J.P.Morgan

North America Fixed Income Strategy
03 February 2023

Short-Term Market Outlook And Strategy

I hear what I want to hear

- Despite the Fed's net hawkish remarks and this week's strong labor markets data, markets continue to hold on to their dovish outlook and expect easing by the end of this year. We discuss some reasons why
- We now expect the Fed to raise rates by 25bp at both the March and May meeting, bringing the terminal fed funds target range to 5.00-5.25%. In turn, we have revised our 1m-trailing SOFR and Libor forecasts to 5.05% and 5.25% by the end of this year
- This week's Treasury's financing estimates reveal $313bn of additional deficit financing needs relative to our Treasury strategists' estimates. As a result, risks are skewed towards an earlier drop-dead date than our modal forecast, the increase in net bill issuance could take place earlier, and nominal coupon sizes could rise in the last quarter of 2023
- Declining supply and strong investor demand has pushed 6m and 9m bank CP/CD spreads tighter by about 15bp and 17bp, respectively, during January
- While some investors have recently been more active in layering into fixed rate bank CP/CDs, short-term credit investors have largely remained defensive and are concentrating their maturities around FOMC meetings or favoring FRNs versus fixed rate maturities
- Consistent with the broader U.S. fixed income markets, total short-term funds and ultra-short term bond funds saw significant outflows last year prompted by the Fed's aggressive tightening agenda
- We have already started to see some curve extension into low duration bond funds, which have increased by an estimated $3.5bn based on the funds we track, during the first three weeks of January, and are likely to trend higher throughout 2023

US Fixed Income Strategy

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J.P. Morgan Securities LLC

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See page 20 for analyst certification and important disclosures.

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Short-Term Fixed Income

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I hear what I want to hear

The old adage "Don't fight the Fed" is currently being ignored by the markets. Despite the Fed delivering a 25bp hike to the fed funds target range, no change to the statement's forward guidance that "ongoing increases" would be appropriate, and Chair Powell essentially repeating his prepared press conference remarks from December, markets interpreted this weeks' FOMC meeting as incrementally dovish. Not only did Chair Powell acknowledge that the disinflationary process has started, but he did not significantly push back against the easing of financial conditions over the intermeeting period (see *Powell doesn't fight the market*, M. Feroli, 2/1/23).

Furthermore, markets seem to be overlooking the continued strength in the labor markets. In addition to the most recent JOLTs report which showed a modest increase in job openings in the month of December (see *US: Job openings move up in December*, D. Silver, 2/1/23) and filings for initial claims continuing to remain low, coming in below 200k in each of the last three reported weeks (see *US: Initial claims stay low but job cut announcements rise*, D. Silver, 2/2/23), January's

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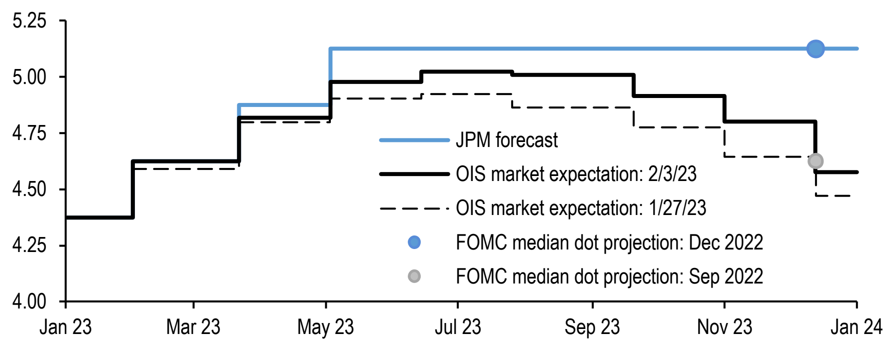
nonfarm employment report significantly beat market expectations and the unemployment rate fell to 3.4% (see *This one goes to 11*, M. Feroli, 2/3/23).

As a result of this week's developments, our US economists have revised their forecast and now expect two more 25bp hikes at the March and May FOMC meetings (as opposed to one), bringing the terminal fed funds range to 5.00-5.25%, and holding it there for the remainder of the year. Yet, market's forward expectations of the Fed have shifted only marginally higher week over week. The OIS markets are still pricing a peak terminal fed funds rate of around 5% and about 1-2 eases by the end of 2023/early 2024 (**Exhibit 1**).

Exhibit 1: The OIS markets are still pricing a peak terminal fed funds rate of around 5% and about 1-2 eases by the end of 2023/early 2024

Fed policy outlook according to J.P. Morgan forecast, OIS market expectations, and FOMC dots (%)



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

This begs the question: why are markets so dovish despite the Fed's hawkish actions and the strength of the labor markets, especially when we know the Fed focuses on core inflation ex-housing which tends to be influenced by wage inflation? We believe there are a few factors at play: **1)** historically, the Fed began easing on average about 8 months after the last interest rate hike; **2)** markets are priced for an inflation outcome in 2023 that is more than 100bp below the Fed's latest projections, suggesting there is less need for rates to be in such restrictive territory (see *TIPS*), **3)** knowing monetary policy acts with a lag, there's concern that the Fed's aggressive hiking action last year could push the economy into a hard landing, forcing the Fed to pivot, and/or **4)** there is an increasing likelihood of a soft landing, which again suggests there is less need for rates to be in such restrictive territory. Indeed, with respect to #4, risky assets are now pricing in much lower probabilities of a recession over the coming year than what we saw in 2022 (**Exhibit 2**).

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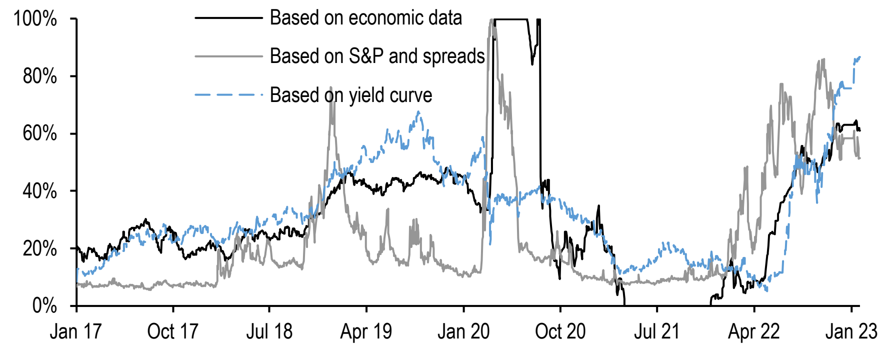
Exhibit 2: Risky assets are now pricing in much lower probabilities of a recession over the coming year than what we saw in 2022

Probabilities of recession within 1 year from all economic indicators, 3m/10y yield curve, and S&P 500/HG credit spreads (%)



Source: Morningstar, J.P. Morgan

As noted above, our modal view is for rates to move higher and pause, rather than move higher than pivot. On the back of our revised Fed forecasts, we have also revised our 1m-trailing SOFR and Libor forecasts (**Exhibit 3**).

Exhibit 3: On the back of our revised Fed forecasts, we have also revised our 1m-trailing SOFR and Libor forecasts

J.P. Morgan short-term interest rates forecast (%)

	1Q23	2Q23	3Q23	4Q23
	31 Mar	30 Jun	30 Sep	31 Dec
EFFR	4.85	5.10	5.10	5.10
SOFR*	4.60	5.05	5.05	5.05
3m Libor	5.25	5.25	5.25	5.25

* 1-month trailing average

Source: J.P. Morgan

The other highlight this week was Treasury's Quarterly Refunding Announcement. Treasury's financing estimates through the second quarter came in well above our Treasury strategist forecasts, which, after adjusting for differences in cash balance assumptions, imply roughly $313bn of additional deficit financing needs relative to our own estimates. If Treasury's forecasts are correct, we think risks are skewed towards an earlier drop-dead date than our modal forecast of early November. Further out, relative to our base case where we expect Treasury to keep sizes unchanged through year-end, borrowing estimates suggest that the increase in net bill issuance we expected later this year could take place earlier and that nominal coupon sizes could rise in the last quarter of 2023. (see *US Treasury Market Daily: Treasury releases financing estimates*, J. Barry, 1/30/22).

Away from the near-term debt management dynamics, buybacks were once again discussed as a way to support overall Treasury market liquidity and provide cash management benefits. In fact, TBAC made the case that buybacks are a strong tool for cash management purposes, given the global precedent and that it could free up dealer balance sheet by swapping out financing intensive short coupons for T-bills. Regardless, we continue to think buybacks at some point will come to fruition, but any facility is still months away. Moreover, it's likely any facility is small in size at

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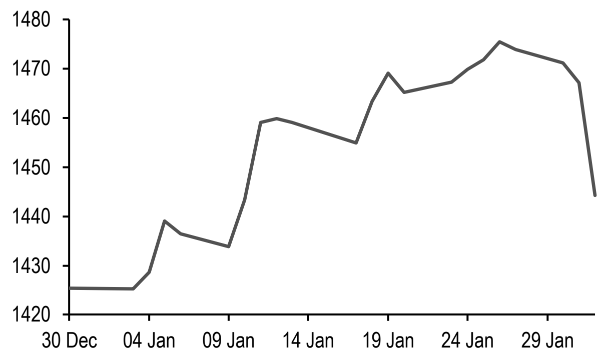
onset, and may be more focused on cash management than liquidity enhancement (see *US Treasury Market Daily: FOMC and February refunding review*, J. Barry, 2/1/23).

Turning to short-term credit money markets, this week has been relatively muted as participants remained sidelined ahead of the February FOMC meeting. Supply has declined over the past two weeks, with total bank CP/CD outstandings falling by about $30bn, to $1.44tn, as of February 1 (**Exhibit 4**). The decline in supply and strong investor demand has pushed 6m and 9m bank CP/CD spreads tighter by about 15bp and 17bp, respectively, during January (**Exhibit 5**). While some investors have recently been more active in layering into fixed rate bank CP/CDs, by and large short-term credit investors have remained defensive given continued Fed uncertainty and are concentrating their maturities around FOMC meetings or favoring FRNs versus fixed rate maturities.

Exhibit 4: Supply has declined recently, with total bank CP/CD outstandings falling by about $30bn, to $1.44tn as of February 1

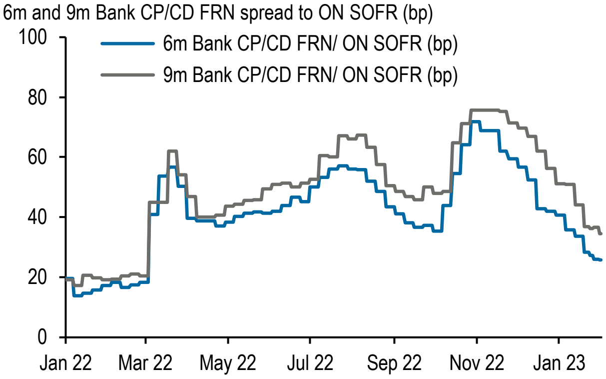
Total bank CP/CD outstandings ($bn)



Source: DTCC, J.P. Morgan

Exhibit 5: The decline in supply and strong investor demand has pushed 6m and 9m bank CP/CD spreads tighter by about 15bp and 17bp, respectively, during January

6m and 9m Bank CP/CD FRN spread to ON SOFR (bp)



Source: J.P. Morgan

Low duration bond fund update

Consistent with the broader U.S. fixed income markets, total short-term funds (effective duration of 1.5-3.5y) and ultra-short term bond funds (effective duration of 0.5-1.5y) saw significant outflows last year prompted by the Fed's aggressive tightening agenda. Based on the bond funds we track, low duration bond fund AUMs declined by an estimated $150bn (or 15%) YoY, to $841bn as of December-end: short-term fund AUMs declined by $117bn, and ultra-short term fund AUMs declined by $33bn (**Exhibit 6**).

Not surprisingly, short-term credit funds saw most of the outflows last year (-$118bn) given their longer duration relative to ultra-short bond funds and money funds. In fact, total returns for short-term bond funds significantly underperformed last year, delivering substantial negative total returns on a 1y basis relative to ultra-short bond funds and MMFs (**Exhibit 7**).

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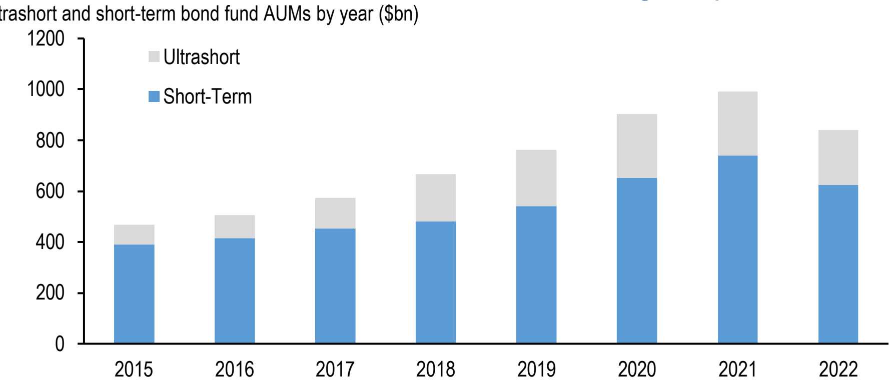
Exhibit 6: Low duration bond fund AUMs declined by an estimated $150bn (or 15%) YoY, to $841bn as of December-end Number of respondents that noted a change to deposit betas in 2022

Ultrashort and short-term bond fund AUMs by year ($bn)



Source: Morningstar, J.P. Morgan

Exhibit 7: Total returns for short-term bond funds significantly underperformed last year, delivering substantial negative total returns on a 1y basis relative to ultra-short bond funds and MMFs

AUMs and returns of ultrashort, short-term, and money market funds (units as indicated)

Fund Type		AUM ($bn)	Total Returns (%)			
			1m	3m	6m	1y
Ultrashort	Government	12	0.35	0.79	1.15	1.05
	Conservative credit	32	0.43	0.96	1.29	0.88
	Credit	97	0.45	1.02	1.33	0.38
	Multi-sector	77	0.54	1.01	1.41	0.28
Short-term	Government	94	0.02	0.58	-1.12	-4.12
	Conservative credit	25	0.29	0.85	-0.28	-3.21
	Credit	309	0.12	1.47	-0.29	-5.19
	Multi-sector	194	0.26	1.22	-0.31	-4.66
MMFs	*Government*	*4012*	*0.31*	*0.80*	*1.23*	*1.33*
	Prime	*1030*	*0.34*	*0.88*	*1.37*	*1.50*

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

It is worth noting that despite the significant decline in net assets at low duration bond funds last year, AUMs are still above pre-pandemic levels. Balances are $77bn above December 2019 levels and $380bn above December 2015 levels, reinforcing the notion that there is still plenty of cash in the front-end relative to the amount of investible assets. It is also for this reason that we believe that when MMF reform gets finalized and implemented, there will still be capacity for CP issuers to access the market, albeit likely at wider levels (see *What if prime MMFs went away? Implications of further MMF reforms*, T. Ho, 10/21/2020).

AUMs this year should be different, especially if the Fed slows the pace of rate hikes followed by a pause, the yield curve steepens, and we see better total returns for low duration bond funds. We have already started to see some curve extension into low duration bond funds, which have increased by an estimated $3.5bn based on the funds we track, during the first three weeks of January, and are likely to trend higher throughout 2023. Indeed, our 2023 Outlook survey conducted last November revealed that 66% of survey respondents intend on adding duration this year.

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Forecasts & Analytics

Interest Rate Forecast

	Actual 3 Feb 23	1Q23 31 Mar 23	2Q23 30 Jun 23	3Q23 30 Sep 23	4Q23 31 Dec 23
Rates					
Effective funds rate	4.58	4.85	5.10	5.10	5.10
SOFR*	4.56	4.60	5.05	5.05	5.05
3-month Libor	4.83	5.25	5.25	5.25	5.25
2-year T-note	4.30	4.50	4.30	4.10	3.80
3-year T-note	3.96	4.15	3.95	3.75	3.50
5-year T-note	3.66	4.00	3.90	3.70	3.50
7-year T-note	3.60	4.00	3.85	3.65	3.45
10-year T-note	3.53	3.80	3.70	3.55	3.40
20-year Treasury	3.76	4.00	4.00	3.90	3.85
30-year T-bond	3.63	3.90	3.90	3.85	3.80
Curves					
2s/5s	-64	-50	-40	-40	-30
2s/10s	-77	-70	-60	-55	-40
2s/30s	-67	-60	-40	-25	0
5s/10s	-13	-20	-20	-15	-10
5s/30s	-4	-10	0	15	30
10s/30s	9	10	20	30	40

* SOFR forecasts reflect 1m trailing average as of the indicated date
Source: J.P. Morgan

Economic forecast

%ch q/q, saar, unless otherwise noted

	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	2021*	2022*	2023*
Gross Domestic Product										
Real GDP	-1.6	-0.6	3.2	2.9	1.0	0.8	0.5	5.7	1.0	0.4
Final Sales	-1.8	1.3	4.5	1.4	1.2	0.4	0.6	4.8	1.3	0.7
Domestic Final Sales	1.3	0.2	1.5	0.8	1.6	1.5	1.1	5.4	1.0	1.1
Business Investment	7.9	0.1	6.2	0.7	2.1	3.8	3.3	5.0	3.7	2.2
Net Trade (% contribution to GDP)	-3.1	1.2	2.9	0.6	-0.5	-1.2	-0.6	-0.5	0.4	-0.4
Inventories (% contribution to GDP)	0.2	-1.9	-1.2	1.5	-0.2	0.4	-0.1	0.9	-0.3	-0.3
Prices and Labor Cost										
Consumer Price Index	9.2	10.5	5.7	3.1	2.3	3.5	3.2	6.7	7.1	2.8
Core	6.5	6.6	6.4	4.4	3.6	3.7	3.2	5.0	6.0	3.2
Employment Cost Index	5.8	5.4	5.1	4.4	4.2	4.0	3.8	3.9	5.2	3.9
Unemployment Rate (%, sa)	3.8	3.6	3.6	3.6	3.4	3.5	3.8	-	-	-

Source: J.P. Morgan

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New Issues

Corporates

Issue Date	Issuer	Ticker	Moody's	S&P	Fitch	Amount	Coupon	Maturity	Term	SOFR Spread Equivalent 12m	24m	36m	60m
1/30/2023	BANK OF NEW ZEALAND	BNZLNZ	A1	AA-		850	4.85	2/7/2028	5				139
1/30/2023	IBM CORP	IBM	A3	A-		850	4.50	2/6/2026	3			70	
1/30/2023	IBM CORP	IBM	A3	A-		1000	4.50	2/6/2028	5				106
1/30/2023	TYCO ELECTRONICS GROUP SA	TEL	A3	A-		500	4.50	2/13/2026	3			70	
2/2/2023	ORACLE CORP	ORCL	Baa2	BBB		750	4.50	5/6/2028	5				131
2/2/2023	NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORP	NRUC	A2	A-		600	4.45	3/13/2026	3			80	
2/2/2023	NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORP (TAP)	NRUC	A2	A-		600	4.80	3/15/2028	5				119

ABS

Issue Date	Issuer	Fitch	Moody's	S & P	Amount	Life	Spread	Benchmark	Series	Class	Market	Deal Type
1/30/2023	Neighborly Issuer LLC				275	4.88	425	I-CRV	2023-1	A-2	US Private	Other - Franchise
1/31/2023	Flagship Credit Auto Trust			A1+	47	0.20	30	I-CRV	2023-1	A-1	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust			AAA	177	1.05	78	I-CRV	2023-1	A-2	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust			AAA	52	2.22	90	I-CRV	2023-1	A-3	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust			AA	36	2.76	110	I-CRV	2023-1	B	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust			A	47	3.32	160	I-CRV	2023-1	C	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust			BBB	33	3.97	275	I-CRV	2023-1	D	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust			BB-	33	4.53	800	I-CRV	2023-1	E	US Private	Auto - NP
1/31/2023	Flagship Credit Auto Trust				0				2023-1	R	US Not Offered	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust			A-1+	23	0.27	30	I-CRV	2023-1	A-1	US Private	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust			AAA	75	1.15	90	I-CRV	2023-1	A-2	US Private	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust			AAA	35	2.31	135	I-CRV	2023-1	A-3	US Private	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust			AA	14	2.92	150	I-CRV	2023-1	B	US Private	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust			A	18	3.37	195	I-CRV	2023-1	C	US Private	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust			BBB	16	3.82	375	I-CRV	2023-1	D	US Private	Auto - NP
1/31/2023	Foursight Capital Automobile Receivables Trust				0				2023-1	R2	US Not Offered	Auto - NP
1/31/2023	Mercury Financial Credit Card Master Trust				747	2.12	400	I-CRV	2023-1	A	US Private	CrCrds - Bank
1/31/2023	Mercury Financial Credit Card Master Trust				94	2.12	560	I-CRV	2023-1	B	US Private	CrCrds - Bank
1/31/2023	Mercury Financial Credit Card Master Trust				73	2.12	890	I-CRV	2023-1	C	US Private	CrCrds - Bank
1/31/2023	Mercury Financial Credit Card Master Trust				61	2.12	1350	I-CRV	2023-1	D	US Private	CrCrds - Bank

Source for corporate and ABS issuance: J.P. Morgan

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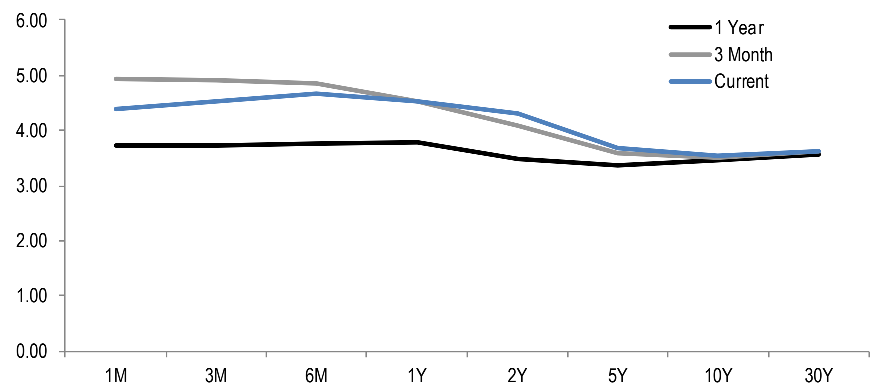
Key Rates

U.S. Treasury Forward Yield Curve (%)



	1M	3M	6M	1Y	2Y	5Y	10Y	30Y
Current	4.40	4.53	4.65	4.52	4.31	3.67	3.53	3.63
3 Month	4.94	4.91	4.86	4.51	4.08	3.58	3.51	3.62
1 Year	3.73	3.74	3.76	3.77	3.49	3.37	3.44	3.56

Source: Bloomberg Finance L.P. All rates and yields are as of 02/03/23

Eurozone Yields (%)

Yield Type	Eurozone	Germany	Britain (UK)	France	Italy	Spain	Portugal	Greece
3M Sovereign Yield	2.41	2.20	3.90	2.41	2.47	2.32	2.28	2.54
2Y Sovereign Yield	2.54	2.54	3.20	2.69	2.88	2.77	2.56	3.04
5Y Sovereign Yield	2.20	2.20	2.91	2.47	3.41	2.76	2.63	3.21
10Y Sovereign Yield	2.19	2.19	3.05	2.64	4.02	3.11	3.03	4.00

Source: Bloomberg Finance L.P. All rates and yields are as of 02/03/23

Libor

		Change since (bp):					
	03 Feb (%)	1w ago	4Q22	3Q2022	2Q2022	6m ago	Year ago
1m Libor	4.57	0.22	18.03	142.92	278.52	219.56	446.06
3m Libor	4.83	0.88	6.68	107.94	254.90	200.19	451.91

Source: J.P. Morgan

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Fed Watch

Members of the Federal Open Market Committee (FOMC) with Voting Status

		DOVISH				HAWKISH
2023	Chair			Powell (2028)		
	Governors	Barr (2032)	Brainard (2026)	Jefferson (2036)	Bowman (2034)	
		Cook (2024)			Waller (2030)	
	Presidents		Harker (Phil., '23)	Williams (NY, '23)	Kashkari (Minn., '23)	Bullard (St. L, '25)
			Logan (Dal., '23)	Goolsbee (Chi., '23)	Barkin (Rich., '24)	Mester (Clev., '24)
			Collins (Bos., '25)	Bostic (Atl., '24)		
			Daly (SF, '24)	George (KC, '25)		

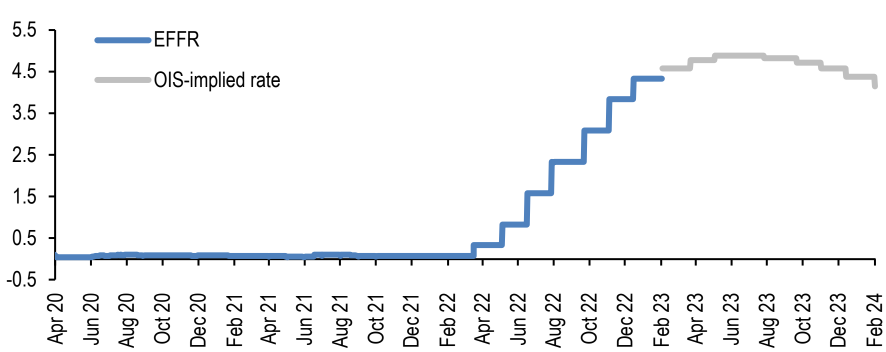
Note: Blue shading denotes current voting members. For Federal Reserve Board members who are permanent voting members, the year in which their term ends is noted.

Commentary from the Federal Open Market Committee (FOMC) Members

FOMC Member	Role	Comments / View
2023 Voting Members:		
Jerome Powell	Chairman	It is likely that restoring price stability will require holding policy at a restrictive level for some time; FOMC does not anticipate rate cuts in 2023
Lael Brainard	Vice Chairman	Appropriate to move to a slower pace of increases, though there is still work to do
Michael Barr	Vice Chairman for Supervision	
Michelle Bowman	Board of Governors	Inflation far too high and must be curbed
Lisa Cook	Board of Governors	Inflation is still much too high
Philip Jefferson	Board of Governors	
Christopher Waller	Board of Governors	Fed committed to lowering inflation
John Williams	New York Fed President	Expects inflation to slow to 5-5.5% by year end and to 3-3.5% next year; Fed will have to tighten further to slow economic activity
Austan Goolsbee	Chicago Fed President	
Patrick Harker	Philadelphia Fed President	Expects Fed to slow pace of rate hikes in coming months as policy approaches a sufficiently restrictive stance
Neel Kashkari	Minneapolis Fed President	Any discussion of pivoting is entirely premature; wages are attempting to catch up to inflation rather than driving it
Lorie Logan	Dallas Fed President	Appropriate to slow the pace of hikes, though there is still a long way to go on bringing down inflation
Nonvoting Members of the FOMC (But Can Influence the Dot Plot):		
Thomas Barkin	Richmond Fed President	A terminal rate north of 5% is conceivable; after having its foot on the gas for months, the Fed is now said to be braking
Raphael Bostic	Atlatna Fed President	Sees rates holding at that level long enough to judge the effectiveness of policy; does not mean Fed will lower rates in 2023
James Bullard	St Louis Fed President	Markets are underpricing risk that Fed may be more aggressive on policy; there is risk that Fed may be more aggressive on policy
Susan Collins	Boston Fed President	Expects additional Fed funds hikes followed by rates holding in restrictive territory for some time
Mary Daly	San Francisco Fed President	Fed is hiking to a strength and trying to slow economy gently; consumers preparing for a slowing economy; unemployment likely to rise
Esther George	Kansas City Fed President	Worried labor market tightness complicates bringing inflation back down to target without the economy slowing or potentially contracting
Loretta Mester	Cleveland Fed President	While inflation will come down next year, Fed is still nowhere near a pause

Source: Federal Reserve, J.P. Morgan

OIS implied fed funds rate forecast



Source: J.P. Morgan. Note: 1d OIS implied forecast as of 02/02/23

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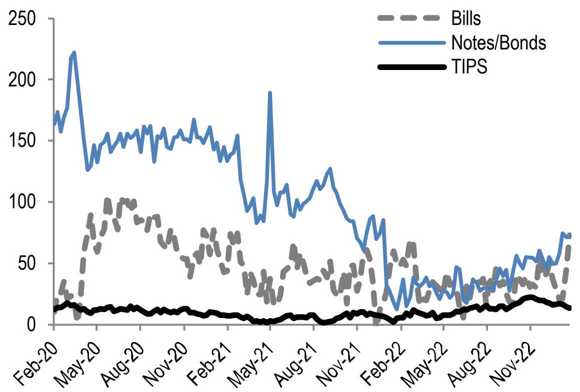
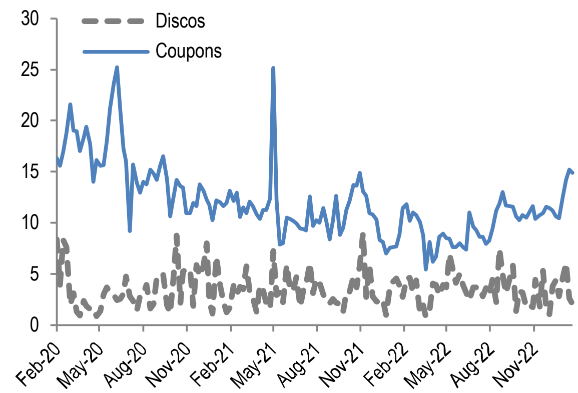
Dealer Net Positions

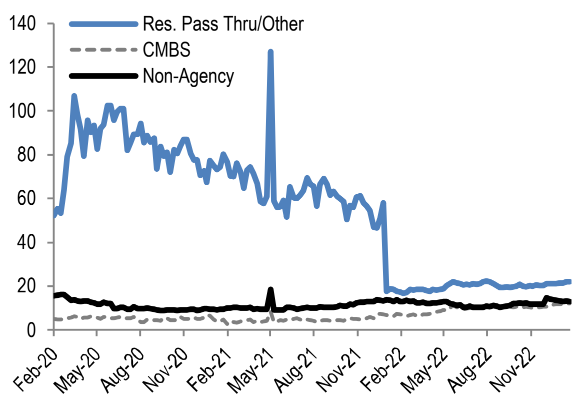
Government ($bn)



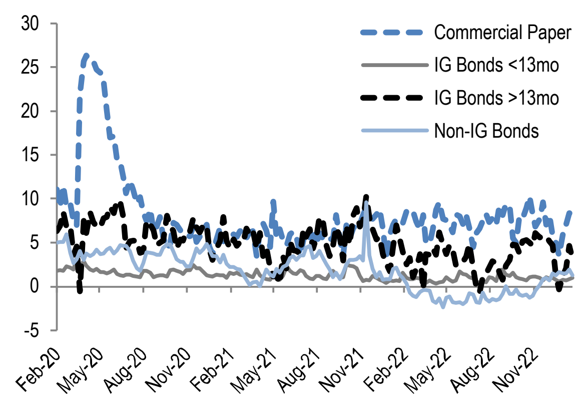
Agency ($bn)



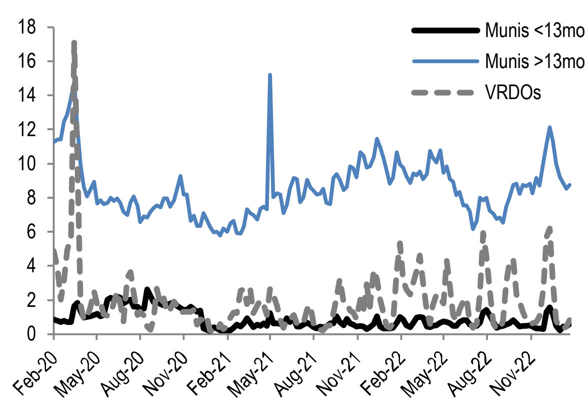
MBS ($bn)



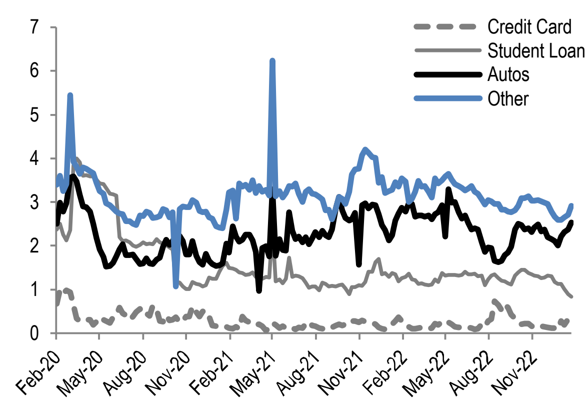
Corporates ($bn)



Munis ($bn)



ABS ($bn)



Source for all charts on this page: New York Fed, data as of 01/25/23

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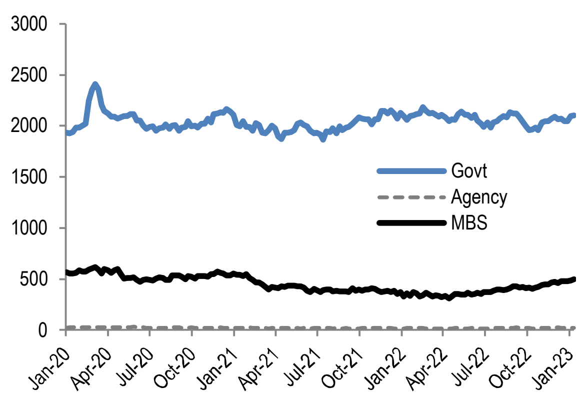
Repo

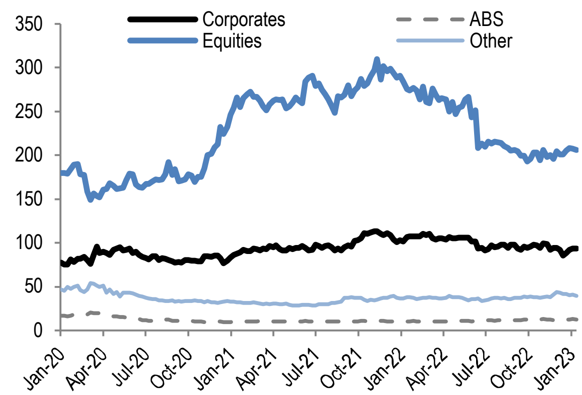
Total Repo Outstanding ($bn)

Total Securities Lending Outstanding ($bn)

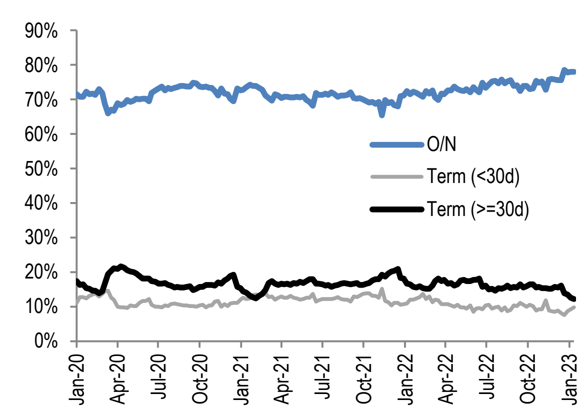
Traditional Collateral Repo ($bn)



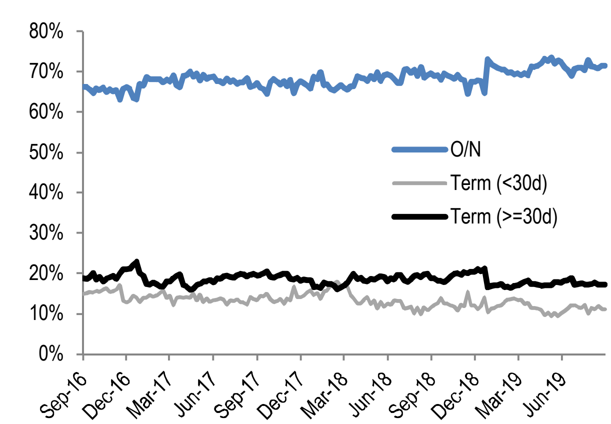
Non-Traditional Collateral Repo ($bn)



Repo Terms (%)



Securities Lending Terms (%)



Source for all charts on this page: New York Fed, data as of 01/25/23

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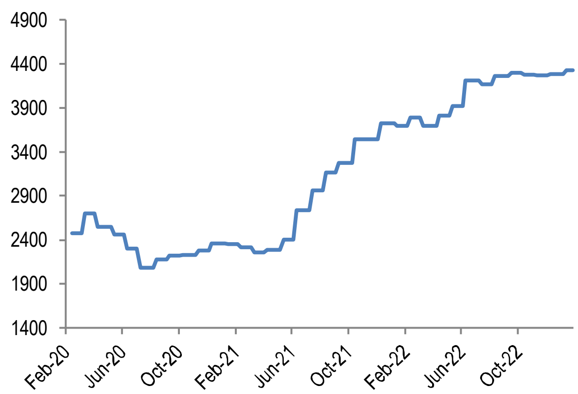
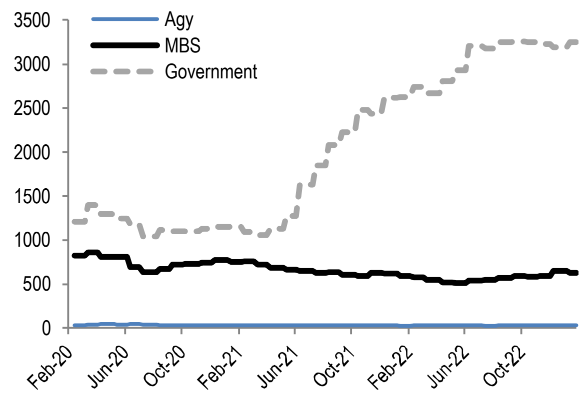
Repo (continued)

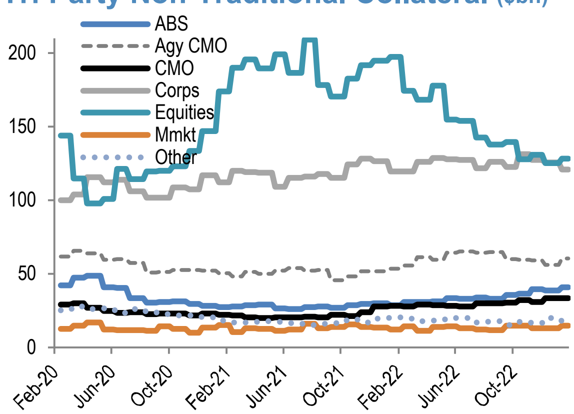
Total Tri-Party Outstanding ($bn)



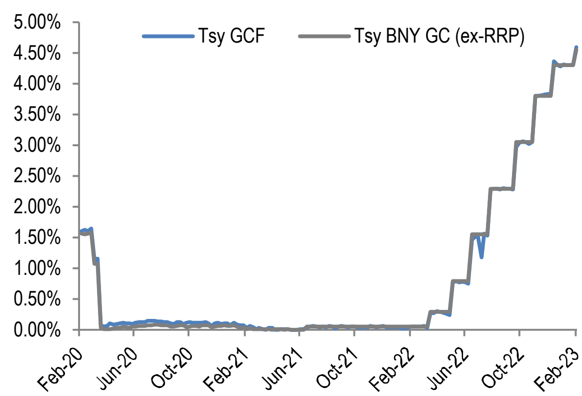
Tri-Party Traditional Collateral ($bn)



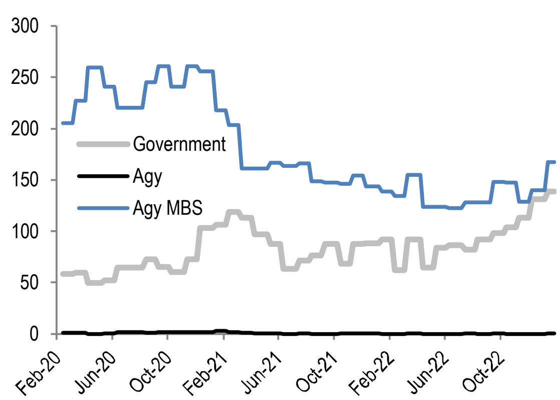
Tri-Party Non-Traditional Collateral ($bn)



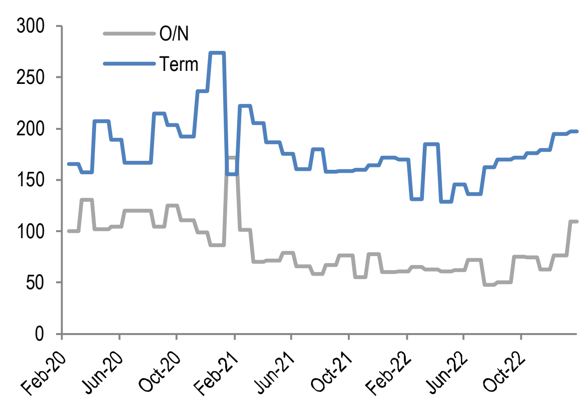
ON GC rates (%)



GCF Collateral ($bn)



GCF Term Composition ($bn)



Source for all charts on this page: New York Fed, data as of 01/25/23

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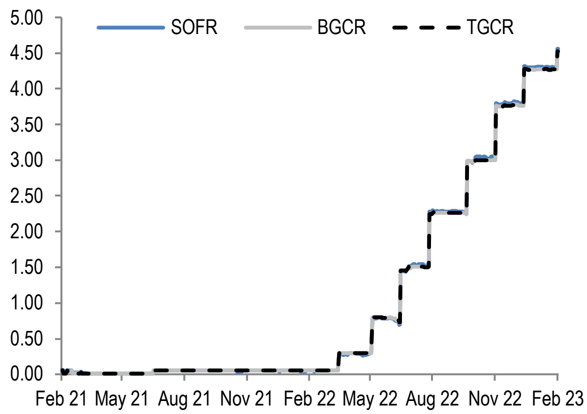
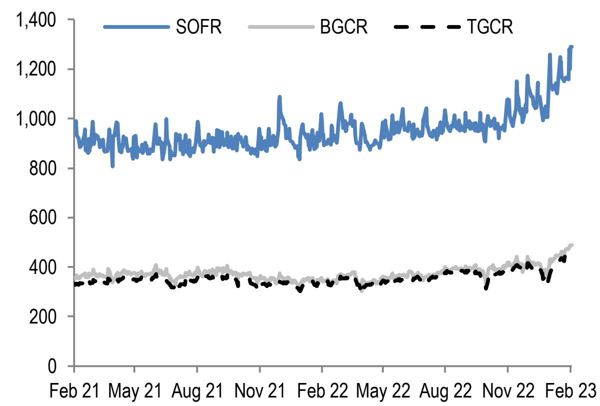
Repo (continued)

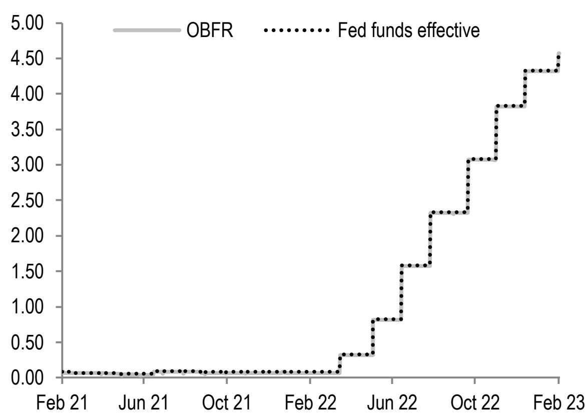
NY Fed repo rates (%)



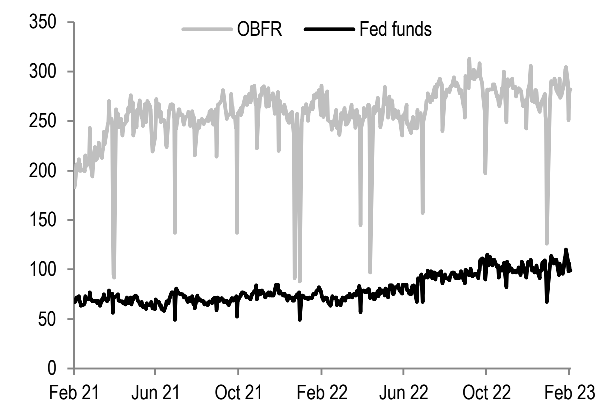
NY Fed repo rate volumes ($bn)



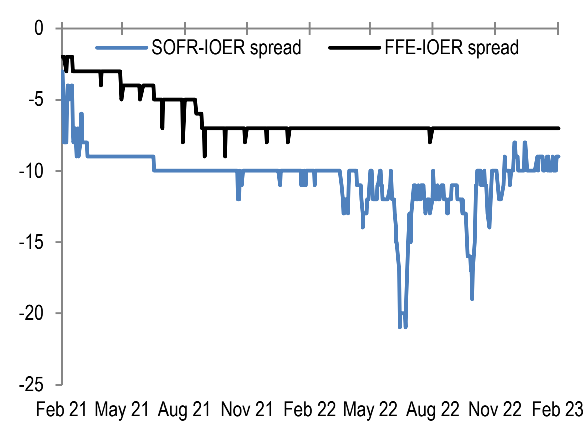
Fed funds effective and OBFR (%)



Fed funds and OBFR* volumes ($bn)



FFE and SOFR spread to IORB (bp)



Source: New York Fed, data as of 2/3/2023

*OBFR volumes include "Selected Deposits" (onshore Eurodollar-like deposits) from 5/1/19 on

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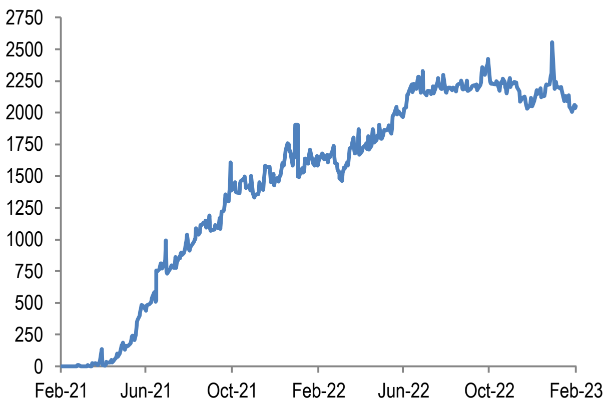
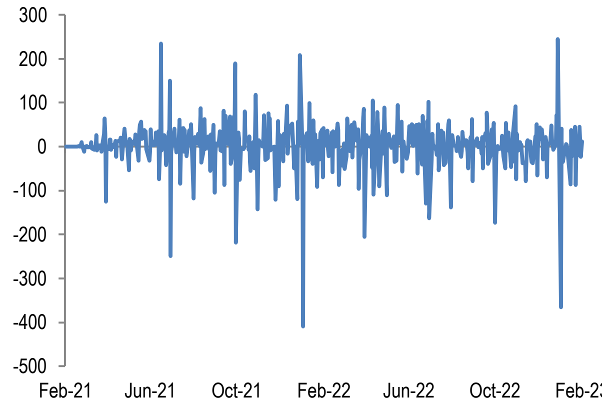
Fed Reverse Repo Facility

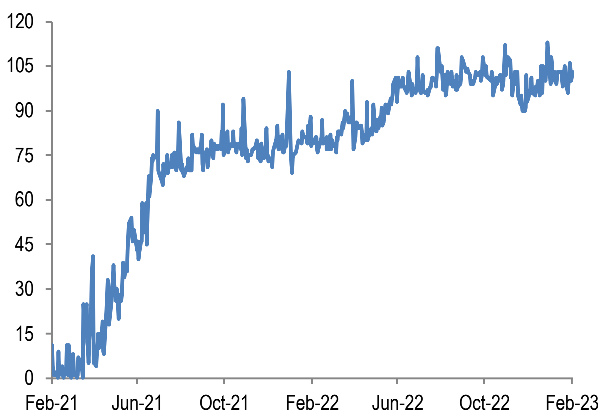
ON Accepted Amount ($bn)



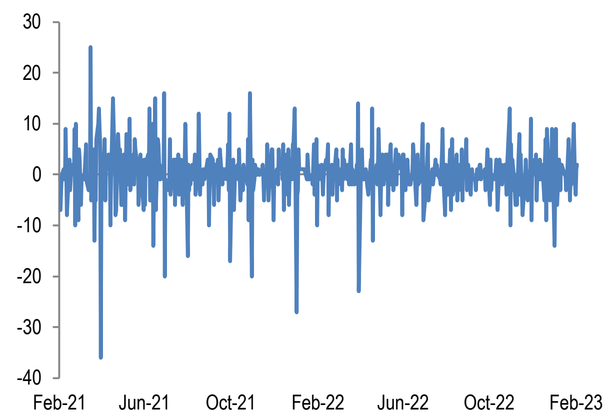
ON Accepted Amount: Daily Change ($bn)



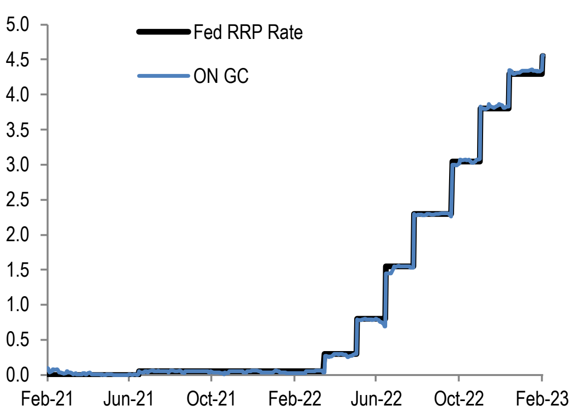
ON Number of Bidders



ON Number of Bidders: Daily Change



ONGC vs RRP fixed rate (%)



Source for all charts on this page: Federal Reserve, data as of 02/03/23

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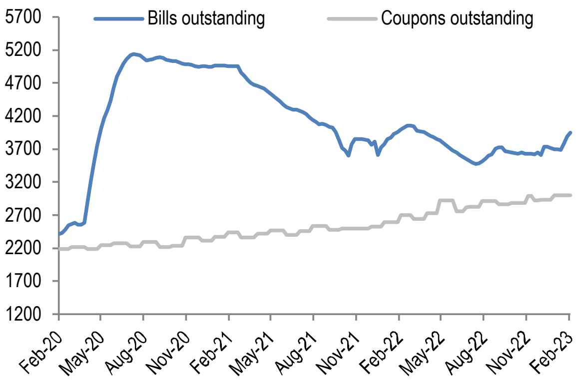
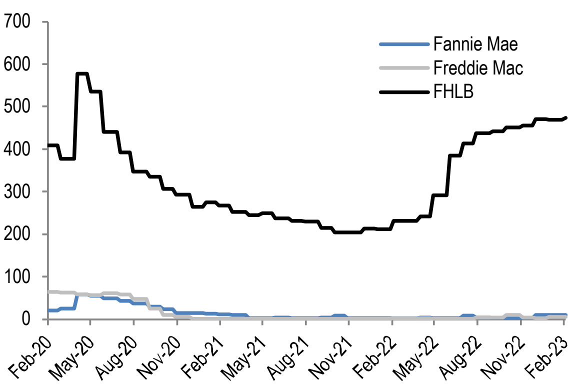
Treasury Debt

Bills and Coupons Outstanding ($bn)

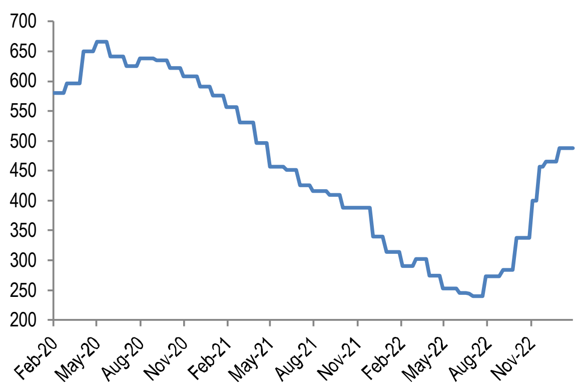


Agency Debt

Discount Notes Outstanding ($bn)

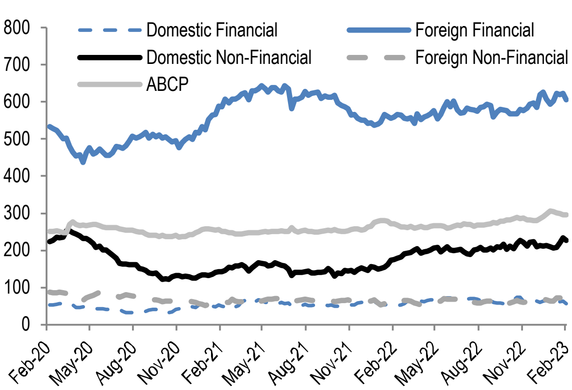


Coupons Outstanding ($bn)

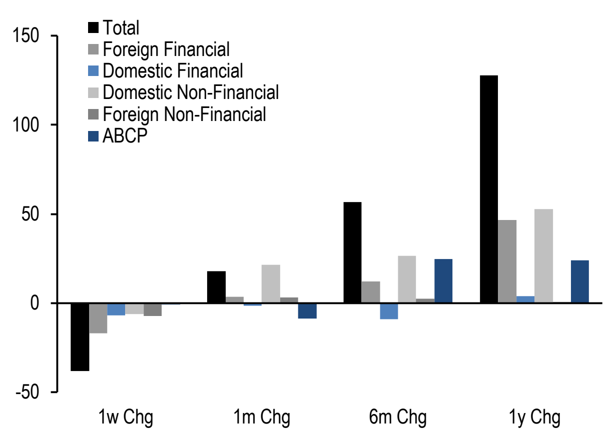


Commercial Paper

Outstanding ($bn)



Change ($bn)



Source: Federal Reserve, US Treasury, J.P. Morgan estimates, data as of 02/01/23

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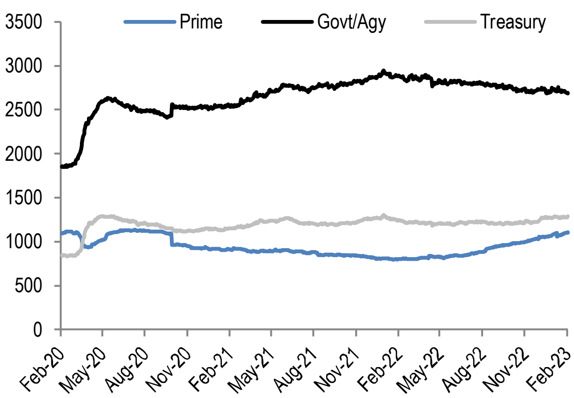
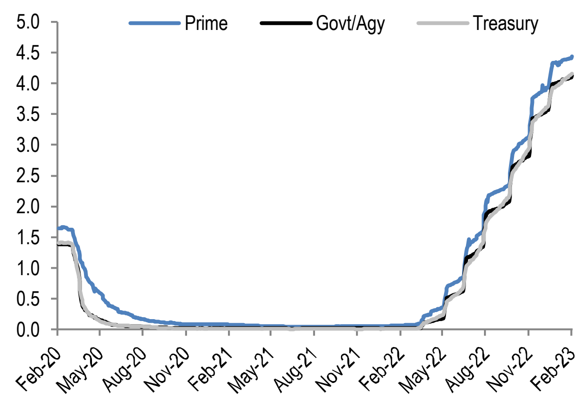
Money Market Funds

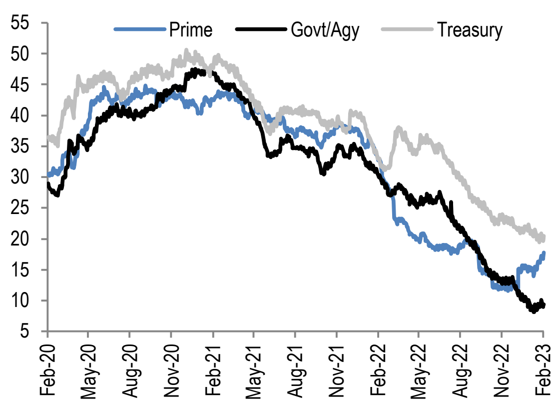
Assets Under Management ($bn)



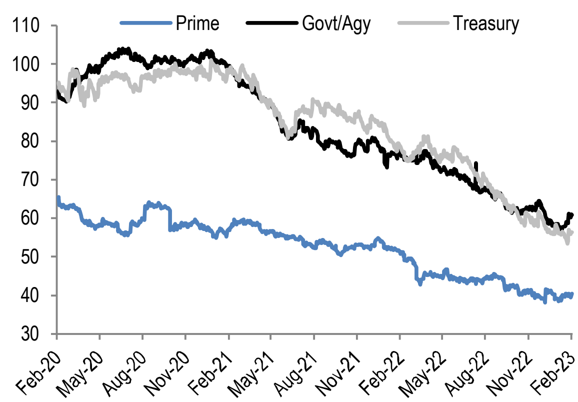
Net Yield (%)



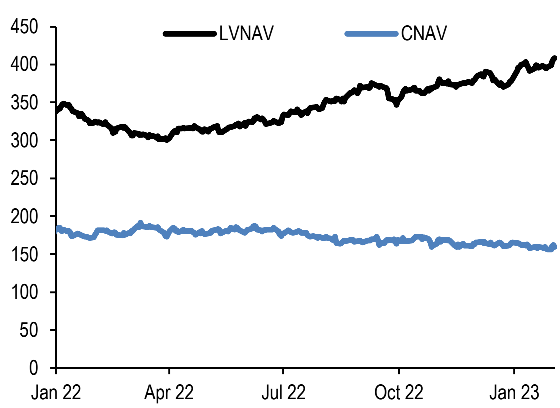
Weighted Average Maturity (days)



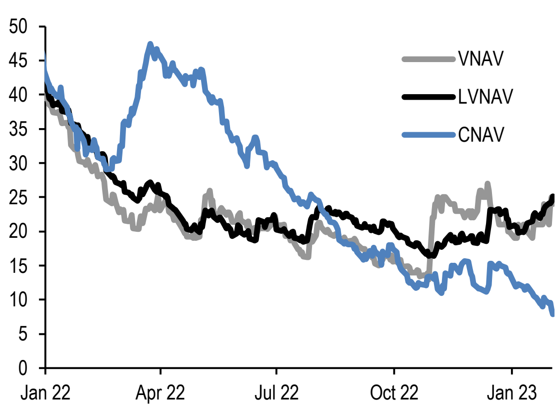
Weighted Average Life (days)



USD Offshore Fund AUM ($bn)



USD Offshore Fund WAM (days)



Source for charts on this page: Crane Data, J.P. Morgan, data as of 02/02/23

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Money Market Funds (continued)

Prime MMF Asset Allocation ($bn)

Sector	Dec-22	% of total	m/m chg	chg since Jun-22	m/m % chg	% chg since Jun-22
Banks (US)	32	3%	5	13	17%	70%
Banks (Eurozone)	51	5%	(39)	(14)	-43%	-22%
Banks (Other Yankee)	275	27%	(32)	26	-10%	10%
Repo	114	11%	12	41	12%	57%
ABCP/CCP (Banks)	38	4%	2	14	4%	61%
ABCP (Non-banks)	6	1%	1	3	18%	79%
ABS	0	0%	(0)	(0)	-33%	-79%
Corporates (Financial)	2	0%	(1)	(0)	-30%	-10%
Corporates (Non-financial)	21	2%	(9)	(5)	-30%	-21%
US Treasuries	28	3%	(9)	(29)	-24%	-51%
US Agencies	64	6%	(14)	14	-18%	27%
US S&L Govt/Munis	10	1%	(1)	(1)	-6%	-6%
Foreign SSA	17	2%	(4)	0	-20%	1%
Central Banks (Fed RRP)	361	35%	98	166	37%	85%
Other	12	1%	0	1	4%	11%
Total	**1,030**	**100%**	**10**	**229**	**1%**	**29%**

Government MMF Asset Allocation ($bn)

Sector	Dec-22	% of total	m/m chg	chg since Jun-22	m/m % chg	% chg since Jun-22
Treasuries	**1,031**	**26%**	**(81)**	**(369)**	**-7%**	**-26%**
Bills	579	14%	(99)	(269)	-15%	-32%
Treasury coupons	61	2%	3	(103)	6%	-63%
FRNs	391	10%	14	3	4%	1%
Agencies	**482**	**12%**	**(10)**	**139**	**-2%**	**41%**
Discos	134	3%	(29)	(20)	-18%	-13%
Agency Coupons	26	1%	(6)	(2)	-19%	-6%
Agency FRNs	322	8%	26	160	9%	99%
Repo	**2,476**	**62%**	**153**	**213**	**7%**	**9%**
Treasury repo	247	6%	(38)	16	-13%	7%
Agency repo	271	7%	(30)	62	-10%	30%
Other Repo	-	0%	0	(8)	0%	-100%
RRP	1,958	49%	222	142	13%	8%
Other	**23**	**1%**	**(2)**	**3**	**-7%**	**17%**
Total	**4,012**	**100%**	**61**	**(14)**	**2%**	**0%**

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

	Dec-22										m/m change										Change since Dec-21									
	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	**164**	**145**	**42**	**34**	**4**	**48**	**16**	**49**	**3**	**505**	**(6)**	**(7)**	**(56)**	**2**	**(1)**	**8**	**0**	**4**	**(1)**	**(55)**	**16**	**37**	**7**	**8**	**(0)**	**27**	**1**	**(3)**	**1**	**93**
Eurozone	**21**	**20**	**10**	**13**	**1**	**3**	**1**	**19**	**0**	**88**	**(7)**	**(5)**	**(27)**	**1**	**0**	**(1)**	**(1)**	**1**	**-**	**(37)**	**4**	**3**	**3**	**3**	**(1)**	**0**	**(1)**	**0**	**(0)**	**11**
France	10	12	3	12	1	2	1	16	0	58	2	(1)	(2)	1	0	(0)	0	1	-	1	1	3	2	3	(1)	1	(1)	(0)	(0)	7
Germany	6	3	1	0	-	0	0	-	0	10	(4)	(5)	(4)	(0)	-	(0)	(0)	-	-	(14)	3	(2)	(0)	(0)	-	(0)	0	-	0	1
Netherlands	3	3	2	1	-	1	0	3	-	12	(2)	1	(16)	0	-	0	(0)	0	-	(17)	1	0	(2)	0	-	0	(0)	1	(0)	(1)
Belgium	-	0	0	-	-	-	-	-	-	1	-	(0)	-	-	-	-	-	-	-	(0)	-	0	0	-	-	-	-	-	-	0
Spain	1	1	4	-	-	0	-	-	-	7	(0)	0	0	-	-	0	-	-	-	0	0	1	3	-	-	(0)	-	-	(0)	4
Luxembourg	0	-	-	-	-	-	-	-	-	0	(0)	-	-	-	-	-	-	-	-	(0)	(0)	-	-	-	-	-	-	-	-	(0)
Austria	0	-	-	-	-	-	-	-	-	0	(3)	-	(5)	-	-	-	-	-	-	(7)	0	-	-	-	-	-	-	-	-	0
Other Europe	**32**	**20**	**4**	**3**	**1**	**1**	**2**	**4**	**0**	**67**	**(4)**	**(3)**	**(25)**	**(0)**	**(0)**	**0**	**1**	**(0)**	**(0)**	**(31)**	**5**	**5**	**3**	**(2)**	**1**	**1**	**1**	**(1)**	**(0)**	**12**
United Kingdom	8	9	-	3	1	1	2	3	0	27	(2)	(1)	(4)	(0)	(0)	0	1	(0)	-	(7)	2	3	-	1	1	1	1	0	(0)	8
Sweden	14	10	4	1	-	-	-	-	-	28	(1)	(2)	(19)	0	-	-	-	-	(0)	(21)	3	3	3	0	-	-	-	-	(0)	10
Switzerland	6	1	-	0	-	-	-	1	0	8	(0)	(0)	-	(0)	-	-	-	-	0	(1)	(2)	(0)	-	(4)	-	(0)	(0)	(1)	(0)	(7)
Norway	4	-	-	-	-	-	-	-	-	4	(1)	-	(2)	-	-	-	-	-	(0)	(2)	1	-	-	-	-	-	-	-	-	1
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Regions	**111**	**106**	**28**	**18**	**2**	**44**	**12**	**27**	**2**	**350**	**5**	**1**	**(4)**	**1**	**(0)**	**8**	**(1)**	**3**	**(1)**	**13**	**7**	**29**	**0**	**7**	**0**	**26**	**1**	**(3)**	**1**	**69**
United States	9	15	2	7	-	23	8	18	2	83	(1)	2	1	0	-	5	(2)	2	(1)	7	2	14	2	1	(0)	16	1	(3)	1	34
Canada	48	35	12	7	2	11	3	6	0	123	5	0	4	0	(0)	3	2	1	(0)	16	1	1	(1)	4	0	6	1	0	0	11
Japan	17	50	4	4	-	10	1	3	0	91	0	(2)	(8)	0	-	0	(1)	(0)	0	(9)	(1)	17	(2)	2	-	4	(1)	(0)	0	20
Australia	27	1	8	-	-	-	-	-	0	36	0	(0)	1	-	-	-	-	-	(0)	1	6	(3)	1	-	-	-	-	-	0	4
Singapore	9	2	-	-	-	-	-	-	-	12	1	0	(0)	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	1
China	0	1	0	-	-	-	-	-	-	2	(0)	0	(1)	-	-	-	-	-	-	(1)	(0)	0	0	-	-	-	-	-	-	0
Abu Dhabi	1	-	0	-	-	-	-	-	-	2	(0)	(0)	(2)	-	-	-	-	-	-	(2)	(1)	(0)	0	-	-	-	-	-	-	(1)
Kuwait	-	0	0	-	-	-	-	-	-	0	-	(0)	0	-	-	-	-	-	-	(0)	-	0	0	-	-	-	-	-	-	0
Chile	0	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0

Source for all charts on this page: Crane Data, J.P. Morgan, data as of 12/30/22

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Market Movers Calendar

Monday	Tuesday	Wednesday	Thursday	Friday
6 Feb **Senior loan officer survey** (2:00pm) Jan 1Q	**7 Feb** **International trade** (8:30am) Dec -$68.7bn **Consumer credit** (3:00pm) Dec Auction 3-year note $40bn Fed Chairman Powell speaks (12:00pm) Fed Vice Chair for Supervision Barr speaks (2:00pm)	**8 Feb** **Wholesale trade** (10:00am) Dec Auction 10-year note $35bn New York Fed President Williams speaks (9:15am) Fed Governor Cook speaks (9:30am) Minneapolis Fed President Kashkari speaks (12:30pm) Fed Governor Waller speaks (1:45pm)	**9 Feb** **Initial claims** (8:30am) w/e Feb 4 190,000 Announce 20-year bond $15bn Announce 30-year TIPS $9bn Auction 30-year bond $21bn	**10 Feb** **Consumer sentiment** (10:00am) Feb prelim 66.0 **Federal budget** (2:00pm) Jan Fed Governor Waller speaks (12:30pm) Philadelphia Fed President Harker speaks (4:00pm)
13 Feb	**14 Feb** **NFIB survey** (6:00am) Jan **CPI** (8:30am) Jan	**15 Feb** **Retail sales** (8:30am) Jan **Empire State survey** (8:30am) Feb **Industrial production** (9:15am) Jan **Business inventories** (10:00am) Dec **NAHB survey** (10:00am) Feb **TIC data** (4:00pm) Dec Auction 20-year bond $15bn	**16 Feb** **Initial claims** (8:30am) w/e Feb 11 **PPI** (8:30am) Jan **Housing starts** (8:30am) Jan **Philadelphia Fed manufacturing** (8:30am) Feb **Business leaders survey** (8:30am) Feb Announce 2-year FRN (r) $22bn Announce 2-year note $42bn Announce 5-year note $43bn Announce 7-year note $35bn Auction 30-year TIPS $9bn Cleveland Fed President Mester speaks (8:45am) St. Louis Fed President Bullard speaks (1:30pm)	**17 Feb** **Import prices** (8:30am) Jan **Leading indicators** (10:00am) Jan **QSS** (10:00am) 4Q advance
20 Feb **Presidents' Day, markets closed**	**21 Feb** **Philadelphia Fed nonmanufacturing** (8:30am) Feb **Manufacturing PMI** (9:45am) Feb flash **Services PMI** (9:45am) Feb flash **Existing home sales** (10:00am) Jan Auction 2-year note $42bn	**22 Feb** Auction 2-year FRN (r) $22bn Auction 5-year note $43bn **FOMC minutes**	**23 Feb** **Initial claims** (8:30am) w/e Feb 18 **Real GDP** (8:30am) 4Q second **KC Fed survey** (11:00am) Feb Auction 7-year note $35bn Atlanta Fed President Bostic speaks (10:50am)	**24 Feb** **Personal income** (8:30am) Jan **Consumer sentiment** (10:00am) Feb final **New home sales** (10:00am) Jan

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