STRATEGIC OUTLOOK

Strategic Frontier Management

Q4 2022

Bear In Mind

- A US stimulus hangover from excessive government spending and monetary stimulus is coinciding with unsettling decline in potential growth, collapse in productivity, and higher inflation expectations, as foreseen a year ago in *Curb Your Enthusiasm* (Q4/2021). *Bear in Mind* declines in stock and bond markets simultaneously are not often observed, but too many policy mistakes are reminding investors of similarity with the Disco 70s, particularly 1977-1981. We expect lower US profit margins to soon take hold with higher expected average inflation (CPI: 3.0% vs. Fed's PCE: 2.0%) with receding disinflationary forces.
- We cut our US potential growth estimate from 2.7% to 2% a year ago, but our US GDP forecast is now 0.2% in 2022 and 1% in 2023. We expect persistent higher average long-run US CPI inflation, therefore higher interest rates with a steeper yield curve slope driven by inflation and interest rate risk over the next cycle more consistent with history. US dollar strength limited inflation in 2022, but currency volatility or US$ weakness may drive higher import prices. Energy prices remain volatile too. An equilibrium S&P 500 P/E of just 14-15x is more likely vs. 17-18x assumed.
- Investors still resist accepting that US Treasury 10-year yields should increase further and the yield curve must normalize to reflect an inflation risk premium with a 1.5% yield slope for 10y-1y. If interest rates exceed 4%, then 10y Treasury yields should exceed 5.5%. Our forecasts for higher long-run US CPI inflation rate of 3% implies a higher average Fed Funds rate of at least 3.5% (Federal Reserve: 2.5%).
- Dramatic volatility during 2022 in declining stock and bond markets has wrecked retirement savings with the S&P 500 declining over 20%, Emerging Markets off more than 30%, and US Treasuries off -16.5%. as yields have more than doubled. Stock and bond market volatility exposed the cost of extended *explicit moral hazard* manipulating bond markets for an extended period, yet there is still further downside risk for bonds implied in the odd Treasury yield curve.
- We believe further interest rate hikes are needed, along side normalizing the $8.9 trillion balance sheet to tame inflation. Negative money supply growth for the foreseeable future is likely impeding credit growth.

The Three Bears returned home to discover massive fiscal monetary, and financial imbalances of market manipulation, as well as misguided executive orders and agency policies with adverse economic impacts, thereby weakening potential growth and productivity, as inflation soared. These policies also undercut basic rights of liberty, freedom (speech, association), equal opportunity, and the pursuit of happiness, as well as productivity enhancing free market capitalism.

- Necessary monetary policy normalization suggests the Federal Reserve still has more work to do hiking interest rates and *quantitative tightening* (QT) to reduce their $8.9 trillion balance sheet toward $2 trillion. Low-to-negative money growth of QT combined with losses on bond holdings as interest rates rise will slow economic growth, further undermine investor sentiment, and likely trigger a profits recession, limiting tax revenue, as fiscal deficits and interest burdens increase. A reckoning of government spending must address unsustainable fiscal deficits, as well as rising interest burdens. Negative bond market sentiment further reduces demand as bond supply increases and risk of a *global government bond crisis* emerges.
- Global bond investors will likely struggle with greater interest rate and currency volatility. Interest rate and inflation uncertainty also should drive greater equity volatility. Prolonged bond market manipulation increased *explicit moral hazard* as the cost of capital rapidly for investors, households, and business engaged in borrowing, lending, or investing. Prevalence of extended bond duration or leverage from pension funds to hedge funds and leveraged ETFs only increase financial instability, as effective monetary policy tools are currently compromised.
- We expect a wicked US economic hangover after a decade-long fling with overly stimulative fiscal and monetary policy. The ruinous pivot in US regulatory, energy, labor, and trade policy compound inflationary consequences while limiting growth and margins, as well as increasing inflation expectations. Slower economic activity and limited credit are consequence of reversing emergency policies extended beyond usefulness. Higher tax rates limit real growth too.

To Be or Not to Be…Stagflation Is The Question

Global inflation expectations rose as secular disinflation and globalization moderated, despite innovation-led decline in labor, resource, and energy intensity. Misguided US policies over the last seven quarters have undermined global competitiveness, potential growth, and profit margins, resulting in lower earnings growth. Economic outcomes are complex to foretell, even if the theory is well known and risks are apparent. Yet, some still misjudge the consequences of ill-advised policies, even if well intended. Policymakers' foolish regarding fiscal and monetary policy decisions are now exposed. The presumption that inflation was going to transitory, was no more certain than the Federal Reserve's misguided belief about their long-run forecasts of interest rates (2.5%), inflation (2.0%), or full employment (4.0%).

Curb Your Enthusiasm a year ago highlighted our belief that reversal of constructive US economic and trade policies would undermine potential growth and increase energy costs. The long era of disinflation was already waning with a maturing *Fourth Industrial Revolution*, but adverse effects have a way of reinforcing each other. What was a surprise was the pace of rate increases, which boosted interest rates to 3-3¼%, even as the Fed dragged its heels tapering QE (Quantitative Tightening).

What began as a rise in energy and commodity prices was quickly compounded by supply chain and labor inefficiencies, which triggered pricing power for goods and services, triggering higher wage and benefit demands. The cycle began reinforcing itself, then spread internationally from the US. Policymakers have played fast and loose for a decade, giving rise to explicit moral hazard (i.e., low interest rates for an extended period, economic forecasts, and forward guidance indication of future policy interest rate indications—consider huge revisions in the September guidance) with radical unfulfilled efforts to steer economic outcomes. The political ramifications of economic devastation should be evident with a pivotal US election just weeks away.

It took too long for the Federal Reserve and US Treasury to realize delaying monetary tightening was reckless with CPI inflation rising from 1.5% in 2020 to 7.1% by the end of 2021. We discuss below why such a startling increase in inflation should not be surprising, but the Federal Reserve became fixated for a decade on maintaining growth, but it ignored how its stable price mandate was in peril. A Goldilocks economic paradigm of disinflation has reset—so the drift in normalized equilibrium expectations is off the mark, we believe. Long-term interest rates (2.5% → 3.5%) and inflation forecasts (2% → 3% PCE or 3.5% CPI) must increase as the US yield curve normalizes. So, why is the yield curve inverted with an odd shape? This feels a lot like 1994, except the recession in 2020 was much steeper.

Rising global bond yields will further increase fiscal deficits as bonds are refinanced at higher rates, further squeezing the US discretionary budget. Bond loses with rising yields can overshoot after years of central banks manipulating bond markets, which compelled investors to extend average bond maturity and even leverage their bond portfolio hoping to enhance income. Buying long maturity bonds financed by short maturity or floating rate debt can trigger margin calls (propelling forced selling) and devastating losses with rapidly rising interest rates or steepening yield curves. This economic environment, rising global interest rates, and policy mischief is terrible for extended maturity or leveraged bond portfolios with an irrationally aberrant (flat or inverted) yield curve.

We expect global bond returns will struggle to earn a positive real return over the next 5 years. Rising interest rates also tend to limit equity returns after stretched 2021 valuations. Negative equity and bond returns have devastated retirement savings, pension funds, and other asset owners' portfolios depending on investment returns in excess of inflation. Correlation of private market equity, debt, property, and infrastructure alternatives can't overcome the broad capital market correction as lagged illiquid private mark-to-market re-valuation must eventually be realized. Continuing hikes in interest rates and expected steeping yield curves should cause further stock and bond declines into 2023.

Disinflation over the last 25 years was symptomatic of globalization and the now maturing *Fourth Industrial Revolution,* driving productivity, hyper-competition and natural creative destruction of technology innovation. This instilled reduced labor, basic material, and energy intensity, as foreseen in our *Future Themes* work. Disinflation extended because rising aggregate demand for labor, materials, and energy was met with efficiency gains, offshoring manufacturing, and an increasingly service oriented economy. So, we grew accustom to disinflation, but inflation expectations are increasing.

Drifting Federal Reserve forecasts are a consequence of behavioural biases rooted in decades of observing the consequences of persistent disinflation. This explains why easy monetary policy hasn't triggered inflation most economists expected or why soaring government debt and fiscal deficits haven't increased sovereign credit risk premiums for bonds. However, we believe inflation will be more difficult to restrain as these disinflationary forces diminish and global inflation expectations revert to historical averages.

With global equity and bond markets declining this year and US interest rates chasing inflation, we remain concerned about further downside risk for US bonds, although US equity valuations marginally improved. We also still favor small-cap and value-oriented equity tilts. Low volatility anomaly should continue breaking down, beginning during the pandemic—for those seeking

refuge, it didn't work. Non-US developed equity markets are preferred, including outperforming UK equities, particularly after weakness in Japanese Yen and European currencies. Our Global TAA Equity forecast also favors equities in Italy and Spain, but we still recommend avoiding Emerging Market equities, including Hong Kong. We believe cash and short-term bonds should be the best low-cost *alternative investment* for a 1-2 year risk-adjusted return.

We believe US$ risk is more balanced now after it strengthened 15% (US$ TWI) year-to-date as the Federal Reserve led global rate hikes. This is the most overlooked effect of widening interest rate differentials versus other countries. Value added of active strategies are more consequential and alluring in a low return environment, including security selection and global tactical asset allocation or currency management strategies, even enhanced by market volatility.

Economic Outlook

Misguided policies and increased regulation triggered higher cyclical costs of US energy, basic resources, food, staples, transportation, labor, and housing, as well as services and imported goods. Increasing inflation becomes permanent when the inflation rate remains high for an extended period or the causes are unlikely to recede, as is the case with notable broad energy, labor, trade, fiscal, and regulatory policy changes observed since January 2021—many policy changes were enacted administratively (i.e., Agency rulemaking and Presidential Executive Orders), rather than by Congress.

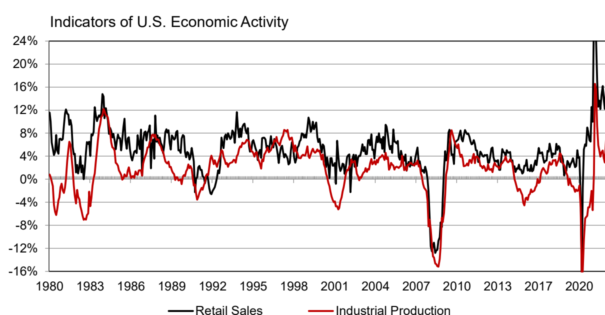
US pricing power was generally absent over the last two decades with persistent disinflationary forces of the *Fourth Industrial Revolution* and globalization. With 7.1% inflation in 2021, we thought US CPI inflation could still exceed 5% in 2022. Instead, inflation jumped to over 9% by June and may still exceed our 5.5% estimate. Non-transitory inflationary forces boosted secular inflation expectations, and we expected to observe later cycle conditions such as higher inflation, slowing real growth, and stalling productivity recovering from the recession.

Economic Forecasts	**2020e**	**2021e**	**2022e**	**2023e**	**2024e**	**2025e**
GDP Growth (Y/Y Real)	**-2.5**	**5.5**	**0.2**	**1.0**	**1.8**	**2.3**
S&P500 Op Earnings Gr	**-13.1**	**49.0**	**6.2**	**5.0**	**5.6**	**6.1**
CPI Inflation (Y/Y)	**1.5**	**7.1**	**6.6**	**4.5**	**3.5**	**3.0**
Unemployment	**6.5**	**5.2**	**3.9**	**4.2**	**4.5**	**4.8**
Fiscal Deficit (vs.GDP%)	**-14.9**	**-13.4**	**-7.0**	**-5.0**	**-4.0**	**-4.0**
Fed Funds Target[1]	**0.25**	**0.25**	**4.50**	**5.00**	**4.50**	**3.50**
10y Treasury Notes	**0.91**	**1.50**	**5.00**	**5.20**	**5.00**	**5.00**
S&P 500 Target	**3756**	**4766**	**4000**	**4200**	**4400**	**4800**

Source: Strategic Frontier Management

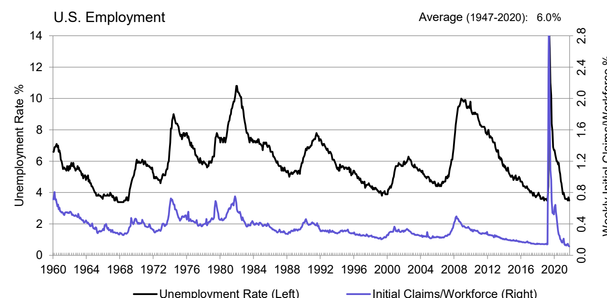
US economic and earnings growth remained robust through 2021, but we expected 2022 real economic growth to slide well below US potential growth of 2%, if not marginally positive after 1H/2022 recession. Economic recovery from the pandemic recession was observed in 2H/2020, and inflation was well contained. Thus, real GDP peaked at 13% in 2Q/2021 as productivity peaked at 3.7%, but productivity (Q2/2022: -0.6%) subsequently declined. Retail sales and industrial production also peaked in March-April 2021. The Administration would like to take credit for growth in jobs and the economy, but ignore inflationary consequences of its policies.

US economic indicators like industrial production, retail sales, unemployment rates, consumer confidence, and housing all traced similar narrow *V-shaped* economic decline and recovery during 2020. Once inflation expectations rose, companies began to pass through expected labor, basic material, and other cost increases. Given the Federal Reserve is well behind the (yield) curve, the risk of even higher bond market volatility and triggering a global debt liquidity crisis has only increased.



Source: Refinitiv DataStream & Strategic Frontier Management

The brief but steep 2020 recession lasted just a few months (NBER dated: March-April 2020) spanning Q1-Q2/2020. Unemployment peaked at 14.8% in May 2020, but steadily declined since to below 4%. The Fed's long-run unemployment rate forecast has declined to 4% over the last decade, despite averaging 6% over 70 years. We believe normal unemployment is closer to 5%, but a 4% Fed forecast could result in chronically looser monetary policy, keeping rates too low.



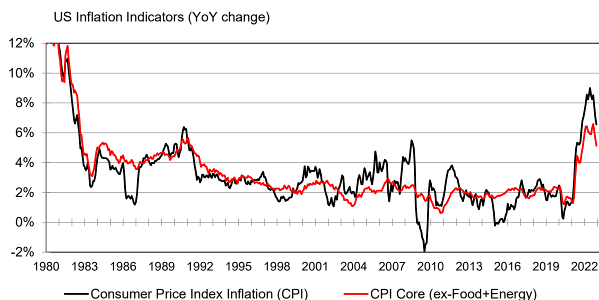
Source: Refinitiv DataStream & Strategic Frontier Management

A combination of persistent higher inflation and low unemployment causes employees to expect higher pay increases for several years to come. Inflation indexing of contracts and cost-of-living increases (i.e., pensions, social security, benefits, compensation plans, wage

agreements, etc.) are adjusted with a lag, so this also will drive higher sustained inflation. More than 60% of US Government spending is indexed to inflation, so the US Budget now is more susceptible to stagflation. The flawed transitory belief inflation would recede if only oil prices declined implies inflation will persist because of misguided energy policies (accelerated fossil fuel-free transition driving speculation prices would remain higher for longer) and compounded by other inflationary policy decisions (i.e., regulation, taxes, labor, etc.). After a lag, US inflation then spread to other countries, triggered by higher global energy costs--currency weakness also boosted import costs. The Administration can't deflect blame for inflation as a global issue if it began as a consequence of misguided US policies.

Inflation has ratcheted up from 1.5% in 2020 to 7.1% by end of 2021 and Q2 was the highest level in 40 years. Higher prices are observed nearly every trip to Home Depot or the grocery store with annual inflation peaking in June at CPI: 9.0%. Cost of nearly everything continues to rise with higher oil and natural gas prices, including basic materials, food, gasoline, heating oil, utilities (water, sewer, electricity, telecom), durables, staples, property, imports, and rent, as well as transportation, services, housing, construction, and labor costs.

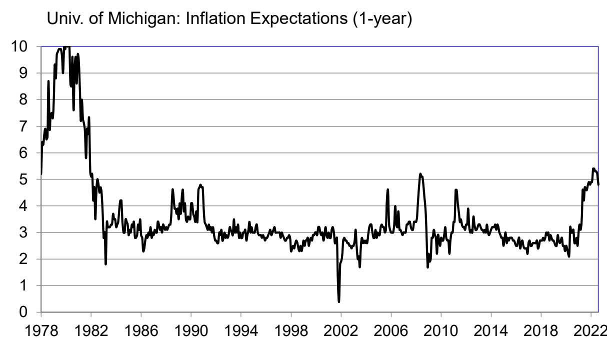
The startling CPI inflation rate (8.2%) should moderate, but expectations for *transitory inflation* were ill-advised from the Federal Reserve to the US Treasury and CEA. The idea of *transitory inflation* permitted the Fed to maintain negative real rates and continue buying US government bonds much longer than it should. It also gave cover for more unnecessary fiscal spending stimulus designed to boost growth before a critical midterm US Election. Former Treasury Secretary Larry Summers thinks the US will pay a price for the least responsible imprudent macroeconomic policy in 40 years. We expect an economic hangover will set in once excessive unnecessary stimulus rolls off. US real growth has slowed, and is now flirting with recession.



Source: Refinitiv DataStream & Strategic Frontier Management

Oil and natural gas prices began rising due to concerns about future energy supply with dramatic changes to US energy policy in Spring 2021 that limited new exploration, production, and distribution. We believe the trigger for igniting higher global inflation began with misguided US policies to force a green transition in energy long before America was ready with technological advances and alternative power sources to fossil fuels driving up the cost of everything dependent on energy and petroleum.

CPI inflation expectations have hovered between 2-3% for most of the last 30 years. Secular forces of disinflation dominated sources of cyclical inflation. Innovation and competition moderated demand intensity of energy, commodities, and labor. It will take time for higher commodity prices to wash out (note: consider what that means for commodity returns), but inflation expectations evolve more slowly over a year or two at least. Excessive growth in money supply, nor fiscal deficits seemed to have little, if any, effect on economic conditions (i.e., inflation, growth) or interest rate risk premiums until recently. Sustained cyclical forces reinforced non-transitory inflation expectations, which spiked to 5.4%.

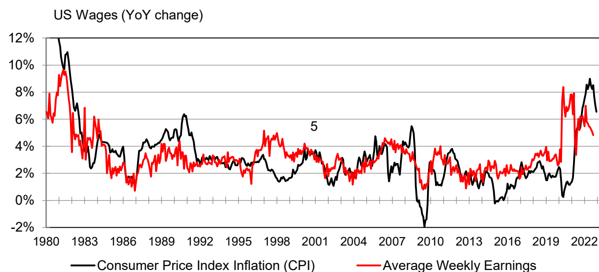


Source: University of Michigan

Inflation expectations were modest since 2005, in part due to globalization and greater productivity enabled by innovation and innovation of the *Fourth Industrial Revolution*. Yet, many mistook lower inflation volatility as a *new normal,* despite declining disinflationary tailwinds. Disinflation for decades has benefited from globalization, hyper-competition, creative destruction and efficiency gains that reduced labor, energy, and basic material intensity with limited import inflation. *Conservation, substitution, and efficiency innovation* not only limited demand growth for energy and basic materials, these forces increased supply too. Exploration, mining, drilling, and distribution became more productive.

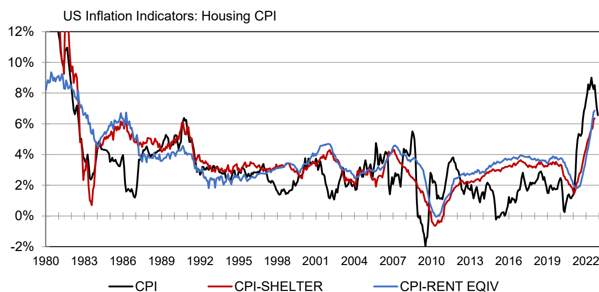
It is not surprising to us that what triggered high inflation in the US, has now spread globally. Only a significant change in policy could have such impact in just 21 months. Soaring energy prices driven by supply-demand imbalance impacts nearly every household and business activity. Tighter leasing and permitting of oil and gas exploration, production, and pipeline construction limited energy supply and increased cost. Basic resources and commodities are similarly constrained, reducing our global competitiveness as manufacturing costs increase.

Other forces driving inflation beyond commodity prices and supply chain chaos include low unemployment among key skilled workers, minimum wage increases, cost of recruitment bonuses, declining productivity, commuting costs, benefits (i.e., health care, retirement, paid leave), greater desire for remote work, overhead expenses, and regulatory licensing costs drive labor cost inflation. Increasing minimum wage up to $15/hour tends to drive higher wages across the board. Average Weekly Earnings are up 5.8% over 12 months, but even higher over 6 months annualized. Employee demands for higher pay increases will likely extend for years to come.



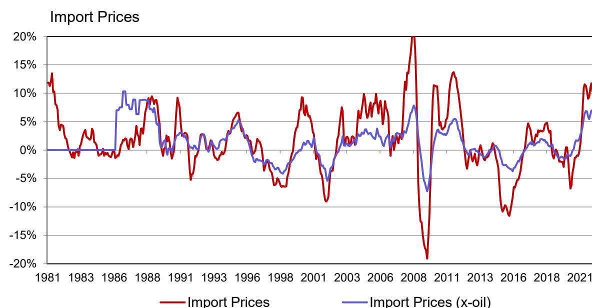
Source: Refinitiv DataStream & Strategic Frontier Management

Given housing's contribution to CPI inflation (33% or 43% of core inflation: ex-food & energy), if follows that rising housing costs have driven inflation higher since 2012. We don't expect much housing weakness despite two years of spectacular appreciation—existing home inventories and new construction are still very low with still high demand, unlike 2008. Instead, higher building and financing costs should drive housing prices even higher with rising replacement value given limited supply.



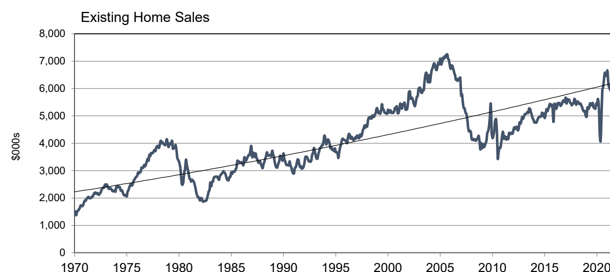
Source: Refinitiv DataStream & Strategic Frontier Management

Supply chain chaos beginning in the Spring of 2021 reflected challenges of increasing economic activity with limited inventories, and strategic reliance on China, made worse by inflexible port authority rules, new regulations, and failing efforts of US Transportation. The longer inflation remains elevated, the more it is ingrained into inflation expectations, as well as self-reinforcing with lagged inflation indexing of cost-of-living increases and service contract price adjustments. By failing to contain inflation, producer and manufacturer pricing power is observed for the first time in decades.



Source: Refinitiv DataStream and Strategic Frontier Management

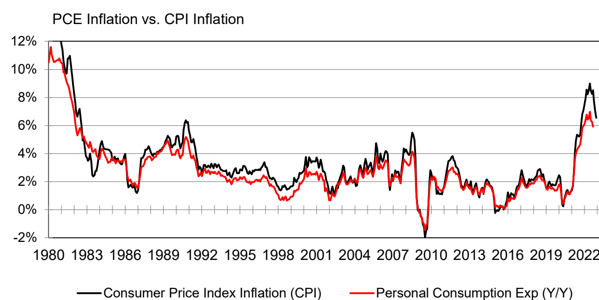
Existing home sales plunged during the pandemic to the lowest level since 2009, rebounding to the best level since 2005. Housing supply has been limited for some time, as housing costs increased steadily and household formation—a key driver of home prices--accelerated in the last two years. Millennials are no longer satisfied just renting, and some are buying second homes. We expect higher mortgage rates approaching 7% will cause buyers to settle for smaller homes, defer second home purchases, and knock out some portfolio investors. Yet, household formation will remain a key driver of home prices. Strong housing demand and short supply can support current home prices, so it will take awhile to correct housing supply-demand imbalances, even as housing affordability declines. Construction is unlikely to slow much, if at all, in our opinion.



Source: Refinitiv DataStream & Strategic Frontier Management

Inflation seems to be moderating, but we should observe not only trending inflation in the latest quarter, but also what rolled off a year ago. High inflation last Fall triggered debate about whether it was *transitory*. CPI inflation should ease toward 4-5%, but we highlight a critical paradigm shift regarding the effect of waning disinflationary forces of globalization to maturing productive effects of the *Fourth Industrial Revolution*. Transportation, energy, and labor input costs increased for imports, despite a strong US$ (cheaper imports, but less competitive exports). So moderating disinflationary forces supporting productivity, as well as rising cost of housing, energy, food, and labor with greater regulation and higher tax rates should sustain higher inflation. We expected higher inflation a year ago, and expect at least 3% average CPI inflation to extend over the long run.

As we've discussed, recasting inflation based on the PCE index failed to be adopted beyond the Federal Reserve and CPI remains the key inflation statistic for business in the US and globally. The PCE index is relatively new, thus has limited out-of-sample history. PCE is incompatible with historical relationships (i.e., real interest rates, real growth, etc.) and cross-border comparability. On the other hand, CPI has been in use for generations to index price increases for contracts and wage or benefit cost of living increases. Economic research almost universally has used either CPI or GDP deflator as the basis for normalizing inflation effects. Over time index weighting adjustments reflect changes in consumer behavior—this is as true for CPI, as it is for PCE, which are highly correlated. Now, more than ever, CPI is key to understanding inflation in historical context.



Source: Refinitiv DataStream & Strategic Frontier Management

The era of high innovation and creativity driving global disinflation has been waning as the *Fourth Industrial Revolution* and globalization have matured. Many occupations are not conducive to working remotely long-term now that the global pandemic receded, so business productivity and culture are suffering—this tends to compromise productivity and profit margins, which will limit profit growth. Higher interest rates, greater volatility, and lower earnings growth should limit equity earnings multiples (P/E: 14-15x vs. 17-18x). Higher interest rates increase financing costs, which is problematic for zombie enterprises and over-indebted nations, if not limiting potential growth with higher cost of capital.

Productivity enhancing automation of adaptive robots with advances in sensors and artificial intelligence reduced labor and energy intensity, which accelerated competitive efficiency gains. Computer-aided design, additive or 3D-manufacturing, advanced materials, and simulation to optimize engineering and product designs has reduced the time, effort, and cost to bring new products to market, and increased customization. Many *Future Themes* remain more enduring (i.e., alternative materials, ubiquitous computing + big data analytics, robotic age, logistics, additive manufacturing, etc.), even as the Fourth Industrial Revolution matures, moderating the forces of disinflation since 2005.

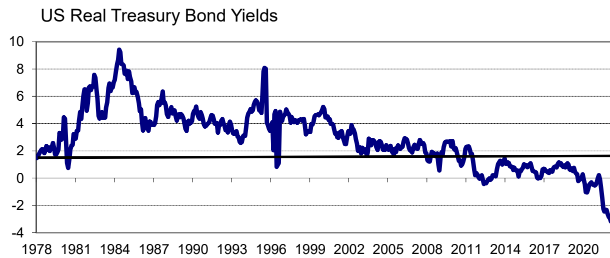
As the US$ strengthened (US$ TWI: +11.5%), it limited import inflation in the US, but we observe that our trading partners have not been as fortunate. On the other hand, a stronger US$ limits earnings growth given currency translation effects. Eventually, the US dollar will weaken, and this too can boost future US inflation. Most other non-US central banks have inflation target mandates that limit their ability to defer rate increases—in other words, inflation targeting central banks have a whole lot of catch-up to do. The Bank of England, Canada, Australia, New Zealand, Switzerland, and the European Central Bank are lagging behind in hiking interest rates. Japan may soon need to hike rates aggressively too.

Source: Refinitiv DataStream and Strategic Frontier Management

Emerging Market urbanization, industrialization, irrepressible demand, emerging credit, and irrepressible demand were key themes implying greater global growth, yet limited import price inflation. Comparative advantages are now fading with automation and higher transportation costs. Emerging markets long benefited from lower labor costs, limited regulation, investment capital, state sponsorship, lower tax rates, and many that pegged their currency. Globalization is being restrained now by concerns about supply chain reliability, quality, and exposed strategic trade dependencies.

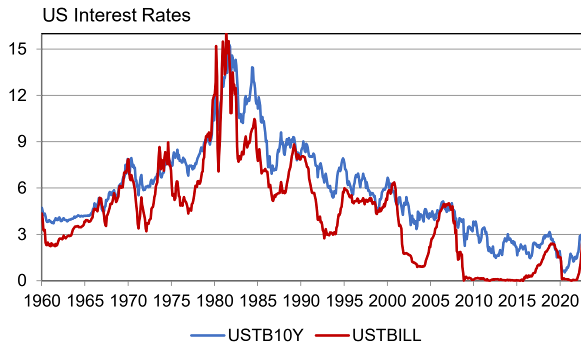
Nagging Explicit Moral Hazard + Bond Manipulation

We think the Federal Reserve waited too long to reverse its manipulative monetary policy actions of low rates, quantitative easing (QE), and forward guidance more-or-less pursued for nearly a decade. As inflation generally fell for 40 years, cognitive bias can be etched into underestimating bond risk, so investors will be likely caught off guard with regime change of higher average inflation (CPI: 3.0%) and interest rates (3.5%). Investor surprise is the Fed's greatest tool to affect behavior, thus more significant hikes than expected are necessary to bring down inflation. Too much *transparency* increases difficulty in managing the Fed's dual mandate of stable prices and full employment. So, the yield curve should steepen with greater interest rate risk and economic volatility. Interest rates must rise until real interest rates are positive with a yield curve slope exceeding 1.5%. Low global bond yields vs. inflation are very concerning.



Source: Refinitiv DataStream & Strategic Frontier Management

Bond market manipulation by central banks over the last decade induced *explicit moral hazard* for financial decisions of investors, businesses, and households. Given the 40-year decline in interest rates, investors likely have become too complacent about downside risk of bonds returns. Symmetric inflation targeting has driven the misguided decline below a *zero lower bound*, presuming central banks should ever attempt to increase inflation. Such objectives appear ridiculous in hindsight. Bond market manipulation over an extended period resulted in a flatter yield curves, thereby increasing financial imbalances.



Source: Refinitiv DataStream & Strategic Frontier Management

We've been critical of the Fed's evolved long-run forecasts regarding PCE inflation (2.0%), interest rates (2.5%), and unemployment (4.0%), which are too low after being depressed by years of cognitive bias. Historically, if CPI inflation averaged 3.0%, and policy interest rates average 4.0% (1% real rate), then 10-year Treasuries should average 1¼ - 1½% over Treasury Bill yields or over 5%. FOMC forecast divergence from historical relationships suggest policy decision making likely suffers from misguided *confirmation* or *anchoring cognitive biases*. The Federal Reserve expects *PCE* inflation will revert to their *implicit* 2% inflation target, but such debate is why the chosen inflation index is critical.

Inconsistencies in the FOMC economic projections and historic implied risk premiums are due in part to confusion about differences between CPI vs. PCE. This suggests a fallacy of *distinction without a discernible difference,* evident in the chart, thus problematic for various reasons. PCE inflation averages -0.5% lower, so historical analysis using the PCE index must be adjusted accordingly. If the Fed Funds Rate–CPI inflation = 1% on average, then FFR–PCE Inflation = 1.5%.

If the Fed believes price stability requires 2.0% inflation, then they will need to hike interest rates more and maintain high interest rates for longer. A normal interest rate gap versus CPI inflation tends to be closer to 1% historically, suggesting the interest rate gap might be 1.5% versus PCE inflation. Consequently, our long-run forecast for interest rates is 3.5% versus the Fed's 2.5% forecast and a historical average of 5.2% over 50 years.

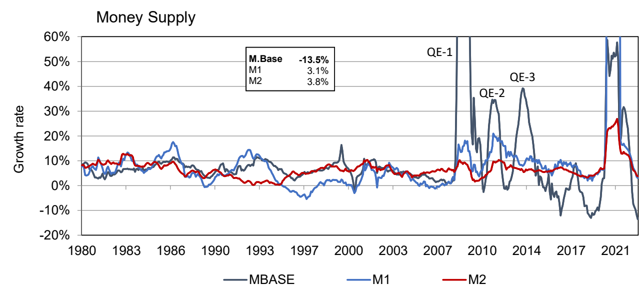
Median Forecast								**LongRun Forecast**	
U.S. Fed %	**2019**	**2020**	**2021e**	**2022e**	**2023e**	**2024e**	**2025e**	**Fed**	**SFM**
GDP	2.15	-2.40	5.90	0.20	1.20	1.70	1.80	1.80	2.00
U.Rate	3.55	6.70	4.80	3.80	4.40	4.40	4.30	4.00	4.50
PCE	1.45	3.40	4.20	5.40	2.80	2.30	2.00	2.00	2.50
Core PCE	1.50	3.00	3.70	4.50	3.10	2.30	2.10	2.00	2.50
Implied CPI	2.00	1.50	3.50	5.90	3.30	2.80	2.50	2.50	3.00
Federal Funds	1.55	0.09	0.13	4.26	4.59	3.76	3.01	2.47	3.50

Interest Rates	2019	2020	2021e	2022e	2023e	2024e	2025e	Longer Run
FOMC Avg.	1.63%	0.13%	0.13%	4.26%	4.59%	3.76%	3.01%	2.47%
SFM[1]	1.75%	0.25%	0.25%	4.50%	5.00%	4.50%	3.50%	3.50%
Rate Change	0.00%	-1.50%	0.00%	4.25%	0.50%	-0.50%	-1.00%	

1. Top-end of indicated Fed Funds range

Source: U.S. Federal Reserve (September 2022) and Strategic Frontier Management

Bond holdings of global central banks will need to be more than halved after successive rounds of QE—in the US, the Fed's $8.9 trillion balance sheet should be just $2 trillion, which is still double what it was before 2008. Meanwhile, global mark-to-market losses on bond holdings compound as bond yields rise, at great cost to taxpayers. Refunded maturing bond holdings, plus high fiscal deficits add to issuance supply of government debt for which demand is declining. Investors are growing weary of persistent losses on bond portfolios, and bond yields will surely increase further in 2023. We expect US (10y) Treasuries could exceed 5.5-6.0% in 2023, dragging other global government bond markets along. Yield curves need to steepen significantly globally.



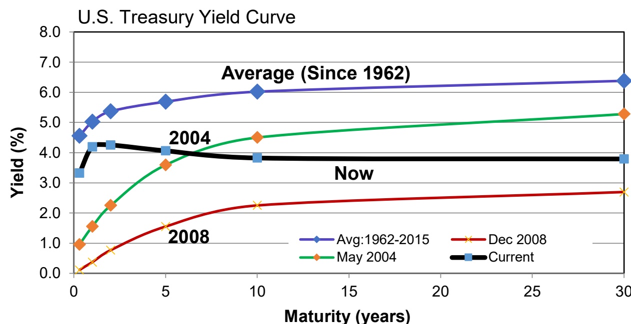
Source: Refinitiv DataStream & Strategic Frontier Management

Monetary stimulus pulled forward consumption with lower financing costs, but sacrifices future economic growth potential. This is problematic once necessary to reverse QE. Consider economic effects of the volatility in money supply growth charted above and now the dip below 0%. Extending QE for a fourth time over the last two years more than doubled Federal Reserve holdings

to $8.9 trillion, which will require years of low—if not negative—money growth in order to normalize around $2 trillion. Eurozone central banks in aggregate are similarly situated (€8.7 trillion). Naive policymakers ignored effects of extended monetary and fiscal stimulus as disinflationary forces receded. While investors are fixated on rising interest rates, the 800-pound gorilla in the room—Fed's balance sheet—may have a greater effect on the yield curve slope, and could have a greater risk of causing a financial crisis. Remember that all the largest central banks are in too deep after their massive fiscal stimulus during 2020-2021, so interest rates may need to rise more than anticipated to contain inflation.

Overreliance on unconventional monetary policy stimulus increased financial imbalances. Interest rates and holdings of quantitative easing must eventually normalize, but in the meantime central banks have few policy tools to address a future crisis. The Federal Reserve's balance sheet exceeding $8.9 trillion must decline toward $2 trillion, but such a contraction can trigger fixed income liquidity issues and sustained negative money supply growth, which should limit US potential growth for years. Monetary stimulus and fiscal Keynesianism can giveth easily, but always taketh away more when reversed.

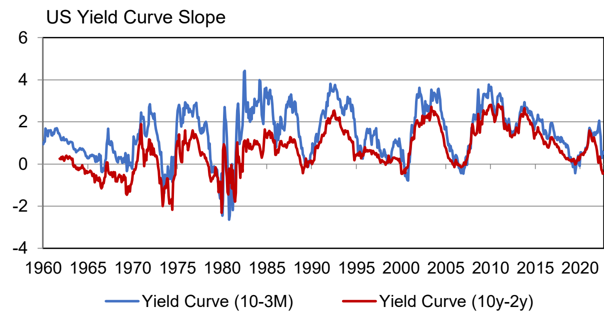
Global bond yield curves should steepen anticipating rate increases, so short-term fixed income and cash are more prudent alternative investments. Consider how much the yield curve differs from May 2004 or 2008 during the GFC. Higher inflation stretched global bond valuations. As short-term rates increase, we'd expect the yield curve to steepen with increased inflation risk, economic volatility, soaring deficits, and higher inflation expectations, not a flat or inverted yield curve observed.



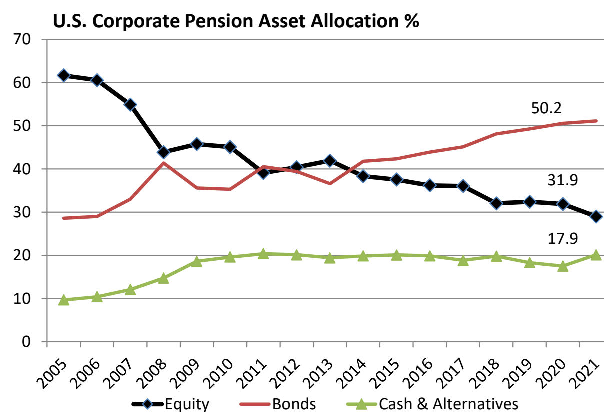
Source: Refinitiv DataStream & Strategic Frontier Management

The Federal Reserve's dual mandate is to maximize the economy's long-run potential real growth—*fostering economic conditions that achieve both price stability and maximum sustainable employment.* We believe the emerging economic regime will be more similar to historical cycles with CPI inflation averaging 3% and Federal Funds rate of at least 3.5%. The Federal Reserve wrecked its credibility by delaying monetary normalization, and Fed Chairman Powell seems in over his head with sadly limited depth of understanding about the challenging US and global economic conditions.

A flat yield curve is inconsistent with high inflation that still is not contained, and uncertainty about how high rates must go. Considering history and current economic conditions, why isn't the yield curve much steeper, as we expect? A global bond correction with such high convexity (change in interest rate risk at such low interest rates), after a decade of manipulation, could trigger the next financial crisis. We expect greater economic, currency, and bond volatility with flatter yield curves that need to steepen significantly. We prefer short maturity or floating rate debt, even cash, which is more resilient to interest rate changes.



Low interest rates encourage leverage, but time and again failures of risk management accelerate quickly. Our lingering concern for many years post-GFC has been increased use of government bond leverage in pension funds implementing liability driven investing (LDI) and risk parity strategies championed by investment consultants as *risk mitigation* or dampening volatility of *pension funding ratios* due to changes in interest rates. Pension plans are considered prudently healthy if it's Funding Ratio = Assets / PV(Liabliity) exceeds 80%. Extended and leveraged bond investors are exposed to significant risk as monetary normalization wrecks havoc on portfolios, including retirement savings, pension funds, and endowment funds—even central bank holdings are at risk of material losses.



We have cautioned maturity extended and leveraged bond investors many times after significant manipulation of global fixed income markets, directed particularly toward asset owners adopting *Liability Driven Investing* (LDI) and *Risk Parity* strategies. How can pension funds expect to meet long-term return objects, which still exceed 5-6% with portfolios so dominated by bonds, rather than equities? Normalizing global yield curves could eventually result in even greater losses for bond investors from sovereign wealth funds to insurance companies (i.e., DB risk transfer) and retirement plans, including pension funds with long average maturity or leveraged bond holdings.

Declining value of leveraged and long maturity bond portfolios are going to be a particular challenge. Ever larger commitments to alternative investments, including private markets (i.e., equity, debt, hedge funds, infrastructure, timber, etc.), have been disappointing net of management costs and fees for asset owners. Cash or short-term and floating rate bonds are better cheap alternative investments for the intermediate term.

Consider the pension fund challenges recently observed in the United Kingdom, requiring the Bank of England to intervene and restore liquidity after pension funds with LDI mandates were overwhelmed by margin calls on leveraged bond holdings as bond yields soared with yield curve steepening. LDI strategies in the UK quadrupled to £1.6 trillion in a decade, so it didn't take much to trigger this a liquidity crisis for a modest increase in gilt yields given high convexity (because yields are low). LDI losses are difficult to explain to risk averse pensioners and investment committees as inflation indexed benefits soar and portfolio values plunge. LDI hoped to smooth pension liability funding challenges as interest rates fell, but a new era of rising interest rates and higher volatility may challenge LDI objective thesis given low or negative real returns, greater asset price volatility, and flat-to-inverted yield curves that offer no yield premium for much higher interest rate risk, as well as more frequent liquidity challenges. Our concerns extended beyond the UK to pension funds in Canada and the United States.

Orange County, CA was forced into bankruptcy in 1994 because their $7.5 billion pension plan followed a misguided strategy that leveraged their Treasury bond holdings (1.5x). Margin calls increased as the Federal Reserve hiked rates from 3% to 6%, which drove bond yields from 5.6% to 7.6%. In 1998, hedge fund Long-term Capital Management (LTCM) failed after its derivative bond arbitrage strategy leveraged $5 billion in AUM to exposure of $100 billion, including interest rate swaps. LTCM's strategy failure was triggered by Russia's debt default, requiring Federal Reserve intervention to avoid a systemic financial crisis. Imagine the consequences of widespread margin calls triggered by rapidly steeping yield curves as central banks unload trillions in bond holdings while hiking interest rates. Many large pension funds and insurance companies with extended duration and leveraged bond portfolios are following similar strategies on a massive scale globally. We seem to have forgotten these lessons regarding leverage and prudent portfolio risk management.

Earnings

Earnings growth and profit margins have been core principles driving our global tactical asset allocation research for over three decades. *Economic growth* translates *revenue* into *earnings* growth through *profit margins*. It is this multi-step translation that investors often fail to fully appreciate in their investment process—today equity investors seem fixated on high economic growth, but overlook differences in margins, currency effects, and even translation of revenue to earnings.

Operating Earnings	2025e	2024e	2023e	2022e	2021	2020	2019	2018
IBES Consensus (CE)	276.32	263.16	243.46	225.33	208.12	139.72	162.17	161.93
Growth	13.5%	16.8%	8.0%	8.3%	49.0%	-13.8%	0.1%	22.7%
Strategic Frontier Mgmt	260.00	245.00	232.00	221.00	208.12	139.72	162.17	161.93
Growth	6.1%	5.6%	5.0%	6.2%	49.0%	-13.8%	0.1%	22.7%
S&P 500 @18x SFM TE	4680	4410	4176	3978	3746	2515	2919	2915
SFM Target S&P 500	4800	4400	4200	4000	4766	3756	3231	2507
SFM S&P 500 P/F12CE	15.76	15.17	14.48	17.24	21.57	18.05	23.12	15.46

Source: I/B/E/S and Strategic Frontier Management

S&P 500 earnings growth of 49% in 2021 bolstered investor sentiment, but more realistic future earnings of 5-8% won't be enough to correct extended valuations. We expect further decline in earnings estimates will increase downside risk, and higher inflation will likely further disappoint both equity and bond investors. The current 7.1% IBES earnings consensus estimate for 2022 is closing in our current 6.2% forecast.

US companies may still struggle to grow into their heady valuations, particularly with higher interest rates rose if 2023 earnings disappoint, as we expect. Investors will struggle with lower operating earnings margins and slower growth that continue to disappoint investors. A normal earnings multiple should adjust lower with higher inflation, higher interest rates, economic uncertainty, and greater equity volatility. If the US economy slows and margins decline, US earnings growth would be limited.

Global Tactical Asset Allocation Strategy

Asset allocation remains the critical determinate of long-term wealth. Our outlook reflects mean reversion of global bond and equity valuations, both which are stretched, as well as normalization of interest rates with improved economic and earnings growth. Long-term volatility and correlation expectations continue to evolve, which has implications for our strategic asset allocation. Investors should expect higher equity, bond, currency, and commodity volatility as interest rates and monetary policies normalize globally. Increased volatility within and across asset classes suggests expanded global tactical asset allocation opportunities. We believe that relative fundamentals will become more important and

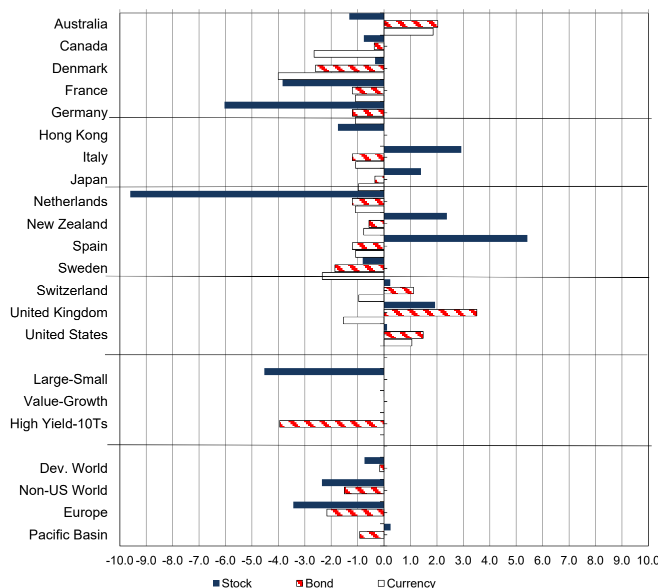
that *Countries Still Matter*, as do sector and risk factor exposures with varying cyclical economic forces again.

Our global tactical equity model forecasts deteriorated last year as index prises rose to new highs, but even as equity markets declined this year, there hasn't been much improvement in valuations as interest rates rose. Further recovery in earnings will struggle if high inflation continues to undermine productivity and margins. With changes in policy, we think US equities will struggle to return 5-6% potential earnings growth over the next decade versus 8.8% annual return observed for the S&P 500 over the last 60 years. However, we do expect global stocks to outperform Treasury bonds, which should struggle to beat inflation over the foreseeable future. Our tactical equity forecasts suggest wide dispersion across countries and currencies. Small-cap and value risk premiums may have further to run.

Global Tactical Asset Allocation Quarterly Forecasts(%)

			Local Markets		**In (US$)**		US$
MSCI	WrldGvt	Oct 2022	Equity	Bond	**Stock**	**Bond**	Currency
100%	100%	World	-0.3	0.4	**-0.7**	**-0.2**	-0.4
20%	34%	Europe	-2.2	-0.5	**-3.4**	**-2.2**	-1.4
10%	19%	Pacific Basin	0.6	-0.2	**0.2**	**-0.9**	-0.3
35%	55%	Non-US World	-1.2	-0.4	**-2.3**	**-1.5**	-1.2
65%	45%	US	0.1	1.5	**0.1**	**1.5**	
		Cash		0.9		**0.9**	

	Lg-Sm	Va-Gr	High Yield - 10yT
US Style	-4.5%	0.0%	-4.0%
	Small -	*Growth*	*10yTs*



Source: Strategic Frontier Management, October 2022

Globally, we expect yield curves to steepen and greater economic volatility. This will tend to increase importance of relative valuation, not only at the asset class level normalizing earnings yields and real interest rates, but between sectors and securities. Potential growth at the sector level will be as varied as it is between countries. We expect further outperformance of value vs. growth and return of the small-cap risk premium. Productivity and profit margins may retreat with higher average inflation of 3%. Increased stock and bond market volatility reflects a transition to higher economic volatility due to waning disinflationary forces that foster greater global dispersion and volatility of interest rates. Higher equity volatility has persisted since 2020, coinciding with greater *volatility-of-volatility* we expected to continue.

As interest rates and bond yields rise, global equity markets sold off over 20%, but our global tactical equity forecasts haven't improved much. Higher inflation combined with higher yields didn't improve bond valuations much either. Higher interest rates cap equity valuations, which continue to struggle—it is still too early to overweight equities or bonds, but narrowing underweight global equity exposures would be consistent with changes in our return forecasts.

Over the last decade, our tactical models have favored overweighting global equities, but last fall both our stock and bond forecasts declined to the lowest level since the turn of the century (1999). We also favored US equity small-cap and value tilts, as well as a preference for non-US developed market equities, but remained concerned about Emerging Markets, particularly China and Russia. We believe investors should expect higher equity, bond, currency, and commodity volatility. As interest rates rise in an asynchronized fashion between countries, global asset allocation opportunities should expand with volatility. We believe there is increased risk of systemic financial chaos (moral hazard) exiting extended emergency monetary policies.

We witnessed a remarkable rotation from glamourous growth to blue-chip value this year with wider dispersion in valuations than observed in the last two decades (i.e., 2000-2001) creating opportunities. Some familiar value companies are trading at single-digit price/earnings ratios, while large-cap growth stocks remain expensive, if they are even turning consistent profit. Consider the widening gap between the S&P Technology Sector vs. Nasdaq 100 Index or S&P Communications Sector or Consumer Discretionary ushered in after S&P GICS rebalancing a few years ago.

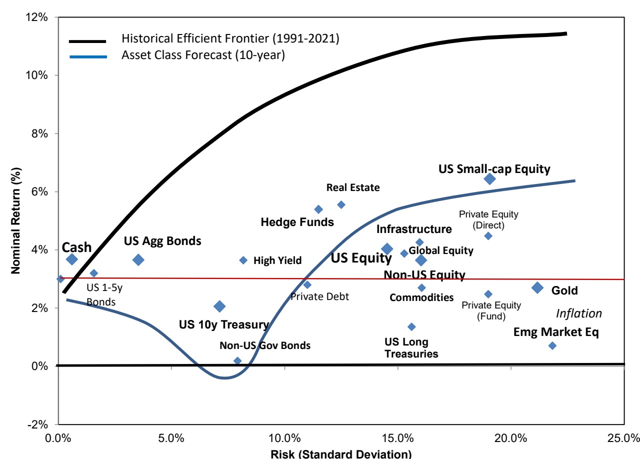
An emerging new regime of generally rising interest rates and central banks reducing bond holdings globally will increase volatility of monetary aggregates, which should boost economic volatility and market volatility-of-volatility. In fixed income, we recommend favoring shorter maturity and floating rate debt. Short-term bond funds with higher credit exposure enjoy higher current yield without much interest rate risk, particularly as credit spreads widened. We don't expect much volatility in the US dollar. We remain overweight cash, which is the only true safe haven for investors—not gold or bitcoin, and certainly not commodities. These speculative securities are neither a store of value, nor do provide for costless

liquid exchange like currencies with the benefit of a *fixed income* yield. Money market funds still charge high fees given such low interest rates. We prefer minimal interest rate risk of short-term bond index funds or cash yields.

Cash can be a prudent risk-reducing portfolio diversifier and better store-of-value than gold when tactical equity forecasts suggest reduced upside, alternatives are costly with marginalized expected return, increasing commodity supply exceeds demand, and global bonds are still overvalued. We have suggested active management can be a constructive *alternative investment*, providing greater diversification while enhancing return, but at lower cost and increased transparency than hedge funds. Active strategies have struggled for years, but so has value and small-cap factor tilts. If rational value investing isn't paying off, is it surprising fundamental analysis hasn't worked, as we observe ever widening dispersion in valuation.

Strategic Asset Allocation

Our strategic allocation forecasts reflect similar valuation, inflation, and interest rate concerns of our global tactical forecasts. We revised US potential real growth lower toward 2% last year. Global bond markets remain overvalued with negative real yields. Extended mispricing of risk can have adverse systemic financial consequences. Cash or short-term and floating rate bonds are better cheap *alternative investments* than any other public or private capital market. Retirement savings and dismal pension funding will suffer if equities and bonds lag inflation, as we expect. We expect 3% US inflation on average is more likely now that higher inflation expectations were unleashed, which should *increase fixed income volatility*.



Source: Strategic Frontier Management

We expect negative real (if not nominal) bond returns for 10-year Treasuries over the next five years with higher inflation and increasing government debt of fiscal deficits. Still no alternative asset allocation has beaten a global balanced strategy on a risk-adjusted basis over longer-term horizons net of fees. If future returns to equities and bonds are lower, so will likely returns of alternative strategies. *Reports of the demise of global balanced strategies have been grossly exaggerated.*

A *Strategic Frontier* theme beginning in 2021 was withering of Emerging Market comparative advantages. Russia, China, and Brazil are among the largest market capitalizations, but economically Socialist countries are in decline losing comparative advantages by limiting free market competition. China increased dominant market share of cheaper and strategic exported basic materials (i.e., aluminum, steel, chemicals, etc.), consumer goods, electronic components, pharmaceuticals, and parts, many of which were labor intensive and/or nationally strategic to importing countries.

Labor and regulatory cost advantages enjoyed by Emerging Markets for two decades are increasingly marginalized by rising energy and transportation costs as technology innovation reduces product labor intensity—it's becoming more cost effect to manufacture locally in the US than offshore production. Decline in the euro improved European competitiveness, too. Declining productivity in China—and lesser extent in other Emerging Market economies—seems a consequence of diminishing subsidies, rising labor costs, depleting commodities, and higher energy prices, as automation and transportation costs began reversing globalization and offshoring. Chinese workers seek higher wages, but robotic automation is indifferent to geographic location, even as global labor intensity declines with innovation. Thus, re-shoring (reversing offshoring) is accelerating with ubiquitous innovation and limited Emerging Market productivity. US import prices increased, even if the strong US$ limited it to some extent.

Even if Emerging Market growth rates exceeded many developed countries, productivity and profit margins are lower, so the translation to earnings growth has been poor. Geopolitical risks also have increased, driving higher volatility and downside risk of equity, bond, and currency market returns. So, when bottlenecks in shipping and ports arose with increased regulatory, labor, and energy costs, the result is predictably higher inflation and shortages in traded goods with cascading logistic dependencies further along supply chains. Our concern in avoiding China since 2021 have only become more critical given declining competitive advantages of low-cost labor, commodities, and minimal regulation, as developed nations seek to reduce import dependency on strategic goods and services from China. The Commerce Department also has been reviewing Chinese company operations with products that are designed, developed, controlled, or manufactured by state enterprises linked to the CCP that may present unacceptable threats and national security risks to US citizens, institutions, businesses, and essential services.

Russia launched its military invasion of Ukraine on February 24, 2022, but WTI oil exceeded $88/BBL *before* Putin declared a "special military operation" for the "demilitarisation and denazification" of Ukraine. Russia then weaponized its oil and gas supply dependency to punish European support for Ukraine. We believe Russia's strategy backfired as EU countries concluded Russia is now indeed an unreliable energy supplier. Russia's stock market has become *uninvestable* as index exposure has dwindled with new sanctions and central bank curbs on trading. MSCI has suggested removing Russia from indexes is a "natural next step". We expect Emerging Market Equities will underperform developed markets with even higher risk.

Portfolios including significant alternative strategies (inc., private equity, venture capital, private debt, real estate, hedge fund, infrastructure, gold, and commodities) haven't performed any better than a mix of listed global stocks and bonds, but limited by management fees and higher transaction costs, foregoing any rebalancing opportunity with limited liquidity. Net returns remain inferior on average to simple global balanced portfolios on a *true* risk-adjusted basis. Lack of timely marked-to-market valuations of private market securities heighten anxiety of wealth uncertainty. The myth of illiquidity or unlisted/non-public risk premiums remains illusive and undiversifiable for capacity constrained private market assets, as discussed in: *Alternative Reality*.

Investment managers of alternative products suggesting balanced portfolio are dying or dead begs the question, what is the alternative? Can alternative products exceed return of public market asset class combinations, off which they're priced and to which they are correlated and limited by higher fees or illiquidity? Private markets can't avoid a re-rating of public equity and bond markets. Any private illiquidity risk premium, if not discount, can't overcome valuation reversion. If currencies have 0% expected return, setting aside interest rate differentials, then why would one expect cryptocurrency returns to exceed inflation with higher volatility than commodities?

We concluded long ago commodities, gold, and particularly cryptocurrencies are *imprudent* strategic asset allocations. Cryptocurrencies failed to be a store of value (ex: Bitcoin: -58% YTD) or hedge inflation risk with high volatility exceeding commodities. We prefer the term *crypto-commodities*, and are unlike low volatility currency yielding income on deposits. Higher interest rates increased the hurdle for cryptocurrencies vs. cash yields, so we are not surprised cryptocurrencies declined as interest rates rose. If higher inflation drives up interest rates, how can cryptocurrencies ever be a good hedge for inflation? Similarly, cryptocurrencies fail to be a hedge for equities or bonds as a commodity without income, and should be regulated as such. Our belief is that the CFTC is best positioned to do so in the US.

Balanced 60/40 strategic asset allocations may need some tactical tuning (i.e., shorter fixed income maturity, limited Emerging Market equity, and fewer alternatives), but pension funds increasingly struggle to keep up with the classic 60/40 prudent man balanced strategy. Our proprietary strategic asset allocation frontier always included less risky short-term bonds as a dedicated asset class, which can exceed US bond allocations in more conservative portfolios, thereby minimizing cash.

US Fiscal Impact of Compounding Deficits

Fiscal deficits increase with the inflation-indexed costs Social Security, Medicare, government benefits (i.e., pensions, retirement plans, health care), of entitlements (i.e., welfare, Obamacare, unemployment, etc.), and other costs of federal, state, and local government. Higher interest burdens for government debt are a function of higher inflation. As non-discretionary share of spending increases, financial flexibility to manage *discretionary* agency funding becomes more challenging for national security, defense, education, transportation, justice, interior, and veteran's administration. Many assume these agencies are essential services, not discretionary. America may be a rich country, but its resources are limited.

Interest burdens will rise with higher bond yields and high fiscal deficits, yet sovereign credit ratings don`t seem impacted. Japan's US$8.8 trillion in debt or 266% of GDP is the highest of any developed nation, the country's A/A+/AA3 credit rating remains stronger than we'd assume, as the Bank of Japan holds 43.3% of this debt with a 10-year yield of just 0.28%. Japan is of particular concern with its national debt exceeding 266% of GDP and BoJ's holdings of both government bonds and equity ETFs. Compare that to US 10-year Treasury debt of $30.93 trillion outstanding yielding 4.05% as of September 30th rated AA+/Aaa/AAA with Debt/GDP of 125%. Over 20% of US Treasury debt is held by the Federal Reserve and another 21.4% is held by federal agencies and trusts, so over 40% of US Gov't Debt is held by the US Government, but this is not sustainable.

How it is possible the US Economy recovered from the pandemic recession in 2020 is now flirting with recession again after a spending binge of more than $4 trillion in just two years? Moreover, how can the Administration take credit for the declining U.S. budget deficit given this fiscal stimulus rolling off:

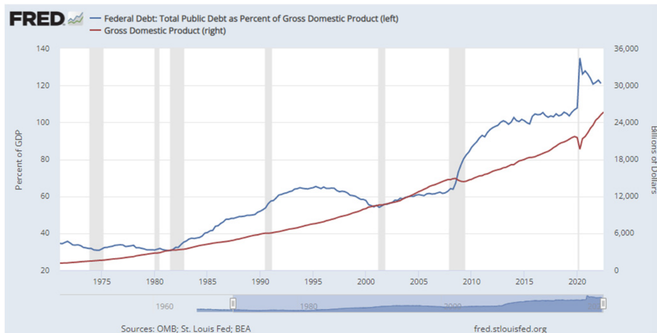
$900 billion Additional pandemic relief in *The Consolidated Appropriations Act* of FY 2021 (Dec. 2020)

$1.9 trillion *American Rescue Plan Act* (March 2021)

$1.2 trillion Infrastructure Investment and Jobs Act (November 2021)

$250 billion CHIPS and Science Act (August 2022)

The CBO estimates the cost of student loan forgiveness, unjustly authorized by Executive Order, would increase US debt at least **$400 billion.** A September 26th estimate from the *Committee for a Responsible Federal Budget* estimated the cost at **$500 - $650 billion**. The student loan forgiveness was declared unconstitutional, and applications are suspended, although it stands as another example of overreaching policy mischief.



Higher interest costs on Federal Debt, plus Federal Reserve losses on mark-to-market securities will further compound federal, state, and local government debt. Over $4 trillion in unnecessary US government deficit spending in 2021-2022 exceeded 100% of US tax revenue in FY2021 well after recovery from a transitional recession due to governments shuttering economies. The FY 2019 US budget deficit was $984 billion. That pushed US debt to $31.26 trillion (53% increase) compared to $20.45 trillion five years ago. Consider that each household's share of US debt is **$256,230.** High US debt and fiscal deficits require spending restraint, which can limit contribution to GDP, and another reason for lower US potential growth.

The Coming Big Chill in Energy Policy

Winter is coming, but Americas have endured a bit of what is yet to come in an escalating war on American energy and fossil fuels. US Policy decisions seeking to accelerate the environmental transition of American energy has adverse consequences, including greater utility costs, as well as higher natural gas, electricity, heating oil and gasoline prices.

Efforts limited US E&P infrastructure projects, including pipelines (Keystone, Enbridge-Line 5, etc.) or land leases increase reliance on foreign oil. Limiting oil, gas, and fuel pipelines to reduce energy supplies tends to drive up consumer costs and increase environmental risks of increased rail tanker and trucking traffic. Environmental initiatives seek to cut off financing and credit necessary for investment and market liquidity. Higher $80-100/BBL oil drove $5-6/gallon gasoline.

Electricity generation and transmission capacity is strained amidst rapidly increasing electricity demand still 61% dependent on fossil fuels and 19% on declining nuclear power. Higher heating oil (27%), natural gas (28%), propane, and even highly regulated electricity (10%) costs are coming into focus as winter approaches. These cost increases far exceed inflation. High electricity costs and rolling blackouts may be just a taste of future consequences of the fossil fuel-free transition the Administration seeks. Greater infrastructure investment, is needed, including pipelines, power plants, and transmission lines to meet the energy need for all the anticipated new electric ovens, stoves, furnaces, water heaters, air conditioners, generators, and cars.

Households with natural gas furnaces spend about 31% less than those with electric furnaces, but California law will limit natural gas for cooking and heating in future new construction just as nuclear power is being sidelined. California regulation to outlaw sale of gasoline-powered cars will strain electricity generation and transmission capacity amidst rapidly increasing electricity demand. Solar and wind are increasingly running into county, city, and local nuisance resistance in land management (NIMBY) and imminent domain scabbles.

When US government policy actions adversely shift the supply curve as the demand curve steepens with moderating innovation, energy prices must rise. What began in the US, accelerated given misguided European energy policies (Russian energy reliance), and triggered OPEC cartel actions to maintain high oil and natural gas prices. When the US government limited production permits and leases, cancels distribution infrastructure (i.e., pipeline or refinery projects), and future supply capacity diminishes, speculative forces of free markets will drive up oil and gas prices, assessing future supply-demand imbalances.

Increased regulation and limitation of energy exploration, production, distribution, and transport of natural gas, oil, and other fuels started in the US. Speculation drove higher oil and natural gas prices, thereby triggered the rise of inflation that spread globally. Soaring energy costs in the US are driving up global oil and natural gas prices. To transition US Energy has a cost, but it will be particularly disruptive and expensive if the alternative power sources are not ready to go or a *transition path* is not obvious. Thus, higher US inflation expectations were triggered by a significant energy policy pivot that drove up US energy prices. President Biden systematically reversed America's energy independence shortly after taking office:

--EXECUTIVE ORDER: Protecting Public Health and the Environment to Tackle the Climate Crisis--Revoked *Keystone XL Pipeline* permit to transport oil from Canada to the US, and revoked other previous Administration related EOs. This EO paused new oil and gas leases on public lands, and seeks to reduce methane emissions from the Oil and Gas Sector. It imposed a moratorium on permits and leases in the Arctic National Wildlife Refuge (ANWR), as well as withdrew areas in Alaskan Arctic waters and the Bering Sea from oil and gas production.

--EXECUTIVE ORDER: Tackling the Climate Crisis at Home and Abroad – Putting the climate crisis at the center of United States foreign, national security, homeland defense, and national defense policy.

--EXECUTIVE ORDER: Rejoin the Paris climate accords, which seeks to slash global greenhouse gas emissions and accelerate transition to net-zero carbon emission standards for the US.

Executive Orders or Directives have the effect of law, and is an explicit power granted to the President by the Constitution, and "shall take Care that the Laws be faithfully executed.", although Congress can pass a law to override any executive order. Such Presential power should be limited and defer to Congress on those issues reserved for the legislative branch. Presidents may unilaterally sign EOs to achieve policy objectives when they can't do so legislatively. President Biden has run out of excuses for poor economic performance and governing failures in believing in *too many impossible things*. Unfortunately -- *You break it…you own it*.

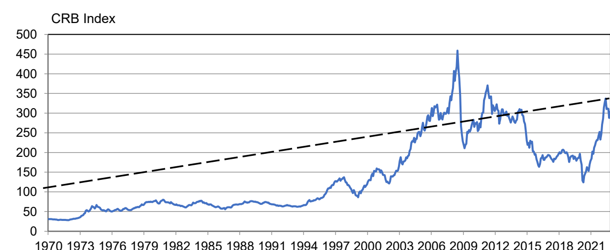
The U.S. Strategic Petroleum Reserve was created to provide short-term relief to critical supply disruption, such as a hurricane or global crisis interrupting imports, not as a tool to manipulate oil prices for political gain. Previous SPR sales included: Operation Desert Storm (1991), Hurricane Katrina (2005), and Libyan Civil War (2011). We believe tapping the SPR in 2022 to lower high gasoline prices was a bad idea and terrible precedent. Of course, the effort failed to achieve any attributable reduction in oil prices. The US SPR has declined 31% to 422.58 million barrels or the lowest level since 1984. Selling SPR oil exposed the US to consequences of an energy crisis for which the SPR was intended.

OPEC's response to increasing foreign oil dependency had an impact on oil and natural gas prices. The U.S. increased its energy independence over the last decade, OPEC now has leverage over global oil prices once again because US energy independence was snuffed out in just two years. Pleading for OPEC to increase production, at the same time pipeline projects and oil production leases are suspended, seems ill-advised. As our dependency on OPEC increased, is it surprising OPEC leveraged compromised energy dependency and marginalized US SPR to drive up oil prices again?

Oil prices were rising long before Russia invaded Ukraine in February and President Biden announced a ban on Russian oil imports shortly thereafter. It had little effect given their oil simply went elsewhere. India and China now account for 50% of Russia's seaborne oil exports, and Russia displaced Saudi Arabia as China's top oil importer. Russian oil exports still hover near its 10 MBBL/day capacity (Sept: 9.7 MBBL/day). The Russian Ruble devalued almost 50% in March, but their currency is now 12-15% stronger than a strong US$ vs. year-end.

Since 2006, energy and basic material demand intensity was moderating as supply efficiency increased, which was a consequence of *Conservation, Substitution, and Innovation.* Transportation fuel needs slowed over the last decade with greater fuel economy, electric vehicles introduced, and workforce trends—accelerated by the pandemic—that reduced commuting and business travel. We inferred consumption growth would lag global growth, but we didn't expect annual miles driven to decline, as it has since 2020. Our investment conclusion has been to avoid commodity investments dependent on higher prices—that long-term view served us well for more than a decade (see chart): *input costs can't exceed output cost, therefore commodity returns can't exceed inflation.* Long term empirical returns to commodities going back to 1900 confirm this relationship:

Commodity Returns **=** Inflation **–** Holding Cost (½%)



This relationship theoretically should also hold for Gold. Real assets with no income will struggle to beat cash, but with much higher return volatility. Cryptocurrencies are also commodities without income, nor correlation to inflation, as a speculative virtual security that is too volatile to be a store of value and vastly inferior to cash, particularly once interest rates (income) normalize and real interest rates are positive.

Causes & Consequences: What Matters Most

A year ago, we suggested extended equity and bond valuations motivated the need to *Curb Your Enthusiasm*. Despite a significant correction in both stock and bond markets in 2022, valuations haven't improved much. Inflation is much higher than even we expected, so real yields are still negative and the yield curve should steepen to at least 1.5%, even as short rates continue to rise. The Fed is also reducing bond holdings, but there still has been little adverse impact on employment so we

expect further rate hikes even as inflation moderates. US equity earnings yield hasn't improved much either after more than a 20% decline in the S&P 500, given much higher interest rates. With declining productivity and material non-transitory inflation that boosted inflation expectations, we expect there is still greater downside risk to the US and global equity markets in the near-term.

Who might have imagined in mid-2020 that we would be grappling with a CPI inflation rate exceeding 8%. Policymakers hoped US inflation would be transitory, but their reluctance to change course triggered even higher inflation expectations, which are now more difficult to contain. Our concerns about the forces driving inflation, including housing, labor costs, energy, basic materials, and transportation, were unlikely to be subdued easily. We cautioned that the longer inflation was dismissed, the greater the effect of explicit moral hazard of extending emergency monetary policies, therefore need to increase rates further.

Poor economic policy and agency regulatory decisions reinforced rising inflation expectations that reinforced labor cost, housing, energy, basic material, and producer prices. Declining equity and bond markets are a consequence of ruinous inflation, soaring interest rates (cost of capital), household insecurity (rising crime), unsustainable government debt with persistent fiscal deficits, supply chain chaos, and too many foreign policy debacles. Misguided Foreign, Domestic, and Economic policy changes believing in too many *Impossible Things* undermined American values, productivity, competitive advantages, prosperity, retirement savings, US savings rate, national security, and global leadership.

US inflation was not transitory, and we expect high CPI inflation to linger for awhile. High inflation peaking over 8% was above the highest level in 40 years, but it will take time to decline below 5% as higher inflation expectations have taken hold. Higher persistent inflation is particularly troubling given the strong US TWI dollar year-to-date, which reduced the cost of imported goods and services. Even if inflation has peaked, fairy-tale forecasts of returning to 2% inflation in 2023 appear unlikely, thus odds of an early Fed pivot (cutting rates) is slim before 2024, we think. Global central banks waited too long to begin unwinding monetary stimulus.

Other countries were impacted to the extent basic materials, energy, and other commodities trade freely in a global market—but as suggested, we have seen inflation effects in Europe and Asia develop after a lag. The strong US dollar and greater energy independence helped America manage inflation better, but once inflation expectations took hold, it became difficult to put the *transitory inflation* genie back in the bottle.

Central banks globally are under increasing scrutiny to deal with rising inflation—those who explicitly target inflation little choice, but to reduce bond holdings (QE), and raise interest rates until inflation is contained closer to its respective inflation target. The idea of reversing monetary tightening in the US or elsewhere is delusional. Emergency monetary stimulus ceased to be needed at least a year ago, as economic conditions normalized. Naïve policy stimulus presumed without consequences increased risk of recession due to needed normalization.

If you are wondering how soaring inflation can coexist with such low interest rates and, speculative overvalued markets, look no further than *explicit moral hazard* of central banks manipulating the bond market for over a decade, fueling financial imbalances, and pulling forward consumption, sacrificing future potential growth. Leveraged bond strategies have become more common among pension funds and insurance companies, many engaged in risk transfer of pension liabilities. Leveraged and extended maturity global bond portfolios are most at risk, but rising bond yields can be a tipping point for global equity valuations, particularly large growth stocks.

Retirement savings were trashed, between increasing cost-of-living and negative market returns. Declining productivity and profit margins suggest future equity returns will struggle. Higher inflation with still flat yield curves needing to steepen suggest to us that bond returns will lag inflation for the foreseeable future. While some strategists anticipate a pivot to cutting rates, we believe higher interest rates will persist through 2023.

Extended equity and bond valuations focuses our need to *Curb Your Enthusiasm*. If you are wondering how soaring inflation can coexist with such low interest rates and, speculative overvalued markets, look no further than explicit moral hazard of central banks manipulating the bond market for over a decade, which fueled financial imbalances globally. Leveraged and extended maturity global bond portfolios could drive significant yield curve steeping, and increase risk of a government debt crisis. We believe even higher bond yields will further undercut speculative global equity valuations.

Strategic Outlook This publication is for general information only and is not intended to provide specific advice to any individual. Some information provided herein was obtained from third party sources deemed to be reliable. We make no representations or warranties with respect to the timeliness, accuracy, or completeness of this publication, and bear no liability for any loss arising from its use. All forward-looking information and forecasts contained in this publication, unless otherwise noted, are the opinion of this author, and future market movements may differ from expectations. Index performance or any index related data is provided for illustrative purposes only and is not indicative of the performance of any portfolio. Any performance shown herein is no guarantee of future results. Investment returns will fluctuate, and the value of holdings may be worth more or less than original cost. © Strategic Frontier Management (www.StrategicCAPM.com). 2022. All rights reserved.