2Q2021 | Capital Markets & Investment Banking

Mesirow

Capital Markets Brief

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2Q2021 Review

We end this second quarter of 2021 with global financial markets awash in liquidity, while capital markets participants are desperately striving to see past the mixed signals emanating from central bankers. Central bank messaging is likely reflecting the clouds they see in their own crystal balls. Credit markets are still priced to perfection. Rates markets are episodically sloughing off "hot" data as "transitory," although the Fed comment-induced curve twist of June 16th suggests that market confidence is lower than a number of bullish metrics might suggest.

On the COVID-19 pandemic front, global health outcomes appear to be tiering along the lines we discussed last quarter. The US will end this quarter with approximately 150,000,000 citizens (45%) fully vaccinated and 53% having one shot in the arm. COVID-19 deaths are trending under 300 per day nationally, although every death is one too many for the family experiencing the loss.

The correlation between free market economies and strong, science-based COVID-19 outcomes remains too strong to ignore. The implications for individual national economies continue to frame our investment outlook.

S&P 500
QTD: 8.55%; YTD: 15.24%

T 10 returns
QTD: 3.03%; YTD: -4.19%

Muni AAA Index
QTD: 1.43%; YTD: -0.58%

US$ Index
QTD: -0.85%; YTD: 2.78%

FED Balance sheet[1]
$8,078,544MM

At the close of 1Q2021 we posed four questions related to balance for consideration:

- Are the pandemic impact and responses evenly distributed?
- Are markets working to price risk efficiently?
- Are central bank and government policy responses balanced and proportionate?
- Finally, are the impacts of these policy responses creating market distortions or masking unrealized risk?

Each of these questions is as valid today as they were on March 31st.

Overview

"So closely united now are the monetary transactions of all the great commercial countries in the world, that whatever affects one less or more affects the whole"
– Walter Bagehot regarding the panic of 1857 in *The Economist*

Our world moves ever-forward, technology evolves at an ever-faster pace (Moore's Law is nothing new) but human nature remains basically the same.

Bagehot's analysis is easily applied to today's global capital markets. His understanding that his Victorian world was growing smaller through the power of advanced technology, Victorian leading technology including steam power and telegraphy, led him to understand that the vastly improved speed of communication would transform the interconnectedness of global markets.

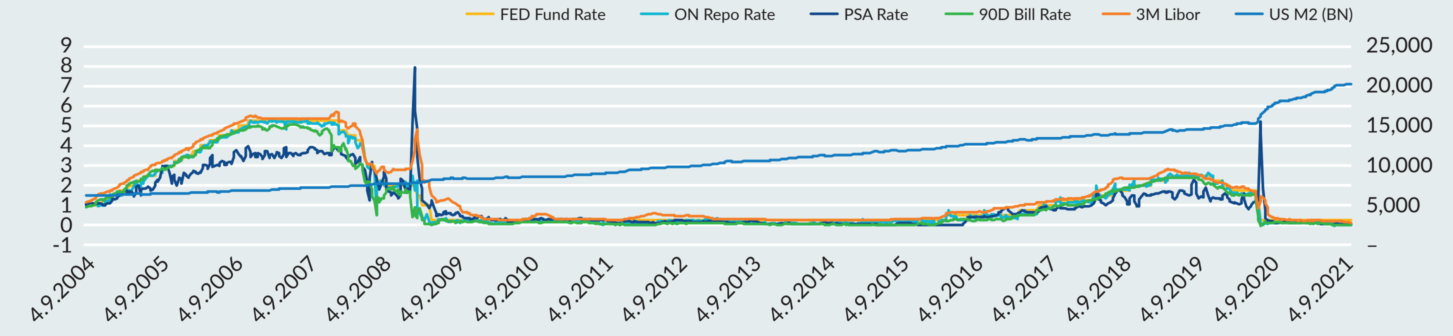
If the last fifteen months have taught us anything, it is that there are no islands of prosperity and safety left in this world. North Korea and Venezuela demonstrate that totalitarian regimes regularly create islands of misery. But, economic prosperity, the efficient capital markets that sustain this prosperity and the viral pandemics that threaten it know no borders.

Charts 1–4 illustrate both the growth of money available and the diminishing cost/return of credit instruments. Whether one focuses on the vastly expanded US balance sheet (just passing $8T), M2 (Chart 1) or Federal debt in relative (Chart 2) or absolute terms (Chart 3), we are in a liquidity bubble. These charts suggest that the decreasing cost of that liquidity continues to sustain and expand this bubble. There are very few discordant notes coming from equity, commodity, residential real estate or crypto-currency markets to suggest otherwise. The value of assets continues to expand as the price of credit stays remarkably low.

"The source of every speculative mania, besides corruptingly low interest rates, is the drive to do too much with too little."
– Walter Bagehot

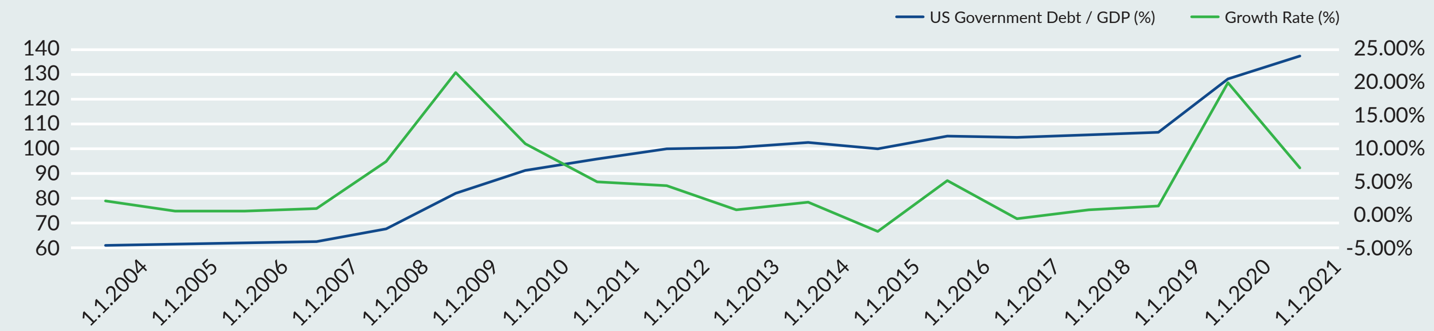
So, are central bankers, and the markets that depend on sustainable interest rate policy, trying to do too much with too little?

CHART 1: US FUNDING RATES (%) & M2 (BN)



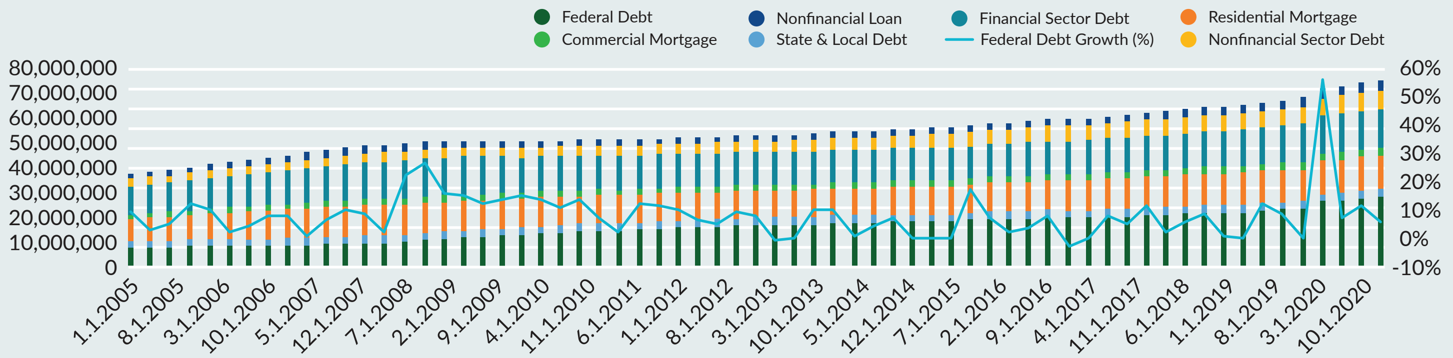
Source: Bloomberg.

CHART 2: US FEDERAL DEBT / GDP (L%) & ANNUAL DEBT GROWTH RATE (R)



Source: Federal Reserve Bank.

CHART 3: US TOTAL DEBT OUTSTANDING (MM) & FEDERAL DEBT GROWTH RATE (%)

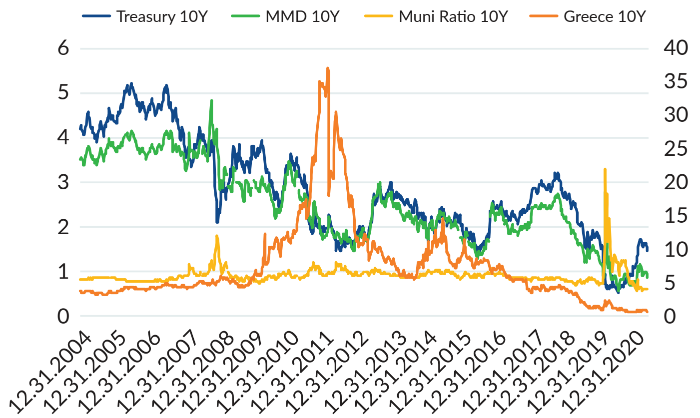


Source: Federal Reserve Bank.

Chart 4, simple in itself, addresses this question in three conflicting ways:

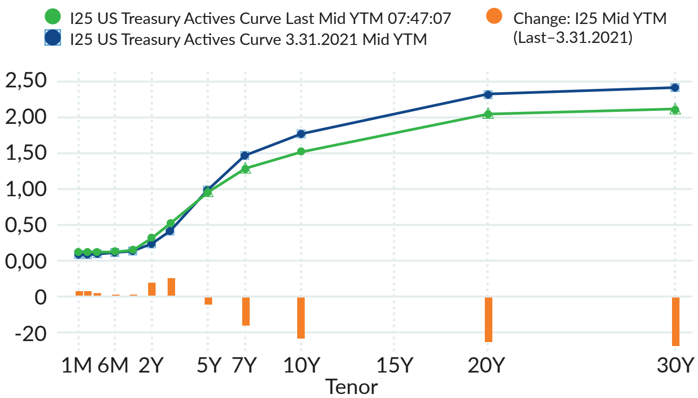
- The US Treasury 10Y shows a minor increase in yields post March 2020. Please refer to Chart 5 to observe the flatting twist in the yield curve that developed over 2Q2020.
- The graph of Municipal 10 Yr AAA yields, while diverging from Treasury's, describes a rate rally that can be largely explained by market supply/demand technicals
- The Greek 10 Year has rallied from rates implying national default to negative yields for investors. While Greece has stabilized since 2011 and the European Union has survived Brexit, it's hard to make a value case for Greece at negative yields. Since we posed the question, "are the markets pricing risk efficiently," we couldn't ignore this one.

CHART 4: **TREASURY, MMD, MUNI RATIO (L) & GREECE BOND YIELD (R)**



Source: Bloomberg. Past performance is not indicative of future results.

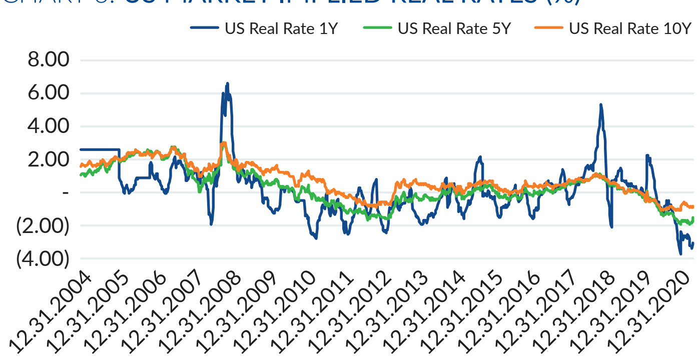
CHART 5: TREASURY CURVE SNAPSHOTS AT 2Q BEGINNING AND END



Source: Bloomberg. Past performance is not indicative of future results.

The “flattening-twist” in the US treasury yield curve described by the curve graphs at April 1st, 2021 and quarter end illustrate the market participant’s desire to look past “hot” near-term economic signals. Short rates have risen and long dated yields have fallen over the quarter.

CHART 6: US MARKET IMPLIED REAL RATES (%)



Source: Bloomberg; Mesirow Research. Past performance is not indicative of future results.

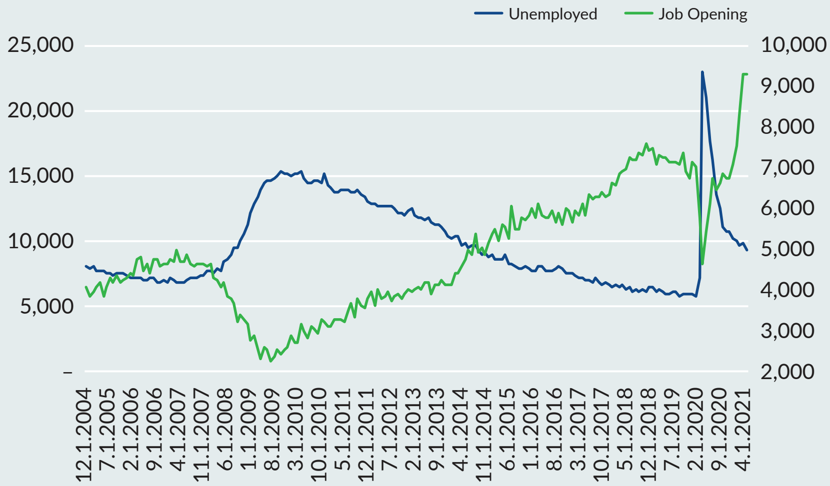
Chart 6, describing “real” US treasury rates across the curve, is occasionally cited by bond Bulls as a defense for their efficient market thesis. A casual look at this chart in the context of two straight Q/Q GDP numbers of 6.4% gives one pause, to say nothing of the commodity or housing charts below. On the face of it, both US treasury and investment grade municipal bond investors are exposed to a difficult trade; as the “breakeven” 10 year yield is 2.355% as we write this note. Perhaps this explains the “risk-on” equity trade with the P/E of the S&P 500 at 30.24 x earnings. If so, are investors being driven into US equities by unjustifiably low yields in fixed income, or are fixed income investors wisely paying up for a credit-risk-free safe haven in the treasury market?

We note that the municipal bond market continues to trade at very tight ratios to US treasuries; the product of a technical supply-demand imbalance during this quarter. The municipal market also appears to be pricing in a substantial tax increase package that is caught in the sausage-making process that is the nature of tax and fiscal negotiations in this toxic political climate. By any metric, tax-exempt bonds as an asset class do not pass a value test.

Charts 7–10 are best viewed in relative context. Chart 7 shows an employment problem that all of us have heard about anecdotally and likely experienced in our own lives; a nominally high unemployment rate set against more than 9,000,000 posted job openings. Let's avoid the policy debate here, but we can recognize that we have a labor/skills mismatch in this economy that is likely pushing up the price of labor, while constraining hiring, and impeding the return to full-time employment for pandemic-affected workers.

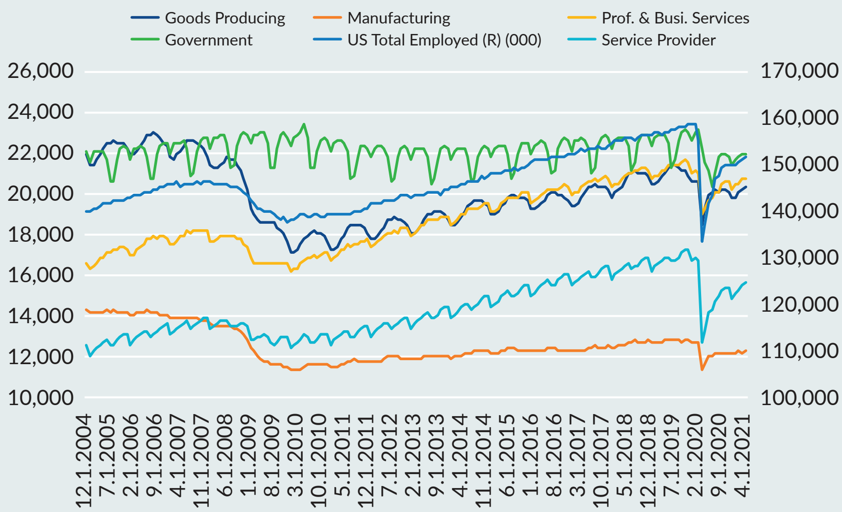
Were those 9,000,000 jobs that are currently going begging filled by willing workers, total US employment would arguably be moving back very close to trend. Regardless of one's political outlook, it's likely that a further sunsetting of supplemental unemployment benefits in September in the states that have not already constrained them will close this gap and provide more economic lift.

CHART 7: **UNEMPLOYED (L) & JOB OPENINGS (R) (000)**



Source: Bureau of Labor Statistics; Mesirow Research.

CHART 8: **US EMPLOYMENT BY SECTORS (000)**



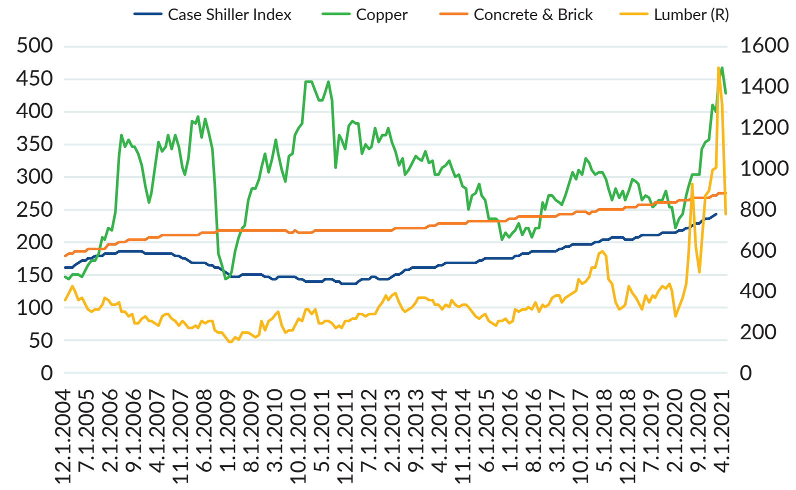
Source: Bureau of Labor Statistics; Mesirow Research.

Anyone who has tried to take on a home improvement project during the pandemic will not be surprised by Chart 9. Housing has been a unique category that is partially explained by the "nesting instinct" that the COVID-19 lockdown stimulated.

But there is clearly a supply-chain element to this as well throughout the building materials sector. Supply-chain pressures are echoing beyond housing and throughout the economy (Chart 10) as production and distribution bottlenecks created by pandemic disruptions clear. The Fed is clearly counting on these bottlenecks resolving themselves and reducing inflation pressure points. To some extent, that is a reasonable expectation. A look at the lumber futures contract shows a strong reversal in the contract this quarter. Is this a function of the production chain rationalizing or of speculative "longs" feeling a squeeze; or both? What is unknown is the extent to which supply-chains have fundamentally changed as a result of the pandemic.

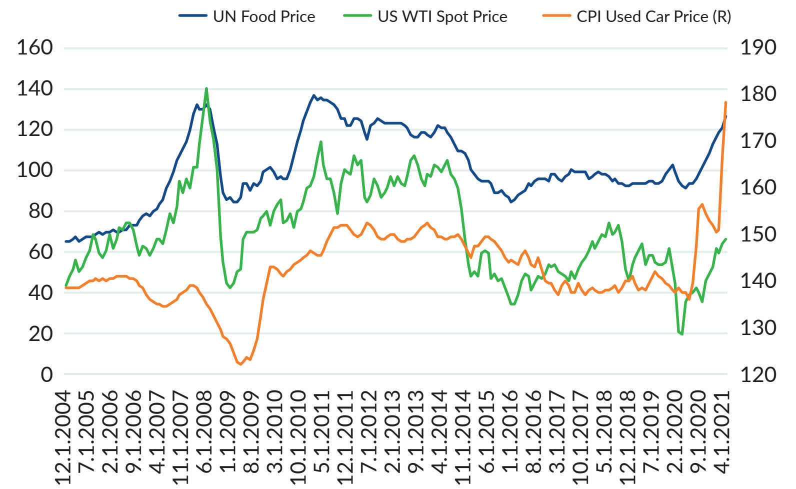
The notion of global supply-chains and the international component price race-to-the-bottom has been tested during COVID-19 and found wanting in a number of industries; pharma and micro-chips being prime examples. Manufacturers may be willing to pay more for components sourced domestically in the name of supply-chain security now that the risk of global sourcing has been "realized". This value trade-off may be wise; it is surely inflationary at the margin.

CHART 9: **HOUSING & RELATED COMMODITY PRICES**



Source: Bloomberg.

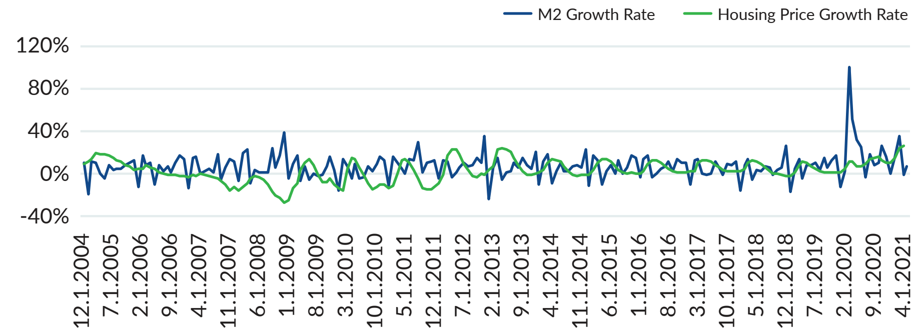
CHART 10: **FOOD, OIL & USED CAR PRICES**



Source: Bureau of Labor Statistics; Bloomberg.

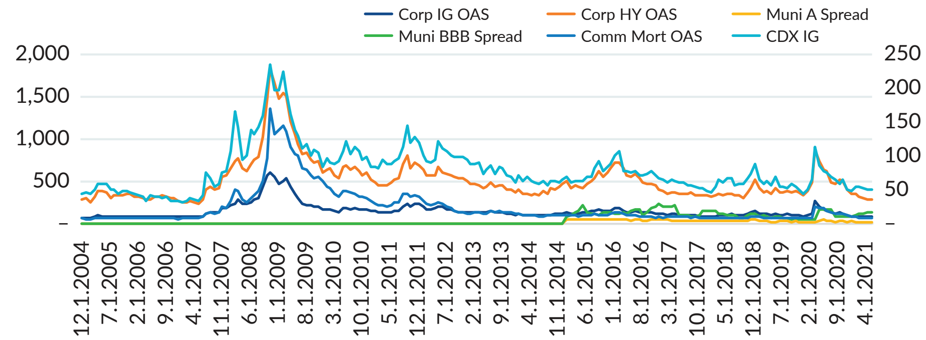
The question of capital markets efficiently pricing risk is unnerving when we consider Charts 11 and 12. Clearly Investment Grade CDX spreads are priced to near-perfection. High yield and municipal credit spreads have priced in minimal credit risk as well. Meanwhile, more than half of all Americans and most global citizens outside of Israel and the UK wait for full vaccination. The majority of citizens of the non-industrialized world are likely to wait long into the future. Credit markets are clearly not pricing in the economic, governance or moral challenges that this cost and logistics hurdle implies.

CHART 11: **M2 & HOUSING PRICE GROWTH RATES**



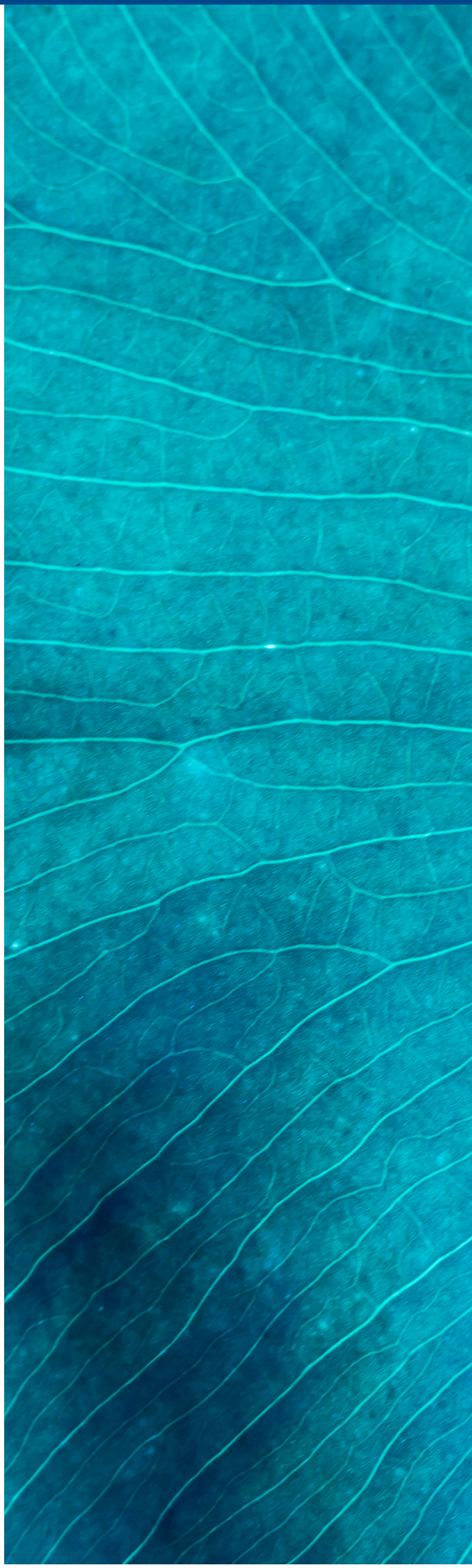
Source: Bloomberg; Mesirow Research.

CHART 12: **CASH BOND CREDIT SPREADS (L) & CDX IG SPREAD (R)**



Source: Bloomberg; Mesirow Research.

Chart 12, describing collapsing credit and CDX spreads, calls out another of the Fed's conundrums. Is the economy so strong that credit risk is de minimis, and thus markets are pricing credit risk correctly? Yet, the Fed has placed its bet on the economy cooling from its 6.4% current pace, allowing it to "look past transitory" inflation signals and wait to begin its taper. The Federal Reserve Board may be omniscient, but both views are unlikely to be simultaneously correct.



The "risk-on" trade on credit is visible across the fixed income market. Leveraged loan activity is very strong in both the primary and CLO Markets. The demand side, mutual funds and ETFs, experienced one of the strongest flow quarters in twenty years. S&P called out the strong activity in M&A and LBO markets in their June 25th sector report. Well worth noting is the composition of the re-pricing market, where 76% of re-priced institutional term loans were in the B-credit category. In effect, institutional borrowers in the weak end of the credit spectrum were strongly incented to re-negotiate price and terms to their own advantage. This is hardly a value signal for investors.

In the absence of an absolute faith in the Fed's wisdom, investors would do well to review these credit spread graphs in the context of value and caution. The pandemic-driven decline in the absolute level of rates has pushed many professional investors to chase yield to maintain the commercial viability of their fixed income portfolios. To date, this professional judgment has been rewarded by the market. But, in every credit cycle the music ends and there is a race for the exits. This cycle, artificially sustained by a liquidity bubble that must be drained/tapered eventually, runs the risk of a painful conclusion, as the inevitable rotation up in credit quality will need to be executed in a "tapered" liquidity environment, enhancing the potential for aggressive spread widening.

Migration and deurbanization pattern: An early look at the data

We continue to monitor municipal credit very closely and watch for trends. One area that deserves attention is urban and state migration.

To date the office market continues to see vacancy and subleasing pressures. While long term levels of hybrid and in-office work will remain unclear over the next year in most parts of the country, September will be a key month to begin measuring the level of activity in urban central business districts. As the Boston Fed pointed out in June, "Contacts expect to have a clearer picture of the office market after Labor Day, which is when many firms are expected to bring greater numbers of workers back to the office."

The most recent 1Q2021 data from the Cleveland Fed showed net outmigration from urban cores peaked in November 2020 and then started to soften. At the last data point in March 2021, the urban outmigration numbers were still much higher than pre-pandemic. While employers and residents are still navigating modified work environments, there are signals to suggest the outmigration from urban cores will continue slow.

As an example, the New York City Comptroller has reported notable increases in job ads, new business license applications have returned to pre-pandemic levels and residential lease vacancies improved a sizable four percentage points in May (in part due to price concessions). These are positive signals, but we caution local government fiscal cycles are 1-3 years lagged from economic cycles and uncertainty remains where commercial valuation levels will stabilize for office-heavy and tech labor concentrated urban cores. As an example, property tax in New York City is expected to decline $1.6B, or 5% for FY 22. 31% of the New York City workforce still works from home as of May — a strong improvement from 48% in March, but significantly higher than the national level of 16.6%.

Federal aid to state and local governments has been a significant credit positive in getting cities through the municipal fiscal cycle typically experienced during recessions. Each government's long-term health (post-federal aid) will depend on the length of job recovery to pre-COVID-19 levels and how governments will budget and deploy the aid. We are still learning how each city's composition of job industries, economy and geography will influence central business district urban life and what the fiscal health of associated governments will be after the federal aid regime. Rating agencies have upgraded their outlooks based on massive federal aid amounts, taxes outperforming budget expectations and positive economic signals after reopening.

CHART 13: **ESTIMATED NET OUT-MIGRATION FROM URBAN NEIGHBORHOODS**

Source: Federal Reserve Bank of New York / Equifax Consumer Credit Panel, American Community Survey, and calculations from Stephen D. Whitaker, policy economist for the Cleveland Fed. https://www.clevelandfed.org/en/newsroom-and-events/publications/cfed-district-data-briefs/cfddb-20210301-covid-19-pandemic-urban-exodus-updates.aspx

Another factor common in migration headlines is tax policy. We reviewed 2019 IRS Adjusted Gross Income (AGI) state migration data in detail and broke down income migration by tax structure, region and age groups. Policy makers are researching the same data closely because the 2017 Tax Cuts and Jobs Act (TCJA) placed a $10k cap on the amount of state and local taxes (SALT) that can be deducted from federal income. Some state and local taxpayers that were affected by the SALT cap likely benefited from TCJA changes to the AMT. Generally, "blue-state" politicians and investors have energetically claimed that the SALT cap is negatively and unfairly impacting these higher tax economies.

Our analysis of the income migration data revealed a few points:

- Regionally, the largest migration of AGI in 2019 was from the Northeast and Midwest to the South.
- From a tax burden standpoint, $20.1B went from "higher tax burden" states to "lower tax burden states". We labeled states high or low tax based on the Tax Foundation 2019 State & Local Tax Burden numbers.
- We were unable to find evidence of SALT impact as many higher tax states actually improved their income inflow/outflow ratios year over year. This also holds true when looking more granularly at filers of $200k or more. We will continue to track this.

There was notable income migration to the South, especially to Florida in 2019. Florida took in 1.7x the size of net income flow of the next highest importer of income, Texas. We should point out that New York has suffered a net loss of income to lower tax and higher tax neighboring states for decades, but payrolls, personal income, GDP and state and local taxes have continued to grow.

TABLE 1: TAX-GROUP MIGRATION ANALYSIS

	Migration (To) From State Group				% AGI		
NET	High	Average	Low	Weighted Avg 2019 / 2018 Tax Growth	High	Average	Low
High	$ 1,280,318	$ (10,823,694)	$ (20,834,574)	8.25%	3.9%	-4.1%	-7.5%
Average	$ 14,695,816	$ 314,505	$ (7,866,239)	7.46%	11.1%	1.0%	-6.0%
Low	$ 22,236,942	$ 9,213,994	$ 1,213,522	5.34%	7.8%	2.2%	-1.4%

High | Greater than .5 standard deviation of average Tax Foundation state and local tax burden
Average | Average of state and local tax burden
Low | Less than .5 standard deviation of average Tax Foundation state and local tax burden
Sources: IRS SOI Tax Stats – Migration Data 2018–2019, Census Summary of State & Local Tax, Tax Foundation State and Local Tax Burdens Calendar Year 2019

While Florida, a low tax state, was the top importer of income from New York, the next three states New York lost income to are all high tax states – New Jersey, California and Connecticut. Looking at migration inflow/outflow ratios by age group, Florida is clearly a retirement destination with a 2.11x inflow/outflow ratio for age group >65. This ratio was relatively the same pre-TCJA at 2.13x. The same ratio for New York and Illinois age group >65 were .44x and .42x. Looking at those who migrate domestically, people near retirement age move away from New York, Illinois, New Jersey, Connecticut and California. Illinois has a net loss of domestic migration income across all age groups.

Reviewing Table 3, we can see inflow/outflow ratios of Adjusted Gross Income increase materially towards retirement ages for Arizona, Florida and South Carolina. As America ages we expect these states to continue gaining income from retirees.

Texas (low tax) and Oregon (high tax) both have steady net inflows across age groups.

TABLE 2: REGIONAL MIGRATION ANALYSIS

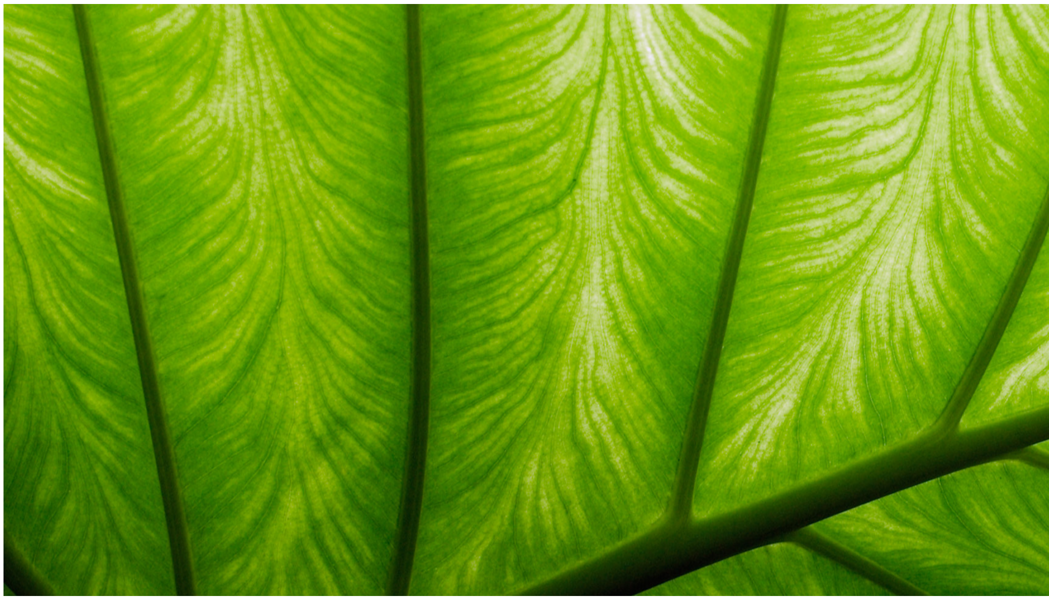
	Migration (To) From Region Group			
	Midwest	Northeast	South	West
Midwest	-	188,933.00	(8,758,860.00)	(2,799,115.00)
Northeast	(188,933.00)	(46,859.00)	(13,314,614.00)	(1,645,434.00)
South	8,752,698.00	13,438,409.00	981,789.00	6,623,510.00
West	3,187,629.00	2,741,160.00	(3,105,605.00)	3,375,882.00

Sources: IRS SOI Tax Stats – Migration Data 2018–2019, Census Summary of State & Local Tax, Tax Foundation State and Local Tax Burdens Calendar Year 2019

TABLE 3: INCOME MIGRATION ACROSS AGE GROUPS

State name	YoY Change	Total Migration Inflow/Outflow Ratio 2019	Income Inflow/Outflow Ratio					
			Under 26 Ratio 2019	26-35 Ratio 2019	35-45 Ratio 2019	45-55 Ratio 2019	55-65 Ratio 2019	65 Ratio 2019
Arizona	-0.02	1.67	1.23	1.28	1.30	1.84	2.30	1.90
California	0.03	0.71	1.15	0.96	0.76	0.61	0.41	0.53
Connecticut	-0.01	0.70	0.71	0.95	1.15	0.63	0.45	0.50
Florida	-0.02	2.06	0.99	1.11	1.46	2.57	3.90	2.11
Illinois	0.02	0.54	0.84	0.73	0.57	0.51	0.31	0.42
New Jersey	0.05	0.73	0.77	1.01	1.01	0.58	0.49	0.50
New York	0.03	0.60	1.06	0.71	0.52	0.70	0.44	0.40
Oregon	-0.02	1.20	1.18	1.31	1.17	1.01	1.20	1.28
South Carolina	-0.04	1.70	1.03	1.21	1.39	1.78	2.82	2.10
Tennessee	0.03	1.41	1.22	1.18	1.28	1.60	1.64	1.73
Texas	0.00	1.25	1.15	1.19	1.40	1.37	1.09	1.32
Washington	-0.03	1.14	1.41	1.35	1.19	0.84	1.07	0.98

Sources: IRS SOI Tax Stats – Migration Data 2018–2019, Census Summary of State & Local Tax, Tax Foundation State and Local Tax Burdens Calendar Year 2019



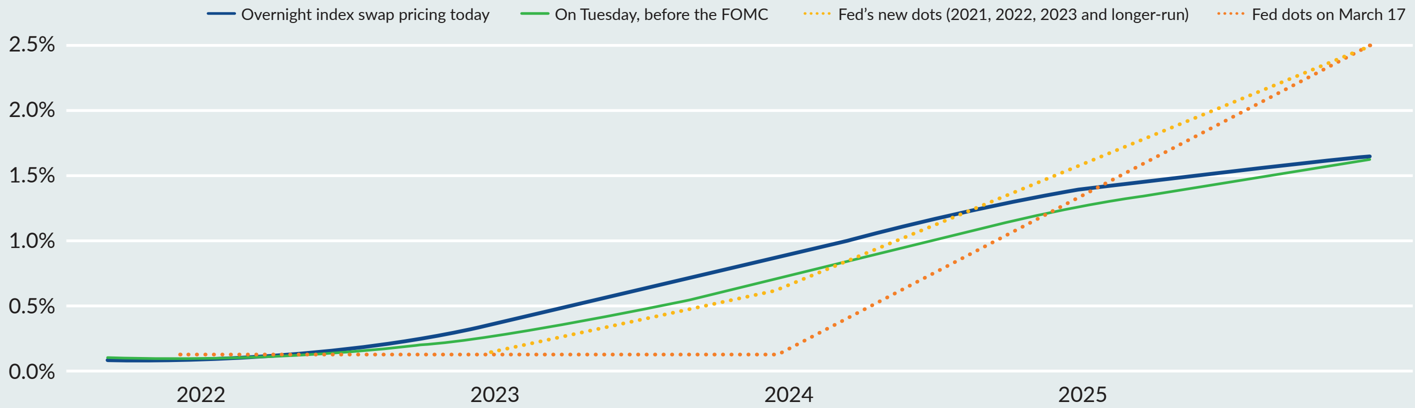
In summary, the interstate migration patterns are a real concern for high tax states, but the data thus far supports the continuance of a trend that was accelerated during the COVID-19 pandemic. Existing retirement migration patterns appear to have strengthened during the pandemic. Warm weather, affordable housing prices and taxpayer-friendly governments have incented the north to south pattern for decades. Pandemic issues clearly encouraged this trend. Highly overwrought stories, bullish and bearish, regarding New York City and San Francisco often leave out important information. We continue to track all data and surveys carefully as 2H2021 will provide us a better benchmark against which to analyze trends. We believe there is likely to be an inflection point in 2H2021 that will provide us with more signals for analysis.

Inter-state migration is an important issue for municipal investors and for governments. Billions of tax dollars are in play. In addition, the culture wars hang over this discussion as is often the case with any issue of public policy in this polarized era. But, the culture questions have been highly charged by COVID-19 directly. Post-pandemic, how do economically mobile taxpayers value:

- Living space; especially contiguous outdoor space, and the relative value thereof
- Crime and personal safety; more importantly, their own perception of personal safety
- Personal mobility, especially the private mobility associated with car ownership; public transit has, at least temporarily, lost some of its appeal
- Public Schools; urban parents will be acutely aware of the relative performance of suburban, charter and parochial schools versus large urban school districts throughout the pandemic on a variety of metrics

Bottom line: these qualitative measures will add further pressure to the intra-state deurbanization migration as well as to the low tax and north-south inter-state trends. We will track the post-Labor Day data very carefully.

CHART 14: **FED'S RISING RATE PROJECTIONS PUT UPWARD PRESSURE ON SHORT-END BOND YIELDS**



Source: Bloomberg, Federal Reserve

"First of all, not for the first time about the dot plot. These are, of course, individual projections. They're not a Committee forecast, they're not a plan. And we did not actually have a discussion of whether lift-off is appropriate at any particular year, because discussing lift-off now would be highly premature, wouldn't make any sense. If you look at the transcripts from five years ago, you'll see that sometimes people mentioned their rate path in their interventions. Often they don't. And the last thing to say is, the dots are not a great forecaster of future rate moves. And that's not because – it's just because it's so highly uncertain. There is no great forecaster of future dots. So, dots to be taken with a big grain of salt."

– Fed Chairman Jerome Powell, *Chairman Powell's Preliminary Conference Notes; page 12*[2]

Conclusion

The four questions we framed in the 1Q2021 Capital Markets Brief are still relevant:

Is the pandemic impact and response evenly distributed?
No. Israel, the United Kingdom and the United States are developed economies that lead the world in their national COVID-19 pandemic responses. The Euro-zone lags. The less developed world is left far behind in vaccination distribution. The post-pandemic economic response is likely to be steeply tiered, accordingly.

Are markets working to price risk efficiently?
This credit brief contains data that suggests that a liquidity bubble is affecting real and financial asset prices. Spreads for credit and other risks are arguably underpriced. The rates markets are remarkably sanguine regarding the risk of a second "taper-tantrum" in the wake of the Federal Reserve reducing its monthly asset purchase regime (approximately $80M treasuries; $40M mortgage securities). The "real" interest rates presented in Chart 6 are difficult to ignore.

Are central bank and government policy responses balanced and proportionate?
As we write, the bi-partisan Problem-Solvers caucus has announced an agreement with the White House on the framework of an infrastructure bill. The order of magnitude is in the $1T range (plus or minus $579M "net additional" funding reported). Objections surfaced immediately from both sides of the political aisle; Liberal Democrats tying their support for a "politically pre-guaranteed" reconciliation bill along the lines of Senator Sander's $6T wish list, while conservative Republicans vow to block any attempt at further spending. The Cares Act of March 2020 (approx. $2.2T) and the Infrastructure deal currently under negotiation ($579M minimum under discussion) represent nearly $3T dollars of largely unfunded fiscal stimulus. This does not include the extraordinary accommodation by the Federal Reserve, including $120B of financial asset purchases monthly. Nor does it include democratic proposals that could bring the cost of pandemic related stimulus measures to over $9T. Meanwhile federal debt careens toward 140% of GDP, a level not seen since the depths of World War II. It would take a very hardened Keynesian viewpoint to feel comfortable with the levels of public debt outlined in the charts above, or to believe without doubt that this vast expenditure is being fed into our economy in a highly economically efficient manner likely to produce net economic growth sufficient to easily manage this extraordinary leverage. Servicing this debt burden will crowd out and compete with other budgetary goals.

Finally, are the impacts of these policy responses creating market distortions or masking unrealized risk?
Many of the graphs presented above clearly describe distortions in long standing relationships and patterns. Markets are largely highly liquid, stable and "priced to perfection". We are operating in a "risk-on" world. Yet, the premia to investors for taking on risk is historically minimal on a variety of metrics. Borrowers are following the incentives to lever-up and weaken debt covenants that the markets are granting them.

Yet, in the review of all this data, we have not touched on the issue of moral hazard. It is rarely discussed in the financial press as we add trillions of dollars of liability to the Federal balance sheet. Meanwhile, rating agencies are assigning stable or improving trends to state and local governments (temporarily) awash in federal relief dollars, governments with the same structural deficits and pension obligations that seemed dire before the first reports emerged of a virus out of Wuhan, China, a virus that continues to morph into deadly variants while most of our global neighbors are under-vaccinated or entirely unprotected.

While we live on a perceived island of prosperity, an untamed pandemic still rages across the globe. Equity markets consistently break historic ceilings. National debt approaches a World War II scale. The incentives for borrowers to take risk are high and the premia for investors to fund this risk-on trade are very low. The change in Federal Reserve "dots" (Chart 14) suggests a committee that is stirring after a period of calm and perhaps growing anxious about $120B of QE monthly. On the surface, markets are quieter than the granular data presented in this note suggest is sustainable.

In this environment, wise investors will make value-based, data-driven decisions. They will balance historic reward expectations against the current risk climate, hoping that the Fed drains excess liquidity from the markets deftly. But wise investors will be prepared for the human error and the human emotional over-responses that inevitably follow, and they will price the risk they accept accordingly.

About Mesirow

Mesirow is an independent, employee-owned financial services firm founded in 1937. Headquartered in Chicago, with offices around the world, we serve clients through a personal, custom approach to reaching financial goals and acting as a force for social good. With capabilities spanning Global Investment Management, Capital Markets & Investment Banking, and Advisory Services, we invest in what matters: our clients, our communities and our culture. To learn more, visit mesirow.com and follow us on LinkedIn.

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1. As of 6.30.21.

2. https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20210616.pdf

The S&P 500 Index is a stock market index tracking the stock performance of 500 of the largest companies listed on stock exchanges in the United States and constructed to provide a comprehensive and unbiased barometer of the U.S. equity market.

The U.S. dollar index (USDX) is a measure of the value of the U.S. dollar relative to the value of a basket of currencies of the majority of the U.S.'s most significant trading partners.

The credit default swap index (CDX) is a financial instrument composed of a set of credit securities issued by North American or emerging market companies. Currently, the CDX contains 125 issuers and is broken down by two different types of credits: investment grade (IG) and high yield (HY).

A proprietary yield curve Municipal Market Data (MMD) AAA Curve provides the offer-side of AAA-rated state general obligation bonds (GO). The MMD analyst team determines the inclusion of bonds. The MMD AAA curve represents the MMD analyst team's opinion of AAA valuation, based on an institutional block size of $2 million-plus market activity in both the primary and secondary municipal bond market.

A collateralized loan obligation (CLO) is a single security backed by a pool of debt.

An exchange traded fund (ETF) is a type of security that tracks an index, sector, commodity, or other asset, but which can be purchased or sold on a stock exchange the same as a regular stock.