

# The Flow Show

## Empty Main St, crowded Wall St

**Scores on the Doors:** commodities 3.6%, global equities 1.6%, gold 1.0%, HY bonds 0.5%, cash 0.0%, US\$ -0.1%, government bonds -0.4%, IG bonds -0.8%; early doors but last time commodities best performing asset class was 2002 (see quilt – page 10), same year US\$ decisively entered bear market following 9/11 & China/WTO (Chart 3).

**Flows:** \$29.1bn into cash, \$14.9bn into bonds, \$11.2bn into equities, \$1.5bn into gold; continues 2020 winning flow trends (\$917bn to cash, \$387bn to bonds, \$182bn to equities, \$54bn to gold).

**Flows to know:** inflationary...largest inflow to gold since Aug'20, big EM debt inflows (\$3.0bn), 6<sup>th</sup> largest inflow to energy ever (\$1.9bn), big inflows to financials (\$1.9bn).

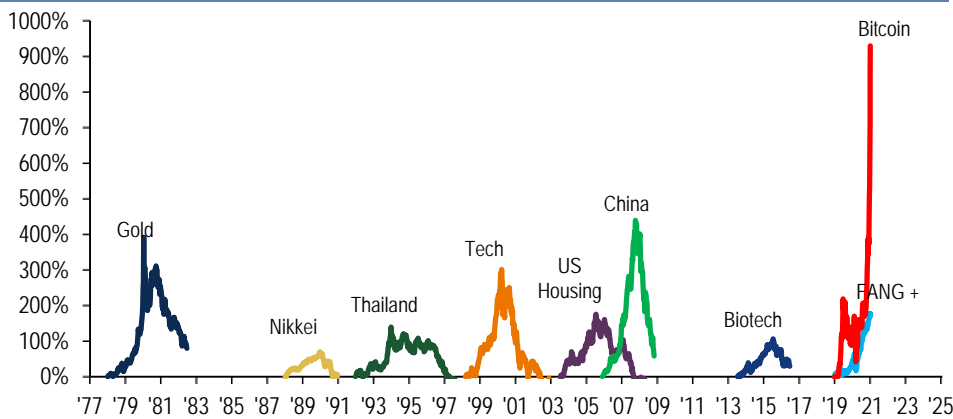
**Rotation flows to know:** for every \$100 of redemptions from EM, financials, Europe, value, small cap between Jan-Oct'20, past 2 months have seen \$58 of inflows back into reopening/cyclical/inflation assets (Chart 4-5).

**BofA Bull & Bear Indicator:** up to 7.1 (Chart 1) from 6.7 (Dec 17<sup>th</sup>); BofA private client up to 61.7% of \$2.9tn AUM in equities, closing in on Mar 2015 peak – Chart 18).

**Big Change...Great Rotation:** big investment trends of 2020s are bigger government, smaller world, US dollar debasement, FX wars, monetary to fiscal excess, subservient central banks via MMT, peak inequality...growing belief in weaker dollar and higher yields (Chart 6); best secular inflation trade is long commodities, short credit (Chart 7).

**GT10>1%:** violent inflationary price action past two months (Chart 8)...Bitcoin up 180% (cryptocurrency market now >\$1tn as Bitcoin past 2 years blows-the-doors-off prior bubbles – Chart 2), steel 61% (Chart 9), European banks 48%, US regional banks 41%, small cap value 37%, EM materials 38%.

**Chart 2: Bitcoin, the Mother-of-all-bubbles?**



Source: BofA Global Investment Strategy, Bloomberg ; Note: Gold (XAU Currency), Japanese Equities (NKY Index), Thai Equities (SET Index), Tech (NDX Index), US Housing (SSHOME Index), Commodities (SHCOMP Index), Biotech (NBI Index), FANG+ (NYFANG Index), Bitcoin (XBTUSD Currency)

More on Page 2

**BofA Securities 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 12 to 13.**

12230758

Timestamp: 07 January 2021 09:01PM EST

07 January 2021

Investment Strategy  
Global

BofA  
Data  
Analytics

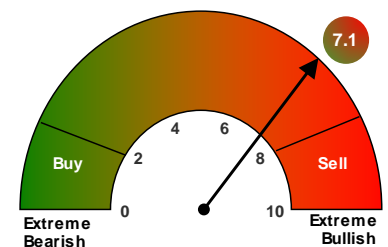


**Michael Hartnett**  
Chief Investment Strategist  
BofAS  
+1 646 855 1508  
michael.hartnett@bofa.com

**David A. Jones**  
Investment Strategist  
BofAS  
david.jones5@bofa.com

**Shirley Wu**  
Investment Strategist  
BofAS  
+1 646 855 3081  
s.wu@bofa.com

**Chart 1: BofA Bull & Bear Indicator**



Source: BofA Global Investment Strategy  
The indicator identified above as the BofA Bull & Bear Indicator is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This indicator was not created to act as a benchmark.

**2021 BofA macro forecasts:** global GDP to surge 5.4% (best since 1973), US GDP to surge 4.5% (best since 1999), China GDP to surge to 8.5% (best since 2011), US 10-year Treasury yield up to 1.5% by year-end, gold to \$2100/oz; global consensus for 2021 is uber-Goldilocks played via assets in “old economy USA” & “new economy China.”

**Sell the Vaccine:** frothy prices, greedy positioning, inflationary & desperate policy makers, peaky China & consumer all ultimately toxic brew in 2021; we continue to say Q1 “sell the vaccine” on peak Positioning, Policy, Profits; thus far premature call as weak vaccine rollout, blue wave & Powell/Yellen gravy give investors free call option for risk.

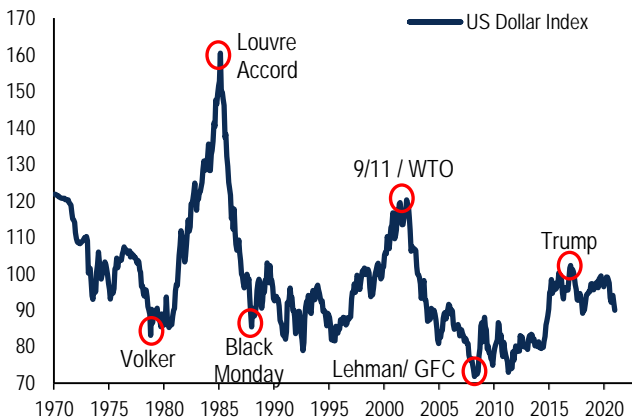
**3P’s:** 1. peak Positioning likely Feb/Mar signaled via BofA Bull & Bear Indicator; 2. peak Policy signaled via trough credit spreads (note correlation with cash as % of equity market cap – Chart 10) likely Mar/April; 3. peak Profits likely April/May (when YoY macro will be strongest in years – Chart 11).

**Liquidity warning signs:** contrarian bear catalyst in 2021 = rates not profits; early warning signs that rates are turning bearish for risk...

- Credit: LQD drops below \$133 and/or levered loans start to significantly outperform (Charts 12-13),
- Dollar: surprise rally as weaker Europe & Asia growth require bout of US dollar strength.
- China: CNY and SHCOMP follow Chinese bond yields lower signaling weaker growth (Chart 14).
- Inflation: inflation prints spook Fed balance sheet bulls (food prices at 6-year highs, up 20% past 8 months)
- Froth: higher yields trigger losses in speculative favorites e.g. XBT, TSLA.
- Rate-sensitives: classic lower rate plays such as XHB, SOX breakdown.

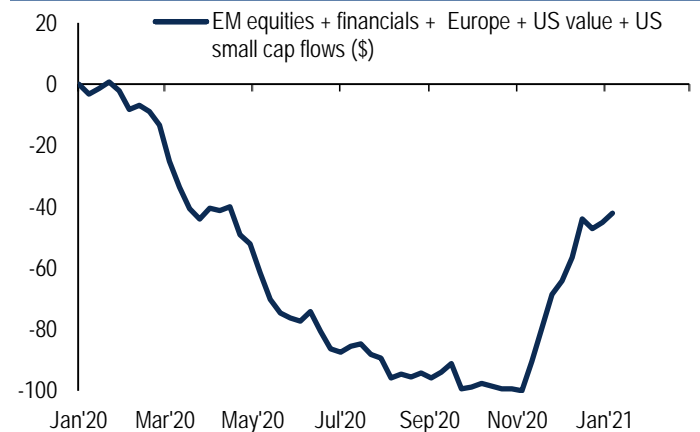
**Bull risk remains bubble:** decade-long backdrop of maximum liquidity and technological disruption has caused maximum inequality & massive social and electoral polarization...value of US financial assets (Wall Street) now 6X size of GDP (Main Street – Chart 15); investor price action increasingly speculative (IPOs, SPACs...), wealth gains obscene, but extreme asset bubbles natural end to nihilistic bull markets of past decade; bubbles (e.g.) in risk asset prices ignore rising rates & humiliated investors worried about “peak positioning”; we’ll know if it’s a bubble by end-Q1.

**Chart 3: Commodities outperformed in '02 when USD declined**



Source: BofA Global Investment Strategy, Bloomberg

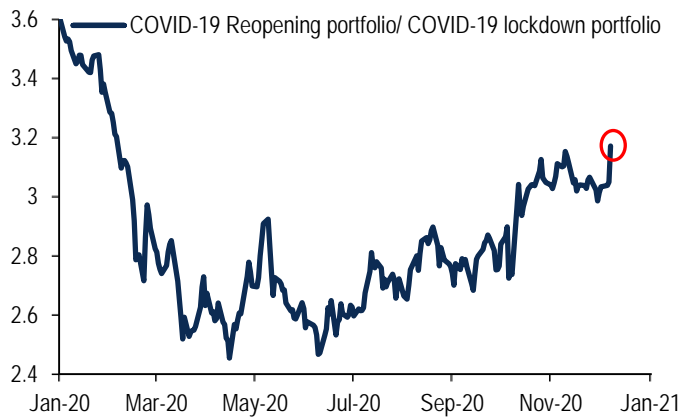
**Chart 4: \$58 of inflows into cyclicals for every \$100 out**



Source: BofA Global Investment Strategy, EPFR Global

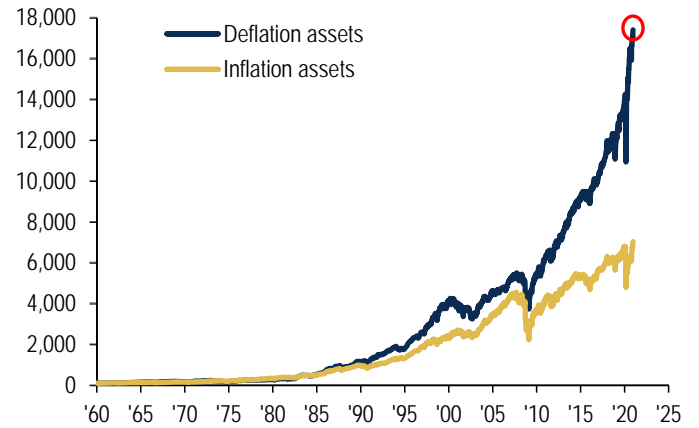


**Chart 5: Reopening trade outperforming lockdown**



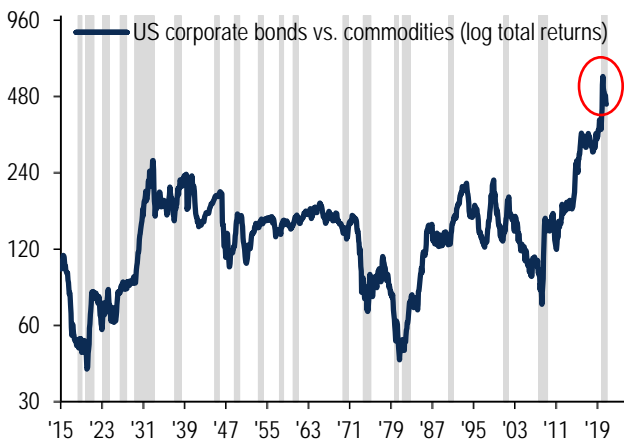
Source: BofA Global Investment Strategy, Bloomberg

**Chart 6: Deflation assets at all-time highs vs Inflation assets**



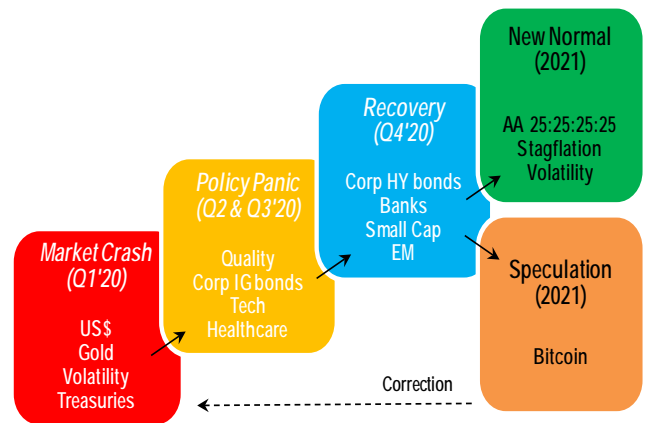
Source: BofA Global Investment Strategy, Global Financial Data, Bloomberg; Note: Inflation assets: Commodities, real estate, TIPS, EAFE, US Banks, Value and Cash; Deflation assets = Govt bonds, US IG, S&P 500, US Cons. Disc, Growth and US HY.

**Chart 7: Best secular inflation trade is long commodities, short credit**



Source: BofA Global Investment Strategy, Bloomberg, Global Financial Data

**Chart 8: Chronology of a Rally**



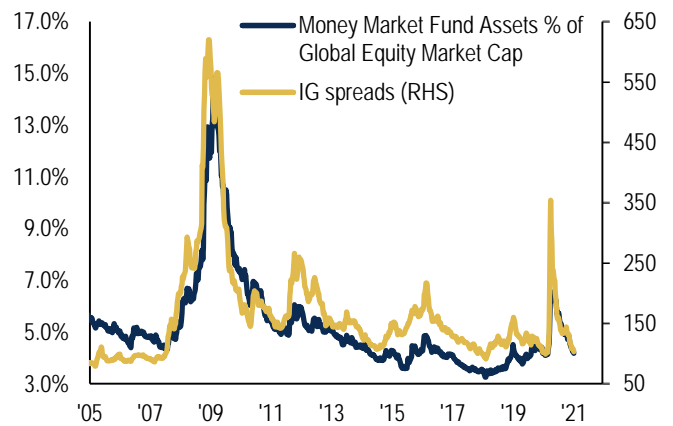
Source: BofA Global Investment Strategy

**Chart 9: Steel highest since Apr'12**



Source: BofA Global Investment Strategy, Bloomberg

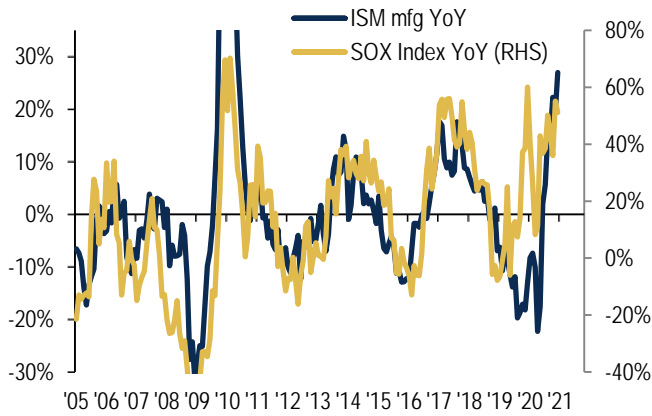
**Chart 10: Credit still the belly of the beast**



Source: BofA Global Investment Strategy, Bloomberg

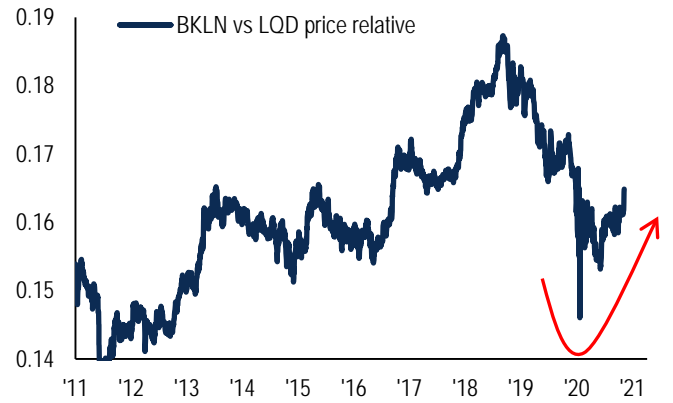


**Chart 11: US manufacturing growth strongest since 2010**



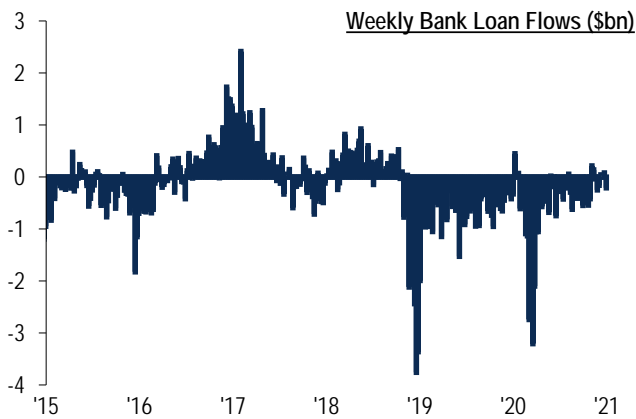
Source: BofA Global Investment Strategy, Bloomberg

**Chart 12: Watch significant underperformance versus levered loans**



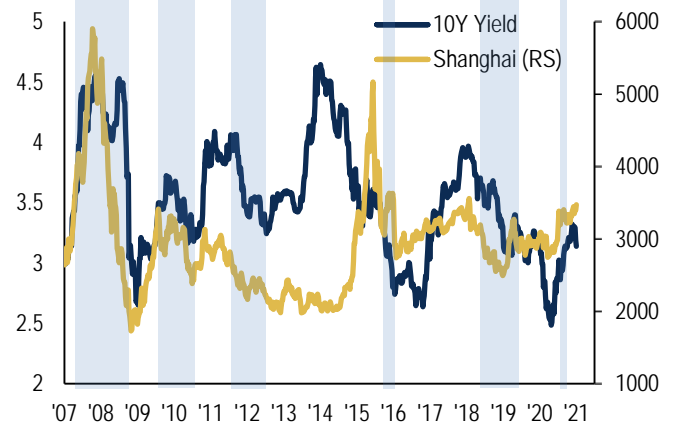
Source: BofA Global Investment Strategy, Bloomberg

**Chart 13: Watch bank loans**



Source: BofA Global Investment Strategy, EPFR Global

**Chart 14: Watch China...leading all asset markets**



Source: BofA Global Investment Strategy, Bloomberg

**Chart 15: Wall St. now 6x the size of Main St.**



Source: BofA Global Investment Strategy, Haver; note private sector financial assets includes currency, deposits, equity shares, and other securities and does not include real estate.



Table 1: BofA Fiscal &amp; Monetary Policy Tracker

Country	Fiscal Stimulus (\$bn)	Monetary Stimulus (\$bn)	% GDP	Rate Cut	Central Bank Actions	Fiscal Stimulus
Japan	1832.6	1692.2	68.4%	-	BoJ boost to asset purchases; QE	SME Loans and public aid; FLIP; Tax Deferrals; Health aid
Italy*	972.6	504.6	73.8%	-	-	SME Loans and public aid
Germany*	1722.2	969.8	70.0%	-	-	Loan commitments; healthcare aid
Singapore	70.1	88.0	43.6%	-	Cut Rates; Lending	SME Loans and public aid
UK	678.4	690.1	48.4%	0.65%	Cut Rates; BoE capital buffer boost; QE	SME Loans and public aid
Bulgaria*	20.6	16.7	56.3%	-	-	SME Loans and Healthcare aid
Sweden*	72.5	215.4	54.2%	-	SEK500Bn (\$50Bn) to SMES	Public aid and delayed taxes
Poland*	170.6	148.8	54.1%	1.40%	Cut Rates; Reduce reserve ratio	SME Loans and public aid
France*	761.6	682.5	53.3%	-	-	Loan commitments; SME Loans and public aid
Romania*	54.3	53.4	50.9%	1.00%	Cut Rates	SME Loans and public aid
Denmark*	84.0	88.7	49.1%	-0.15%	Raised Rates	Paid wages
Spain*	328.7	351.3	48.8%	-	-	Loan guarantees
New Zealand	47.0	18.0	32.0%	0.75%	Cut Rates; Lending	SME Loans and public aid
Bahrain	11.3	-	29.6%	0.75%	Cut Rates	SME Loans and public aid
Austria*	86.1	112.5	44.5%	-	-	Loan commitments; SME Loans and public aid
USA	3742.0	4620.4	38.5%	1.50%	Cut rates to 0%; Unlimited QE; \$1.5Tn on reverse repos; Commercial Paper Funding Facility; Primary Dealer Credit Facility; Money Market Mutual Fund Liquidity Facility; Dollar Swap Line with Central Banks; TALF	SME Loans and public aid; Direct consumer checks; Healthcare aid
Czech*	45.2	62.0	43.6%	2.00%	Cut Rates	SME Loans and public aid
Canada	267.7	652.4	52.8%	1.50%	Cut Rates; QE	Direct support; tax deferrals; SME Loans and public aid; Business Credit Availability
Finland*	43.2	68.0	41.2%	-	-	Healthcare aids; SME Loans
EU*	2133*	4612*	21.1%	-	ECB QE; TLTRO facility; PEPP of public/private securities	Direct support; tax deferrals; SME Loans and public aid; credit lines
Colombia	14.0	2.6	20.9%	2.50%	Cut Rates; Lending	Cash transfers; Health commitment
Australia	197.0	243.1	38.6%	0.65%	Cut Rates; Bank lending; ABS purchases; Yield Curve Control; QE	SME Loans and public aid; Subsidies
Chile	28.7	32.0	20.6%	1.25%	Cut Rates; Credit lines to banks; Purchase of \$4Bn in bank bonds	Healthcare aid, SME Loans and public aid
Peru	32.8	8.7	19.6%	2.00%	Cut Rates; Lending	Cash Transfer
United Arab Emirates	7.2	70.0	19.0%	-	Lending	-
Ireland*	37.2	98.0	34.8%	-	-	SME Loans and public aid
Thailand	61.2	31.2	17.4%	0.75%	Cut Rates; Lending	SME Loans and public aid
Netherlands*	72.1	229.2	33.1%	-	-	Healthcare aid
Iceland	1.6	3.2	16.9%	1.25%	Cut Rates; Lending	SME Loans and public aid
India	486.7	49.6	16.7%	1.15%	Cut Rates; Lending	SME Loans and public aid
Dominican Republic	-	12.1	14.8%	1.00%	Cut Rates; Lending	-
South Korea	222.7	1.2	14.0%	0.75%	Cut Rates; Broaden the eligible collateral for open market operations; QE	SME Loans and public aid; Liquidity to financial markets
Turkey	89.3	-	12.0%	-3.75%	Cut Rates	SME Loans and public aid; Tax cuts
Hong Kong	37.2	6.5	11.7%	1.14%	Cut Rates; Lending	SME Loans and public aid
Brazil	199.3	10.0	11.2%	2.25%	Cut Rates; Lending	Healthcare aid, SME Loans and public aid; Credit lines to individuals and firms; Tax cuts
Switzerland	74.9	-	10.7%	-	-	SME Loans and public aid
Tunisia	1.2	-	10.3%	0.50%	Cut Rates	Healthcare aid
Hungary*	29.8	40.6	25.2%	1.10%	Cut Rates	-
Mexico	11.2	94.0	8.3%	3.25%	Cut Rates; Lending	Healthcare aid
China	904.2	251.1	8.2%	0.35%	Cut Rates; Expanded repos; RRR cuts	Loan commitments; rate cuts for some banks; Relief Measures
South Africa	26.3	-	7.3%	2.75%	Cut Rates	Tax exemptions
Indonesia	76.2	-	6.9%	1.00%	Cut Rates	Loan commitments; public and health aid
Senegal	1.3	-	5.4%	-	-	Healthcare aid
Philippines	12.1	6.4	5.2%	1.75%	Cut Rates; Cut reserve requirement	Healthcare aid, SME Loans and public aid
Norway	19.5	-	4.7%	1.50%	Cut Rates; Bank lending	SME Loans and public aid
Argentina	23.1	-	4.5%	-	-	SME Loans and Healthcare aid
Saudi Arabia	21.0	13.3	4.4%	0.75%	Cut Rates; Lending	SME Loans and public aid
Kazakhstan	7.5	-	4.4%	2.75%	Cut Rates	Healthcare aid



**Table 1: BofA Fiscal & Monetary Policy Tracker**

Country	Fiscal Stimulus (\$bn)	Monetary Stimulus (\$bn)	% GDP	Rate Cut	Central Bank Actions	Fiscal Stimulus
Israel	-	16.3	4.2%	0.15%	Cut Rates; Lending; Corporate debt purchases	-
El Salvador	1.0	-	3.8%	-	-	Cash transfers
Bangladesh	3.4	9.5	3.7%	1.25%	Cut Rates; Lending	Healthcare aid
Russia	55.3	-	3.3%	1.75%	Cut Rates	Healthcare aid, SME Loans and public aid; education aid
Egypt	6.4	-	2.1%	1.50%	Cut Rates	SME Loans and public aid
Malaysia	4.7	3.0	2.1%	1.25%	Cut Rates; Cut reserve ratio	SME Loans and public aid
Qatar	-	3.6	1.9%	0.50%	Cut Rates; Lending	-
Guatemala	-	1.5	1.8%	1.00%	Cut Rates; Lending	-
Guatemala	-	1.5	1.8%	1.00%	Cut Rates; Lending	-
Pakistan	3.6	1.1	1.6%	8.25%	Cut Rates; Lending	-
Vietnam	4.2	-	1.6%	1.50%	Cut Rates	SME Loans and public aid; Tariff Exemptions
Albania	0.2	-	1.3%	0.50%	Cut Rates	Healthcare aid
Mongolia	-	0.1	0.9%	1.00%	Cut Rates; Lending	-
Honduras	0.2	-	0.8%	0.75%	Cut Rates	Healthcare aid
Kenya	0.5	-	0.6%	1.25%	Cut Rates	-
Nigeria	1.8	-	0.4%	2.00%	Cut Rates	-
Taiwan	2.0	-	0.3%	0.25%	Cut Rates	SME Loans and public aid
Georgia	0.6	-	0.1%	0.50%	Cut Rates	-
IMF	200.0	-	-	-	-	Public Emergency Aid; Loan commitments
World Bank	12.0	-	-	-	-	SME Loans and public aid
Zimbabwe	-	-	-	10.00%	Cut Rates	-
Ukraine	-	-	-	4.00%	Cut Rates	-
Sri Lanka	-	-	-	3.75%	Cut Rates	-
Zambia	-	-	-	3.50%	Cut Rates	-
Myanmar	-	-	-	3.00%	Cut Rates	-
South Sudan	-	-	-	3.00%	Cut Rates	-
Lesotho	-	-	-	2.75%	Cut Rates	-
Mozambique	-	-	-	2.50%	Cut Rates	-
Paraguay	-	-	-	2.50%	Cut Rates	-
Namibia	-	-	-	2.50%	Cut Rates	-
Gambia	-	-	-	2.00%	Cut Rates	-
Seychelles	-	-	-	2.00%	Cut Rates	-
Tanzania	-	-	-	2.00%	Cut Rates	-
Uganda	-	-	-	2.00%	Cut Rates	-
Uzbekistan	-	-	-	2.00%	Cut Rates	-
Congo	-	-	-	1.50%	Cut Rates	-
ESwatini	-	-	-	1.50%	Cut Rates	-
Ghana	-	-	-	1.50%	Cut Rates	-
Guinea	-	-	-	1.50%	Cut Rates	-
Malawi	-	-	-	1.50%	Cut Rates	-
Mauritania	-	-	-	1.50%	Cut Rates	-
Azerbaijan	-	-	-	1.25%	Cut Rates	-
Botswana	-	-	-	1.00%	Cut Rates	-
Kuwait	-	-	-	1.00%	Cut Rates	-
Oman	-	-	-	0.75%	Cut Rates	-
Moldova	-	-	-	0.60%	Cut Rates	-
Morocco	-	-	-	0.50%	Cut Rates	-
Rwanda	-	-	-	0.50%	Cut Rates	-
West Africa	-	-	-	0.50%	Cut Rates	-
Belarus	-	-	-	0.25%	Cut Rates	-
North Macedonia	-	-	-	0.25%	Cut Rates	-
Serbia	-	-	-	0.25%	Cut Rates	-

Source: BofA Global Investment Strategy, Bloomberg



## Asset Class Flows (Table 2)

**Equities:** \$11.2bn inflows (\$15.0bn into ETFs, \$3.8bn out of mutual funds)

**Bonds:** inflows past 38 of 39 weeks (\$14.9bn)

**Precious metals:** largest inflow in 22 weeks (\$1.5bn)

**Table 2: Global asset class flows, \$mn**

	Wk % AUM	YTD	YTD %AUM
Equities	0.1%	11,175	0.1%
ETFs	0.2%	14,997	0.2%
LO	0.0%	-3,823	0.0%
Bonds	0.2%	14,946	0.2%
Commodities	0.3%	1,127	0.3%
Money-market	0.5%	29,066	0.5%

\* week of 1/6/2021: Source: EPFR Global

## Fixed Income Flows (Chart 16)

2<sup>nd</sup> week of large **IG bond** fund inflows (\$10.2bn)

Small **HY bond** inflow (\$0.1bn)

12<sup>th</sup> largest **EM debt** inflows ever (\$3.0bn)

**Munis** inflows continue (\$0.9bn)

**MBS** inflows past 16 of 17 weeks (\$0.3bn)

Moderate **Govt/Tsy** fund outflows (\$0.9bn)

11<sup>th</sup> largest **TIPS** fund inflows ever (\$1.2bn)

Small **Bank loan** inflows (\$8mn)

## Equity Flows (Table 3)

**US:** largest inflow in 4 weeks (\$9.9bn)

**Japan:** largest inflow in 6 weeks (\$0.6bn)

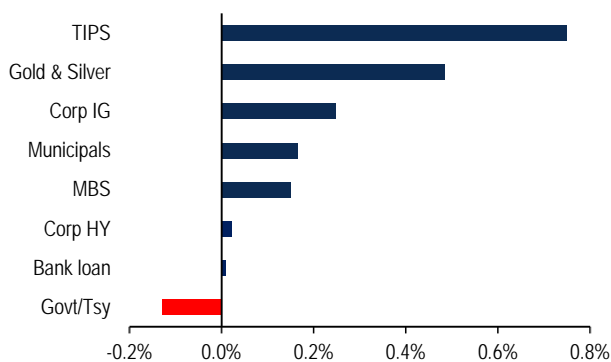
**Europe:** moderate outflow (\$0.3bn)

**EM:** first outflow in 16 weeks (\$1.6bn)

By style: inflows **US small cap** (\$3.5bn), **US large cap** (\$3.3bn), **US value** (\$0.6bn); outflows **US growth** (\$3.9bn).

By sector: inflows **financials** (\$1.9bn), **energy** (\$1.9bn), **materials** (\$0.9bn), **tech** (\$0.6bn), **consumer** (\$0.3bn), **hcare** (\$0.3bn), **com svcs** (\$29mn); outflows **utils** (\$0.1bn), **real estate** (\$0.7bn).

**Chart 16: Weekly FICC flows as % AUM**



Source: EPFR Global

**Table 3: Net fund flows to global equities, \$mn**

	Wk % AUM	YTD
<b>Total Equities</b>	<b>0.1%</b>	<b>11,175</b>
long-only funds	0.0%	-3,823
ETFs	0.2%	14,997
<b>Total EM</b>	<b>-0.1%</b>	<b>-1,599</b>
Brazil	-1.0%	-151
Russia	-0.2%	-19
India	0.4%	127
China	-1.0%	-3,285
<b>Total DM</b>	<b>0.1%</b>	<b>12,773</b>
US	0.1%	9,908
Europe	0.0%	-320
Japan	0.1%	585
International	0.1%	2,699

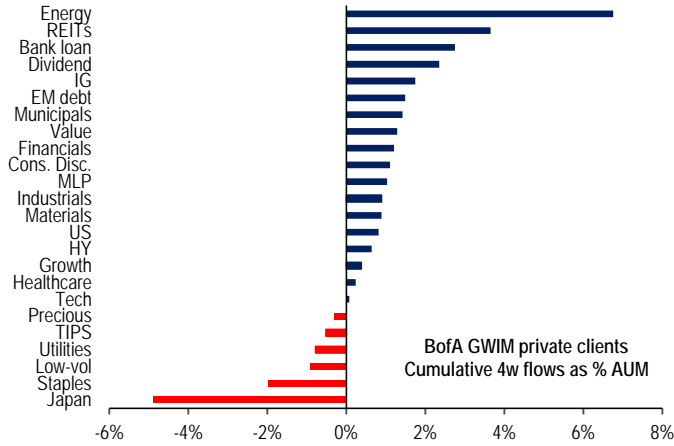
Total Equities = Total EM + Total DM

Source: EPFR Global



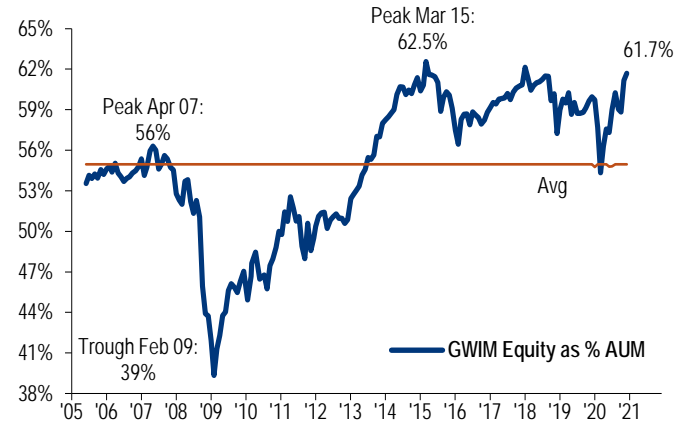
# BofA private client flows & allocations

**Chart 17: GWIM ETF flows past 4wks as %AUM**



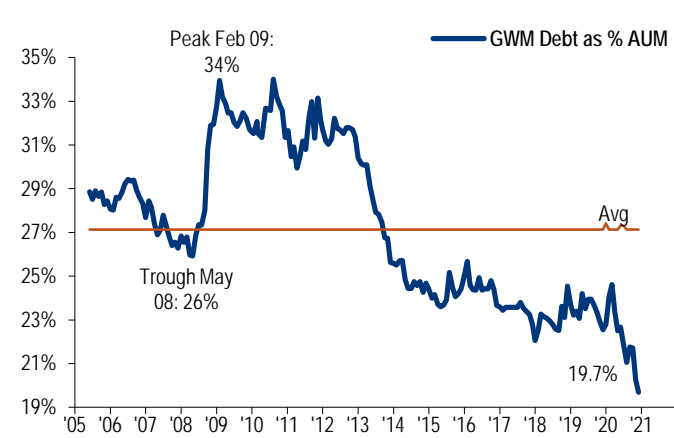
Source: BAC internal data

**Chart 18: GWIM equity allocation as % AUM**



Source: BAC internal data

**Chart 19: GWIM debt allocation as % AUM**



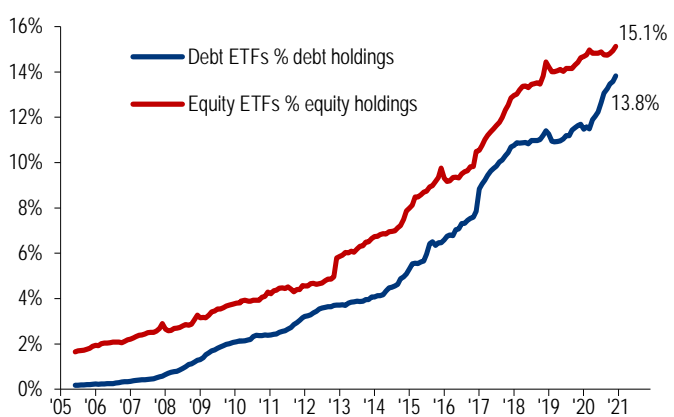
Source: BAC internal data

**Chart 20: GWIM cash allocation as % AUM**



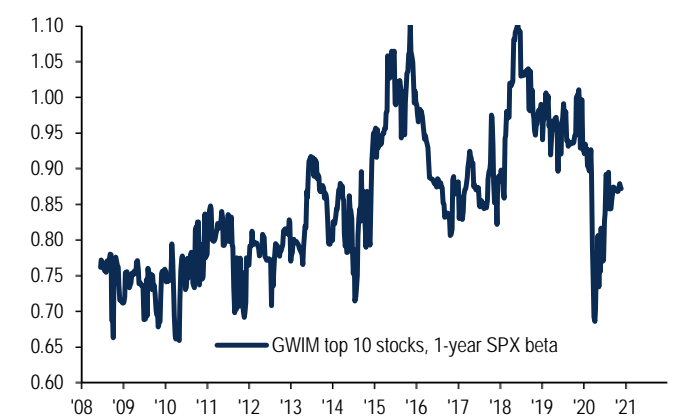
Source: BAC internal data

**Chart 21: GWIM ETF holdings as % AUM**



Source: BAC internal data

**Chart 22: GWIM top 10 stocks, 1-year SPX beta**



Source: BAC internal data





# The Asset Class Quilt of Total Returns

Chart 23: The Asset Quilt of Total Returns

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*
Commodities 31.8%	US Treasuries 6.7%	Commodities 25.9%	MSCI EM 56.3%	REITS 32.0%	MSCI EM 34.5%	REITS 37.5%	MSCI EM 39.8%	US Treasuries 14.0%	MSCI EM 79.0%	Gold 29.2%	US Treasuries 9.8%	REITS 23.8%	S&P 500 32.4%	S&P 500 13.7%	S&P 500 1.4%	Global HY 14.8%	MSCI EM 37.8%	Cash 1.8%	S&P 500 31.5%	Gold 24.8%	Commodities 3.4%
US Treasuries 13.4%	Global IG 4.6%	Gold 25.6%	MSCI EAFE 39.2%	MSCI EM 26.0%	Commodities 21.4%	MSCI EM 32.6%	Gold 31.9%	Gold 4.3%	Global HY 62.0%	MSCI EM 19.2%	Gold 8.9%	Global HY 19.3%	MSCI EAFE 23.3%	REITS 11.7%	US Treasuries 0.8%	S&P 500 12.0%	MSCI EAFE 25.9%	US Treasuries 0.8%	REITS 27.4%	S&P 500 16.3%	MSCI EM 1.9%
REITS 8.5%	Cash 4.4%	Global IG 14.9%	REITS 33.5%	MSCI EAFE 20.7%	Gold 17.8%	MSCI EAFE 26.9%	Commodities 16.2%	Cash 2.1%	MSCI EAFE 32.5%	Commodities 16.8%	Global IG 4.5%	MSCI EM 18.6%	Global HY 8.0%	US Treasuries 6.0%	Cash 0.1%	Commodities 11.8%	S&P 500 22.0%	Gold -1.9%	MSCI EAFE 22.8%	MSCI EM 15.8%	MSCI EAFE 1.4%
Cash 6.2%	Global HY 3.1%	US Treasuries 11.6%	Global HY 30.7%	Global HY 12.4%	MSCI EAFE 14.0%	Gold 23.2%	MSCI EAFE 11.6%	Global IG -8.3%	REITS 31.7%	REITS 15.9%	Global HY 2.6%	MSCI EAFE 17.9%	REITS 0.7%	Global IG 3.2%	MSCI EAFE -0.8%	MSCI EM 11.2%	Gold 12.9%	Global HY -3.3%	Commodities 20.1%	Global IG 10.3%	Gold 0.9%
Global IG 3.1%	Gold -0.7%	Cash 1.8%	S&P 500 28.7%	S&P 500 10.9%	REITS 10.7%	S&P 500 15.8%	US Treasuries 9.1%	Global HY -27.9%	S&P 500 26.5%	S&P 500 15.1%	S&P 500 2.1%	S&P 500 16.0%	Global IG 0.1%	Gold 0.1%	REITS -3.4%	Gold 8.6%	REITS 11.5%	Global IG -3.4%	MSCI EM 18.6%	US Treasuries 8.2%	Global HY 0.2%
Gold -5.4%	MSCI EM -2.4%	Global HY -1.1%	Commodities 23.9%	Global IG 9.4%	S&P 500 4.9%	Global HY 13.5%	Global IG 7.3%	Commodities -35.6%	Gold 25.0%	Global HY 13.9%	Cash 0.1%	Global IG 11.1%	Cash 0.1%	Cash 0.0%	Global IG -3.8%	Global IG 4.3%	Global HY 10.2%	REITS -3.9%	Gold 17.9%	Global HY 8.0%	Cash 0.0%
Global HY -5.8%	REITS -7.8%	REITS -2.4%	Gold 19.9%	Commodities 9.1%	Cash 3.1%	Global IG 7.2%	S&P 500 5.5%	S&P 500 -37.0%	Global IG 19.2%	MSCI EAFE 8.2%	REITS -9.4%	Gold 8.3%	MSCI EM -2.3%	Global HY -0.1%	Global HY -4.2%	REITS 1.3%	Global IG 9.3%	S&P 500 -4.3%	Global HY 13.7%	MSCI EAFE 5.4%	S&P 500 -0.2%
S&P 500 -9.1%	S&P 500 -11.9%	MSCI EM -6.0%	Global IG 14.5%	Gold 4.6%	US Treasuries 2.8%	Cash 4.9%	Cash 5.0%	MSCI EAFE -43.1%	Commodities 18.9%	Global IG 6.0%	MSCI EAFE -11.7%	US Treasuries 2.2%	US Treasuries -3.3%	MSCI EM -1.8%	Gold -10.4%	US Treasuries 1.1%	Commodities 7.6%	Commodities -12.9%	Global IG 11.4%	Cash 0.5%	Global IG -0.7%
MSCI EAFE -14.0%	Commodities -19.5%	MSCI EAFE -15.7%	US Treasuries 2.3%	US Treasuries 3.5%	Global HY 1.5%	US Treasuries 3.1%	Global HY 3.0%	REITS -50.2%	Cash 0.2%	US Treasuries 5.9%	Commodities -13.3%	Cash 0.1%	Commodities -9.5%	MSCI EAFE -4.5%	MSCI EM -14.9%	MSCI EAFE 1.0%	US Treasuries 2.4%	MSCI EAFE -13.2%	US Treasuries 7.0%	REITS -7.6%	US Treasuries -0.9%
MSCI EM -30.6%	MSCI EAFE -21.2%	S&P 500 -22.1%	Cash 1.1%	Cash 1.3%	Global IG -3.0%	Commodities 2.1%	REITS -10.0%	MSCI EM -53.2%	US Treasuries -3.7%	Cash 0.1%	MSCI EM -18.2%	Commodities -1.1%	Gold -27.3%	Commodities -17.0%	Commodities -24.7%	Cash 0.3%	Cash 0.8%	MSCI EM -14.3%	Cash 2.2%	Commodities -15.0%	REITS -2.9%

Source: BofA Global Investment Strategy, Bloomberg. \* YTD

# BofA Rules & Tools

**Table 4: BofA Global Investment Strategy Proprietary Indicators**

Proprietary Indicators	Category	Current reading	Current signal	Duration of signal
<b>Contrarian</b>				
<b>BofA Bull &amp; Bear Indicator (B&amp;B)</b> Sell when investor sentiment > 8.0; Buy when investor sentiment < 2.0	Contrarian	7.1	Neutral	1-3 months
<b>BofA Global FMS Cash Indicator</b> Buy when cash at or above 4.5%; Sell when cash at or below 3.5%	Contrarian	4.0%	Sell	4 weeks
<b>BofA Global Breadth Rule</b> Buy when net 88% of markets in MSCI ACWI trading below 200-day moving & 50-day moving averages	Contrarian	93%	Sell	3 months
<b>BofA Global Flow Trading Rule</b> Buy when outflows from global equities & HY > 1.0% AUM over 4wks; Sell when inflows > 1.0% AUM over 4wks	Contrarian	0.3%	Neutral	8 weeks
<b>BofA EM Flow Trading Rule</b> Buy when outflows from EM equities > 3.0% of AUM; Sell when inflows > 1.5% of AUM over 4 wks	Contrarian	0.4%	Neutral	8 weeks
<b>Macro</b>				
<b>BofA Global EPS Growth Model</b> Model indicates trend in year-on-year change in 12-month forward global EPS growth.	Macro	2.8%	EPS growth accelerating	6-12 months

Source: BofA Global Investment Strategy/ For a guide to our trading models see [here](#) & our FMS models, see [here](#)

## BofA Bull & Bear Indicator (B&B)

Our BofA Bull & Bear Indicator is at 7.1, signal is Neutral.

**Chart 24: BofA B&B Indicator (scale 0 to 10)**



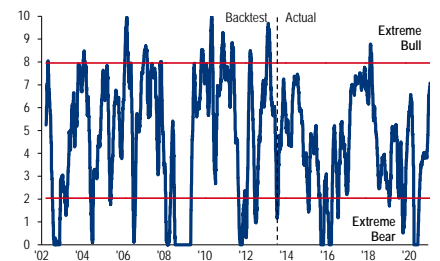
Source: BofA Global Investment Strategy

**Table 5: Components of BofA B&B Indicator**

Components	Percentile	Sentiment
HF positioning	47%	Neutral
Credit mkt technicals	36%	Bearish
Equity market breadth	100%	V. Bullish
Equity flows	60%	Bullish
Bond flows	70%	Bullish
LO positioning	87%	V. Bullish

Source: BofA Global Investment Strategy, Bloomberg, EPFR Global, Lipper FMI, Global FMS, CFTC, MSCI

**Chart 25: BofA Bull & Bear Indicator history**



Source: BofA Global Investment Strategy, EPFR Global, FMS, CFTC, MSCI

Disclaimer: The indicators identified above as the BofA Bull & Bear Indicator, MVP Model, BofA Global Breadth Rule, BofA EM Flow Trading Rule, BofA Global Flow Trading Rule, BofA Global FMS Macro Indicator, BofA Global FMS Cash Rule, Global Wave, Sell-Side Indicator, and Global Financial Stress Indicator are intended to be indicative metrics only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. These indicators were not created to act as a benchmark.



# 2021 Cross-Asset Winners & Losers

## Chart 26: 2021 Ranked Returns, USD-terms

### Ranked Returns, USD-terms (2021)

Assets		Equities		Sectors		Fixed Income		FX vs. USD		Commodities	
1 UK Equities	5.0%	1 Portugal Equities	6.4%	1 ACWI Energy	6.4%	1 European HY	0.8%	1 Norwegian krone	2.0%	1 Natural Gas	7.0%
2 Oil	4.3%	2 UK Equities	5.0%	2 ACWI Materials	4.7%	2 CCC HY	0.5%	2 Turkish lira	1.8%	2 Brent Crude Oil	4.8%
3 Industrial Metals	3.6%	3 Mexico Equities	4.5%	3 ACWI Banks	3.0%	3 German Govt	0.2%	3 NZ dollar	1.6%	3 WTI Crude Oil	4.3%
4 Europe Equities	2.3%	4 Spain Equities	4.3%	4 ACWI Financials	2.4%	4 US Corp HY	0.1%	4 Australian dollar	1.4%	4 Copper	3.5%
5 EM Equities	1.9%	5 Turkey Equities	3.9%	5 ACWI Utilities	1.6%	5 3-Month Treasury Bills	0.0%	5 Mexican peso	1.3%	5 Iron Ore	2.8%
6 Pacific Rim x Japan	1.5%	6 Taiwan Equities	3.0%	6 ACWI Industrials	1.2%	6 2-year Treasury	0.0%	6 Indonesian rupiah	1.1%	6 Platinum	2.8%
7 Gold	0.7%	7 Russia Equities	3.0%	7 ACWI Healthcare	1.0%	7 US Mortgage Master	-0.1%	7 Chinese renminbi	1.0%	7 Silver	2.4%
8 High Yield Bonds	0.2%	8 Korea Equities	3.0%	8 ACWI Cons. Discretionary	0.0%	8 Japan Govt	-0.1%	8 Euro	0.9%	8 Gold	0.7%
9 US Equities	-0.2%	9 Italy Equities	2.7%	9 ACWI BioTechnology	-0.2%	9 Non-US IG Government	-0.2%	9 Swiss franc	0.8%		
10 Government Bonds	-0.4%	10 Canada Equities	2.6%	10 ACWI Consumer Staples	-0.3%	10 EM Corporate	-0.2%	10 Swedish krona	0.7%		
11 US Dollar	-0.5%	11 Hong Kong Equities	2.0%	11 ACWI Telecoms	-0.3%	11 TIPS	-0.4%	11 Russian ruble	0.7%		
12 EM Sovereign Bonds	-0.5%	12 China Equities	1.9%	12 ACWI Info Tech	-1.7%	12 EM Sovereign	-0.5%	12 Taiwanese dollar	0.4%		
13 Japan Equities	-0.7%	13 France Equities	1.9%	13 ACWI Real Estate	-2.4%	13 Treasury Master	-0.9%	13 Canadian dollar	0.4%		
14 Investment Grade Bonds	-0.7%	14 India Equities	1.9%			14 BBB IG	-1.2%	14 Singapore dollar	0.3%		
		15 Germany Equities	1.4%			15 US Corp IG	-1.3%	15 Japanese yen	0.2%		
		16 Australia Equities	1.2%			16 UK Govt	-1.8%	16 Korean won	0.1%		
		17 Greece Equities	1.2%			17 30-year Treasury	-4.1%	17 Indian rupee	-0.1%		
		18 Singapore Equities	0.8%					18 British pound	-0.4%		
		19 Switzerland Equities	0.5%					19 Brazilian real	-1.9%		
		20 US Equities	-0.2%					20 South African rand	-2.5%		
		21 Japan Equities	-0.7%								
		22 S. Africa Equities	-1.6%								
		23 Brazil Equities	-1.9%								

Source: BofA Global Investment Strategy, Bloomberg, as of 6 January 2021

## Chart 27: The Overbought & Oversold

### Ranked Deviation from 200-Day Moving Average, USD-terms (as at 06 Jan '21)

Assets		Equities		Sectors		Fixed Income		FX vs. USD		Commodities	
1 Oil	34.6%	1 Korea Equities	43.6%	1 ACWI Materials	26.5%	1 CCC HY	15.4%	1 Mexican peso	11.5%	1 WTI Crude Oil	34.6%
2 EM Equities	23.3%	2 Mexico Equities	32.3%	2 ACWI Banks	23.3%	2 US Corp HY	7.9%	2 Norwegian krone	11.3%	2 Brent Crude Oil	32.3%
3 Industrial Metals	21.4%	3 Taiwan Equities	31.6%	3 ACWI Financials	21.4%	3 EM Sovereign	6.9%	3 South African rand	11.3%	3 Iron Ore	28.4%
4 Pacific Rim x Japan	19.3%	4 India Equities	28.2%	4 ACWI Cons. Discretionary	21.4%	4 European HY	6.8%	4 Australian dollar	11.2%	4 Copper	25.4%
5 UK Equities	18.7%	5 Turkey Equities	25.9%	5 ACWI Industrials	19.8%	5 EM Corporate	6.0%	5 NZ dollar	11.2%	5 Platinum	23.6%
6 Europe Equities	18.6%	6 Spain Equities	24.5%	6 ACWI Info Tech	19.3%	6 Non-US IG Government	5.4%	6 Swedish krona	10.5%	6 Silver	22.7%
7 Japan Equities	16.4%	7 Brazil Equities	23.7%	7 ACWI Energy	15.1%	7 BBB IG	3.9%	7 Korean won	8.0%	7 Natural Gas	22.0%
8 US Equities	16.1%	8 Portugal Equities	23.6%	8 ACWI Telecoms	14.9%	8 TIPS	2.8%	8 Euro	6.7%	8 Gold	3.8%
9 High Yield Bonds	9.3%	9 Italy Equities	23.2%	9 ACWI Utilities	9.9%	9 US Corp IG	2.6%	9 Chinese renminbi	6.2%		
10 EM Sov Bonds	6.9%	10 Australia Equities	22.1%	10 ACWI Healthcare	9.5%	10 US Mortgage Master	0.3%	10 British pound	5.8%		
11 Investment Grade Bonds	4.8%	11 France Equities	20.8%	11 ACWI Consumer Staples	8.3%	11 German Govt	0.3%	11 Swiss franc	5.6%		
12 Gold	4.4%	12 S. Africa Equities	18.9%	12 ACWI Real Estate	4.2%	12 2-year Treasury	0.1%	12 Canadian dollar	5.6%		
13 Government Bonds	2.8%	13 UK Equities	18.7%	13 ACWI BioTechnology	3.6%	13 3-Month Treasury Bills	0.0%	13 Indonesian rupiah	5.2%		
14 US Dollar	-5.6%	14 Russia Equities	18.1%			14 Japan Govt	-0.1%	14 Singapore dollar	4.4%		
		15 Germany Equities	17.9%			15 UK Govt	-0.5%	15 Taiwanese dollar	3.9%		
		16 Canada Equities	17.8%			16 Treasury Master	-1.5%	16 Japanese yen	2.8%		
		17 China Equities	16.9%			17 30-year Treasury	-7.9%	17 Indian rupee	2.1%		
		18 Japan Equities	16.4%					18 Brazilian real	1.6%		
		19 US Equities	16.1%					19 Turkish lira	0.2%		
		20 Greece Equities	15.9%					20 Russian ruble	0.2%		
		21 Hong Kong Equities	15.3%					21 Argentine peso	-12.9%		
		22 Singapore Equities	15.0%								
		23 Switzerland Equities	10.7%								

Source: BofA Global Investment Strategy, Bloomberg



# 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 Global 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.

## 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 BofA Securities 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 or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor for information relating to such instruments. 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.

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.

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

**"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill 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 Securities" is a global brand for BofA Global Research.**

### Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") 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); BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the 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 (HKSF); 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; BofAS Japan: BofA Securities Japan 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; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); 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): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, 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 BofAS 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 HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS 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. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, 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. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe 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 Securities group. You may be contacted by a different BofA Securities 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 Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities 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 Securities, 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.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities 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.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, 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 Securities 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 Securities, through business units other than BofA 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 Securities 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 and General Information:

Copyright 2021 Bank of America Corporation. All rights reserved. iQprofile<sup>SM</sup>, iQmethod<sup>SM</sup> are service marks of Bank of America Corporation. iQdatabase<sup>®</sup> is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities 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 Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities 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 Securities.

Materials prepared by BofA 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 Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities 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 Global Research personnel's knowledge of legal proceedings in which any BofA Securities 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 Securities 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 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 Securities 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 Securities 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 Securities. 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 Securities 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 Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities 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 Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

