
Capital Markets Brief



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S&P 500

QTD: -16.11% | YTD: -19.96%

Treasury 10Y

QTD: -5.14% | YTD: -12.06%

Muni AAA 10Y

QTD: -2.84% | YTD: -10.45%

DXY

QTD: 6.48% | YTD: 9.42%

Dow

QTD: -11.25% | YTD: -15.31%

NASDAQ

QTD: -22.27% | YTD: -29.22%

Euro Stock 50

QTD: -17.82% | YTD: -9.82%

Bloomberg APAC

QTD: -15.28% | YTD: -17.16%

Introduction

“What is called sound economics is very often what mirrors the needs of the respectably Affluent.”

– John Kenneth Galbraith; Money: Whence it Came, Where it Went 1975

“The long run has caught up to us.”

– Paul Volcker; Speech to the American Banker’s Association 1979

This has been a remarkable quarter for everyone who shares this small planet. Geo-politics, hot inflation, market disarray in labor, energy and commodities, global equity market volatility, Russian sovereign default and a crypto-meltdown have made this an extremely challenging quarter for investors.

Russian revanchist aggression has shown itself to be as dangerous in failure as it appeared to be in the early days of their unprovoked attack on Ukraine. Settled International Law and Sovereign boundaries, respected since 1945, were cast aside on February 24. The “Cold War” that we had consigned to the dustbin of history is being reborn in Eastern Europe, this time with no room for neutrality (Sweden, Finland).

The Mesirow Capital Markets Brief is not a geo-political tract; rather, it is a capital markets-focused investment analysis. However, investors who have studied the post-Vietnam rate cycle understand the resonance of history as they contemplate today’s markets. Once again, thoughtful investors are coming to terms with the systemic consequences of a decade of a “Guns and Butter” fiscal policy in the economic context of “endless war.”

The fiscal pressure created by unyielding international demands on a materially exhausted military structure should be priced into 2022 capital markets analysis.

The United States Federal Reserve Board, after a long period of zero interest rate policy, raised rates sharply in the past quarter in response to inflationary pressure. The steady upward march of Y/Y CPI (May at 8.6%) and PPI (May at 10.8%) data has placed a spotlight on potential further Fed action. May's hourly earnings number of +5.2% with an unemployment rate of 3.5% strongly implies the existence of structurally embedded inflation pressure.

Meanwhile, consumer confidence falling in May (U of MI 58.4%) and the hard bite of falling real incomes is dragging down personal expenditures and potentially initiating the deflation of the real estate asset bubble already facing increasing pressure from a nearly flat and rising yield curve.

Market volatility in both equity and capital markets may be enough to incent a risk-on asset rotation by experienced investors at the expense of "small" investors who may remember the 1970s or may lack the stomach or the will to cope with extreme equity volatility.

While crypto-currencies dissolve, more than 200 bio-tech companies are trading below their cash value. The explosive short-squeeze in bio-tech last week is an indication that markets may have lost their valuation disciplines.

Opportunity lies in crises and turbulent markets. It lives side by side with risk.

Once again, in this Capital Markets Brief, we will try to cut through much of the noise generated in this most unhospitable quarter for investors. We will, as always, focus on data and demonstrated behavior to provide some clarity regarding what underlies market behavior in this violent global environment, and how best to navigate this market turbulence mindfully and opportunistically.

The Fed awakes:

- Are markets pricing risk and reward fairly?
- Are policy makers' responses to market conditions balanced and proportionate?

We will address these questions as we examine the data charts.

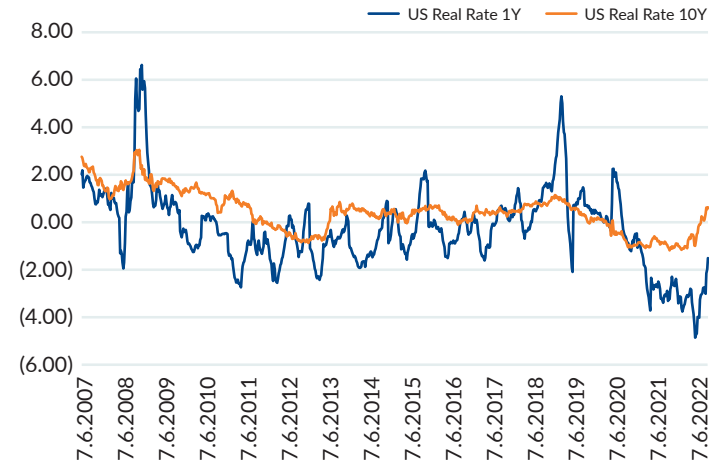
CHART 1: US 3M REAL RATE



Source: Bloomberg, Mesirow Research.

We lead with a chart that investors old enough to remember the 1970s, or those who have studied the economic history of the period (highly recommended), will know where to focus; 1979.

Paul Volcker's appointment, ascendancy, and the reluctant political support he commanded for his subsequent extraordinarily restrictive rate regime were likely the result of this data series. Markets (and Wall Street leaders) demanded tough medicine, and they got a full dose. We do not believe that investors will be living through a 1979-81 Fed/rate scenario, but you can look at this chart and reasonably prepare your asset allocation for a bumpier landing than the Fed is suggesting

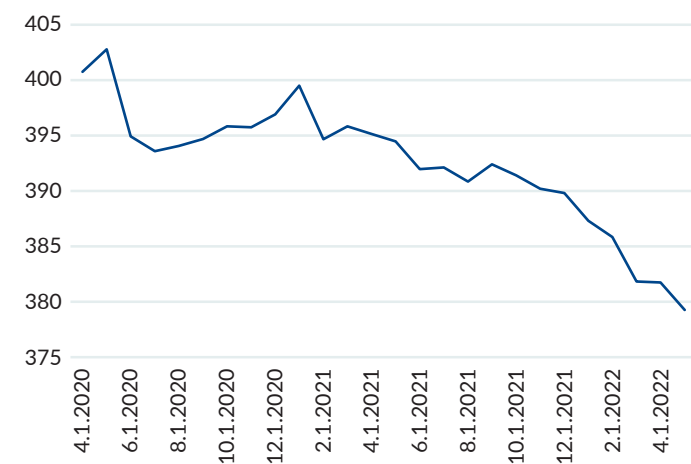
CHART 2: US REAL 1Y & 10Y RATES

Source: Bloomberg, Mesirow Research.

The yield curve adjustment over 2Q has moved the 10-year Real Rate into positive territory. The front end of the Real Rate curve is still negative. Interest rates, the Fed balance sheet and fiscal policy are still very accommodative.

CHART 3: REAL WEEKLY EARNINGS

(Average of 82–84=100)



Source: Bloomberg, Mesirow Research.

Incumbent politicians grateful for Chairman Powell's complicity in 2021 will examine Chart 3 with deep concern. The Fed played ball, and a Congress facing mid-term elections will not thank them for it.

This is a chart that describes genuine American kitchen table hardship. Labor inflation pressure will not melt away in the face of this data.

Does Fed Chairman G. William Miller, the last non-economist Fed Chair, live on in Jay Powell? The mid-term elections are likely beyond management at this point, but how, in pure economic terms, how will the Fed behave in the run-up to the 2024 election season? Serious investors should consider this question carefully.

CHART 4: PPI YOY

Source: Bloomberg, Mesirow Research.

The latest reading (+ 10.8%) does not a trend make. The data charted is all the more shocking, given that these pressures feed CPI...

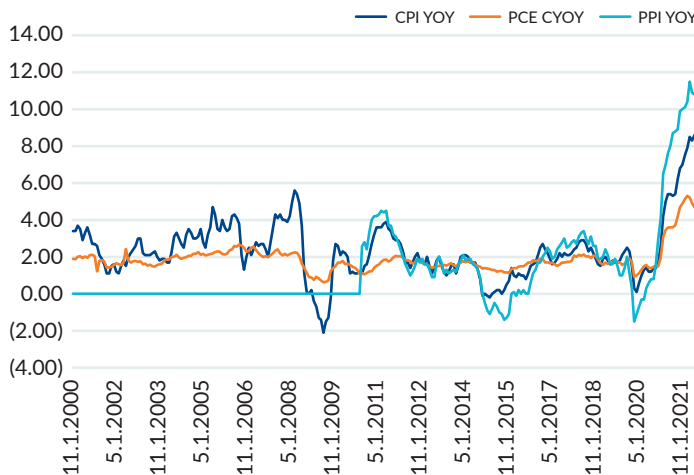
CHART 5: CPI YOY



Source: Bloomberg, Mesirow Research.

June 10 CPI data at +8.6% should bring no relief to investors.

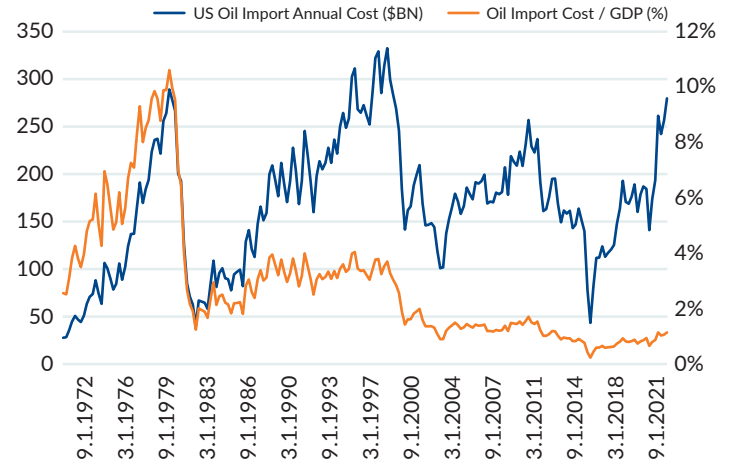
CHART 6: CPI YOY, PCE CORE YOY & PPI FINAL DEMAND YOY



Source: Bloomberg, Mesirow Research.

Core PCE, Powell's favorite inflation data point (running systematically at a lower value), is still unforgiving. Data posted on 6/30, + 5.3% at slightly above consensus, provided minimal relief for former Fed doves or for fixed income investors.

CHART 7: US OIL IMPORT ANNUAL COST (L) & IMPORT COST / GDP (R)

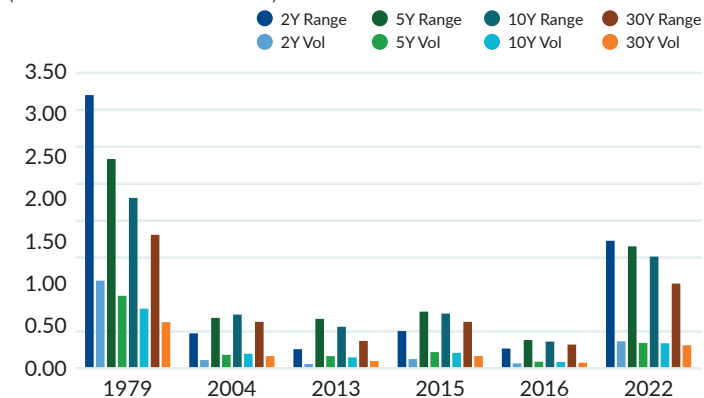


Source: Bloomberg, Mesirow Research.

In citing the 1970s, we thought it fair to look at two critical drivers of that grim period. Oil imports (on a \$ cost basis) are currently well above the 1979 range. The spike up in 2020 is notable. But consider the relative size of today's economy. Adjusted for economic growth, the share of GDP consumed by petroleum imports is a fraction of the Volcker era figure. The political discord around energy costs is real, but the systemic economic drag it provides today is marginal in comparison to the "oil shock" era.

CHART 8: TREASURY YIELD RANGE & VOLATILITY ACROSS CURVE

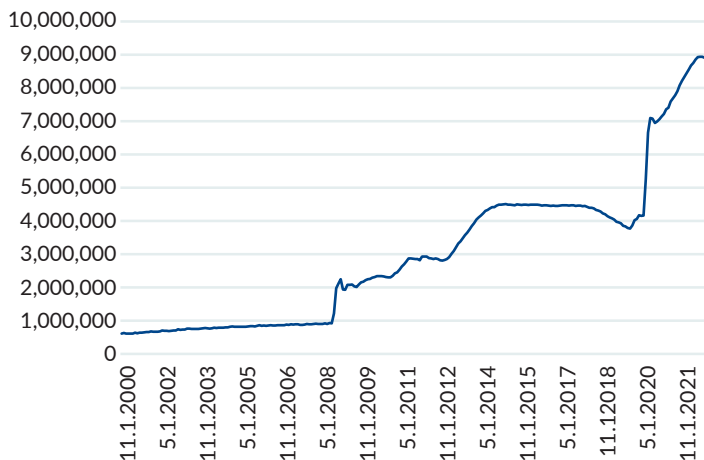
(3 Month Post 1st Hike)



Source: Bloomberg, Mesirow Research.

In these data, 2022 presents the highest level of market volatility since 1979. The '79 period rate structure was nominally much higher, so the 2022 volatility stands out.

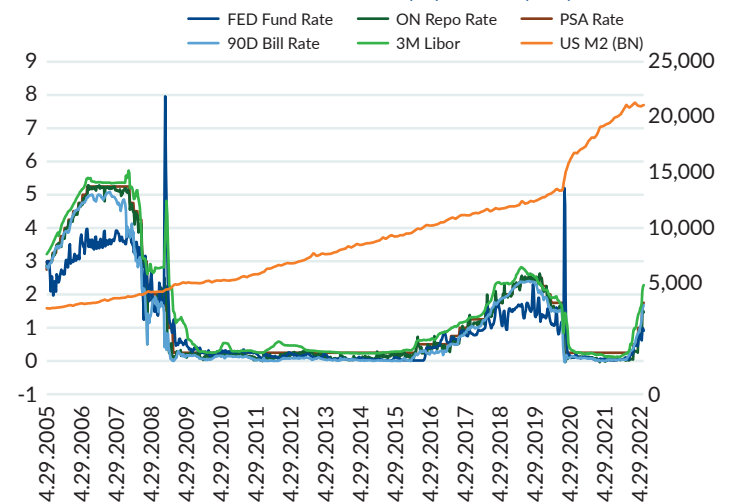
CHART 9: FED BALANCESHEET (MM)



Source: Bloomberg, Mesirow Research.

Other than the Real Wage chart, Chart 9 is the most alarming data series in this package. How will the Fed balance sheet, bloated to this degree, be drained artfully enough to create the much promoted “soft landing,” when the fiscal side of the equation has been equally undisciplined during the Covid-19 era.

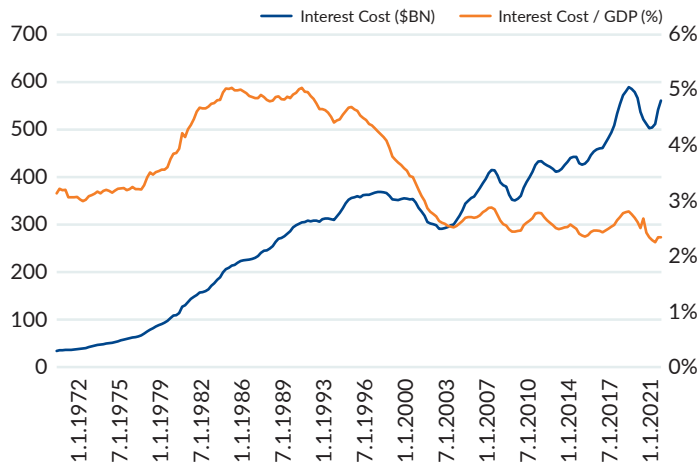
CHART 10: US FUNDING RATES (%) & M2 (BN)



Source: Bloomberg, Mesirow Research.

Just look at M2 since March 2020. The definition of accommodation? Investors should consider how smoothly and artfully the required adjustments must be made to avoid the Stagflation trap; or simply a measurable recession...

CHART 11: ANNUAL INTEREST COST OF SERVICING FEDERAL DEBT

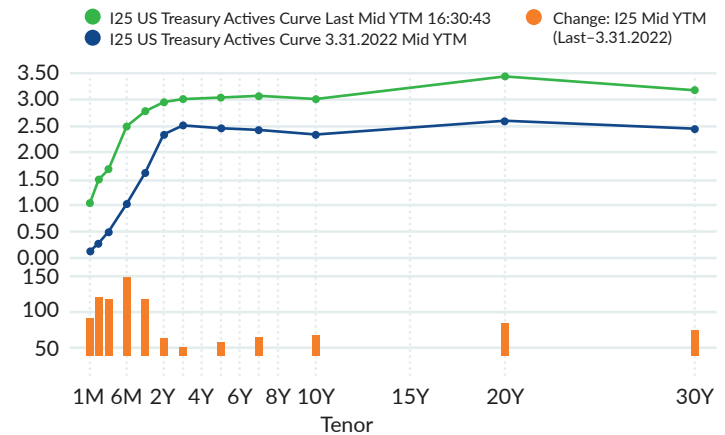


Source: Bloomberg, Mesirow Research.

In our effort to look back to the Volcker tightening regime, we present Chart 11. Federal interest cost has risen dramatically in dollar terms. But the lowrate regime has actually reduced Federal interest cost as a percentage of GDP. This has also likely moderated the “crowd-out” effect of Federal borrowing on the private economy.

Sovereign debtors, notably those with central banks firmly in hand, tend to flirt with the strong incentives to allow inflated currency to reduce their future debt service burden. But investors and fiscal hawks should note that Congressional Budget Office projections recently reviewed and published by the St. Louis Fed project Federal interest/GDP to rise to 3.71% in 2032, a **48% increase over ten years**.

CHART 12: CURRENT UST CURVES 4.1 AND 6.30.2022



Source: Bloomberg, Mesirow Research.

Note the change in the US Treasury yield curve over 2Q. The net result of all the quarter's volatility is a significantly higher rate structure but still very flat curve. Rate movement in the front end (inside 1 year) was most dramatic. The curve is pricing a tightening Fed but suggests a benign view of inflation in the out years. Is the bearish “just at the beginning” June 29 comment by Loretta Mester, President of the Cleveland Fed, a one-off? Or is it a calculated trial balloon, to signal increasing concern within the Fed system as labor inflation signals continue to rise (6/2 Unit Labor Costs + 12.6%) while productivity falls (6/2 reported non-farm productivity fell -7.3%).

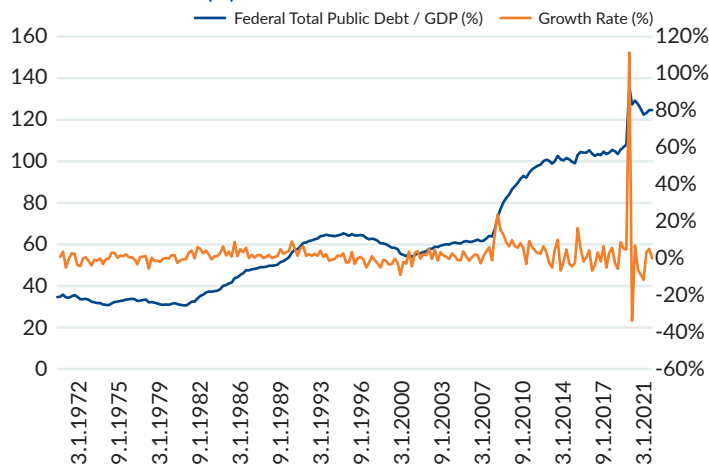
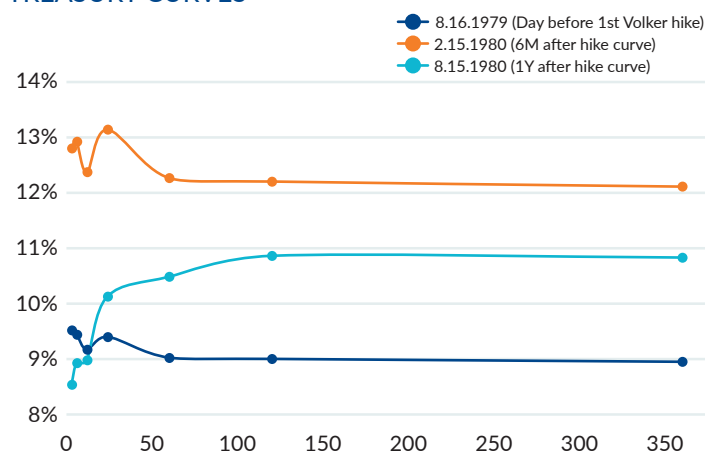
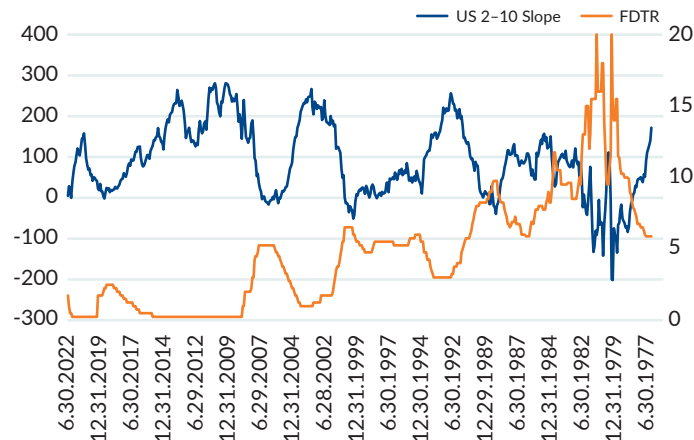
CHART 13: FEDERAL TOTAL DEBT / GDP (L) & ANNUAL GROWTH RATE (R)**CHART 14: '79-'80 BEFORE/AFTER VOLCKER HIKE TREASURY CURVES**

Chart 14 shows the effect of the Volcker tightening regime on the Treasury yield curve over time. Just before the first tightening (8/16/79), the curve traced 229 basis points of slope starting with an absolute rate of 8.54% for a 3-month bill. In six months after the first hike, the 3-month bill had risen 426 bp to 12.8% and the curve had inverted -69 bp. Over the next six months (one year after the first tightening move), the 3-month T-bill had dropped 328 bp to a yield of 9.52% and the curve was showing a healthier positive +125 bp slope.

What can we infer from this? During the Volcker period, the curve reacted violently in response to credible Federal Reserve conviction. The market believed Paul Volcker and his Board meant business as inflation fighters. But within a year, the curve had dramatically normalized (in the context of nominal rates of that era) and had returned to a positive slope. Volatility was extraordinarily high, but not irrational based upon the market's belief in the Fed's own conviction.

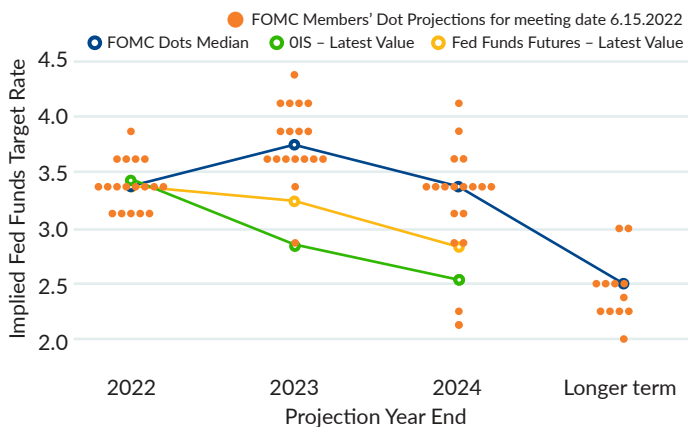
In 2022, there is no Paul Volcker on the horizon and no talk of "national malaise." While outstanding Federal debt was lower in the post oil-shock period, the cost of servicing it in a weak economy at double-digit rates was a formidable burden on the Federal debt. (See Chart 11).

2022 investors should not extrapolate a 400bp T-bill move in the next three months. But the '79-80 data demonstrates that the market will respond to credible anti-inflation Fed moves and may normalize remarkably quickly.

CHART 15: FED TARGET RATE (R) VS. TREASURY 2-10 SLOPE (L)

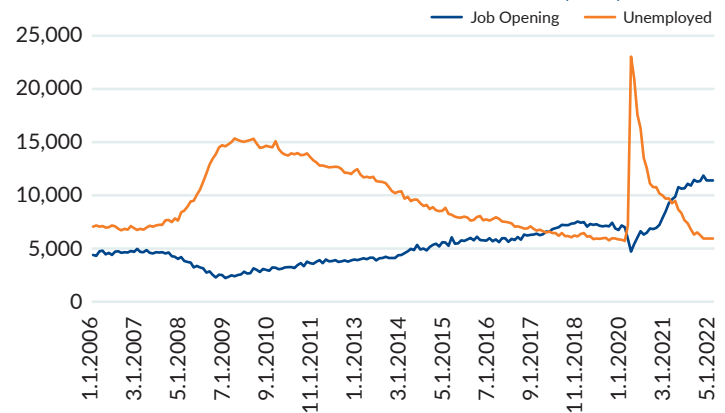
Source: Bloomberg, Mesirow Research.

The Treasury Market experienced yield curve inversion several times in H1 2022. The curve remains relatively flat. Note the depth of the inversion in the 1979–80 Volcker tightening regime.

CHART 16: IMPLIED FED FUNDS TARGET RATE

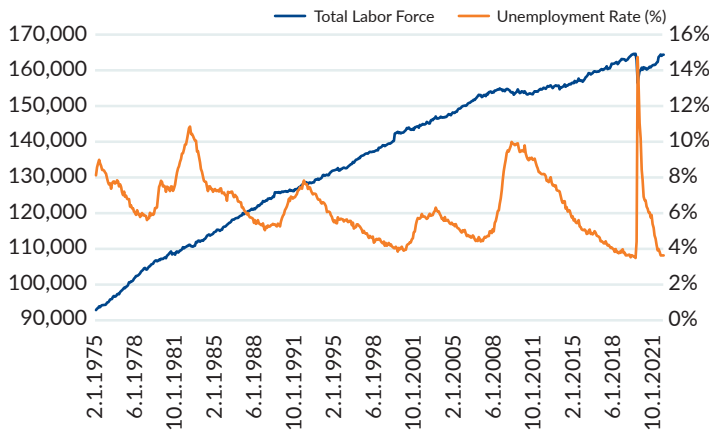
Source: Bloomberg, Mesirow Research.

The Dot Plot (Chart 16) remains business television's favorite Fed Meeting Day toy. Notice the divergence of opinion as the Board projections move into '23 and '24. Consider this in the context of Cleveland Fed President Mester's comments noted on Chart 13.

CHART 17: UNEMPLOYED & JOB OPENINGS (000)

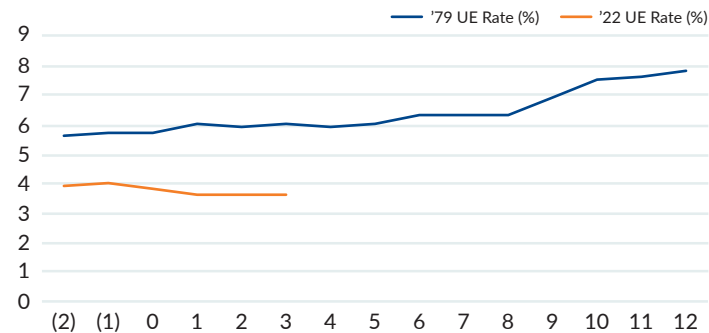
Source: Bloomberg, Mesirow Research.

We continue to highlight this highly inflationary employment mismatch. As ever we ask, is it a job skills gap driven by failing public education outcomes, a demo/geographic mismatch of jobs and workers, or is it the result of disincentives to work embedded in the Federal and State Covid-19 relief packages? Note that Labor Force participation has fallen to 62.3% as jobs go begging (6/1 JOLTS report showed 11.35mm job openings).

CHART 18: TOTAL LABOR FORCE (L) & CALCULATED UNEMPLOYMENT RATE (R)

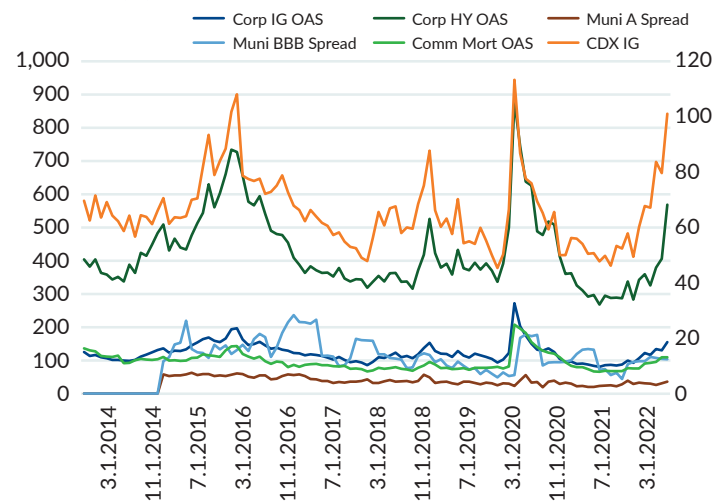
Source: Bloomberg, Mesirow Research.

The US labor force continues to grow, but unemployment is at 3.5%, productivity is falling and 11mm jobs are unfilled. This is a recipe for the wage inflation pressure we are measuring to continue.

CHART 19: MONTHS FROM 1ST HIKE UNEMPLOYMENT RATE 1979 & 2022

Source: Bloomberg, Mesirow Research.

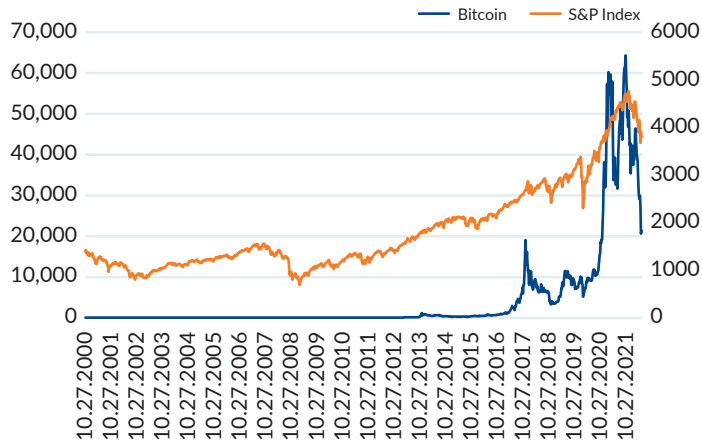
Compare unemployment rising by month following the first Fed rate hike in 1979, and where we are at the 3 month point in the 2022 Fed cycle.

CHART 20: CASH BOND CREDIT SPREADS (L) & CDX IG SPREAD (R)

Source: Bloomberg, Mesirow Research.

Corporate Investment Grade spreads have risen, but do not reflect panic. The Bloomberg HY OAS spread is 521 bid as we write, less than half the spread of March 2020, but rising steadily. High grade municipals trade at 100% of Treasuries on the long end. Pressure on Italian debt is straining the ECB. Yet, Corporate traders say, “we haven’t seen a credit event yet.” This is strictly true. But the Russian sovereign debt default, the Nickel market collapse, the Chinese real estate bust (and the pressure on their bank and local government systems to bury it) are not “normal” events. The speculative short-selling in biotech and the subsequent short-squeeze have been ferocious. And then there is Crypto...

CHART 21: BITCOIN VALUATION (L) & S&P INDEX (R)



Source: Bloomberg, Mesirow Research.

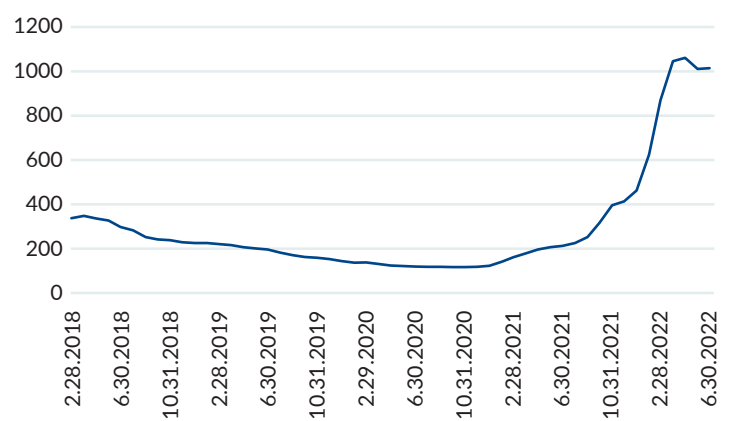
We graphed Bitcoin, trading below \$19,000 on 6/29, as a proxy for the Crypto collapse. Arguably, Bitcoin will outperform several of its competing tokens in this rout.

Not to kick a market when it's down but, in this era, central bank performance is critical. It's very hard to believe in a market that, by its nature, devalues the importance of Fiat Currency, the foundation of Sovereign Government and central bank power. Since the dawn of human collective government systems, the ability to "create" money is the most mystical and powerful tool of both lost empires and modern sovereign governments.

The ability to track the money "created," and thus to tax it, falls just behind the "creation myth" in importance.

Putting aside money, the aments most often made against block-chain currency, laundering and liquifying criminal activity; can thoughtful Investors believe that Sovereign governments and their bankers will abrogate their nearly religious power to "create" money and delegate it to Bitcoin miners? We take "the under" on that bet.

CHART 22: LITHIUM PRICE



Source: Bloomberg, Mesirow Research.

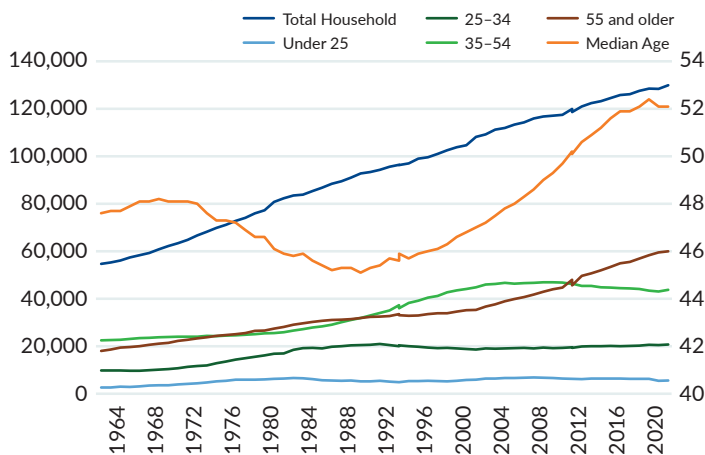
The European political experiment in energy virtue signaling is ending badly. Given the cost and low efficiency of energy storage, industrial and domestic energy base loads will remain carbon-based for the foreseeable future. Away from the strategic question of sovereign energy independence, developed nations require stable power, day and night.

Germany's apparently comfortable dependence on Russian energy has largely fallen apart since February 24th. They are considering alternatives including coal plants and re-energizing dormant nukes. Will Ruhr coal fields be buzzing once again this fall?

Investors should watch to see whether the NordStream2 project resumes following the current conflict's end.

Meanwhile, the Lithium Chart (#23) highlights the increasing cost of energy storage (note that extracting/producing Li and any of the minerals associated with battery production is anything but environmentally clean. We are literally exporting our environmental damage to poor and underdeveloped parts of the world when we drive our e-cars and use our devices).

CHART 23: TOTAL HOUSEHOLD AND AGE GROUP BREAKDOWN (L) & MEDIAN AGE (R)



Source: Bloomberg, Mesirow Research.

We know that America is aging. Examine the bold orange (median) line on Chart 23. You will not be surprised to see the rising brown line (Boomers) driving this aging phenomenon.

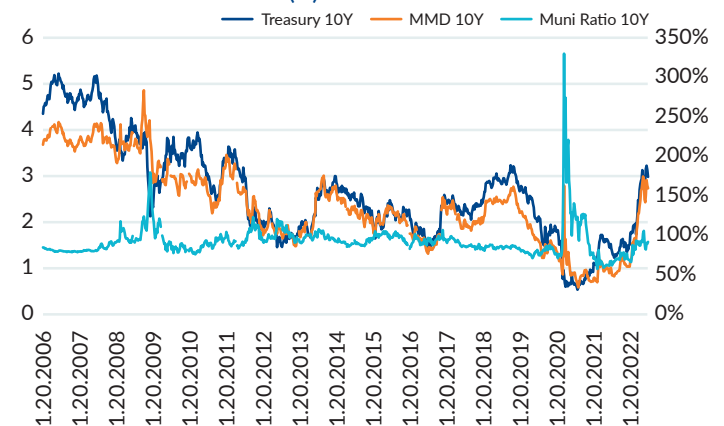
Economists regularly spill barrels of ink on subject of the “Graying of America,” often thoughtfully so, especially in the context of equity sectoral investing. But consider the question on the broadest macro political science level. Who “owns” the money in this country: in 2021 the top 10% held 69.8% of net worth? The top 1% held 32.1%. The bottom 50% held 2% (St Louis Fed).

The Great Asset Bubble has been the Federal Reserve’s extraordinary gift to that top 10% of the population. This is a powerful and worried constituency.

This group is well represented within the Baby Boomer demographic. Away from the super-wealthy component, this group is likely to represent retirement-focused investors and affluent families that have benefitted directly from housing inflation.

Investors should reflect on the following question as they consider Federal Reserve policy: having presented this powerful and politically attentive demographic group with the gift of asset inflation, a historic wealth transfer by any measure, will the Fed let this wealth be diluted by monetary inflation? It’s a serious policy question, and it tracks back to, “Who owns the money?”

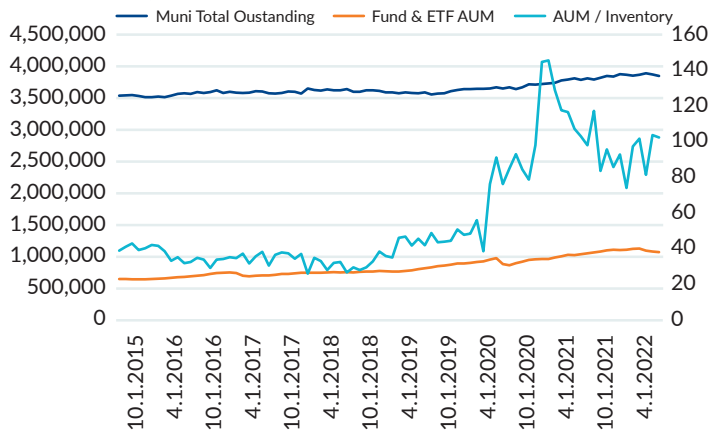
CHART 24: TREASURY, MMD 10Y YIELD (L) & MUNI / TREASURY RATIO 10Y (R)



Source: Bloomberg, Mesirow Research.

Pick your spot on the yield curve and municipals are cheap, especially in the longer tenors favored by mutual funds. SMA and ETFs have held ratios down in shorter maturities.

As a long-only, retail flow-driven market, municipal rates reflect a liquidity premium that is the product of very negative fund flows. While credit quality remains generally strong in the wake of the various Federal Covid stimulus packages, we note that municipal demand remains muted.

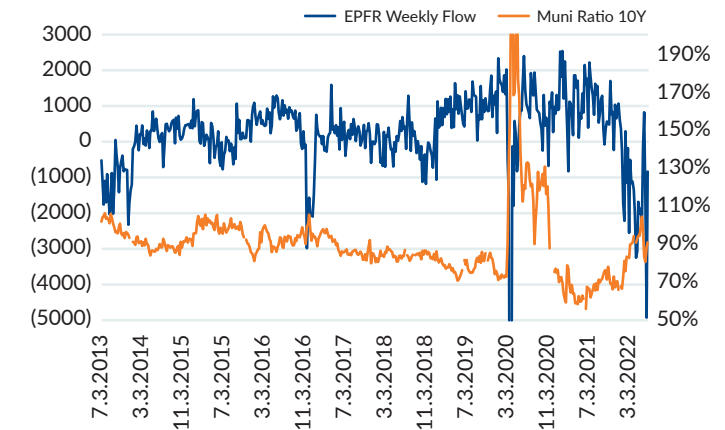
CHART 25: MUNICIPAL TOTAL OUTSTANDING, FUND & ETF AUM (L) & AUM / INVENTORY (R)

Source: Bloomberg, Mesrow Research.

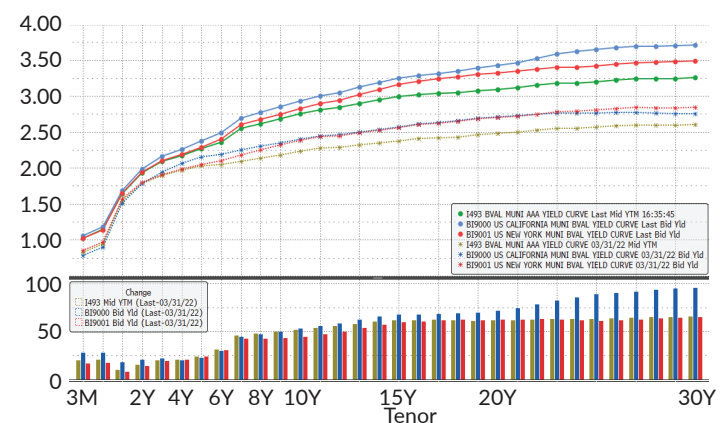
As always, we highlight the ratio of municipal Dealer capital to institutional assets under management. The ratio has risen to over 100X, a strong signal of strained liquidity. Weak Dealer commitment is part of the story. More important may be the rising market share of funds, especially SMAs and ETFs as households divest their direct bond ladders and choose intermediation, i.e., bond funds!

Fund assets are “hotter” money in market terms. Daily redemption provisions offered by institutional funds leave the manager “short a daily put” to his retail client. This hotter money potentially adds greater strain on the Dealer liquidity available.

Serious investors will ask themselves, when are “cheap ratios” truly cheap, once liquidity premia are thoughtfully assigned.

CHART 26: MUNI/TREASURY RATIO 10Y & EPFR WEEKLY FLOWS

Source: Bloomberg, Mesrow Research.

CHART 27: BVAL CURVES

Source: Bloomberg, Mesrow Research.

Conclusion

“It is by a mathematical point only that we are wise, as the sailor keeps the Polestar in his eye; but that is sufficient guidance for our life. We may not arrive at our port within a calculable period, but we would preserve the true course.

– Henry David Thoreau, Walden 1854

“The Federal Reserve is a political institution, and like every political institution, it is seeking to retain its own power, its own decisions, its own prestige... people in the Fed want to retain their own position. Their coin is influence and power.”

– Milton Friedman

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

Are the pandemic impact and response evenly distributed?

Clinically: No. The effective prevention and treatment of Covid-19 and its various emergent strains continue to correlate with wealth/healthy populations. In the developed world, the oldest, the most immune-compromised and the poorest segments of the population continue to bear the brunt of infection risk and ineffective treatment. This is unlikely to change.

In the United States, regional disparities remain. While political and cultural anti-vaccination populations remain, those same populations may be benefitting from herd immunity. These groups very likely strongly believe this to be the case. So both highly vaccinated populations (two booster shots) and less compliant regions are driving toward “normal”.

Economically: No. But there is irony in these two answers. The immediate and dramatic fiscal response of First World governments to CV-19 has created the conditions for the labor and commodity inflation pressures that we have reviewed above. While there are counter-pressures to domesticate supply chains that

may impair growth in low-cost emerging manufacturing economies, the increasing cost of labor in developed economies may raise the effective cap on the price of labor in the developing world... TBD? We will follow this in the quarters to come.

Generally, investors should expect higher commodity prices to support growth in extraction and agriculturally based economies.

Are markets working to price risk efficiently?

Arguably, the second quarter volatility that investors experienced is market risk recalibration in action. While very unnerving for retail investors, asset volatility is the ugly face of market forces colliding in real time.

Capital market investors pushed the Fed into what many observers felt was an overdue response when the Treasury yield curve inverted in 1Q.

Technology stocks ferociously discounted future earnings, slamming high tech investors and potentially creating value mining opportunities.

Broad equity indices have repriced to the point that a rotation out of fixed income into heavier equity exposure is a discussion that many financial advisors are having with their conservative clients, given uncertainty about the Fed's commitment to inflation fighting. Equities are going to have a bumpy ride as the capital markets attempt to price inflation and Fed responses in real time.

Real estate investing needs, more than ever, to be market and project specific. Residential housing performance will be distributed by market and by sub-sector within markets. Broadly, there is an unbridged mismatch between residential supply and demand. The hurdle is cost. The market will solve this in the aggregate. Individual markets and individual family experiences may be difficult as the housing markets begin to price positive real rates into the value/affordability equation.

Commodities benefit from real time price discovery in futures markets across the globe. Prices reflect the central bank and fiscally driven asset bubble, but they are challenged 24/7 in live markets. Just because we don't like commodity inflation, doesn't mean commodity markets are not price responsive. Central bank rate responses will send signals that will be priced in real time on the exchanges. Volatility is the price investors pay for this efficiency.

Are central bank and government policy responses balanced and proportionate?

The first step to solving a problem is accepting the fact that you have one. The US Federal Reserve Board has been highly political, and they are paying a reputational price as they attempt to tighten their way to increased credibility.

The political, economic, and fiscal policy typhoon of the 1979–81 period is fascinating. Many, but not all, of the conditions that the Fed Board faced on the day Paul Volcker took the chair, with the overwhelming support of the Wall Street establishment, are present. William Greider's *Secrets of the Temple* is a fascinating contemporary account of that era.

The Federal Reserve Board of 2022 is not nearly as discredited as that of G. William Miller in 1979. Powell, like Miller, is not an economist and, like Miller, Powell likes to be liked by Washington insiders, presumed to include the resident of 1600 Pennsylvania Avenue.

The US carries a burden of Debt/GDP more than 2x that faced by the Fed in 1979. Fiscal rectitude is a distant memory. But our economy is running hard with full employment. Technology continues to be a US proprietary advantage. Technology can unlock productivity gains again, as it has done throughout the silicon revolution. Capital formation, critical to innovation and growth, continues to be the United States untouchable advantage, especially as what we still call "Wall Street" physically decentralizes across the cloud. The brightest minds can work together from anywhere they can find connectivity.

But the Federal Reserve has a weakened leader and a formidable task ahead: systematically reduce their \$8.9T balance sheet; re-grip inflation expectations by systematically re-instilling investor confidence in the Board's disciplined commitment to both of their twin missions:

Federal Reserve mission: The Federal Reserve promotes a healthy economy and financial stability.

We do this by:

- Pursuing maximum employment, stable prices, and moderate long term interest rates in the U.S. economy
- Promoting the stability of the financial system and seeking to minimize and contain systemic risks through active monitoring and engagement

A "soft" landing will not be easy or likely. Wage inflation pressures will be unrelenting and difficult to break without unemployment rising significantly. A core question will be whether this Fed has the will to accept a mild recession in a Presidential election year to tame inflation and restore institutional credibility.

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

The answer to both questions is yes. But as noted above, volatility is arguably a signal of markets trying to come to terms with emerging and competing pressures.

In the context of this Brief, two markets should be called out again: energy and labor.

Energy markets are an endless target for government intervention; often well intended...

Governments invariably fail at picking winners and losers: whether it is a \$7,500 incentive for a (necessarily affluent) family to purchase an electric car; German-style over-regulation of their electric grid (exporting their carbon burden to less developed petrocratic regimes); whip-saw regulation of low-carbon base-load energy sources like hydro or nuclear; or carbon trading regulatory regimes, certain to draw forth a river of dark money lobbying.

The labor market problem is both complex and straightforward. Real wages are down. Nominal wages are rising. Household costs for food, shelter and transportation are rising faster than nominal wages.

And, looking under the hood, for millions of middle-class Americans, their work skills are mismatched to the opportunities our 21st century knowledge economy offers.

Traditional material expectations about middle class life are in play and at risk: housing costs; food and energy costs, the nexus of property taxes and quality education, the economic pressure to upgrade work skills and migrate away from family, the rise of public sector unions and the collapse of private sector union membership.

Against the backdrop of these complexities, where are we in this most unconventional political and business/economic/ Fed cycle?

Capital market investors pushed the Fed into what many believed was an overdue response when the Treasury yield curve inverted in 1Q. As you noted on Chart 13 tracing Treasury market reaction to Fed tightening in 1979-80, the power and effectiveness of a disciplined Federal Reserve Board is clear. Midterm and 2024 election cycles will challenge the conviction of the Fed Board. More importantly, the capital markets will have to come to believe in their conviction.

Technology stocks ferociously discounted future earning, slamming high risk investors and potentially creating value.

Broad equity indices have repriced to the point that a rotation out of fixed income into re-priced equities is a discussion that many financial advisors are having with their conservative clients, given uncertainty about the Fed's commitment to inflation fighting.

Real estate investing, more than ever, needs to be market and project specific. Residential housing performance will be distributed by market and by sub-sector within markets. Broadly, there is an unbridged mismatch between residential supply and demand. The hurdle is cost. The market will solve this in the aggregate. Individual markets and individual family experiences may be difficult as the housing markets begin to price positive real rates into the value equation.

Commodities benefit from real time price discovery in futures markets across the globe. Prices reflect the central bank and fiscally driven asset bubble, but they are challenged 24/7 in live markets. Just because we don't like commodity inflation, doesn't mean commodity markets are not price responsive. Central bank rate responses will send signals that will be priced. Volatility is the price investors pay for this efficiency.

Prudent investors will understand market volatility as opportunity. They will think long-term, preparing for the Fed Funds rate to more than double, and discounting their investment opportunities accordingly.

Prudent investors will buy quality assets and work with quality partners. They will discount liquidity thoughtfully, not fearfully.

Wise investors will understand that we are not entitled to cheap energy, that we will burn carbon for the foreseeable future for baseload. Investors will hope and expect American science to develop an energy storage breakthrough and American markets to finance its development and bring it to the world, much as we electrified global life more than 100 years ago.

Prudent investors will always balance risk and reward, thoughtfully and opportunistically. They will remember that the highest quality investment for generations has been one correlated to the great American economic engine of opportunity.

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](https://www.mesirow.com) and follow us on LinkedIn.

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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 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.

US Real Weekly Earnings Index is the weekly earnings of US employees, adjusted for inflation. They provide insight into what an average individual is earning per week and thus is the primary measure of wage growth in the United States.

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.

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