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Short-Term Market Outlook and Strategy

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- Nonetheless, we continue to believe that the Fed will hike later this month and expect them to continue hiking into 2019, though we acknowledge the Fed will turn more data dependent going forward
- Investors at Monday's Treasury Market Structure Conference noted that the 2m bill has been well received, and expected continued growth in sponsored repo
- Liquidity markets were thrown into a whirlwind due to Wednesday's market closure, with repo rates jumping significantly…
- …we suspect this was largely due to substantial withdrawals from institutional MMFs on Tuesday, which was consistent with behavior before other market holidays. We do not expect repo rates to remain elevated as we head into next week
- The Fed's Senior Financial Officer Survey provides insight into banks' demand for reserves. Across respondent banks, the lowest comfortable level of reserve balances was $600bn, suggesting we are far from scarcity
- The way banks plan on replenishing their reserves differs greatly between domestic banks and foreign banks and depends on the time horizon
- Most banks said they would economize their reserves if the opportunity cost was 25bp or higher, and noted their willingness to lend reserves in the overnight wholesale funding market at a spread over IOER

US Rates Strategy
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Contents

Note to readers: This has been adapted from a piece published on December 7, 2018 in our US Fixed Income Markets Weekly publication.

See page 24 for analyst certification and important disclosures.

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Short-Term Fixed Income

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Market commentary

Two weeks ago, we published our year-ahead outlook for 2019. At that time, we argued that while US economic growth is expected to face more challenges in 2019 than in 2018, the continued tightening in the labor markets should put upward pressure on inflation, warranting the Fed to raise rates in December and then continuing those hikes four times next year. Since then however, that forecast has been severely tested this week as the equity market sell-off and the Treasury yield curve inversion prompted markets to markedly re-price Fed expectations. Indeed, as of close of business Friday, markets were less confident of a rate hike at the upcoming December FOMC meeting. Furthermore, markets are now barely pricing one hike in 2019, and see a small probability of an ease by 2020 (**Exhibit 1**).

We continue to believe that the Fed will hike rates later this month. While the November employment report came in on the softer side of expectations and recent trends, the downshift in employment growth was not a big surprise as we've been looking for the pace of GDP growth in 4Q to step down to 2.5% from the almost 4% growth in 2Q and 3Q. **We disagree with the market that they're done after that, but we acknowledge the Fed will turn more data dependent going forward.** Going back to jobs, even if the job growth were to stabilize at 155,000 per month,

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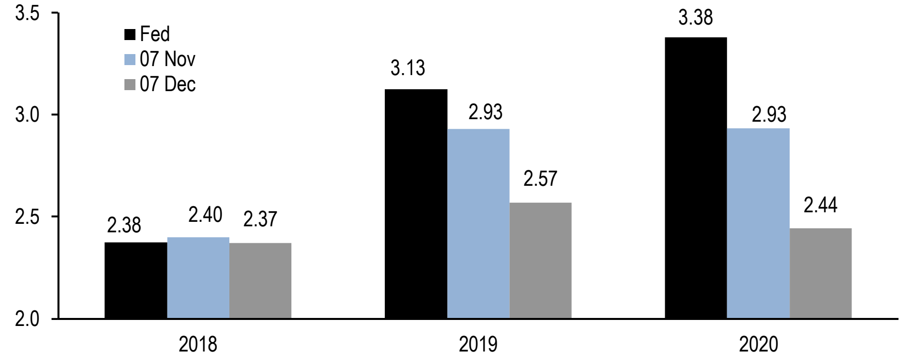
that's still faster than is sustainable in the long run. Moreover, we believe the neutral nominal interest rate is above 2.4% so the Fed's got more work to do (see *Milquetoast jobs report doesn't settle any debates*, M. Feroli, 12/7/18).

Exhibit 1: Markets are barely pricing one hike in 2019 and see a small probability of an ease by 2020

Median FOMC projections of midpoint of Federal funds target range for year-end 2018-2020 from September 2018 Summary of Economic Projections, compared to 1m OIS rates out of early-December (%)



Source: Federal Reserve, J.P. Morgan

On Monday, our Treasury strategists attended the Fourth Annual Treasury Market Structure Conference[1], jointly hosted by Treasury, FRBNY, the Federal Reserve Board of Governors, the SEC, and the CFTC at the New York Fed. A number of senior officials from the aforementioned agencies, as well as representatives from the dealer and investor communities presented at the conference on a broad range of topics. Regarding Treasury repo markets, key money market investors noted that in addition to the increase in Treasury collateral, increased balance sheet availability as well as an increase in counterparties have also driven the rise in repo supply, with new entrants such as foreign counterparties, insurers, as well as semi-sovereigns playing a role. The significant growth in sponsored repo has contributed to the rise in supply as well.

Investors also noted that the introduction of the 2-month T-bill has been well-received, finding a natural home within Treasury-only funds, and that the new dual settlement cycle for T-bills has provided more flexibility to funds that cannot use repo by adding liquidity dates. In 2019, participants expected that sponsored repo should continue to grow, with DTCC looking to expand sponsored repo to all FICC clearing members, and that bid-offers should have more room to tighten (for more, see *Treasuries*).

What happened to the repo markets?

US liquidity markets were thrown into a whirlwind this week as a result of the unexpected market closures on Wednesday. The unanticipated holiday led to a series of events which made it difficult to operate in the funding markets. This was most evident in the repo market, where overnight rates jumped 4bp on Tuesday and another 7bp on Thursday.

Among those events, **most notable was the decrease in government MMF balances**. On 12/4, the day before the market close on Wednesday, shareholders withdrew ~$50bn from government MMFs, making this the single biggest day of

[1] Webcast replay available at http://frbny.honeycast.com/20181203/

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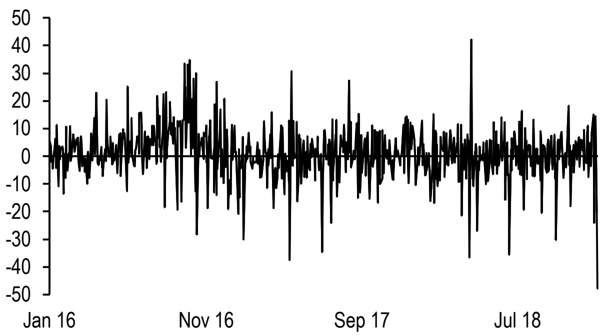
outflow since MMF reform (**Exhibit 2**). A closer look at the balances shows this was driven entirely by institutional investors (**Exhibit 3**). Given that MMFs were closed on Wednesday, corporates likely wanted their cash on hand to manage any potential liquidity needs they might have that day. Indeed, using Good Friday as a comparison, we find that corporates often withdraw cash the day before a market holiday. And since most of their corporate money resides with government MMFs, it was obvious that these funds were going to be most impacted with redemptions.

Exhibit 2: Shareholders withdrew ~$50bn from government MMFs on Tuesday, the single biggest day of outflow since MMF reform

Daily change in AUMs at government MMFs ($bn)



Source: iMoneyNet

Exhibit 3: Government institutional MMFs drove much of the outflows on Tuesday

Daily change in AUMs at MMFs ($bn)

	12/4/2018	12/3/2018	Daily Chg	Avg Daily Chg in 2018
Govt Institutional MMF	1,572	1,623	(51)	(0.26)
Govt Retail MMF	601	597	3	0.11
Prime Institutional MMF	227	227	0	0.16
Prime Retail MMF	322	322	1	0.24

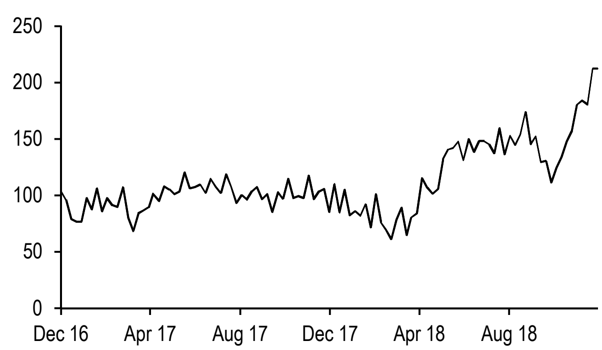
Source: iMoneyNet

This matters of course as **government MMFs invest a substantial amount in repo**. As of October month-end, they held $866bn in repo exposures, comprising about 38% of their portfolio. Generally, redemptions out of government funds mean there is less cash to lend to dealers.

The confluence of these factors ultimately meant **repo participants had to scramble to finance their collateral longs on Tuesday given the unexpected turn of events**. It did not help that primary dealer balance sheets were already pretty heavy with collateral (**Exhibit 4**). In fact, Treasury primary dealer positions were the highest on record at $212bn as of last week. Tacking on the hangover from month-end, the unexpected market closures resulted in some pretty substantial dislocations in the repo markets.

Exhibit 4: Primary dealer balance sheets were already heavy with collateral

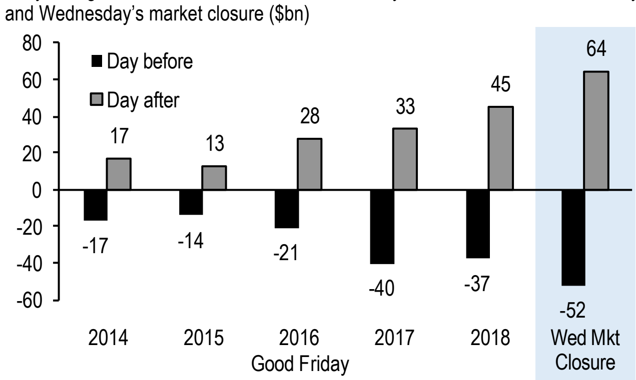
Treasury primary dealer positions ($bn)



Source: Federal Reserve Bank of New York

Exhibit 5: Institutional investors tend to allocate their cash back into MMFs the day after a holiday

Daily change in institutional MMF AUMs on the days before and after Good Fridays and Wednesday's market closure ($bn)



Source: iMoneyNet, J.P. Morgan

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That said, **we do not expect repo rates to remain elevated as we head into next week**. Using Good Friday as a comparison again, we've generally found that institutional investors tend to allocate their cash back into MMFs the day after the holiday (**Exhibit 5**). To this end, we did see flows move back into government MMFs on Thursday and will likely make their way back into the repo markets.

The Fed's Senior Financial Officer Survey

For those that are interested in what the potential demand picture for reserves could look like as the interest rate environment evolves, the Senior Financial Officer Survey[2] provides some insights. In conjunction with the release of the November FOMC minutes last week, the Fed also released the results to this survey, which collected information from 51 banks (31 domestic, 20 foreign) regarding their reserve balance management strategies and practices. Importantly, it sheds light on how banks think about reserves under various market conditions, how they expect to replenish reserves should they find themselves short, and what is the optimal amount of reserves that should be on their balance sheets.

The report noted that **in aggregate, the lowest comfortable level of reserve balances by all respondent banks is about $600bn as of August 2018**. At that time, the respondent banks held about two-thirds of total reserve balances, so extrapolating that to the whole market would suggest the desired level of reserve balances among banks to be around $900bn. Currently, total reserves balances are around $1.74bn so we are far from an environment where reserves are scarce—a dynamic we noted recently in *The Fed's undoing project: an update*.

Interestingly, **should banks find themselves short in reserves** (i.e., where balances are below their lowest comfortable level), **the manner in which banks plan on replenishing their reserves differs greatly between domestic banks and foreign banks** and depends on the time horizon (short-term: up to a week or long-term: over a week) (**Exhibit 6**). For instance, most domestic banks noted that they would increase their FHLB advance borrowing to replenish reserves over both short-term and long-term horizons – not surprising given FHLB advances tend to receive better treatment under LCR. In contrast, most foreign banks noted that they would tap the unsecured funding markets, increase their wholesale deposit rates, and/or reduce their lending in the repo markets as ways to address a shortage in reserves.

We find these responses notable as when viewed in the context of reserves scarcity, **these actions are perhaps the clearest signals that would suggest reserves are scarce in the marketplace**. Said another way, should we see FHLB advance borrowings increase materially or if there's a sustained widening in the gap between money market rates and OIS, then this would indicate there's an insufficient amount of reserves in the banking system, all else equal.

[2] https://www.federalreserve.gov/data/sfos/files/senior-financial-officer-survey-201809.pdf

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Exhibit 6: The manner in which banks plan on replenishing their reserves differs greatly between domestic banks and foreign banks and depends on the time horizon

Percentage of respondents that noted they would employ a certain action to replenish their reserves

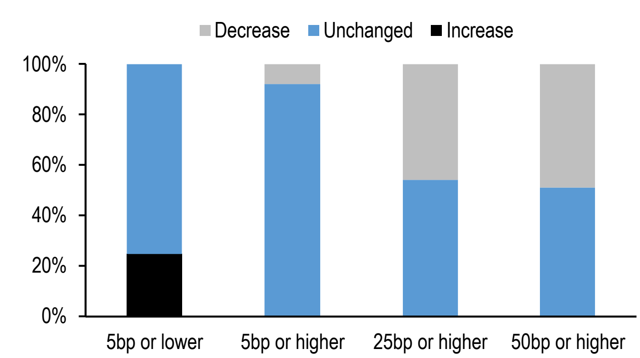
		Domestic Banks		Foreign Banks	
	Action	Likely / Very Likely	Unlikely / Very Unlikely	Likely / Very Likely	Unlikely / Very Unlikely
Short-term funding need	***Borrow in unsecured funding markets in tenors <30d***	59%	41%	***71%***	***29%***
	Borrow in unsecured funding markets in tenors >30d	28%	72%	40%	60%
	Borrow in secured funding markets in tenors <30d	50%	50%	30%	70%
	Borrow in secured funding markets in tenors >30d	23%	77%	15%	85%
	Borrow from the Federal Reserve Discount Window	0%	100%	0%	100%
	Reduce lending in short-term money markets (e.g., repo)	39%	61%	***63%***	***37%***
	Reduce holdings of available-for-sale short-term securities	20%	80%	20%	80%
	Increase advances from FHLBs	***89%***	***11%***	0%	100%
	Raise wholesale deposit rates	26%	74%	***71%***	***29%***
	Raise retail deposit rates	14%	86%	0%	100%
Long-term funding need	Borrow in unsecured funding markets in tenors <30d	17%	83%	25%	75%
	Borrow in unsecured funding markets in tenors >30d	59%	41%	***86%***	***14%***
	Borrow in secured funding markets in tenors <30d	17%	83%	20%	80%
	Borrow in secured funding markets in tenors >30d	40%	60%	30%	70%
	Borrow from the Federal Reserve Discount Window	0%	100%	0%	100%
	Reduce lending in short-term money markets (e.g., repo)	44%	56%	***68%***	***32%***
	Reduce holdings of available-for-sale short-term securities	40%	60%	25%	75%
	Increase advances from FHLBs	***86%***	***14%***	0%	100%
	Raise wholesale deposit rates	67%	33%	***67%***	***33%***
	Raise retail deposit rates	61%	39%	29%	72%

Source: Senior Financial Officer Survey

That's not to say that when reserves approach or fall below banks' lowest comfortable level of reserve balances, that's not a sign of reserve scarcity. But as the survey aptly suggests, **at a price reserves are fungible**, so the manner in which reserve balances contract may not necessarily suggest reserves are scarce. Instead, **there are price points at which banks think it's better to economize their reserves, by opportunistically engaging in reserve substitution or lending reserves in the overnight wholesale funding markets**. Indeed, most banks (domestic and foreign) noted in the survey their willingness to deploy reserves if the opportunity cost were 25bp or higher (i.e., if money markets rates like bills and repo were 25bp higher than IOER) (**Exhibit 7**). Likewise, most respondents noted their willingness to lend reserves in the overnight wholesale funding market provided that they are able to make a spread over IOER (**Exhibit 8**).

Exhibit 7: Most banks noted their willingness to economize their reserves if the opportunity cost was 25bp or higher

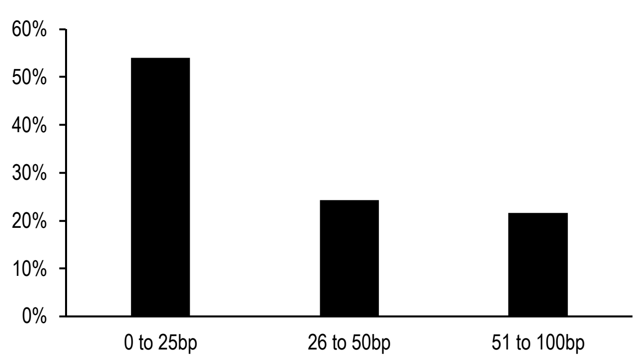
Percentage of respondents that noted they would decrease/increase/keep their reserve balances if money market rates traded lower or higher relative to IOER



Source: Senior Financial Officer Survey

Exhibit 8: Most banks also noted their willingness to lend reserves in the overnight wholesale funding market at a spread over IOER

Percentage of respondents that noted they would lend reserves in the overnight wholesale funding market provided they make a certain spread over IOER



Source: Senior Financial Officer Survey

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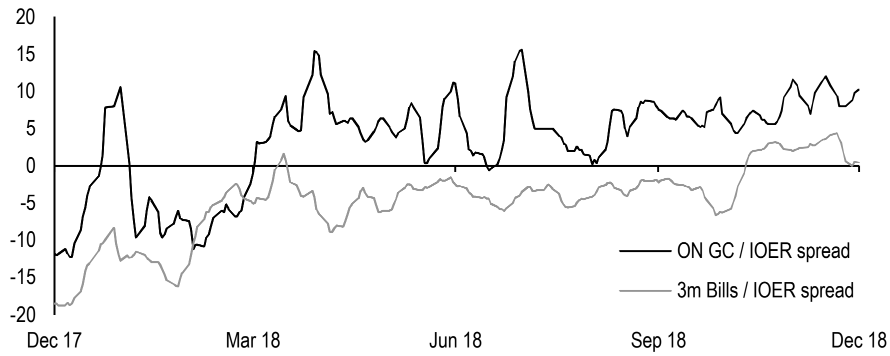
That said, while the above provides some framework in terms of how banks could respond under various market conditions, **what is unclear is just how quickly and to what extent banks will look to capitalize on these friction points**. Do banks begin to opportunistically reduce reserves when the spread is higher than 5bp or when it's closer to 25bp? And how much of their reserves would they be willing to deploy opportunistically? Different banks are also under different constraints, so the idiosyncratic nature of how individual banks may respond makes it difficult to gauge when money market rates have hit a tipping point. Even so, given the way repo and bills have moved recently, we may begin to get a glimpse of their behavior in the near future (**Exhibit 9**). As for Fed funds, given the small size of this market, small movements could have large impacts on the Fed funds rate, which would suggest increased volatility next year to the degree banks look to lend their reserves out in the Fed funds market.

Exhibit 9: GC/IOER and bills/IOER spreads have trended wider in 4Q18

GC/IOER spread and Bills/IOER spread, 5d moving average (bp)



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Forecasts

Interest Rates

	Current 12/7/2018	1m ahead 1/7/2019	1Q19 3/31/2019	2Q19 6/30/2019	3Q19 9/30/2019	4Q19 12/31/2019
Rates						
Fed Funds Effective	2.20	2.40	2.65	2.90	3.15	3.40
3m Libor	2.77	2.80	2.95	3.20	3.45	3.70
UST 2y	2.71	2.85	3.25	3.45	3.60	3.70
UST 3y	2.72	2.90	3.20	3.40	3.55	3.65
UST 5y	2.69	2.80	3.30	3.45	3.55	3.60
UST 7y	2.76	2.90	3.30	3.45	3.55	3.60
UST 10y	2.85	3.00	3.35	3.50	3.55	3.60
UST 30y	3.14	3.20	3.45	3.55	3.55	3.55

	Current 12/7/2018	1Q19 3/31/2019	2Q19 6/30/2019	4Q19 12/31/2019
2y swap	2.87	3.42	3.63	3.91
5y swap	2.81	3.45	3.62	3.84
10y swap	2.90	3.44	3.60	3.71
30y swap	3.00	3.43	3.55	3.64
Spreads				
2y Swap Spread	16	17	18	21
5y Swap Spread	12	15	17	19
10y Swap Spread	5	9	10	11
30y Swap Spread	-14	-2	0	4

Economics

%ch q/q, saar, unless otherwise noted

	17Q2	17Q3	17Q4	18Q1	18Q2	18Q3	18Q4	2016*	2017*	2018*
Gross Domestic Product										
Real GDP	4.2	3.5	2.5	2.3	2.0	1.8	1.5	2.5	3.1	1.9
Final Sales	5.4	1.2	2.7	2.9	2.1	1.7	1.5	2.6	2.8	2.0
Domestic Final Sales	4.0	3.1	3.4	3.0	2.6	2.2	2.0	2.8	3.1	2.5
Business Investment	8.7	2.5	3.6	3.8	4.2	4.0	3.6	6.3	6.5	3.9
Net Trade (% contribution to GDP)	1.2	-1.9	-0.8	-0.2	-0.5	-0.5	-0.5	-0.2	-0.3	-0.4
Inventories (% contribution to GDP)	-1.2	2.3	-0.2	-0.6	-0.1	0.0	0.0	-0.1	0.3	-0.2
Prices and Labor Cost										
Consumer Price Index	1.7	2.0	1.7	0.2	1.6	2.4	2.5	2.1	2.2	1.7
Core	1.8	2.0	1.9	2.1	2.2	2.5	2.6	1.7	2.2	2.3
Employment Cost Index	2.4	3.0	3.0	3.1	3.1	3.2	3.2	2.7	3.0	3.1
Unemployment Rate (%, sa)	3.9	3.8	3.7	3.6	3.5	3.4	3.3	-	-	-

* Q4/Q4 change

Source for interest rate and economic forecasts: J.P. Morgan as of 12/07/2018

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Forecasts (continued)

Money Market Supply

($bn)	YE 2018* 12/31/2018	YE 2019* 12/31/2019	Y/Y Exp. $ Change
Dealer Repo**	**2,550**	**2,600**	**50**
Treasuries	**4,745**	**5,095**	**350**
Treasury Bills	2,342	2,495	153
Treasury Coupons	2,023	2,160	137
Treasury FRNs	380	440	60
Agencies	**1,090**	**1,065**	**(25)**
Agency Discos	490	505	15
Agency Coupons	215	165	(50)
Agency FRNs	385	395	10
Financials	**1,190**	**1,240**	**50**
Yankee CDs	640	640	-
Foreign Financial CP	480	520	40
Domestic Financial CP	70	80	10
ABCP	**230**	**230**	**-**
Non-Financial CP	**250**	**230**	**(20)**
Bonds <1y	**905**	**985**	**80**
Total (ex-Fed)	**10,960**	**11,445**	**485**
Total (ex-Fed, ex-Treasuries)	**6,215**	**6,350**	**135**

* J.P. Morgan Forecasts

** Because of year-end balance sheet fluctuation, this figure is based on weekly outstandings averaged over December

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

Long-term (>1Y) net issuance

($bn)	YE 2017 12/31/2017	YE 2018* 12/31/2018	YE 2019* 12/31/2018	2018 Y/Y $ Change	2019 Y/Y Exp. $ Change
IG Corporates	607	488	336	-119	-152
HY Corporates	120	85	100	-35	15
EM Corporates	177	115	88	-62	-27
EM Sovereign	99	84	41	-15	-43
Municipals	-30	-121	-69	-91	52
Non-Agency MBS	-38	-3	20	35	23
Agency MBS	338	280	225	-58	-55
CMBS	-22	46	50	68	4
ABS	29	40	30	11	-10
CLOs	55	75	95	20	20
Agency Debt	-27	-65	25	-38	90
Treasuries	435	957	1115	522	158
Total	**1744**	**1981**	**2056**	**237**	**75**
Total (ex Treasuries)	**1309**	**1024**	**941**	**-285**	**-83**

* J.P. Morgan Forecasts

Notes:For IG, the net issuance number excludes EM corporates. HY net issuance is calculated as gross issuance - refis. The EM Corporates number includes IG, HY, and quasi-sovereigns and is only USD issuance. Additionally the issuance is adjusted for tender/buyback/call activity. EM sovereign net issuance in USD only which is calculated using historical average of 80% of total net issuance. Munis figures reflect a change in calculation methodology post 2010. For CLOs, numbers represent US Arbitrage CLOs only Agency debt includes FNMA, FHLMC, and FHLB. For AgencyMBS, the negative net issuance in 2010 is due to agency buyout of $200bn of delinquent loans backlog/ Fannie and Freddie didn't want to put up cash but were required to do the buyout. Treasuries include TIPS and represents net issuance to the public.

Source: J.P. Morgan, Dealogic, Bloomberg, Bond Radar, Commercial Mortgage Alert, INTEX, FNMA, FHLMC, FHLB, GNMA, LoanPerformance, US Treasury, Thomson SDC, S&P, SIFMA, Trepp

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New Issues

Corporates

										3mL Spread Equivalent			
Issue Date	Issuer	Ticker	Moody's	S&P	Fitch	Amount	Coupon	Maturity	Term	12m	24m	36m	60m
11/13/2018	SVENSKA HANDELSBANKEN AB	SHBASS	Aa2	AA-		1400	3.90	45250	5				82
11/13/2018	MARRIOTT INTERNATIONAL	MAR	Baa2	BBB		550	FRN	12/1/2020	2		60		
11/13/2018	MARRIOTT INTERNATIONAL	MAR	Baa2	BBB		350	4.15	12/1/2023	5				60
11/13/2018	US BANK NA CINCINNATI	USBNA	A1	AA-		300	FRN	11/16/2021	3			38	
11/13/2018	US BANK NA CINCINNATI	USBNA	A1	AA-		700	3.45	11/16/2021	3			38	
11/14/2018	DOWDUPONT INC	DWDP	Baa1	A-		500	FRN	11/15/2020	2		71		
11/14/2018	DOWDUPONT INC	DWDP	Baa1	A-		1500	3.77	11/15/2020	2		71		
11/14/2018	DOWDUPONT INC	DWDP	Baa1	A-		300	FRN	11/15/2023	5				111
11/14/2018	DOWDUPONT INC	DWDP	Baa1	A-		2500	4.21	11/15/2023	5				111
11/19/2018	TAKEDA PHARMACEUTICAL COMP	TACHEM	A2	A-		1000	3.80	11/26/2020	2		86		
11/19/2018	TAKEDA PHARMACEUTICAL COMP	TACHEM	A2	A-		1250	4.00	11/26/2021	3			103	
11/19/2018	TAKEDA PHARMACEUTICAL COMP	TACHEM	A2	A-		1500	4.40	11/26/2023	5				141
11/19/2018	WISCONSIN PUBLIC SERVICE	WEC	A2	A-		400	3.35	11/21/2021	3			72	
11/26/2018	NATIONAL AUSTRALIA BANK	NAB	Aa3	AA-		750	FRN	11/4/2021	3			71	
11/26/2018	NATIONAL AUSTRALIA BANK	NAB	Aa3	AA-		600	3.70	11/4/2021	3			71	
11/26/2018	NATIONAL AUSTRALIA BANK	NAB	Aaa	AAA		1150	3.45	12/4/2023	5				NA
11/26/2018	HARLEY-DAVIDSON FINL SER	HOG	A3	BBB+		350	FRN	3/2/2020	2		94		
11/27/2018	HOME DEPOT INC	HD	A2	A		300	FRN	3/1/2022	3			31	
11/27/2018	HOME DEPOT INC	HD	A2	A		700	3.25	3/1/2022	3			31	
11/27/2018	IBM CREDIT CORP	IBM	A1	A		750	FRN	11/30/2020	2		47		
11/27/2018	IBM CREDIT CORP	IBM	A1	A		750	3.45	12/1/2020	2		47		
11/27/2018	IBM CREDIT CORP	IBM	A1	A		500	3.60	11/30/2021	3			59	
11/28/2018	SANTANDER HOLDINGS USA	SHUSA	Baa3	BBB+		1000	4.45	12/3/2021	3			152	
11/28/2018	AMERICAN ELECTRIC POWER CO	AEP	Baa1	BBB+		400	3.65	12/1/2021	3			68	
11/28/2018	ARCHER-DANIELS-MIDLAND CO	ADM	A2	A		400	3.38	3/15/2022	3			43	
11/28/2018	MCKESSON CORP	MCK	Baa2	BBB+		700	3.65	11/30/2020	2		73		
11/28/2018	AVIATION CAPITAL GROUP	PACLIF	A-	BBB+		500	FRN	6/1/2021	3			95	
11/28/2018	AVIATION CAPITAL GROUP	PACLIF	A-	BBB+		300	4.38	1/30/2024	5				161
11/29/2018	BRITISH TELECOM	BRITEL	Baa2	BBB		675	4.50	12/4/2023	5				151
11/29/2018	BANK OF NEW YORK MELLON CORP	BK	Aa2	AA-		1000	FRN	12/4/2020	2 NC 1		30		
11/29/2018	BB&T CORPORATION	BBT	A2	A-		1000	0.00	12/6/2023	5				79
12/3/2018	NXP SEMICONDUCTORS NV	NXPI	Baa3	BBB-		1000	4.88	3/1/2024	5				190
12/3/2018	CATERPILLAR FINL SERVICE	CAT	A3	A		400	FRN	12/7/2020	2		35		
12/3/2018	CATERPILLAR FINL SERVICE	CAT	A3	A		350	3.35	12/7/2020	2		35		
12/3/2018	CATERPILLAR FINL SERVICE	CAT	A3	A		500	3.65	12/7/2023	5				68
12/4/2018	BAIDU INC	BIDU	A3	A		250	4.38	5/14/2024	5				149

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ABS

Issue Date	Issuer	Fitch	Moody's	S & P	Amount	Life	Spread	Benchmark	Series	Class	Market	Deal Type
11/14/2018	CarNow Auto Receivables Trust				74	0.62	85	EDSF	2018-1	A	US Private	Auto - NP
11/14/2018	CarNow Auto Receivables Trust				15	1.82	125	EDSF	2018-1	B	US Private	Auto - NP
11/14/2018	CarNow Auto Receivables Trust				22	2.47	220	Swap	2018-1	C	US Private	Auto - NP
11/14/2018	CarNow Auto Receivables Trust				11	2.74	350	Swap	2018-1	D	US Private	Auto - NP
11/14/2018	Taco Bell Funding			BBB	825	4.90	125	Swap	2018-1	A-2-1	US Private	Other - Franchise
11/14/2018	Taco Bell Funding			BBB	625	9.50	180	Swap	2018-1	A-2-2	US Private	Other - Franchise
11/15/2018	AmeriCredit Auto Receivables Trust		P-1		161	0.17	25	Libor - Int	2018-3	A-1	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust		Aaa		240	0.87	25	EDSF	2018-3	A-2A	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust		Aaa		65	0.87	25	1 Mo. LIBOR	2018-3	A-2B	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust		Aaa		261	2.09	35	Swap	2018-3	A-3	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust		Aa1		79	2.98	53	Swap	2018-3	B	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust		Aa3		98	3.55	70	Swap	2018-3	C	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust		Baa2		96	3.98	100	Swap	2018-3	D	US Public	Auto - NP
11/15/2018	AmeriCredit Auto Receivables Trust				26	0.00			2018-3	E	US Not Offered	Auto - NP
11/15/2018	Drive Auto Receivables Trust		P-1	A-1+	122	0.13	30	Libor - Int	2018-5	A-1	US Public	Auto - NP
11/15/2018	Drive Auto Receivables Trust		Aaa	AAA	200	0.54	32	EDSF	2018-5	A-2A	US Public	Auto - NP
11/15/2018	Drive Auto Receivables Trust		Aaa	AAA	80	0.54	32	1 Mo. LIBOR	2018-5	A-2B	US Public	Auto - NP
11/15/2018	Drive Auto Receivables Trust		Aaa	AAA	187	1.36	38	EDSF	2018-5	A-3	US Public	Auto - NP
11/15/2018	Drive Auto Receivables Trust		Aa1	AA	125	2.03	65	Swap	2018-5	B	US Public	Auto - NP
11/15/2018	Drive Auto Receivables Trust		A2	A	178	2.78	95	Swap	2018-5	C	US Public	Auto - NP
11/15/2018	Drive Auto Receivables Trust		Baa3	BBB	120	3.61	125	Swap	2018-5	D	US Public	Auto - NP
11/15/2018	Mercedes-Benz Auto Lease Trust	F1+		A-1+	234	0.28	5	Libor - Int	2018-B	A-1	US Public	Auto - Leases
11/15/2018	Mercedes-Benz Auto Lease Trust	AAA		AAA	345	0.88	20	EDSF	2018-B	A-2	US Public	Auto - Leases
11/15/2018	Mercedes-Benz Auto Lease Trust	AAA		AAA	365	1.64	23	EDSF	2018-B	A-3	US Public	Auto - Leases
11/15/2018	Mercedes-Benz Auto Lease Trust	AAA		AAA	90	2.22	30	Swap	2018-B	A-4	US Public	Auto - Leases
11/15/2018	Tricolor Auto Securitization Trust				61	1.38	100	EDSF	2018-2	A	US Private	Auto - NP
11/15/2018	Tricolor Auto Securitization Trust				10	2.81	175	Swap	2018-2	B	US Private	Auto - NP
11/15/2018	Tricolor Auto Securitization Trust				6	3.10	275	Swap	2018-2	C	US Private	Auto - NP
11/15/2018	Tricolor Auto Securitization Trust				19	3.52	575	Swap	2018-2	D	US Private	Auto - NP
11/15/2018	Volkswagen Auto Loan Enhanced Trust		P-1	A-1+	238	0.27	10	Libor - Int	2018-2	A-1	US Public	Auto - P
11/15/2018	Volkswagen Auto Loan Enhanced Trust		Aaa	AAA	275	1.05	16	EDSF	2018-2	A-2A	US Public	Auto - P
11/15/2018	Volkswagen Auto Loan Enhanced Trust		Aaa	AAA	50	1.05	16	1 Mo. LIBOR	2018-2	A-2B	US Public	Auto - P
11/15/2018	Volkswagen Auto Loan Enhanced Trust		Aaa	AAA	337	2.32	23	Swap	2018-2	A-3	US Public	Auto - P
11/15/2018	Volkswagen Auto Loan Enhanced Trust		Aaa	AAA	100	3.39	30	Swap	2018-2	A-4	US Public	Auto - P
11/16/2018	Flagship Credit Auto Trust			AAA	181	1.11	50	EDSF	2018-4	A	US Private	Auto - NP
11/16/2018	Flagship Credit Auto Trust			AA	24	2.70	85	Swap	2018-4	B	US Private	Auto - NP
11/16/2018	Flagship Credit Auto Trust			A	32	3.27	107	Swap	2018-4	C	US Private	Auto - NP
11/16/2018	Flagship Credit Auto Trust			BBB	26	3.97	130	Swap	2018-4	D	US Private	Auto - NP
11/16/2018	Flagship Credit Auto Trust			BB-	19	4.53	250	Swap	2018-4	E	US Private	Auto - NP
11/16/2018	Horizon Aircraft Finance I Limited	A			476	4.90			2018-1	A	US Private	Other - Aircraft
11/16/2018	Horizon Aircraft Finance I Limited	BBB			91	4.90	230	Swap	2018-1	B	US Private	Other - Aircraft
11/16/2018	Horizon Aircraft Finance I Limited	BB			45	3.50			2018-1	C	US Private	Other - Aircraft
11/20/2018	Honda Auto Receivables Owner Trust		P-1	A-1+	250	0.27		Libor - Int	2018-4	A-1	US Public	Auto - P
11/20/2018	Honda Auto Receivables Owner Trust		Aaa	AAA	366	1.00	12	EDSF	2018-4	A-2	US Public	Auto - P
11/20/2018	Honda Auto Receivables Owner Trust		Aaa	AAA	385	2.22	20	Swap	2018-4	A-3	US Public	Auto - P
11/20/2018	Honda Auto Receivables Owner Trust		Aaa	AAA	100	3.28	33	Swap	2018-4	A-4	US Public	Auto - P
11/20/2018	SunStrong LLC				400	8.24	265	Swap	2018-1	A	US Private	Other - Solar
11/20/2018	Vx Capital Partners LLC				139	3.46			2018-1	A	US Private	Other - Aircraft
11/20/2018	Vx Capital Partners LLC				36	3.46			2018-1	B	US Private	Other - Aircraft
11/20/2018	Vx Capital Partners LLC				15	2.29			2018-1	C	US Private	Other - Aircraft
11/21/2018	GoldenTree ABS Management LLC				106	3.13	200	Prime	2018-B	A-1	US Private	Student Loan
11/21/2018	GoldenTree ABS Management LLC				8	9.45	130	Prime	2018-B	A-2	US Private	Student Loan
11/21/2018	GoldenTree ABS Management LLC				6	9.91	10	Prime	2018-B	B	US Private	Student Loan
11/30/2018	Drug Royalty III LP 1			BBB	47	2.67	160	3 Mo. LIBOR	2018-1	A-1	US Private	Other - Royalties
11/30/2018	Drug Royalty III LP 1			BBB	53	2.67			2018-1	A-2	US Private	Other - Royalties
11/30/2018	Oportun Funding II LLC				129	3.00	120	Swap	2018-D	A	US Private	Other - Consumer
11/30/2018	Oportun Funding II LLC				28	3.00	190	Swap	2018-D	B	US Private	Other - Consumer
11/30/2018	Oportun Funding II LLC				9	3.00	280	Swap	2018-D	C	US Private	Other - Consumer
11/30/2018	Oportun Funding II LLC				9	3.00	430	Swap	2018-D	D	US Private	Other - Consumer
12/3/2018	Nissan Auto Receivables Owner Trust		P-1	A-1+	200	0.30			2018-C	A-1	US Public	Auto - P
12/3/2018	Nissan Auto Receivables Owner Trust		Aaa	AAA	310	1.09	15	EDSF	2018-C	A-2A	US Public	Auto - P
12/3/2018	Nissan Auto Receivables Owner Trust		Aaa	AAA	50	1.09	17	1 Mo. LIBOR	2018-C	A-2B	US Public	Auto - P
12/3/2018	Nissan Auto Receivables Owner Trust		Aaa	AAA	360	2.43	28	Swap	2018-C	A-3	US Public	Auto - P
12/3/2018	Nissan Auto Receivables Owner Trust		Aaa	AAA	80	3.71	35	Swap	2018-C	A-4	US Public	Auto - P
12/3/2018	Rosy Blue Carat SA				35	4.00		0	2018-1	A1	US Private	Other - Other
12/3/2018	Rosy Blue Carat SA				65	4.00	325	1 Mo. LIBOR	2018-1	A2	US Private	Other - Other
12/4/2018	American Credit Acceptance Receivables Trust			AAA	94	0.58	55	EDSF	2018-4	A	US Private	Auto - NP
12/4/2018	American Credit Acceptance Receivables Trust			AA	28	1.48	85	EDSF	2018-4	B	US Private	Auto - NP
12/4/2018	American Credit Acceptance Receivables Trust			A	43	2.14	105	Swap	2018-4	C	US Private	Auto - NP
12/4/2018	American Credit Acceptance Receivables Trust			BBB	36	3.02	150	Swap	2018-4	D	US Private	Auto - NP
12/4/2018	American Credit Acceptance Receivables Trust			BB-	18	3.49	250	Swap	2018-4	E	US Private	Auto - NP
12/4/2018	American Credit Acceptance Receivables Trust			B	14	3.49	410	Swap	2018-4	F	US Private	Auto - NP
12/4/2018	Chesapeake Funding II LLC	AAA	Aaa		270	2.01	46	Swap	2018-3	A-1	US Private	Auto - Fleet
12/4/2018	Chesapeake Funding II LLC	AAA	Aaa		100	2.01	48	1 Mo. LIBOR	2018-3	A-2	US Private	Auto - Fleet
12/4/2018	Chesapeake Funding II LLC	AA	Aa2		11	3.41	70	Swap	2018-3	B	US Private	Auto - Fleet
12/4/2018	Chesapeake Funding II LLC	A	A2		9	3.46	90	Swap	2018-3	C	US Private	Auto - Fleet
12/4/2018	Chesapeake Funding II LLC	BBB	Baa2		9	3.51	130	Swap	2018-3	D	US Private	Auto - Fleet
12/4/2018	Hyundai Auto Receivables Trust		P-1	A-1+	168	0.26	5	Libor - Int	2018-B	A-1	US Public	Auto - P
12/4/2018	Hyundai Auto Receivables Trust		Aaa	AAA	219	0.97	15	EDSF	2018-B	A-2	US Public	Auto - P
12/4/2018	Hyundai Auto Receivables Trust		Aaa	AAA	219	2.06	26	Swap	2018-B	A-3	US Public	Auto - P
12/4/2018	Hyundai Auto Receivables Trust		Aaa	AAA	60	3.12	37	Swap	2018-B	A-4	US Public	Auto - P
12/4/2018	Hyundai Auto Receivables Trust		Aa2	AA+	13	3.55			2018-B	B	US Not Offered	Auto - P
12/4/2018	Hyundai Auto Receivables Trust		A3	A+	22	3.75			2018-B	C	US Not Offered	Auto - P
12/6/2018	CommonBond Student Loan Trust		Aaa		275	3.66	100	Swap	2018-C-GS	A-1	US Private	Student Loan
12/6/2018	CommonBond Student Loan Trust		Aaa		28	3.19	95	1 Mo. LIBOR	2018-C-GS	A-2	US Private	Student Loan
12/6/2018	CommonBond Student Loan Trust		NR		43	4.61	140	Swap	2018-C-GS	B	US Private	Student Loan
12/6/2018	CommonBond Student Loan Trust		NR		21	1.86	145	Swap	2018-C-GS	C	US Private	Student Loan
12/6/2018	Consumer Loan Underlying Bond Credit Trust				198	1.03	100	EDSF	2018-P3	A	US Private	Other - Consumer
12/6/2018	Consumer Loan Underlying Bond Credit Trust				23	2.62	150	Swap	2018-P3	B	US Private	Other - Consumer
12/6/2018	Consumer Loan Underlying Bond Credit Trust				37	3.27	275	Swap	2018-P3	C	US Private	Other - Consumer
12/6/2018	Nelnet Student Loan Trust		Aaa	AA+	498	5.62	68	1 Mo. LIBOR	2018-5	A	US Private	Student Loan
12/6/2018	Nelnet Student Loan Trust		Aaa	AA	14	13.95	145	1 Mo. LIBOR	2018-5	B	US Private	Student Loan

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

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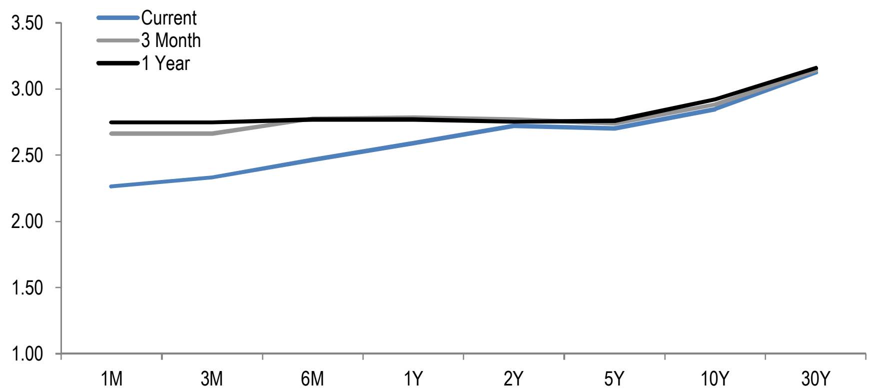
Key Rates

U.S. Treasury Forward Yield Curve (%)



Eurozone Yields (%)

Yield Type	Eurozone	Germany	Britain (UK)	France	Italy	Spain	Portugal	Greece
3M Sovereign Yield	-0.76	-0.74	N/A	-0.76	-0.22	-0.50	-0.69	N/A
2Y Sovereign Yield	-0.58	-0.58	0.69	-0.44	0.67	-0.18	-0.27	N/A
5Y Sovereign Yield	-0.29	-0.29	0.82	0.04	2.17	0.39	0.53	3.28
10Y Sovereign Yield	0.25	0.25	1.20	0.69	3.10	1.44	1.78	4.23

ECB Main Refinancing Rate (Equivalent to Fed Funds Rate in the US) is currently at 0.00%

Source: Bloomberg. All rates and yields are as of 12/10/18

Libor

		Change since (bp):					
	10 Dec (%)	**1w ago**	**2Q18**	**1Q18**	**4Q17**	**6m ago**	**Year ago**
1m Libor	2.42	7.13	33.03	53.74	85.63	34.73	96.10
3m Libor	2.78	3.78	44.02	46.42	108.17	43.53	121.25

Source: J.P. Morgan

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Fed Watch

Members of the Federal Open Market Committee (FOMC) with Voting Status in 2017

		DOVE				HAWK
2018	Chair			Powell (2028)		
	Governors*			Brainard (2026)	Quarles (2032)	
				Clarida (2022)		
	Presidents†	Kashkari (Minn., nv)	Bostic (Atl, v)	Williams (NY, v)	Barkin (Rich., v)	George (KC, nv)
		Bullard (St. L, nv)	Daly (SF, v)	Evans (Chi., nv)	Mester (Clev., v)	
			Harker (Phil., nv)		Rosengren (Bos., nv)	
			Kaplan (Dal., nv)			

* Richard Clarida has been sworn in as Vice Chair. Marvin Goodfriend, Michelle Bowman, and Nellie Liang have been nominated but not confirmed. There are currently 3 vacancies on the Board of Governors.

† John Williams has begun serving as the president of the New York Fed. Mary Daly has been named president of the San Francisco Fed effective October 1.

Commentary from the Federal Open Market Committee (FOMC) Members

FOMC Member	Role	Comments / View
2018 Voting Members:		
Jerome Powell	Chair	Says rates are "just below" the range of estimates of the neutral level
Richard Clarida	Vice Chair	Says rates are close to neutral range but he could be receptive to faster hikes if data come in stronger
Randal Quarles	Vice Chair for Supervision	
Lael Brainard	Governor	Says that the current gradualist approach is appropriate
Raphael Bostic	Atlanta Fed President	Says the Fed should "proceed cautiously" with rate hikes
Loretta Mester	Cleveland Fed President	Says the Fed is on a good and gradual rate path
Thomas Barkin	Richmond Fed President	
John Williams	NY Fed President	Says the Fed is on a "gradual" but not pre-set rate path
Mary Daly	San Fran Fed President	Says she wouldn't be surprised to see a December hike and at least a couple of hikes next year
Nonvoting Members of the FOMC (But Can Influence the Dot Plot):		
Charles Evans	Chicago Fed President	Says comfortable with the idea of a December hike
Robert Steven Kaplan	Dallas Fed President	Says the Fed should gradually and patientlybe moving toward neutral stance
Neel Kashkari	Minneapolis Fed President	Sees no reason yet to move rates higher and tap the brakes
Patrick Harker	Philadelphia Fed President	Says he favored raising rates only three times in 2018 but could support a December hike
Eric Rosengren	Boston Fed President	
Esther George	Kansas City Fed President	
James Bullard	St Louis Fed President	Says rates are already at or near neutral

Source: Federal Reserve, J.P. Morgan

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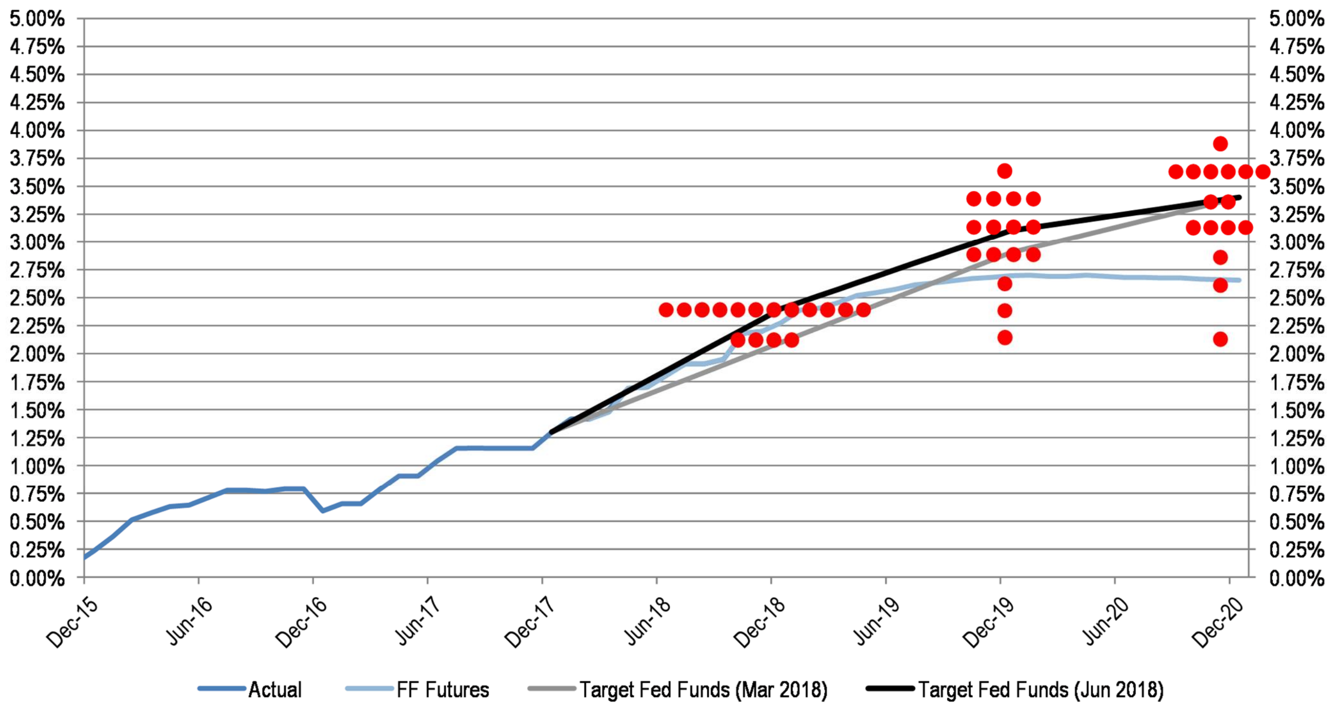
Fed Watch (continued)

Fed funds rate options implied forecast & Federal Reserve's Target Fed funds rate forecast



Source: Bloomberg, Federal Reserve and J.P. Morgan. Note: Fed funds options implied forecast as of 12/04/18. Fed dot plot as of 9/26/18 FOMC Statement

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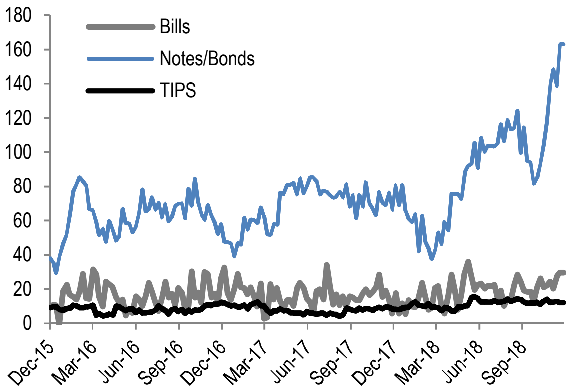
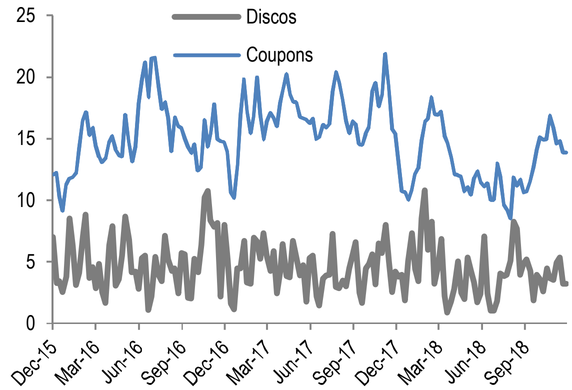
Dealer Net Positions

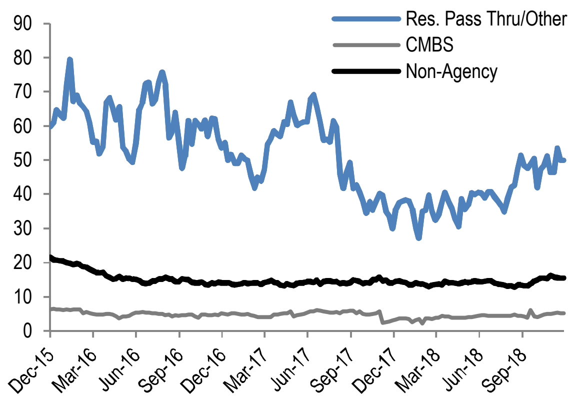
Government ($bn)



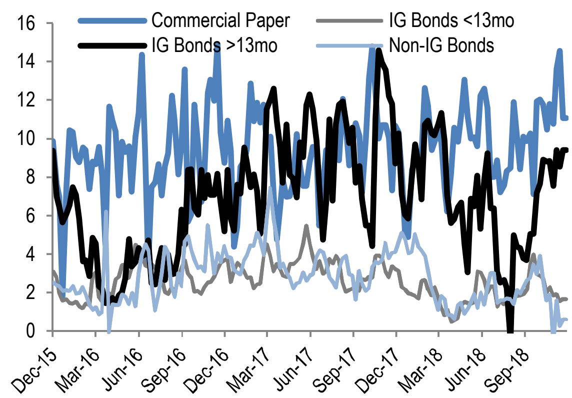
Agency ($bn)



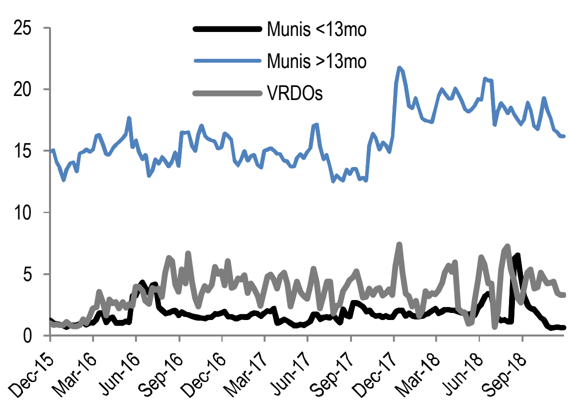
MBS ($bn)



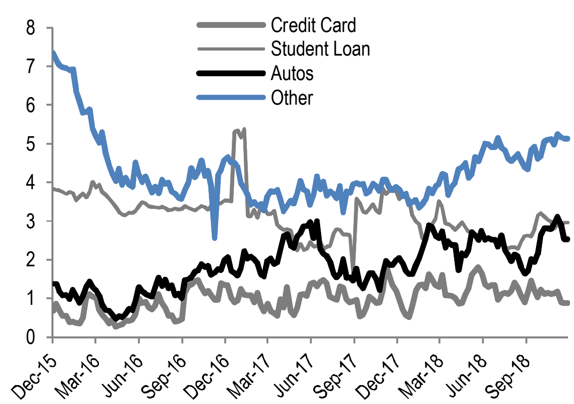
Corporates ($bn)



Munis ($bn)



ABS ($bn)



Source for all charts on this page: New York Fed, data as of 11/28/2018

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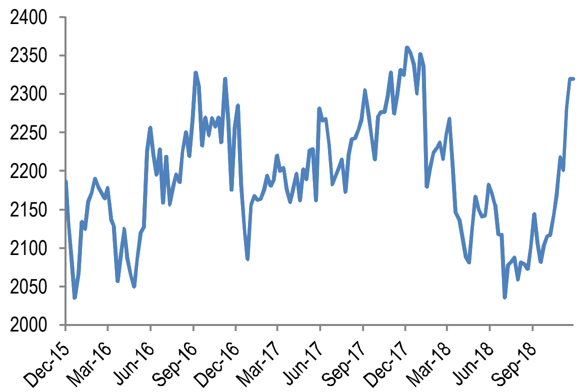
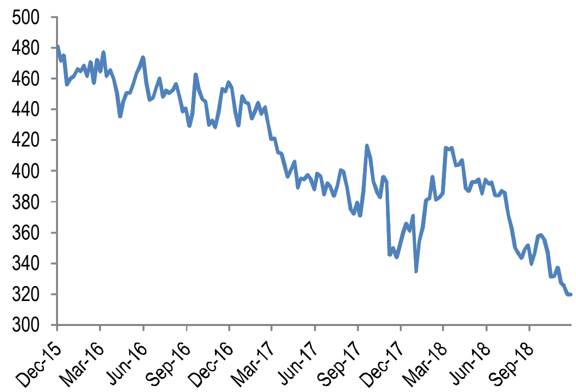
Repo

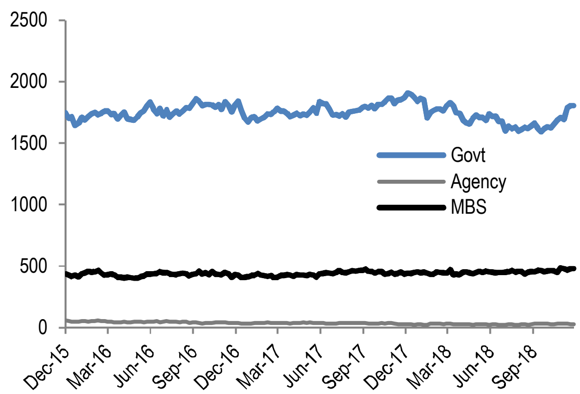
Total Repo Outstanding ($bn)



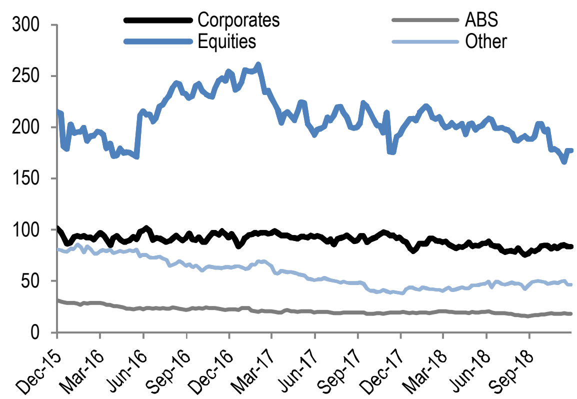
Total Securities Lending Outstanding ($bn)



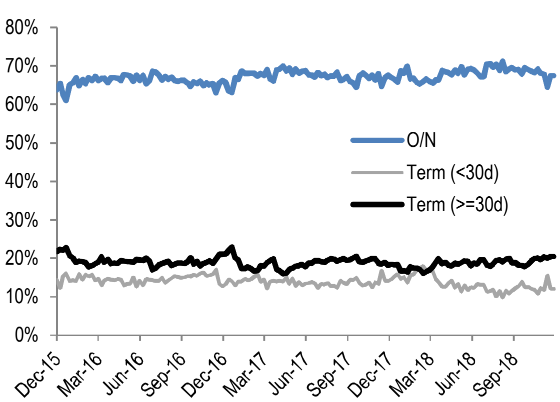
Traditional Collateral Repo ($bn)



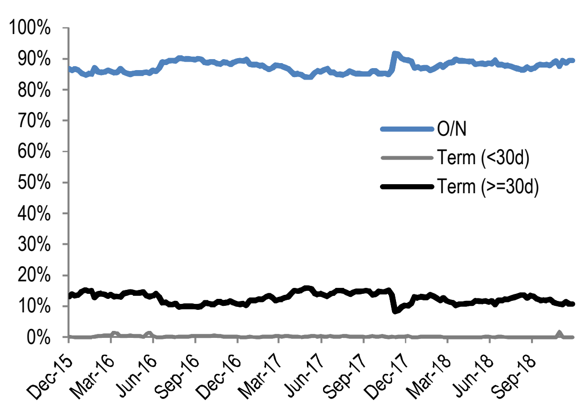
Non-Traditional Collateral Repo ($bn)



Repo Terms (%)



Securities Lending Terms (%)



Source for all charts on this page: New York Fed, data as of 11/28/2018

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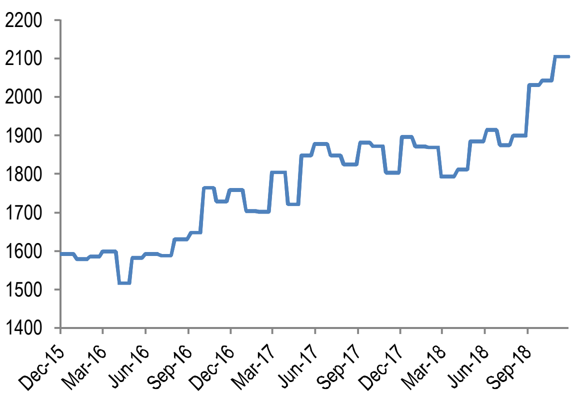
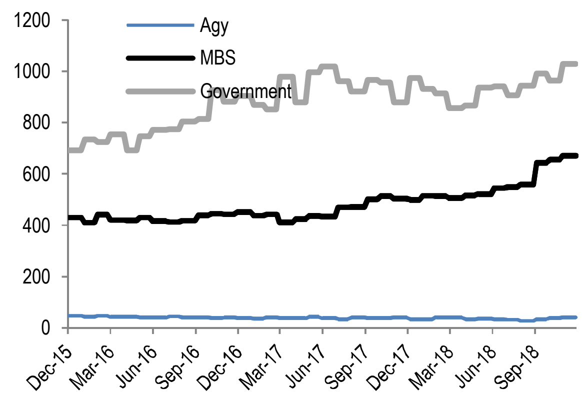
Repo (continued)

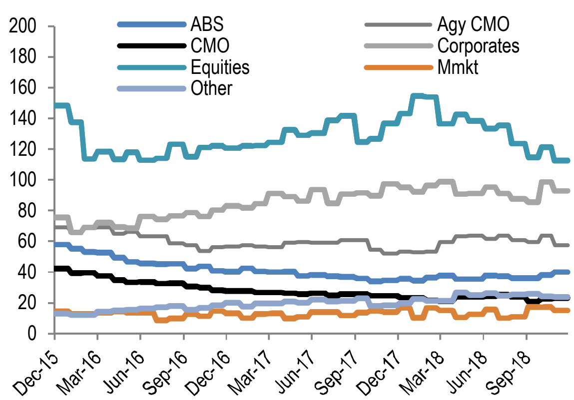
Total Tri-Party Outstanding ($bn)



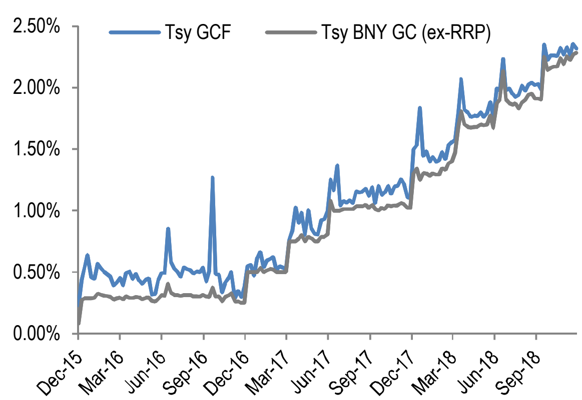
Tri-Party Traditional Collateral ($bn)



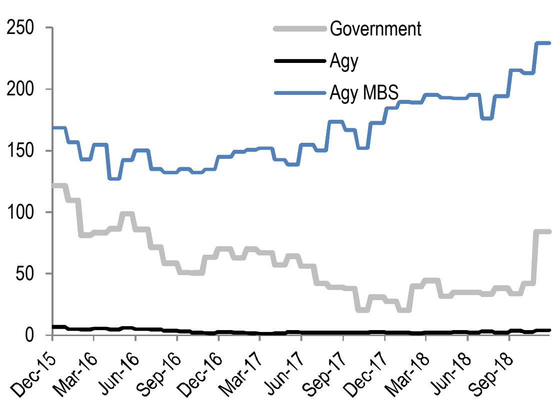
Tri-Party Non-Traditional Collateral ($bn)



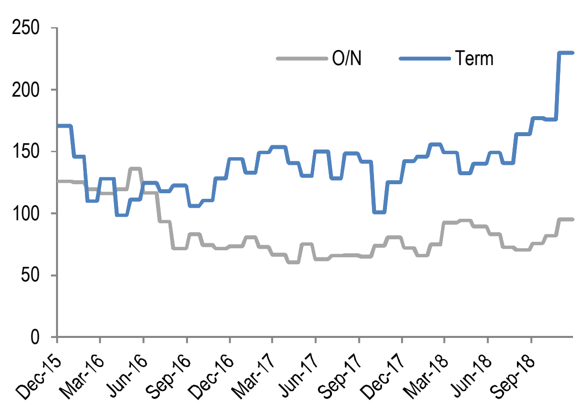
ON GC rates (%)



GCF Collateral ($bn)



GCF Term Composition ($bn)



Source for overnight GC rates: JPMorgan, DTCC, data as 12/07/2018, all other charts: New York Fed, data as of 11/09/2018

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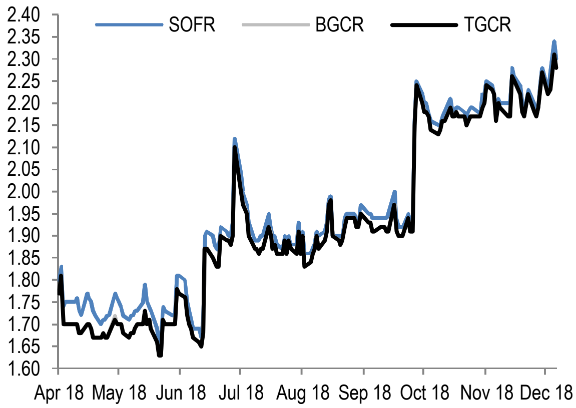
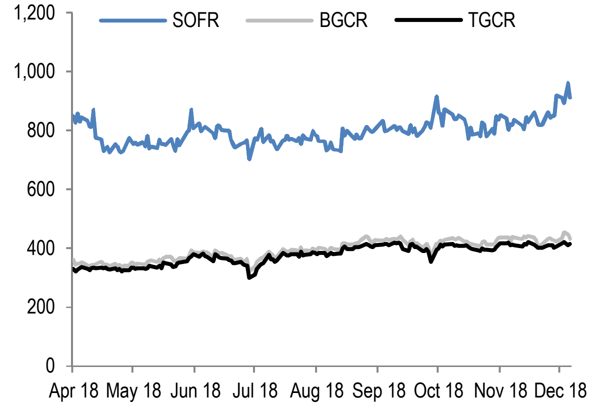
Repo (continued)

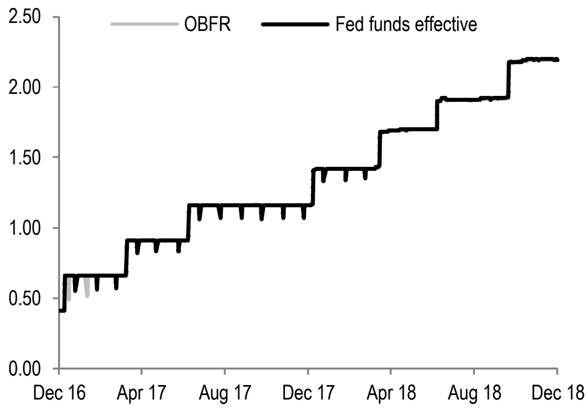
NY Fed repo rates (%)



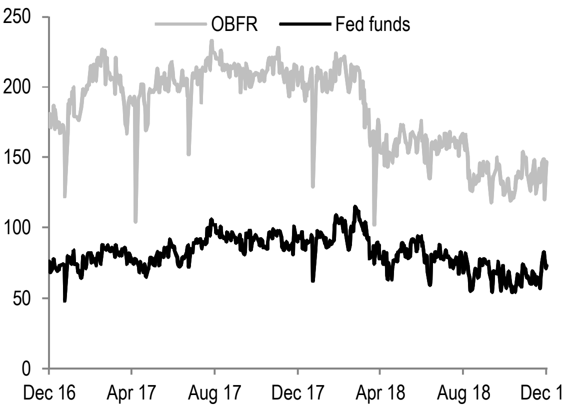
NY Fed repo rate volumes ($bn)



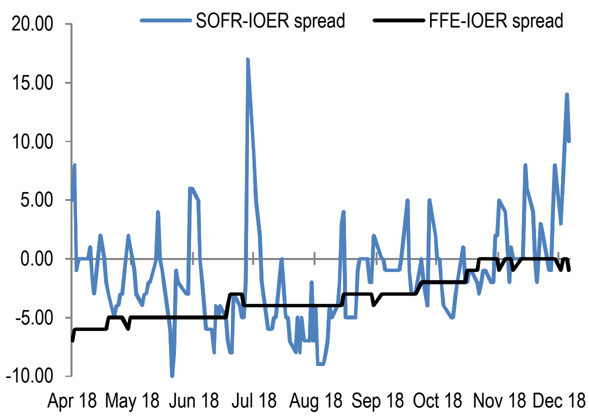
Fed funds effective and OBFR (%)



Fed funds and OBFR volumes ($bn)



FFE and SOFR spread to IOER (bp)



Source: New York Fed, data as of 12/07/2018

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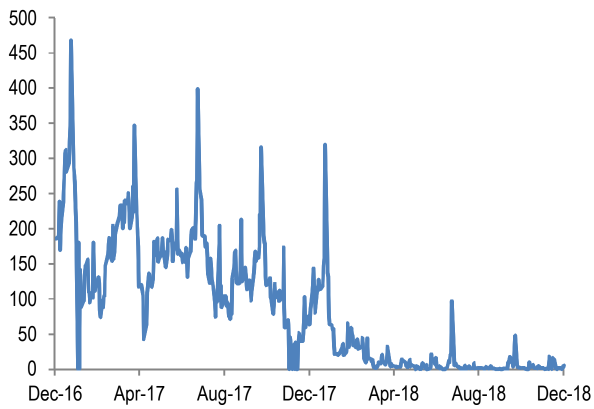
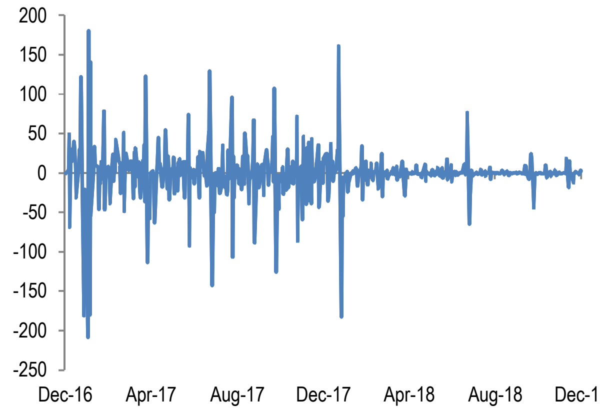
Fed Reverse Repo Facility

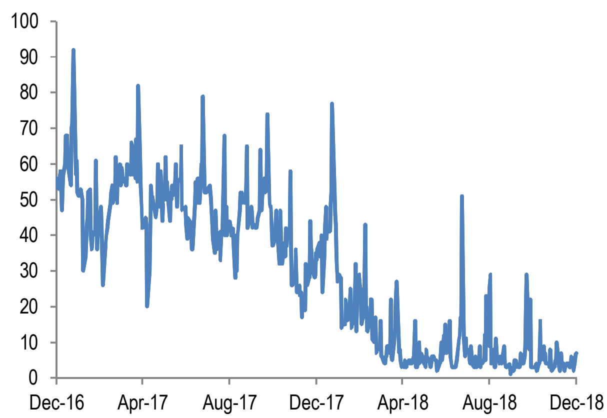
ON Accepted Amount ($bn)



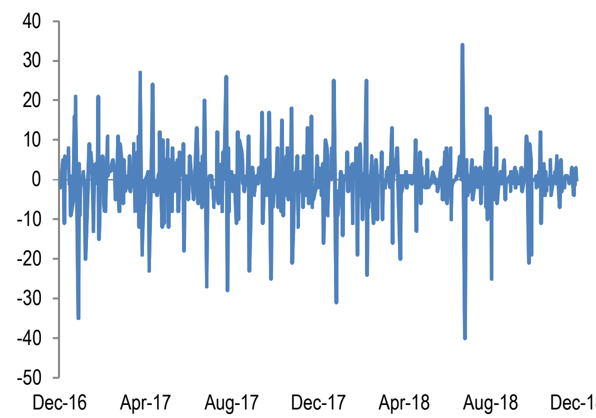
ON Accepted Amount: Daily Change ($bn)



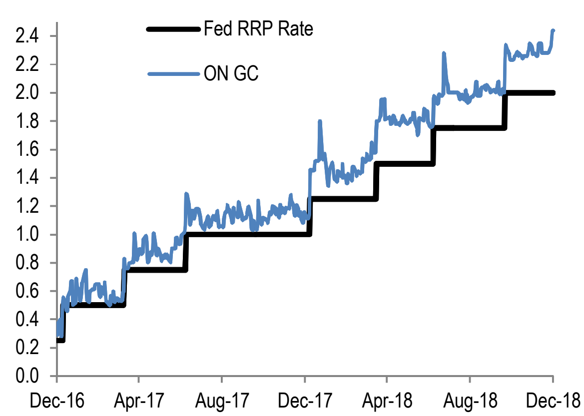
ON Number of Bidders



ON Number of Bidders: Daily Change



ONGC vs RRP fixed rate (%)



Source for all charts on this page: Federal Reserve, data as of 12/07/2018

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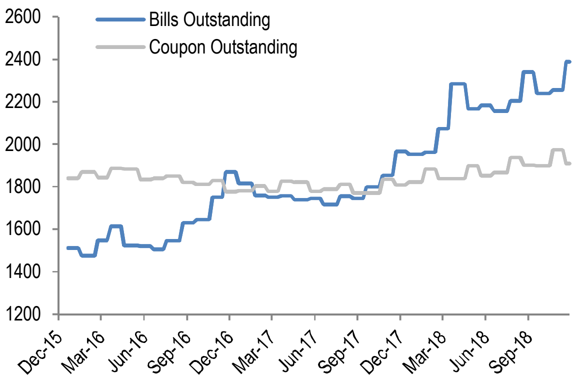
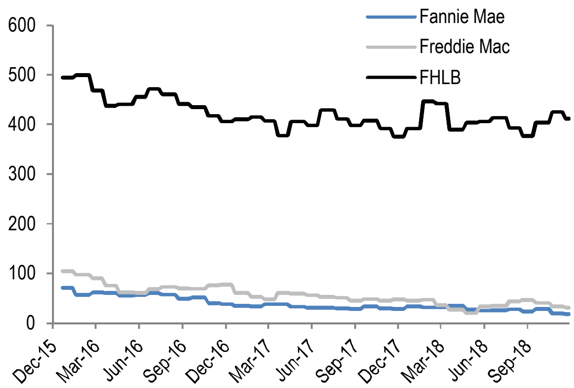
T-Bills

Bills and Coupons Outstanding ($bn)

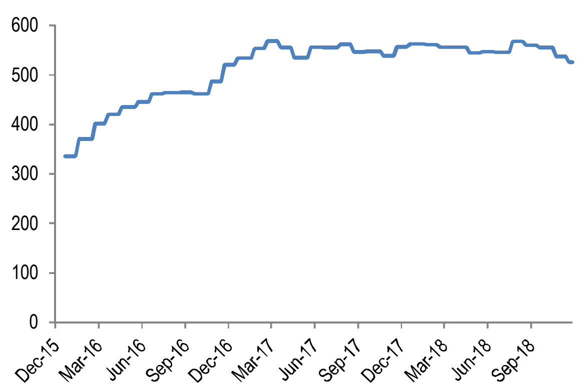


Agency Debt

Discount Notes Outstanding ($bn)

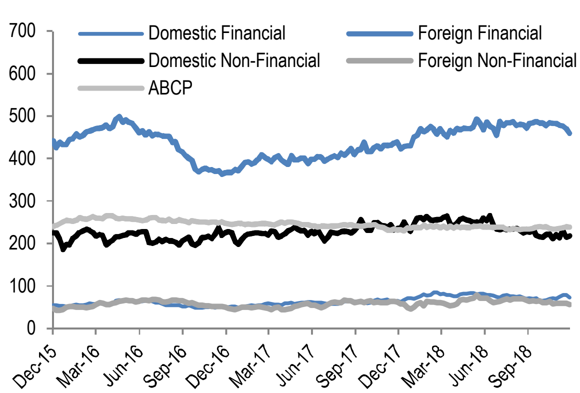


Coupons Outstanding ($bn)

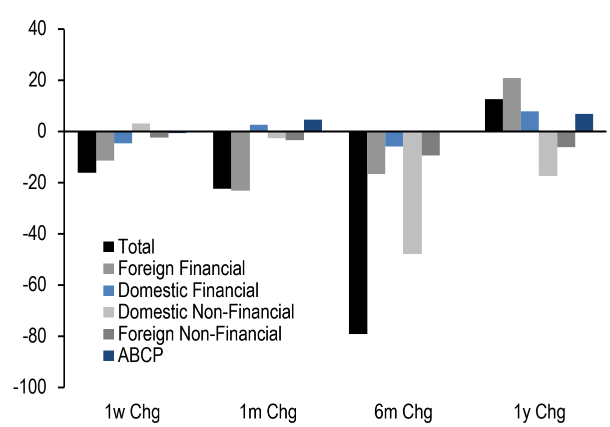


Commercial Paper

Outstanding ($bn)



Change ($bn)



Source: Federal Reserve, US Treasury, J.P. Morgan estimates, Treasury and Agency debt as of 11/30/18, commercial paper as of 12/05/18

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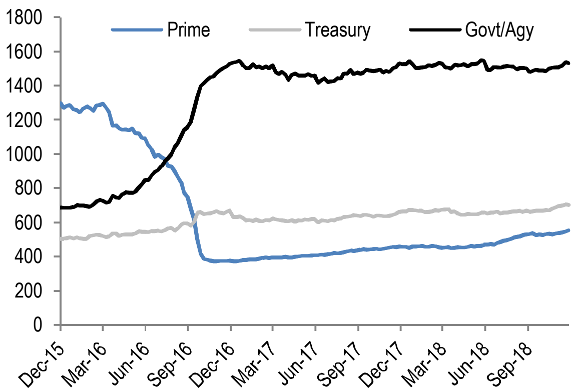
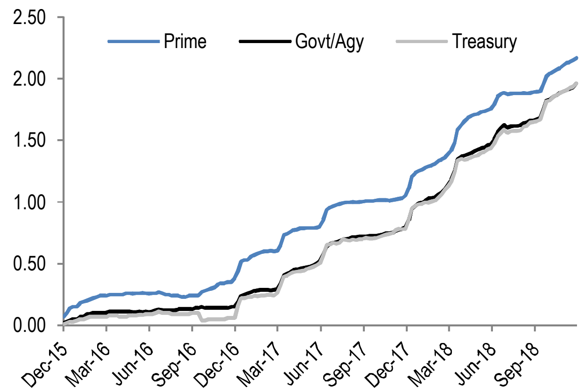
Money Market Funds

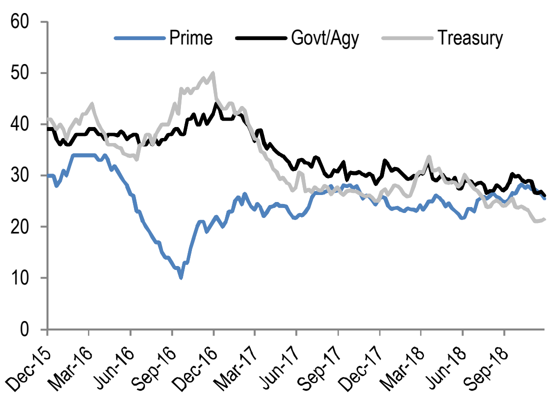
Assets Under Management ($bn)



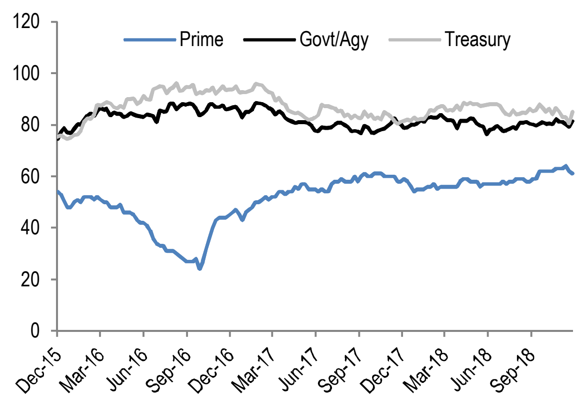
Net Yield (%)



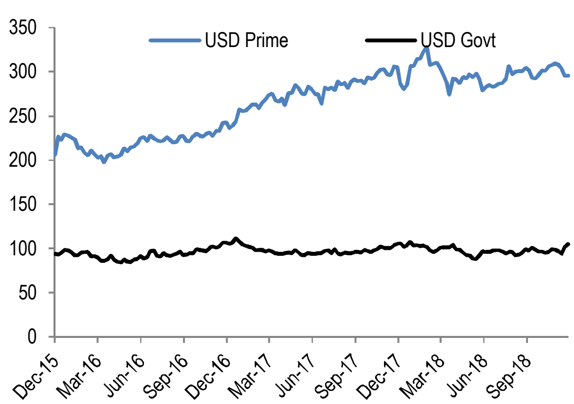
Weighted Average Maturity (days)



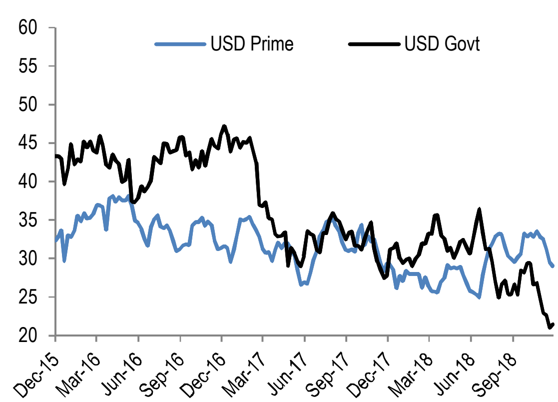
Weighted Average Life (days)



USD Offshore Fund AUM ($bn)



USD Offshore Fund WAM (days)



Source for all charts on this page: iMoneyNet, J.P. Morgan, data as of 12/07/2018

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Money Market Funds (continued)

Prime MMF Asset Allocation ($bn)

Sector	Oct-18	% of total	m/m chg	chg since Dec-17	m/m % chg	% chg since Dec-17
Banks (US)	67	9%	5	8	9%	13%
Banks (Eurozone)	128	18%	25	62	25%	95%
Banks (Other Yankee)	311	43%	12	31	4%	11%
ABCP/CCP (Banks)	42	6%	2	5	4%	14%
ABCP (Non-banks)	7	1%	(2)	0	-24%	5%
ABS	1	0%	0	0	50%	53%
Corporates (Financial)	10	1%	5	6	83%	113%
Corporates (Non-financial)	34	5%	(0)	13	0%	60%
US Treasuries	47	6%	(11)	(0)	-19%	-1%
US Agencies	37	5%	(1)	9	-4%	33%
US S&L Govt/Munis	8	1%	(1)	(3)	-7%	-27%
Foreign SSA	28	4%	(3)	10	-10%	54%
Central Banks (Fed RRP)	-	0%	(27)	(59)	-100%	-100%
Other	8	1%	0	8	2%	7406%
Total	**726**	**100%**	**4**	**89**	**1%**	**14%**

Government MMF Asset Allocation ($bn)

Sector	Oct-18	% of total	m/m chg	chg since Dec-17	m/m % chg	% chg since Dec-17
Treasuries	**785**	**35%**	**33**	**91**	**4%**	**13%**
Bills	551	24%	48	101	9%	22%
Treasury coupons	72	3%	(11)	(21)	-14%	-22%
FRNs	162	7%	(3)	11	-2%	7%
Agencies	**595**	**26%**	**3**	**(72)**	**1%**	**-11%**
Discos	209	9%	13	(7)	6%	-3%
Agency Coupons	3	0%	(1)	(11)	-23%	-77%
Agency FRNs	383	17%	(8)	(54)	-2%	-12%
Repo	**866**	**38%**	**18**	**(23)**	**2%**	**-3%**
Treasury repo	540	24%	34	161	7%	43%
Agency repo	322	14%	(3)	38	-1%	13%
Other Repo	-	0%	(1)	(0)	-100%	-100%
RRP	4	0%	(13)	(223)	-75%	-98%
Other	**16**	**1%**	**3**	**8**	**25%**	**104%**
Total	**2,261**	**100%**	**57**	**4**	**3%**	**0%**

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

	Oct-18										m/m change										Change since Dec-17									
	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	**135**	**192**	**66**	**32**	**9**	**37**	**33**	**37**	**6**	**549**	**4**	**15**	**1**	**2**	**(1)**	**9**	**13**	**(0)**	**0**	**45**	**25**	**24**	**9**	**7**	**(1)**	**25**	**24**	**(2)**	**(3)**	**107**
Eurozone	**31**	**39**	**24**	**11**	**2**	**12**	**11**	**10**	**1**	**141**	**4**	**6**	**4**	**0**	**(0)**	**9**	**4**	**0**	**(1)**	**25**	**14**	**11**	**16**	**1**	**(1)**	**10**	**10**	**2**	**(0)**	**63**
France	9	16	18	10	2	11	5	9	0	80	2	1	4	(0)	(0)	9	2	0	(1)	18	1	11	12	1	(1)	10	5	2	(0)	39
Netherlands	7	7	4	1	-	1	0	2	0	21	(1)	(0)	1	0	-	0	0	(0)	(0)	(0)	3	1	2	0	-	(0)	0	1	0	7
Germany	12	9	2	0	-	0	5	-	0	29	3	0	(2)	(0)	-	0	1	-	-	3	7	(2)	2	0	-	0	4	-	(0)	12
Belgium	-	7	0	-	-	-	-	-	-	7	-	4	0	-	-	-	-	-	-	5	-	2	0	-	-	-	-	-	-	2
Spain	3	0	0	-	-	-	-	-	0	3	(0)	0	(0)	-	-	-	-	-	-	0	2	(0)	(0)	-	-	-	-	-	0	2
Luxembourg	1	-	-	-	-	-	-	-	-	1	(0)	-	-	-	-	-	-	-	-	(0)	0	-	-	-	-	-	-	(0)	-	0
Austria	0	-	0	-	-	-	-	-	-	0	(0)	-	0	-	-	-	-	-	-	0	0	-	0	-	-	-	-	-	-	0
Other Europe	**31**	**40**	**17**	**8**	**1**	**2**	**14**	**7**	**0**	**119**	**3**	**5**	**1**	**2**	**(0)**	**0**	**9**	**0**	**0**	**21**	**5**	**13**	**2**	**4**	**(0)**	**2**	**10**	**0**	**(1)**	**35**
Sweden	6	29	8	-	-	-	-	-	0	43	(0)	4	(2)	-	-	-	-	-	0	2	(1)	16	(0)	(0)	-	-	-	-	(0)	15
United Kingdom	11	6	7	4	1	2	8	5	0	45	1	0	5	(1)	(0)	0	3	(0)	0	9	5	(1)	2	2	(0)	2	4	1	(0)	15
Switzerland	10	1	-	4	-	-	6	1	0	23	3	0	-	3	-	-	6	0	0	12	4	(4)	-	2	-	-	6	(1)	(1)	6
Norway	3	4	2	-	-	-	-	-	-	8	0	(0)	(1)	-	-	-	-	-	-	(1)	(2)	2	0	-	-	-	-	(0)	-	1
Denmark	1	-	-	-	-	-	-	-	-	1	(1)	-	-	-	-	-	-	-	-	(1)	(1)	(1)	-	-	-	-	-	-	-	(2)
Other Regions	**74**	**113**	**25**	**13**	**6**	**24**	**8**	**21**	**5**	**288**	**(2)**	**5**	**(4)**	**(0)**	**(0)**	**(1)**	**0**	**(0)**	**1**	**(1)**	**7**	**(1)**	**(9)**	**1**	**1**	**13**	**4**	**(4)**	**(2)**	**10**
Canada	30	42	2	5	3	6	4	3	0	96	(1)	(1)	(6)	0	(0)	1	1	0	(0)	(6)	8	(3)	(14)	1	0	4	1	(1)	(0)	(3)
United States	7	19	7	5	4	15	2	14	4	76	(1)	3	2	1	(0)	2	(0)	(1)	1	7	3	(2)	4	2	0	8	1	(4)	(2)	10
Japan	8	43	4	3	-	2	2	3	0	66	0	3	(2)	(1)	-	(3)	(0)	1	(0)	(2)	6	4	3	(2)	-	2	2	1	0	16
Australia	19	4	9	-	-	-	-	-	0	33	(1)	0	2	-	-	-	-	-	0	2	(12)	0	(2)	-	-	-	-	(0)	0	(14)
Singapore	6	2	-	-	-	-	-	-	-	8	(0)	0	(0)	-	-	-	-	-	-	(0)	(0)	(1)	(1)	-	-	-	-	(0)	-	(2)
China	2	2	2	-	-	-	-	-	-	5	0	(1)	(0)	-	-	-	-	-	-	(1)	1	(0)	1	-	-	-	-	-	-	2
Abu Dhabi	1	-	1	-	-	-	-	-	-	1	0	-	(0)	-	-	-	-	-	-	(0)	0	-	0	-	-	-	-	-	-	1
Kuwait	-	0	0	-	-	-	-	-	-	0	-	(0)	(0)	-	-	-	-	-	-	(0)	-	0	(0)	-	-	-	-	-	-	0
Chile	0	0	-	-	-	-	-	-	-	1	(0)	(0)	-	-	-	-	-	-	-	(0)	0	(0)	-	-	-	-	-	-	-	(0)

Source for all charts on this page: Crane Data, J.P. Morgan, data as of 10/31/2018

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Market Movers Calendar

Monday	Tuesday	Wednesday	Thursday	Friday
3 Dec **Manufacturing PMI** (9:45am) Nov final 55.4 **ISM manufacturing** (10:00am) Nov 57.5 **Construction spending** (10:00am) Oct 0.1% **Light vehicle sales** Nov 17.5mn Fed Vice Chairman Clarida speaks (6:30am) Fed Vice Chairman Quarles speaks (8:00am) NY Fed President Williams speaks (9:15am) Fed's Brainard speaks (10:30am) Dallas Fed President Kaplan speaks (1:00pm)	**4 Dec** **QFR** (10:00am) 3Q	**5 Dec** **ADP employment** (8:15am) Nov **Productivity and costs** (8:30am) 3Q rev 2.2% Unit labor costs 0.9% **Services PMI** (9:45am) Nov final 54.4 **ISM nonmanufacturing** (10:00am) Nov 58.5 **QSS** (10:00am) 3Q **Beige book** (2:00pm) Fed Chairman Powell testifies before Joint Economic Committee (10:15am)	**6 Dec** **Initial claims** (8:30am) w/e Dec 1 225,000 **International trade** (8:30am) Oct -$55.1bn **Factory orders** (10:00am) Oct -1.8% Announce 10-year note (r) $24bn Announce 30-year bond (r) $16bn Announce 3-year note $38bn Atlanta Fed President Bostic Speaks (12:15pm)	**7 Dec** **Employment** (8:30am) Nov 175,000 Unemployment rate 3.7% Average weekly hours 34.5 **Consumer sentiment** (10:00am) Dec prelim 96.5 **Wholesale trade** (10:00am) Oct **Consumer credit** (3:00pm) Oct Fed's Brainard speaks (12:00pm)
10 Dec **JOLTS** (10:00am) Oct	**11 Dec** **NFIB survey** (6:00am) Nov **PPI** (8:30am) Nov Auction 3-year note $38bn	**12 Dec** **CPI** (8:30am) Nov **Federal budget** (2:00pm) Nov Auction 10-year note (r) $24bn	**13 Dec** **Import prices** (8:30am) Nov **Initial claims** (8:30am) w/e Dec 8 Announce 5-year TIPS (r) $14bn Auction 30-year bond (r) $16bn	**14 Dec** **Retail sales** (8:30am) Nov **Industrial production** (9:15am) Nov **Manufacturing PMI** (9:45am) Dec flash **Services PMI** (9:45am) Dec flash **Business inventories** (10:00am) Oct
17 Dec **Empire State survey** (8:30am) Dec **NAHB survey** (10:00am) Dec **TIC data** (4:00pm) Oct	**18 Dec** **Business leaders survey** (8:30am) Dec **Housing starts** (8:30am) Nov **FOMC meeting**	**19 Dec** **Current account** (8:30am) 3Q **Existing home sales** (10:00am) Nov **FOMC statement and projections (2:00pm) and press conference (2:30pm)**	**20 Dec** **Initial claims** (8:30am) w/e Dec 15 **Philadelphia Fed manufacturing** (8:30am) Dec **Leading indicators** (10:00am) Nov Announce 2-year FRN (r) $18bn Announce 2-year note $40bn Announce 5-year note $41bn Announce 7-year note $32bn Auction 5-year TIPS (r) $14bn	**21 Dec** **Durable goods** (8:30am) Nov **Real GDP** (8:30am) 3Q final **Philadelphia Fed nonmanufacturing** (8:30am) Dec **Personal income** (10:00am) Nov **Consumer sentiment** (10:00am) Dec final **KC Fed survey** (11:00am) Dec

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