This report is intended for brian.fagan@mackayshields.com

Situation Room

Pleasing shareholders

Bank of America 🧼 **Merrill Lynch**

13 August 2019

Credit Strategy United States Cross Product

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

Credit Strategy

Global Investment Strategy

Michael Hartnett Chief Investment Strategist +1 646 855 1508 michael.hartnett@baml.com

Jared Woodard

Investment Strategist +1 646 855 2600 jared.woodard@baml.com

Tommy Ricketts

Investment Strategist **BofAS** +1 646 855 2842 tommy.ricketts@baml.com

Economics Michelle Meyer

US Economist **BofAS** +1 646 855 6261 mmeyer2@baml.com

Joseph Song

US Economist +1 646 855 8138 jsong5@baml.com

Alexander Lin. CFA

US Economist **BofAS** +1 646 855 6499 alexander.lin@baml.com

See Team Page for List of Analysts

Pleasing shareholders. Our fresh global (equity) fund manager survey (FMS) shows a record 50% of investors saying corporate balance sheets are overleveraged (see: My herd is my bond 13 August 2019). This mirrors the sharp increase in leverage for US IG companies that began in 2015 on US economic weakness and the collapse in corporate yields. Of course the FMS has only been conducted since 2005, which means that the only recession in-sample was the global financial crisis, where corporate leverage never reached high levels. Had the FMS extended back to the early 2000s recession, where corporate leverage was also high, we suspect equity investors would have been pushing back on leverage as much as we see today.

- What's different this time. What we think is different this time is that leverage on IG corporate balance sheets reached worrisome levels a number of years prior to the next recession. With equity investors pushing back strongly on leverage - as many of these companies would be too large to continue business as usual should they get downgraded to HY - incentives are aligned for a large number of companies with relatively high leverage namely BBBs - to successfully pursue debt friendly action to put their balance sheets in better shape before the next recession. In prior cycles there was little time for this as the timing for the trigger in the form of pushback from equity investors was nearly coincident with the actual recession, which makes for an ugly scenario for a deleveraging process.
- **Best of BBBreed**. We track a growing list of currently 23 BBB rated companies that took debt friendly action since November 2017 (see: Credit Market Strategist 02 August 2019). Presently this list accounts for almost \$500bn of index eligible IG debt, or 20% of the nonfinancial, non-Utilities BBB segment. While these companies experienced increasing leverage, ratings downgrades and underperformance in the corporate bond market relative to other BBBs prior to taking debt friendly action, that all changed afterward. From the point they began outperforming materially in terms of credit spreads and leverage stabilized and eventually declined. While there is further downgrade risk for ratings, about six months after the action the ratings trajectory also turns positive. It is because of significant flexibility, time and incentives to deleverage, as well as generally speaking relatively stable cash flows, we are not overly concerned about Fallen Angel risk for the greatly expanded part of the US IG market that is rated BBB in the next recession. - Hans Mikkelsen, Yunyi Zhang
- A delay in tariffs. Some of the additional tariffs on Chinese goods were delayed until December 15th, while US and China officials had a "very productive" call according to President Trump. Risk assets rallied on this de-escalation of trade tensions, while Treasury curve bear flattened. - Yuri Seliger
- **Daily supply update**. \$10bn across 6 deals today with an average concession of 9.9bps and 1.5bps of tightening on the break, \$21.1bn WTD. Following the FDX example in July, UPS also issued \$1.5bn today to make pension contributions and repay CP. – Yunyi Zhang
- Daily foreign demand tracker. Yuri Seliger, Yunyi Zhang
- Other reports: 1) Global Fund Manager Survey: My herd is my bond, 2) Positive surprise in July core CPI, core PCE to rise trend-like 0.2%, 3) BofA on USA: Summer Black Friday.

This document is intended for BofA Merrill Lynch institutional investors only. It may not be distributed to BofA Merrill Lynch Financial Advisors, retail clients or retail prospects. Bof A 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 10 to 11.

Research Overview — The Situation

Hans Mikkelsen

Credit Strategist BofAS +1 646 855 6468 hans.mikkelsen@baml.com Yunyi Zhang

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

Pleasing shareholders

Our fresh global (equity) fund manager survey (FMS) shows a record 50% of investors saying corporate balance sheets are overleveraged (see: My herd is my bond 13 August 2019). This mirrors the sharp increase in leverage for US IG companies that began in 2015 on US economic weakness and the collapse in corporate yields (Figure 1). Of course the FMS has only been conducted since 2005, which means that the only recession in-sample was the global financial crisis, where corporate leverage never reached high levels. Had the FMS extended back to the early 2000s recession, where corporate leverage was also high, we suspect equity investors would have been pushing back on leverage as much as we see today.





Source: BofA Merrill Lynch Global Research, BofA Merrill Lynch Global Fund Manager Survey

What's different this time

What we think is different this time is that leverage on IG corporate balance sheets reached worrisome levels a number of years prior to the next recession. With equity investors pushing back strongly on leverage - as many of these companies would be too large to continue business as usual should they get downgraded to HY - incentives are aligned for a large number of companies with relatively high leverage - namely BBBs - to successfully pursue debt friendly action to put their balance sheets in better shape before the next recession. In prior cycles there was little time for this as the timing for the trigger in the form of pushback from equity investors was nearly coincident with the actual recession, which makes for an ugly scenario for a deleveraging process.

Best of BBBreed

We track a growing list of currently 23 BBB rated companies that took debt friendly action since November 2017 (see: Credit Market Strategist 02 August 2019). Presently this list accounts for almost \$500bn of index eligible IG debt, or 20% of the non-financial, non-Utilities BBB segment. While these companies experienced increasing leverage, ratings downgrades and underperformance in the corporate bond market relative to other BBBs prior to taking debt friendly action, that all changed afterward. From the point of debt friendly action they began outperforming materially in terms of credit spreads (Figure 2) and leverage stabilized and eventually declined (Figure 3). While there is further downgrade risk for ratings, about six months after the action the ratings trajectory also turns positive (Figure 4). It is because of significant flexibility, time and incentives to deleverage, as well as generally speaking relatively stable cash flows, we are not overly concerned about Fallen Angel risk for the greatly expanded part of the US IG market that is rated BBB in the next recession.

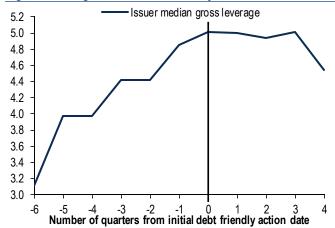
Figure 2: Non-Financial & Utility BBBs underperform, take debt-friendly action, then outperform



Note: Average issuer bond index spread across 23 events from t=-18 to t=0. 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

Figure 3: Leverage stabilizes and eventually declines after action date



Note: Median issuer gross leverage across 23 events from t=-6 to t=-1. From t=0 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=0 we have 22 events. t=1 18 events and t=4 7 events.

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

Figure 4: Ratings trajectory turns positive ~6 months after action date



Number of months from initial debt friendly action date

Note: Average issuer ratings across 23 events from t=-18 to t=0. 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

Credit Strategy

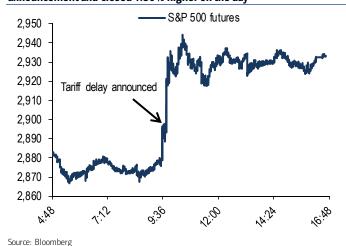
Yuri Seliger

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

A delay in tariffs

This morning USTR (the Office of the United States Trade Representative) announced that some of the additional tariffs on approximately \$300bn of Chinese goods will be delayed until December 15th. Originally all tariffs were scheduled to go into effect on September 1st. Our economists estimate that the value of the goods on which tariffs were delayed accounts for over half of the total. In addition in an interview Trump called "very productive" a call between Chinese Vice Premier Liu He and U.S officials that was held earlier today. Both sides agreed to talk again within two weeks, according to news reports. Not surprisingly stocks took this de-escalation of trade tensions positively. The S&P 500 index rallied 1.0% immediately following the announcement and closed 1.50% higher on the day (Figure 5). Chinese currency (off-shore) appreciated by 1.3% (Figure 6). The Treasury curve bear-flattened, with 2, 5, 10 and 30-year Treasury yields increasing 8, 9, 6 and 3bps, respectively. CDX IG closed 4.95pbs tighter on the day, while CDX HY was \$0.87pts higher. IG bond spreads opened unchanged to a few bps wider. Then following the trade headlines spreads improved to a few bps tighter on the day, on average.

Figure 5: S&P 500 index rallied 1.0% immediately following the announcement and closed 1.50% higher on the day



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

Figure 6: Chinese currency (off-shore) appreciated by 1.3%



Source: Bloomberg

Daily supply update

USD IG new issuance continues to be heavy with another \$10bn priced across 6 deals today, bringing us to \$21.1bn week-to-date (Figure 7). Following the FDX example in July, UPS also issued \$1.5bn today to make pension contributions and repay CP. The average new issue concession remains elevated at 9.9bps today versus 9.7bps yesterday, while the average break performance improved to 1.5bps tighter today from 0.9bps tighter yesterday. This week's new issues are trading 1.2bps tighter from pricing. Note that despite the heavy supply volume, dealer inventories declined by about \$70mn today, driven by client buying in the front-end and affiliate buying in the intermediate to long-end. Risk assets rallied on positive trade-related macro headlines (see piece above). Liquid credit secondaries also rallied with US banks 1-3bps tighter, TMT 1-4bps tighter, consumer retail unchanged to 2bps tighter, health care 3bps tighter to 2bps wider, and energy 1-3bps tighter, and general industrials unchanged to 3bps tighter on the day.

Figure 7: Recent new issue pricing and new issue concessions

				Size	Moody's/S&P	Coupon	Px Spread	New Issue	* Break	Current
Date	Ticker	Nam e	Tenor	(\$mm)	Rating	(%)	(bps)	Conc. (bps) performance spread (bps)		
2019-08-12	CNP	CenterPoint Energy Inc	5	\$500	Baa2/BBB	2.5	105	14	-3	103
2019-08-12	CNP	CenterPoint Energy Inc	11	\$400	Baa2/BBB	2.95	135	1	-2	134
2019-08-12	CNP	CenterPoint Energy Inc	30	\$300	Baa2/BBB	3.7	163	n.a.	-1	162
2019-08-12	DAIGR	Daimler Finance North America LLC	3	\$1,500	A2/A	FRN	3mL+90	n.a.	n.a.	n.a.
2019-08-12	DAIGR	Daimler Finance North America LLC	3	\$1,250	A2/A	2.55	105	n.a.	-2	100
2019-08-12	DAIGR	Daimler Finance North America LLC	5	\$750	A2/A	2.7	125	n.a.	-3	121
2019-08-12	DAIGR	Daimler Finance North America LLC	10	\$500	A2/A	3.1	150	29	-6	142
2019-08-12	DUK	Duke Energy Carolinas LLC	10	\$450	Aa2/A	2.45	82	6	-2	82
2019-08-12	DUK	Duke Energy Carolinas LLC	30	\$350	Aa2/A	3.2	110	1	-2	110
2019-08-12	EVRG	Westar Energy Inc	30	\$300	A2/A	3.25	117	13	-1	118
2019-08-12	LNC	Lincoln National Corp	10	\$500	Baa1/A-	3.05	142	9	5	147
2019-08-12	OKE	ONEOK Inc	5	\$500	Baa3/BBB	2.75	130	10	-2	126
2019-08-12	OKE	ONEOK Inc	10	\$750	Baa3/BBB	3.4	180	14	-1	180
2019-08-12	OKE	ONEOK Inc	30	\$750	Baa3/BBB	4.45	235	12	-1	234
2019-08-12	PNW	Arizona Public Service Co	10	\$300	A2/A-	2.6	98	4	-2	96
2019-08-12	SHW	Sherwin-Williams Co/The	10	\$800	Baa3/BBB	2.95	135	-1	1	134
2019-08-12	SHW	Sherwin-Williams Co/The	30	\$550	Baa3/BBB	3.8	170	7	1	170
2019-08-12	VTR	Ventas Realty LP	10	\$650	Baa1/BBB+	3	140	14	3	144
2019-08-13	AMTD	TD Ameritrade Holding Corp	10	\$500	A2/A	2.75	108	-2	n.a.	n.a.
2019-08-13	BRX	Brix mor Operating Partnership LP	10	\$350	Baa3/BBB-	4.125	165	15	n.a.	n.a.
2019-08-13	DRE	Duke Realty LP	8	\$175	Baa1/BBB+	3.375	113	7	n.a.	n.a.
2019-08-13	REG	Regency Centers LP	10	\$425	Baa1/BBB+	2.95	127	8	-2	125
2019-08-13	UPS	United Parcel Service Inc	5	\$400	A2/A	2.2	65	6	n.a.	n.a.
2019-08-13	UPS	United Parcel Service Inc	10	\$400	A2/A	2.5	85	15	n.a.	n.a.
2019-08-13	UPS	United Parcel Service Inc	30	\$700	A2/A	3.4	130	18	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	3	\$750	AAA/AA+	FRN	3mL+33	n.a.	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	3	\$750	AAA/AA+	1.902	30	-1	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	5	\$1,000	AAA/AA+	2.019	45	9	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	7	\$1,000	AAA/AA+	2.275	65	18	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	10	\$1,250	AAA/AA+	2.44	75	13	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	20	\$750	AAA/AA+	2.995	85	n.a.	n.a.	n.a.
2019-08-13	XOM	Exxon Mobil Corp	30	\$1,500	AAA/AA+	3.095	95	13	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. Source: BofA Merrill Lynch Global Research

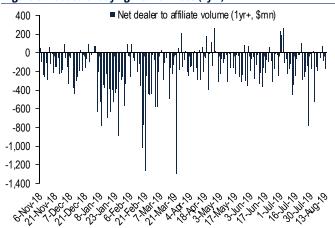
Yuri Seliger Credit Strategist BofAS +1 646 855 7209 yuri.seliger@baml.com Yunyi Zhang Credit Strategist BofAS +1 646 855 8696 yunyi.zhang@baml.com

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 8 shows the overall daily dealer-to-affiliate volumes while Figure 9, Figure 10 and Figure 11 show subsets of this data. In particular Figure 9 shows net dealer-to-affiliate volumes for longer maturity (12+ years) bonds, Figure 10 displays volumes reported to Trace before 8am NY time (biased toward Asian buying) and Figure 11shows the subset of net trades reported between 8am and noon (biased toward European buying). Figure 8 and Figure 9 include data from today, whereas Figure 10 and Figure 11 run through the previous business day.

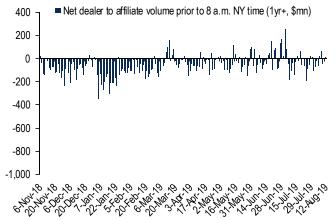
Figure 8: Net dealer buying from affiliate (1yr+)



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

Source: Bloomberg, TRACE

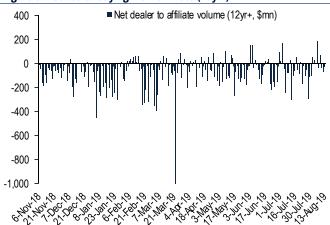
Figure 10: Net dealer-to-affiliate trading volumes before 8 a.m. NY time



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

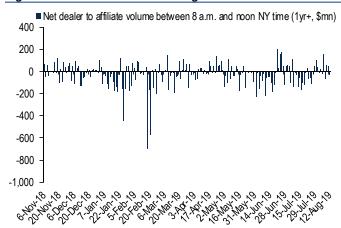
Figure 9: Net dealer buying from affiliate (12yr+)



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

Source: Bloomberg, TRACE

Figure 11: 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

Global Investment Strategy

Michael Hartnett

Chief Investment Strategist BofAS +1 646 855 1508 Jared Woodard

Investment Strategist BofAS +1 646 855 2600

Tommy Ricketts

Investment Strategist BofAS +1 646 855 2842 tommy.ricketts@baml.com

> Previously published here Global Fund Manager Survey: My herd is my bond 13 August 2019

Global Fund Manager Survey: My herd is my bond

The BofAML August Global Fund Manager Survey

The nut: August BofAML FMS most bullish on rates since 2008 as trade war concerns send recession risk to 8-year high; investors slash exposure to cyclicals to buy US Treasuries & US growth stocks; with global policy stimuli at a 2.5-year low, onus is on Fed/ECB/PBoC to restore animal spirits.

On growth: 1/3 of FMS investors expect a global recession in the next 12 months, the highest since 2011.

On policy: FMS investors say global fiscal & monetary policy mix is the most hawkish since Nov'16; only 9% see higher bond yields in the next 12 months, the most bullish stance on rates since 2008.

On leverage: 1/2 of FMS investors say corporates are excessively leveraged, a new record; investors want corporates to use cash to improve balance sheets > capex or buybacks.

On risk appetite: in contrast to June, the FMS cash level did not surge as growth expectations plunged...August cash levels fell from 5.2% to 5.1%; BofAML Bull & Bear Indicator holds at 3.7 (not extreme bearish though record net % say they have taken out protection).

On rotation: FMS investors sold cyclical value (Japan at 7-year low, industrials 2nd biggest MoM drop ever), bought defensives/growth (staples, tech) & bonds (#1 most crowded FMS trade = long US Treasuries); "growth over value" highest since GFC.

On US: FMS investors say US equities are the most preferred region over the next 12 months despite 78% saying the region is overvalued; note combination of two 2nd most extreme on record (#1 Aug'18).

On bubbles: FMS investors say biggest central bank-induced bubble risk in: #1 corporate bonds (33%), #2 Govt bonds (30%), #3 US equities (26%), #4 gold (8%).

FMS contrarian trades: contrarians should be long inflation vs. deflation assets (equities>bonds, Japan>US, industrials>pharma).

Economics



Alexander Lin, CFA

US Economist BofAS +1 646 855 6499 alexander.lin@baml.com

Michelle Meyer

US Economist BofAS +1 646 855 6261 mmeyer2@baml.com

Previously published here

<u>US Economic Watch: Positive surprise in July core CPI, though core PCE to</u> rise trend-like 0.2% 13 August 2019

Positive surprise in July core CPI, core PCE to rise trend-like 0.2%

Core CPI starts a strong streak

Core CPI posted a second consecutive 0.3% pickup (0.29% unrounded) in July, which bumped up yoy inflation to 2.2% from 2.1%. Headline CPI also posted a 0.3% increase mom as energy rose 1.3%. Looking at the components, the upside surprise owed to likely transitory influences. Transportation services increased 0.3% bolstered by an outsized 2.3% pop in airline fares. Education & communication commodities jumped 1.1%, as computers saw a record increase of 2.8% mom. Other goods rebounded 0.6% mom after a 0.3% drop in June, supported by a 0.6% jump in personal care products which was the strongest gain since October 2015. Personal care services also accelerated to 0.5% mom after averaging a more tepid 0.1% over the prior 6 months.

That said, stickier sources of inflation were healthy. Although there was some cooling in rents as primary rents grew 0.28% and owners' equivalent rent (OER) grew 0.25%, both were quite robust in June and the moves in July put them closer to sustainable trends. Broader shelter prices held at 0.3% mom as lodging away from home jumped 0.9%, offsetting rents. Meanwhile, medical services inflation accelerated to a 0.5% mom clip from 0.4% previously, and we continue to be positive on medical services going forward.

Elsewhere, household furnishings & supplies picked up 0.3% mom for a third straight month, likely reflecting tariff pressures from the recent hike on Chinese imports. Healthcare goods, recreation services, education & communication services, water, sewer, & trash collection services all rose 0.2% mom. Apparel, used cars, and household operations slowed from July but posted gains of 0.4%, 0.9%, and 0.6%, respectively. New cars decreased 0.2% mom and recreation commodities fell 0.4%.

What does this mean for core PCE? The PPI data last week suggested flat healthcare PCE and a modest increase in financial services. Coupled with CPI, we predict a 0.2% (0.17% unrounded) mom rise in core PCE, keeping % yoy steady at 1.6%. This eases some concern for the Fed but won't dramatically change their easing bias.

Michelle Meyer US Economist BofAS +1 646 855 6261 mmeyer2@baml.com Joseph Song US Economist BofAS +1 646 855 8138 jsong5@baml.com Previously published here

<u>BofA on USA: Summer Black Friday 13 August 2019</u>

BofA on USA: Summer Black Friday

A promotional July

Consumers continued with their shopping spree in July. Based on BAC aggregated credit and debit cards, retail sales ex-autos climbed 0.8% month-over-month (mom) seasonally adjusted (SA) in July, following the strong gain in June. Before we break out the champagne, we caution that there are two reasons for such exceptional spending in the month: 1) Amazon Prime Day and promotions from other retailers and 2) the historic heatwave which hit much of the country.

For the past five years, Amazon has offered promotions in mid-July called "Prime Day". It first started with just 24 hours of promotions and has expanded to a full 48 hours in 2019. This year, Amazon's Prime Day promotions were matched by large-scale promotions from other retailers with advertisements suggesting that it was the "Black Friday" of the summer. Consumers noticed and ramped up spending during this period. Indeed, the Chart of the month shows an aggregate for such discretionary spending on a daily basis, with July 1st 2016 level indexed to 1. We shaded the dates where the Prime Day promotions hit this year. There is clear level shift higher in spending over these dates. Importantly, the impact has increased over the years - it was negligible in 2016 and 2017, modest in 2018 and large this year. We can use this proxy to estimate the boost on total spend - we find that incremental spending in this category over the prime day period added 0.4% to the MOM growth rate of retail sales ex-autos, all else equal.

The weather also played a role in supporting spending but by a lesser degree. More than half of the continental United States experienced historically hot weather. We created two samples: one with states that were impacted by the weather and the other with the "typical" weather states. We find that spending was higher in the impacted states, particularly in groceries, utilities and gasoline. Indeed, once the heat wave started on July 13th, the growth rate in spending in the impacted states diverged (Chart 3).

Bottom line: consumer spending was robust, aided by the special factors mentioned above. Looking ahead, we will be closely monitoring to see if strong spending continues into August without promotions and in the face of an escalation in the trade war.

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.

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 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 Italy, the Financial (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 (HKSFC); 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): 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 (Brazil): Bank of the Russian Federation; Merrill Lynch (DFC): Merrill Lynch (DFC) Franch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Spain): Merrill Lynch Capit

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 HKSFC; 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 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.

Research Analysts

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

This document is intended for BofA Merrill Lynch institutional investors only. It may not be distributed to BofA Merrill Lynch Financial Advisors, retail clients or retail prospects.