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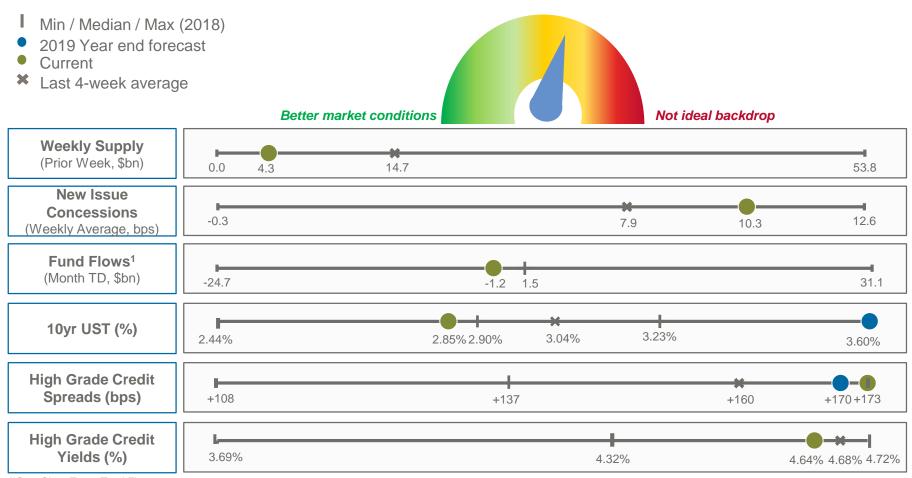
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# Agenda

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#### State of the markets – sentiment scale



<sup>1</sup>IG ex Short Term, Total Flows

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#### Current interest rate environment

#### Historical 10-year U.S. Treasury yield

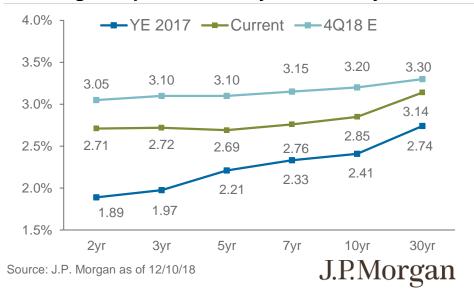


#### Range of 10-year U.S. Treasury yield forecasts

#### High forecast Actual - Low forecast Median forecast 5.00% - J.P. Morgan forecast 4.29% 4.25% 3.60% 3.55% 3.50% 3.50% 3.35% 3.50% 3.45% 3.30% 3.40% 2.85% 2.75% 2.50% 2.00% 2.40% 2.20% 2.20% 1.25% Present 1Q19 2Q19 3Q19 4Q19

#### Source: J.P. Morgan, Bloomberg as of 12/10/18

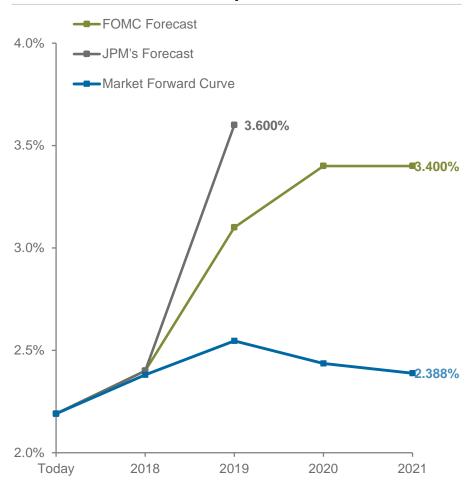
#### J.P. Morgan expects a flatter yield curve by YE 2018



#### Current interest rate environment

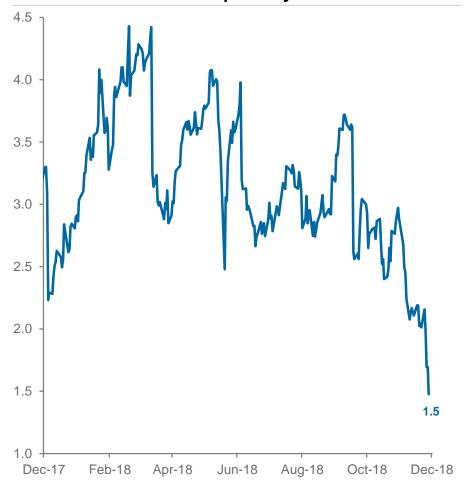
#### Fed rate forecast compared to market participants

#### FOMC dots vs. market expectations



## Source: FOMC year-end Fed Funds Rate projections, 9/26/18. Market forward curve, 12/10/18. JPM forecasts: 1 more hike in 2018 and 4 in 2019

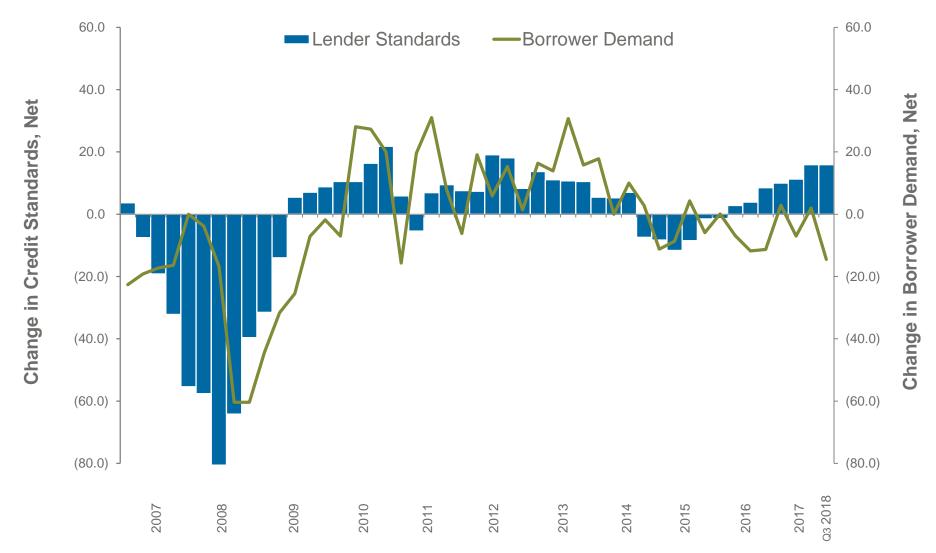
#### Number of Fed hikes implied by OIS rates\*



\*Implied number of hikes out to end of year 2019 Source: J.P. Morgan



### Federal Reserve Board survey



source: The Federal Reserve Board's "Senior Loan Officer Opinion Survey on Bank Lending Practices", November 13, 2018

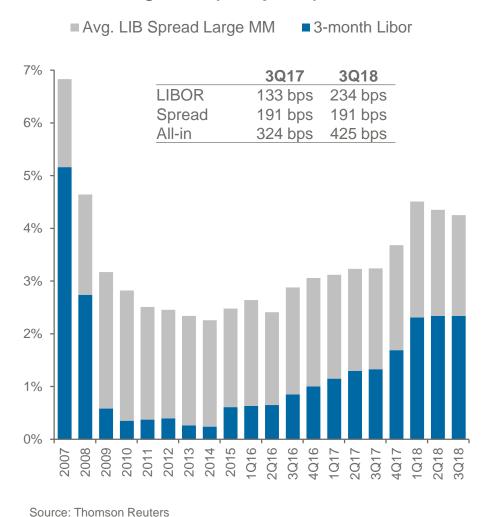
Refinancing activity spikes as borrowers capitalize on favorable market conditions

#### Non-sponsored quarterly loan issuance (\$bn) New money loan volume (\$bn) **■**1Q **■**2Q **■**3Q **■**4Q **—**% Institutional New money volume —% of total volume 50.0 50% 150 50% 131 133 125 118 116 112 40.0 40% 40% 97 100 93 92 30.0 30% 30% 79 74 75 58 20% 20.0 20% 50 10.0 10% 10% 25 0.0 2010 2013 2014 2015 2016 2018 2010 2012 2013 2014 2015 2016 2017 YTD18 2008 2009 2012 2011 2007 2011 YTD17 Source: Thomson Reuters Source: Thomson Reuters J.P.Morgan

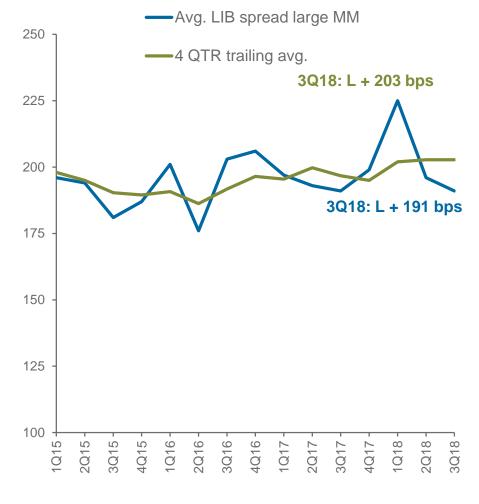
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Borrowing costs for MM companies have increased due to rising rates, but spreads remain borrower-friendly

#### All-in borrowing costs (L + spread)



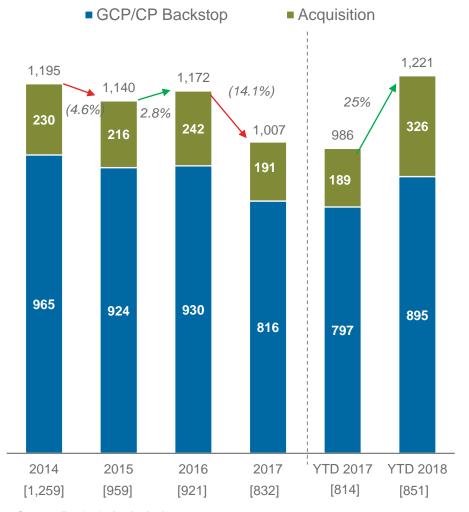
#### Average LIBOR spread (Large MM borrowers)



Source: Thomson Reuters

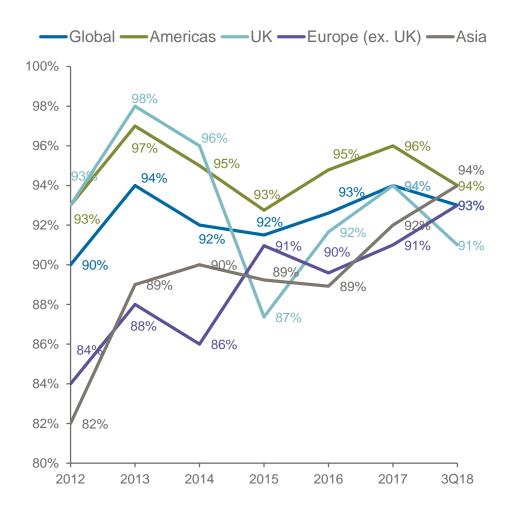
#### Investment grade loan market remain active

#### High grade loan volume exceeds \$1.2 trillion YTD



Source: Dealogic (12/10/18) Note: [ ] = # of deals

#### Lender hit rates remain elevated

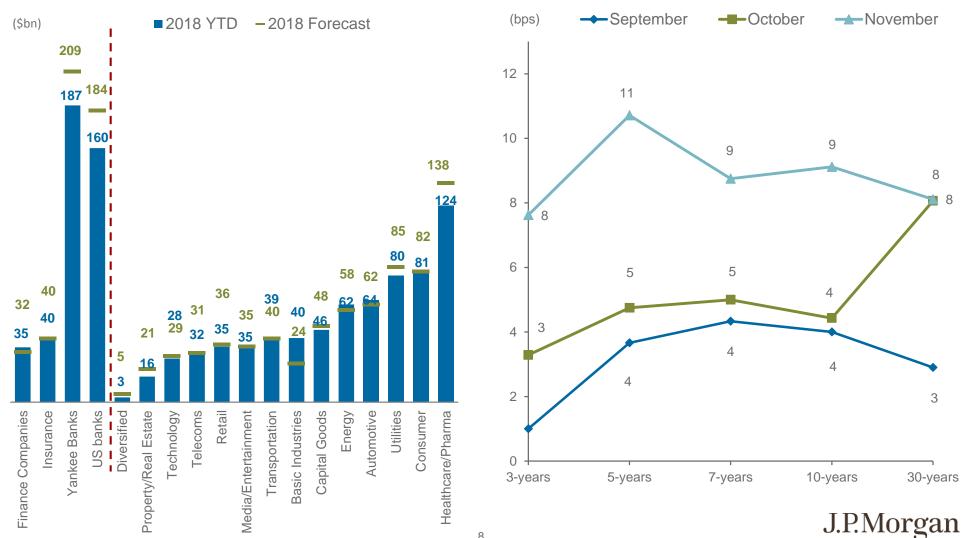


Source: J.P. Morgan investment grade loan transactions

High grade supply rebounded post-Thanksgiving

#### 2018 YTD supply vs. YE forecasted supply by sector

#### New issue concessions have increased



Sources: Securities Data Corporation, J.P. Morgan Credit Research, Informa Business Intelligence, Dealogic as of 11/30/18, J.P. Morgan as of 11/30/18 Note: Excludes hybrid capital and cross-over issuance; includes MTNs, 144A and Yankees with minimum maturity of 13 months

Debt private placement market remains active with a strong pipeline until year end

#### 2017 volume exceeded \$70 billion for the first time

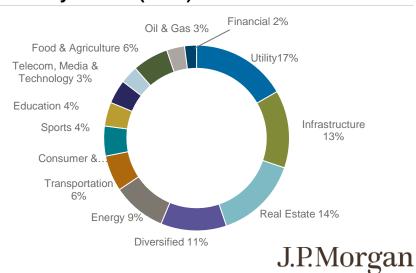


# Source: All available trade publications as of 12/10/2018; Note: Historical data is based on Thomson Financial official league table publications and excludes direct transactions. Numbers may not add up due to rounding .

#### Average transaction size (\$mm)

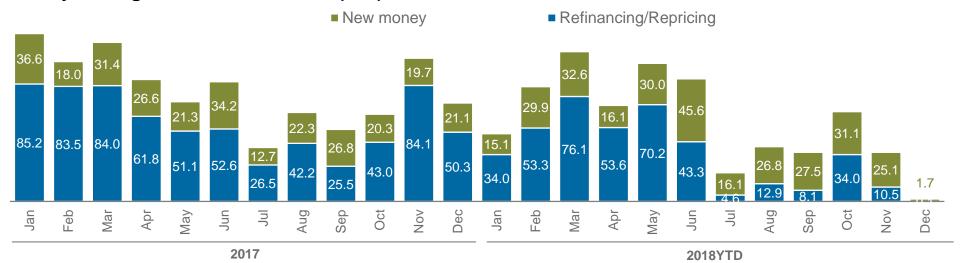


#### Issuance by Sector (2018)

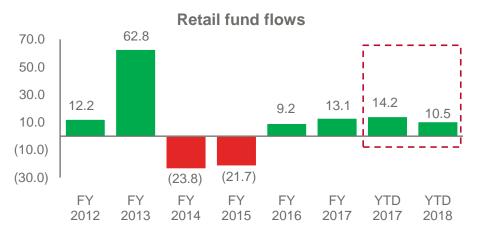


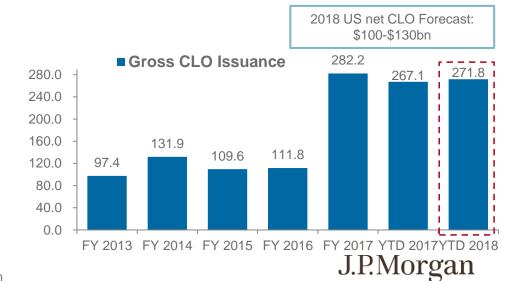
#### Recent trends in the leveraged loan market

#### Monthly leveraged loan new issuance (\$bn)



#### Leveraged loan demand remains robust (\$bn)

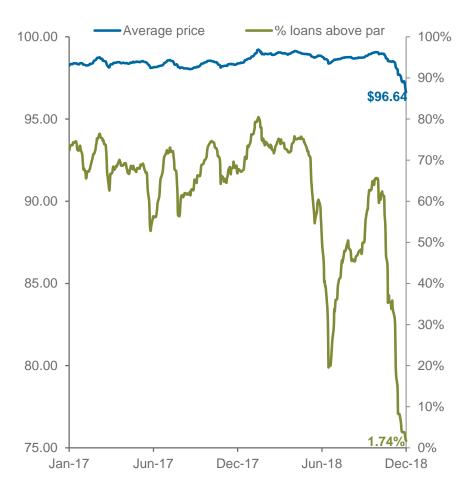




Source: Lipper (as of week ending 12/05/18)

#### Recent trends in the leveraged loan market

#### JPM Leveraged Loan Index trading prices



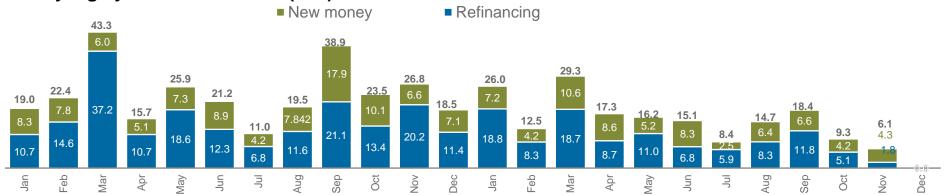
#### Source: JPMLLI (as of 12/07/18)

#### JPM Leveraged Loan Index yields (3yr)

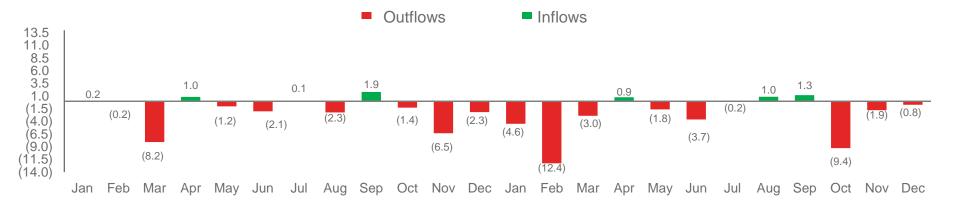


## Recent trends in the high yield market

#### Monthly high yield new issuance (\$bn)

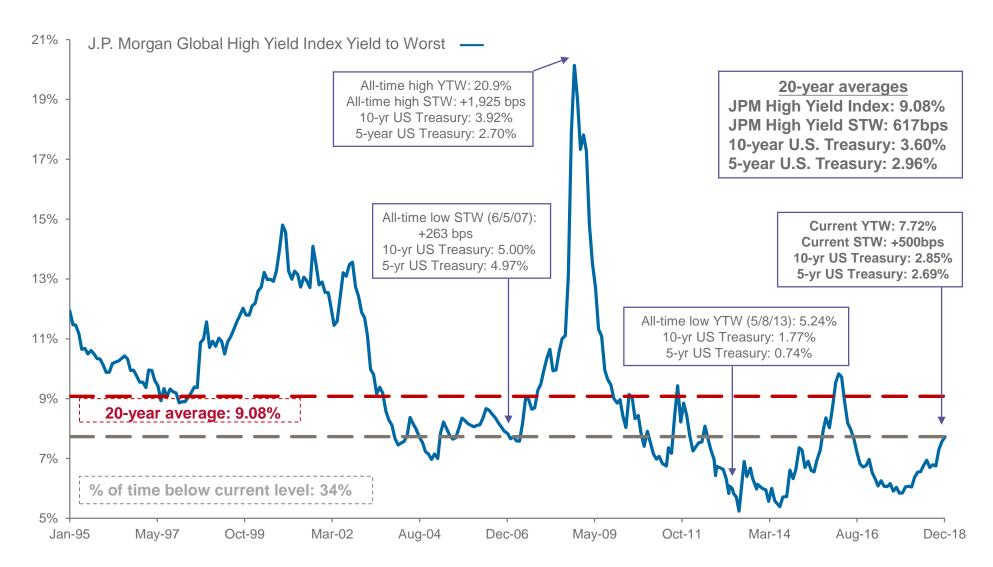


#### HY fund flows (\$bn)



Source: Lipper (as of week ending 12/05/18)

Despite the recent volatility in the high yield market, yields remain below historical averages



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#### J.P. Morgan anticipates 5 rate hikes and an inverted yield curve by YE 2019

#### **Current observations**

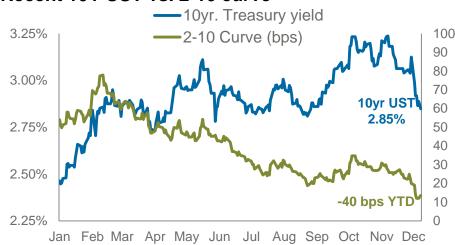
- The U.S. economy is in the late innings of the current expansion, but not yet at the end of the cycle
  - JPM expects that the economic backdrop will keep the Fed on their once-a-quarter hiking pattern, leaving the funds rate at 3.25 3.50% at the end of next year
  - The market, however, is pricing in a more dovish YE19 rate of ~2.75%
  - As the front end widens faster than the intermediate/long end, the 2-10 curve continues to compress

#### **Key economic indicator forecasts**

	Current	1Q19	2Q19	3Q19	4Q19
Real GDP	3.50%	2.2%	2.00%	1.70%	1.50%
Core PCE prices	1.60%	2.30%	2.40%	2.30%	2.20%
Fed Funds	2.20%	2.65%	2.90%	3.15%	3.40%
3m LIBOR	2.77%	2.95%	3.20%	3.45%	3.70%
WTI (\$/bbl)	\$52.61	\$75.83	\$76.33	\$73.30	\$80.67
2Y UST	2.71%	3.25%	3.45%	3.60%	3.70%
5Y UST	2.69%	3.30%	3.45%	3.55%	3.60%
10Y UST	2.85%	3.35%	3.50%	3.55%	3.60%
30Y UST	3.14%	3.45%	3.55%	3.55%	3.55%

Source: J.P. Morgan 12/10//18

#### Recent 10Y UST vs. 2-10 curve



#### JPM expects the yield curve to be inverted by 2H19



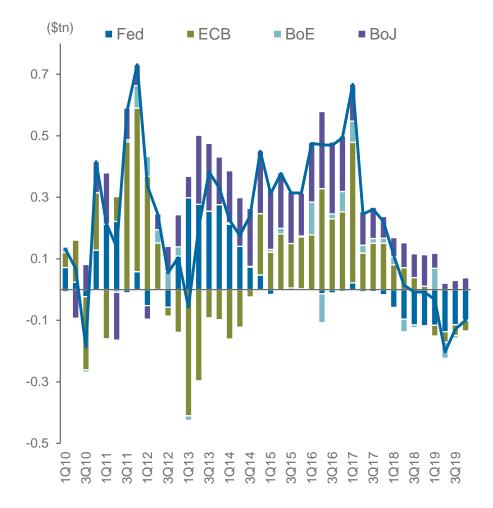
High grade credit spreads are forecast to widen in 2019

#### J.P. Morgan research expects the JULI to reach 170bps

# (bps) Historical JULI Spread 250 -Current spread 2019 YE Forecast 200 150 100 Jan-16 May-16 Sep-16 Feb-17 Jun-17 Oct-17 Mar-18 Jul-18 Nov-18

## Source: J.P. Morgan DataQuery as of 12/10//2018 JULI: J.P. Morgan's High Grade Credit Index

#### DM CB balance sheets expected to shrink in 2019



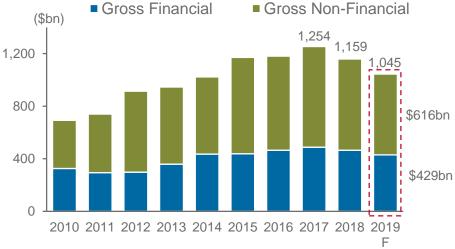
Source: J.P. Morgan Research

J.P.Morgan

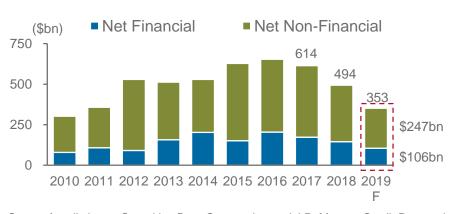
2019 high grade supply issue forecasted to decline year over year

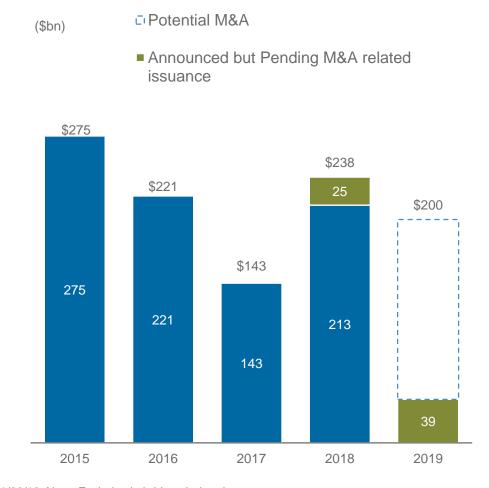
#### Gross issuance is forecasted at \$1,045bn for 2019...

# M&A activity is expected to fall in 2019



#### ... while net issuance is forecasted to decline 29% vs. 2018





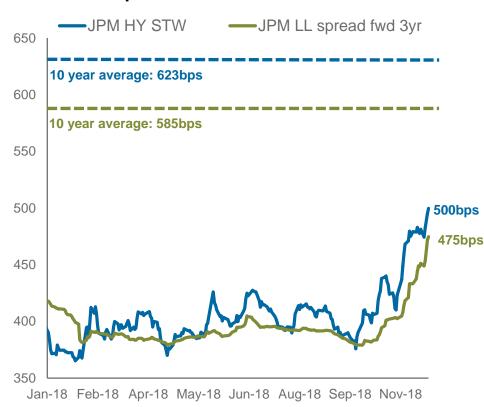
Source for all charts: Securities Data Corporation and J.P. Morgan Credit Research as of 11/22/18. Note: Excludes hybrid capital and cross-over issuance; includes MTNs, 144A and Yankees with minimum maturity of 13 months.

Yields and spreads in leveraged finance markets are beginning to widen on the back of equity volatility

#### **HY and LL Yields YTD**



#### **HY and LL Spreads YTD**



In volatile market conditions, issuers should be prepared to take advantage of windows of opportunity when the market opens

#### Leveraged loan stats and forecasts

			_	
	2016	2017	2018 YTD	2019E
Total Return	9.78%	4.25%	3.72%	6.00%
Gross Issuance (USD)	\$488bn	\$982bn	\$695bn	\$750bn
Net Issuance (USD)	\$203bn	\$286bn	\$250bn	\$275bn
	2016	2017	Current	2019E
Default Rates	1.50%	1.84%	1.57%	1.50%
Yield to 3yr	6.23%	6.31%	7.42%	7.75%
Spread to 3yr	458bps	419bps	449bps	390bps

#### High yield stats and forecasts

	2016	2017	2018 YTD	2019E
Total Return	18.27%	8.28%	-0.83%	3.25%
Gross Issuance (USD)	\$229bn	\$285bn	\$173bn	\$200bn
Net Issuance (USD)	\$85bn	\$97bn	\$64bn	\$100bn
	2016	2017	Current	2019E
Default Rates	4.28%	1.27%	1.84%	1.50%
JPM Global HY YTW	6.53%	6.07%	7.67%	8.00%
JPM Global HY STW	482bps	398bps	479bps	450bps

J.P. Morgan's 2019 high yield and leveraged loan outlook is constructively neutral – we expect returns and issuance to be healthy and default rates to remain near post-crisis lows