

Credit Market Strategist

Pick your poison

Credit Analysis

Bank of America
Merrill Lynch

02 August 2019

- **Pick your poison.** The yield on US IG fixed income has declined to 2.43%, the lowest since September 2017 but well off the 1.37% all-time floor from September 2012. However, non-US IG fixed income yields have collapsed to 0.32%, an all-time record low even compared with the 0.34% number seen in July 2016. While the US fixed income accounts for roughly half (49.2%) the \$55tn global IG fixed income market, it pays out 88% of all yield, up from 82% as late as May and 50% in 2013%. As many global bond investors – such as insurance companies – need a certain minimum yield level to survive this means there is a growing wall of foreign money coming into the US bond market. Of course dollar hedging costs remain a high hurdle, and on a hedged basis only about 20% of the US IG fixed income market is actually positive yielding for EUR investors presently. However, with the collapse in non-US yields we think foreign fixed income investors have no choice but to take more risk. It is pick your poison: take more credit, duration or currency risk. That means more unhedged money entering the US bond market and especially the US corporate bond market.
- **Trade vs. central banks.** President Trump announced 10% tariffs on the remaining \$300bn currently un-tariffed imports from China starting Sept 1st. This is an unexpected escalation that creates additional uncertainty and is a negative for credit spreads. How far spreads widen depends on, among other things, whether China retaliates or even calls off negotiations. However, the big difference this time relative to early May is that the Fed and ECB will be very responsive, which should lead to substantially less spread widening. Whatever builds we view as another buying opportunity.
- **You can't have your cake and eat it too.** While Wednesday's FOMC statements – with a 25bps rate cut, possibly more to come and ending QT – more or less matched market expectations on average, Fed Chair Powell's comments at the press conference were less dovish than investors hoped for. Characterizing the US economy as strong and the rate cut as merely a "mid-cycle adjustment to policy" he recognized that you can't have a strong economy and rate cuts on a regular basis. This outcome is what we expected and help form the foundation for our bullish outlook for IG credit spreads.
- **Best of BBBBreed.** Following Mylan's credit-friendly agreement to combine with Upjohn, we update our list of BBB names taking debt friendly action over the past 21 months. The other addition is Vodafone. We now have 23 debt friendly cases, accounting for 12% of the IG index and 20% of BBBs. That represents a sizable and growing segment of the IG market, which highly unusually is focused on deleveraging well before a recession.
- **HG 2Q earnings season update.** 81% of 2Q earnings have by now been released by 75% of US IG public issuers. Earnings are expected to grow 1.3% YoY in 2Q ex. Boeing, and decline 0.2% YoY with Boeing included. Revenues are expected to grow 4.0% YoY in 2Q. The actual earnings growth exceeded expectations by 2.4% (3.9% ex. Boeing).
- **Worried about profits, not revenues.** The outlook for earnings growth in 2H-19 deteriorated notably, although expectations for sales remained more resilient.
- **M&A announcement volume declined in July.**
- **Fund flows: Flows moderate.** \$1.70bn IG fund/ETF inflow this week.
- **Busy supply calendar for a short August.** \$25.1bn this week. \$30-40bn next week.

BofA Merrill Lynch does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 38 to 40.

12029439

Timestamp: 02 August 2019 09:06PM EDT



Credit Strategy
United States

High Grade Strategy

Hans Mikkelsen
Credit Strategist
BofAS
+1 646 855 6468
hans.mikkelsen@baml.com

Yuri Seliger
Credit Strategist
BofAS
+1 646 855 7209
yuri.seliger@baml.com

Yunyi Zhang
Credit Strategist
BofAS
+1 646 855 8696
yunyi.zhang@baml.com

Recent credit strategy research

Publication	Name
Situation Room	Trade vs. central banks
Situation Room	You can't have your cake and eat it too
Situation Room	Best of BBBBreed
Situation Room	HG 2Q half-time earnings season update
Monthly HG Market Review	Jul '19: Good data and rate cut
Credit Market Strategist	Jul '19 US Credit Investor Survey: Still all about China
Credit Market Strategist	Summer 2018 snapshot of the HG market

Data and charts:

Corporate credit spreads and returns
Spread and supply forecasts
Sector views
High Grade Spreads by Sector
High grade sector historical performance
Sector performance and relative value
Supply statistics
Mutual fund flows
Corporate spread curves
Liquidity premium in high grade spreads
Dealer inventories
CDS cash basis
USD EUR relative value
Rating actions summary
Daily foreign demand tracker

In This Issue

Macro Credit Strategy3

Pick your poison..... Page 3

The yield on US IG fixed income has declined to 2.43%, the lowest since September 2017 but well off the 1.37% all-time floor from September 2012. However, non-US IG fixed income yields have collapsed to 0.32%, an all-time record low even compared with the 0.34% number seen in July 2016. While the US fixed income accounts for roughly half (49.2%) the \$55tn global IG fixed income market, it pays out 88% of all yield, up from 82% as late as May and 50% in 2013%. As many global bond investors need a certain minimum yield level to survive this means there is a growing wall of foreign money coming into the US bond market.

Trade vs. central banks..... Page 3

President Trump on Thursday afternoon announced 10% tariffs on the remaining \$300bn currently un-tariffed imports from China starting September 1st. Coming immediately after Treasury Secretary Mnuchin and Trade Representative Lighthizer returned from meetings in Shanghai and briefed him, this suggests negotiations did not go as well as hoped. This is obviously an unexpected escalation that creates additional uncertainty and is a negative for credit spreads. However, the big difference this time relative to early May is that the Fed and ECB will be very responsive, which should lead to substantially less spread widening.

You can't have your cake and eat it too..... Page 6

While the statement from Wednesday's FOMC meeting – with a 25bps rate cut, possibly more to come and ending QT – more or less matched market expectations on average, Fed Chair Powell's comments at the press conference were less dovish than investors hoped for. This is precisely what we expected and help form the foundation for our bullish outlook for IG credit spreads. Wednesday's flatter treasury curve creates near term headwinds for spread curve flatteners.

Best of BBBreed..... Page 7

Following Monday's credit-friendly Mylan agreement to combine with Upjohn, we update our list of BBB-rated non-Financial & Utilities names taking debt friendly action over the past 21 months (since November 2017). The other addition is Vodafone, which cut its dividend by 40% in May and sold its NZ business). We now have 23 debt friendly cases.

M&A announcement volume declined in July..... Page 9

North American M&A announcement volume declined significantly to \$177bn in July from \$369bn in June. At the same time, the pipeline value of announced deals with potential IG funding implications increased from \$378bn at the end of June to \$415bn at the end of July and \$442bn currently. M&A-related USD IG issuance totaled \$12.2bn in July.

Flows moderate..... Page 13

Flows for US funds and ETFs moderated during the past week ending on July 31st. The net inflow to stocks was close to flat at \$0.63bn, while inflows to bonds decelerated to \$2.46bn from \$6.03bn on weaker flows for IG, HY and munis.

High Grade 17

HG 2Q earnings season update..... Page 17

Following three heavy weeks of reporting 81% of 2Q earnings have by now been released by 75% of US IG public issuers. Earnings are expected to grow 1.3% YoY in 2Q ex. Boeing, and decline 0.2% YoY with Boeing included. Revenues are expected to grow 4.0% YoY in 2Q. The actual earnings growth exceeded expectations by 2.4% (3.9% ex. Boeing).

Worried about profits, not revenues..... Page 21

1Q and 2Q results for US IG issuers surprised to the upside as usual. Meanwhile the outlook for earnings growth in 2H-19 deteriorated notably, although expectations for sales remained more resilient. That likely reflects the view that economic growth outlook has not changed materially since the beginning of the year, while other factors weigh on company profits.

Busy supply calendar for a short August..... Page 23

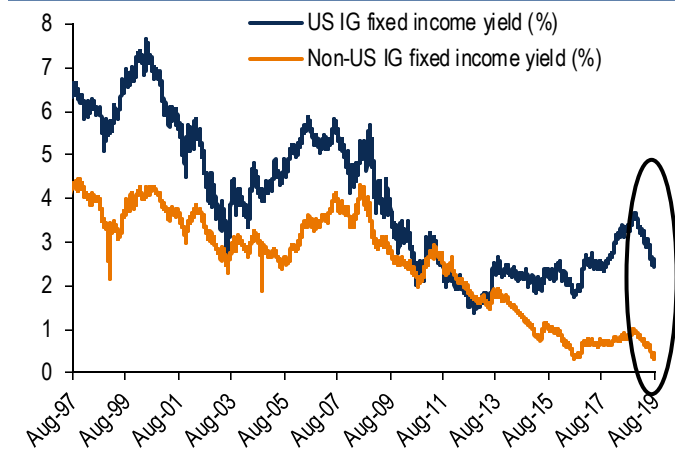
USD IG new issuance totaled \$101.1bn in July, bringing the YTD volume to \$739.9bn, the slowest January-July pace since 2014 and down 7% from the same period in 2018. We expect \$70-100bn of supply in August – including \$30-40bn next week.

Macro

Pick your poison

The yield on US IG fixed income has declined to 2.43%, the lowest since September 2017 but well off the 1.37% all-time floor from September 2012 (Figure 1). However, non-US IG fixed income yields have collapsed to 0.32%, an all-time record low even compared with the 0.34% number seen in July 2016. While the US fixed income accounts for roughly half (49.2%) the \$55tn global IG fixed income market, it pays out 88% of all yield, up from 82% as late as May and 50% in 2013% (Figure 2). As many global bond investors – such as insurance companies - need a certain minimum yield level to survive this means there is a growing wall of foreign money coming into the US bond market. Of course dollar hedging costs remain a high hurdle, and on a hedged basis only about 20% of the US IG fixed income market is actually positive yielding for EUR investors presently. However, with the collapse in non-US yields we think foreign fixed income investors have no choice but to take more risk. It is pick your poison: take more credit, duration or currency risk. That means more unhedged money entering the US bond market and especially the US corporate bond market.

Figure 1: US IG fixed income yield has declined to 2.43% while non-US yield has collapsed to an all-time record flow of 0.32%



Source: ICE Data Indices, LLC

Figure 2: US accounts for roughly half of the global IG fixed income market, but pays out 88% of all yield



Source: ICE Data Indices, LLC

Based on

[Situation Room: Trade vs. central banks 01 August 2019](#)

Trade vs. central banks

President Trump on Thursday afternoon announced 10% tariffs on the remaining \$300bn currently un-tariffed imports from China starting September 1st. Coming immediately after Treasury Secretary Mnuchin and Trade Representative Lighthizer returned from meetings in Shanghai and briefed him, this suggests negotiations did not go as well as hoped. We also note that North Korea launched missiles Wednesday and Thursday. This is obviously an unexpected escalation that creates additional uncertainty and is a negative for credit spreads, as our credit investor survey shows the top concerns (by far) being 1) Trade war, 2) Geopolitical risk and 3) China (Figure 3). How far spreads widen depends on, among other things, whether China retaliates or even calls off negotiations. However, the big difference this time relative to early May is that

the Fed and ECB will be very responsive, which should lead to substantially less spread widening. Whatever builds we view as another buying opportunity.

Figure 3: What are your biggest concerns?



Source: BofA Global Research Credit Investor Survey

Big difference this time = Fed+ECB

After US-China trade negotiations broke down in early May IG credit spreads widened about 18bps to 136bps, then rallied starting early June and ultimately more than retraced (Figure 5). There were three drivers of this reversal 1) central bank response (by far most important), 2) strong US economic data and 3) US-China truce at the G20 (least important). Recall that the Fed at their May 1st meeting – a few days before the breakdown in trade talks – came off as hawkish as Fed Chair Powell during the press conference described recent downward pressure on inflation as “transient” (see: [Situation Room 01 May 2019](#)). What kick-started the June retracement in spreads was many FOMC members coming out open for rate cuts, a remarkable shift over the course of a month – no doubt to a great extent due to concerns about trade. For example, on June 4th Fed Chair Powell stated that the Fed is monitoring trade developments and promised to act as appropriate to sustain the expansion (see: [Situation Room 04 June 2019](#)). After Wednesday’s FOMC meeting there is little doubt increased trade uncertainties imply more/faster rate cuts. In fact Thursday’s trade uncertainties more than offset the hawkish tilt at Wednesday’s FOMC meeting in terms of Fed expectations (Figure 4).

Figure 4: Thursday’s trade uncertainties more than offset the hawkish tilt at Wednesday’s FOMC meeting

FOMC Meeting	Rate cuts priced in as of (bps)		
	Jul 31 7a.m.	Aug 1 7a.m.	Aug 1 close
Sept	-22	-15	-23
Oct	-31	-26	-37
Dec	-42	-34	-50
Jan	-48	-40	-58
Mar	-56	-46	-63

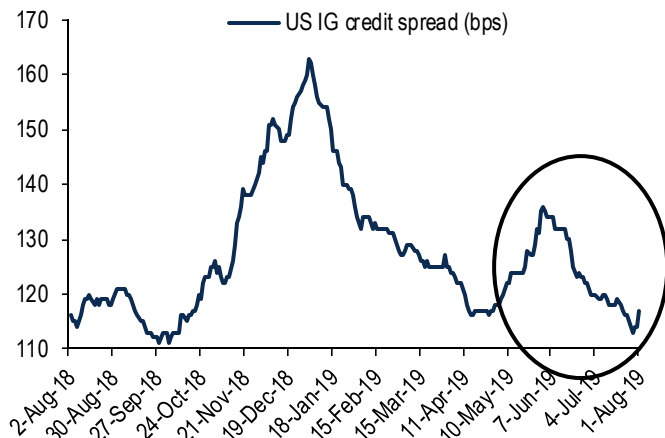
Source: Bloomberg, BofA Merrill Lynch Global Research

But an escalating trade dispute between the US and China also increases the likelihood of a response from the ECB exceeding the rate cut widely expected at its Sep meeting. Recall that the ECB already is responsible for a large share of the post-May retracement of spreads after ECB President Draghi at their June 6th meeting for the first time this round appeared open to QE and rate cuts (see: [Credit Market Strategist 07 June 2019](#)).

Mountain of negative yielding assets

Of course Thursday's substantial bull steepener in Treasury yields – with 2-year and 30-year yields down 14 and 8bps, respectively – creates a sticker shock for yield-sensitive investors that needs to be overcome. However, as we have argued regularly for the largest one – foreigners – that is offset by lower expected dollar hedging costs as more Fed rate cuts are priced in (Figure 4). Moreover consider that the mountain of negative yielding assets is going to grow even taller now after having reached a new record above \$14tn on Wednesday, up from around \$10tn in early May. To understand how painful this is for foreign investors yields on 10-year Swiss sovereigns closed at -86bps, their 30-year counterparts at -30bps (Figure 8) and 10- and 30-year bunds at -50bps and +1bps, respectively, and all of these are new records. That means more investors fleeing negative yields even if they have to take currency risk, and inflows to the US IG corporate bond market.

Figure 5: IG market retraced May's trade related spread widening



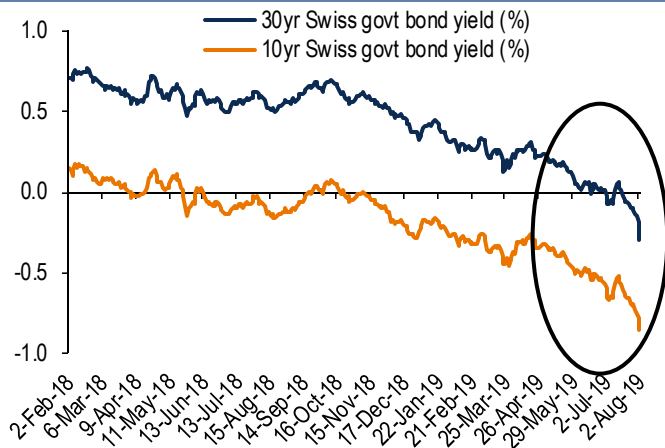
Source: ICE Data Indices, LLC

Figure 6: Negative yielding assets now exceed \$14tn for first time



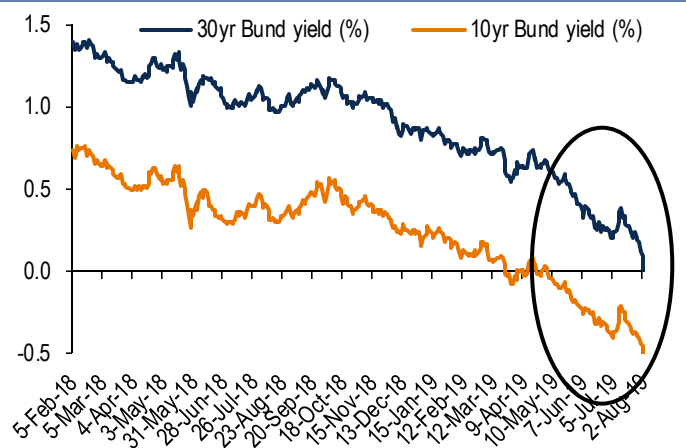
Source: Bloomberg

Figure 7: Negative Swiss sovereign yields



Source: Bloomberg

Figure 8: 30-year bund yields next to go negative?



Source: Bloomberg

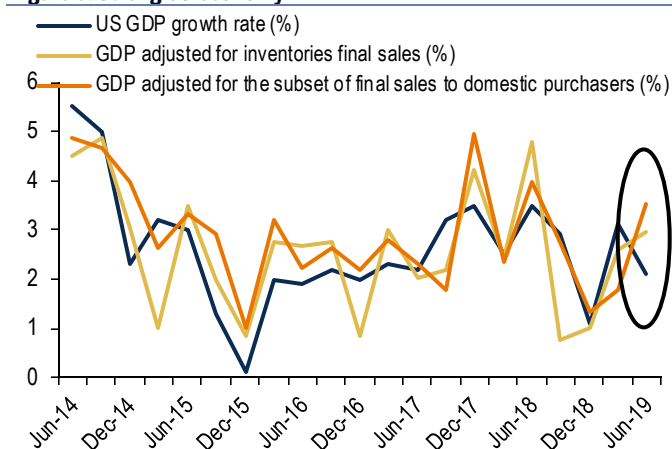
Based on

[Situation Room: You can't have your cake and eat it too 31 July 2019](#)

You can't have your cake and eat it too

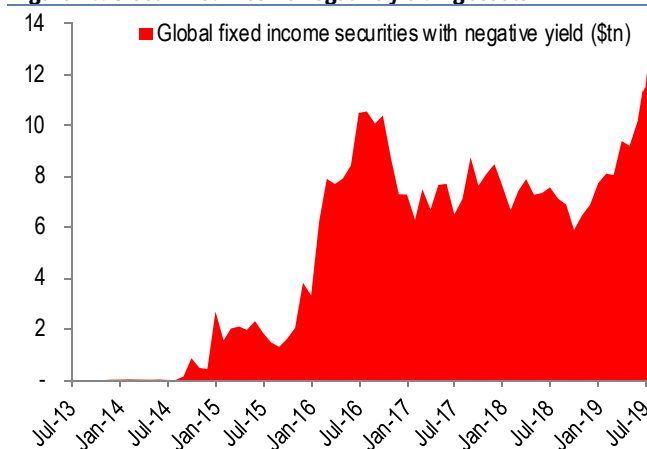
While the statement from Wednesday's FOMC meeting – with a 25bps rate cut, possibly more to come and ending QT – more or less matched market expectations on average, Fed Chair Powell's comments at the press conference were less dovish than investors hoped for. Characterizing the US economy as strong and the rate cut as merely a “mid-cycle adjustment to policy” he recognized – apparently to the disappointment of some investors – what is obvious, that you can't have your cake and eat it too. You can't have a strong economy and rate cuts on a regular basis. However, the strong US economy is what prevents US interest rates from collapsing toward their foreign peers, while each rate cut makes the very front end a less attractive place to be in and subtracts from the cost of dollar hedging for foreign investors (Figure 9). Meanwhile, the ECB and other central banks are creating a mountain of negative yielding fixed income assets abroad (Figure 10). Initial disappointment in risk assets aside, the resulting environment is super-supportive for inflows to the US IG corporate bond market. The outcomes of Wednesday's FOMC statement and press conference were precisely what we expected and help form the foundation for our bullish outlook for IG credit spreads (see: [Credit Market Strategist 26 July 2019](#)). Wednesday's flatter treasury curve creates near term headwinds for spread curve flatteners.

Figure 9: Strong US economy



Source: Bureau of Economic Analysis

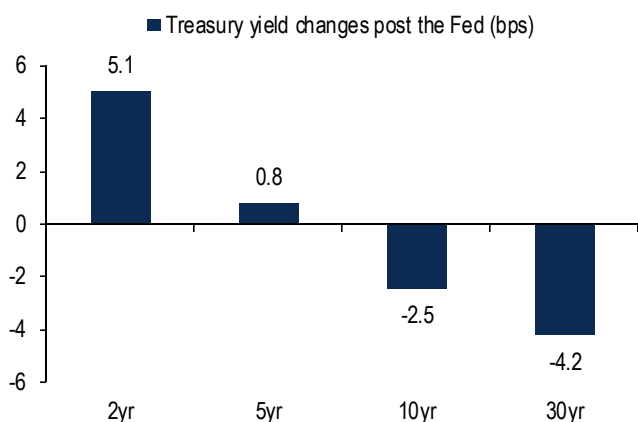
Figure 10: Global fixed income negative yielding assets



Source: BofA Merrill Lynch Global Research

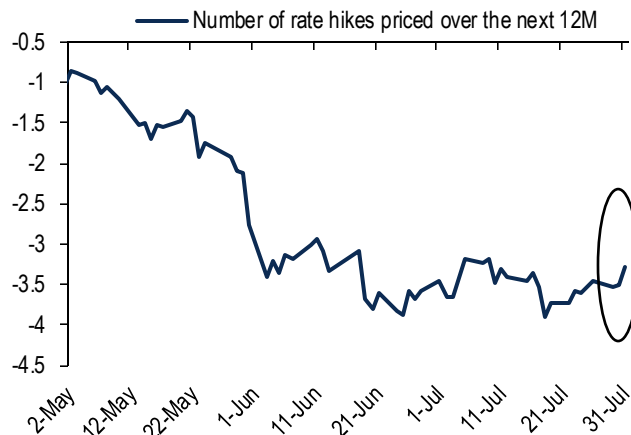
The hawkish FOMC surprise led to a flattening in the Treasury curve, with 2yr yield rising 5.1bps post the Fed. On the other hand 5-year yield was little changed while 10 and 30-year yields declined 2.5, and 4.2bps, respectively (Figure 11). Still, the number of rate cuts priced over the next 12 months declined by only 0.22 to 3.28 (Figure 12). On the other hand, stocks reacted strongly, with S&P 500 declining as much as 1.8% intraday before closing down 1.1% on the day. CDX IG widened 2.50bps, underperforming stocks, while CDX HY decline of \$0.39 was more in line with stocks. IG cash bond spreads opened generally unchanged but then moved 2-3bps wider post the Fed on the back of lower stocks and lower rates. The flattening Treasury curve supported spreads in the front-end, which remained largely unchanged. Liquid secondaries traded with a weak tone post Fed with US banks 1bps tighter to 2bps wider, telecom 3-5bps wider, energy unchanged to 2bps wider, consumer retail 2-3bps wider, healthcare and general industrials 3bps tighter to 3bps wider on the day.

Figure 11: Treasury yield changes post the Fed on Wednesday



Source: Bloomberg

Figure 12: The number of rate cuts declined by 0.22.



Source: BofA Merrill Lynch Global Research

Based on

[Situation Room: Best of BBBreid 30 July 2019](#)

Best of BBBreid

Following Monday's credit-friendly Mylan agreement to combine with Upjohn, we update our list of BBB-rated non-Financial & Utilities names taking debt friendly action over the past 21 months (since November 2017). The other addition is Vodafone, which cut its dividend by 40% in May and sold its NZ business (Figure 13), [Credit Market Strategist 12 May 2019](#). We now have 23 debt friendly cases, having occurred at a pace of about one per month, covering \$483bn of outstanding index eligible bonds – which is 12% of the IG index and 20% of BBBs (ex. Financials and Utilities). That represents a sizable and growing segment of the IG market, which highly unusually is focused on deleveraging well before a recession. Instead of all the fears of BBBs getting downgraded to HY we are seeing the opposite - improving credit quality and undoubtedly many large capital structures ultimately ending up instead getting upgraded. This change in corporate behavior is also why the upside to supply volumes in response to collapsing yields this time is much more limited than back in 2016/2017 (Figure 14). Not surprisingly, our list of debt friendly companies outperformed by 15-20% of spreads during the first year after the debt friendly action (Figure 15). On the other hand, they experience the equivalent of 1.2 negative outlooks from Moody's, S&P and Fitch over the 18-month period prior to taking debt-friendly actions, and continue to be viewed negatively with the equivalent of 1.2 out of the 3 agencies downgrading them by one notch six months after the initial action date. This is followed by gradual rating improvements thereafter.

Figure 13: BBB-rated DM companies that took debt friendly action since November 1th, 2017

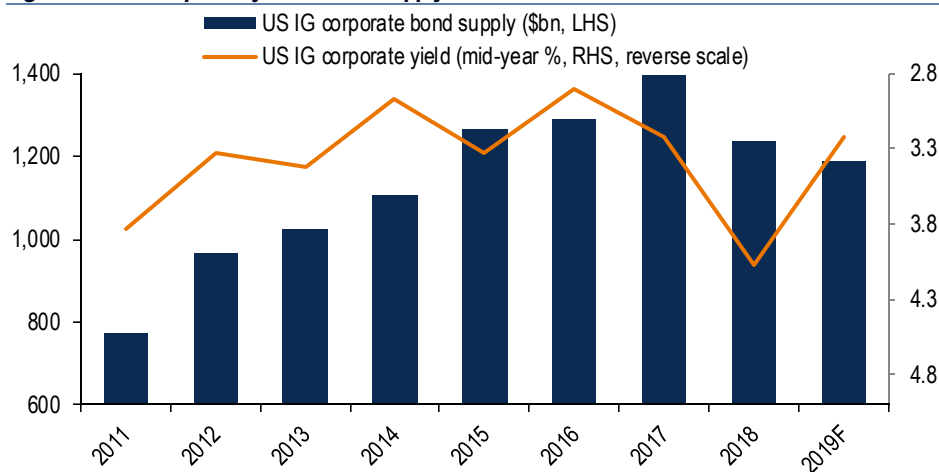
Ticker	Name	Sector	BBB index bonds (\$bn)	Debt Friendly Action Date	Debt Friendly Action	Outlooks Ratings at the time	Current ratings	Current outlooks
M	Macy's	Retail	3.6	11/27/17	Voluntary debt tender	Baa3 / BBB- / BBB S / S / S	Baa3 / BBB- / BBB S / S / S	S / S / S
ENBCN	Enbridge	Energy	13.9	12/12/17	Introduced 3-year plan with deleveraging targets	Baa2 / BBB+ / BBB+ S / S / S	Baa2 / BBB+ / BBB+ P / S / S	P / S / S
VZ	Verizon	Telecom	66.0	1/23/18	Committed to use tax reform windfall for deleveraging	Baa1 / BBB+ / A- S / S / S	Baa1 / BBB+ / A- P / P / S	P / P / S
DELL	Dell Technologies	Technology	20.8	3/9/18	Guided to \$4-5bn of debt reduction in FY19	Baa3 / BBB- / BBB- NA / S / S	Baa3 / BBB- / BBB- NA / S / S	NA / S / S
KSS	Kohl's Corp	Retail	1.1	4/2/18	Tender and open market purchases	Baa2 / BBB- / BBB S / S / S	Baa2 / BBB / BBB S / S / S	S / S / S
WHR	Whirlpool Corp	Consumer Products	3.0	4/25/18	Asset sales for deleveraging	Baa1 / BBB / BBB S / S / S	Baa1 / BBB / BBB S / S / S	S / S / S

Figure 13: BBB-rated DM companies that took debt friendly action since November 1th, 2017

Ticker	Name	Sector	BBB index bonds (\$bn)	Debt Friendly Action Date	Debt Friendly Action	Ratings at the time	Outlooks	Current ratings	Current outlooks
KMI	Kinder Morgan	Energy	28.5	5/29/18	Trans Mountain asset sale proceeds to reduce debt	Baa3 / BBB- / BBB-	S / S / S	Baa3 / BBB / BBB	S / S / S
ETP	Energy Transfer	Energy	35.2	8/1/18	GP/LP roll-up that served as a backdoor dividend cut	Baa3 / BBB- / BBB-	S / S / S	Baa3 / BBB- / BBB-	S / S / S
NWL	Newell Brands	Consumer Products	6.2	9/25/18	Began series of asset sales for deleveraging	Baa3 / BBB- / BBB-	S / S / S	Baa3 / BBB- / BB+	S / N / S
CPB	Campbell Soup	Food & Bev	6.1	10/9/18	Began series of asset sales for deleveraging	Baa2 / BBB- / NA	S / S / NA	Baa2 / BBB- / BBB	N / S / N
ABIBB	Anheuser-Busch InBev	Food & Bev	62.9	10/25/18	50% dividend cut	A3 / A- / BBB	N / S / S	Baa1 / A- / BBB	S / NW / S
GE	General Electric	Industrial Products	45.1	10/30/18	Dividend cut to 1 cent	A2 / BBB+ / A	N / S / N	Baa1 / BBB+ / BBB+	S / S / N
BPL	Buckeye Partners	Energy	3.2	11/2/18	Assetsale and dividend cut to repay balance sheet	Baa3 / BBB- / BBB-	S / S / S	Baa3 / BBB- / BBB-	NW / NW / NW
T	AT&T	Telecom	93.4	11/29/18	Committed to deleveraging	Baa2 / BBB / A-	S / S / S	Baa2 / BBB / A-	S / S / S
AAP	Advance Auto Parts	Retail	0.8	1/29/19	Voluntary short-term debt tender	Baa2 / BBB- / NA	S / S / NA	Baa2 / BBB- / NA	S / S / NA
KHC	Kraft Heinz	Food & Bev	23.7	2/21/19	36% dividend cut	Baa3 / BBB / BBB-	S / S / S	Baa3 / BBB / BBB-	S / S / S
KR	Kroger	Retail	10.9	3/13/19	Asset sales for deleveraging	Baa1 / BBB / NA	S / S / NA	Baa1 / BBB / NA	S / S / NA
STZ	Constellation Brands	Food & Bev	9.3	3/18/19	Asset sales for deleveraging	Baa3 / BBB / NA	S / S / NA	Baa3 / BBB / NA	S / S / NA
K	Kellogg	Food & Bev	5.4	4/1/19	Asset sales for deleveraging	Baa2 / BBB / BBB-	S / S / S	Baa2 / BBB / BBB-	S / S / S
IMBLN	Imperial Brands	Tobacco	5.0	4/30/19	Premium Cigars asset sales for deleveraging	Baa3 / BBB / BBB	S / S / S	Baa3 / BBB / BBB	S / S / S
TSN	Tyson Foods	Food & Bev	9.6	5/7/19	Committed to deleveraging with cash flows or short-term liquidity options	Baa2 / BBB / BBB	S / S / S	Baa2 / BBB / BBB	S / P / S
VOD	Vodafone Group	Telecom	20.6	5/14/19	40% dividend cut and sale of NZ business	Baa2 / BBB+ / BBB+	N / S / S	Baa2 / BBB+ / BBB+	N / NW / NW
MYL	Mylan	Health Care	9.2	7/26/19	Merger with Pfizer's generic business Upjohn	Baa3 / BBB- / BBB-	S / S / N	Baa3 / BBB- / BBB-	S / D / N

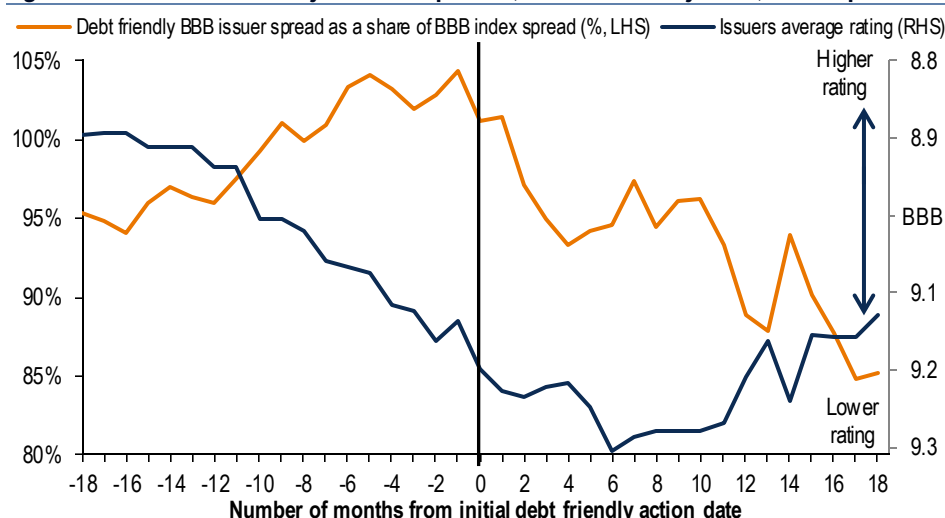
Source: BofA Merrill Lynch Global Research, Bloomberg, ICE Data Indices, LLC

Figure 14: Low corporate yields attract supply



Source: ICE Data Indices, LLC, BofA Merrill Lynch Global Research

Figure 15: Non-Financial & Utility BBBs underperform, take debt-friendly action, then outperform



Note: Average issuer bond index spread across 23 events from t=-18 to t=0. Same for average issuer rating from Moody's, S&P and Fitch with 1 unit weight for rating changes, 0.75 unit weight for rating watches, and 0.25 unit weight for rating outlooks. From t=1 and onward we start losing events gradually given the more recent timing of many events. We correct for that decline in sample size by estimating every monthly change on an event matched basis. For t=1 we have 22 events, t=6 15 events, t=12 7 events and t=18 3 events.
Source: BofA Merrill Lynch Global Research, Bloomberg, ICE Data Indices, LLC

Methodology

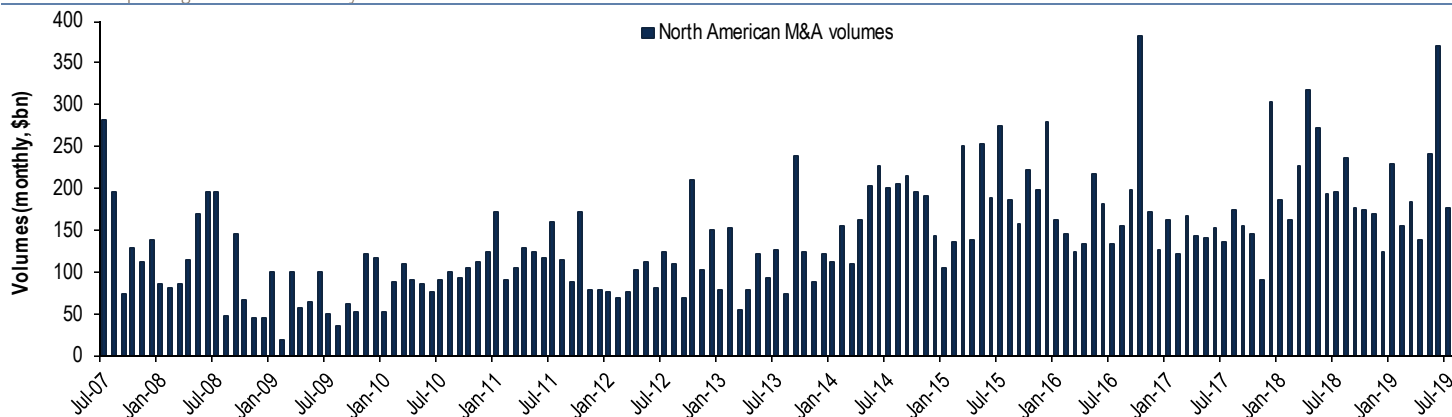
For this case study we collected a list of 23 BBB-rated companies that took important debt friendly actions to defend IG ratings over the past 21 months (Figure 13). We do not pretend for this list to be 100% comprehensive, however it does represent our best effort after numerous discussions with our fundamental analysts. Note that we exclude companies not rated BBB at the time of initial debt friendly action, such as when then BB-rated Williams Cos (WMB) did a GP/LP roll-up that served as a backdoor dividend cut on May 17, 2018. We do, however, include HY companies issuing IG secured debt, such as Dell. We exclude EM. It is noteworthy that we did not find any BBB-rated company taking debt-friendly over the past 21 months that (so far) could not hold IG (and we tried). We excluded the Financial and Utilities sectors. Note we only include events where companies had to take unplanned debt friendly action. That excludes M&A or other situations where companies pre-commit to deleverage.

M&A announcement volume declined in July

North American M&A announcement volume declined significantly to \$177bn in July from \$369bn in June (Figure 16). At the same time, the pipeline value of announced deals with potential IG funding implications increased from \$378bn at the end of June to \$415bn at the end of July and \$442bn currently with the London Exchange-Refinitiv deal announced on August 1st (Figure 17). M&A-related USD IG issuance totaled \$12.2bn in July, similar to \$11.4bn in June (Figure 18). There are currently eight large (EV > \$10bn) pending deals (Figure 59), with Occidental Petroleum and Global Payments having already announced fixed income investor calls with issuance expected to follow as soon as next week. See details in the Pipeline of M&A deals with IG issuance implications section below.

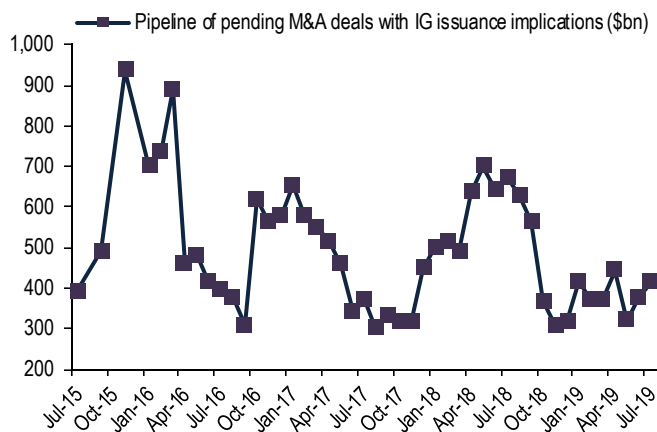
Figure 16: Monthly North American M&A volumes

Note: limited to pending and closed deals only. Cancelled deals are excluded.



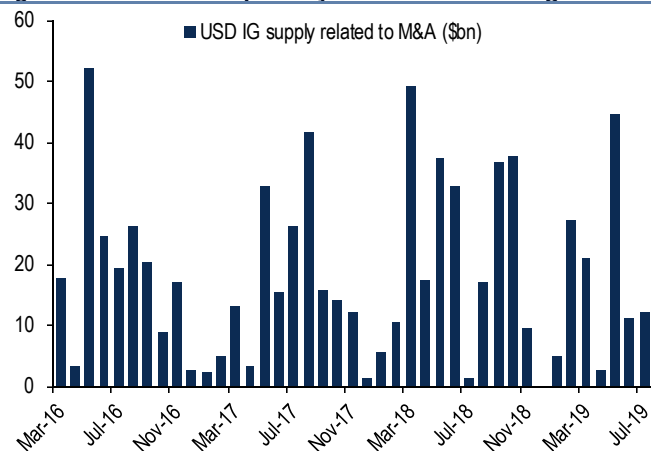
Source: Bloomberg

Figure 17: Pipeline of pending M&A deals with IG issuance implications



BofA Merrill Lynch Global Research, Bloomberg.

Figure 18: IG new issuance primarily related to M&A funding

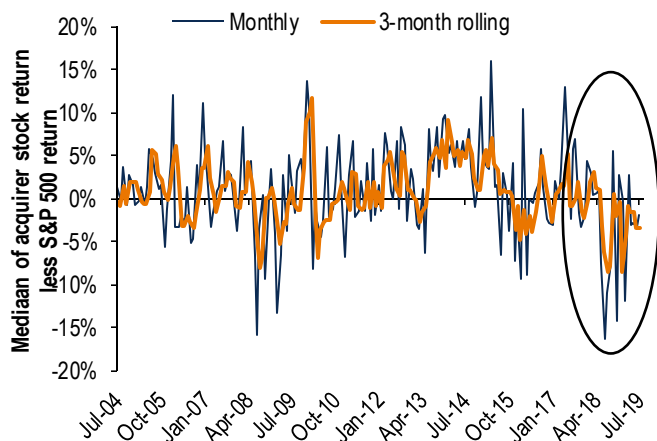


BofA Merrill Lynch Global Research

Equity investor sentiment towards M&A deal announcements

Equity investor sentiment towards M&A deal announcements was mixed in July. The stock prices of companies announcing larger acquisitions (over 25% of the acquirer's EV) underperformed the S&P 500 by 1.8% in July following a 3.4% underperformance in June (Figure 19). On the other hand, companies repurchasing the most shares in the S&P 500 outperformed the market by 0.17% in July after outperforming the market by 0.86% in June (Figure 20).

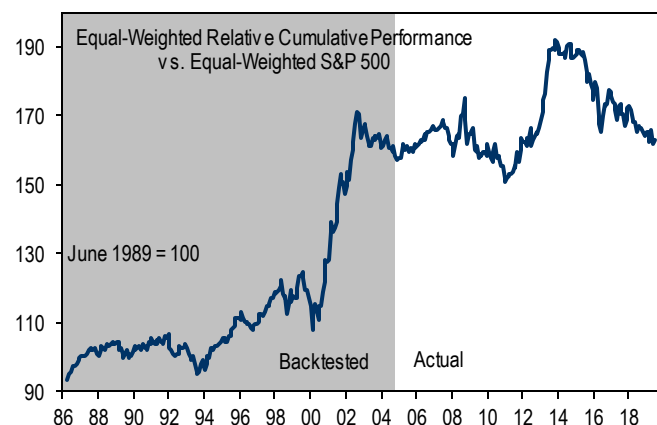
Figure 19: Acquirer stock performance



Note: The stock performance is based on the period from 2 day prior to the deal announcement to 2 days following the deal announcement.

Source: BofA Merrill Lynch Global Research, Bloomberg.

Figure 20: Cumulative Relative Performance of S&P 500 Top Decile by Share Repurchase (3/31/86-7/31/19)



*Note: the shaded area shows backtested results during the period from month-end March 1986 to month-end Dec. 2004. The unshaded portion represents actual performance since Jan. 2005. Backtesting is hypothetical in nature and reflects application of the screen prior to its introduction. It is not actual performance and is not intended to be indicative of future performance. The back-tested performance results are based on criteria applied retroactively with the benefit of hindsight and knowledge of factors that may have positively affected its performance, and cannot account for all financial risks that may affect the performance of the screen going forward. See Appendix for performance data and calculation methodology.

Source: BofA Merrill Lynch US Equity & US Quant Strategy

Pipeline of M&A deals with IG issuance implications

The T-Mobile and Sprint merger saga continues with the IG bond deal size estimated at around \$23bn to refinance outstanding high yield debt, term loans and revolvers, according to management commentaries on the 2Q19 earnings call. The timing remains uncertain, subject to the ongoing state AG lawsuits and the only remaining state of California's regulatory commission approval, although the company intends to prefund the merger prior to deal close. The company completed US and European fixed income investor meetings in May.

Mylan N.V. and Upjohn, Pfizer Inc.'s off-patent branded and generic medicine business, entered into a definitive agreement to combine on July 29th, 2019 with the deal expected to close by mid-2020, subject to Mylan's shareholder approval. Upjohn will issue about \$12bn of debt at or prior to separation with proceeds retained by Pfizer.

London Stock Exchange announced the acquisition of Refinitiv for \$27bn on August 1st, 2019. The company has a \$13.5bn bridge loan in place and is expected to refinance Refinitiv's EUR and USD bonds and term loans in full upon deal completion. Recent news articles suggest \$10bn of IG issuance needs prior to deal close, subject to obtaining regulatory approvals. The new company is expected to maintain IG ratings.

AbbVie announced an \$84bn cash-and-stock acquisition of Allergan with a \$38bn bridge loan in place to finance the transaction. The deal is expected to complete by June 2020. Management stated that they plan to pay down \$15-18bn of debt before the end of 2021, hence depending on interest rates it remains possible for the company to either frontload bond issuance into 2019 or rely heavily on the term loan market.

Pfizer closed the \$11.4bn all-cash acquisition of Array BioPharma funded mostly with commercial papers on July 31st, 2019. Management stated that they plan to issue new debt to fund a majority of the deal with the remainder in cash. The company ended 1Q19 with \$12bn of cash on hand.

For Danaher Corp's \$21.4bn acquisition of the biopharma business from GE, management stated on the deal call that new debt would be issued at a blended

financing rate of below 3%. Keep in mind that the 1-3 year US IG corporate bond market was yielding 3.2% at that time, implying that the blended financing rate would only be achievable if DHR relied heavily on Reverse Yankee issuance. With 30% the business' revenue coming from EMEA, it would make sense for the company to tap the EUR primary market, term loans and revolvers, leaving very little issuance needs in USD.

SAP SE closed the acquisition of Qualtrics International Inc in January 2019 with a 7bn EUR credit facility and expects to term out part of that with senior unsecured issuance. All of the company's debt is in EUR, hence the USD portion of new issuance is light.

Occidental made a \$55bn offer for Anadarko with an expected deal completion date of YE19. There could be around \$10-15bn of debt issuance needs from Occidental's on-balance-sheet cash shortfall and refinancing needs (see: [Occidental Petroleum Corp.: Reinstating coverage on OXY with a MW rec post APC acquisition 15 May 2019](#)).

Global Payments and Total System Services announced a \$25bn all-stock merger in May expected to close by YE19. The combined entity is expected to have IG ratings. Global Payments has \$5.5bn of term loans maturing in 2023 and \$500mn maturing in 2025 with potential refinancing needs.

Our criteria for inclusion in the list of announced deals listed in Figure 21 consists of deals at least \$1bn in size (in terms of EV) announced by USD high grade issuers. We further restrict the list to deals with a cash component, suggesting to us that the company may choose to fund all or portion of that cash component in the high grade bond market. Finally the list excludes deals that have already been funded in the corporate bond market and deals that have been rejected by regulators.

Figure 21: M&A deals with potential high grade bond funding needs

Deal announcement date	Acquirer Ticker	Acquirer Name	Target Name	Announced deal value (\$bn)	Expected completion date
11-Nov-18	SAP GR	SAP SE	Qualtrics International Inc	7.9	Jan-19
7-Feb-18	CNL US	Cleco Corporate Holdings LLC	South Central business/NRG Ene	1.0	Feb-19
13-Feb-19	JNJ US	Johnson & Johnson	Auris Health Inc	3.4	Apr-19
			Eureka Midstream Holdings LLC, Hornet Midstream Holdings LLC	1.0	Apr-19
14-Mar-19	EQM US	EQM Midstream Partners LP	Dairy Crest Group PLC	1.6	Apr-19
22-Feb-19	SAP CN	Saputo Inc	Two residential mortgages and	6.4	Apr-19
2-Apr-19	C US	Citigroup Inc	Brammer Bio LLC	1.7	May-19
24-Mar-19	TMO US	Thermo Fisher Scientific Inc	Chiller Holdco LLC	1.2	May-19
16-Apr-19	COLD US	Americold Realty Trust	Class A medical office and out	1.3	May-19
2-Jan-19	WELL US	Welltower Inc	OppenheimerFunds Inc	4.0	May-19
18-Oct-18	IVZ US	Invesco Ltd	Deep Water Gulf of Mexico oil	1.4	Jun-19
23-Apr-19	MUR US	Murphy Oil Corp	Luxoft Holding Inc	1.9	Jun-19
7-Jan-19	DXC US	DXC Technology Co	Antelliq Holdings France SASU	3.7	Jun-19
14-Dec-18	MRK US	Merck & Co Inc	Embraco compressor business	1.1	Jul-19
24-Apr-18	6594 JP	Nidec Corp	Xiidra 5%	3.4	Jul-19
9-May-19	NOVN SW	Novartis AG	HFF Inc	2.0	Jul-19
19-Mar-19	JLL US	Jones Lang LaSalle Inc	Murphy Sabah Oil Co Ltd, Murphy Sarawak Oil Co Ltd	2.1	Jul-19
21-Mar-19	PTTEP TB	PTT Exploration & Production P	Cookies & Fruit Snacks busines	1.3	Jul-19
1-Apr-19	0852591D LX	Ferrero International SA	MG LLC/NJ	1.2	Jul-19
31-Mar-19	WLTW US	Willis Towers Watson PLC	Array BioPharma Inc	11.0	Jul-19
17-Jun-19	PFE US	Pfizer Inc	Columbia Midstream Group LLC	1.3	Aug-19
2-Jul-19	UGI US	UGI Corp	Anadarko Petroleum Corp	55.2	Aug-19
9-May-19	OXY US	Occidental Petroleum Corp	Spark Therapeutics Inc	3.7	Sep-19
25-Feb-19	ROG SW	Roche Holding AG	Oaktree Capital Group LLC	4.8	Sep-19
13-Mar-19	BAM/A CN	Brookfield Asset Management Inc	Peloton Therapeutics Inc	1.1	Sep-19
21-May-19	MRK US	Merck & Co Inc	Master Trust 2014 Properties	2.4	Sep-19
3-Jun-19	HPT US	Hospitality Properties Trust	Liberty Living Management Two	1.9	Sep-19
3-Jul-19	UTG LN	UNITE Group PLC/The	Laboratoires Filorga Cosmetiqu	1.7	Sep-19
11-Jul-19	CL US	Colgate-Palmolive Co	Sprint Corp	57.8	Dec-19
29-Apr-18	TMUS US	T-Mobile US Inc	JR Automation Technologies LLC	1.4	Dec-19
24-Apr-19	6501 JP	Hitachi Ltd	BioPharma Business/GE	21.4	Dec-19
25-Feb-19	DHR US	Danaher Corp	Emera Maine	1.3	Dec-19
25-Mar-19	1680Z CN	ENMAX Corp	WABCO Holdings Inc	7.1	Dec-19
28-Mar-19	0296891D GR	Zeppelin-Stiftung Ferdinand gG	Acelity Inc	6.7	Dec-19
2-May-19	MMM US	3M Co	Total System Services Inc	25.0	Dec-19
28-May-19	GPV US	Global Payments Inc	BioTek Instruments Inc	1.2	Dec-19
11-Jul-19	A US	Agilent Technologies Inc	Smartphone modem business	1.0	Dec-19
25-Jul-19	AAPL US	Apple Inc			

Figure 21: M&A deals with potential high grade bond funding needs

Deal announcement date	Acquirer Ticker	Acquirer Name	Target Name	Announced deal value (\$bn)	Expected completion date
29-Jul-19	PH US	Parker-Hannifin Corp	Exotic Metals Forming Co LLC	1.7	Dec-19
30-Jul-19	1644Z CN	Ontario Power Generation Inc	Natural gas-fired plants portf	2.2	Dec-19
17-May-19	HPE US	Hewlett Packard Enterprise Co	Cray Inc	1.3	Mar-20
29-May-19	NXPI US	NXP Semiconductors NV	Wi-Fi Connectivity business/Ma	1.8	Mar-20
12-Jul-19	HI US	Hillenbrand Inc	Milacron Holdings Corp	2.0	Mar-20
19-Jul-19	PEP US	PepsiCo Inc	Pioneer Foods Group Ltd	1.9	Mar-20
3-Jun-19	IFX GR	Infineon Technologies AG	Cypress Semiconductor Corp	9.4	Jun-20
25-Jun-19	ABBV US	AbbVie Inc	Allergan PLC	83.8	Jun-20
29-Jul-19	MYL US	Mylan NV	Upjohn medicine business/Pfize	32.7	Jun-20
1-Jul-19	AMAT US	Applied Materials Inc	Hitachi Kokusai Electric Inc	2.2	Jul-20
9-Jul-19	CSCO US	Cisco Systems Inc	Acacia Communications Inc	2.5	Jul-20
25-Jul-19	SCHW US	Charles Schwab Corp/The	Brokerage And Wealth Managemen	1.8	Dec-20
1-Aug-19	LSE LN	London Stock Exchange Group PL	Refinitiv Holdings Ltd	27.0	Dec-20
19-Mar-18	FNH US	Fidelity National Financial In	Stewart Information Services C	1.2	n.a.
23-May-18	0772700D US	Global Atlantic Financial Grou	1.7 Gigawatts 26 facilities So	1.2	n.a.
6-Jun-19	GOOGL US	Alphabet Inc	Looker Data Sciences Inc	2.6	n.a.
21-Jun-19	UNH US	UnitedHealth Group Inc	Equian LLC	3.2	n.a.
25-Jun-19	1644Z CN	Ontario Power Generation Inc	Cube Hydro Partners LLC	1.1	n.a.
12-Jul-19	VOW GR	Volkswagen AG	Argo AI LLC	2.6	n.a.
16-Jul-19	PLD US	Prologis Inc	Industrial Property Trust Inc	5.5	n.a.
22-Jul-19	MSFT US	Microsoft Corp	OpenAI Inc	1.0	n.a.

Source: BofA Merrill Lynch Global Research, Bloomberg.

Based on

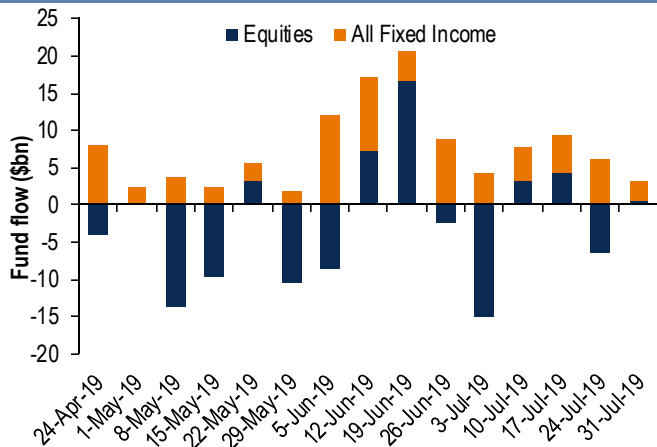
[Situation Room: Trade vs. central banks 01 August 2019](#)

Flows moderate

Flows for US funds and ETFs moderated during the past week ending on July 31st. The net inflow to stocks was close to flat at \$0.63bn, compared to a \$6.43bn outflow a week earlier. At the same time inflows to bonds decelerated to \$2.46bn from \$6.03bn on weaker flows for high grade, high yield and munis, while flows for government bonds improved (Figure 22).

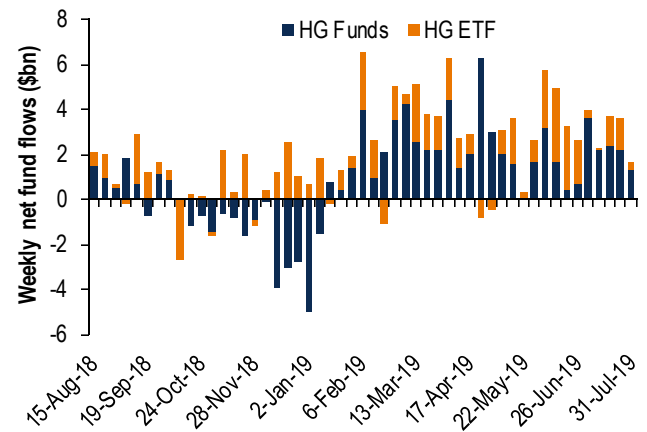
The decline in high grade inflows to \$1.70bn from \$3.61bn was on the back slower inflows for both short-term (to \$0.56bn from \$1.29bn) and ex. short-term high grade (to \$1.15bn from \$2.32bn). Flows were also down for high grade funds (to \$1.29bn from \$2.19bn) as well as ETFs (to \$0.42bn from \$1.42bn, Figure 23). Investors also sold \$0.85bn of high yield, after buying \$1.51bn in the prior week. Outflows from loans were little changed at \$0.48bn compared to a \$0.42bn outflow a week earlier, while inflows to munis slowed to \$0.84bn from \$1.16bn. On the other hand inflows to global EM bonds increased to \$2.30bn from \$1.99bn, while flows for government bonds turned to a \$0.85bn inflow after a \$0.09bn outflow. Finally, money markets reported a \$10.48bn outflow this past week following a \$23.26bn inflow in the prior week.

Figure 22: Flows for the broad US asset classes: stocks and bonds



Note: data are for US-domiciled funds only.
Source: EPFR Global.

Figure 23: High grade fund and ETF flows, \$bn



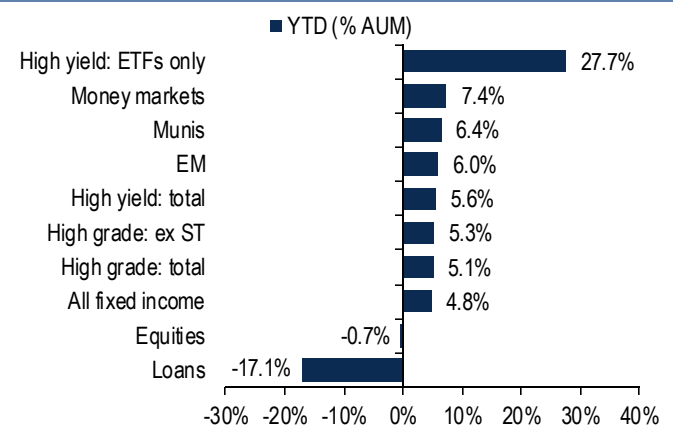
Note: data are for US-domiciled funds only.
Source: EPFR Global.

Figure 24: Fund flows summary

Asset class	Last week (% of AUM for weekly reporting funds/ETFs)	YTD (% of AUM for all funds/ETFs)	YTD (\$bn)
High grade: total	0.11%	5.1%	148.2
High grade: ex short-term	0.04%	5.3%	116.0
High yield: total	-0.39%	5.6%	15.9
High yield: ETFs only	-1.78%	27.7%	10.0
Loans	-0.58%	-17.1%	-24.5
EM	0.45%	6.0%	34.6
Munis	0.18%	6.4%	49.9
All fixed income	0.09%	4.8%	228.6
Money markets	-0.35%	7.4%	237.7
Equities	0.01%	-0.7%	-79.0

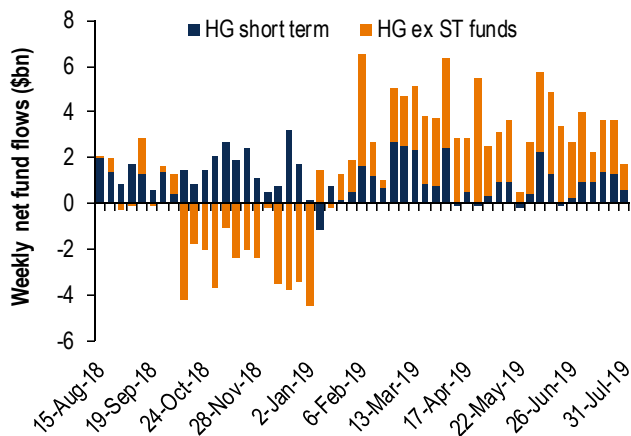
Note: Last week flow as % of AUM is based on AUM for weekly reporting funds / ETFs only. YTD flow as % of AUM is based on AUM for the full fund/ ETF universe as of December 31 2018. Global EM funds, US-domiciled funds only for other fund types.
Source: EPFR Global, BofA Merrill Lynch Global Research

Figure 25: Year to date fund flows, % of AUM



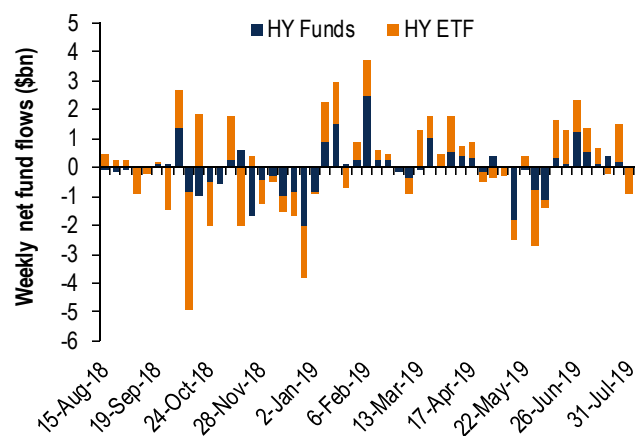
Note: Global EM funds, US-domiciled funds only for other fund types.
Source: EPFR Global, BofA Merrill Lynch Global Research

Figure 26: Weekly high grade fund flows, \$bn



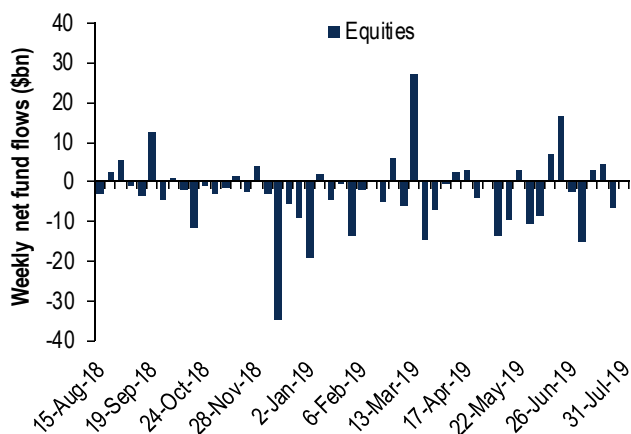
Note: the flows data is for US-domiciled funds and ETFs. The flows include: high grade bond funds, high grade corporate bond funds, and total return bond funds. We exclude two volatile funds from our aggregate data. Short-term refers to duration of 0 to 4 years.
Source: EPFR Global, BofA Merrill Lynch Global Research

Figure 27: Weekly high yield fund flows, \$bn



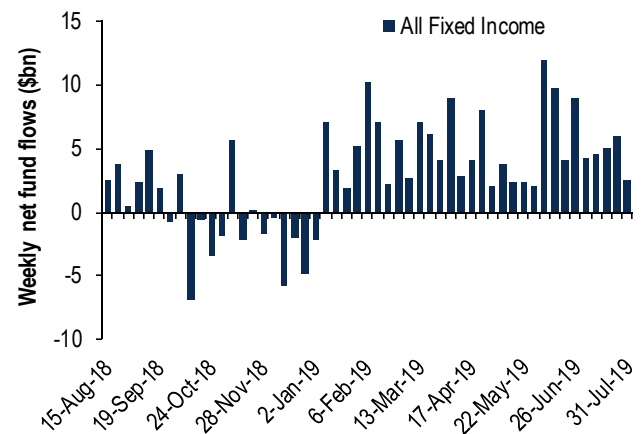
Note: the flows data is for US-domiciled funds and ETFs.
Source: EPFR Global.

Figure 28: Weekly equity fund flows, \$bn



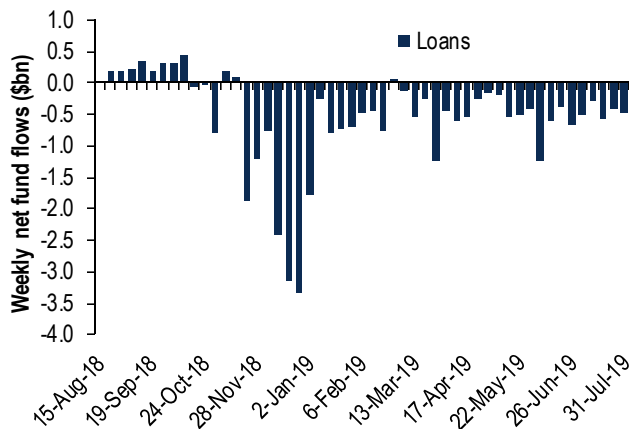
Note: the flows data is for US-domiciled funds and ETFs.
Source: EPFR Global.

Figure 29: Weekly fixed income fund flows, \$bn



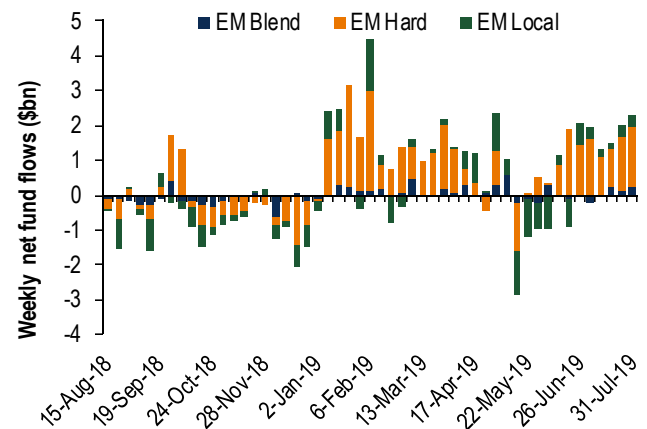
Note: the flows data is for US-domiciled funds and ETFs. The flows include the following asset classes: high grade (corporate and government), high yield, mortgage backed, floating rate, total return, municipals, inflation protected.
Source: EPFR Global.

Figure 30: Weekly loan fund flows, \$bn



Note: the flows data is for US-domiciled funds and ETFs.
Source: EPFR Global.

Figure 31: Weekly EM fund flows, \$bn



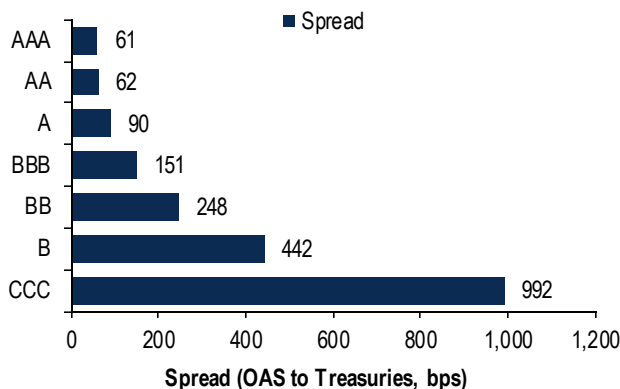
Note: the flows data is for US-domiciled funds and ETFs.
Source: EPFR Global.

Appendix: defining high grade

We define our high grade flows metric as a combination of “bond,” “corporate bond” and “total return” fixed income funds and ETFs domiciled in the US (and investing in any currency, although the majority is invested in USD). The “bond” category refers to the broad high grade market, which includes Treasuries, mortgages and agencies in addition to corporate bonds. This category accounts for the majority of AUM and flows. On the other hand the dedicated corporate bond funds and ETFs are much smaller in terms of assets under management. We also include the “total return” bond category in our tracking of high grade flows. Finally note that “short-term” maturity refers to duration of 0 to 4 years.

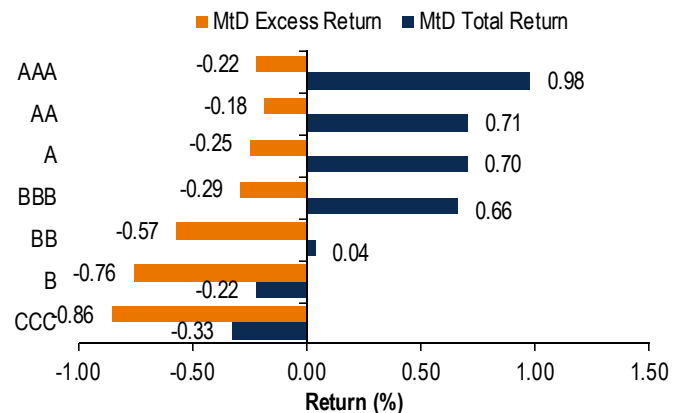
Corporate credit spreads and returns

Figure 32: Corporate spreads by rating



Source: ICE Data Indices, LLC, BofA Merrill Lynch Global Research

Figure 33: Month to date credit returns by rating



Source: ICE Data Indices, LLC, BofA Merrill Lynch Global Research

High Grade

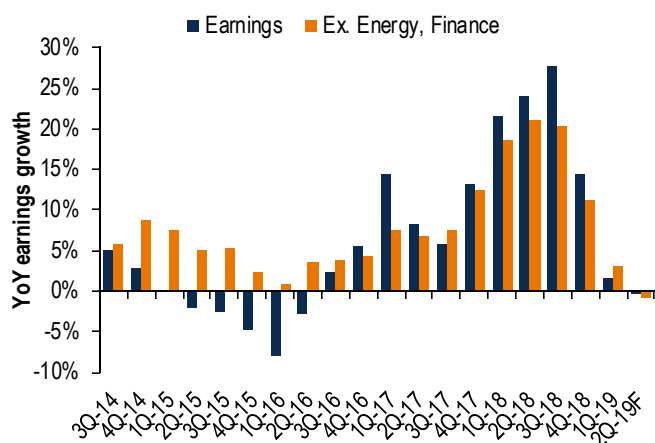
Based on

[Situation Room: HG 2Q half-time earnings season update 29 July 2019](#)

HG 2Q earnings season update

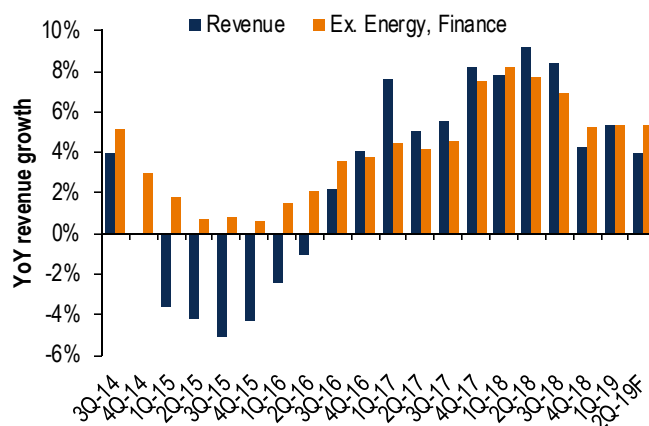
Following three heavy weeks of reporting 81% of 2Q earnings have by now been released by 75% of US IG public issuers. The aggregate results have been significantly impacted by Boeing's \$5.6bn charge related to the 737 Max plane. Hence earnings are expected to grow 1.3% YoY in 2Q ex. Boeing, and decline 0.2% YoY with Boeing included, based on the actual results when available and the latest analyst estimates otherwise. Revenues are expected to grow 4.0% YoY in 2Q (Figure 34, Figure 35). The actual earnings growth exceeded expectations by 2.4% (3.9% ex. Boeing). Away from the large Boeing charge the positive earnings surprises were concentrated among the more globally oriented issuers, suggesting analysts overestimated the impact of stronger dollar / global weaker growth on 2Q results.

Figure 34: Earnings growth for US high grade issuers



Note: 2Q-19 based on the actual results when available and consensus estimates otherwise
Source: BofA Merrill Lynch Global Research, FactSet.

Figure 35: Revenue growth for US high grade issuers

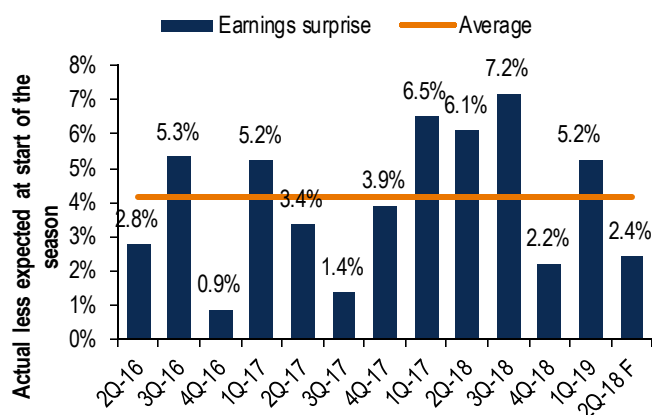


Note: 2Q-19 based on the actual results when available and consensus estimates otherwise
Source: BofA Merrill Lynch Global Research, FactSet.

Results were better than expected, as usual

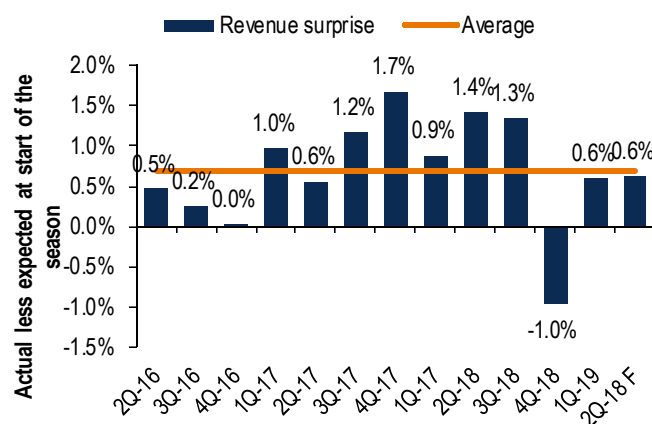
The 3.9% earnings growth surprise excluding Boeing was close to the 4.5% average since 2Q-2016 and the 5.2% surprise in 1Q-2019, but the surprise was notably below average at 2.4% with Boeing included. Revenue growth surprise of 0.6% (0.8% ex. Boeing) was relatively close to historical averages (Figure 36, Figure 37). At the sector level earnings surprises were the lowest for Aerospace/Defense (-49.2% due to Boeing), Utilities (-3.0%) and Basic Materials (-1.4%). On other hand Tech (+8.8%), Health Care (+6.9%), Consumer products (+5.0%) and Insurance (+4.7%) delivered the highest positive earnings surprises in 2Q (Figure 38).

Figure 36: Earnings surprises



Source: BofA Merrill Lynch Global Research

Figure 37: Sales surprises



Source: BofA Merrill Lynch Global Research

Figure 38: 2Q-19 earnings / sales surprises by sector

Sector	Expected earnings growth (YoY)	Actual earnings growth (YoY)	Earnings surprise	Expected sales growth (YoY)	Actual sales growth (YoY)	Sales surprise	Percentage of the sector that has reported
Aerospace/Defense	-10.5%	-59.7%	-49.2%	1.9%	1.2%	-0.7%	100%
Automobiles	-5.5%	-3.5%	2.0%	-1.0%	-0.8%	0.1%	100%
Banks/Brokers	-1.6%	1.8%	3.4%	1.6%	2.6%	1.0%	100%
Basic Materials	-12.9%	-14.3%	-1.4%	1.5%	-0.2%	-1.7%	86%
Consumer Products	-1.8%	3.3%	5.0%	1.0%	1.8%	0.8%	93%
Energy	-6.1%	-4.6%	1.5%	1.9%	3.3%	1.5%	77%
Finance	-9.2%	-7.2%	2.0%	-7.4%	-4.5%	2.9%	61%
Food, Bev., & Bottling	-4.7%	-3.3%	1.4%	1.0%	-1.3%	-2.3%	59%
Health Care	3.6%	10.4%	6.9%	10.4%	12.1%	1.8%	76%
Industrial Products	-3.4%	-3.5%	-0.1%	-1.6%	-2.4%	-0.9%	78%
Insurance	3.3%	8.0%	4.7%	0.3%	2.4%	2.2%	75%
Media & Entertainment	14.1%	17.3%	3.2%	15.4%	14.4%	-0.9%	65%
REITs	2.4%	4.6%	2.2%	5.8%	7.4%	1.6%	87%
Retail	-0.3%	-1.2%	-0.9%	7.9%	8.7%	0.7%	36%
Technology	-10.5%	-1.7%	8.8%	2.1%	3.4%	1.3%	74%
Telecom	7.4%	8.9%	1.5%	8.4%	8.2%	-0.2%	100%
Transportation	0.4%	1.2%	0.9%	2.9%	2.5%	-0.4%	100%
Utilities	1.7%	-1.4%	-3.0%	3.2%	0.3%	-2.9%	77%
Other	2.4%	0.1%	-2.3%	3.8%	4.9%	1.1%	76%
Total US HG public co's	-2.8%	-0.3%	2.4%	3.9%	4.6%	0.6%	81%
Total ex. Financials	-3.3%	-1.2%	2.1%	4.6%	5.0%	0.4%	76%
Total ex. Energy	-2.5%	0.0%	2.5%	4.1%	4.7%	0.5%	81%
Total ex. Fin. & Energy	-3.0%	-0.9%	2.2%	4.9%	5.2%	0.3%	76%
HQ ex. Financials, Utilities	-3.1%	-0.6%	2.4%	3.9%	4.1%	0.1%	81%
BBB ex. Financials, Utilities	-4.1%	-2.0%	2.1%	5.2%	6.0%	0.8%	73%
Excluding Boeing	-2.4%	1.5%	3.9%	4.2%	5.1%	0.8%	81%

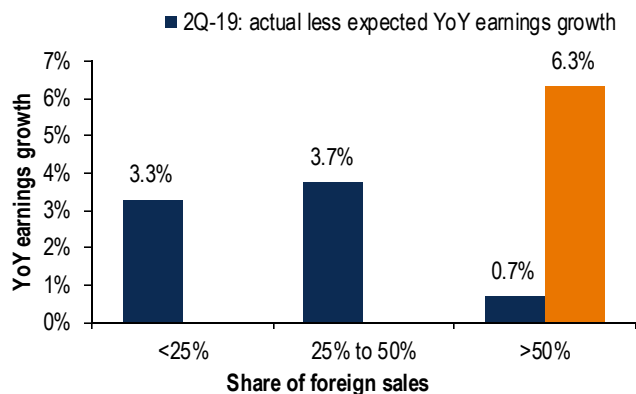
Note: based only companies that have released 2Q results.

BofA Merrill Lynch Global Research, FactSet.

Positive surprises led by the more global issuers

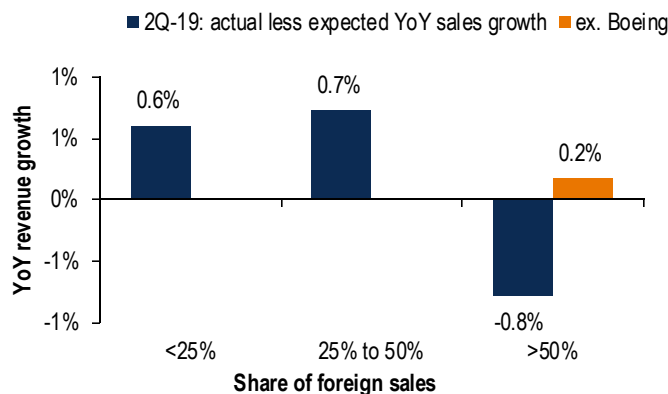
The actual 2Q earnings growth came in 0.7% above expectations for the more global US IG issuers (ex. Finance, Energy, Utilities), or those deriving over 50% of sales from outside the US. However, all of that negative surprise was due to Boeing. Excluding the company earnings were 6.3% ahead of expectations for the more global issuers, above +3.3% surprise for the more domestic ones (deriving less than 25% of earnings from outside the US). On the other hand sales surprise was a bit stronger for the more domestic IG issuers, even after excluding Boeing (Figure 39, Figure 40).

Figure 39: Earnings surprise by the share of foreign sales



Note: excluding Finance, Energy, Utilities.
Source: BofA Merrill Lynch Global Research

Figure 40: Sales surprise by the share of foreign sales

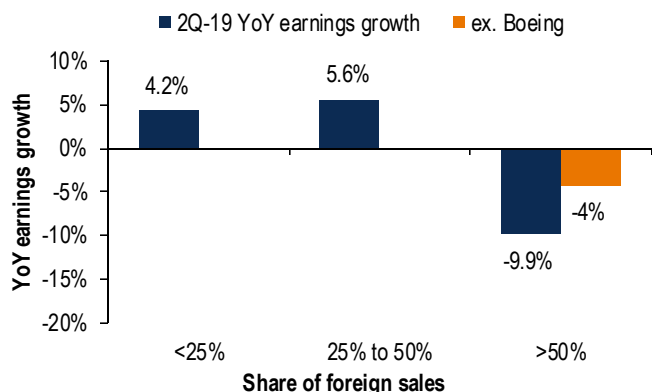


Note: excluding Finance, Energy, Utilities.
Source: BofA Merrill Lynch Global Research

Growth led by the more domestic issuers

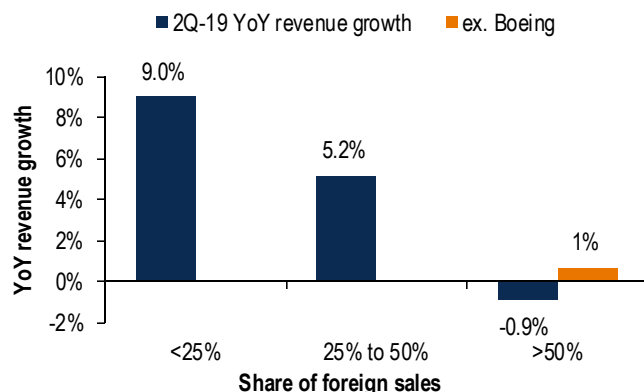
Despite the strong positive surprise ex. Boeing for the more global US IG issuers, their earnings and revenue growth are both expected to lag those for the more domestic issuers (ex. Finance, Energy, Utilities), based the actual results when available and consensus expectations otherwise. In fact of the three cohorts by the share of foreign sales only the more global US IG issuers are expected to have negative earnings growth in 2Q (Figure 41, Figure 42, Figure 43, Figure 44).

Figure 41: 2Q-19 bottom-up consensus earnings growth by foreign sales



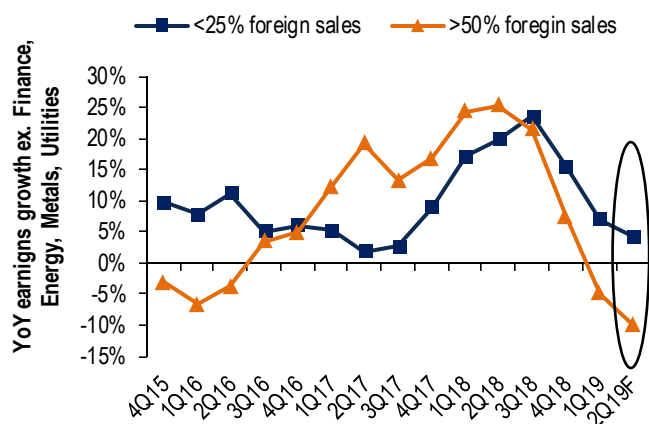
Note: 2Q-19 based on the actual results when available and consensus estimates otherwise.
Excluding Finance, Energy, Utilities.
Source: BofA Merrill Lynch Global Research, FactSet.

Figure 42: 2Q-19 bottom-up consensus sales growth by foreign sales



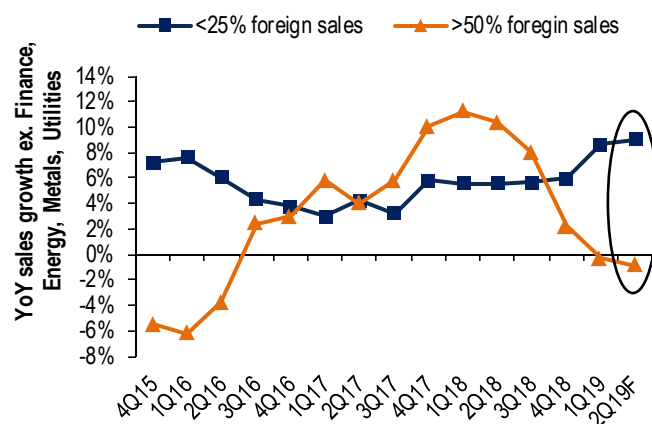
Note: 2Q-19 based on the actual results when available and consensus estimates otherwise.
Excluding Finance, Energy, Utilities.
Source: BofA Merrill Lynch Global Research, FactSet.

Figure 43: Earnings growth: more domestic vs. more global US issuers



Note: 2Q-19 based on the actual results when available and consensus estimates otherwise
Source: BofA Merrill Lynch Global Research

Figure 44: Sales growth: more domestic vs. more global US issuers



Note: 2Q-19 based on the actual results when available and consensus estimates otherwise
Source: BofA Merrill Lynch Global Research

Results by sector

By sector the strongest 2Q earnings growth is expected for Healthcare (+9.8%), Telecom (+8.9%) and Insurance (+8.7%). On the flip side the following sectors are expected to deliver the weakest earnings growth in 2Q: Aerospace/Defense (-59.7% due to Boeing), Basic Materials (-9.9%) and Finance (-7.3%, Figure 45Error! Reference source not found.).

Figure 45: Expected 2Q-2019 results for US high grade issuers

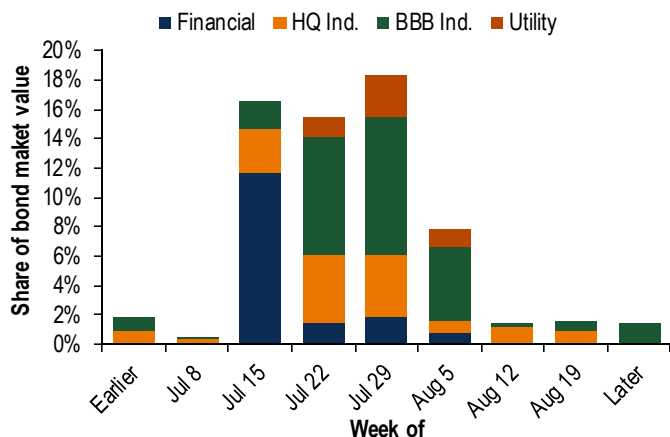
Sector	Earnings growth (YoY)	Sales growth (YoY)	Share of bond index value	Percentage of the sector that has reported
Aerospace/Defense	-59.7%	1.2%	1.5%	100%
Automobiles	-3.5%	-0.8%	1.3%	100%
Banks/Brokers	1.8%	2.6%	12.2%	100%
Basic Materials	-9.9%	5.6%	1.6%	86%
Consumer Products	2.5%	1.9%	0.6%	93%
Energy	0.3%	-0.9%	6.2%	77%
Finance	-7.3%	-3.8%	0.9%	61%
Food, Bev., & Bottling	-3.1%	0.1%	2.4%	59%
Health Care	9.8%	13.3%	7.7%	76%
Industrial Products	-2.2%	-1.6%	1.6%	78%
Insurance	8.7%	2.9%	2.5%	75%
Media & Entertainment	8.0%	18.5%	2.9%	65%
REITs	3.5%	4.2%	2.2%	87%
Retail	-3.4%	4.3%	3.1%	36%
Technology	-2.2%	2.0%	6.8%	74%
Telecom	8.9%	8.2%	2.9%	100%
Transportation	1.2%	2.5%	1.3%	100%
Utilities	1.8%	1.2%	5.6%	77%
Other	0.5%	4.0%	1.8%	76%
Total US HG public co's	-0.2%	4.0%	64.9%	81%
Total ex. Financials	-0.7%	4.5%	47.2%	76%
Total ex. Energy	-0.2%	4.7%	58.7%	81%
Total ex. Fin. & Energy	-0.8%	5.3%	41.0%	76%
Yankee and private co's	n.a.	n.a.	35.1%	n.a.
HQ ex. Financials, Utilities	-0.9%	3.1%	15.5%	81%
BBB ex. Financials, Utilities	-0.7%	5.8%	26.1%	73%
Excluding Boeing	1.3%	4.0%	64.7%	81%

Note: 2Q-19 based on the actual results when available and consensus estimates otherwise
Source: BofA Merrill Lynch Global Research, FactSet,

Timing of the earnings season

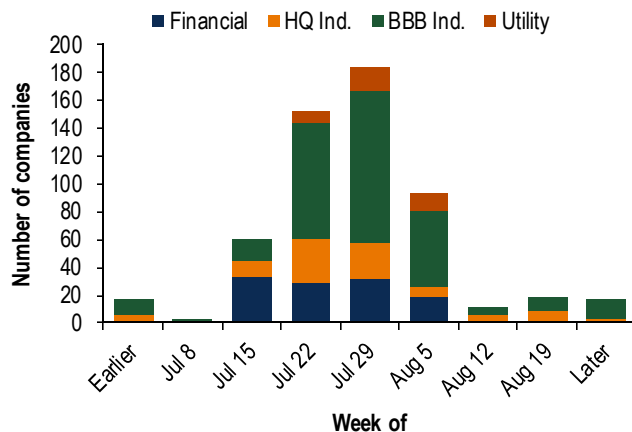
By today 414 public US IG issuers accounting for 81% of the total by index bond market value have released 2Q results. The pace of earnings reporting will remain elevated next week of August 5th with a total of 54 issuers reporting (7.9% of the bond index market value). Reporting then trails off for the remainder of August as the summer vacation season kicks in (Figure 46, Figure 47). By broad sector the reporting so far was more concentrated among financials and HQ industrials. Going forward a larger share of BBB industrials and Utilities are scheduled to release 2Q results (Figure 48, Figure 49).

Figure 46: Weekly reporting: by the share of the high grade bond index



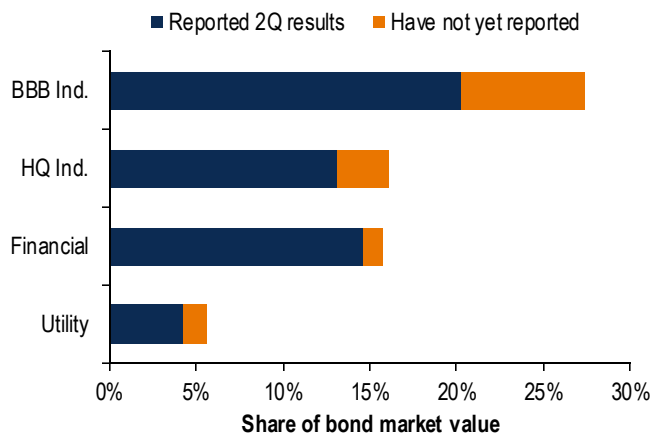
Source: BofA Merrill Lynch Global Research.

Figure 47: Weekly reporting: by the number of credits



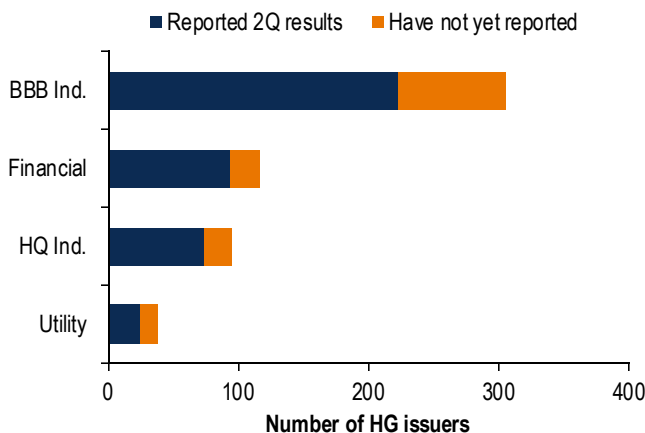
Source: BofA Merrill Lynch Global Research.

Figure 48: 2Q reporting season progress by bond share of market value



Source: BofA Merrill Lynch Global Research.

Figure 49: 2Q reporting season progress by issuer count



Source: BofA Merrill Lynch Global Research.

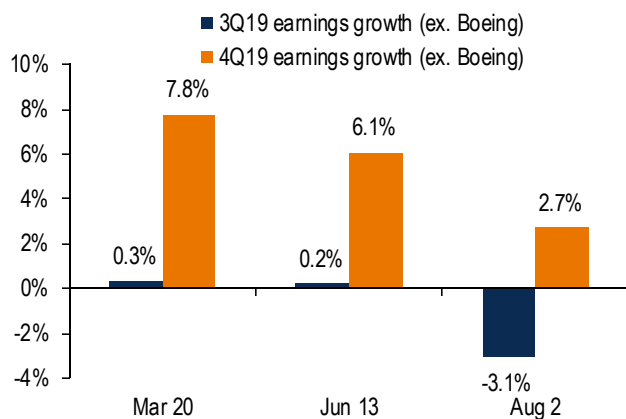
Worried about profits, not revenues

1Q and 2Q results for US IG issuers surprised to the upside as usual. At the same time the outlook for earnings growth in 2H-19 deteriorated notably, although expectations for sales remained more resilient. That likely reflects the view that economic growth outlook has not changed materially since the beginning of the year, while other factors such as tariffs, higher costs, etc. are weighing on company profits. Finally, note that because Boeing was such a large idiosyncratic negative surprise in 2Q (see [Situation Room: HG 2Q half-time earnings season update 29 July 2019](#)) we remove the company from the sample to make the expectations more comparable to those at the start of the year.

Hence bottom-up consensus calls for 3Q-19 earnings to decline -3.1% YoY currently, down from a 0.3% increase based on expectations on March 20th. Similarly 4Q-19 earnings are expected to growth 2.7% YoY currently, down from +7.8% in March (Figure 50). In contrast the deterioration in revenue growth expectations has been much more limited. Expectations for sales growth declined from 4.5% in March to 3.6% currently for 3Q-19, and from 6.3% to 5.3% for 4Q-19 (Figure 51).

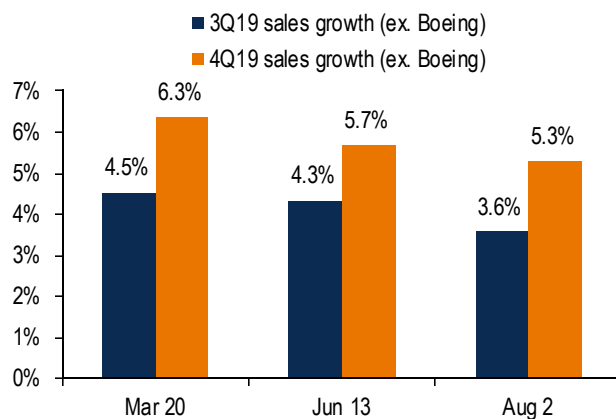
Also reflecting the expected strength of the US economy, expectations for lower earnings growth are driven mostly by US IG issuers with substantial sales outside of the US (Figure 52, Figure 53). Although note that most of the positive surprise in 2Q came from these more global issuers. Issuers with foreign sales of less than 25% saw little deterioration in 2H earnings expectations since March (Figure 54).

Figure 50: Weaker earnings expectations for 2H-19 ...



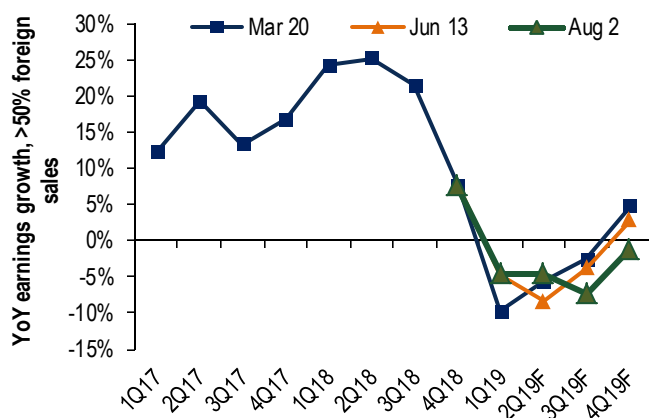
Source: BofA Merrill Lynch Global Research

Figure 51: ... while sales are expected to be more resilient



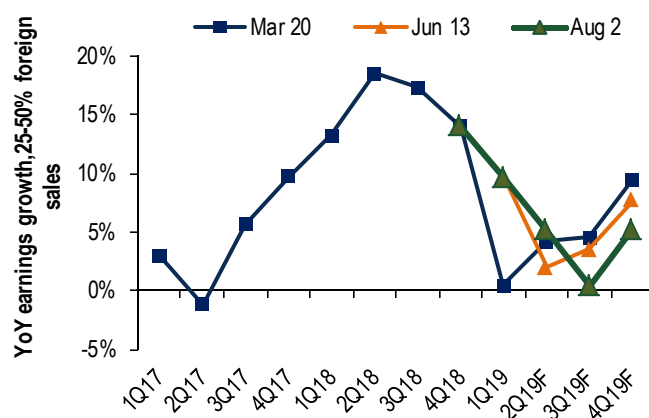
Source: BofA Merrill Lynch Global Research

Figure 52: Issuers with >50% foreign sales: expected earnings growth ex. Boeing



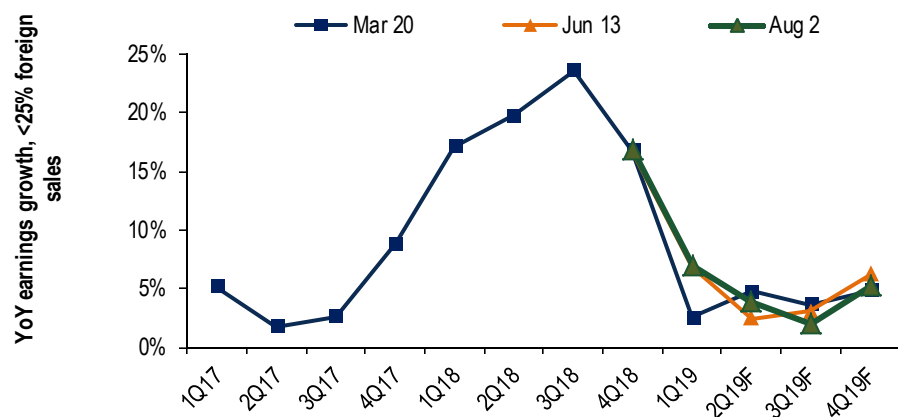
Note: ex. Finance, Energy, Utilities
Source: BofA Merrill Lynch Global Research

Figure 53: Issuers with 25 to 50% foreign sales: expected earnings growth ex. Boeing



Note: ex. Finance, Energy, Utilities
Source: BofA Merrill Lynch Global Research

Figure 54: Issuers with < 25% foreign sales: expected earnings growth ex. Boeing



Note: ex. Finance, Energy, Utilities
Source: BofA Merrill Lynch Global Research

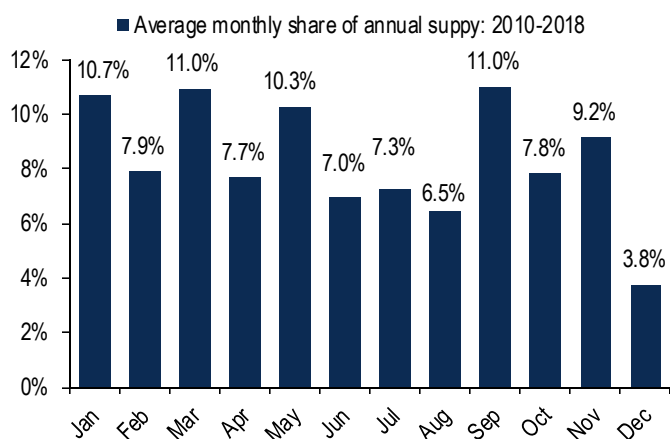
Previously published here

[Situation Room: HG 2Q half-time earnings season update 29 July 2019](#)

Busy supply calendar for a short August

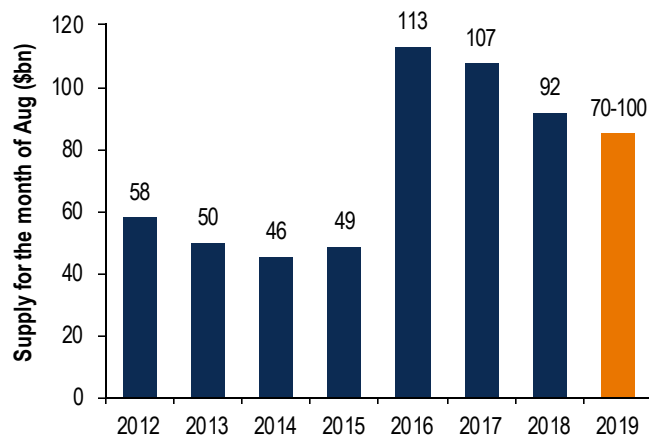
USD IG new issuance totaled \$101.1bn in July, bringing the YTD volume to \$739.9bn, the slowest January-July pace since 2014 and down 7% from the same period in 2018. Looking ahead, August is seasonally the second slowest month of the year for supply, and this time even shorter than in the past with only two weeks of open market access, assuming more or less closed last two weeks before Labor Day (Figure 55). The five-year run-rate for August is \$81bn overall (Figure 56) and \$61bn ex-M&A as a result of large deal financing in recent years (Figure 57). The pipeline of pending M&A deals with IG funding implications has increased to \$415bn presently (Figure 58), and there are currently eight large deals (> \$10bn enterprise value) with reasonably high Bloomberg estimated deal probabilities, including one already closed and four more expected to close by yearend 2019 (Figure 59). Given a relatively stable macro backdrop and the current low interest rate environment, we would not be surprised to see supply to fund M&A as well as CP/short-term debt repayment pick up in August. In fact, Occidental Petroleum and Global Payments have already announced fixed income investor calls with issuance expected to follow as soon as next week. On the other hand, the trend of strong Reverse Yankee volumes should continue with the European primary markets still offering more attractive pricing than the USD market on recent deals. As a result, we expect \$70-100bn of supply in August – including \$30-40bn next week – in line with seasonality as the short timeframe gets partially offset by the upside potential from M&A and refinancing trades.

Figure 55: Average monthly share of annual USD IG supply



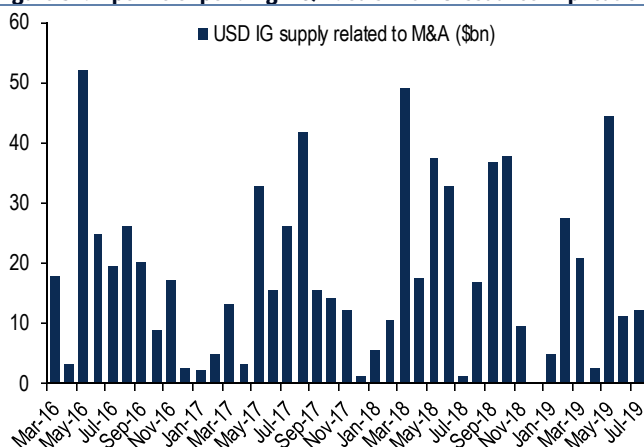
Source: BofA Merrill Lynch Global Research

Figure 56: USD IG supply for the month of August



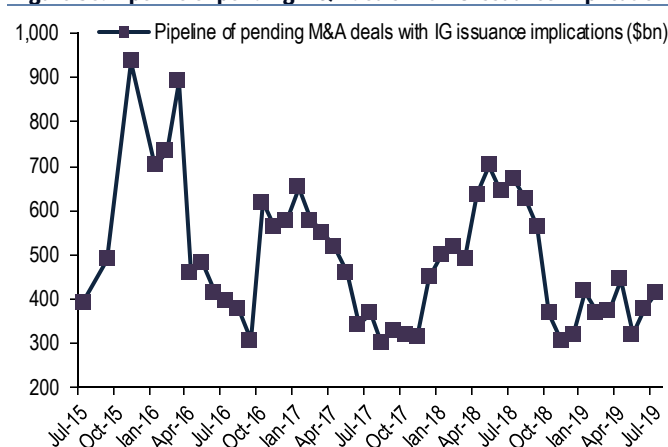
Source: BofA Merrill Lynch Global Research

Figure 57: Pipeline of pending M&A deals with IG issuance implications



Source: BofA Merrill Lynch Global Research, Bloomberg

Figure 58: Pipeline of pending M&A deals with IG issuance implications



Source: BofA Merrill Lynch Global Research, Bloomberg

Figure 59: M&A deals with at least \$10bn in enterprise value and USD IG funding implications

Deal announce date	Acquirer Ticker	Acquirer Name	Target Name	Expected completion date	Announced deal enterprise value (\$bn)	Deal probability (%)	Likely size of bond deal (\$bn)
17-Jun-19	PFE US	Pfizer Inc	Array BioPharma Inc	30-Jul-19	11.0	100	6-12
9-May-19	OXY US	Occidental Petroleum Corp	Anadarko Petroleum Corp	9-Aug-19	55.2	95.7	10-15
25-Feb-19	DHR US	Danaher Corp	BioPharma Business/GE	31-Dec-19	21.4	NA	15
28-May-19	GPN US	Global Payments Inc	Total System Services Inc	31-Dec-19	25.0	98.7	0-6
29-Apr-18	TMUS US	T-Mobile US Inc	Sprint Corp	31-Dec-19	57.8	65.7	23
25-Jun-19	ABBV US	AbbVie Inc	Allergan PLC	30-Jun-20	83.8	67.5	20-25
29-Jul-19	MYL US	Mylan NV	Upjohn medicine business/Pfizer	30-Jun-20	32.7	NA	12
1-Aug-19	LSE LN	London Stock Exchange Group PL	Refinitiv Holdings Ltd	31-Dec-20	27.0	NA	10-13.5

Note: Bloomberg uses the deal terms and the current market price of the target company to calculate the deal probability that the market is pricing in: (current price less pre-offer price) / (target price less pre-offer price). This approach breaks down when either 1) the current price is below the offer price as would imply a negative deal probability, or 2) when the current price exceeds the target price which would imply a deal probability exceeding 100%.

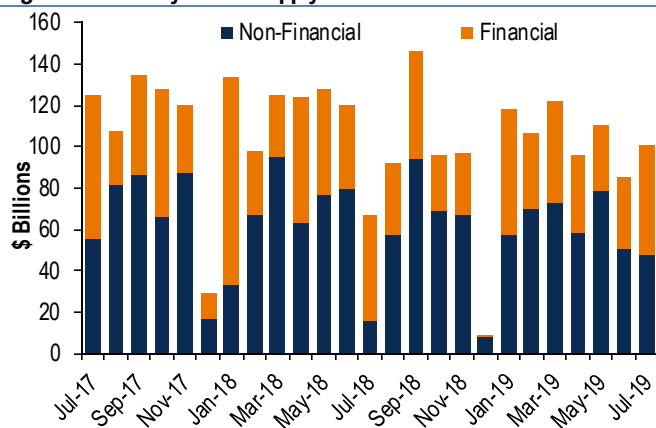
Source: BofA Merrill Lynch Global Research, Bloomberg

July supply review

USD IG new issuance totaled \$101.1bn in July, up 18% from \$85.5bn in June 2019 and 50% from \$67.3bn in July 2018 (Figure 60). Supply this month consisted of \$53.2bn of financials and \$47.9bn of industrials, including \$45.2bn of Yankee bonds. On the back of low interest rates, supply for commercial paper and bank loan repayment increased notably to \$11.8bn this month from \$2.9bn during the same period last year (Figure 61). New issue performance in July was little changed from that in June as average new issue concessions improved a touch to 8.0bps from 8.2bps while average break performance

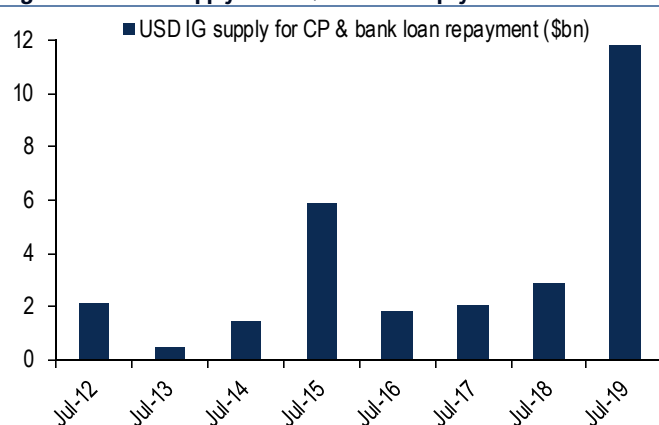
softened a bit to 3.3bps tighter from 3.5bps tighter. As a result, the overall performance of new issues, which we define as new issue concession plus break performance, netted out at 4.7bps in July versus 4.8bps in June (Figure 62).

Figure 60: Monthly USD IG supply volume



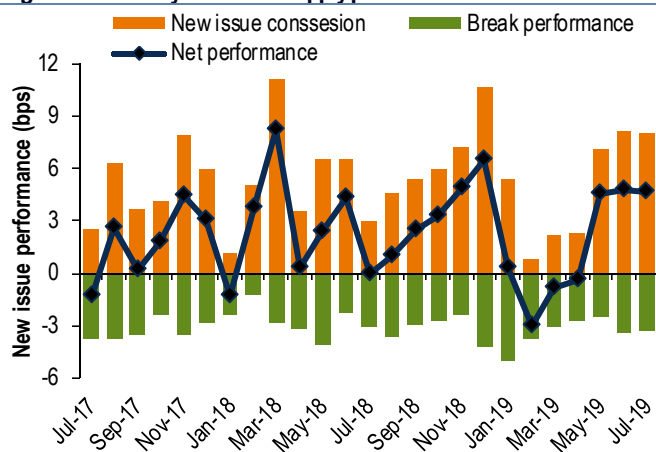
Source: BofA Merrill Lynch Global Research

Figure 61: USD IG supply for CP & bank loan repayment



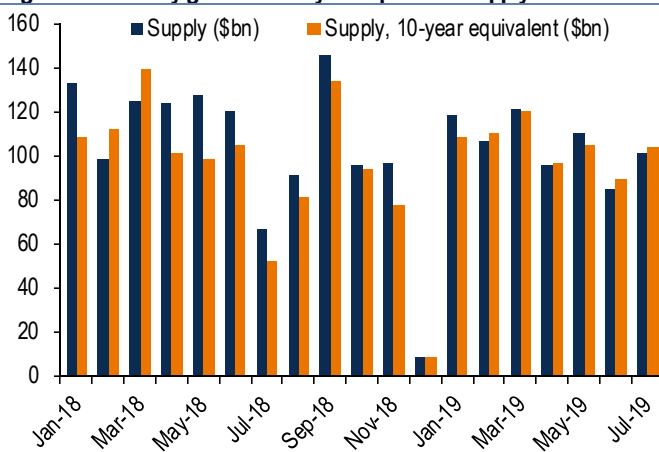
Source: BofA Merrill Lynch Global Research

Figure 62: Monthly new issue supply performance



Source: BofA Merrill Lynch Global Research

Figure 63: Monthly gross and 10-year equivalent supply volumes



Source: BofA Merrill Lynch Global Research

Figure 64: Recent new issue pricing and new issue concessions

Date	Ticker	Name	Tenor	Size (\$mm)	Moody's/S&P Rating	Coupon(%)	Px Spread (bps)	New Issue Conc. (bps)	* Break performance
7/1/2019	MASSMU	MassMutual Global Funding II	10	\$150	Aa3/AA+	2.866	85	n.a.	n.a.
7/2/2019	ACAFF	Credit Agricole Corporate and Investment Bank/New	18m	\$192	A1/A+	FRN	3mL+27	n.a.	n.a.
7/2/2019	LLOYDS	Lloyds Bank Corporate Markets PLC/New York NY	18m	\$80	Aa3/A+	FRN	3mL+35	n.a.	n.a.
7/2/2019	RY	Royal Bank of Canada	2	\$300	A2/A	FRN	3mL+35	n.a.	n.a.
7/8/2019	ARE	Alexandria Real Estate Equities Inc	12	\$750	Baa1/BBB+	3.375	135	15	-4
7/8/2019	ARE	Alexandria Real Estate Equities Inc	31	\$500	Baa1/BBB+	4	150	17	-4
7/8/2019	D	Virginia Electric & Power Co	10	\$500	A2/BBB+	2.875	85	5	-2
7/8/2019	FSK	FS KKR Capital Corp	5	\$400	Baa3/NA	4.625	288	15	n.a.
7/8/2019	POHANG	POSCO	5	\$500	Baa1/BBB+	2.75	105	7	1
7/8/2019	SUMIBK	Sumitomo Mitsui Financial Group Inc	5	\$2,000	A1/A-	2.696	85	16	0
7/8/2019	SUMIBK	Sumitomo Mitsui Financial Group Inc	10	\$2,500	A1/A-	3.04	100	18	-1
7/8/2019	TOTAL	Total Capital International SA	2	\$750	Aa3/A+	2.218	33	0.0	-2
7/8/2019	TOTAL	Total Capital International SA	6	\$1,000	Aa3/A+	2.434	58	7	-3
7/8/2019	TOTAL	Total Capital International SA	11	\$1,250	Aa3/A+	2.829	78	7	-2
7/8/2019	TOTAL	Total Capital International SA	30	\$1,000	Aa3/A+	3.461	93	n.a.	-3
7/9/2019	HNDA	American Honda Finance Corp	2	\$1,000	A2/A	FRN	3mL+35	n.a.	n.a.
7/9/2019	KORGAS	Korea Gas Corp	10	\$500	Aa2/AA-	2.875	93	0	-3
7/9/2019	MIZUHO	Mizuho Financial Group Inc	4NC3	\$500	A1/A-	FRN	3mL+84	n.a.	n.a.
7/9/2019	MIZUHO	Mizuho Financial Group Inc	4NC3	\$1,000	A1/A-	2.721	85	10	-2
7/9/2019	MIZUHO	Mizuho Financial Group Inc	6NC5	\$500	A1/A-	2.839	95	10	-3

Figure 64: Recent new issue pricing and new issue concessions

Date	Ticker	Name	Tenor	Size (\$mm)	Moody's/S&P Rating	Coupon (%)	Px Spread (bps)	New Issue Conc. (bps)	* Break performance
7/9/2019	MIZUHO	Mizuho Financial Group Inc	11NC10	\$750	A1/A-	3.153	108	n.a.	-3
7/9/2019	NYLIFE	New York Life Global Funding	3	\$400	AAA/AA+	FRN	3mL+43	n.a.	n.a.
7/9/2019	NYLIFE	New York Life Global Funding	3	\$500	AAA/AA+	2.25	45	1	n.a.
7/9/2019	RY	Royal Bank of Canada	5	\$1,250	Aa2/AA-	2.55	72	8	-2
7/10/2019	MATSEL	Panasonic Corp	3	\$1,000	A3/A-	2.536	75	n.a.	-5
7/10/2019	MATSEL	Panasonic Corp	5	\$1,000	A3/A-	2.679	85	n.a.	-7
7/10/2019	MATSEL	Panasonic Corp	10	\$500	A3/A-	3.113	105	n.a.	-10
7/10/2019	MU	Micron Technology Inc	8	\$900	Baa3/BB+	4.185	225	4	-1
7/10/2019	MU	Micron Technology Inc	11	\$850	Baa3/BB+	4.663	260	13	-1
7/10/2019	PLNIJ	Perusahaan Listrik Negara PT	10	\$700	Baa2/BBB	3.875	189	n.a.	n.a.
7/10/2019	PLNIJ	Perusahaan Listrik Negara PT	30	\$700	Baa2/BBB	4.875	238	n.a.	n.a.
7/10/2019	SUMIBK	Sumitomo Mitsui Banking Corp/New York	2	\$550	A1/A-	FRN	3mL+35	n.a.	n.a.
7/11/2019	ACAFP	Credit Agricole Corporate and Investment Bank/New	18m	\$200	A1/A+	FRN	3mL+29	n.a.	n.a.
7/11/2019	EPPME	Empresas Publicas de Medellin ESP	10	\$1,000	Baa3/NA	4.25	215	n.a.	-7
7/11/2019	MTNA	ArcelorMittal	5	\$750	Baa3/BBB-	3.6	175	6	-2
7/11/2019	MTNA	ArcelorMittal	10	\$500	Baa3/BBB-	4.25	225	13	1
7/11/2019	MUFG	Mitsubishi UFJ Financial Group Inc	3	\$2,250	A1/A-	2.623	78	8	-1
7/11/2019	MUFG	Mitsubishi UFJ Financial Group Inc	5	\$1,000	A1/A-	2.801	90	8	-1
7/11/2019	MUFG	Mitsubishi UFJ Financial Group Inc	10	\$1,750	A1/A-	3.195	105	15	0
7/11/2019	MUFG	Mitsubishi UFJ Financial Group Inc	20	\$1,500	A1/A-	3.751	108	5	-3
7/11/2019	NWIDE	Nationwide Building Society	11NC10	\$1,000	Baa1/BBB+	3.96	185	14	-2
7/12/2019	PSHNA	Pershing Square Holdings Ltd	20	\$400	NA/BBB	4.95	230	n.a.	n.a.
7/12/2019	SUMIBK	Sumitomo Mitsui Banking Corp/New York	2	\$100	A1/A-	FRN	3mL+35	n.a.	n.a.
7/15/2019	BNS	Bank of Nova Scotia/The	4	\$500	A2/A-	2.375	58	11	-3
7/15/2019	BNSF	Burlington Northern Santa Fe LLC	31	\$825	A3/A+	3.55	95	14	-2
7/15/2019	CM	Canadian Imperial Bank of Commerce	4	\$750	A2/BBB+	2.606	80	7	-3
7/15/2019	DE	John Deere Capital Corp	10	\$600	A2/A	2.8	72	7	-4
7/15/2019	RABOBK	Cooperatieve Rabobank UA	5	\$1,000	A3/A-	2.625	83	11	-1
7/15/2019	TD	Toronto-Dominion Bank/The	3	\$150	Aa3/A	2.75	n.a.	n.a.	n.a.
7/15/2019	TERRAF	PLA Administradora Industrial S de RL de CV	10	\$500	Baa3/NA	4.962	288	n.a.	-6
7/15/2019	TOMARI	Reliance Standard Life Global Funding II	3	\$400	A2/A+	2.625	83	n.a.	-2
7/16/2019	ACAFP	Credit Agricole Corporate and Investment Bank/New	18m	\$110	A1/A+	FRN	3mL+27	n.a.	n.a.
7/16/2019	ADSEZ	Adani Ports & Special Economic Zone Ltd	5	\$650	Baa3/BBB-	3.375	150	n.a.	n.a.
7/16/2019	MUFG	MUFG Bank Ltd/New York NY	2	\$400	A1/A	FRN	3mL+50	n.a.	n.a.
7/16/2019	WSTP	Westpac Banking Corp	15	\$1,250	Baa1/BBB	4.11	200	n.a.	-5
7/16/2019	WSTP	Westpac Banking Corp	20	\$1,000	Baa1/BBB	4.421	180	n.a.	-12
7/17/2019	MPW	MPT Operating Partnership LP / MPT Finance Corp	10	\$900	Ba1/BBB-	4.625	263	n.a.	n.a.
7/17/2019	TOYOTA	Toyota Motor Credit Corp	5	\$68	Aa3/AA-	2.41	n.a.	n.a.	n.a.
7/18/2019	CMA	Comerica Bank	5	\$500	A3/A-	2.5	75	n.a.	-3
7/18/2019	CMA	Comerica Inc	10	\$200	A3/BBB+	4	105	3	-3
7/18/2019	DNBNO	DNB Bank ASA/New York	2	\$99	Aa2/A+	FRN	3mL+22	n.a.	n.a.
7/18/2019	LIMAMT	Lima Metro Line 2 Finance Ltd	17	\$563	Baa1/BBB	4	n.a.	n.a.	n.a.
7/18/2019	LLOYDS	Lloyds Bank Corporate Markets PLC/New York NY	2	\$175	Aa3/A+	FRN	3mL+55	n.a.	n.a.
7/18/2019	MS	Morgan Stanley	6NC5	\$2,000	A3/BBB+	2.72	92	5	-2
7/18/2019	PNC	PNC Bank NA	3NC2	\$900	A2/A	FRN	3mL+45	n.a.	n.a.
7/18/2019	PNC	PNC Bank NA	3NC2	\$600	A2/A	2.232	48	4	-3
7/18/2019	PNC	PNC Financial Services Group Inc/The	7	\$1,000	A3/A-	2.6	75	6	-3
7/22/2019	BBT	BB&T Corp	PERP	\$1,700	Baa1/BBB-	4.8	n.a.	n.a.	n.a.
7/22/2019	CFG	Citizens Financial Group Inc	7	\$500	NA/BBB+	2.85	97	8	-3
7/22/2019	FDX	FedEx Corp	10	\$1,000	Baa2/BBB	3.1	110	11	-4
7/22/2019	FSK	FS KKR Capital Corp	3	\$175	Baa3/NA	4.75	n.a.	n.a.	n.a.
7/22/2019	OBRCOL	Oberlin College	30	\$82	Aa3/AA	3.685	110	n.a.	n.a.
7/22/2019	SYF	Synchrony Financial	3	\$750	NA/BBB-	2.85	110	4	-8
7/22/2019	TE	Tampa Electric Co	31	\$300	A3/BBB+	3.625	113	10	-7
7/23/2019	BBT	BB&T Corp	5	\$1,000	A2/A-	2.5	70	13	-1
7/23/2019	BMO	Bank of Montreal	PERP	\$500	Baa3/BBB-	4.8	n.a.	n.a.	n.a.
7/23/2019	HWEUHC	Hanwha Energy USA Holdings Corp	3	\$300	Aa2/NA	2.375	70	n.a.	n.a.
7/23/2019	IMBLN	Imperial Brands Finance PLC	5	\$1,000	Baa3/BBB	3.125	140	19	-11
7/23/2019	IMBLN	Imperial Brands Finance PLC	7	\$750	Baa3/BBB	3.5	170	n.a.	-13
7/23/2019	IMBLN	Imperial Brands Finance PLC	10	\$1,000	Baa3/BBB	3.875	190	n.a.	-5
7/23/2019	MTB	M&T Bank Corp	PERP	\$400	Baa2/BBB-	5	n.a.	n.a.	n.a.
7/23/2019	PERTIJ	Pertamina Persero PT	10	\$750	Baa2/BBB	3.65	n.a.	n.a.	n.a.
7/23/2019	PERTIJ	Pertamina Persero PT	30	\$750	Baa2/BBB	4.7	n.a.	n.a.	n.a.
7/23/2019	UNH	UnitedHealth Group Inc	5	\$750	A3/A+	2.375	55	-3	-3
7/23/2019	UNH	UnitedHealth Group Inc	10	\$1,000	A3/A+	2.875	80	4	-2
7/23/2019	UNH	UnitedHealth Group Inc	20	\$1,250	A3/A+	3.5	95	n.a.	-4
7/23/2019	UNH	UnitedHealth Group Inc	30	\$1,250	A3/A+	3.7	110	6	-2
7/23/2019	UNH	UnitedHealth Group Inc	40	\$1,250	A3/A+	3.875	130	n.a.	-2
7/24/2019	BNS	Bank of Nova Scotia/The	7	\$1,250	A2/A-	2.7	82	7	-2
7/24/2019	IFHBH	Intercorp Peru Ltd	10	\$325	Ba1/BBB-	3.875	205	n.a.	n.a.

Figure 64: Recent new issue pricing and new issue concessions

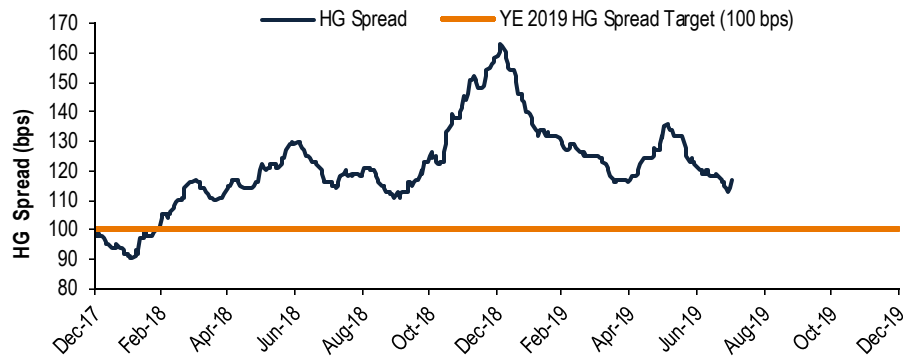
Date	Ticker	Name	Tenor	Size (\$mm)	Moody's/S&P Rating	Coupon(%)	Px Spread (bps)	New Issue Conc. (bps)	* Break performance
7/24/2019	JPM	JPMorgan Chase & Co	PERP	\$2,250	Baa2/BBB-	5	n.a.	n.a.	n.a.
7/24/2019	NGGLN	Boston Gas Co	10	\$500	A3/A-	3.001	95	4	-7
7/24/2019	SEB	Skandinaviska Enskilda Banken AB/New York NY	2	\$75	Aa2/A+	FRN	3mL+30	n.a.	n.a.
7/24/2019	STZ	Constellation Brands Inc	10	\$800	Baa3/BBB	3.15	110	12	-4
7/24/2019	USB	US Bancorp	5	\$1,250	A1/A+	2.4	60	9	-3
7/24/2019	USB	US Bancorp	10	\$1,000	A1/A-	3	95	7	-7
7/25/2019	AXP	American Express Co	5	\$1,500	A3/BBB+	2.5	72	7	-2
7/25/2019	PEP	PepsiCo Inc	10	\$1,000	A1/A+	2.625	58	8	-2
7/25/2019	PEP	PepsiCo Inc	30	\$1,000	A1/A+	3.375	80	6	-3
7/26/2019	TD	Toronto-Dominion Bank/The	2	\$350	Aa3/A	2.7	n.a.	n.a.	n.a.
7/29/2019	BA	Boeing Co/The	2	\$750	A2/A	2.3	45	-2	-2
7/29/2019	BA	Boeing Co/The	8	\$1,000	A2/A	2.7	80	4	-1
7/29/2019	BA	Boeing Co/The	11	\$750	A2/A	2.95	90	15	-1
7/29/2019	BA	Boeing Co/The	16	\$750	A2/A	3.25	120	18	1
7/29/2019	BA	Boeing Co/The	31	\$1,250	A2/A	3.75	120	14	-2
7/29/2019	BA	Boeing Co/The	40	\$1,000	A2/A	3.95	140	15	-2
7/29/2019	ESS	Essex Portfolio LP	10	\$400	Baa1/BBB+	3	110	7	-3
7/29/2019	F	Ford Motor Credit Co LLC	3	\$1,250	Baa3/BBB	3.35	155	7	-6
7/29/2019	F	Ford Motor Credit Co LLC	7	\$750	Baa3/BBB	4.542	260	14	-8
7/29/2019	LVS	Las Vegas Sands Corp	5	\$1,750	Baa3/BBB-	3.2	138	n.a.	-5
7/29/2019	LVS	Las Vegas Sands Corp	7	\$1,000	Baa3/BBB-	3.5	163	n.a.	-10
7/29/2019	LVS	Las Vegas Sands Corp	10	\$750	Baa3/BBB-	3.9	188	n.a.	-8
7/29/2019	NAB	National Australia Bank Ltd	15NC10	\$1,500	Baa1/BBB	3.933	188	n.a.	-1
7/29/2019	OC	Owens Corning	10	\$450	Ba1/BBB	3.95	192	7	-1
7/29/2019	RSG	Republic Services Inc	5	\$900	Baa2/BBB+	2.5	70	4	-6
7/29/2019	SHINFN	Shinhan Financial Group Co Ltd	11	\$500	Baa1/BBB	3.34	150	n.a.	-1
7/29/2019	UNP	Union Pacific Corp	20	\$500	Baa1/A-	3.55	98	2	-4
7/29/2019	UNP	Union Pacific Corp	40	\$500	Baa1/A-	3.95	140	5	-4
7/30/2019	HBAN	Huntington Bancshares Inc/OH	5	\$800	Baa1/BBB+	2.625	83	3	-2
7/30/2019	HON	Honeywell International Inc	3	\$600	A2/A	FRN	3mL+37	n.a.	n.a.
7/30/2019	HON	Honeywell International Inc	3	\$600	A2/A	2.15	37	0	-3
7/30/2019	HON	Honeywell International Inc	5	\$750	A2/A	2.3	50	8	-4
7/30/2019	HON	Honeywell International Inc	10	\$750	A2/A	2.7	68	3	-4
8/1/2019	ALL	Allstate Corp/The	PERP	\$1,150	Baa2/BBB	5.1	n.a.	n.a.	n.a.
8/1/2019	CCI	Crown Castle International Corp	10	\$550	Baa3/BBB-	3.1	122	7	4
8/1/2019	CCI	Crown Castle International Corp	30	\$350	Baa3/BBB-	4	157	14	3
8/1/2019	EIX	Southern California Edison Co	10	\$400	A3/A-	2.85	95	-2	-2
8/1/2019	EIX	Southern California Edison Co	28	\$800	A3/A-	4	130	2	-1
8/1/2019	R	Ryder System Inc	5	\$550	Baa1/BBB+	2.5	83	8	1
8/1/2019	SINOPE	Sinopec Group Overseas Development 2018 Ltd	5	\$800	A1/A+	2.5	88	n.a.	n.a.
8/1/2019	SINOPE	Sinopec Group Overseas Development 2018 Ltd	10	\$700	A1/A+	2.95	110	5	n.a.
8/1/2019	SINOPE	Sinopec Group Overseas Development 2018 Ltd	30	\$500	A1/A+	3.68	n.a.	n.a.	n.a.

* We define the break performance as the difference between the new issue spread and the initial secondary market spread on the first day of trading. BAC bonds have been removed.

Source: BofA Merrill Lynch Global Research

Spread and supply forecasts

Figure 65: Spread targets for 2019



Source: ICE Data Indices, LLC, BofA Merrill Lynch Global Research

Sector views

Figure 66: BofAML High Grade Sector Views Summary

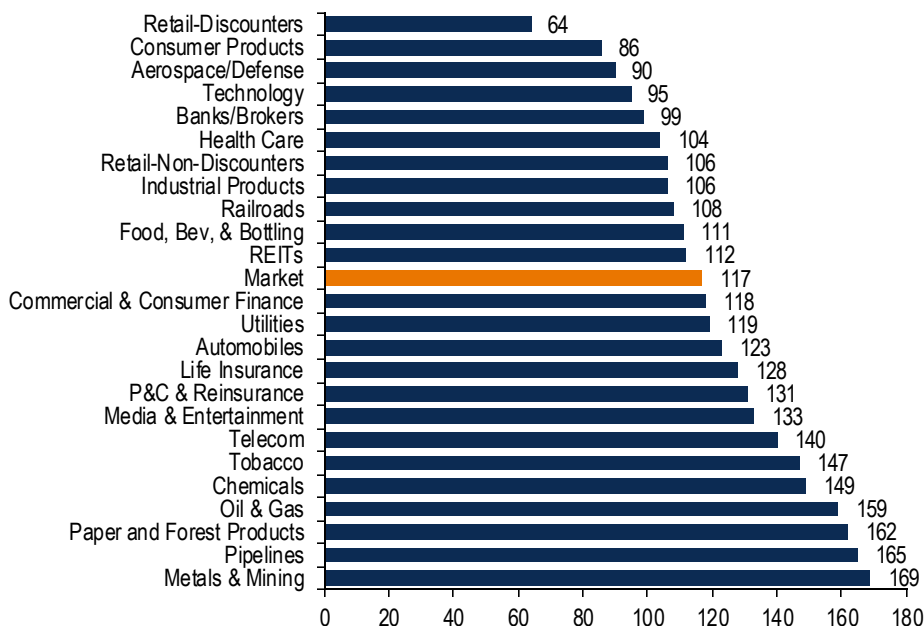
Overweight	View	Market weight	View	Underweight	View
Basic Materials	Over	Food, Bev, & Bottling	Market	Aerospace & Defense	Under
Chemicals	Over	Healthcare	Market	Automobiles	Under
Metals & Mining	Market	REITS	Market	Banks/Brokers	Under
Paper and Forest Products	Over	Tobacco	Market	Consumer Products	Under
Energy	Over	Utilities	Market	Industrial Products	Under
Oil & Gas	Market			Retail	Under
Pipelines	Over			Discounters	Under
Insurance	Over			Non-Discounters	Market
Life Insurance	Over			Technology	Under
P&C & Reinsurance	Market			Transportation	Under
Media & Entertainment	Over			Railroads	Under
Telecommunications	Over				

Source: BofA Merrill Lynch Global Research

High Grade Spreads by Sector

Figure 67: High grade spreads by sector (bps)

Sector spreads for BofAML HG U.S. Corporate Master COA0 as of August 1, 2019. Results include subordinated and hybrid securities



Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

High grade sector historical performance

Figure 68: High Grade Sector Performance as of August 01, 2019

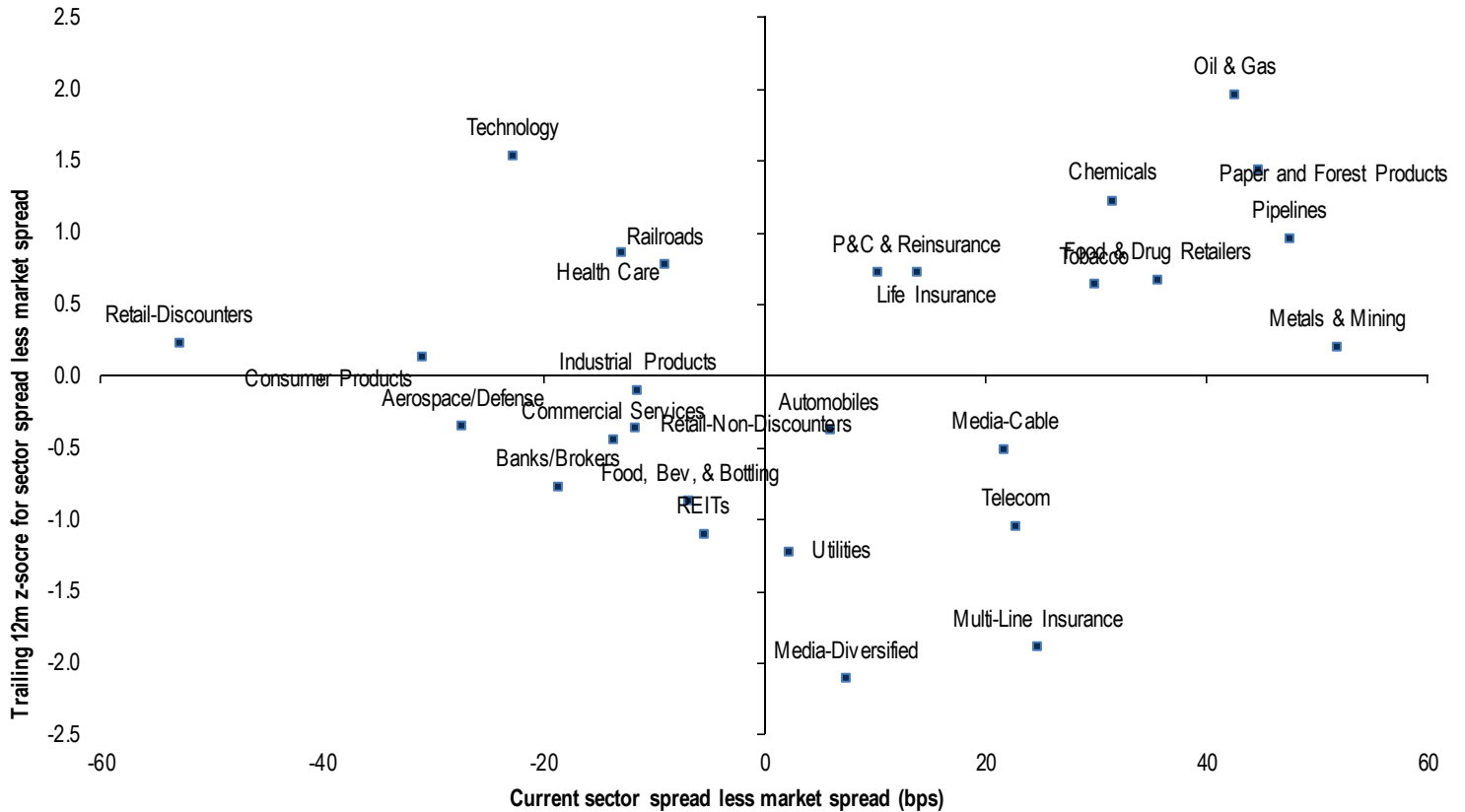
Sector spreads and performance for BofAML HG U.S. Corporate Master COAO. Results include subordinated and hybrid securities

Sector	Rating	OAS	Duration	Yield	Price	Face (\$bn)	% Mkt Value	Excess Return (bps)				Spread Change (bps)				Total Return
								MTD	QTD	YTD	YOY	MTD	QTD	YTD	YOY	QTD
Aerospace/Defense	BBB1	90	8.4	2.84	108.8	107.8	1.66	-22	39	433	174	3	-5	-39	-3	134
Automobiles	A3	123	4.3	3.02	103.3	175.2	2.55	-9	51	380	91	2	-9	-55	14	100
Banks/Brokers	A3	99	5.2	2.81	105.7	1,516.8	22.60	-19	30	385	200	3	-3	-48	-6	90
Basic Materials	BBB2	158	7.6	3.50	108.8	302.0	4.64	-38	49	449	139	5	-5	-41	13	136
Building Materials	BBB2	165	8.2	3.58	104.8	20.8	0.31	-4	129	480	112	0	-13	-40	23	221
Chemicals	BBB2	149	7.3	3.39	106.5	134.7	2.03	-32	29	419	94	5	-3	-39	19	112
Homebuilders	BBB1	87	4.5	2.62	106.3	3.1	0.05	7	61	282	176	-2	-12	-112	-63	116
Metals & Mining	BBB1	169	8.0	3.65	112.0	100.0	1.58	-54	51	509	208	8	-5	-48	3	143
Paper and Forest Products	BBB2	162	7.3	3.51	110.4	43.5	0.68	-33	67	409	122	4	-7	-30	23	154
Commercial Services	A3	104	9.6	3.01	109.7	74.8	1.16	-20	53	345	217	3	-4	-34	-7	158
Consumer Products	A3	86	6.8	2.73	106.5	68.1	1.02	-14	66	239	134	1	-8	-24	-3	144
Energy	BBB1	161	7.8	3.55	108.2	724.9	11.09	-39	33	449	65	4	-5	-40	14	122
Oil & Gas	A3	159	7.6	3.51	107.7	465.4	7.08	-44	29	414	34	5	-5	-38	16	116
Pipelines	BBB2	165	8.2	3.62	109.2	259.5	4.01	-29	40	511	122	3	-4	-44	10	133
Finance	A3	116	5.9	3.00	106.5	146.0	2.20	-19	60	337	184	4	-7	-50	-8	127
Commercial & Consumer Finance	BBB1	118	4.1	2.93	104.3	69.0	1.02	-18	47	355	202	5	-6	-49	3	95
Finance-Other Services	A3	114	7.5	3.05	108.6	77.0	1.18	-20	71	321	169	3	-8	-52	-18	155
Food, Bev, & Bottling	BBB1	111	8.3	3.06	107.8	275.1	4.18	-19	80	576	182	2	-7	-46	6	173
Health Care	A3	104	8.6	3.00	107.9	607.3	9.25	-25	44	336	91	2	-5	-28	6	139
Industrial Products	A3	106	7.0	2.95	106.1	189.2	2.83	-26	70	420	15	3	-8	-47	13	151
Insurance	A3	129	8.4	3.31	110.9	262.3	4.11	-32	67	454	219	4	-6	-35	0	162
Insurance-Other	BBB1	112	7.7	3.04	109.4	22.7	0.35	-14	113	425	201	1	-12	-46	-10	200
Life Insurance	A2	128	8.0	3.31	109.8	148.2	2.30	-36	52	414	186	5	-5	-37	-2	143
Multi-Line Insurance	BBB1	142	8.4	3.41	110.6	24.7	0.39	-43	84	714	230	3	-9	-59	-7	182
P&C & Reinsurance	A3	131	9.3	3.36	114.1	66.8	1.08	-25	78	450	289	3	-7	-18	10	184
Leisure	BBB2	134	4.5	3.11	106.5	25.2	0.38	-26	100	500	257	6	-16	-73	22	155
Media & Entertainment	BBB1	133	9.2	3.32	111.5	205.3	3.23	-33	44	545	290	3	-3	-45	-14	149
Media-Cable	BBB1	139	9.8	3.40	111.6	127.6	2.01	-37	34	594	331	3	0	-42	-19	144
Media-Diversified	BBB1	125	8.3	3.20	111.6	75.1	1.19	-25	62	486	237	3	-6	-50	-12	157
Media-Publishing	BBB1	89	4.9	2.62	104.6	2.6	0.04	-22	58	259	202	5	-9	-28	1	117
Real Estate Dev & Mgt	A3	137	6.4	3.20	108.5	7.0	0.11	-35	31	286	159	7	-3	-36	1	108
REITs	BBB1	112	6.1	2.93	105.5	156.0	2.32	-14	67	353	247	2	-7	-44	-12	138
Retail	A3	96	8.7	2.92	108.6	212.1	3.25	-27	47	426	116	3	-4	-45	-6	145
Food & Drug Retailers	BBB2	153	7.5	3.45	105.9	27.0	0.40	-29	55	509	175	3	-7	-25	24	141
Retail-Discounters	A1	64	8.9	2.60	111.1	80.7	1.26	-26	31	379	160	2	-2	-32	-4	131
Retail-Non-Discounters	BBB1	106	8.8	3.03	107.5	104.4	1.58	-26	58	413	48	3	-6	-39	-2	157
Technology	A2	95	7.6	2.85	106.6	492.8	7.41	-26	40	365	104	3	-4	-31	10	125
Telecom	BBB1	140	9.5	3.40	111.6	272.0	4.30	-40	49	688	430	4	-4	-50	-14	157
Tobacco	BBB1	147	7.9	3.40	105.0	72.6	1.08	-28	89	623	-64	3	-6	-50	37	179
Transportation	BBB1	122	9.9	3.23	108.8	156.2	2.40	-28	38	411	114	3	-3	-30	3	146
Railroads	A3	108	11.5	3.17	111.5	85.7	1.35	-17	21	412	113	1	-2	-25	2	146
Transportation-Other	BBB1	139	7.7	3.31	105.5	70.5	1.05	-42	59	410	115	5	-6	-37	5	146
Utilities	A3	119	9.8	3.22	110.8	525.2	8.22	-28	109	375	75	3	-9	-40	-3	219
Market	A3	117	7.5	3.09	107.8	6,574.1	100.00	-26	50	420	152	3	-5	-42	1	135

Source: ICE Data Indices, LLC, BofA Merrill Lynch Global Research

Sector performance and relative value

Figure 69: Trailing 12 month spread Z-score vs. current sector spread differential to the market



Source: ICE Data Indices, LLC, BofA Merrill Lynch Global Research

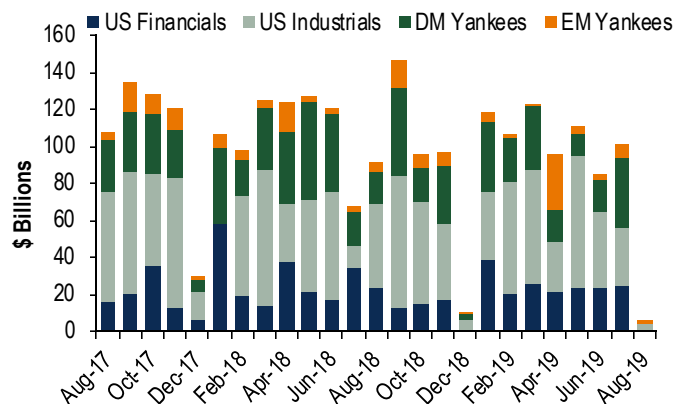
Supply statistics

Figure 70: High grade supply summary, \$bn

Sector	WTD	MTD	QTD	YTD
US Financials	2.4	1.2	26.1	178.4
US Industrials	18.7	2.7	33.6	332.8
European Financials	0.0	0.0	3.3	63.2
European Industrials	0.0	0.0	8.0	49.9
EM Yankees	2.5	2.0	9.7	55.8
Non-Euro Non-EM Yankees	1.5	0.0	26.1	65.6
Total	25.1	5.8	106.9	745.7

Source: BofA Merrill Lynch Global Research

Figure 71: HG monthly issuance, \$bn



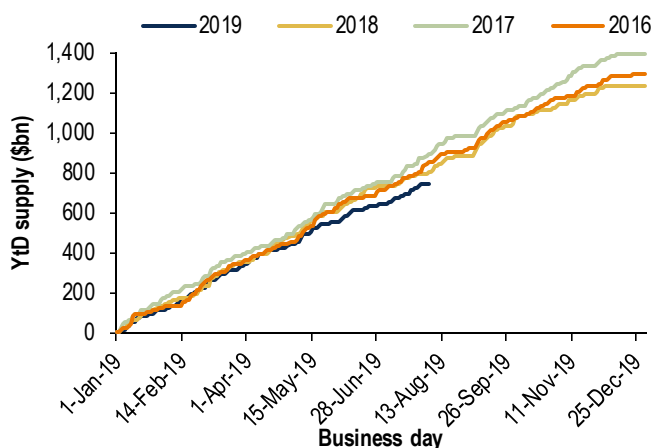
Source: BofA Merrill Lynch Global Research

Figure 72: Cumulative High grade supply YTD, \$bn

Sector	YTD 2016	YTD 2017	YTD 2018	YTD 2019
Financials	330.3	403.8	367.0	305.1
AAA-A Industrials	272.4	217.1	152.0	203.7
BBB Industrials	236.7	271.5	285.5	236.8
Total	839.5	892.4	804.6	745.7
%-change		6%	-10%	-7%
US	541.5	603.8	508.5	511.2
Europe	153.1	135.2	165.9	113.1
EM	52.1	51.5	48.5	55.8
Other DM	92.7	101.9	81.6	65.6

Source: BofA Merrill Lynch Global Research

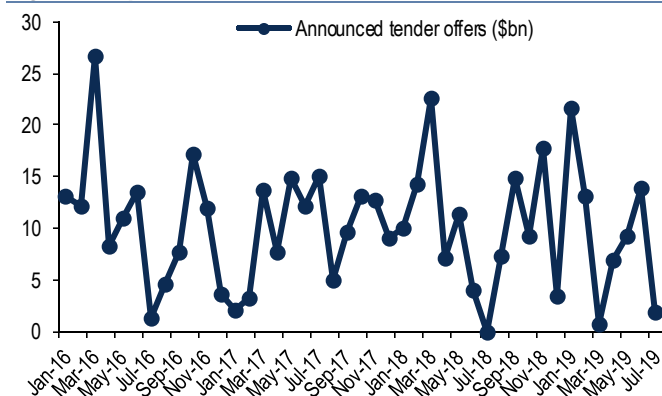
Figure 73: Cumulative High grade supply, \$bn



Source: BofA Merrill Lynch Global Research

Announced vs actual tenders & related supply

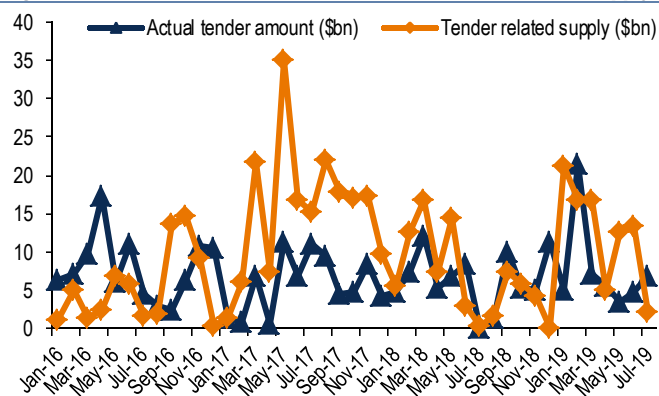
Figure 74: Pipeline of USD HG tender offer announcements (\$bn)



Note: Limited to issuers with public tender offer announcements for USD bonds with at least one HG rating from Moody's, S&P and Fitch.

Source: BofA Merrill Lynch Global Research, Bloomberg, company reports

Figure 75: Actual tendered amount vs. tender-related USD HG supply

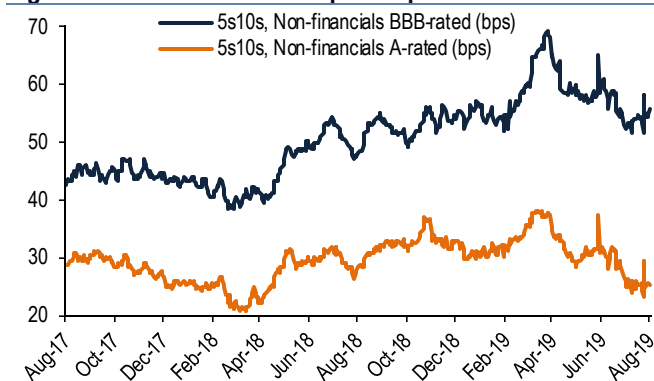


Note: Tender related supply refers to USD bonds with at least one HG rating from Moody's, S&P and Fitch that contains specific reference to "tender" in its use of proceeds language.

Source: BofA Merrill Lynch Global Research, Bloomberg, company reports

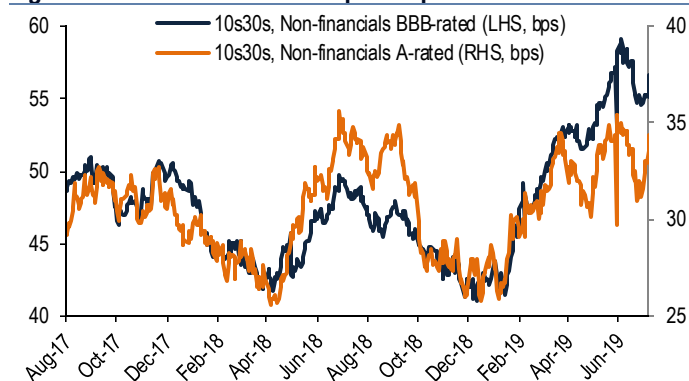
Corporate spread curves

Figure 76: 5s10s non-financial corporate spread curves



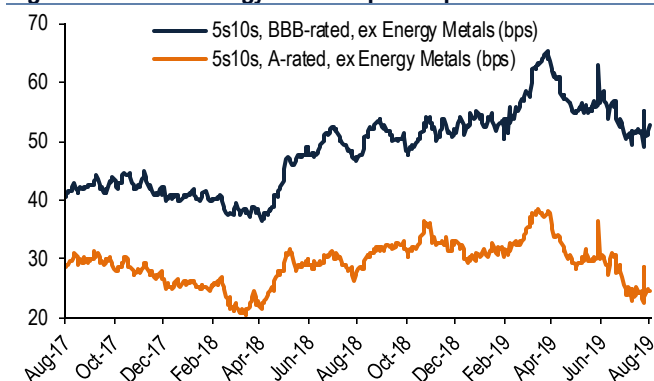
Note: the curve is computed for individual issuers first, and then aggregated to create the average.
Source: BofA Merrill Lynch Global Research

Figure 77: 10s30s non-financial corporate spread curves



Note: the curve is computed for individual issuers first, and then aggregated to create the average.
Source: BofA Merrill Lynch Global Research

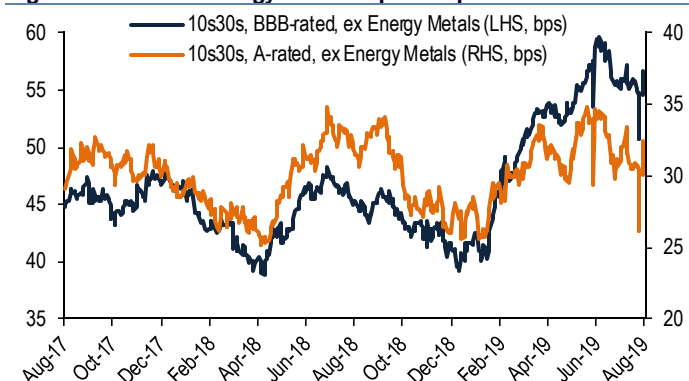
Figure 78: 5s10s ex Energy Metals corporate spread curves



Note: the spread curve calculation is restricted to issuers that have bonds outstanding for both the short and the long tenors. For spread levels we use only on-the-run bonds (one for each tenor), outstanding for at most three years. The aggregate market spread curve is a simple average of individual issuer curves.

Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

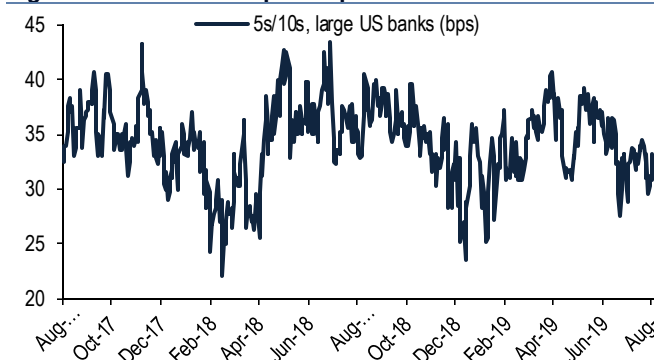
Figure 79: 10s30s ex Energy Metals corporate spread curves



Note: the spread curve calculation is restricted to issuers that have bonds outstanding for both the short and the long tenors. For spread levels we use only on-the-run bonds (one for each tenor), outstanding for at most three years. The aggregate market spread curve is a simple average of individual issuer curves.

Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

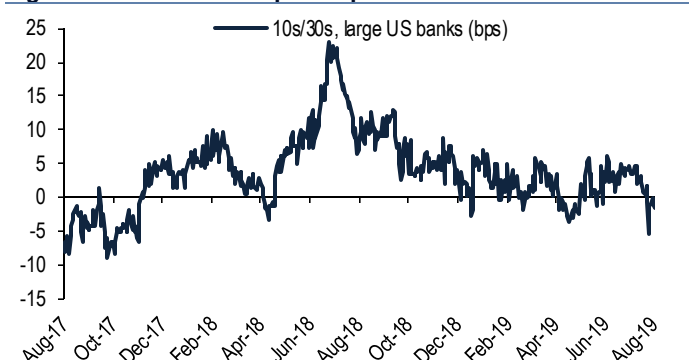
Figure 80: 5s10s Banks corporate spread curves



Note: the spread curve calculation is restricted to BAC, JPM, C and WFC that have senior bonds outstanding for both the short and the long tenors. For spread levels we use only on-the-run bonds (one for each tenor), outstanding for at most three years. The aggregate market spread curve is a simple average of individual issuer curves.

Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

Figure 81: 10s30s Banks corporate spread curves

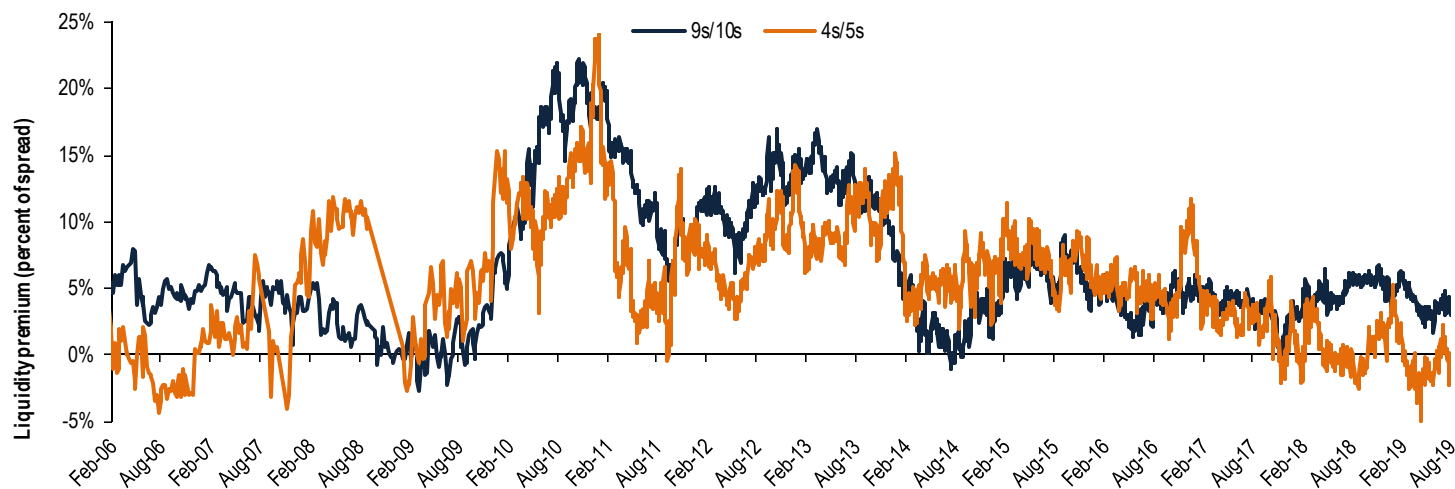


Note: the spread curve calculation is restricted to BAC, JPM, C and WFC that have senior bonds outstanding for both the short and the long tenors. For spread levels we use only on-the-run bonds (one for each tenor), outstanding for at most three years. The aggregate market spread curve is a simple average of individual issuer curves.

Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

Liquidity premium in high grade spreads

Figure 82: Liquidity premium in high grade spreads

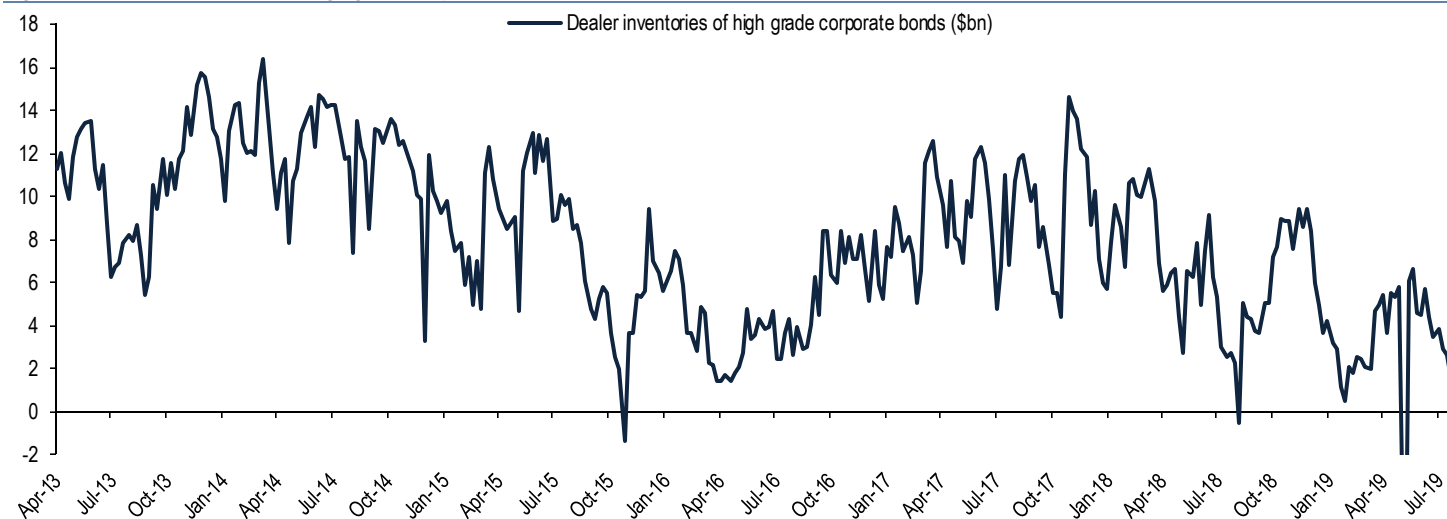


Note: our liquidity premium is the spread difference between old bonds that have rolled down to the 9, 8, 7, 6 and 4-year tenors and on-the-run 10-year and 5-year (for the 4-year tenor) bonds, adjusted for the credit curve.

Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

Dealer inventories

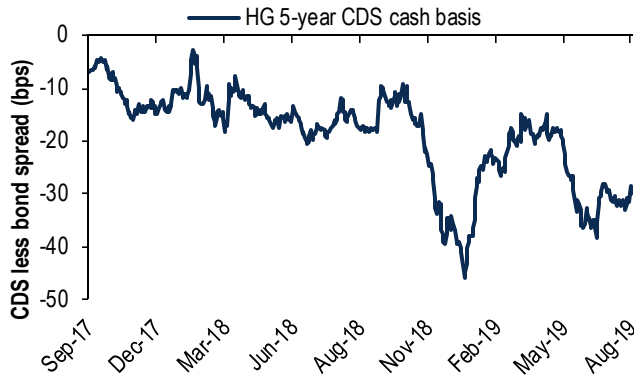
Figure 83: Dealer inventories of high grade corporate bonds (\$bn)



Source: BofA Merrill Lynch Global Research, Federal Reserve Bank

CDS cash basis

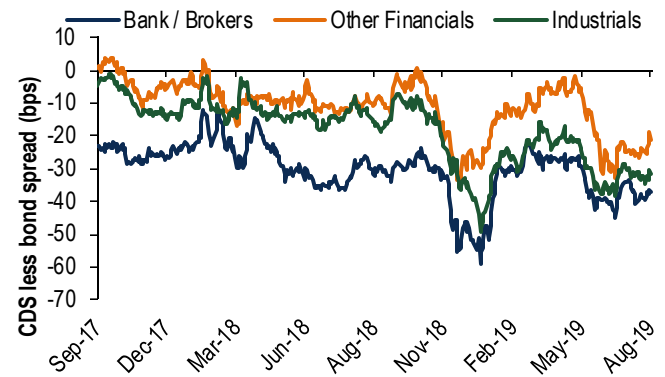
Figure 84: 5-year CDS cash basis



Note: CDS-Cash and based on spreads of the following 30 issuers: AIG, AMGN, AXP, BAC, BRK, C, CAT, CMCSA, COF, CVS, DE, DIS, F, GE, GS, HD, HPQ, IBM, JPM, MET, MO, MS, PFE, PRU, SPG, T, VZ, WFC, WMT, VIA

Source: BofA Merrill Lynch Global Research

Figure 85: 5-year CDS cash basis by broad sector

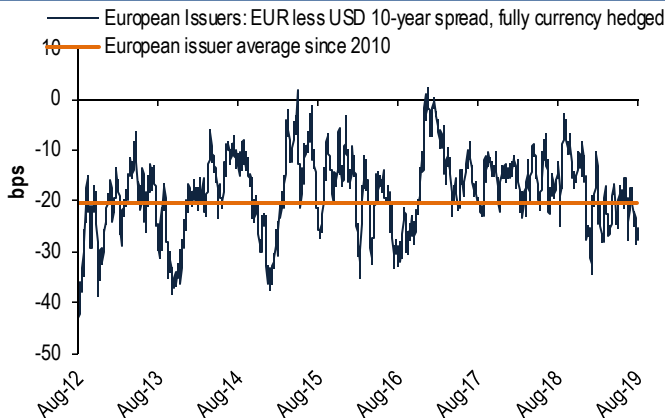


Note: CDS-Cash and based on spreads of the following 30 issuers: AIG, AMGN, AXP, BAC, BRK, C, CAT, CMCSA, COF, CVS, DE, DIS, F, GE, GS, HD, HPQ, IBM, JPM, MET, MO, MS, PFE, PRU, SPG, T, VZ, WFC, WMT, VIA

Source: BofA Merrill Lynch Global Research

USD EUR relative value

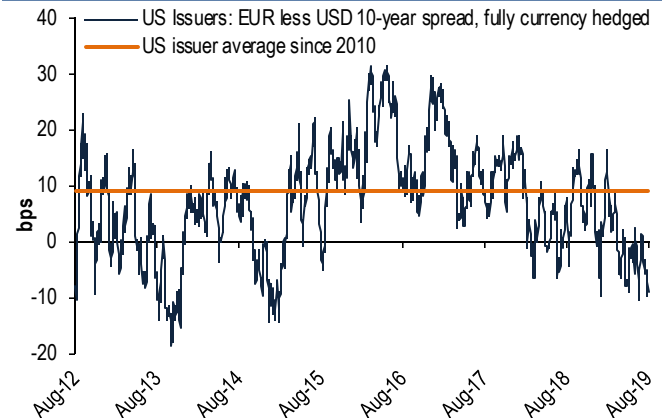
Figure 86: European issuers: relative EUR and USD spreads



Note: the chart plots issuer-matched spreads on a fully currency hedged basis. We use maturity-matched cross currency basis swaps to fully currency hedge principal and interest rate payments, and forward FX rates to fully hedge the stream of spread payments. We also adjust for the difference in quoting conventions with a 3 to 6M Euribor swap.

Source: BofA Merrill Lynch Global Research, Bloomberg, ICE Data Indices, LLC

Figure 87: US issuers: relative EUR and USD spreads

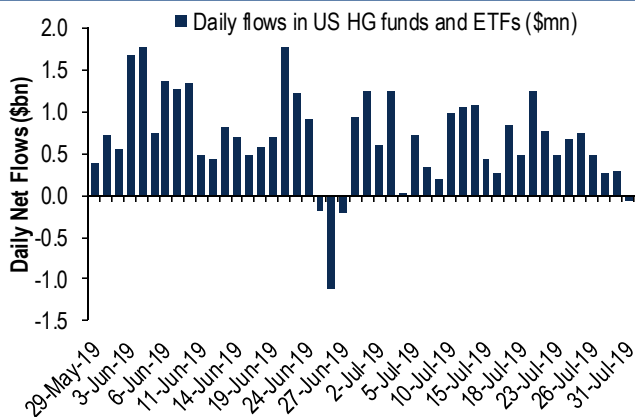


Note: the chart plots issuer-matched spreads on a fully currency hedged basis. We use maturity-matched cross currency basis swaps to fully currency hedge principal and interest rate payments, and forward FX rates to fully hedge the stream of spread payments. We also adjust for the difference in quoting conventions with a 3 to 6M Euribor swap.

Source: BofA Merrill Lynch Global Research, Bloomberg, ICE Data Indices, LLC

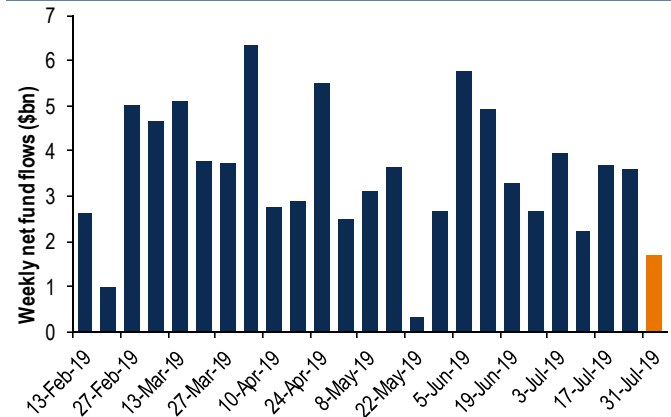
Mutual fund flows

Figure 88: Daily flows in the US HG funds and ETFs (\$mn)



Source: BofA Merrill Lynch Global Research, EPFR Global

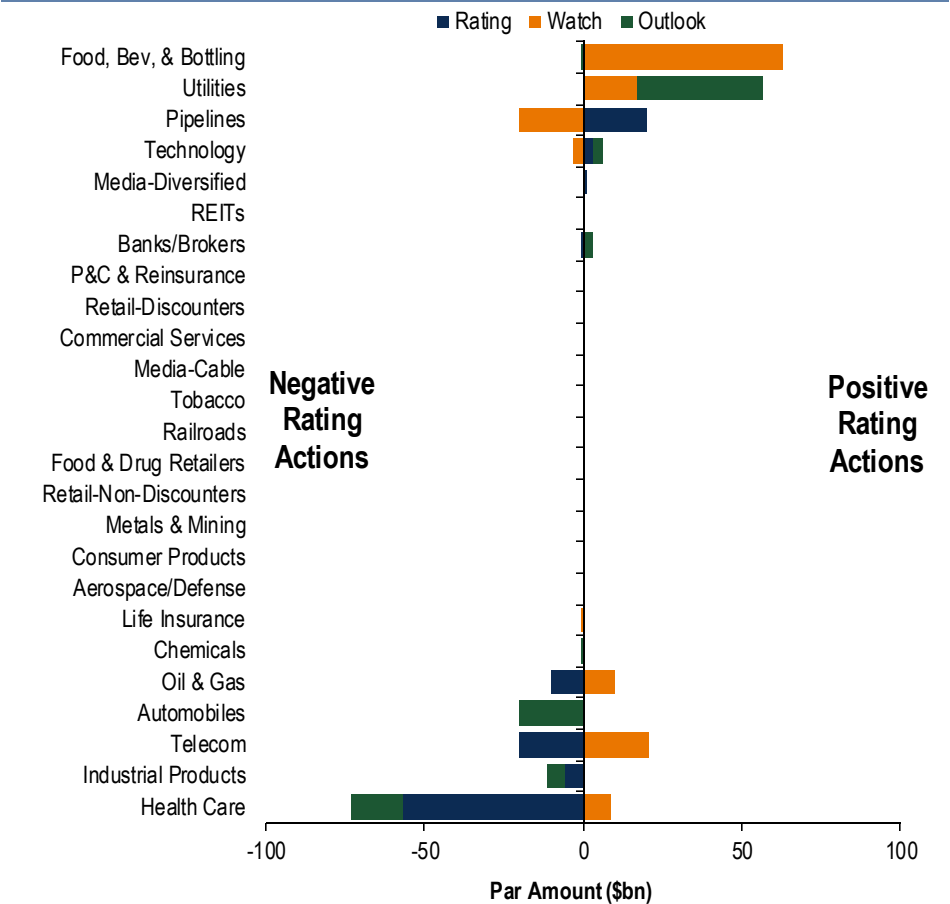
Figure 89: Weekly mutual fund net flows in HG credit funds



Source: BofA Merrill Lynch Global Research, EPFR

Rating actions summary

Figure 90: Weekly rating actions by sector, notional value in HG Master index

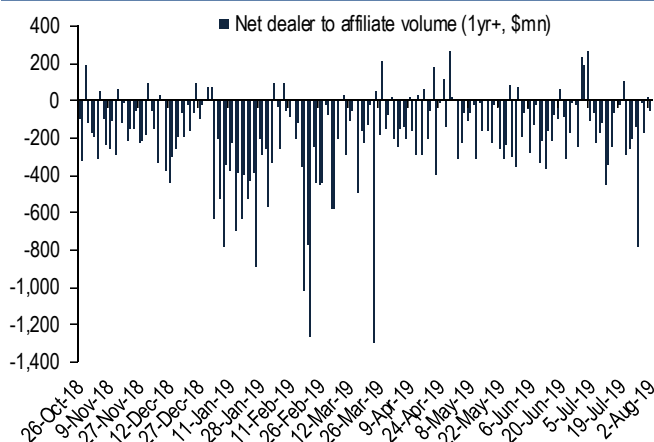


Source: BofA Merrill Lynch Global Research, ICE Data Indices, LLC

Daily foreign demand tracker

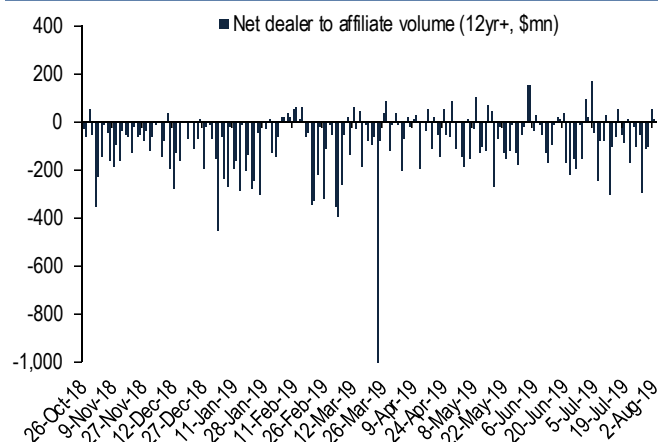
We believe net dealer-to-affiliate volumes from Trace are correlated with foreign buying of US HG corporate bonds - i.e., negative numbers mean foreign investor buying (US dealers taking down inventory in favor of foreign affiliates). For supporting material see our “primer” on tracking foreign inflows (See: [Credit Market Strategist: One year round-trip in spreads 15 July 2016](#)). Figure 91 shows the overall daily dealer-to-affiliate volumes while Figure 92, Figure 93 and Figure 94 show subsets of this data. In particular Figure 92 shows net dealer-to-affiliate volumes for longer maturity (12+ years) bonds, Figure 93 displays volumes reported to Trace before 8am NY time (biased toward Asian buying) and Figure 94 shows the subset of net trades reported between 8am and noon (biased toward European buying). Figure 91 and Figure 92 include data from today, whereas Figure 93 and Figure 94 run through the previous business day.

Figure 91: Net dealer buying from affiliate (1yr+)



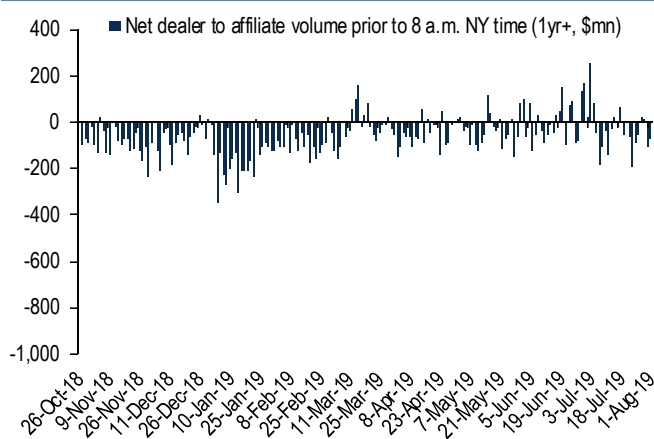
Note: Net dealer-to-affiliate volumes are correlated with foreign buying/selling. Negative numbers indicate foreign buying.
Source: Bloomberg, TRACE

Figure 92: Net dealer buying from affiliate (12yr+)



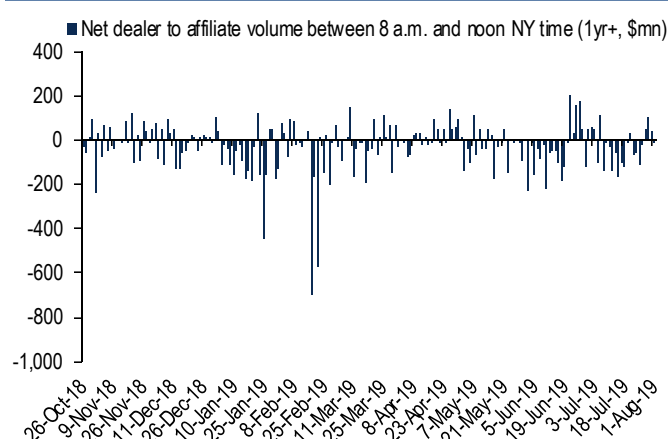
Note: Net dealer-to-affiliate volumes are correlated with foreign buying/selling. Negative numbers indicate foreign buying.
Source: Bloomberg, TRACE

Figure 93: Net dealer-to-affiliate trading volumes before 8 a.m. NY time



Note: Morning share of daily trading volume is correlated with secondary market activity of foreign investors due to different time zones.
Source: BofA Merrill Lynch Global Research, TRACE

Figure 94: Net dealer-to-affiliate trading volumes 8 a.m. - noon NY time



Note: Morning share of daily trading volume is correlated with secondary market activity of foreign investors due to different time zones.
Source: BofA Merrill Lynch Global Research, TRACE



Disclosures

Important Disclosures

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities. BofA Merrill Lynch Research Personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible. BofA Merrill Lynch fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for the purpose of any recommendation in relation to: (i) an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report; or (ii) a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including Bank of America Merrill Lynch trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities that may not be offered or sold in one or more states or jurisdictions. Readers of this report are advised that any discussion, recommendation or other mention of such securities is not a solicitation or offer to transact in such securities. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor for information relating to fixed income securities.

Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. SECURITIES DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

The securities discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these securities are exempt from registration or have been qualified for sale.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

This report, and the securities discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors.

Information relating to Affiliates of BofAS, MLPF&S and Distribution of Affiliate Research Reports:

BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <https://rsch.baml.com/coi>

"BofA Merrill Lynch" includes BofA Securities, Inc. ("BofAS"), Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Merrill Lynch" and "Merrill Lynch" are each global brands for BofA Merrill Lynch Global Research.

BofAS and/or MLPF&S or may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF); BAMLI DAC (Milan): Bank of America Merrill Lynch International DAC, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSCF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; DSP Merrill Lynch (India): DSP Merrill Lynch Limited, regulated by the Securities and Exchange Board of India; Merrill Lynch (Indonesia): PT Merrill Lynch Sekuritas Indonesia, regulated by Otoritas Jasa Keuangan (OJK); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow, regulated by the Central Bank of the Russian Federation; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V., regulated by Comisión Nacional del Mercado de Valores; Merrill Lynch (Brazil): Bank of America Merrill Lynch Banco Multiplo S.A., regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by Merrill Lynch (Japan), a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSCF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by DSP Merrill Lynch (India); and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Bank of America N.A., Australian Branch (ARBN 064 874 531), AFS License 412901 (BANA Australia) and Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distribute this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of BANA Australia, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. Bank of America Merrill Lynch International DAC, Frankfurt Branch (BAMLI DAC (Frankfurt)) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Merrill Lynch entities, including BAMLI DAC and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Merrill Lynch group. You may be contacted by a different BofA Merrill Lynch entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please use this link <http://www.bankofamerica.com/emaildisclaimer> for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security

discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Merrill Lynch.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Merrill Lynch clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst's particular "Overweight" or "Underweight" rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst's rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright, User Agreement and other general information related to this report:

Copyright 2019 Bank of America Corporation. All rights reserved. iQprofileSM, iQmethodSM are service marks of Bank of America Corporation. iQdatabase[®] is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Merrill Lynch clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Merrill Lynch. BofA Merrill Lynch Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Merrill Lynch and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Merrill Lynch.

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS or any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Merrill Lynch Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Merrill Lynch is under no obligation to update this information and BofA Merrill Lynch's ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Merrill Lynch will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.