Mesirow

Capital Markets Brief

3Q2021 Review

"You mean to tell me that the success of the economic program and my re-election hinges on the Federal Reserve and a bunch of ***** bond traders?" – William Jefferson Clinton

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As we close the third quarter of 2021, the party rolls on and the heavy-handed knock at the door that we all expect has not been heard above the loud chatter, although the two and a half point dip in the 30-year Treasury bond and the equity dump rattled the knob. In spite of this, equity markets continue to sleepwalk through this liquidity fueled asset bubble (S&P 500 at 25.82X as we write). Credit spreads dance ever tighter.

If the rates markets haven't heard the knock, perhaps some government bond traders noted the late hour; one to three month notes inverted this week as traders eyed the cascade of dysfunctional Washington headlines: government spending authorization, debt limit, infrastructure bill stall, Senate reconciliation stimulus bill deadlock, Fed taper on the near horizon.

So much to worry about, but so little market reaction…

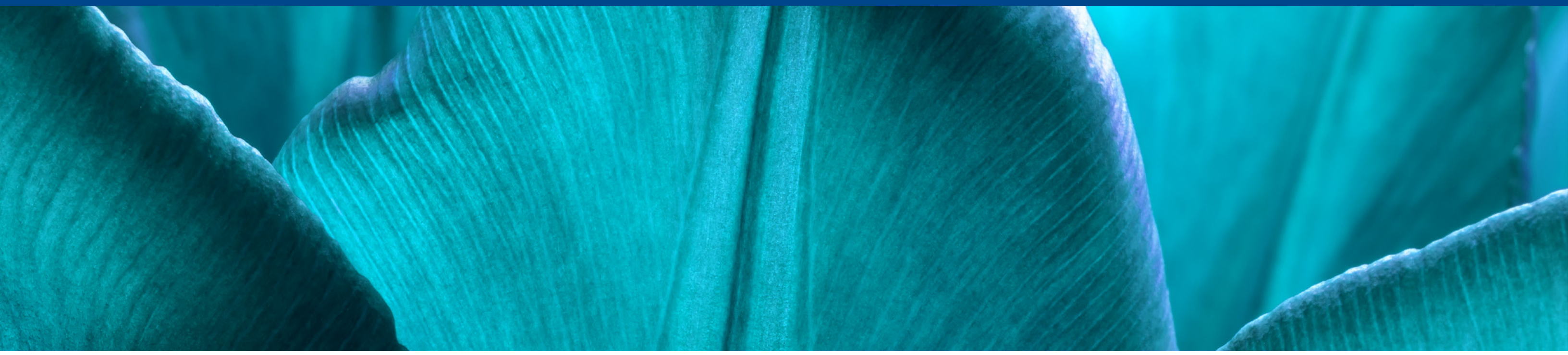
At the close of 2Q2021 we posed four questions related to **balance** for consideration:

- Are the pandemic impact and response 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 remain critically important 90 days later.

We add two more serious concerns at the close of 3Q2021:

- Why are markets so careless of the conspicuous asset inflation that the Fed liquidity bubble encouraged?
- Where are we in this most unconventional business/economic/Fed cycle? Is this level of fiscal and monetary stimulus justified by some new paradigm?



S&P 500
QTD: 0.58%; YTD: 15.91%

T 10 returns
QTD: 0.13%; YTD: -4.07%

Muni AAA Index
QTD: 0.29%; YTD: -0.29%

US$ Index
QTD: 1.94%; YTD: 4.77%

FED Balance sheet[1]
$8,447,981MM

Overview

At the end of September 2021, the COVID-19 pandemic rages on in the form of the delta variant. Front-line medical heroes have administered 6.3 billion vaccine doses, 387 million in the US alone. As we have discussed, this statement highlights the problem of vaccine distribution infrastructure challenges, as well as that of distribution equities. We continue to believe that the global pandemic response has at least three tiers: the US, Israel and the UK (preparing to implement third doses and youth doses of the most highly effective vaccines); Western Europe - bogged down by an initial slow response and leaning heavily on less effective vaccines; the less developed world struggling with overwhelmed medical infrastructures distributing the least effective (Sinovac) treatments (Bloomberg cites the least wealthy 52 countries having 3.6% of vaccinations).

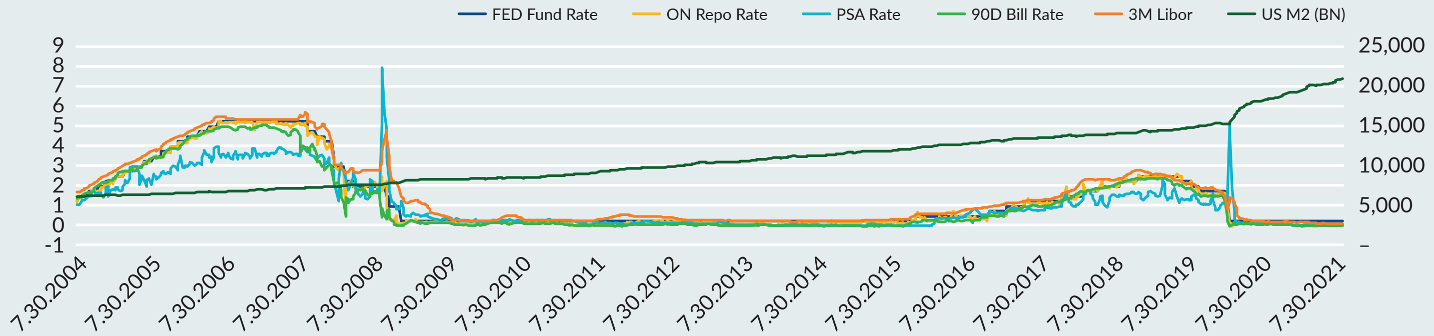
At each of these three tiers, medicos face proportional communication and education challenges. The US delta variant infection rebound is to a large degree a socially self-inflicted public health crisis. Prophylactic vaccine treatment is widely available to most US population segments, but politicization and historic "trust" issues have hamstrung public health officials.

This tiered structure of a return to economic and supply chain "normalcy" informs our economic outlook.

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 $8.44T), 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 the equity, commodity and residential real estate markets to suggest otherwise. We note that the Chinese government's move against cryptocurrencies is likely to create significant volatility in that market.

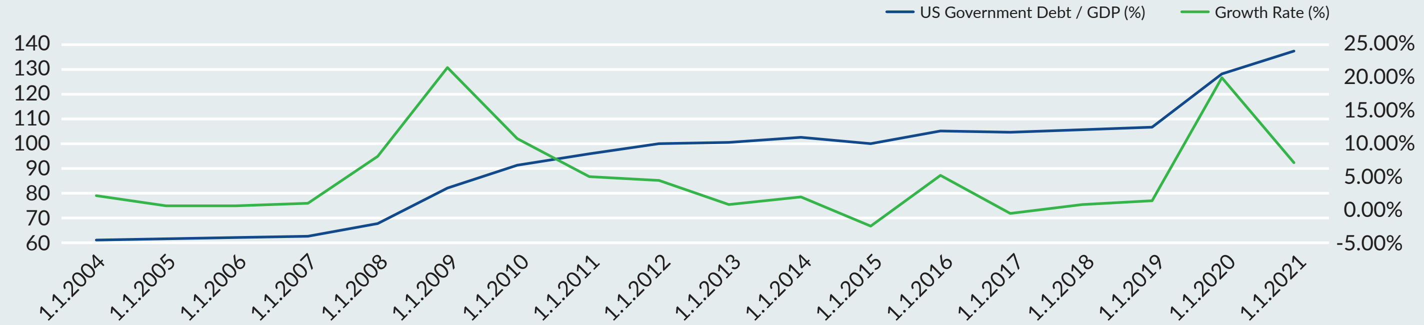
The value of assets continues to expand as the price of credit stays remarkably low. As noted above, the yield curve twists are a warning signal that these extended markets have largely ignored to date. Tuesday, September 29, gave us a brief sniff of burning powder. The quarter-end annualized GDP number at 6.7% and the GDP price index number at 6.1% will do nothing to clear the smoke that fixed income investors may be inhaling.

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



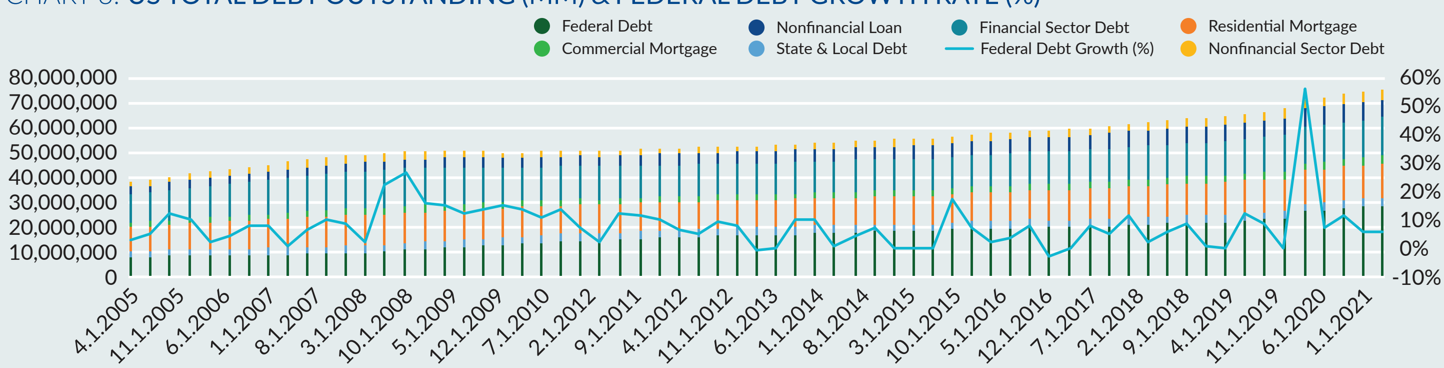
Source: Bloomberg.

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.

Please note that Charts 2 and 3 do not include either the impact on the proposed federal infrastructure bill (~-$1.2) or the reconciliation-based stimulus bill (A $3.5T headline number that conceals its true cost in obscure sunset and state mandate provisions, bringing the total into the ~$5-6T range).

Please consider this simple formula:
(1.2T + $6T)/ $ 28.797T* = 25% of current outstanding US national debt. As they used to say in Washington, a billion here and a billion there and pretty soon you're talking about real money.

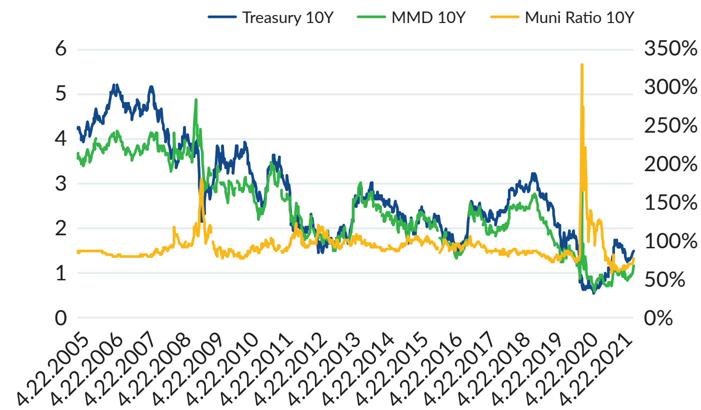
Now we are doing our underfunded liability math in trillions...

Charts 4 and 5 offer much information, but not much clarity to capital markets professionals.

- The US Treasury 10Y has been relatively stable over this quarter, while flattening at both ends for most of 3Q2021. Even after Tuesday's tantrum, the curve remains modestly flatter than on 6.30.21. The inversion at the very front end of the curve (1-3 months) suggests trader concern that is not reflected in T10 activity.
- The technically-driven municipal market rally took a breath over 3Q2021. The market has moved closer to normal ratios versus Treasuries. Obviously, daily tax change headlines will continue to drive this ratio.

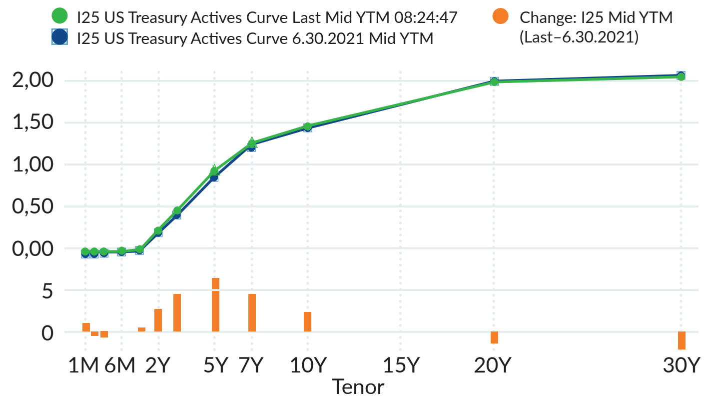
Last quarter's "flattening-twist" in the US Treasury yield curve was a cause for concern. 3Q2021 has seen further, all-be-it modest, flattening on the long end. The bond market looked blithely past "hot" economic numbers in 2Q2021, but political headline risk is absorbed with much less apparent confidence in 3Q2021. The market has been digesting a rich diet of inflation headlines in September and the first signs of indigestion are showing.

CHART 4: **TREASURY, MMD 10Y YIELD (L) & MUNI / TREASURY RATIO 10Y (R)**



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

CHART 5: **TREASURY CURVE SNAPSHOTS AT 3Q2021 BEGINNING AND END**



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

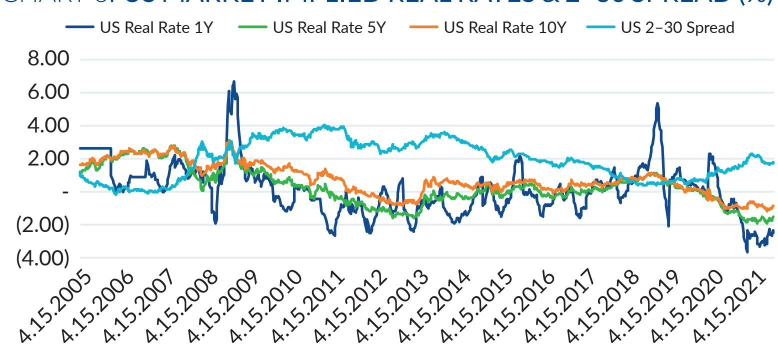
* Source: US Debt Clock

Fed Chairman Powell's mixed signals have taken on a bit more hawkish edge in this last week of September despite the Fed Chairman's none too subtle campaign for reappointment. His campaign talking points seem to be: holding off the taper, sequencing the end of quantitative easing ("QE") with a rate tightening theme in mid-2022 (50% of the Fed Governors); talking down inflation as manageable while talking up employment and, most of all, sustaining the asset bubble (that he hopes to drain slowly and gracefully). Market participants will judge for themselves how well the Fed is balancing its twin duties of price stability versus strong and growing employment.

Chart 6 below, describing "real" US Treasury rates across the curve, reinforces much of our previous data. One-year real rates have risen (they are less negative) and the 2-30 curve spread has flattened; remarkably in the face of a GDP QoQ read at 6.6% June 30. The September 30 number is 6.7%.

The "breakeven" 10-year yield is 2.375% as we write this note versus a market yield of 1.515. We asked last quarter: why are investors accepting negative yields given the headline risks to the markets? Perhaps this explains the "risk-on" equity trade with the P/E of the S&P 500 at 25.82x 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 haven in the Treasury market?

CHART 6: **US MARKET IMPLIED REAL RATES & 2–30 SPREAD (%)**



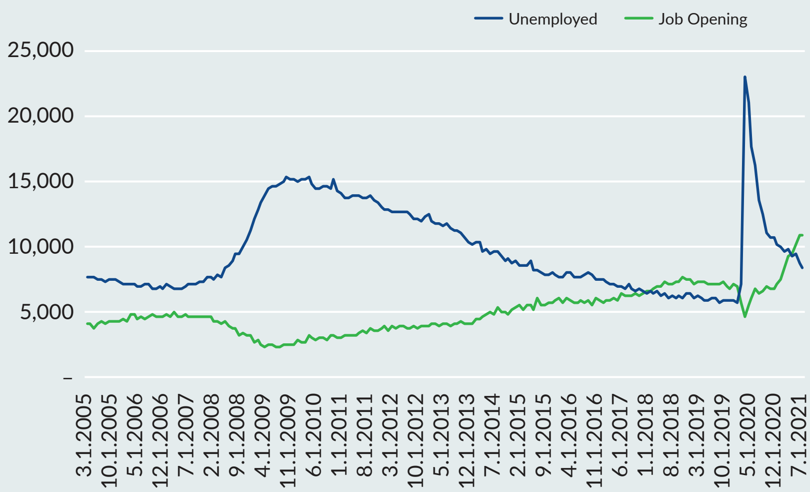
Source: Bloomberg; Mesirow Research. Past performance is not indicative of future results.

Charts 7–10 are best viewed in relative context. Chart 7 shows an employment imbalance that has worsened during the third quarter; a nominally high unemployment rate set against more than 10,000,000 posted job openings. The labor/skills mismatch in this economy continues to push up the price of labor, while constraining hiring and impeding the return to full-time employment for pandemic-affected workers. One's own political lens will determine if this is a simple post-COVID-19 employment crisis, a government middle-class entitlements crisis, a dignity of work-civic values crisis, the manifestation of an education and work-skills crisis, demography or all of the above.

These 10,000,000 available jobs, if filled, would bring this economy back close to trend. It's too early to tell whether the sunsetting of supplemental unemployment benefits in September will close this gap and provide more economic lift.

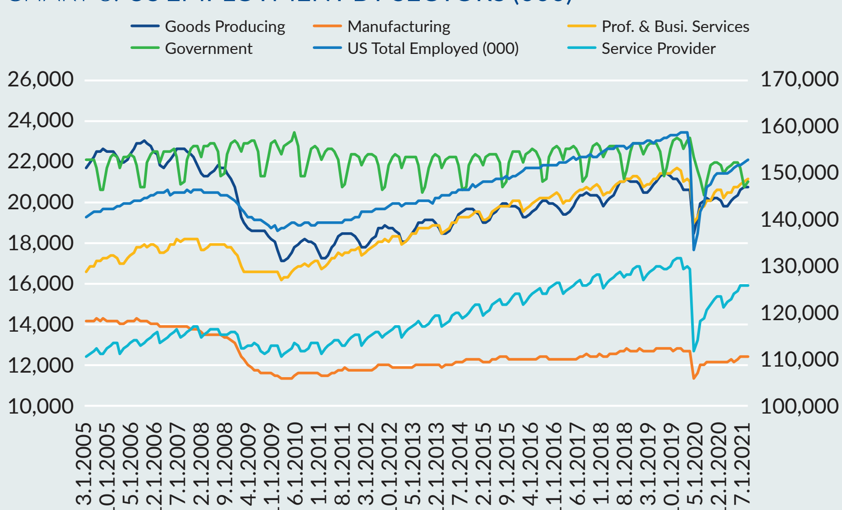
There is clearly a supply chain disruption driving inflation throughout the building materials sector, while recognizing the very strong crack both lumber and iron ore futures, partially attributable to a strong downward move in China's construction economy. Supply chain pressures are echoing beyond housing and throughout the economy (Charts 9 and 10) as production and distribution bottlenecks created by pandemic disruptions clear themselves. The Fed was clearly encouraging the markets to look past these inflationary bottlenecks through the early part of 3Q2021.

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



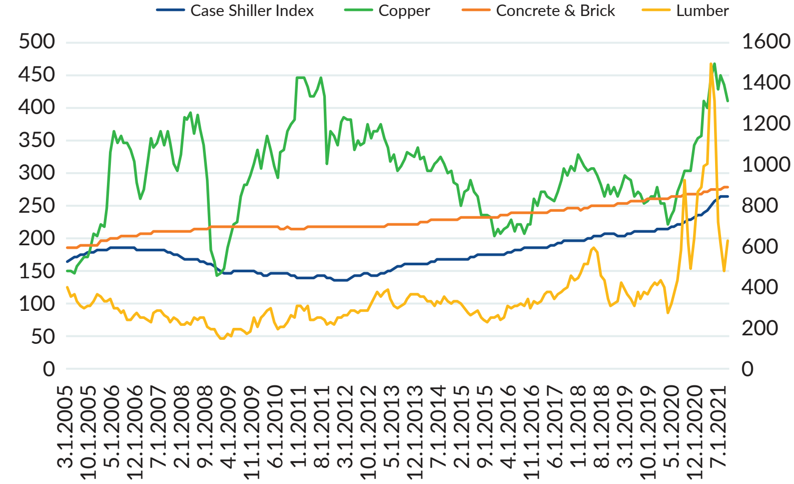
Source: Bureau of Labor Statistics; Mesirow Research.

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



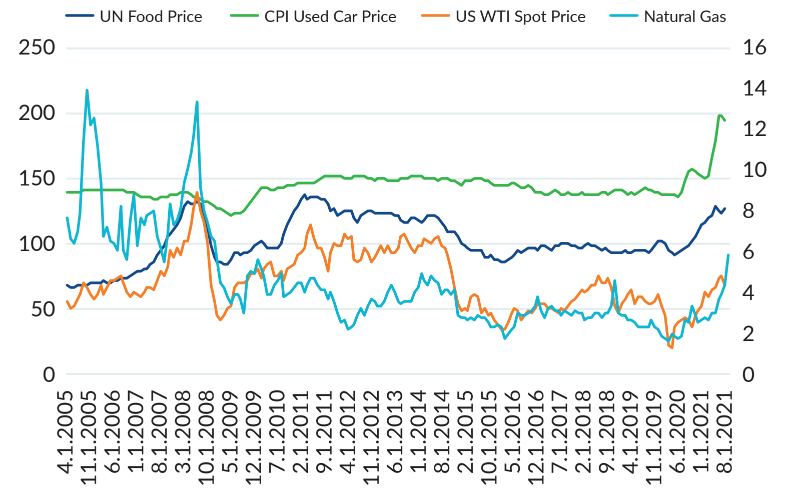
Source: Bureau of Labor Statistics; Mesirow Research.

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



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

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



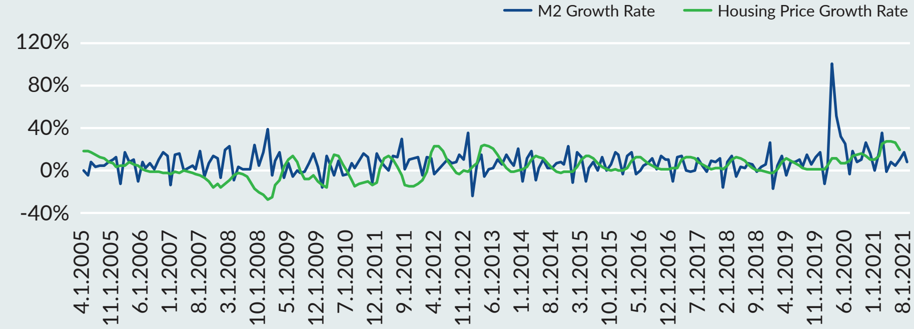
Source: Bureau of Labor Statistics; Bloomberg.

However, the Fed's latest notes release suggests that they have moved beyond a wishful 2Q2021 strategy and their discussions regarding QE and tightening in 2022 are more realistically grounded in data.

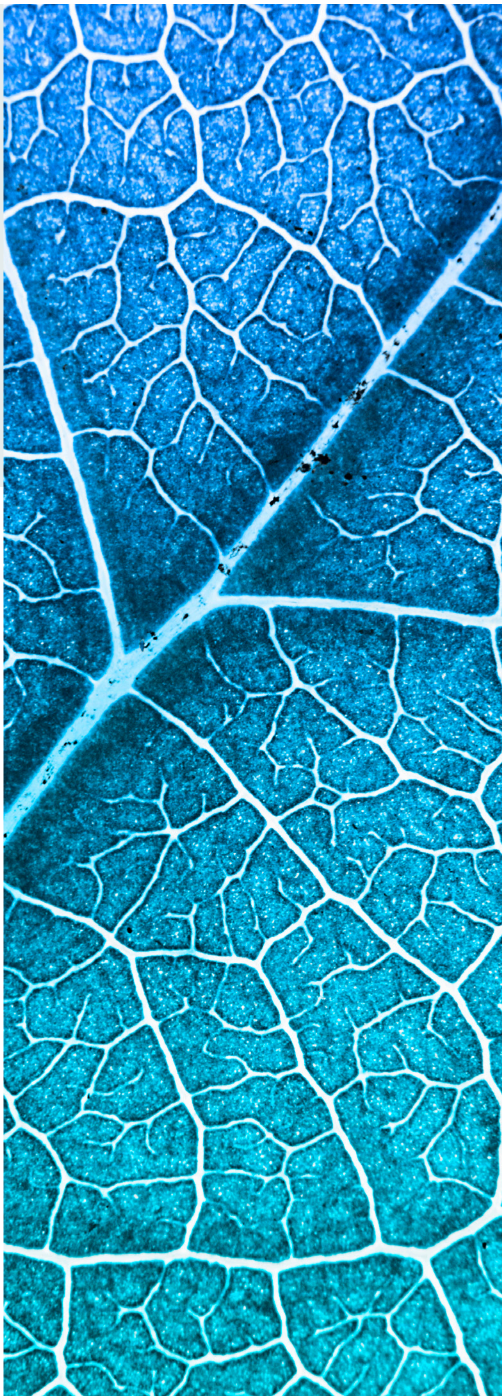
The asset bubble continues to manifest itself for most Americans in housing prices. Economists are increasingly concerned about the unwind of this bubble as demographics will almost certainly come into play. Baby boomers are over-invested in housing – it's been a good trade, but every good trade requires an exit. Based on history, the millennial generation is the natural buyer to take out downsizing baby boomers. But, many millennials joined the workforce in the chaos of a post-Lehman crash world of 2008–2011 which has effected both their earning power and their lifestyle values. Household formation has been delayed for this generation. The housing bubble has priced many millennials out of the market. We will be watching these trends closely to see if the housing "haves and have-nots" gap resolves itself without market dislocation.

The other two trends facing households daily are food and energy prices. An administration official spoke out for Beltway values last week by testifying that food was not significantly more expensive as long as your family didn't eat beef, pork or chicken; clearly blind to the mockery certain to be directed his way.

CHART 11: M2 & HOUSING PRICE GROWTH RATES



Source: Bloomberg; Mesirow Research.



Energy prices remain a vulnerability that has a knock-on effect throughout the supply chain. The Fed's latest comments seem to suggest that inflation is not simply a transitory effect of the COVID-19 recovery. Brent oil crossed $80 and natural gas and its derivatives are being pulled upward by offshore demand and regulatory limits on fracking. The front end of the bond market has taken note. When will the long end traders get skittish?

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 are pricing in minimal credit risk as well. Markets are not only looking past hot GDP and inflation numbers. The capital market's tame reaction to the threat of a US government shutdown in the next two weeks on top of a totally partisan approach to the debt ceiling is remarkable. We are facing a hostility within the political system not seen since the 1850s that is creating systemic dysfunction across the US government, yet the markets dance on…

Regardless of one's political outlook, none of us needs a return to the Standard & Poor's downgrade of US sovereign debt, and of the market dislocation that followed.

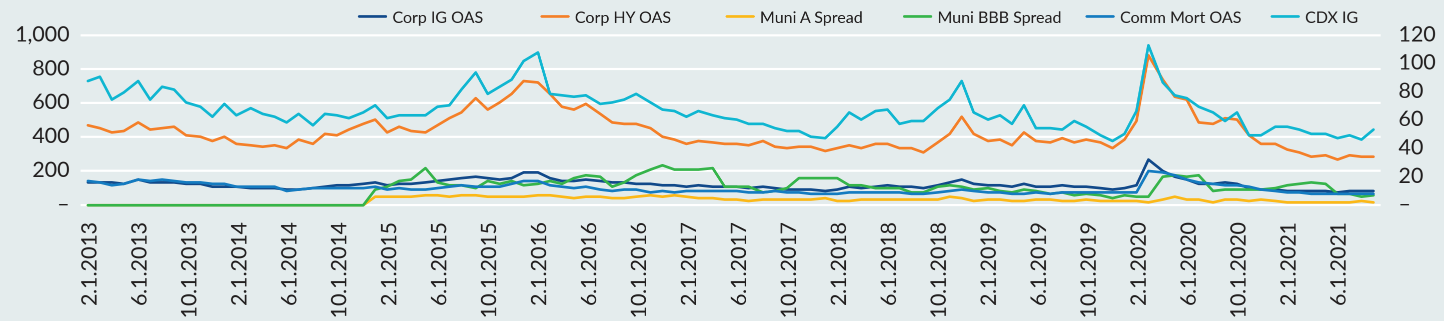
Chart 12, describing collapsing credit and CDX spreads, calls out another of the Fed's conundrums. Is the economy so strong that credit risk is de minimis, and thus markets are pricing credit risk correctly but discounting interest rate risk?

Investors would do well to review these credit spread graphs with caution. The Federal Reserve Board seems this week to have, however reluctantly and incrementally, begun to recognize that inflation may not be fleeting. Artfully draining a liquidity bubble is a remarkably difficult challenge, made harder by Congress's inability to accept even the appearance of fiscal discipline. When the executive branch and a bicameral legislature are in a bidding war to expand the role of government, the eventual impact on productivity and markets is not difficult to predict. The capital market's inevitable rotation up in credit quality in a "tapered" liquidity environment creates a very strong potential for aggressive spread widening.

As widely reported, the Fed took a more hawkish view of the rate environment last week. The "DOTS" suggest that half of the Fed Governors expect tightening to begin in 2022, following a taper of monthly QE asset purchases.

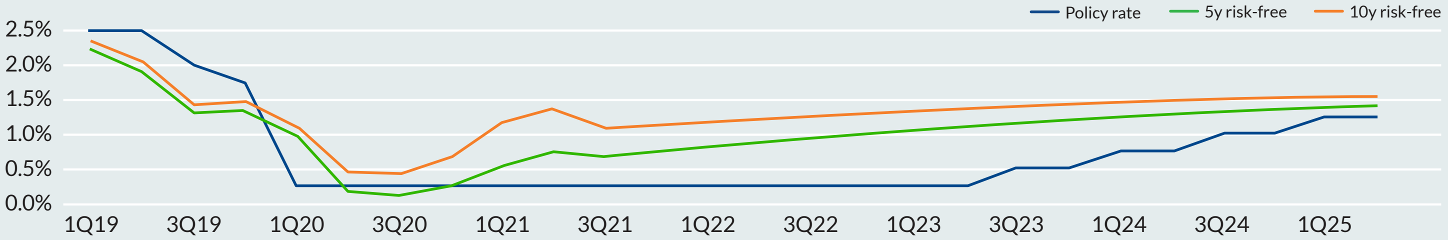
A simple but critically unknown variable that underlies all our questions is: where are we in the business/economic cycle? In this extraordinary pandemic environment, given our apparently remarkable fiscal and monetary conditions, it's difficult to "place" this economy in the context of business cycle stages.

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



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

CHART 13: **FED'S RISING RATE PROJECTIONS PUT UPWARD PRESSURE ON SHORT-END BOND YIELD**



Source: Bloomberg; Federal Reserve.

If we were very early in the recovery, this fiscal and monetary stimulus would be less threatening to fixed income investors. But the case we make below places us between late-stage and peak, exposing the bond market to greater risk through the inevitable tightening regime at hand.

Centuries of evidence suggest recognizing business cycle phases is important to assess growth trends.

A global pandemic and unprecedented monetary and fiscal policy disrupted the current business cycle and blurred the signals that analysts are accustomed to watch for. Acknowledging this, we still view the current phase as "late upswing."

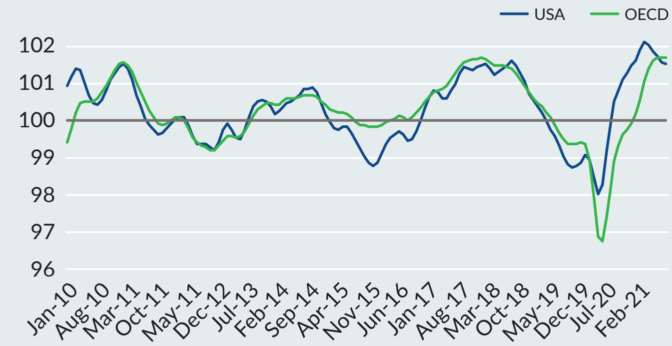
Federal stimulus and monetary policy drove the current expansion phase, so a change in direction by the Fed such as tapering could be a headwind and move rates higher. Any unexpected action from the Fed such as more stimulus or signals of steady asset purchases well into the future could keep us in a late upswing phase.

Current evidence of a late upswing phase illustrated in Charts 14–19 includes:

- In economic and business indicators:
  - High business confidence, labor shortages, accelerating wages, rapid growth in GDP, increasing inflation and the output gap is expected to close this quarter.
- Capital markets:
  - Nascent upward pressure on yields and gradual increase VIX levels in the 3rd quarter indicates some level of nervousness in the stock market. Bond market volatility, while historically low, has been trending upwards since the 1st quarter.

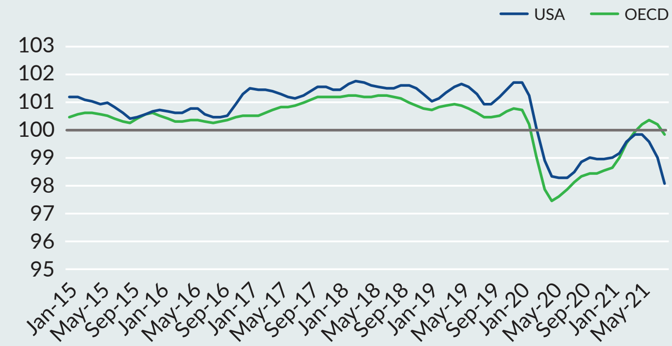
Consumer confidence has been declining. Does this reflect delta variant restrictions taking another bite out of the consumer, fuel and food prices or simply state and federal household stimulus drying up? We note that persistently low consumer confidence can be a leading indicator to a slowdown.

CHART 14: **BUSINESS CONFIDENCE**



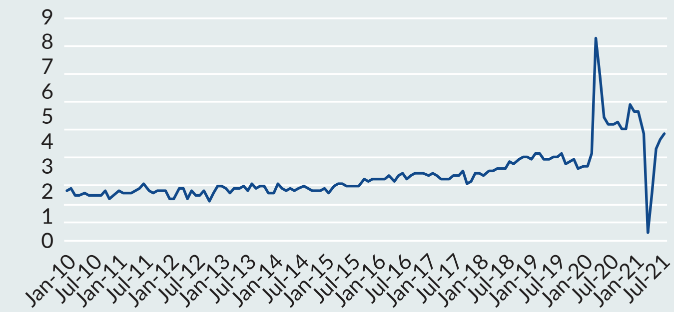
Source: OECD, Mesirow.

CHART 15: **OECD CONSUMER CONFIDENCE**



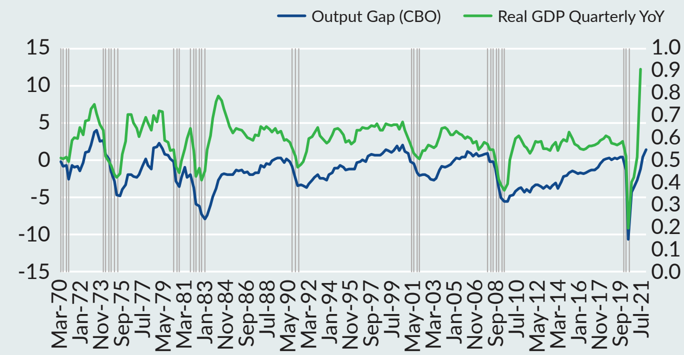
Source: OECD, Mesirow.

CHART 16: **WAGE GROWTH YOY% (MONTHLY)**



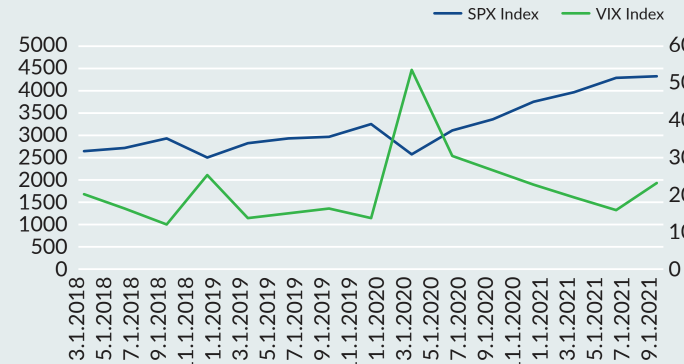
Source: Bureau of Labor Statistics, Mesirow.

CHART 17: **REAL GDP AND THE OUTPUT GAP**



Source: Congressional Budget Office, Bureau of Economic Analysis, National Bureau of Economic Research, Mesirow.

CHART 18: **STOCKS AND VOLATILITY**



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

CHART 19: **VOLATILITY**

Source: Bloomberg, Mesirow.

Conclusion

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

Are the pandemic impact and response evenly distributed?

No. The disparity between the developed and the undeveloped world is growing. As vaccine production and distribution has ramped up, the developed world is trending toward third doses and vaccine mandates. The United States is currently facing a pandemic of the unvaccinated. The science-based response, and the vaccines and treatment regimens it developed, are ever improving and strong enough to manage all current virus variants.

The politicization of this public health crisis seems remarkable to anyone old enough to remember the terror of polio and the near-universal support for broad-based public vaccination. If history is any guide, a harder line on COVID-19 vaccination will come, and soon. A strong Supreme Court precedent for mandatory vaccination (for smallpox) exists (Jacobson vs Cambridge, Massachusetts, 197 U.S. 11 (1905)). There has been remarkably little discussion of this very powerful ruling in support of public health measures for the general public good. We will hear more about Jacobson in the months to come as the basis of ever-stronger incentives to improve vaccination rates generally, and to extend relief to younger and marginalized populations.

Are markets working to price risk efficiently?

The concerns we raised in our 2Q2021 Capital Markets Brief are still very real. Credit remains inefficiently priced, unless one firmly believes that we are at an early phase of this economic cycle. Most evidence is to the contrary. Liquidity measures, asset prices, employment data, yield curve twists and supply chain inflation indications suggest we are not at the beginning of this admittedly unusual economic cycle. The Fed Governors themselves are visibly moving closer to a tightening regime. "Real" interest rates (Chart 6) are difficult for the Fed or for investors to ignore.

> "I used to think that if there was reincarnation, I wanted to come back as the President or the Pope, or as a .400 baseball hitter. But now I would like to come back as the bond market. You can intimidate everybody."
>
> – James Carville

Are central bank and government policy responses balanced and proportionate?

As we write, US government funding authorization is subject to a last minute continuing resolution and the federal debt limit looms, with no rational bipartisan response in sight. The "bipartisan" infrastructure bill remains hostage to objections from both sides of the political aisle; Democrats tie their support for a "politically pre-guaranteed" reconciliation bill along the lines of Senator Sander's $6T wish list, while Republicans vow to block any attempt at further spending, using the budget authorization and debt ceiling as political leverage. Meanwhile, Secretary Yellen has imposed extraordinary measures at Treasury and calculates the impending default metric in terms of days.

The Cares Act of March 2020 (approx. $2.2T) and the infrastructure deal currently under negotiation, $1.2T ($579B net additional spending) 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 Two. To many observers, there is often very little evidence that either political party, much less both of them working together, is focused on public interest.

The reasonable economic goal of every legislator of both parties should not be hard to state: to build a growing modern economy, develop a well educated workforce, support a smoothly functioning job market based upon the productive investment of national wealth toward the development of human capital. As we look at the legislative process stumbling its way toward the fiscal and policy deadlines of October 2021, we believe investors should "take the under" on any investment that requires high-minded civic maturity.

Are the impacts of these policy responses creating market distortions or masking unrealized risk?

The graphs we presented at the end of 2Q2021 have been updated to present the latest data. Unfortunately, the narrative has not substantially changed, while time has slipped away among the partisan policy squabbles. Markets are largely highly liquid, stable and "priced to perfection." We are operating in a "risk-on" world. Yet, the premia granted to investors for taking on risk are historically minimal on a variety of metrics. Borrowers are following the perceived incentives to lever-up and they are accepting the minimal protective debt covenants that the markets are offering. The asset bubble continues to expand as the liquidity bubble grows. Political actors out-bid one another for popular programs untethered to any notion of the public fisc. Moral hazard continues to be diluted as legislators on both sides of the aisle engage in magical thinking.

As we said last quarter, in this environment, mindful 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.

Why are markets so careless of the conspicuous asset inflation that the Fed liquidity bubble encouraged?

There is no clear answer. Of the many possibilities, two stand out.

The belief in a "Fed Put" is a magical talisman to institutional investors. March-April 2020 capital markets disruption appears to have hardened this view rather than humbled it. Professional investors seem to have scrubbed their memories of their own panic before the Fed intervened in the front end of the Treasury curve to stabilize markets. Perhaps first-world professional investors, managing the largest asset pools, believe that this global pandemic (largely well-managed within wealthy postal code zones) and the resulting monetary response from the US Fed, BOE, ECB and PBOC has been a trend-creating opportunity they have been bound to chase. Professionally, this has been rewarding to many investors thus far through this cycle. Hard reality has been kept at a distance by government policy thus far. But, the most terrifying term in the investment lexicon ought to be "unrealized risk."

Another possible answer lies in a near-magical belief that both professional and retail investors alike have in the stability of residential real estate. It has been government policy to subsidize and support real estate as a form of middle class entitlement (largely subsidized by US government guarantees and tax incentives) creating a highly leveraged driver of employment and a powerful commercial lobby. This market has become an untouchable sacred cow in Washington. Many investors are too young to remember the S&L crisis…

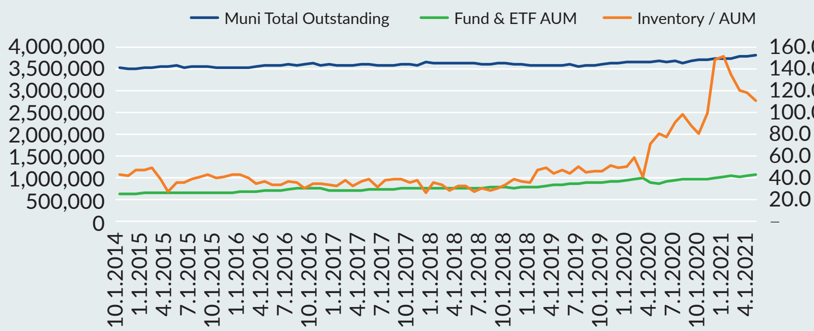
Where are we in this most unconventional business/economic/Fed cycle? Is this level of fiscal and monetary stimulus justified by some new paradigm?

As noted on page 10, this is a unique Fed cycle with conflicting data, but we believe that the data points to our being in a late upswing phase and all appropriate fixed income caution should follow that conclusion.

CHART 20: **CPI YOY & PCE CORE YOY**

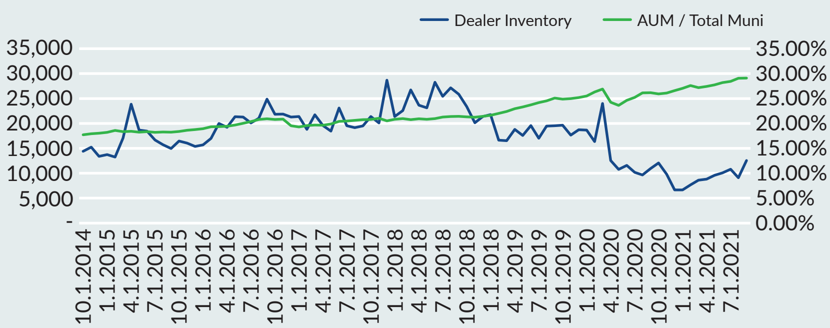
Source: Bloomberg; Bureau of Labor Statistics.

CHART 21: **MUNICIPAL TOTAL OUTSTANDING, FUND & ETF AUM (L) & AUM / INVENTORY (R)**



Source: Bloomberg, EPFR, Federal Reserve Bank of New York.

CHART 22: **DEALER INVENTORY (L) & AUM / TOTAL MUNI OUTSTANDING (R)**



Source: Bloomberg, EPFR, Federal Reserve Bank of New York.

Municipal market thoughts

While the ratio of municipal bond rates to equivalent Treasury tenors has partially retraced last quarter's over valuation and settled in the low 80% range, munis are still somewhat rich. As the credit spread chart (Chart 12) describes, all credit markets are overpriced and municipals are no exception. Municipal investors tend to look for rate guidance from the Treasury curve and, as noted, conservative wisdom (the type generally valued by tax exempt investors) has been found wanting. We all wait on Washington and the Federal Reserve for a sense of committed direction. Yet in the last weeks of 3Q2021, the muni market has recognized and repriced the risk in deep discount coupon structures.

A rarely discussed risk to municipals is the disconnect between the capital markets asset bubble we have discussed above, and the disproportionate decline in Wall Street broker's trading capital. When compared to the growth of mutual fund and ETF assets on "the buy side," Wall Street's consolidation has left a hole in the municipal market's trading capital structure. "The Street" has contracted while invested assets in intermediated "retail" funds have grown. Never discussed (in polite company) is the unfunded "daily put" that retail investors enjoy as a benefit of fund/ETF ownership; Mom and Pop can call up and redeem shares any morning for any reason. These funds represent approximately 29.09% of a more than $3.8T market. This large percent of the municipal market is effectively "short" this daily retail investor "put". The scale of dealer capital is dwarfed by this liability at 88.4X orders of magnitude.

Municipal investors who doubt this point should remember March 2020 as an event that (momentarily) exposed this risk. They should focus on high quality assets that foot with their holding horizon in the context of likely ever-changing tax treatment.

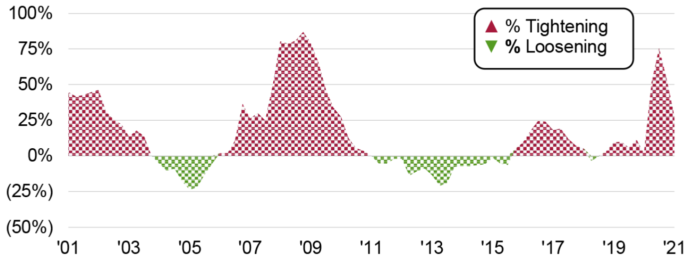
Credit tenant lease and real estate thoughts

According to CBRE, global investment volume in real estate increased by 19% during the first half of 2021 over the year prior. North America and Asia Pacific matched pre-pandemic volume levels while Europe lagged in conjunction with its access to COVID-19 vaccines and longer quarantine mandates.

In an environment where liquidity continues to chase yield, prices in the real estate markets have held up stronger than expected. Investors have been challenged to source deals and many have increased their tolerance for risk. According to CBRE's 2021 Global Investor Intentions Survey, nearly 25% of recently surveyed investors are targeting opportunistic and distressed assets, particularly in the retail and hotel sectors.

CHART 23: SENIOR LOAN OFFICER SURVEY (CRE)

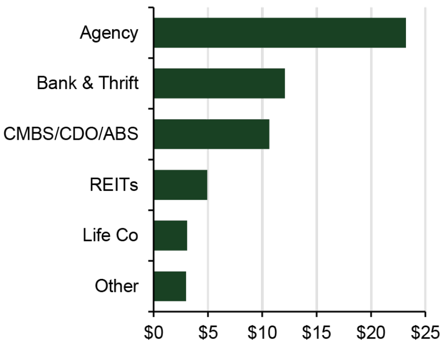
(% tightening standards)



Source: Green Street September 2021 Report.

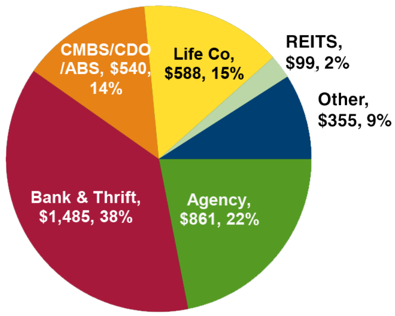
CHART 24: MORTGAGE FLOWS

Net change in debt outstanding; QoQ



Source: Green Street September 2021 Report.

CHART 25: COMM. MORTGAGE DEBT OUTSTANDING ($B)



Source: Green Street September 2021 Report.

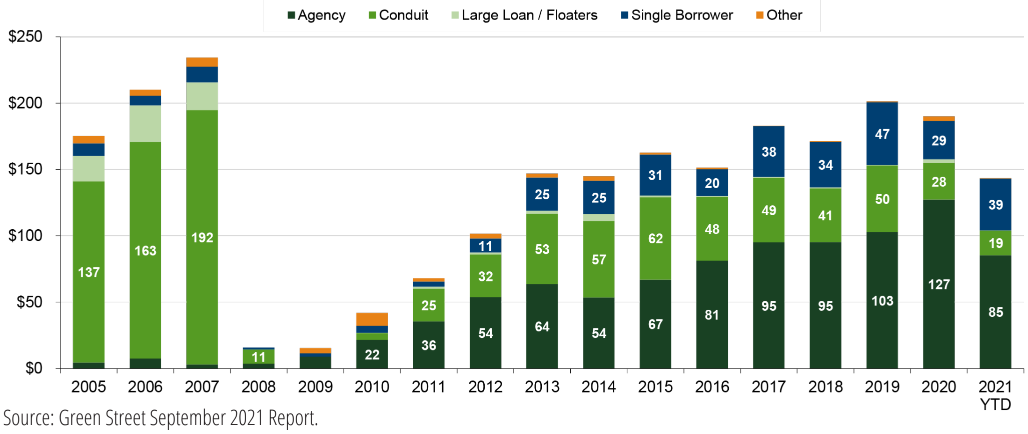
Macroeconomic concerns have been quelled in a material way and sentiment toward real estate as an asset class remained steadier than expected during periods of uncertainty, with momentum picking up where it left off prior to COVID-19, albeit with some internal shifting among asset types given the accelerated effect of secular trends and social movements.

A rate environment persists which continues to fuel the real estate debt capital markets. Access points for real estate issuers are abundant from a diverse group of direct lenders such as traditional banks, debt funds, LifeCos, CMBS, Agency/GSEs and mortgage REITs. Together, the commercial mortgage debt markets comprise approximately $3.8T of outstanding principal.

Asset managers have seen a continued increase in LP capital over recent years for the credit vehicles they form and manage. This has come at a time of unprecedentedly cheap access for these vehicles to the debt capital markets such as CLO, repo and bank/sub-line financing. Over the last cycle and persisting through COVID-19, these managers have risen to meet ever-increasing demand, building bank-rivaling infrastructure in order to produce both direct and indirect real estate lending opportunities. This industry's market share in the mortgage bridge and construction lending space continues to creep to a level that rivals the traditional bank market which has traditionally owned this space, particularly prior to the current regulatory environment which has made it less nimble and less incentivized.

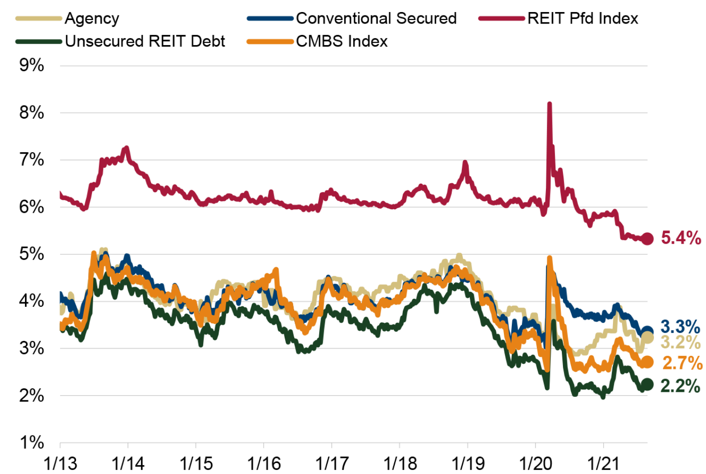
Broadly, real estate debt markets are highly accessible to issuers, with an increased easing in LTVs, and decreasing spreads.

CHART 26: US COMMERCIAL AND MULTIFAMILY MORTGAGE-BACKED SECURITIES ISSUANCE VOLUME ($B)

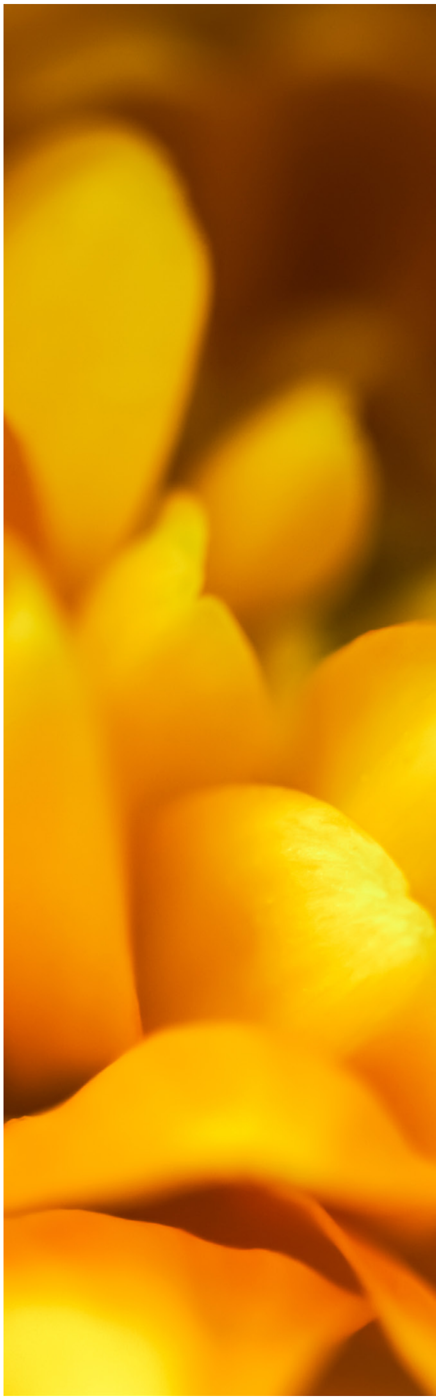


Source: Green Street September 2021 Report.

CHART 27: CRE DEBT COSTS BY TYPE (10 YR)



Source: Green Street September 2021 Report.



According to Green Street, unsecured REIT debt costs are touching all-time lows and August was another active month of issuance.

Increasing liquidity in the debt and equity capital markets, paired with buying power near all-time highs continues to cause continued compression in cap rates. This pressure is further fueled by significant acceleration of certain secular trends that occurred as a result of the pandemic which has caused a redistribution among asset types.

	Cap Rate (9.2021)
Manuf Home	3.8%
Senior Housing	4.5%
Lodging	5.7%
Mall	7.0%
Self-Storage	4.4%
Strip Center	5.7%
Student Housing	4.1%
Industrial	3.5%
Apartment	3.9%
Office	5.3%
All Property Types	4.8%

Source: Green Street.

Long-term inflation expectations measured by the difference in yield on treasuries and TIPS eased some during 3Q2021 from their 2Q2021 peak, though expectations for the next five years remain elevated and highly topical among investors.

TABLE 1: RECENT DEBT DEALS

Sector	Type	Amount ($M)	Term (yrs)	LT Rating Moody's/ S&P	Pricing	Spread	Date
Healthcare	Unsecured	$500	10	Baa1 / BBB+	2.50%	T + 117	8.20.21
Mall	Unsecured	$700	10	A3 / A-	2.25%	T + 93	8.18.21
Mall	Unsecured	$550	5	A3 / A-	1.38%	T + 5	8.18.21
Mall	Unsecured	$400	10	Baa3 / BBB-	2.75%	T + 140	8.10.21
Office	Unsecured	$400	7	Baa3 / BBB-	2.00%	T + 82	8.11.21
SFR	Unsecured	$650	10	Baa3 / BBB-	2.00%	T + 83	8.3.21
Strip Center	Unsecured	$500	10	Baa3 / BBB-	2.50%	T + 117	8.11.21

Source: Green Street September 2021 Report.

TABLE 2: REIT UNSECURED MARKET

Issuer	Mat	Yield / Sprd (bps)	MoM ▲ Sprd (bps)
AvalonBay	1/31	2.02% / 73	▲ +1
Boston Properties	4/32	2.46% / 108	▲ +5
Duke	2/31	2.16% / 84	▲ +2
Equity Residential	2/30	1.94% / 74	▼ -3
Federal Realty	6/30	2.22% / 99	▼ -1
Healthpeak	1/31	2.27% / 98	▲ +7
KIMCO	10/30	2.30% / 105	▲ +2
Prologis	3/31	1.92% / 60	▼ -1
Realty Income	1/31	2.07% / 78	▼ -1
Regency	6/30	2.22% / 99	▲ +2
Simon Property	2/31	2.23% / 92	▼ -2
Ventas	11/30	2.39% / 92	▲ +0
Average		**2.23% / 111**	▲ +0
Unsec. REIT Issuance Prior Month ($B)			**$3.7**

Source: Green Street September 2021 Report.

Overall, real estate is typically viewed as an inflationary hedge given the historical relationship between rent growth and consumer prices.

This view is further pronounced within the net lease real estate sector given its contractual annual base rent increases and its full pass-through of operating expenses to the tenant as additional rent. Real estate debt secured by properties net leased to credit tenants provides a prudent, tactical opportunity in the current environment with layers of credit enhancement often characteristic of both senior unsecured corporate and secured real estate credit exposure.

Such products may enhance portfolio diversification whether as part of an investor's real estate allocation or as part of an investor's fixed income portfolio.

Thoughtful investors will continue to believe in the dynamic strength and creativity of the American economy and place their markers on the energy and good will of our people. But wise investors will note the divisiveness and partisan rancor of our professional political class and recognize this as an "investment signal" of unrealized risk. Thoughtful, patient investors will establish a balanced allocation between the dynamic wealth-creating creative economy along with a core of stable, quality-focused, volatility-constrained positions. They will let the trend-chasers have their run, confident that they will be sitting comfortably when the music stops. The music always stops before it starts again...

TABLE 3: **NOI GROWTH**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Apartment	6.90%	7.70%	5.30%	5.10%	6.70%	5.40%	2.90%	2.50%	3.60%	-4.70%	-1.50%	14.10%	5.10%	3.70%	2.20%
Industrial	1.0%	2.3%	2.3%	3.5%	4.5%	5.3%	5.1%	5.2%	4.8%	3.4%	6.0%	6.0%	6.1%	6.1%	6.1%
Mall	3.0%	4.2%	4.8%	4.3%	3.7%	3.7%	2.3%	1.8%	1.1%	-17.9%	6.9%	8.5%	2.5%	2.5%	2.6%
Office	1.4%	1.1%	3.2%	4.1%	2.6%	5.0%	4.8%	2.8%	2.4%	-2.3%	1.4%	3.5%	1.7%	1.9%	2.0%
Strip Center	1.1%	3.4%	3.9%	3.4%	3.6%	3.1%	2.4%	2.4%	2.8%	-10.7%	9.0%	3.9%	3.4%	3.1%	2.9%
Lodging	10.9%	13.7%	11.6%	12.9%	7.6%	2.6%	2.0%	1.9%	-0.8%	-108.1%	-442.3%	216.7%	14.4%	3.2%	1.5%
Manuf Home	3.0%	3.3%	4.1%	5.9%	7.1%	6.3%	6.0%	6.0%	6.2%	3.5%	10.5%	7.5%	6.1%	5.3%	4.7%
Self-Storage	6.6%	7.7%	7.9%	6.9%	8.8%	7.3%	3.4%	2.1%	1.2%	-1.2%	12.9%	8.0%	4.5%	3.3%	2.2%
Student Housing	6.3%	4.1%	-0.2%	1.0%	4.7%	3.0%	2.5%	1.0%	2.7%	-11.3%	2.2%	9.3%	11.2%	3.2%	3.0%
Senior Housing	4.0%	6.6%	4.8%	5.7%	3.3%	3.2%	1.9%	-1.0%	-0.7%	-25.0%	-15.0%	37.5%	20.0%	8.0%	5.0%
Wtd Avg	3.9%	4.9%	4.7%	5.0%	5.2%	4.9%	3.6%	2.8%	2.7%	-10.2%	6.3%	11.6%	5.3%	3.9%	3.2%

Source: Green Street as of September 2021.

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 9.30.21.

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.