tax-exempt money market funds and into longer-dated bond funds

This week, the Fed kicked off an expected 10-month easing cycle. In our August 2nd report (LINK) we illustrated that municipal mutual funds experienced sustained inflows in all six of the last easing cycles, dating back to 1992. **Easing cycles that were reversed in relative short order such as in 1992, 1995, and 1998, saw relatively low inflows as a proportion of AUM at 13%, while periods where the funds rate held lower for longer (2007, 2019) saw higher average inflows as a proportion of AUM at 25%.**

Figure 141: Municipal mutual funds experienced sustained inflows in all six of the last easing cycles, dating back to 1992

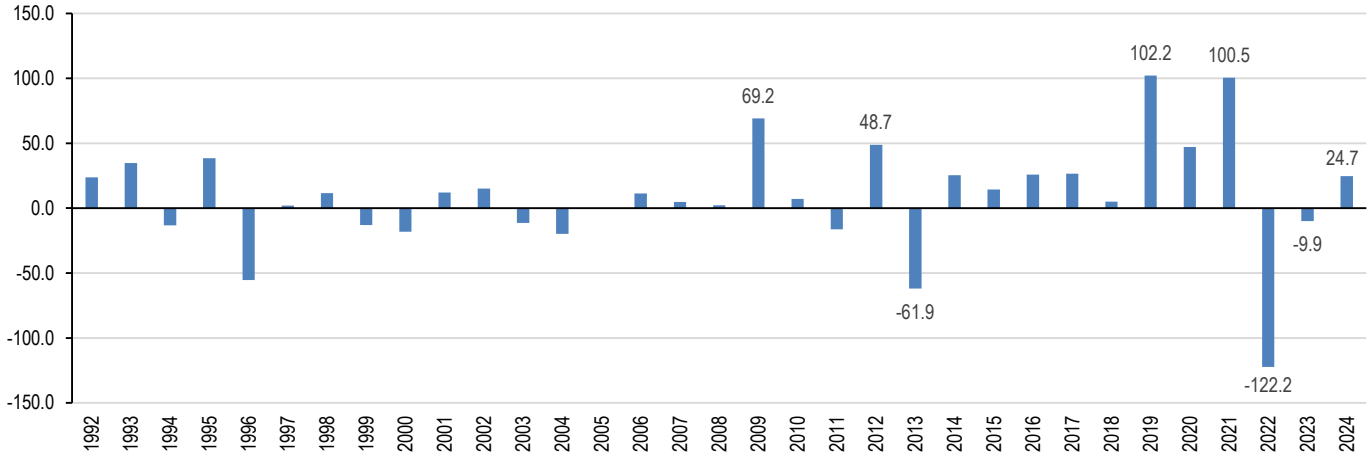
Fed funds rate, % (left) and muni fund flow, $bn (right)



Source: LSEG Global Lipper Fund Flow, J.P. Morgan.

We believe the inflow cycle is now in its early stages. As reported above, thus far in 2024, the broadest representation of municipal market fund flows according to LSEG Lipper, **shows year-to-date inflows $24.7bn.** Our current view on the easing cycle calls for a cumulative 250bps of cuts, with 125bp of easing expected in 2024 and 2025. If this plays out as expected, it would **suggest a sizable inflow cycle through 2025.** Please see annual flows below for context.

Annual all term muni fund flow, $bn



Source: LSEG Lipper Global Fund Flows, J.P. Morgan. Note: Figures shown on this table are a combination of weekly and monthly reporters. Data refreshed on 9/19/24 at 2pm.

Naturally, as the Fed progresses deeper into the easing cycle, investment in tax-exempt money market funds becomes less attractive. Historically, this has ultimately resulted in a migra-

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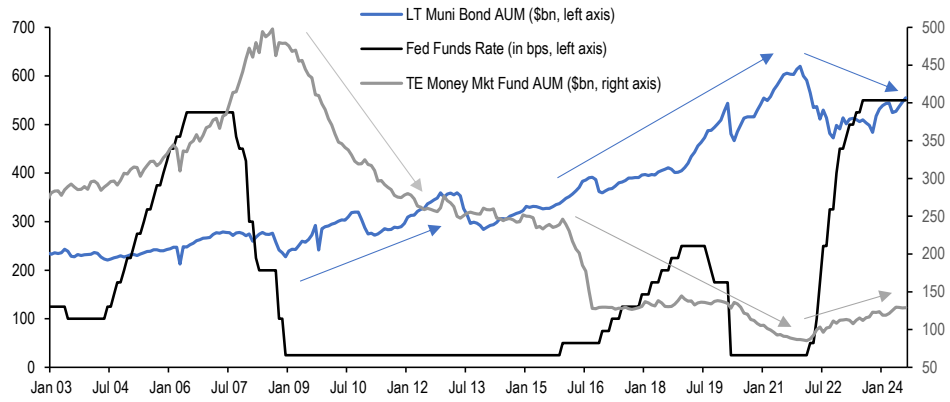
tion of capital out of tax-exempt money market funds and into longer dated tax-exempt funds. While money market reform (in 2016) significantly reduced the assets under management in tax-exempt money market funds, in the figure below, we can clearly see that over broader cycles, money market fund AUM is negatively correlated to long-term tax-exempt fund AUM. **Over the period represented in the figure below, the correction of tax-exempt money market fund AUM to long-term tax-exempt fund AUM is -83% (Figure 142).**

Looking at the AUM of tax-exempt money market funds from the lows of the cycle in February of 2022, through the peak this year at the end of July, **tax-exempt money market AUM rose $43bn.** Not coincidentally, over that same period, **long-term tax-exempt bond fund AUM fell by $45bn**. Based on the longer term capital flow trends, it is not unreasonable to expect this capital to revert back into longer term tax-exempt funds over time.

Figure 142: Over the period represented in the figure below, the correction of tax-exempt money market fund AUM to long-term tax-exempt fund AUM is -83%



Source: LSEG Lipper Global Fund Flows, J.P. Morgan. Note: as of 8/31/2024

With the massive growth in taxable money market funds, now at $6tn, we have also fielded questions about whether the massive cash store of capital might migrate further out on the curve and crossover into long-term tax-exempt funds. In an effort to quantify the historical relationship, we ran a similar correlation of the AUM of taxable money market funds to the AUM on long-term tax-exempt funds. The correlation over the period from 2003 to present, showed **a positive correlation of 85%, suggesting that, broadly speaking, flows between long-dated tax-exempt funds and taxable money market funds tend to move in the same direction, and this capital would likely not be a source of inflows over the expected easing cycle.**

More analysis is warranted inclusive of equities, to gain a greater understanding of the behavior of capital flows around easing cycles.

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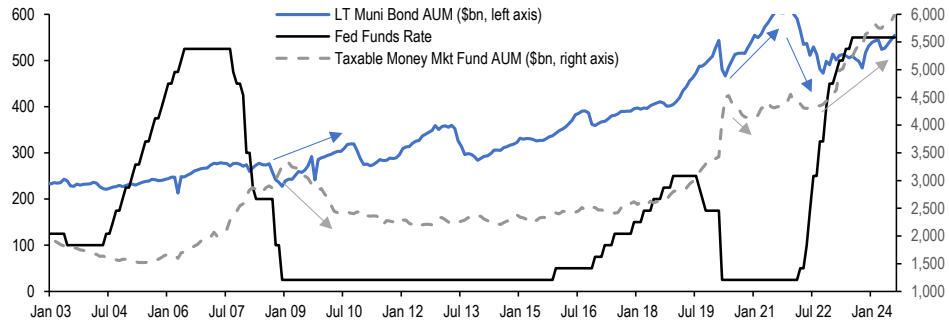
Figure 143: We find a positive correlation of 85%, between the AUM of long-dated tax-exempt funds and taxable money market funds, suggesting that outflows from taxable money market funds would not be a source of long-term tax-exempt fund inflows over the expected easing cycle



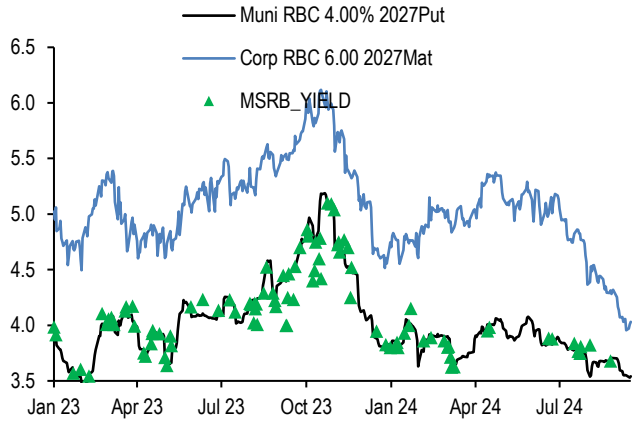
Source: LSEG Lipper Global Fund Flows, J.P. Morgan. Note: as of 8/31/2024

Tax-exempt gas prepay bonds and IDR bonds appear cheap vs. their corporate pari debt

With IG corporate spreads close to historic tights and muni/UST ratios close to YTD highs, tax-exempt gas prepay bonds and IDR bonds appear cheap vs. corporate pari debt

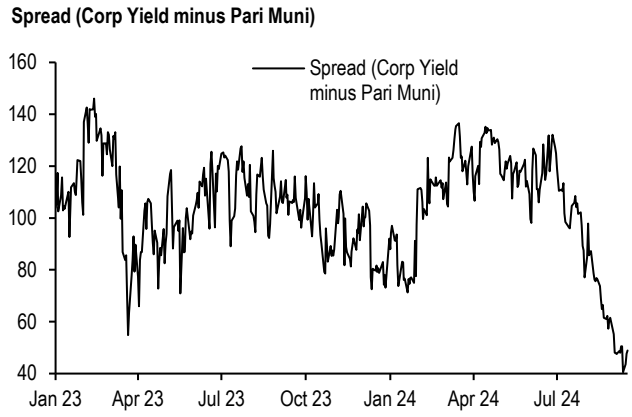
For example, a RBC-backed tax-exempt gas prepay bond (56035DDH2, 4%, 2027 Put) is currently yielding 49bps less than its corporate pari bond (US78016FZU10, 6.0%, 2027 Maturity), **the tightest level since the bond was sold in 2022, or 2.7 sigma below 21 month average.** The underperformance started at the end of April 2024, when tax-exempt muni supply surged. Currently the tax-exempt gas prepay bond yield is ~88% of the corporate bond yield.

Figure 144: RBC backed tax-exempt gas prepay bond is currently yielding 49bps below its corporate pari bond, tightest since the bond was sold in 2022, or 2.7 sigma below 21 month average



Source: ICE, MSRB, J.P. Morgan

Figure 145: Currently tax-exempt gas prepay bond yield is ~88% of the corporate bond yield



Source: ICE, MSRB, J.P. Morgan

A similar conclusion can be found in CIBC backed gas prepay bonds (09182TBL0, 5% cpn, 2028 Put) also lagged the rally by its corporate pari bond (US13607LWV16, 5.99% cpn, 2028 Maturity) recently. Since July, the spread of the corporate CIBC bond over the tax-exempt CIBC gas prepay bond declined to just 64bps, vs. 130bps in September 2023, also marking the lowest level since the two bonds were issued, **or 2.6 sigma below one year average.**

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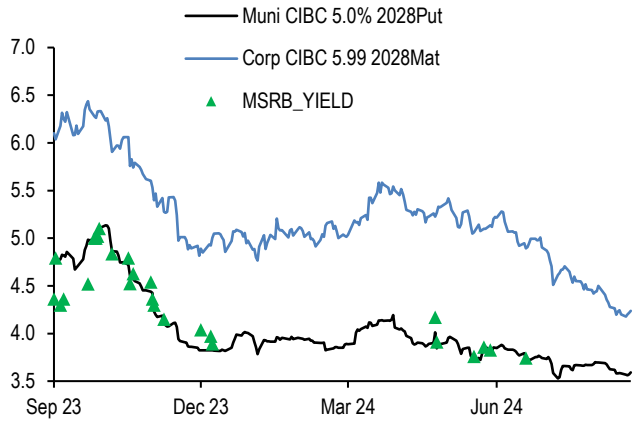
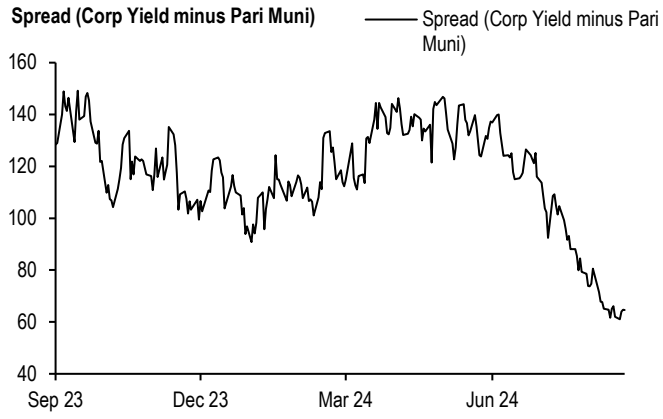
Figure 146: CIBC backed gas prepay bond also lagged the rally of its corporate pari bond recently



Source: ICE, MSRB, J.P. Morgan

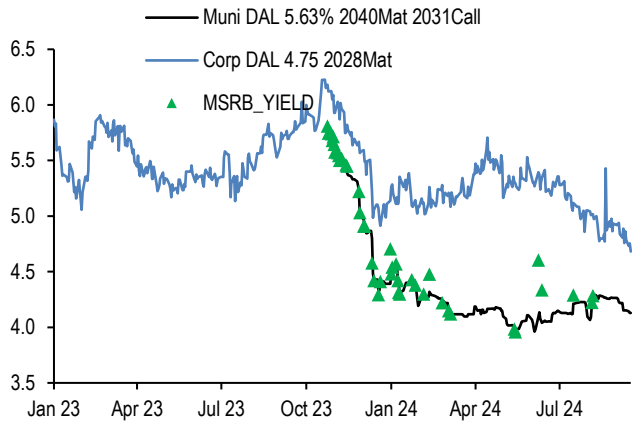
Figure 147: Since July spread of corporate CIBC bond over tax-exempt CIBC gas prepay bonds declined to just 64bps vs. 130bps in September 2023, or 2.6 sigma below one year average



Source: ICE, MSRB, J.P. Morgan

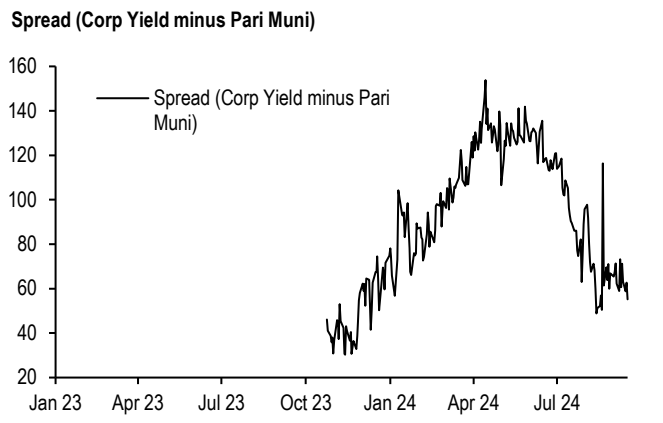
Delta Airline tax-exempt bonds (650116GP5, 5.63%, 2040Mat, 2031 Call) are currently yielding just 55bps below its longest corporate pari debt (US830867AB33, 4.75%, 2028Mat), vs. YTD high of 154bps in April. As illustrated in Figure 148 and Figure 149, **since Apr 2024, Corp DAL bond yields declined along with Treasuries, while tax-exempt DAL bonds yield even moved higher. Tax-exempt DAL bonds lagged the Corp DAL bond by ~100bps over the last five months, or 1.1 stdev cheaper vs. the corporate pari bond.**

Figure 148: Delta Airline tax-exempt bonds are currently yielding just 55bps below its longest corporate pari debt, vs. YTD high of 154bps in April



Source: ICE, MSRB, J.P. Morgan

Figure 149: Tax-exempt DAL bonds lagged the Corp DAL bond by ~100bps over the last five months, or 1.1 stdev cheaper vs. the corporate pari bond



Source: ICE, MSRB, J.P. Morgan

Moving to the shorter end, Waste Management's Corp bond yield and tax-exempt gas prepay bond yields have converged since April 2024. WM-backed tax-exempt bonds (130536QS7, 3.63%, 2027Mat, 2025Call) have underperformed pari corporate bonds (US94106LBE83, 3.15%, 2027Mat) by ~100bps since April 2024, also close to the three year low, at 37bps, 1.5 sigma cheaper based on more than 3yrs data. **As such, the tax-exempt bonds are cheap versus the trailing 3yr average spread.**

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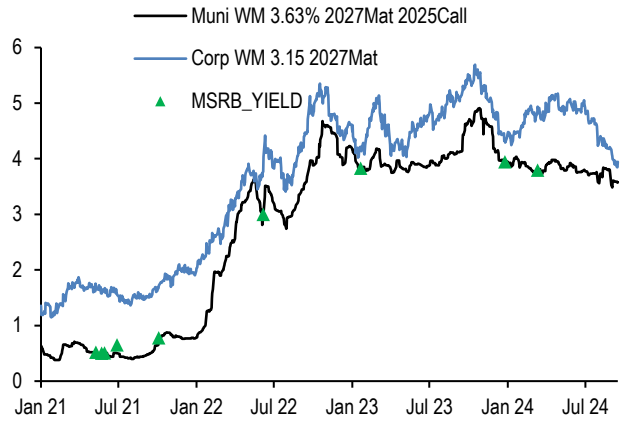
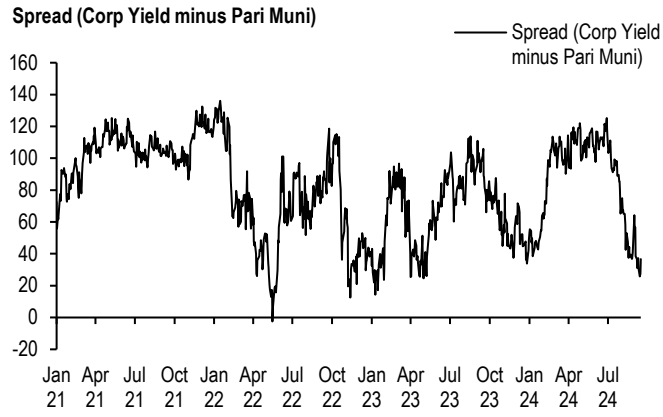
Figure 150: Waste Management's Corp bond yield and tax-exempt gas prepay bonds yield have converged since April 2024



Source: ICE, MSRB, J.P. Morgan

Figure 151: WM-backed tax-exempt bonds have underperformed pari corporate bonds by ~100bps since April 2024, also close to the three year low, 1.5 sigma cheaper based on more than 3yrs data



Source: ICE, MSRB, J.P. Morgan

State unemployment rate update

State-level unemployment data for August was released by the BLS this morning. **For context, recall that the U.S. unemployment rate rounded down from 4.3% in July to 4.2% last month, but was 0.4 percentage point higher than in August 2023** (*Trend job growth keeps slowing*, Michael Feroli, 9/6/24). Key takeaways from the state-level data:

- Unemployment rates increased in 39 states and DC relative to August 2023, 16 at a faster pace than the nation (+0.4ppt). The **largest y/y increases were seen in RI (+1.7ppt), SC (+1.4ppt) and OH (+1.0ppt).** The **best performance was recorded by Arizona (-0.7ppt), Mississippi (-0.5ppt), Wisconsin and Connecticut (-0.4ppt each).**
- On the positive side, unemployment rates in 39 states and DC (coincidentally the same count in the comparison above) in August 2024 were below the 10yr trailing average for the month (ex-Aug 2020). **The ten states with above-average rates in August 2024 were California, Colorado, Idaho, Illinois, Indiana, Kentucky, Missouri, South Carolina, Utah, and Washington.**
- Nine states had rates above 4.5% in August, down from ten in July; Rhode Island left the group with a 0.1 percentage point improvement (Figure 5).
- **Three states (CA, IL, NV) and DC had rates above 5.0%;** this is unchanged from July.

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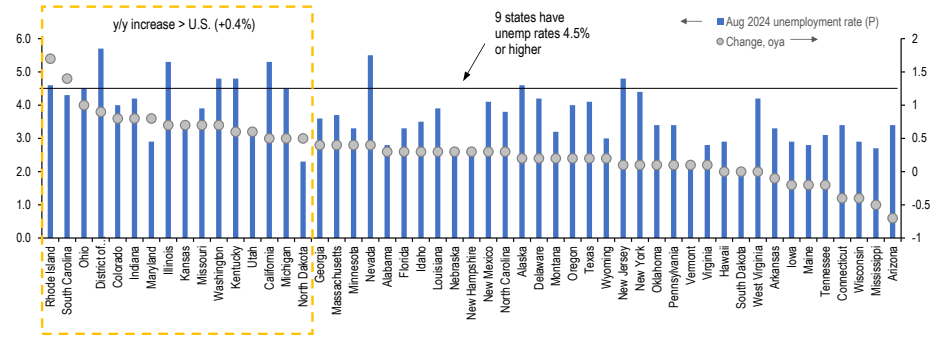
Figure 152: Y/Y, unemployment rates rose in 39 states and DC in August, 16 at a faster pace than the nation

Aug 2024 prelim state unemployment rate (%) (left axis); change in unemployment rate (%), oya (right axis). Sorted in descending order of % oya change.



Note: August 2024 data is preliminary.
Source: U.S. Bureau of Labor Statistics, J.P. Morgan

State and local tax receipts remain elevated on moderate growth in 2Q24, through the noise related to California's tax filing deadline extension last year

Herein, **we review Census Bureau data (through 2Q24) to examine trends in state and local tax receipts.** The data is reported on a nominal basis and all statistics referred to in the following text are not seasonally adjusted (NSA). High level takeaways:

- **State and local tax receipts increased in 2Q24 by +7.4% compared to 2Q23,** which, notably, was a relatively weak quarter due to noise related to California's tax filing deadline extension. This follows three quarters of y/y revenue growth averaging +4.4%, and the CA-driven contraction in 2Q23 (-8.2% y/y).
- Compared to 2Q22 (the highest 2Q on record for collections), **state and local tax receipts in 2Q24 were down 1.9%.**
- Compared to the trailing 5-year average for the quarter, **state and local tax receipts in 2Q24 were up 17.9%.**
- Over the last four quarters, **state and local tax receipts are up +5.2% y/y** (Figure 155), with growth across all major revenue streams, including individual income tax (+4.9%), property tax (+8.1%), sales tax (+0.9%) and corporate income tax (+8.2%) (Figure 154). That said, this revenue growth is also **biased upward by California's timing variance.** Recall, the 2023 mid-April tax filing deadline was extended to October in California, which delayed receipt of what are typically highly seasonal collections into 4Q23 (vs. 2Q typical).
- Excluding the state of California (but not the localities within, given data availability), **state and local tax receipts grew by a more moderate +2.6% y/y in 2Q24 (Figure 153).**
- Excluding local receipts, 32 states reported y/y growth in total major tax receipts in 2Q24. **Receipts were up strongly in Idaho (+49.2% /+$1.0bn y/y), South Carolina (+27.8% / +$1.3bn), Massachusetts and New York (+8.5% / +$2.6bn).** Weaker relative performance was recorded by Nebraska (-26.7% / -$561mn), Colorado (-9.7% / -$541mn), and West Virginia (-12.9% / -$284mn).

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Figure 153: Excluding the state of California (but not the localities within, given data availability), S&L tax receipts grew by a more moderate +2.6% y/y in 2Q24

2Q24 y/y revenue growth (%)

		US	US Ex-CA
Total Tax Revenue		7.4%	2.6%
Property		8.1%	8.1%
Income	Individual	11.9%	2.1%
	Corporate	7.2%	-3.1%
Sales		2.6%	2.8%

Source: U.S. Census Bureau, J.P. Morgan. Not seasonally adjusted.

Figure 154: Over the last four quarters, state and local tax receipts are up +5.2% y/y, with growth across all major revenue streams, also biased upward by CA

	Last 4 quarters ending 2Q24	vs. 4 quarters ending 2Q23
Total Tax Revenue	2,074,443	+5.2%
Individual Income	529,120	+4.9%
Property	784,030	+8.1%
Sales	581,093	+0.9%
Corporate Income	180,198	+8.2%

Source: U.S. Census Bureau, J.P. Morgan. Not seasonally adjusted.

Figure 155: Over the last four quarters, state and local tax receipts are up +5.2% y/y, reaching $2.07tn

Total state and local tax revenue, 4 Quarters Ending ($mn)

Source: U.S. Census Bureau, retrieved from FRED, Federal Reserve Bank of St. Louis

Statistics by major tax source:

(1) Individual income taxes (42% of total state receipts/5% of local): Individual income tax receipts increased +11.9% y/y in 2Q24 (ex-California, +2.1%). This follows a decrease of 1.7% y/y in 1Q24, an increase of +7.9% y/y in 4Q23, declines of -0.02% in 3Q23, -27.8% in 2Q23, -21.9% in 1Q23 -12.4% in 4Q22, -4.8% in 3Q22 and increases of +14.2% in 2Q22, +22.4% in 1Q22 and +24.4% in 4Q21. Key drivers of volatility in individual income tax receipts are discussed in detail in our Mid-Year Outlook and include: (i) California, in regards to both timing variance and the makeup of its tax base, (ii) state tax cuts, and (iii) elective pass-through entity tax programs.

(2) Property taxes (2% of total state receipts/81% of local): Consistent with strong post-pandemic growth in home prices, **property tax receipts expanded for a ninth consecutive quarter, with growth of +8.1% y/y in 2Q24.** Over the last four quarters, property taxes are up 8.1% y/y.

(3) Sales taxes (42% of total state receipts/5% of local): As noted by our economists, **a combination of solid wage gains and moderating inflation has generated a real purchasing power lift, fueling spending.** Sales tax receipts advanced for a 16th consecutive quarter on a y/y basis. Earlier growth rates suggested deceleration, with four quarters of sub-2% y/y revenue increases (+0.3% in 1Q24, +1.4% in 4Q23, +0.2% in 3Q23, and +0.6% in 2Q23), following +6.9% in 1Q23, +7.0% in 4Q22 and six prior quarters of y/y revenue increases that averaged +16.9%. This deceleration is consistent with the moderation seen in inflation, although sales tax growth in 2Q24 did come in above 2% (+2.6% y/y).

(4) Corporate income taxes (14% of total state receipts/1% of local): Corporate income tax receipts, which are historically volatile due to variance in corporate profits and timing of payments, **increased by +7.2% y/y in 2Q24.** Elective pass-through entity tax programs also may be a source of some noise in this revenue stream.

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The municipal market expanded by +1.1% q/q and +1.8% y/y in 2Q24, surpassing $4.1tn, driven primarily by households

The municipal market surpassed $4.1tn in 2Q24, expanding by +1.1% on a quarter-over-quarter basis and by +1.8% on a year-ago basis, according to the Fed's Z.1 data released last week, as tax-exempt supply surged over the period. This follows two quarterly gains (+0.6% in 1Q24, and +0.3% in 4Q23) and a slight contraction in 3Q23 (-0.3%) (Figure 156). For further context, the market expanded by 0.5% in 2023, following a decline in 2022 (-1.3%) and three prior years of growth (+2.0% in 2021, +2.3% in 2020, and +0.4% in 2019).

In terms of the detail, the higher yield milieu attracted capital from investors subject to individual tax rates, as their holdings increased by 5.6% y/y (+$154bn), while holdings subject to corporate tax rates declined 8.4% (-$83bn). **On a q/q basis, holdings subject to individual tax rates increased 1.8% (+$53bn) and holdings subject to corporate tax rates decreased -2.7% (-$25bn).**

In terms of ownership, Figure 157 shows that households continue to comprise a plurality of the municipal market, with 44.6% ownership as of 2Q24, up a tick q/q (44.5% in 1Q24) and up from 42.5% oya. And together with mutual funds, MMFs, closed-end funds, and ETFs, holdings subject to individual tax rates accounted for 72.1% of the market, up from 69.7% in 2Q23, as ownership by institutions subject to corporate tax rates contracted by 2.6 percentage points to 22.4%.

Of course, the shift in ownership in the municipal market began with the passage of the 2017 Tax Cuts and Jobs Act (TCJA), which permanently reduced the U.S. corporate tax rate from 35% to 21%, starting in 2018. **Indeed, municipal holdings by institutions subject to the corporate tax rate have contracted by 19.0% over 4Q17-2Q24 (Figure 161).** In contrast, holdings subject to the individual income tax rate increased by 2.7% over the same period (Figure 164). Put another way, ownership of the municipal market continues to shift away from institutions subject to the corporate tax rate (from 27% in 4Q17 to 22% in 2Q24) toward households and products subject to individual tax rates (from 69% to 72%) (Figure 158).

Unless there are changes to the tax code, in 2026, the current top Federal individual income tax rate of 40.8% (37% + 3.8% ACA tax on interest income) will bump to 43.4% (39.6%+ 3.8%). This would drive a further advantage in the taxable equivalent yield on tax-exempt municipals for investors that are subject to individual taxes versus those subject to corporate taxes. We expect this would continue to skew ownership toward individuals. Meanwhile, **a scenario where a future US administration raises the corporate tax rate would renew demand for tax-exempt securities from institutions subject to the corporate rate.**

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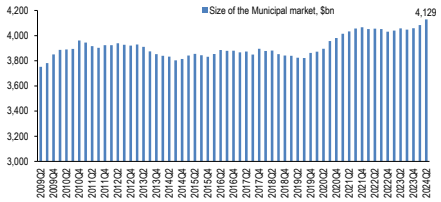
Figure 156: The municipal market expanded by 1.1% q/q (+1.8% y/y) in 2Q24

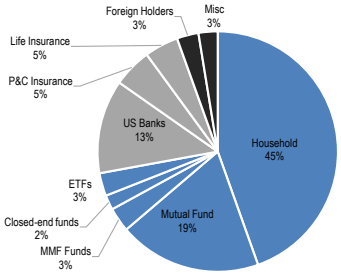
Size of municipal market, $bn



Source: Federal Reserve Z.1, J.P. Morgan

Figure 157: Muni bond holders subject to individual tax rates represented 69% of the market in 2Q24

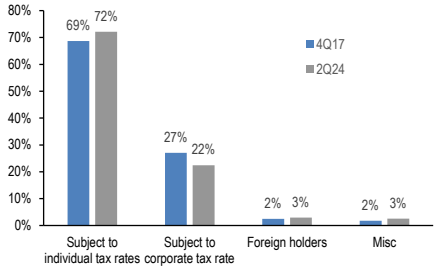
Proportion of the municipal market held by investor classes, %



Holders subject to individual (corporate) tax rates shaded in blue (gray)
Source: Federal Reserve Z.1, J.P. Morgan

Figure 158: Ownership post-TCJA has shifted toward individuals

Proportion of the municipal market held by investor classes, %



Source: Federal Reserve Z.1, J.P. Morgan

Holdings subject to corporate tax rates decreased by -2.7% ($25bn) q/q and -8.4% ($83bn) on a y/y basis in 2Q24

Holdings subject to corporate tax rates decreased by 2.7% q/q (Figure 159), marking a fifth contraction in the last six quarters and a 10th in the last 12 quarters. **On a year-ago basis, corporate holdings are down 8.4% (to $904bn), led lower on a percentage basis by P&C insurers (-9.4% to $210bn), U.S. banks (-8.9% to $509bn) and life insurers (-5.5% to $184bn) (Figure 160).**

We believe the quarterly and y/y contraction in bank ownership is attributable to generally better yield in short/intermediate-term mortgage backed securities, and lesser need for long-duration investment assets. Discord within the regional banking system in 2023 could also have some impact on the y/y change. Meanwhile, we believe the corporate tax rate cut in the TCJA has driven the ongoing decline in P&C insurer's muni ownership, which is down 37.9% relative to the last pre-TCJA period (4Q17) (Figure 161). We believe the meaningful decline in taxable municipal issuance in recent years has restrained growth in life insurance ownership.

Worth noting, we have seen a **recent increase in bank and insurance based interest for tax-exempts** given the 3ppts cheapening in ratios in the longer portion of the market. As such, **we expect a lesser decline in corporate ownership in 3Q24.**

Figure 159: Muni bond holdings by institutions subject to the corp tax rate decreased by 2.7% q/q...

q/q change, %

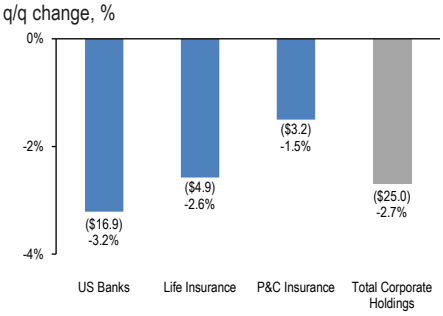


Figure 160: ...and were down 8.4% on a year ago basis...

y/y change, %

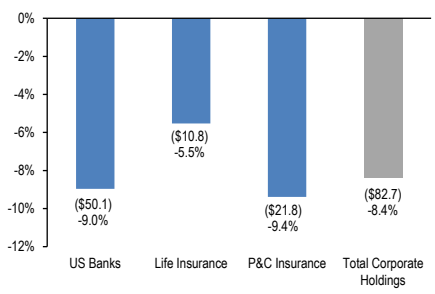
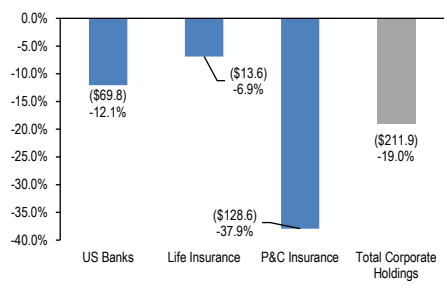


Figure 161: ..and remain well below the last pre-TCJA period (-19.0%)

2Q24 vs. 4Q17, %



Source: Federal Reserve Z.1, J.P. Morgan

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Holdings subject to individual tax rates increased by +1.9% q/q and +5.6% y/y in 2Q24

Figure 162 shows that the quarter-over-quarter increase in holdings subject to individual tax rates (+5.6%/+$154bn) was driven by household ownership (+6.9%/+$117bn). This follows four consecutive quarters of year-over-growth, averaging +3.4%. Meanwhile, ETFs led on a percentage basis (+15.7%/+$16.9bn), followed by money market fund holdings (+9.3%/+$11.2bn).

Year over year, ownership by all holder types subject to individual tax rates increased (Figure 163). Specifically, household holdings were up +2.4% y/y – likely boosted by SMA growth - with increases also seen in ETFs (+1.7%), money market funds (+3.4%) and mutual funds (+0.5%). In aggregate, holdings subject to individual tax rates increased by 1.8% y/y in 2Q24.

Figure 162: Holdings subject to individual tax rates increased by 5.6% in 1Q24...

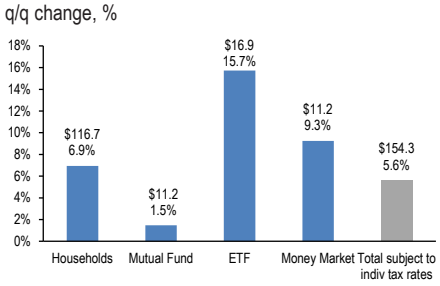


Figure 163: ...are 1.8% higher on a year ago basis...

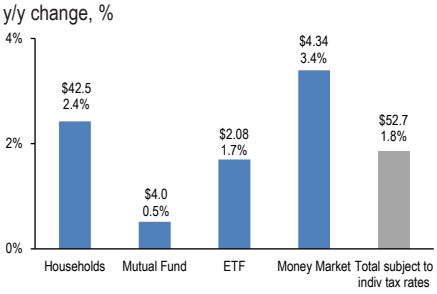
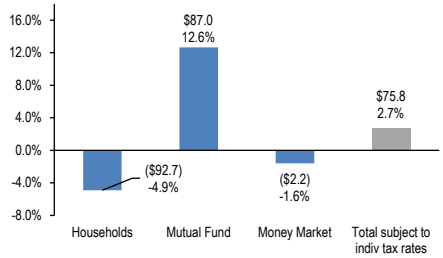


Figure 164: ...and higher relative to the last pre-TCJA period



Source: Federal Reserve Z.1, J.P. Morgan

Recall, the Fed's Z.1 report does not breakout SMA ownership. Using our estimate of SMA AUM from our YE23 survey as a proxy (survey results, 3/15/24), we estimate that approximately half of household ownership and 22% of the market overall is comprised by SMAs. Note that we believe SMA AUM has expanded since our survey, **suggesting that this product may now comprise a slight majority of household ownership** and a larger share of overall ownership.

Growth in household ownership was also observed in other asset classes (Figure 165 and Figure 166). Specifically, on a year-ago basis, household ownership of Treasuries increased by $359bn (+15.0%), money market funds increased by $503bn (+13.9%), **and ownership of corporate bonds increased by $30mn (+9.3%). This compares with an increase of $117mn (+6.9%) for municipals.**

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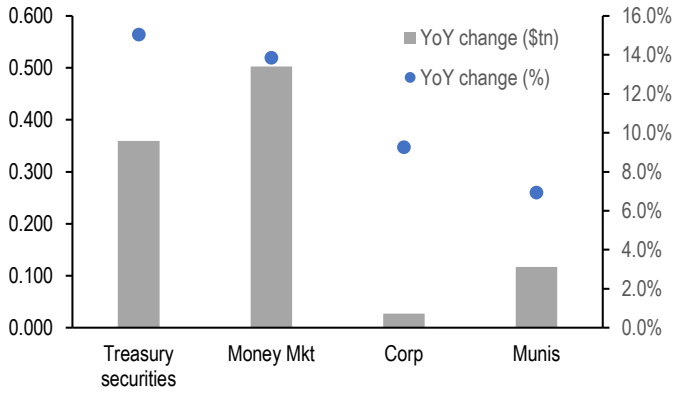
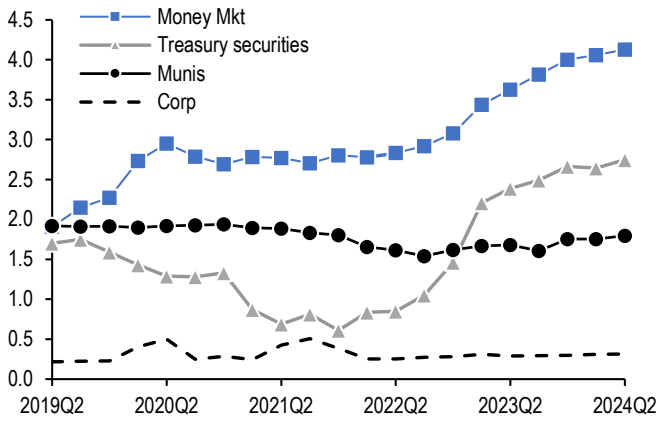
Figure 165: Growth in household ownership was not discriminate in terms of asset class



Source: Federal Reserve Z.1, J.P. Morgan

Figure 166: Household ownership by asset class

Household ownership by asset class ($tn)



Source: Federal Reserve Z.1, J.P. Morgan

BAB ERP tracker

In 2024, we have identified ~45 unique issuers that have either called BABs (31 issuers, affecting $12.9bn of debt), posted conditional calls (7 issuers, set to impact $1.7bn of debt), or announced that they are considering financing plans in this regard (13 issuers, potentially impacting $5.6bn of debt). Totaling YTD calls and notices of potential redemptions, BAB ERP activity would total about $20bn for the year. Please note that this list is constantly evolving.

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Figure 167: BAB ERP Tracker

Ultimate Borrower	CUSIPs	Call Date	Total Amount
Sthrn CA Pub Pwr	84247PEP2	1/19/2024	41,550,000
VA Trn Brd	927793TC3	3/14/2024	266,100,000
University of CA	91412F7Y7, 91412GDZ5, 91412GEA9, 91412GDY8	3/27/2024	1,215,130,000
State of WA	93974CRC6, 93974CRD4, 93974CRF9, 93974CRE2, 93974CPK0, 93974CPL8, 93974CPM6	4/1/2024	1,222,545,000
Purdue University	746189QT9, 746189QU6, 746189QV4	4/2/2024	60,040,000
NYS EFC SRF	64986AL58, 64986AL66, 64986AL74, 64986AL82, 64986AL90, 64986AL25	4/2/2024	155,875,000
MD Trans Auth	574300HZ5, 574300JQ3, 574300HY8, 574300JP5, 574300JN0	4/5/2024	721,135,000
NC Turnpike Auth	658308AF8, 658308AA9, 658308AB7	4/8/2024	208,060,000
Sacramento MUD	786005PM4, 786005PN2	4/11 & 5/15/2024	450,000,000
LA DWAP	544495UG7, 544525NZ7	4/18/2024 & 5/24/24	566,000,000
Los Angeles USD	544646ZR6, 544646XZ0, 544646XY3	4/30/2024	2,620,385,000
Hmptn Rds San Dist	409327DR1, 409327DS9	5/9/2024	99,265,000
ASU	04048RDR4, 04048RDS2, 04048RDT0	5/10/2024	120,240,000
State of Alaska	011770T79, 011770T87, 011770T95, 011770U28, 011770U36, 011770U44	6/4/2024	119,570,000
KY Prop & Bldg	49151E4G5, 49151E7B3, 49151E7C1, 49151E2Q5	6/4/2024	428,290,000
Orange Co San Dist	68428TAD9	6/20/2024	134,170,000
MBTA	575579VP9, 575579WX1, 575579WW3	7/2/2024	377,000,000
BATA	072024NU2 (partial), 072024NT5	7/5/2024	293,280,000
OR DOT	68607DNE1, 68607DNF8, 68607DNG6, 68607DNH4, 68607DNJ0, 68607DNK7, 68607DNL5	7/10/2024	493,010,000
Burbank CA Wtr Rev	12082UAP4, 12082UAR0, 12082UAQ2	7/11/2024	26,045,000
Burbank CA Elec Rev	12082TAK8, 12082TAL6	7/11/2024	50,455,000
KS DOT	485424NF8	7/26/2024	325,000,000
Omaha Pub Pwr Dist	6817934Q5	8/1/2024	111,595,000
KY Turnpike Authority	491552UY9, 491552UZ6	8/8/2024	113,920,000
MTA	59259NZH9 (partial), 59259NZW6, 59259NZM8, 59259NZN6, 59259YBF5	8/9/2024	779,085,000
City of Tallahassee, FL	874461GL4, 874461GK6, 874476HD9	8/21/2024 & 9/12/24	239,295,000
Reg Trans Dist, CO	75913TGJ7	8/26/2024	100,000,000
NYC TFA	64971MZG0, 64971MQ62, 64971MM74, 64971MM33, 64971MM66, 64971MQ54, 64971MM25, 64971MP71, 64971MP89, 64971ML91, 64971MP97, 64971ML83, 64971MM41, 64971MM58, 64971MQ39, 64971MQ47	8/29/2024	835,265,000
Utah Transit Auth	917565LK7, 917565LB7	8/30/2024	461,450,000
Grant Co PUD No. 2	387883PP0, 387883PK1, 387883PL9, 387883PM7, 387883PN5	9/4/2024	150,540,000
UT Build Own Auth	917547UP4, 917547UZ2	9/17/2024	67,160,000
Total ERP Calls			**12,851,455,000**

Ultimate Borrower	CUSIP	Total Amount	Call Date	Type of call
Orlando Util Comm	686507CW2	200,000,000	9/27/2024	Conditional
TBTA	89602NVH4, 89602NVJ0, 89602NVK7, 89602NVL5, 89602NVM3	244,090,000	9/23/2024	Conditional
District of Columbia	25477GEU5, 25477GEV3, 25477GDB8, 25477GCY9, 25477GDA0	665,820,000	10/2/2024	Conditional
Baltimore Co, MD	05914FJC5, 05914FJP6, 05914FJQ4, 05914FFE5, 05914FFG0, 05914FHZ6, 05914FJB7, 05914FJN1, 05914FJR2, 05914FJT8, 05914FFD7, 05914FFF2, 05914FJA9, 05914FJD3, 05914FJM3, 05914FJS0	175,600,000	10/18/2024	Conditional
MS Dev Bank	60534RTN9, 60534RTM1	136,780,000	10/10/2024	Conditional
County of Kauai	486116XQ4, 486116XR2, 486116XS0, 486116XT8, 486116XU5, 486116XV3, 486116XW1, 486116XX9, 486116XY7, 486116YA8, 486116XZ4	70,740,000	10/18/2024	Conditional
Franklin Con Fac Auth	353174FT7, 353174FU4, 353174FV2, 353174FW0, 353174FX8	136,120,000	10/25/2024	Conditional
Total Conditional ERP Calls		**1,629,150,000**		

Ultimate Borrower	CUSIP		Total Amount	Announced Date	Type of call
4636324P1	Irvine Ranch Water CA	5/1/2040	175,000,000	5/3/2024	Notice
072024NV0	BATA	4/1/2050	850,000,000	1/8/2024	Notice
597502BK8	Midland Co Hosp	5/15/2039	55,715,000	1/24/2024	Notice
597502BJ1	Midland Co Hosp	5/15/2029	20,280,000	1/24/2024	Notice
663903DN9	Northeast Ohio Reg Swr Dist	11/15/2032	85,210,000	9/10/2024	Notice
52385LCU1	Lee Health	4/1/2027	42,000,000	9/4/2024	Notice
MTA Credit	**CUSIP**		**Total Amount**	**Announced Date**	**Type of call**
Transportation Rev	59259YBY4, 59259YBZ1, 59259YCA5, 59259YCD9, 59259YDB2, 59259YDC0, 59259YDK2, 59259YGE3, 59259YGF0		1,829,310,000	6/19/2024	Notice
Dedicated Tax Fund	59259NZH9 (partial), 59259NZV8		671,540,000	6/19/2024	Notice
TBTA	89602NUM4, 89602NUN2, 89602NVG6		209,665,000	6/19/2024 & 8/9/24	Notice
Total MTA Notices Posted			**2,710,515,000**		
Colorado Mesa Uni	59067ABJ1, 59067ACQ4, 59067ACR2, 59067ACT8		56,455,000	4/12/2024	Notice
Hennepin Co, MN	4255063K6, 4255063L4, 4255063M2, 4255063N0, 4255063P5, 4255063Q3		28,390,000	5/2/2024	Notice
NYC TFA	64971M5J7, 64971M5K4, 64971M5L2, 64971MS78, 64971MS86, 64971M4M1, 64971M4P4		1,003,005,000	7/9/2024	Notice
State of CT	207758KG7, 207758KH5, 207758KM4		480,645,000	9/3/2024	Notice
Upper Occoquan Sewage Authority	916277KT2,916277KU9,916277KV7,916277KW5,916277KX3,916277KY1,916277KZ8,916277LA2		63,280,000	9/11/2024	Notice
Total Notices Posted			**5,570,495,000**		
Total ERP calls, conditional calls & notices			**20,051,100,000**		

Source: EMMA, Bloomberg Finance L.P., J.P. Morgan

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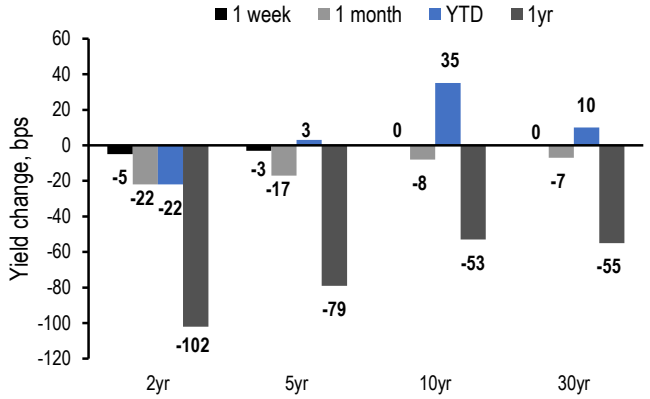
Markets at a glance

Figure 168: HG muni yield change over various time horizons



Source: Refinitiv, J.P. Morgan. Note: As of 9/20/24

Figure 169: We project a 10yr municipal high-grade yield of 2.30% by YE24

Treasury	9/20/2024	1mo ahead Forecast	4Q24 Forecast	1Q25 Forecast	2Q25 Forecast	3Q25 Forecast
2yr	3.57	3.55	3.40	3.05	2.90	2.70
5yr	3.48	3.45	3.30	3.05	2.95	2.85
10yr	3.73	4.35	3.55	3.50	3.45	3.40
30yr	4.07	4.05	3.90	3.95	3.95	3.95
AAA Tax-exempt						
2yr	2.30	2.40	2.15	1.90	1.75	1.75
5yr	2.31	2.40	2.10	1.90	1.75	1.80
10yr	2.63	2.70	2.30	2.10	2.05	2.20
30yr	3.52	3.60	3.30	3.10	3.05	3.20
AAA / TSY Ratios						
2yr	64%	68%	63%	62%	62%	64%
5yr	66%	70%	64%	62%	62%	64%
10yr	71%	73%	65%	60%	60%	72%
30yr	87%	89%	79%	78%	78%	85%

Source: Refinitiv, J.P. Morgan

Figure 170: Gross and net supply tax-exempt forecast

J.P. Morgan forecast

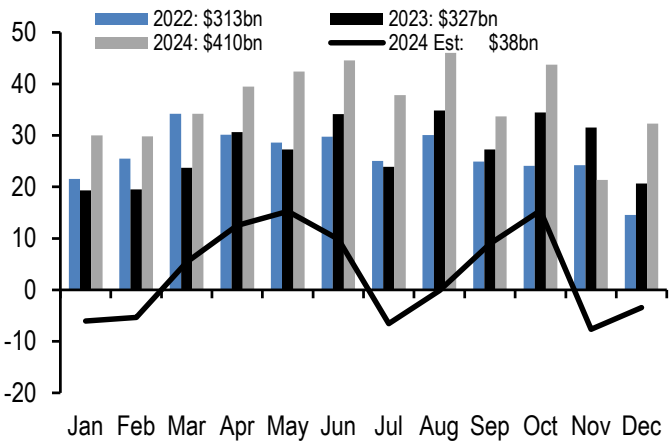


Figure 171: Tax-exempt AA Muni/Corp ratios

AAA tax-exempt yield / Treasury yield (%)	Last	Min	Max	Mean	St. Dev.	Z-score 3yr	Z-score 5yr
2yr	63.8	62.3	69.2	64.7	1.2	0.5	0.6
5yr	65.9	65.2	71.6	67.3	1.1	0.3	0.4
10yr	70.3	64.1	72.7	68.4	2.4	0.2	0.2
30yr	86.4	80.8	89.4	85.0	2.3	0.2	0.3

AA corporate yield - AA tax-exempt yield (bp)	Last	Min	Max	Mean	St. Dev.	Z-score 3yr	Z-score 5yr
3-5yr	152	147	189	166	11	0.6	1.0
5-7yr	152	148	191	168	11	0.6	1.0
7-10yr	157	152	205	178	14	0.6	0.9
25yr	111	107	154	131	13	0.4	0.7

yy indicates rich yy indicates cheap

Source: Refinitiv, J.P. Morgan
Note: Values over last 3 months displayed, as of 9/19/24

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YTD Issuance and Trading Trends

Figure 172: YTD issuance by maturity bucket relative to 2023 and the past 10yrs

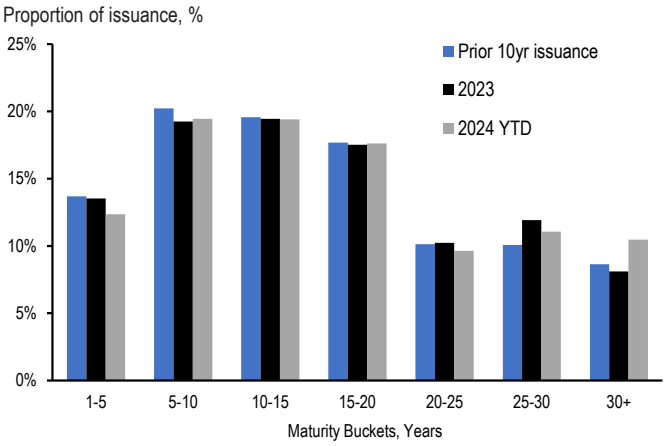


Figure 173: YTD issuance by coupon bucket relative to 2023 and the outstanding market

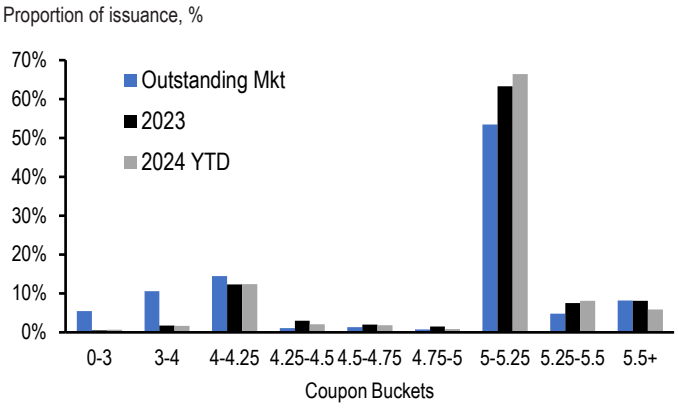
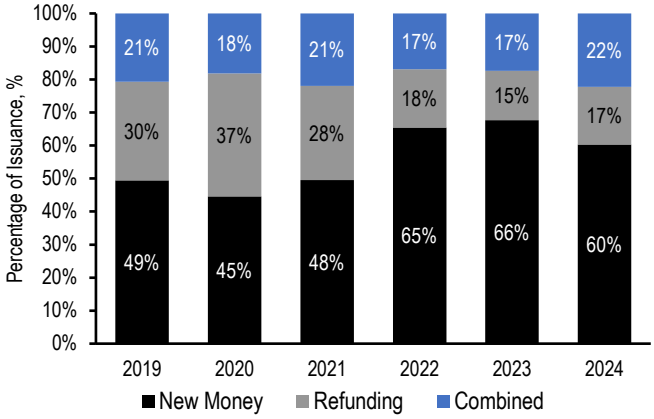
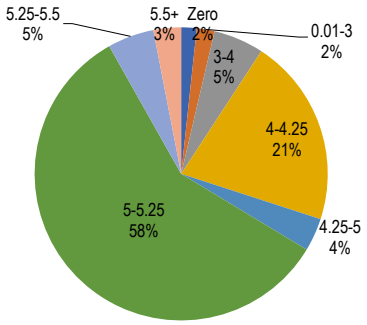


Figure 174: YTD issuance by purpose



Source: Bloomberg Finance L.P., J.P. Morgan
Note: Long term bonds only

Figure 175: YTD trading volume by coupon type



Source: MSRB, ICE, J.P. Morgan
Note: Long term, fixed coupon, tax-exempt bonds

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YTD total return and curve spreads

Figure 176: YTD total returns

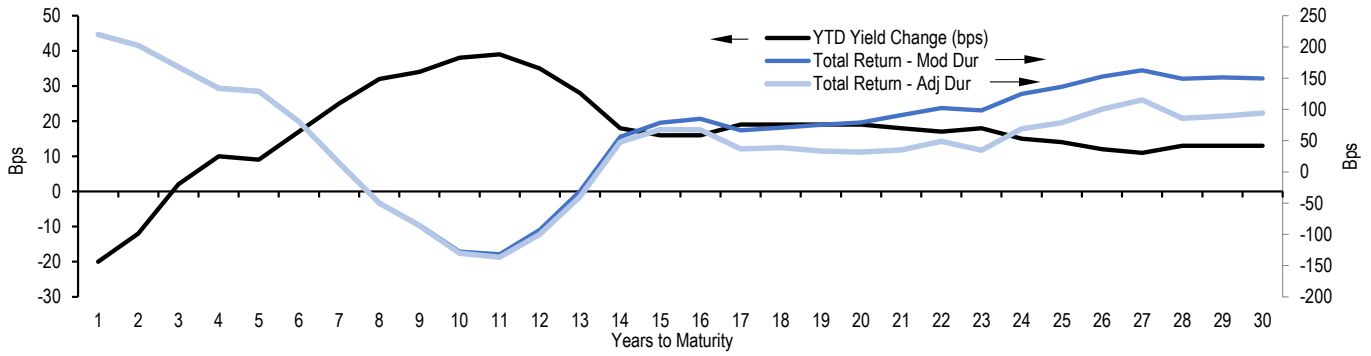


Figure 177: The 2s/30s curve is 2.6 sigma above its one year average

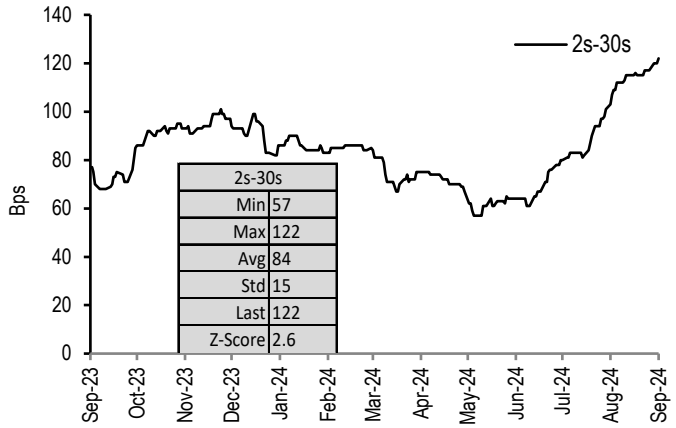
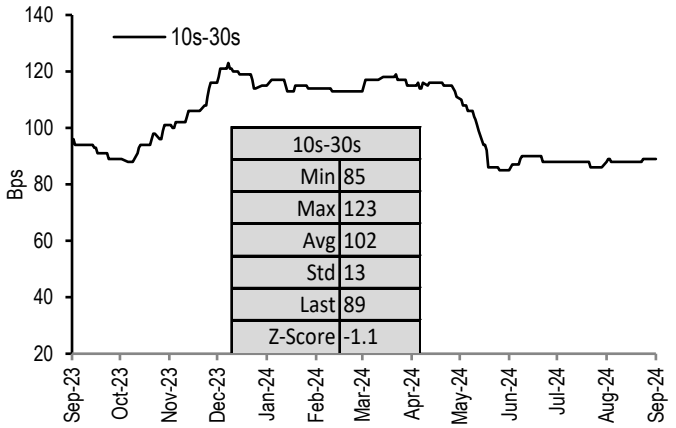


Figure 178: The 10s/30s curve is 1.1 sigma below its one year average



Source:

Figure 179: The 5s/10s curve is 3.5 sigma above its one year average

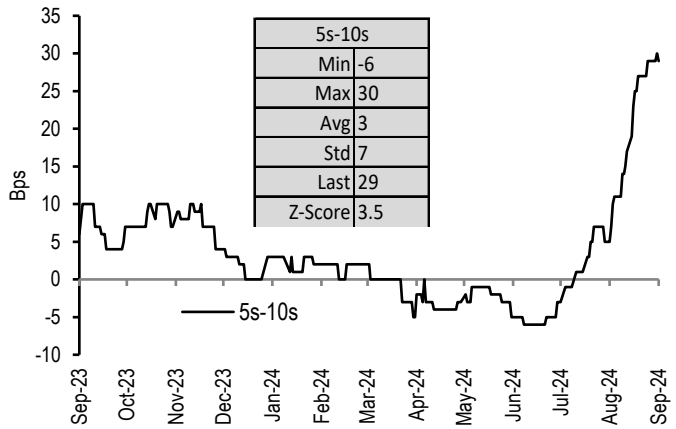
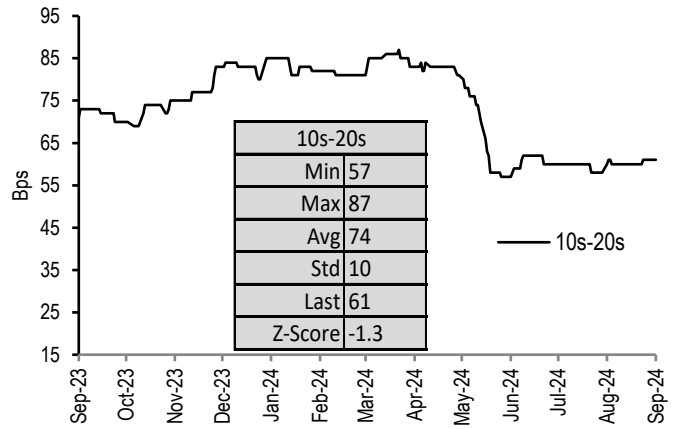


Figure 180: The 10s/20s curve is 1.3 sigma below its one year average



Source: Refinitiv Lipper, Bloomberg Finance L.P., J.P. Morgan. Note: As of 9/19/24

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Total return by state and sector

Figure 181: The average YTD total return for Bloomberg municipal bond indices by state is 2.5%

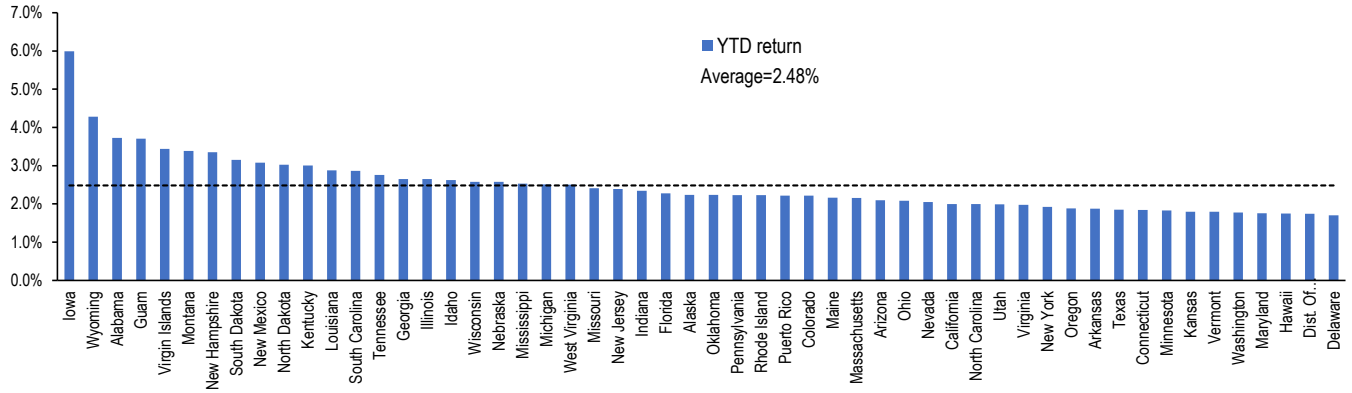


Figure 182: Year-to-date, the broader municipal market has returned 2.2%

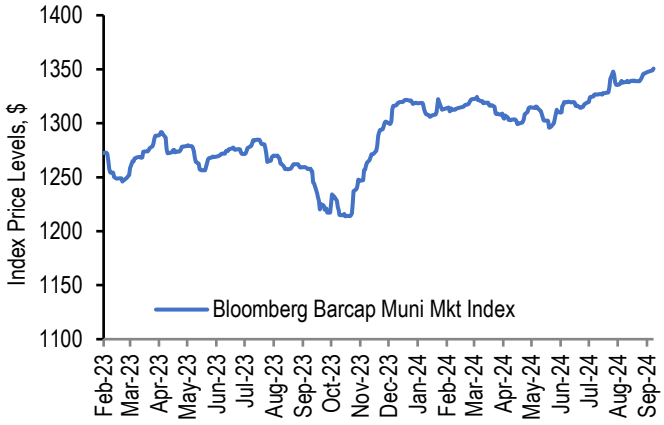


Figure 183: In the last three months, the Bloomberg muni index has returned 2.3%

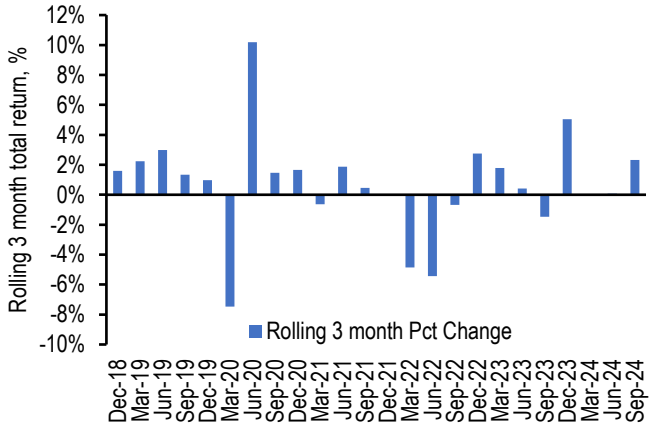


Figure 184: On a YTD basis, the HY muni index is outperforming

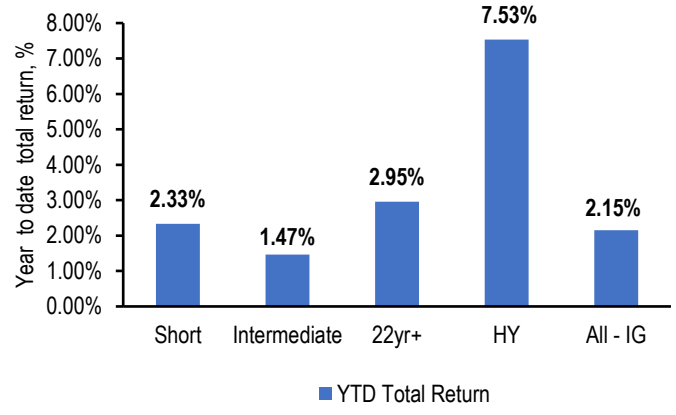
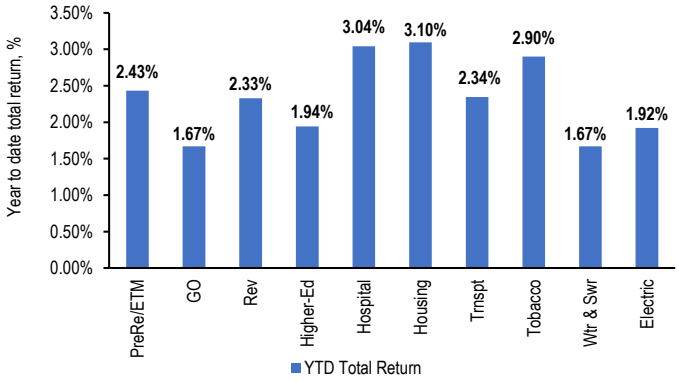


Figure 185: By sector, YTD returns are up 1.7-3%



Source: Bloomberg Finance L.P., J.P. Morgan, as of 9/19/24. Note: Total return calculated as the percentage change in index levels. Bloomberg Municipal bond total return indices used

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Glossary of Publication Topics

Sector Overviews

- Airports: 04/13/2018, 04/20/2018, 09/06/2019, 05/15/2020,06/11/2021, 01/10/2022, 02/11/2022, 08/19/2022, 07/28/2023
- Bond Insurance: 03/18/2016, 6/23/2017, 10/27/2017
- Charter Schools: 01/25/13, 03/15/24, 03/22/24
- Double-Barreled Bonds: 05/13/2016, 6/24/2016, 05/13/2022
- Energy: 01/29/2016, 02/05/2016, 02/19/2016, 04/23/2021, 02/11/2022
- Environmental, Social, Governance (ESG) Bonds:06/01/2018, 10/22/2021
- Gas prepay: 3/10/2017, 06/07/2019, 3/10/2023, 3/24/2023
- Housing: 1/20/2017, 10/20/2017, 07/26/2019, 08/02/2019, 12/10/2021,5/3/2024
- Healthcare: 04/29/2016, 1/27/2017, 3/03/2017, 1/19/2018, 1/28/2019, 2/1/2019, 01/24/2020, 10/16/2020, 01/22/2021, 08/27/2021, 06/03/2022, 06/10/2022, 9/23/2022, 4/28/2023, 01/19/2024
- Higher Ed: 5/19/2017, 9/14/2018, 07/24/2020, 07/16/2021, 08/05/2022, 04/05/24
- High/Enhanced Yield: 9/8/2017, 9/15/2017, 7/27/2018, 8/03/2018, 05/08/2020, 05/15/2020, 06/05/2020, 06/12/2020, 08/28/2020
- Local Government Credit: 4/07/2017, 11/10/2017, 06/18/2021, 10/29/2021, 11/04/2022
- Low beta/defensive: 08/25/2017
- Office: 04/14/2023, 05/12/2023, 07/07/23, 03/11/24
- Pensions: 11/03/2017, 10/12/2018, 10/19/2018, 10/26/2018, 04/05/2019, 04/17/2019, 08/16/2019, 08/23/2019, 10/18/2019, 07/30/2021, 11/05/2021, 10/28/2022, 09/29/23
- Pre-refunded bonds: 1/29/2018
- Primary and secondary (K-12) education: 11/02/2018
- Public Power/Electric: 2/09/2018, 02/19/2021, 07/09/2021, 03/18/2022
- U.S. Ports: 04/15/2016, 05/20/2016, 11/18/2016, 04/06/2018, 10/15/2021
- Secured Credits: 08/07/2015, 09/18/2015, 09/25/2015
- Special Tax Bonds: 05/01/2015, 07/31/2015, 09/25/2015, 01/29/2016, 5/5/2017, 09/29/2017, 5/18/2018, 04/26/2019, 05/03/2019, 01/31/2020, 05/20/2022
- States: 11/13/2020, 2/5/2021, 09/24/2021, 02/25/2022, 03/04/2022, 07/08/2022
- SIFMA/Floating Rate notes: 03/15/2016, 08/26/2016, 3/31/2017, 4/28/2017, 04/13/2018, 9/14/2018, 02/20/2019, 04/26/2019
- Taxable bonds: 5/11/2018, 12/14/2018, 03/29/2019, 05/31/2019, 09/27/2019, 04/03/2020, 07/10/2020, 07/24/2020, 08/14/2020, 08/21/2020, 10/16/2020, 10/23/2020, 08/06/2021, 10/22/2021, 11/12/2021, 04/08/2022, 06/03/2022, 07/29/2022, 08/05/2022
- Toll Roads: 9/16/2016, 5/12/2017, 09/15/2017, 07/10/2020, 07/15/2022
- Tobacco: 11/20/2015, 12/15/2017, 7/27/2018, 03/29/2019, 05/07/2021, 08/19/2022, 08/26/2022, 5/10/24, 5/17/24
- Water & Sewer: 05/06/2016, 6/24/2016, 02/02/2018, 12/17/2021, 7/14/23, 5/31/24

Specific Credits

- Assured Guaranty: 03/18/2016, 6/23/2017, 10/27/2017
- National Public Finance Guarantee Corporation: 6/23/2017, 10/27/2017
- Chicago & related credits: 9/23/2016, 2/10/2017, 04/13/2018, 10/25/2019, 02/07/2020, 06/12/2020, 10/23/2020, 02/19/2021, 10/01/2021, 05/13/2022, 10/14/22
- Detroit: 05/14/2021
- Dallas/Fort Worth & related credits: 6/02/2017, 08/04/2017, 04/13/2018
- Houston & related credits: 02/19/2016, 6/02/2017, 08/04/2017, 09/01/2017
- New York City & related credits: 03/31/2015, 6/17/2016, 9/9/2016, 8/17/2018, 08/23/2019, 06/12/2020, 05/21/2021, 04/08/2022, 04/22/2022, 05/20/2022, 01/20/2023
- Puerto Rico: 3/17/2017, 5/5/2017, 5/12/2017, 6/02/2017, 09/22/2017, 5/04/2018, 9/7/2018, 02/22/2019, 04/26/2019, 05/10/2019, 05/17/2019, 02/21/2020, 03/05/2021, 04/30/2021, 01/28/2022, 02/04/2022, 03/11/2022, 03/18/2022, 03/31/2023, 07/28/2023
- Santee Cooper / MEAG / Westinghouse Bankruptcy: 3/17/2017, 3/24/2017, 3/31/2017, 9/21/2018, 9/28/2018
- State of Alaska: 07/28/2017, 06/15/2018
- State of California & locals: 03/02/2018, 03/09/2018, 06/08/2018, 02/05/2021, 04/29/2022, 05/06/2022, 01/27/2023
- State of Connecticut & locals: 8/18/2017, 5/18/2018, 10/4/2019, 05/01/2020

- State of Illinois & related credits: 9/29/2017, 7/13/2018, 1/11/2019, 03/01/2019, 05/31/2019, 07/26/2019, 02/28/2020, 05/01/2020, 02/19/2021, 05/20/2022
- State of New York: 5/16/2014, 09/29/2017, 2/8/2019, 02/10/2023
- State of New Jersey & locals: 6/17/2016, 8/05/2016, 3/24/2017, 3/31/2017, 4/27/2018, 5/04/2018, 03/15/2019, 05/01/2020, 05/21/2021, 06/04/2021
- State of Pennsylvania: 7/15/2016
- State of Texas & locals: 08/04/2017, 08/16/2019, 03/12/2021, 03/19/2021, 02/03/2023
- State of Wisconsin & locals: 03/15/2015, 9/30/2016
- U.S. Virgin Islands & Guam: 07/15/2016, 07/29/2016, 2/24/2017

Defaults/Distressed Munis

- Chapter 9/Distressed locals: 10/31/2014, 11/21/2014, 06/30/2015, 07/08/2016, 04/26/2019, 01/31/2020, 02/07/2020
- Defaults: 11/20/2015, 06/24/2016, 07/08/2016, 08/26/2016, 8/24/2018, 04/23/2020, 07/24/2020, 09/24/2021, 02/11/2022, 03/11/2022, 07/29/2022, 01/6/2023, 01/05/24
- GO Security/Statutory Lien: 10/2/2015, 11/4/2016

Tax Policy

- AMT: 03/16/2018, 5/18/2018, 10/19/2018, 06/14/2019, 04/01/2022, 05/20/2022, 12/9/2022, 07/28/2023, 02/02/2024
- De minimis: 03/02/2018, 06/14/2019, 03/25/2022, 05/06/2022, 05/13/2022
- State and local tax (SALT) deduction cap: 1/26/2018, 7/6/2018,4/16/2021, 10/22/2021, 02/09/24
- Tax swapping: 1/24/2014, 10/28/2016, 2/09/2018, 10/12/2018, 11/15/2019
- Tax reform: 2/28/2014, 12/16/2016, 4/28/2017, 5/05/2017, 6/16/2017, 09/29/2017, 10/272017, 11/03/2017, 11/10/2017, 1/26/2018

Other Federal Public Policy

- BABs: 02/23/24, 03/01/24,06/21/24
- COVID-19: 03/06/2020, 03/13/2020, 03/20/2020, 03/27/2020, 04/03/2020, 04/17/2020, 06/26/2020, 07/31/2020, 01/08/2021, 02/26/2021, 09/17/2021
- CARES Act: 04/03/2020, 01/21/2022
- American Rescue Plan: 03/26/2021, 04/09/2021, 05/21/2021, 01/21/2022
- Inflation Reduction Act: 08/05/2022, 08/19/2022, 08/26/2022
- Infrastructure spending: 04/09/2021, 05/14/2021, 07/16/2021, 08/06/2021, 09/17/2021, 01/21/2022
- Fed facilities/Municipal Liquidity Facility: 8/11/2020
- Regulatory reform/High-Quality Liquid Assets: 04/01/2016, 07/14/2017, 03/09/2018, 8/24/2018
- Health-care reform/Medicaid funding: 3/10/2017, 3/17/2017, 3/24/2017, 6/23/2017, 07/28/2017, 11/22/2017
- Trade war and tariffs: 04/06/2018, 06/07/2019

Periodic Updates

- 2024 election: 6/7/24
- Coupon performance: 04/08/2016, 9/21/2018, 03/15/2019, 06/14/2019, 06/28/2019, 10/18/2019, 08/20/2021, 04/01/2022, 08/26/2022, 09/09/2022
- Federal Reserve Flow of Funds: 01/10/2020, 03/27/2020, 06/26/2020, 09/25/2020, 12/11/2020, 06/18/2021, 09/24/2021, 12/17/2021, 03/18/2022, 06/10/2022, 09/16/2022, 12/16/2022 , 12/15/2023, 03/15/24
- Make-Whole Call: 04/22/2016, 07/12/2019
- Outflow cycle: 10/29/2021, 11/05/2021, 03/11/2022, 04/01/2022, 04/29/2022, 05/06/2022, 05/13/2022, 09/16/2022
- Short call bonds: 08/28/2015, 12/11/2015, 03/04/2016, 3/3/2017, 3/10/2017, 08/04/2017, 03/26/2021, 10/01/2021, 06/10/2022
- Taxable advance refunding: 09/13/2019, 10/25/2019, 10/16/2020, 10/01/2021
- Total Return & Performance: 05/13/2016, 06/10/2016, 5/19/2017, 07/07/2017, 11/10/2017, 02/23/2018, 1/4/2019, 01/10/2022, 04/08/2022
- Sovereign Government Relative Value: 09/09/2016, 01/19/2018, 8/17/2018
- State and Local revenues: 04/13/2018, 9/21/2018, 1/11/2019, 05/17/2019, 06/21/2019, 09/20/2019, 01/10/2020, 04/17/2020, 09/11/2020, 09/18/2020, 11/13/2020, 01/29/2921, 06/18/2021, 11/12/2021, 03/25/2022, 09/09/2022, 11/10/22, 2/24/2023, 02/23/24,06/12/24

- Appropriation debt: 8/19/2016, 01/26/2024

Municipal Market Outlook

- 2H24 Outlook
- 2024 Outlook

Weekly Updates

- Economic and policy updates
- Next week's supply, fund flows
- Comparisons versus Corporates, Treasuries, and Global Sovereigns
- Full year gross, net-supply estimates, and interest rate forecast

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Emerging Markets

- In EM fixed income, we are OW GBI-EM local rates, and are MW CEMBI and EMBIGD.
- EM bond flows were +$541mn (+0.14% of weekly AUM, ↑ from -$705mn).

EM fixed income significantly tighter after the 50bp rate cut from the Fed. EMBIGD at 369bp tightened by 20bp while CEMBI tightened by 9bp (222). At 6.1%, GBI-EM yields are also tighter by 6bp. Overall retail inflows increased to +$541mn (from -$705mn). Inflows were led by hard currency, which rose to +$714mn (from -$685mn), while local currency outflows grew to -$173mn (from -$20mn). ETF inflows rose to +$859mn, while non-ETF outflows fell to -$318mn. Within local currency, EM ex-China saw outflows of -$139mn (from +$33mn), and China-focused funds outflows of -$33mn (from -$52mn). Within hard currency, AsiaXJ funds saw outflows of -$39mn (from -$65mn), while "broad" EM funds saw inflows of +$753mn (from -$620mn).

Philippines Local Strategy: It's not just about rate cuts...

BSP have been moving towards a more market based system to manage system liquidity in recent years, away from enforcing large Reserve Requirements on local banks. The Reserve Requirement mandates banks set aside a certain percentage of their liquidity in deposits which are held at the central bank. Historically, the Philippines has used the Required Reserve Ratio (RRR) as the main liquidity management tool, although in recent years that has been changing, as placing a high reserve requirement on the system has its own drawbacks. Unlike more market orientated operations, such as Open Market Operations (OMO's), deposits held at the BSP as part of the RRR do not pay any interest. This results in a significant cost to the banking system, which can result in dampened policy rate transmission. In light of this, the BSP has made a commitment to reduce the Required Reserve Ratio (RRR) and shift toward more market-based tools.

Philippines currently has the largest RRR across the EM Asia region, with up to 400bp of potential cuts just to bring it in line with the regional averages. Although the BSP has reduced the RRR materially over recent years, from the high of 20% in 2018 down to 9.5% today, we would expect it to be further reduced going forward. The governor himself has expressed on numerous occasions that his intent is to further reduce the RRR, and more recently suggested the central bank will "reduce the reserve requirement substantially this year, and then there may be further reductions by next year" . When compared with regional peers, Philippines currently has the highest RRR, with the regional average RRR sitting at 5.4%.

Banking sector holdings of local debt are already substantial, sitting amongst the highest in EM…. One feature of the local bond market in the Philippines is that there is very limited foreign involvement (accounting for just 2.5% of the outstanding). The offset to this is that it means the domestic players have a much larger role to play in the local market, especially in the local banking sector. In total, the banking sector owns circa PHP7.4tn worth of local debt, which accounts for close to 28% of their total balance sheet assets. Within this, banks hold approximately 67% of these under amortized costs. When compared to EM peers, bank holdings of local debt are amongst the highest, and well above the average EM level of just 12%.

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… however we would expect any potential liquidity release from a RRR reduction to drive further bond demand from this sector. Although domestic bank holdings already screen elevated both in a historical context and versus peers in EM, we would expect that any increase in inter-bank liquidity from a RRR reduction would further drive holdings higher. Since 2020, there have been two predominant forces which have driven system liquidity higher. One has been central bank bond purchases, which occurred during COVID, while the second has been a steady reduction in the RRR. Both of these have seen excess liquidity jump from around PHP500bn in 2018, up to PHP1.7bn currently. This shift higher in system liquidity coincided with a material increase in bank holdings, with the ratio to total asset holdings increasing from around 20% up to 28%.

Interbank liquidity aside, the BSP have the scope to deliver one of the deepest policy rate cutting cycles across the whole EM Asia region. Over the past week, RPGB's have been a material outperformer with the 5y point rallying over 25bp (vs. the 10bp sell off in UST's over the same period). Excitement has picked up once again, with the Fed delivering 50bp worth of easing, the market is now becoming more atune to the prospect of large RRR reductions over the coming months (discussed above), while at the same time Finance Secretary Recto has suggested he would be open to the idea of the BSP potentially cutting by as much as 50bp at the MPC meeting in October (see here). As we discuss more in the below, indeed policy continues to screen materially restrictive which opens up for prospect for a relatively deep cutting cycle in light of the tepid growth and inflation backdrop. On a real yield basis, the policy rate is circa 300bp over the longer run historical averages, with policy rates well above where we would judge neutral to be.

A softer inflation profile is the backbone behind our bullish duration stance; we expect headline to further cool with notable downside risks to the BSP's official 2025 forecast... The latest inflation data for August printed with a decent downside, with headline coming in at 3.3%yoy (vs. 3.6% consensus) - which was at the lower end of the BSP guided range of 3.2-4.0%. Importantly, core inflation also continues to moderate, slowing to 2.6%yoy from the 2.9% last month. Perhaps the most encouraging part of the latest data, is that the move lower in inflation is happening without any real shift lower in retail rice prices yet. Although the year-on-year pace came off to 14.7%, the month-on-month was still flat - pointing to still material downside to inflation once the lower rice prices feed through (following the cut to import tariffs). Part of the reason for the slow transmission to retail prices would appear to be as importers bought a large amount of stock from January to June at the previous 35% tariff, and hence have been reluctant up to this point to pass on the lower prices, before they sell off this old stock first. The DA expects that the decline in rice prices will occur from October. This can have material implications for the outlook for inflation, with our economists expecting headline to average at 2.5% through 2025, well below the BSP's official forecast of 3.1% (see here). On top of this, reports continue to suggest that India is mulling easing export curbs on rice which would be a further boost should it occur (see here).

… especially if oil prices take a turn lower through 2025. While weaker oil prices haven't been part of our bullish stance on PHP duration (and for that matter duration across Asia) the recent pull back has the potential to both speed up and deepen regional cutting cycles in our view, with the import led nature of this region particularly sensitive to shifts in global oil prices (see here). On the back of what will be higher supply, our global commodities team expect oil to average $75/bbl in 2025, with prices dipping into low-$60s by year-end (from their current 4Q24 forecast of $80 - see here). This itself can have material implications for the domestic inflation outlook for the Philippines, with a 20% fall in oil prices equating to roughly a 1.2%pt drop in headline inflation, all else equal. For this reason, domestic bonds

have historically shown a strong relationship to shifts in global oil prices. Using averaged quarterly return data since 2008, the beta of a 1% move in global oil prices has translated into a 2.1bp move on PHP bond yields.

For further detail, see *Philippines Local Strategy: It's not just about rate cuts... : Reduction in RRR can potentially unlock up to PHP600-700bn in system liquidity, boosting commercial bank demand; stay long 5y RPGB (R518)*, S. Kelly & A. Sandilya, September 19, 2024

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Forecast & Analytics

Interest rate forecast

	Actual 20-Sep	1m ahead 20-Oct	4Q24 31-Dec	1Q25 31-Mar	2Q25 30-Jun	3Q25 30-Sep
Rates (%)						
Effective funds rate	4.83	4.85	4.10	3.60	3.10	2.85
SOFR	4.82	4.85	4.10	3.60	3.10	2.85
2-yr Treasury	3.57	3.50	3.40	3.05	2.90	2.70
3-yr Treasury	3.46	3.40	3.30	2.95	2.80	2.65
5-yr Treasury	3.48	3.45	3.30	3.05	2.95	2.85
7-yr Treasury	3.60	3.60	3.40	3.20	3.10	3.00
10-yr Treasury	3.73	3.70	3.55	3.50	3.45	3.40
20-yr Treasury	4.11	4.10	3.95	3.90	3.85	3.80
30-yr Treasury	4.07	4.05	3.90	3.95	3.95	3.95
Spreads (bp)						
Fed funds/2yr	-126	-135	-70	-55	-20	-15
2s/10s	15	20	15	45	55	70
2s/5s	-9	-5	-10	0	5	15
5s/10s	24	25	25	45	50	55
5s/30s	59	60	60	90	100	110
10s/30s	34	35	35	45	50	55

Source: J.P. Morgan

Swap spread forecast*

SOFR Swap Spread (bp)	Actual 20-Sep-24	YE24 31-Dec-24
2-year SOFR swap spread (bp)	-19	-6
5-year SOFR swap spread (bp)	-30	-22
10-year SOFR swap spread (bp)	-46	-37
30-year SOFR swap spread (bp)	-81	-79

* Forecast uses matched-maturity spreads
Source: J.P. Morgan

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TIPS real yield & breakeven forecast

	Actual 20-Sep-24	4Q24 31-Dec-24	1Q25 31-Mar-25	2Q25 30-Jun-25	3Q25 30-Sep-25
Breakevens (bp)					
5Y	205	200	200	195	190
10Y	215	205	205	200	200
30Y	216	210	210	205	205
Real yields (%)					
5Y	1.44	1.30	1.05	1.00	0.95
10Y	1.58	1.50	1.45	1.45	1.40
30Y	1.92	1.80	1.85	1.90	1.90
Curves (bp)					
5s/10s BE	10	10	0	10	10
10s/30s BE	1	5	10	0	5
5s/10s yld	14	20	40	45	45
10s/30s yld	35	30	40	45	50

Source: J.P. Morgan

Economic forecast

%ch q/q, saar, unless otherwise noted

	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	2023*	2024*	2025*
Gross Domestic Product										
Real GDP	3.4	1.4	3.0	2.5	1.3	1.8	1.8	3.1	2.0	1.9
Final Sales	3.9	1.8	2.2	2.7	1.1	1.4	1.6	3.5	1.9	1.8
Domestic Final Sales	3.6	2.4	2.9	3.1	1.5	1.6	1.6	3.2	2.5	1.9
Business Investment	3.7	4.4	4.6	5.9	3.4	4.0	3.4	4.6	4.6	4.6
Net Trade (% contribution to GDP)	0.3	-0.7	-0.8	-0.6	-0.4	-0.3	-0.1	0.3	-0.5	-0.1
Inventories (% contribution to GDP)	-0.5	-0.4	0.8	-0.2	0.2	0.4	0.2	-0.4	0.1	0.1
Prices and Labor Cost										
Consumer Price Index	2.7	3.8	2.8	1.2	1.4	2.2	2.1	3.2	2.3	2.3
Core	3.4	4.2	3.2	2.1	2.6	2.5	2.4	4.0	3.0	2.4
Employment Cost Index	3.8	4.8	3.7	3.0	2.8	2.7	2.9	4.2	3.6	2.9
Unemployment Rate (%, sa)	3.7	3.8	4.0	4.3	4.5	4.5	4.6	-	-	-

* Q4/Q4 change

Source: J.P. Morgan

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Financial markets forecast

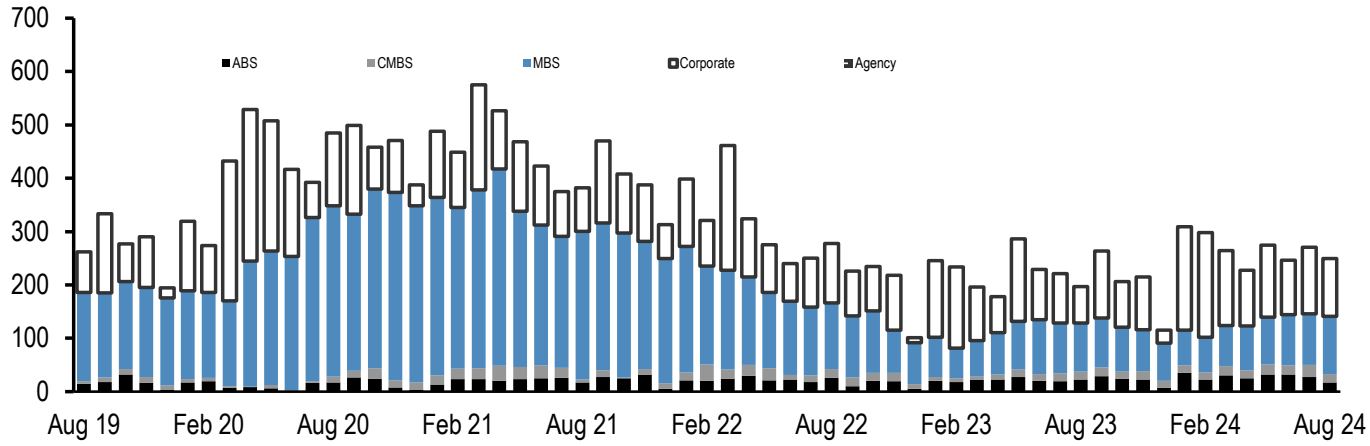
Credit Spread	Current	YE24
10-year SOFR swap spread (bp)	-46	-37
FNMA 30yr 6% Front Tsy OAS (bp)	8	10
10yr conduit CMBS LCF AAA	90	95
3-year AAA card ABS to Treasuries (bp)	47	40
JULI spread to Treasuries (bp)	106	110
High Yield Index	352	500
Emerging Market Index	369	400
Local currency: GBI-EM yield (%)	6.10%	5.58%

Source: J.P. Morgan

cont.

	Current	YE24
S&P 500 (level)	5703	4200
Brent ($/bbl)	75	83
Gold ($/oz)	2622	2281
EUR/USD	1.12	1.05
USD/JPY	144	149.5

Gross fixed-rate product supply*



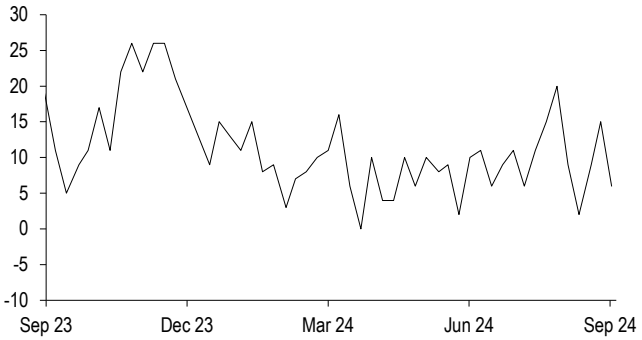
Treasury client survey

All Clients

	Long	Neutral	Short	Changes	Net longs
Sep 16, 2024	**17**	**72**	**11**	**9**	**6**
Sep 9, 2024	22	71	7	13	15
Sep 3, 2024	20	69	11	11	9
4-week avg	19	70	11		
52-week avg	22	68	10		

Source: J.P. Morgan

Output



Page 1

Source: J.P. Morgan

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Treasury net issuance forecast

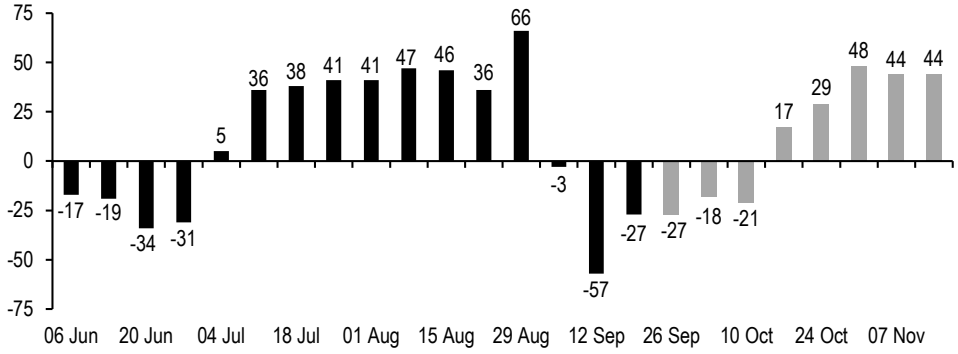
J.P. Morgan projection of net Treasury issuance to private investors, Federal Reserve purchases of Treasuries, and expected change in Treasuries held by private investors; $bn

Year	Net privately-held borrowing		Fed secondary market purchases		Net change in privately-held debt	
	Bills	Coupons	Bills	Coupons	Bills	Coupons
CY 2019	77	1133	169	77	-92	1056
CY 2020	2547	1752	157	2184	2390	-432
CY 2021	-1195	2898	0	957	-1195	1942
CY 2022	-37	1638	0	75	-37	1563
CY 2023	2047	1107	0	0	2047	1107
CY 2024	400	1909	0	0	400	1909

Source: J.P. Morgan, US Treasury, Federal Reserve Bank of New York

T-bill weekly net issuance

Weekly net issuance of T-bills, historical and JPM projections; $bn



Source: J.P. Morgan

Dealer inventories

Primary dealer positions in Treasuries*, with 5-year statistics; $bn

Maturity	Last	1w chg	5y avg	5y min	5y max	5y z-score
T-bills	69	-1	54	-4	119	0.6
<2y	36	1	32	-17	96	0.1
2-3y	12	-2	5	-14	17	1.1
3-6y	72	1	30	-2	78	2.3
6-7y	19	1	13	-4	29	1.0
7-11y	28	1	4	-10	35	2.8
>11y	48	0	46	27	62	0.3
11-21y	26	0				
>21y	36	1				
TIPS	21	-1	13	1	25	1.3
FRNS	18	-1	7	-14	29	1.5
Total	323	0	205	76	361	1.9

Source: Federal Reserve Board of New York
*Latest data as of 9/11/2024

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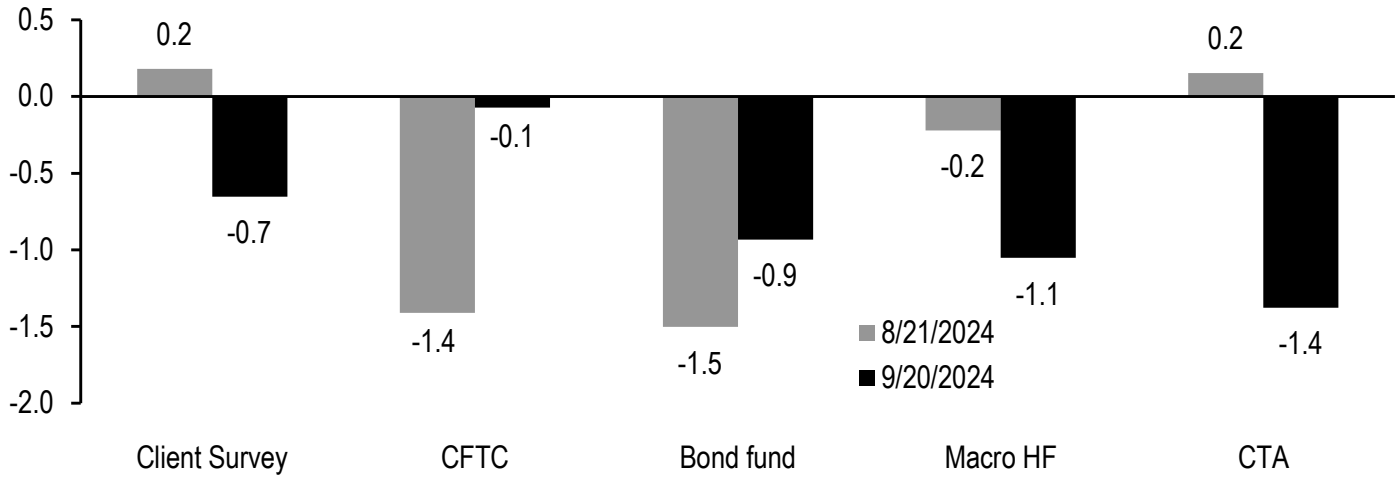
Investor position technical indicators

Current value of various position indicators* versus 1 month ago; 1-year z-score



Source: CFTC, Bloomberg Finance L.P, SG, HFR, J.P. Morgan
* JPM Client Survey refers to a 4-week moving average of our Treasury Client Survey Index; (Longs+Neutrals)/(Shorts+Neutrals), see *Survey Says: Using the Treasury Client Survey to predict rates moves*, 7/21/23for more details. CFTC refers to the non-commercial net longs in UST and SOFR futures contracts reported by the CFTC. CTA beta is the four-week partial beta of SG CTA Index to 10-year UST yields. Real money beta is the eight-week partial beta of excess returns of the 20 largest actively managed US core bond funds to 10-year UST yields. Macro HF beta is the six-week partial beta of HFRX Macro/CTA Index to 10-year UST yields

Treasury market functioning metrics

Various metrics of Treasury market functioning; units as indicated

Indicator	Today	1w chg	1y avg	1y min	1y max	1y z-score
Duration weighted mkt depth*; $mn	307	37.6	222	94	308	2.3
10y price impact**; 32nds	0.7	0.0	0.7	0.4	1.1	-0.4
1m GC/OIS; bp	19.6	-8.4	8	2.8	32.2	2.3
UST curve RMSE***; bp	0.0	-1.5	1.4	0.0	1.7	-7.1
10s/3x old 10s ASW; bp	1.0	-0.2	-0.9	-3.1	1.3	2.2
30s/3x old 30s ASW; bp	0.7	-0.2	-0.3	-2.1	1.8	1.1

Source: J.P. Morgan, BrokerTec
* Market depth is the sum of the three bids and offers by queue position, averaged between 8:30 and 10:30am daily
** Price impact defined as the average move in order book mid-price against a $100mn flow in traded notional. See *Drivers of price impact and the role of hidden liquidity*, J. Younger et al., 1/13/17 for more details.
*** Root Mean Square Error of J.P. Morgan par fitted Treasury curve (see The (par) curves they are a-changin', 7/23/24)

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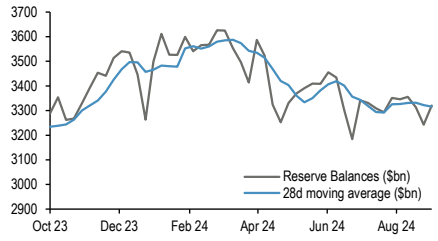
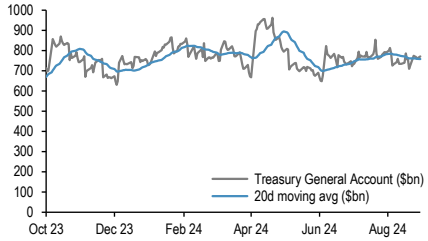
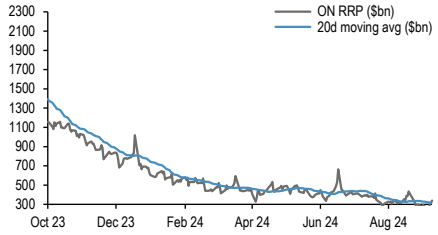
Select Federal Reserve balance sheet items







Select FRB Balance Sheet Items ($bn)	9/18/24	9/11/24	8/21/24	9/20/23	1wk Δ	1m Δ	1y Δ	1y avg	1y min	1y max	Percentile	Status**
Assets												
SOMA Holdings	6569	6574	6598	7347	-5	-29	-778	6913	6569	7347	0%	Narrow
T-bills	195	195	195	247	0	0	-52	209	195	247	23%	Narrow
Treasury Notes and Bonds	3721	3727	3737	4220	-5	-15	-499	3941	3721	4220	37%	Normal
Treasury FRNs	6	6	6	18	0	0	-12	9	5	18	15%	Narrow
TIPS	344	344	344	365	0	0	-21	356	343	366	4%	Narrow
Federal Agency Debt	2	2	2	2	0	0	0	2	2	2	0%	Narrow
Agency MBS	2292	2292	2306	2486	0	-14	-194	2387	2292	2486	0%	Narrow
Agency CMBS	8	8	8	8	0	0	0	8	8	8	0%	Narrow
Total Assets	7109	7115	7140	8024	-6	-31	-915	7509	7109	8024	0%	Narrow
Discount Window Borrowings	1	2	2	3	0	-1	-2	4	1	9	0%	Narrow
Liabilities												
Reserves	3313	3321	3356	3232	-8	-42	82	3401	3146	3626	25%	Narrow
Treasury General Account	839	746	759	675	93	80	164	767	631	962	88%	Wide
Overnight RRP*	339	281	321	1487	58	18	-1148	620	239	1558	12%	Narrow
Foreign RRP	418	420	397	318	-2	21	100	358	290	420	98%	Wide
Other Deposits	158	159	153	163	-1	5	-5	157	145	183	60%	Normal

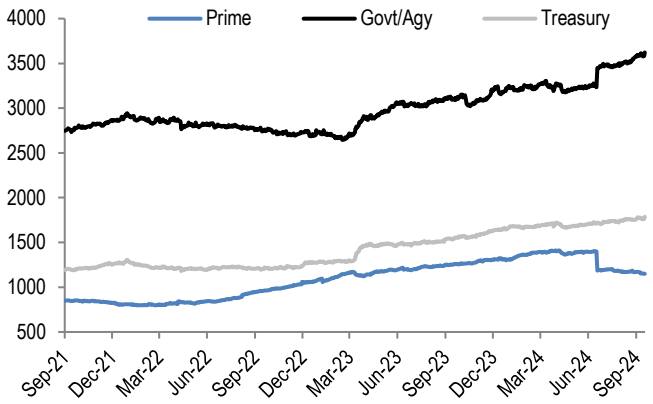
Source: Federal Reserve Bank, Bloomberg Finance L.P., J.P.Morgan

* Overnight RRP as of 09/20/24

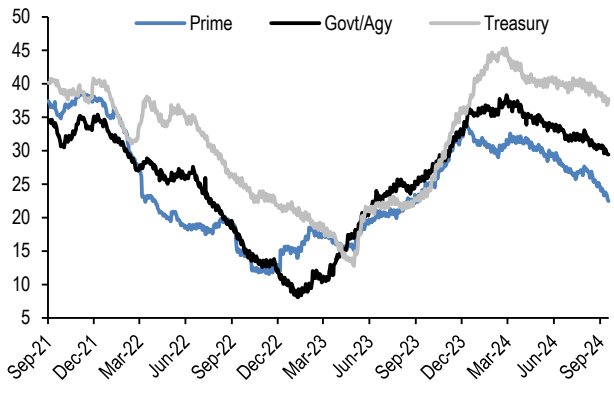
** Status: "Normal" means the current value is within 30-70% percentile over the past year. "Narrow" means the current value is within 10-30% percentile over the past year. "Wide" means the current value is within 70-90% percentile over the past year. A orange highlighted "Narrow" means the current value is less than 10% percentile over the past year. A orange highlighted "Wide" means the current value is greater than 90% percentile over the past year.

Money market funds

Assets under management ($bn)



Weighted average maturity (days)



Source: Crane Data, J.P. Morgan

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US funds flows

US Fund Flows ($mn)	Monthly					Weekly				
	Aug	Jul	Jun	May	Apr	9/18/2024	9/11/2024	9/4/2024	8/28/2024	8/21/2024
UST	15,870	12,881	9,805	10,029	3,251	(134)	3,243	(1,854)	7,561	3,761
Mutual	341	(57)	572	698	(2,012)	(42)	(612)	200	(53)	19
ETF	15,529	12,939	9,233	9,331	5,262	(92)	3,854	(2,054)	7,614	3,742
IG	34,954	26,579	29,272	22,092	23,193	4,863	4,004	5,327	5,168	3,402
Mutual	17,332	8,008	(2,598)	11,794	15,518	2,205	2,323	2,216	2,802	1,316
ETF	17,622	18,571	31,870	10,298	7,676	3,753	3,764	3,809	3,064	2,523
HY	2,939	7,487	1,299	7,554	(5,390)	1,430	2,012	595	707	2,206
Mutual	2,270	4,528	(447)	2,450	(2,554)	544	1,257	553	221	427
ETF	669	2,960	1,746	5,104	(2,836)	887	755	43	487	1,779
LL	(4,232)	1,348	375	4,138	2,601	128	(213)	178	8	(467)
Mutual	(1,655)	198	126	2,283	2,125	(27)	(52)	118	95	(477)
ETF	(2,577)	1,149	249	1,855	476	155	(161)	60	(87)	11
Municipal	5,982	5,496	240	2,039	(782)	898	1,833	407	1,332	906
Mutual	4,374	2,245	(607)	1,110	(1,567)	855	891	113	796	574
ETF	1,608	3,252	846	928	786	43	942	294	537	331
Inflation Protected	489	(331)	(1,168)	(1,162)	(717)	(118)	(438)	(204)	(262)	(743)
Mutual	693	(415)	(782)	(1,052)	(246)	(64)	(40)	(7)	(64)	(79)
ETF	(204)	84	(386)	(109)	(472)	(54)	(398)	(197)	(198)	(665)
MBS	1,284	3,777	2,993	2,716	2,921	721	437	605	353	487
Mutual	547	432	750	73	(122)	81	61	198	98	349
ETF	737	3,345	2,243	2,644	3,043	640	376	407	255	139
Agg	15,153	12,730	24,568	13,342	21,333	6,838	9,406	4,520	5,334	2,168
Mutual	7,197	5,610	(1,592)	8,481	13,077	2,456	1,074	1,727	2,545	425
ETF	2,459	1,412	934	979	1,345	4,383	8,332	2,793	2,789	1,744
Equities	22,697	47,114	23,090	33,452	(26,681)	33,753	(6,126)	(20)	5,751	12,552
Mutual	(21,645)	(39,467)	(19,898)	(24,860)	(41,527)	(4,825)	(455)	(2,727)	(3,797)	(2,201)
ETF	44,342	86,581	42,988	58,313	14,846	38,578	(5,671)	2,707	9,548	14,753
MMFs	108,465	16,923	19,146	86,923	(18,759)	(23,271)	13,445	41,804	23,981	10,302
Prime	(10,980)	(11,167)	(207,917)	22,105	(28,004)	(3,324)	(16,687)	148	(4,605)	5,397
Government	119,445	28,090	227,063	64,818	9,245	(19,947)	30,132	41,656	28,586	4,905

Source: EPFR, Crane Data, J.P. Morgan

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Market Movers Calendar

Monday	Tuesday	Wednesday	Thursday	Friday
23 Sep **Manufacturing PMI**(9:45am) Sep flash 48.5 **Services PMI**(9:45am) Sep flash 55.0 Atlanta Fed President Bostic speaks(8:00am) Chicago Fed President Goolsbee speaks(10:15am) Minneapolis Fed President Kashkari speaks(1:00pm)	**24 Sep** **Philadelphia Fed nonmanufacturing**(8:30am) Sep -5.0 **FHFA HPI**(9:00am) Jul **S&P/Case-Shiller HPI**(9:00am) Jul **Richmond Fed survey**(10:00am) Sep **Consumer confidence**(10:00am) Sep 104.0 Auction 2-year note $69bn Fed Governor Bowman speaks(9:00am)	**25 Sep** **New home sales**(10:00am) Aug 710,000 Auction 2-year FRN (r) $28bn Auction 5-year note $70bn Fed Governor Kugler speaks(4:00pm)	**26 Sep** **Real GDP**(8:30am) 2Q final 3.0% **Durable goods prelim**(8:30am) Aug -1.0% Ex. transportation -0.1% **Initial claims**(8:30am) w/e Sep 21 220,000 **Pending home sales**(10:00am) Aug -2.0% **KC Fed survey**(11:00am) Sep Auction 7-year note $44bn Boston Fed President Collins and Fed Governor Kugler speak(9:10am) Fed Governor Bowman speaks(9:15am) Fed Chair Powell speaks(9:20am) New York Fed President Williams speaks(9:25am) Fed Vice Chair for Supervision Barr speaks(10:30am) Fed Governor Cook speaks(10:30am) Minneapolis Fed President Kashkari and Fed Vice Chair for Supervision Barr speak(1:00pm) Fed Governor Cook speaks(6:00pm)	**27 Sep** **Personal income**(8:30am) Aug 0.3% Real consumption 0.1% Core PCE deflator 0.14% (2.7%) **Advance economic indicators**(8:30am) Aug -$102.0bn Wholesale inventories 0.3% Retail inventories 0.2% **Consumer sentiment**(10:00am) Sep final 69.5 Boston Fed President Collins and Fed Governor Kugler speak(9:30am) Fed Governor Bowman speaks(1:15pm)
30 Sep **Dallas Fed manufacturing**(10:30am) Sep Fed Chair Powell speaks(1:00pm)	**1 Oct** **Manufacturing PMI**(9:45am) Sep final **ISM manufacturing**(10:00am) Sep **JOLTS**(10:00am) Aug **Construction spending**(10:00am) Aug **Dallas Fed services**(10:30am) Sep **Light vehicle sales** Sep Atlanta Fed President Bostic speaks(11:00am) Atlanta Fed President Bostic and Fed Governor Cook speak(11:10am) Boston Fed President Collins and Richmond Fed President Barkin and Atlanta Fed President Bostic speak(6:15pm)	**2 Oct** **ADP employment**(8:15am) Sep St. Louis Fed President Musalem speaks(10:05am) Fed Governor Bowman speaks(11:00am)	**3 Oct** **Initial claims**(8:30am) w/e Sep 28 **Services PMI**(9:45am) Sep final **ISM services**(10:00am) Sep **Factory orders**(10:00am) Sep Announce 10-year note (r) $39bn Announce 3-year note $58bn Announce 30-year bond (r) $22bn Atlanta Fed President Bostic and Minneapolis Fed President Kashkari speak(10:40am)	**4 Oct** **Employment**(8:30am) Sep

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7 Oct	8 Oct	9 Oct	10 Oct	11 Oct
Consumer credit(3:00pm) Aug Atlanta Fed President Bostic speaks(6:00pm)	**NFIB survey**(6:00am) Sep **International trade**(8:30am) Aug Auction 3-year note $58bn	**Wholesale trade**(10:00am) Aug Auction 10-year note (r) $39bn	**CPI**(8:30am) Sep **Initial claims**(8:30am) w/e Oct 5 **Federal budget**(2:00pm) Sep Auction 30-year bond (r) $22bn Announce 5-year TIPS $24bn Announce 20-year bond (r) $13bn	**PPI**(8:30am) Sep **Consumer sentiment**(10:00am) Oct preliminary Chicago Fed President Goolsbee speaks(9:45am)
14 Oct	**15 Oct**	**16 Oct**	**17 Oct**	**18 Oct**
Columbus Day, bond market closed	**Empire State survey**(8:30am) Oct	**Import prices**(8:30am) Sep **Business leaders survey**(8:30am) Oct Auction 20-year bond (r) $13bn	**Retail sales**(8:30am) Sep **Initial claims**(8:30am) w/e Oct 12 **Philadelphia Fed manufacturing**(8:30am) Oct **Industrial production**(9:15am) Sep **NAHB survey**(10:00am) Oct **Business inventories**(10:00am) Aug **TIC data**(4:00pm) Aug Auction 5-year TIPS $24bn Announce 2-year FRN $30bn Announce 2-year note $69bn Announce 7-year note $44bn Announce 5-year note $70bn	**Housing starts**(8:30am) Sep

Source: Private and public agencies and J.P. Morgan. Further details available upon request.

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