STRATEGIC OUTLOOK

Strategic Frontier Management

Q1 2023

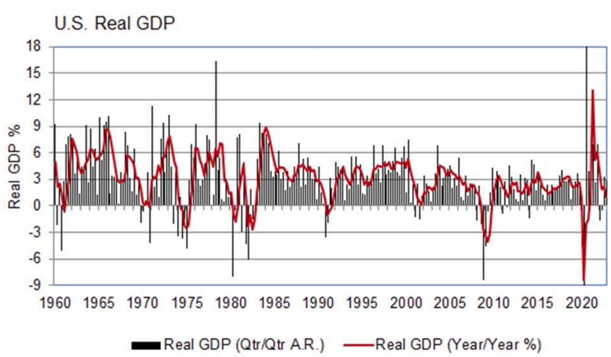
Value Shrugged

- 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 monetary and fiscal policies extended beyond usefulness. Higher tax rates limit real growth too.
- 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. The dismal consequences for profit margins and productivity will be felt for years, if not a decade.
- 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 as inverted yield curves remain must now normalize.
- 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.
- See: Topical for our *Global Strategic Outlook* briefing.

Fundamental Reversion to Regular Order

Slower economic growth is a consequence of reversing emergency monetary stimulus policies that extended well beyond usefulness, and should result in higher cost of capital (normalizing interest rates). We expect negative money growth due to significant *Quantitative Tightening* (QT) required to reduce the Federal Reserve's holdings from $9 trillion toward $2 trillion, yet similar declines are required of central banks of Europe (ECB), United Kingdom, Japan, China, Switzerland, and many others. It will take years to reverse more than a decade of misguided monetary policies, and may take at least a decade to extinguish the U.S. fiscal deficit.

The ruinous policy pivot through misguided legislation, executive orders (107 so far, plus 125 presidential memoranda), and agency regulations over the last two years has compounded inflation, while undermining potential growth, profit margins, productivity, and US competitiveness. Rising inflation expectations were foreseen a year ago in *Curb Your Enthusiasm* (Q4/2021). We also were concerned that equity and bond valuations were quite extended, risking a difficult correction that would hit retirement savings. Despite a significant correction in both stock and bond markets in 2022, valuations haven't improved much as interest rates increased and real yields are still negative. Bond yields rose dramatically (-17% US 10yr Treasury return) despite a US recession (sequential negative real growth) in 1H/22, but persisteny negative real yields with higher inflation and an inverted yield curve suggests that bonds remain extended. Inflation is still 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.



Source: BEA

US inflation was not transitory, and we expect high CPI inflation to linger for some time to come. U.S, inflation peaked over 8% in mid-2022 at the highest level in 40 years, but it will take time to decline as greater inflation expectations have taken hold. Persistence of higher inflation is particularly troubling given the strong US TWI dollar over the last two years, which reduced the cost of imported goods and services. Even if inflation has peaked, forecasts of returning to 2% inflation in 2023 appear unlikely. We believe further interest rate hikes are needed, alongside normalizing the Fed's balance sheet to tame inflation, so odds of a Fed pivot (cutting rates) are slim before well into 2024. Negative money supply growth (QT) for the foreseeable future will impede credit growth, and thus limit economic and earnings growth for some time to come.

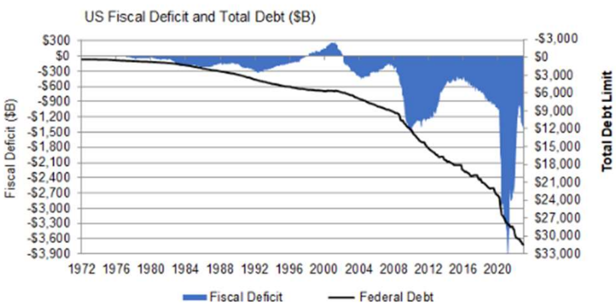
Economic Forecasts	2020	2021	2022	2023e	2024e	2025e
GDP Growth (Y/Y Real)	-1.5	6.1	1.0	0.5	1.8	2.3
S&P500 Op Earnings Gr	-13.8	49.0	5.2	1.8	5.4	6.4
CPI Inflation (Y/Y)	1.5	7.1	6.4	4.5	3.5	3.0
Unemployment	6.7	3.9	3.5	4.2	4.5	4.8
Fiscal Deficit (vs.GDP%)	-15.5	-11.2	-5.5	-5.0	-4.5	-4.0
Fed Funds Target[1]	0.25	0.25	4.50	5.50	4.50	3.50
10y Treasury Notes	0.91	1.50	3.83	5.75	5.50	5.00
S&P 500 Target	3756	4766	3840	4000	4250	4600

Source: Strategic Frontier Management

Global central banks waited too long to begin unwinding monetary stimulus. Emergency monetary stimulus ceased to be needed at least 2 years ago, as economic conditions stabilized with still low inflation. Inflation expectations rose as secular disinflation moderated, including innovation-led decline in labor, resource, and energy intensity. Thus, central banks globally are under increasing scrutiny to deal with rising inflation. Those that explicitly target inflation have little choice, but to reduce bond holdings, and raise interest rates until inflation is contained with respect to their inflation targets. Higher global inflation plus soaring government debt with excessive monetary stimulus for an extended period increased financial imbalances, which has elevated risk of a *Global Debt Crisis*.

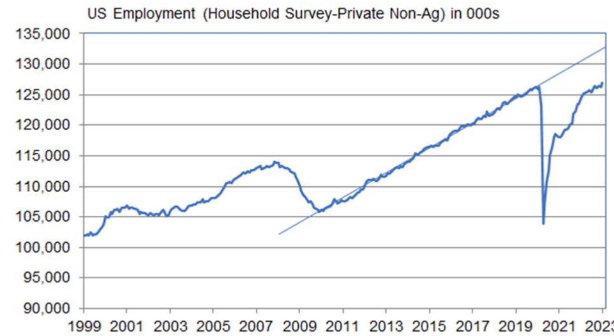
Theory well defines consequences of observed misguided US fiscal, regulatory, energy, transportation, trade, and other economic policies over the last two years, which heightened well known economic and capital market risks that are increasingly apparent. Economic outcomes of one or another isolated policy can be difficult to predict, but the broad and radical policy pivot of this Administration in so many directions already had a significant long-term secular impact on the US economy (lower growth and higher inflation, interest rates, unemployment, debt/deficits/liabilities, etc.) resulting in significant damage to America's financial stability and economic security, as US Debt/GDP soared over 100%.

Government Interest burdens are rising rapidly with higher interest rates and still significant fiscal deficits. Fiscal deficits should decline as extraordinary fiscal spending stimulus of COVID Relief, Infrastructure Act, Inflation Reduction Act, and CHIPS & Science Act run off, but these programs have suffered from significant fraud and waste. US Government spending over the last two years drove US debt over $30 Trillion or over $246K per taxpayer. Growth in tax revenues may decline as income and business revenue growth will slow if the US stumbles into recession, or even just flirts with moderate to intermittent recession in 2023. A reckoning of government spending must address unsustainable fiscal deficits, as well as rising interest burdens. The U.S. government doesn't have a tax revenue collection problem, instead it has a spending and accumulated debt problem. A reckoning of government spending must address unsustainable fiscal deficits, as rising interest burdens coincide with rapidly increasing bond supply and faltering investor demand (compounding losses) increases risk of a global sovereign bond crisis.



We expect disappointing US economic growth (0.5%) and earnings growth (1.8%), both well below US potential growth (forecast reduced to 2% in 2021) despite massive stimulus over the last two years. We expect a lot more economic and capital market volatility with a S&P 500 target of 4000 (3840 year-end) and negative bond return.

Unemployment peaked at 14% during the global pandemic in mid-2020, but in 2023, exceptionally low unemployment and tight labor markets--even with declining productivity (work from home, labor cost increases, skilled worker shortage, etc.) are simply not compatible with a recession, as many have forecast. So what do we make of the claim: *We created more new jobs in two years than any president did in their entire term?* The household survey suggests that private sector job growth in US employment (Household Survey) still has yet to exceed pre-pandemic levels (Dec 2019: 126.174M vs. Dec.2022: 126.169M)—only just getting back to even (and the jobs/population ratio) suggests there has been subpar job growth under President Biden. Federal and state government employees increased more rapidly than the private sector with expanded government spending over the last two years. The long-term chart below of employment is quite revealing, and should put to rest any debate about whether the Biden Administration can claim it “created more new jobs” than ever before, or not. Extrapolating job growth since 2009, we suggest the U.S. is short about 5 million jobs below potential--so, hardly something to highlight. Moreover, job creation rate has slowed, just as high profile layoff announcements seem to be increasing.



Source: US Labor Dept (BLS)

Investors should prepare for a new differentiated market regime reversing decades of declining interest rates, flatter or inverted yield curves, low inflation expectations, and interest burdens of increasing debt that collapsed normal risk premiums, including equity risk, equity style risk factor (value vs. growth, large-cap vs. small, quality, low volatility), liquidity, inflation or term risk premium. After years of being abnormally low, investment grade corporate and asset backed credit exposure (inc.: high yield and unrated) is one risk premium that seems to have normalized.

For active management to pay off from security selection and sector rotation to global asset allocation and currency management, we believe that relative valuation importance will increase the relevance of analytical research (after Value Shrugged), and non-shareholder value or non-pecuniary factors decline in importance. More specifically, we expect normalization of still wide P/E, P/B, P/CF valuation gaps (resurgence of value investing) as glamorous growth was in part driven by speculative asset flows into socially responsible, acivist, and ESG strategy objectives. Without sufficiently greater cash flow or earnings growth (necessary value-added condition for alternative non-pecuniary factor), how do such investment guidelines, constraints, or objectives with no basis in increasing economic, enterprise, or shareholders' value justify their continued use or extend 2022's remarkable decline in significance?

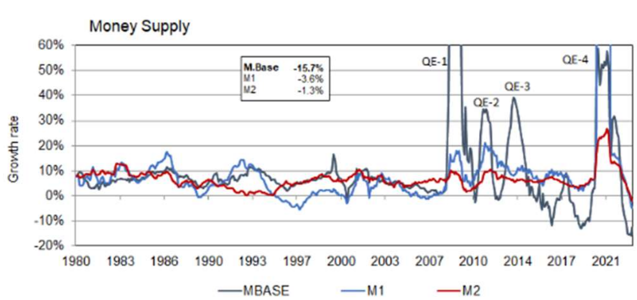
Resetting Equilibrium and Yield Curve Normalization

We expect higher average long-run US CPI inflation (3% vs. 2% recently) to persist, therefore necessitating higher interest rates (Fed Funds: 3.5%. 10-year Treasury: 4.7%) as a steeper yield curve slope is driven by greater inflation and interest rate risk more consistent with history. The presumption that inflation was transitory was no more assured than the Federal Reserve’s mistaken belief about their declining long-run forecasts of interest rates (2.5%), inflation (2.0%), or full employment (4.0%). US dollar strength limited inflation in 2022 (i.e., lower import, basic material costs), but currency volatility or even US$ weakness may drive higher import prices in the future.

We believe fixed income liquidity will be an increasing concern with required greater bond issuance of declining central bank holdings (QT) of tendered and refunded Treasury and agency mortgage bonds, as well as still extreme fiscal deficits (i.e., new and expanded government programs or entitlements, inflation-indexed liabilities, and interest burden of higher interest rates). Tax revenue also may be limited if the US economy flirts with recession and high operating costs limiting margins due to tight monetary conditions and higher income tax rates. We are concerned investor sentiment could unravel and further reduce bond demand, even as institutional risk questions extended bond maturity and leverage (i.e., Liability Driven Investing, risk parity, pension risk transfer) with a still inverted yield curve that must steepen dramatically.

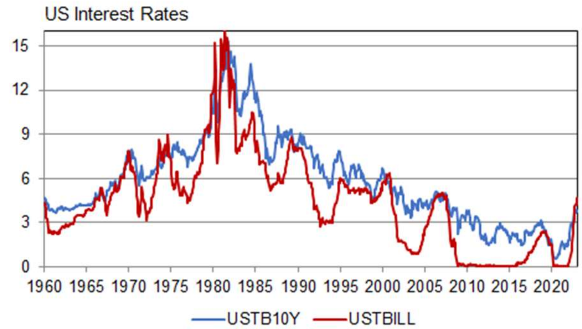
An economic hangover, exacerbated by cognitive and emotional behavioral bias, is likely after market manipulation of central banks' misguided policies for an extended period fostered *explicit moral hazard* (negative real rates, forward guidance, quantitative easing) to investors, borrowers, and lenders. *Quantitative Tightening* for years to come will tend to result in periods of negative money growth as interest rates rise, both which can limit real economic growth, and trigger a profits recession. We are concerned all this combined could result in a *Global Debt Crisis* with upward spiraling yields (restrained bond demand) and higher volatility of economic conditions, currencies, and capital markets.

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. Under normal conditions, the monetary base should grow in-line with nominal GDP, which is consistent with observed 6.4% money growth from 1980-2007. However, since the 2008 Financial Crisis, which introduced quantitative easing (QE: central bank buying government bonds), money growth has averaged 16.5%, well in excess of annualized nominal GDP of 3.9% (1.7% real GDP). The Federal Reserve wrecked its credibility by insisting inflation was transitory, and deferring monetary normalization, including hiking interest rates and reducing balance sheet holdings well into 2022.



Source Federal Reserve, & Strategic Frontier Management

Readers will remember our concern over several years about extended maturity and derivative leverage in *Liability Driven Investing* and risk parity strategies of Canadian, Dutch, British, and American pension funds. The Bank of England was forced to intervene in the UK's Pension Fund Crisis of September 2022 to stabilize bond market yields and restore liquidity. Widening funding gaps of underfunded pension funds coincided with massive losses and increased volatility on long duration bond portfolios. For US 10yr Treasuries, we believe 2023 will be the third sequential annual loss, which would be unprecedented in at least the last 60 years. Yet, there is still a lot of room for interest rates to move much higher.



Source Federal Reserve

US Treasury yields have declined for four decades, but the last decade of abnormally low interest rates that we've grown accustom is unsustainable, resulting in increased leverage and financial imbalances that must be normalized. Global interest rates too low for too long will result in much greater return volatility given high convexity starting from near 0% interest rates. With the fastest increase in interest rates observed since Fed Chair Volker's tenure, yield curve normalization is still necessary with still rising inflation expectations. Therefore, we expect negative real bond returns for some time to come, as US and global yield curves must eventually steepen. Investors still resist accepting that US Treasury 10-year yields should increase even further to reflect a normal inflation risk premium with a 1.5% yield slope for 10y-1y. If interest rates exceed 4.5%, then 10y Treasury yields should exceed 5.7-6.0%. Our forecast for a higher long-run US CPI inflation rate of 3% implies a higher average Fed Funds rate of at least 3.5-3.8%, consistent with 40-year and longer averages, even as the Federal Reserve median forecast suggests an unbelievable 2.5%.

Rising interest rates increase government debt burdens, which will crowd out U.S. discretionary spending. It is surprising that as interest rates rose, debt increased, and inflation persisted that yield curve slopes have inverted again. High fiscal deficits, accelerating quantitative tightening (selling Fed holdings), rising currency volatility, and increased bond leverage all have destabilized the US bond market. So, we expect negative bond market returns in 2023, as higher inflation should persist with increasing inflation expectations (labor, housing, transportation costs, services) and the negative yield curve slope reverts to normal.

Median Forecast U.S. Fed %	2018	2019	2020	2021	2022	2023e	2024e	2025e	LongRun Forecast Fed	SFM
GDP	3.05	2.15	-2.40	5.90	0.50	0.50	1.60	1.80	1.80	2.00
U.Rate	3.70	3.55	6.70	4.80	3.70	4.60	4.60	4.50	4.00	4.50
PCE	1.85	1.45	3.40	4.20	5.60	3.10	2.50	2.10	2.00	2.50
Core PCE	1.85	1.50	3.00	3.70	4.80	3.50	2.50	2.10	2.00	2.50
Implied CPI	2.35	2.00	1.50	3.50	6.10	3.60	3.00	2.60	2.50	3.00
Federal Funds	2.38	1.55	0.09	0.13	4.38	5.22	4.55	3.34	2.51	3.50

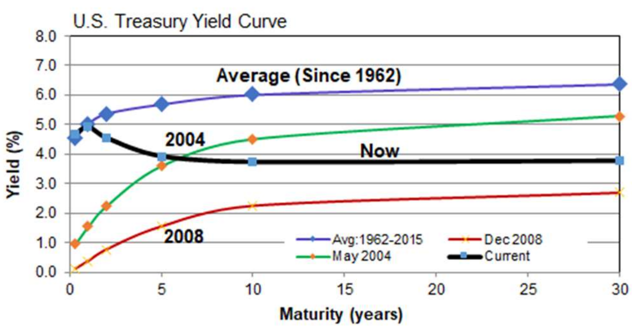
Interest Rates	2018	2019	2020	2021	2022	2023e	2024e	2025e	Longer Run
FOMC Avg.	2.38%	1.63%	0.13%	0.13%	4.38%	5.22%	4.55%	3.34%	2.51%
SFM[1]	2.50%	1.75%	0.25%	0.25%	4.50%	5.50%	4.50%	3.50%	3.50%
Rate Change	1.00%	-0.75%	-1.50%	0.00%	4.25%	1.00%	-1.00%	-1.00%	

1. Top-end of indicated Fed Funds range

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

Fundamental Reversion to Regular Order

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. Thus, US (10y) Treasuries could exceed 5.5-6.0% in 2023, dragging other global government bond yields much higher. Yield curves need to steepen significantly globally, and can't remain inverted, particularly the US yield curve, even if there is a shallow economic or earnings recession in 2023, as we expect.



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 (Ref: SFM estimate of normal). Low-to-negative money growth due to QT as interest rates rise will slow economic growth, thereby likely triggering a profits recession and limiting tax revenue as interest burdens increase,thereby driving even greater fiscal deficits. Continuing losses on bond holdings might further undermine bond investor sentiment. Negative bond market sentiment only compounds declining demand as bond supply also increases, so risk of a global government bond crisis emerges. We expect Global Bond investors will 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 increased 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.

Global Bonds remain stretched with inverted yield curves, negative real yields (inflation > bond yield) so investors will likely struggle with greater interest rate and currency volatility. *The Three Bears* have returned home to discover massive fiscal, monetary, and financial imbalances due to market manipulation for an extended period, so effective monetary policy tools are currently compromised. Misguided executive orders and agency policies have undermined U.S. potential growth, U.S. competitiveness, profit margins, and productivity, as inflation expectations ratcheted higher. Increased financial and economic instability, in part a consequence of new radical policies derived from collectivist/socialist ideology, have undermined individual rights of freedom, liberty, property (inc., pursuit of happiness), equal opportunity (vs. social justice equity), and Capitalism (see: *A Defense of Free Market Capitalism*) rooted in our nation's founding principles over 245 years ago.

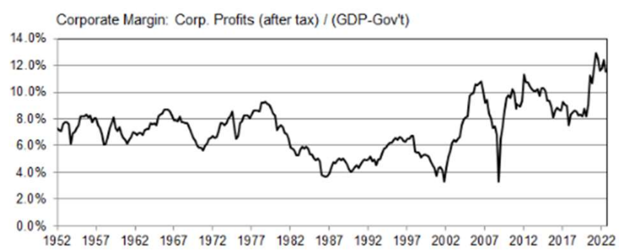
So, Value Shrugged (finally)

US equity valuation (Earnings Yield = E/P – interest rate) hasn't improved much after an -18% return of the S&P 500 index in 2022 as interest rates jumped almost 4.4% and earnings growth was disappointing. With declining productivity (slower growth) with higher inflation expectations, we expect greater downside risk to the US and global equity markets in the near-term.

Total Return	3-mon	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr	30-Yr
S&P 500 Index	7.6	-18.1	7.7	9.4	11.7	9.8	9.6
NASDAQ Composite	0.1	-31.7	6.0	9.4	14.0	12.6	12.0
Russell 2000	6.2	-20.4	3.1	4.1	8.6	9.4	8.9
Russell Value-Growth	10.0	21.6	-1.8	-4.3	-4.5	-2.4	-0.3
Non-US (World xUS)	16.3	-13.8	1.8	2.3	4.1	6.6	5.5
Emerging Markets	9.8	-19.7	-2.3	-1.0	1.4	9.1	6.3
Small-cap Global	9.4	-19.6	3.2	3.9	7.5		
US 10-Year Treasury	0.3	-17.0	-3.0	-6.1	0.6	3.1	4.5
US Aggregate Bonds	-1.9	-13.0	-2.7	0.0	0.9	3.1	4.5
BAML High Yield Bonds	4.0	-11.2	-0.5	2.1	3.9	7.3	6.7
Short-term Bonds	1.2	-5.5	-0.7	0.8	0.7	2.0	3.3
JPM Non-US Bonds	6.8	-18.3	-6.5	-3.3	-2.7	2.3	3.2
Cash (US T-Bills)	0.9	1.8	0.8	1.2	0.7	1.2	2.2
US Dollar (TWI)	-4.7	6.4	2.1	2.0	3.5	0.0	0.7
CRB Commodity Index	4.6	22.0	15.3	8.9	-0.7	3.2	5.1
WTI Oil (US$)	0.4	6.7	9.5	5.8	-1.4	4.9	4.4
Gold (US$)	8.3	-0.6	6.0	6.8	0.6	8.6	5.4
Bitcoin	-14.5	-64.1	32.3	3.0	108.9		

Source: Strategic Frontier Management & Refinitiv Datastream

Even if earnings growth were higher than normal, we expect a lower equilibrium S&P 500 P/E of just 15x vs. 18-20x equilibrium observed over the last 20 years. Since 2020 (global pandemic), we've averaged 23x—even after the correction in 2022, we think there is further to go. To move the S&P500 equilibrium P/E toward 15x would require a significant further correction in equities, if not earnings growth well in excess of 10%/year. Finally, with lower potential growth and higher inflation expectations, declining S&P 500 profit margins (5-6% vs. 9-12% observed more recently) as normal long-term earnings growth converges toward a lower level of 5% with loss of national competitiveness and productivity, as we've discussed. We should expect much greater market volatility than we've grown accustom to observing, including equity indices, bond returns, interest rates, currencies, and commodities, including energy and gold prices. This will coincide with greater economic volatility, including growth and inflation rates.



Source: U.S. Government

Observing earnings growth and profit margins have been key indicators driving our global tactical asset allocation for three decades. Economic growth translates revenue into earnings growth through profit margins. It is this multi-step translation that investors must appreciate in their investment process. Today equity investors seem fixated on economic growth, but overlook effects of currency translation and declining operating margins. S&P 500 earnings growth of 49% (unsustainable margin—in part due to tight labor conditions) in 2021 bolstered investor sentiment, but more realistic future earnings growth of 5-8% won't be enough to correct extended valuations. We expect just 1.8% earnings growth in 2023. If the US economy slows and profit margins decline, US earnings growth would be very limited.

Operating Earnings	2025e	2024e	2023e	2022	2021	2020	2019	2018
IBES Consensus	5.0%	10.5%	4.3%	5.6%	49.0%	-13.8%	0.1%	22.7%
SFM Growth	6.4%	5.4%	1.8%	5.2%				
SFM S&P500 Target	4600	4250	4000	3840	4766	3756	3231	2507
Index Return (no Div)	8.2%	6.3%	4.2%	-19.4%	26.9%	16.3%	28.9%	-6.2%
Dividend Yield	1.77	1.82	1.75	1.75	1.29	1.48	1.85	2.21
S&P 500 @18x SFM TE	4500	4230	4014	3942	3746	2515	2919	2915
SFM S&P 500 P/F12	15.4	15.2	14.3	17.2	21.8	18.0	23.1	15.5

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

Higher bond yields, interest rate volatility, and persistent inflation should drive greater equity market volatility and earnings uncertainty after years growing accustom to exceptionally low capital market and economic volatility. Years ago, we introduced the idea of volatility-of-volatility (risk) for broad equity market indices like the S&P 500 index, which otherwise should average 15-17% (std. dev.) versus <10% observed on average during 5 years or so prior to the Global Pandemic.

The Fed has begun tightening monetary conditions (hiking interest rates, reducing balance sheet holdings), but there still has been little adverse impact on employment. This means the Federal Reserve still has room to hike rates further, appreciating normal lagged effects in policy changes. In Q4/2021, we were growing increasingly concerned that US companies would struggle to grow into their euphoric valuations, particularly if interest rates rose and earnings disappointed. The equilibrium earnings multiple should adjust lower with higher inflation, higher interest rates, and greater volatility in stocks and bonds. At some point in 2021, we think investors capitulated and *Value Shrugged*—whether the pivot in investor preferences can be sustained to restore normal risk premium may take some time to be revealed, but momentum chasers may reinforce restoring a more normal relationship favoring critical disciplined analytical research over feel-good trend following and momentum trading.

The Prudent Investor Standard since 1830 compelled a fiduciary to only invest in securities that a reasonable person in a similar capacity under similar circumstances would purchase—evaluated from the perspectives of probable income (i.e., net total return) and probable safety (i.e., investment risk) under legal precedent in Harvard College v. Amory, 26 Mass. 446. This fiduciary standard guided investment managers for 190 years, and was the basis upon which ERISA was enacted.

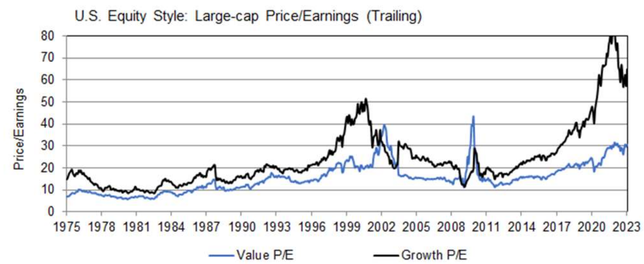
In December 2020, the Department of Labor clarified ERISA's fiduciary duties of prudence and loyalty and exercising shareholder rights in *Financial Factors in Selecting Plan Investments* with respect to investment guidelines, and retirement plan objectives, including proxy voting guidelines. This rule clarified that seeking to incorporate non-pecuniary (non-monetary/financial) factors, such as social justice, stakeholder values, sustainability, or ESG (Environmental, Social, and Governance) into any investment strategy for ERISA (retirement) plans required analysis supporting its value or benefit to investors over any reasonable horizon: This would include supporting analysis of security selection strategies, portfolio characteristics, constraints, or other objective guidelines providing positive risk-adjusted return or shareholder value.

In November 2022, the DoL superseded its 2020 ERISA rule that required a fiduciary to make investment decisions "based only on pecuniary factors" defined to be any factor "a fiduciary prudently determines is expected to have a material effect on the risk and/or return of an investment". The new fiduciary rule was changed to: make investment decisions "based on factors that the fiduciary reasonably determines are relevant to a risk and return analysis."—so, "prudently" was changed to "reasonably," and "material" to "relevant", striking the context of pecuniary factors. The final rule really didn't change the context of ERISA's fiduciary rule—despite headlines to the contrary. The change failed to reverse the basic underlying premise that a prudent fiduciary should only make investment decisions based on maximizing expected risk-adjusted investor returns. This is not to say that other factors or objectives can't add investor value (over a chosen horizon), but that a supportive fundamental or quantitative analysis still should be provided and updated regularly, as also generally required of Investment Policy Statements.

Contrary to headlines, final changes in the 2022 version of the fiduciary rule—*Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights*--were not substantively different than the 2020 rule, and failed to provide much safe harbor for non-pecuniary factor preferences as presumed. A fiduciary still cannot subordinate plan participants or beneficiaries, specifically sacrifice investment return or increase investment risk to promote non-financial benefits, objectives, or goals. The DoL's 2020 rule was targeted because the "objective analysis" requirement was (and continues to be...) a difficult hurdle for ESG objectives, while at the same time ESG and sustainability disclosure regulations are tightening over concerns about assessment reliability, consistency, subjectivity, and effectiveness of ratings quality and value—wide variance and seeking competitive differences in subjective ESG scoring is problematic, whereas in contrast standardized non-subjective credit ratings are 98-99% correlated.

Despite innumerable studies seeking linkages between environmental and socially responsible factors, there is no measurable evidence of financial value added or systematic alpha—indeed, any reduced opportunity of narrowing or constraining an investment universe can limit maximizing long-term risk-adjusted return, particularly for active management. We suspect that the most effective long-term quantitative financial performance measurement analyzing ESG and sustainable factors may need to be derived from earnings growth, rather than simple investment returns.

Money flows into ESG strategies and funds over the last 3-5 years appear to be self-fulfilling, reinforcing speculative P/E divergence with capitulation to momentum of glamorous growth (ex: social media and other communication services with high ESG scores) from 2017-2021, but in 2022 the flows slowed and valuation capitulation seems to have flipped as *Value Shrugged*, resulting in a dramatic reversal in Value vs. Growth performance, similar to what we observed in 1998-2002. We're being told that capitalism needs to be fixed or at least more responsible, including focusing more on "environmental" and "social justice" concerns, as well as more accountable to external "stakeholders." These efforts to "reform" capitalism may well be what undermines accountability to shareholders, which actually best hold management accountable. There is no evidence suggesting ESG-favored companies create more value in earnings growth or enterprise value—instead seem to be increasing only speculative flows, that only stretched valuations near-term, but eventually must be reconciled (in other words, ***not*** sustainable).



Source: Refinitiv and Strategic Frontier Management

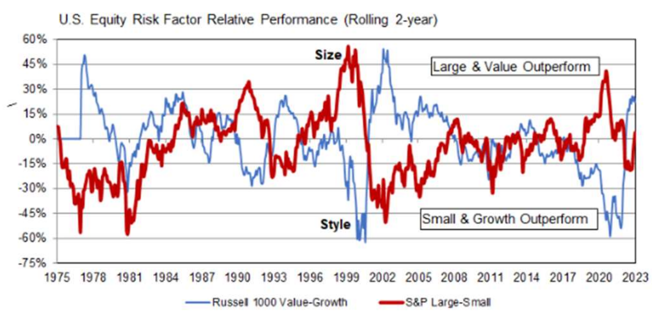
ESG ratings providers still struggle to offer robust statistical evidence supporting claims about excess return of their particular factors, particularly out-of-sample. This is the same old challenge of *quantitative factor tilt investing*[1]. Most ESG scoring or rating systems have not been around long, nor really been tested out-of-sample over a couple cycles. ESG ratings face criticism for innumerable faults as investors have been burned time and again by the enumerated risks they pay a premium to avoid. The longest running provider MSCI began to publish ESG ratings in 2010, but they recently announced a significant methodology change to address rating inflation, in part due to behavioral greenwashing or social-washing, but now the historical consistent track record is broken and begins anew. More broadly, a 2022 study by Capital Group found that lack of ESG ratings consistency between providers seems to be the No. 1 challenge for institutional clients implementing ESG strategies and companies seeking to meet standards contrary to their shareholders' and even many (often conflicting) stakeholders' interests.

We'd be hard pressed to suggest such ratings were scrutinized much before 2015, when sustainably-targeted AUM finally crossed over $50 billion. Evolution and regulatory change is afoot. Yet, is it surprising that the largest passive index fund and ETF-oriented asset managers (BlackRock-iShares, State Street Global-

[1] Harvey, Campbell R. & Liu, Yan, *A Census of the Factor Zoo* (Rev. 10/16/2020) http://dx.doi.org/10.2139/ssrn.3341728 document over 400 factors published in top journals. Surely, many of them are false. We explore the incentives that lead to factor mining and explore reasons why many published factors are simply lucky findings, which usually disappoint in trading experience. Surely, efforts to data mine another species of ESG factors in the Zoo must suffer similar fate if heroic previous efforts would have stumbled upon such value-or-enterprise enriching factors before now.

SPDRs, Vanguard, etc.) all leaned into ESG objectives with premium expense ratios (management fees) versus common indices, as fund expense ratios collapsed toward 0%? Similarly, index providers (MSCI, S&P, LSEG/FTSE Russell, etc.) also sought greener pastures to expand stale product line-ups, as new ideas for once-innovative factor investing indices became scarce. Even proxy-voting firm ISS has jumped on board, of course, offering new services—ISS's ESG APIs and datasets can range upward from $10,000/year.

We expect further outperformance of value vs. growth and continue to favor US small-cap vs. large-cap stocks. Increased market volatility should provide a more conducive environment for active management from security selection and sector rotation to global tactical asset allocation and currency management. Greater market volatility also tends to increase importance of relative valuation (credit spreads, industries or sectors, etc.) within asset classes, but also reset valuation equilibriums for equity and bond indices.



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, although we expect growth at the U.S. sector level will be as varied as it is between countries. We expect further outperformance of value vs. growth, and continue to favor small-cap equities. 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. Yet, our tactical forecast for US equities is the most constructive we've observed since Fall 2021. Dramatic volatility during 2022 in declining stock and bond markets has wrecked retirement savings with the S&P 500: -18%, Non-US equities: -14%, Emerging Markets: -20%, and US Treasuries: -17%, as bond yields have more than doubled.

Our US bond return forecast suggest further downside risk for bond returns. Global yield curve inversions are peculiar given current economic conditions, even as global bond valuations versus inflation remain stretched. We expect yield curves will steepen and capital market volatility to generally increase with greater economic, currency, and interest rate volatility. 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.

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. 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, and global bonds are still overvalued. We have suggested cash can be the best liquid alternative asset class, but at lower cost and increased transparency than hedge funds. Active management also can be a constructive alternative investment, providing greater diversification while enhancing return. 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.

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. Given negative returns to equities and bonds last year, and a simple balanced 60/40 portfolio of S&P500 and US 10y Treasuries returned -17.7%. This has recked havoc on retirement plans, but it is wrong to think that the balanced portfolio standard is antiquated, broken, no longer useful, or needs a major revision. 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 inversion.

We believe debate over the ***Death of 60/40*** (equity/bond) is mistaken once again, if not *grossly misguided.* For each obituary written over the last decade or two, systematically rebalancing to a balanced 60/40 has been an incredibly difficult benchmark to beat. Moreover, we have never precluded diversification within broad equity or fixed income allocations--for example, incorporating non-US, equity styles (value vs. growth, large vs. small, etc.), credit (high yield, asset-backed, leveraged loan, etc.), or varying maturity, particularly on a tactical basis.

Our proprietary strategic asset allocation frontier always included less risky short-term bonds as a dedicated asset class, which exceeded US Aggregate Bond allocations in more conservative portfolios, rather than unpalatable cash allocations exceeding 5% or so. Under recent conditions, this has proved shrewd and pragmatic given our expectations for still further rate hikes and generally rising equilibrium inflation expectations. We suggest cash is a better liquid and low-cost alternative investment yielding over 4% and may yield up to 5% before year-end. Further declines in equity and bond market returns still can't justify increasing allocations to high-cost private market or alternative funds, let alone re-engineering long-term strategic policy asset allocations that have worked well for generations.

Attempts to recast or re-engineer the basic *strategic frontier* has been debated for decades, but inconsistent with *Strategic Frontier Management's* founding methods and investment philosophy. Yet, every time capital markets stumble, it seems many opportunistically seek to discredit enduring strategic allocations based on asset class volatility, simply confuses strategic vs. tactical asset allocation investment horizons. Balanced 60/40 strategic asset allocations may need some tactical tuning (i.e., shorter fixed income maturity or cash, limiting Emerging Market equity, or expensive private market and illiquid alternatives), but pension funds, endowments still struggle to keep up with the classic 60/40 balanced strategy, even as significant commitments to private markets have lagged public market equivalents net of fees and associated expenses.

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.

Economic Outlook

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

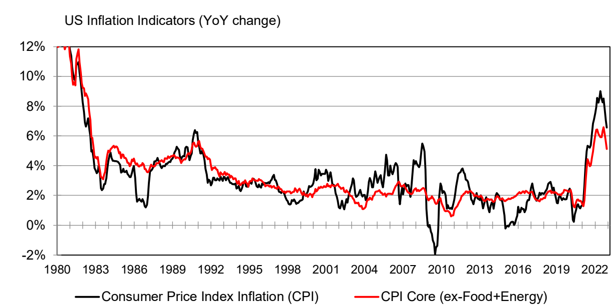
Source: Strategic Frontier Management

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.

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

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. Higher commodity prices will wash out, but inflation expectations evolve more slowly. Excessive growth in money supply, nor excessive fiscal spending seemed to have much, if any, effect on economic growth, but can result in excessive hangover. 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.

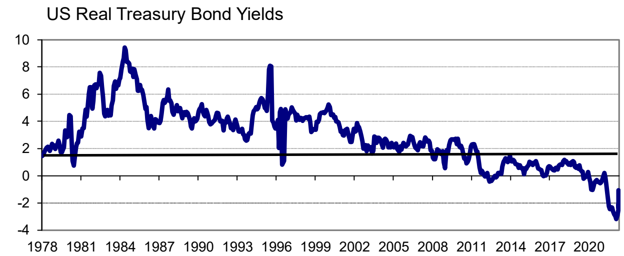
CPI inflation should ease toward 4-5%, but we highlight a critical paradigm shift regarding the effect of waning disinflationary forces of globalization to maturing productive effects of the *Fourth Industrial Revolution*. Transportation, energy, and labor input costs increased for imports, despite a strong US$ (cheaper imports, but less competitive exports). Moderating disinflationary forces supporting productivity, as rising cost of housing, energy, food, and labor with greater regulation and higher tax rates sustain higher inflation. We expect at least 3% average CPI inflation to extend over the long run.

The era of high innovation and creativity driving global disinflation has been waning as the *Fourth Industrial Revolution* and globalization have matured. 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.

Emerging Market urbanization, industrialization, irrepressible demand, emerging credit, and irrepressible demand were key themes implying greater global growth, yet limited import price inflation. 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.

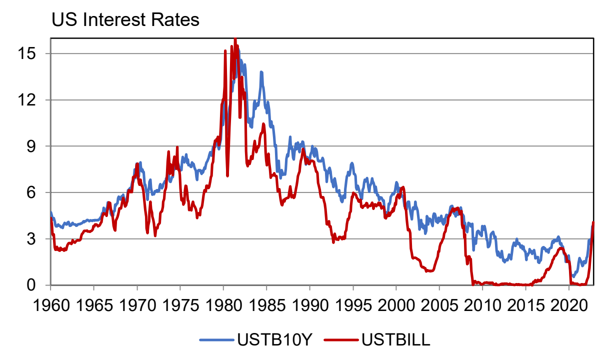
Nagging Explicit Moral Hazard + Bond Manipulation

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. Average inflation has fallen gradually after peaking cyclically in 1982, and cognitive bias has become etched into underestimating bond risk, catching investors off guard with seeming regime change of higher average inflation (CPI: 3.0%) and interest rates (3.5%). So, the yield curve must steepen with greater interest rate risk and economic volatility. Real interest rates must be positive across the yield curve with the yield curve slope exceeding 1.5% (10Ts – 3m T-Bills). 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 has induced *explicit moral hazard* for financial decisions of investors, businesses, and households. Global bond market manipulation over an extended period resulted in flatter/inverted yield curves, thereby increasing financial imbalances.



Source: Refinitiv DataStream

We've been critical of the Fed's evolved long-run forecasts for PCE inflation (2.0%), interest rates (2.5%), and unemployment (4.0%), which are far 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), as 10-year Treasury yields 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 believes *PCE* inflation will revert to their *implicit* 2% inflation target, but this seems to be a misguided forecast.

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

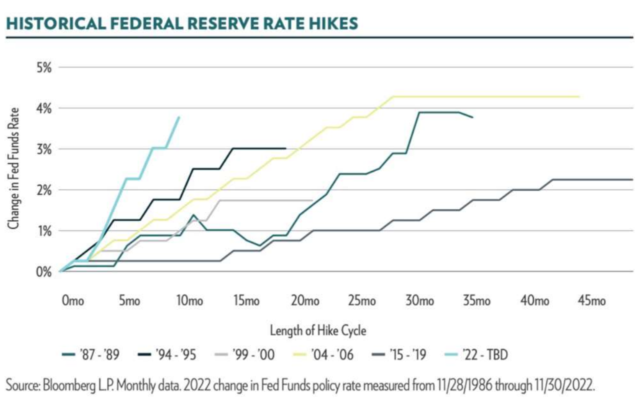
Interest Rates	2019	2020	2021e	2022e	2023e	2024e	2025e	Longer Run
FOMC Avg.	1.63%	0.13%	0.13%	4.26%	4.59%	3.76%	3.01%	2.47%
SFM[1]	1.75%	0.25%	0.25%	4.50%	5.00%	4.50%	3.50%	3.50%
Rate Change	0.00%	-1.50%	0.00%	4.25%	0.50%	-0.50%	-1.00%	

1. Top-end of indicated Fed Funds range

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

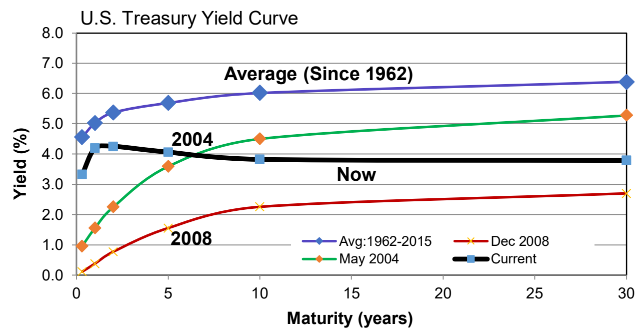
The Federal Reserve's dual mandate is to maximize the economy's long-run potential real growth—*fostering economic conditions that achieve both price stability and maximum sustainable employment.* We believe the emerging economic regime will be more similar to historical cycles with CPI inflation averaging 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.

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. Thus, US (10y) Treasuries could exceed 5.5-6.0% in 2023, dragging other global government bond yields much higher. Yield curves need to steepen significantly globally, and can't remain inverted, particularly the US yield curve, even if there is a shallow economic or earnings recession in 2023, as we expect.



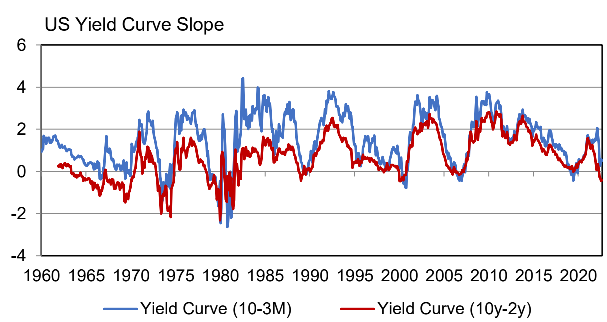
Monetary stimulus pulled forward consumption with lower financing costs, but sacrifices future economic growth potential. This is problematic once necessary to reverse QE. Consider economic effects of the volatility in money supply growth charted above and now the dip below 0%. Extending QE in 2020 for a fourth time more than doubled Federal Reserve holdings to $8.9 trillion. This will require years of low—if not negative—money growth to normalize around $2 trillion. Eurozone central banks are similarly situated (€8.7 trillion). Overreliance on unconventional monetary policy stimulus increased global financial imbalances. Interest rates and QE holdings must eventually normalize, but in the meantime central banks have few policy tools to address a future crisis. Low interest rates also encourage leverage, but time and again risk management failures surprise us.

Global bond yield curves should steepen, or at least be positive during times of inflation uncertainty or anticipating rate increases. Thus, we recommend favoring shorter-term fixed income and cash, even as more prudent "liquid-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, certainly not a flat or inverted yield curve.



Source: Refinitiv DataStream & Strategic Frontier Management

A flat yield or inverted 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.



Source: Refinitiv DataStream & Strategic Frontier Management

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. Such a decline in the Federal Reserve's holdings must put upward force on the yield curve to be even steeper than normal!

Declining value of leveraged and long maturity bond portfolios are going to be a particular challenge. Cash or short-term and floating rate bonds are better cheap *alternative investment* for the intermediate term.

Fiscal and Monetary Hangover Persists

Last year (*Bear In Mind*, Q4/2022), we expected that a US fiscal and monetary stimulus hangover would coinciding with a debilitating decline in US potential growth, collapse in productivity, and higher inflation expectations. It is reminiscent of 1977-1981, and the risk as before is pulling back (i.e., interest rate cuts) before inflation expectations decline. Misguided US fiscal and regulatory policies have undermined global competitiveness, potential growth, and profit margins, as well as increased inflation expectations, which resulted in lower secular earnings growth—we think 10-12% profit margins are sure to decline to 6-8 under the current regime, while economic growth stalls. This is the perfect recipe for much lower average earnings growth.

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. This only exacerbated the explicit moral hazard we have cautioned about. Rising global bond yields will further increase fiscal deficits, as bonds are refinanced at higher interest rates, further squeezing the US discretionary budget. Rising bond 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. It makes no sense for the yield curve to be inverted—we expect normalizing will expose more systemic problems in pension funds (inc. LDI, risk parity), as well as insurance and banking sectors overloaded with long maturity bonds.

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 duration/long maturity or leveraged bond portfolios, particularly with normalizing 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. Continuing hikes in interest rates and expected steeping yield curves should cause further stock and bond declines into 2023.

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.

Earnings Recession of Increasing Risk

We remain concerned that secular earnings growth and exceptional profit margins are now declining. Thus, the risk of an earnings recession is increasing with higher interest rates (cost of capital) and persistent inflationary forces, even if the rate of inflation moderates toward 4%.

The understanding of how *Economic growth* translates *revenue* into *earnings* growth through *profit margins* are a core principle driving our global tactical equity return forecasts for three decades (Global Tactical Asset Allocation discipline est. mid-1990). Investors often fail to fully appreciate this financial dynamic in their investment process—today equity investors seem more fixated on inflation and economic growth, but often assume stability of productivity and profit margins, yet also unaware of effects due to volatility of: currencies, interest rates, commodity prices, and labor costs, let alone speculative adjustment to real rates or valuations.

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

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.

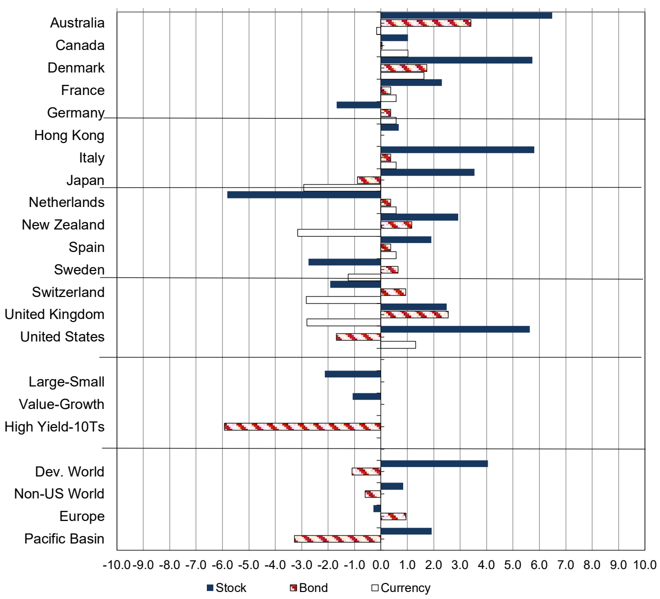
Our global tactical equity model forecasts deteriorated last year as index prises rose to new highs, but even as equity markets declined this year, there hasn't been much improvement in valuations as interest rates rose. Further recovery in earnings will struggle if high inflation continues to undermine 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	Jan 2023	Equity	Bond	**Stock**	**Bond**	Currency
100%	100%	World	3.6	-0.5	**3.1**	**-1.3**	-0.6
20%	34%	Europe	-2.1	-0.6	**-4.0**	**-3.2**	-2.2
10%	19%	Pacific Basin	0.9	-0.4	**0.6**	**-1.1**	-0.3
35%	55%	Non-US World	-0.9	-0.5	**-2.5**	**-2.0**	-1.6
65%	45%	US	6.0	-0.4	**6.0**	**-0.4**	
		Cash		1.2		**1.2**	

	Lg-Sm	Va-Gr	High Yield - 10yT
US Style	-3.4%	-1.4%	-3.4%
	Small -	*Growth*	*10yTs*

Tactical 3-Month Return Forecasts %



Source: Strategic Frontier Management, January 2023

We remain concerned about further downside risk for US bonds, and to a lesser extent US equities as valuations marginally improved. The key question is our outlook for US equity earnings. We still favor small-cap and value-oriented equity tilts. 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.

Globally, we expect yield curves to steepen and greater economic volatility. This will tend to increase importance of relative valuation at the asset class level normalizing earnings yields and real interest rates. 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.

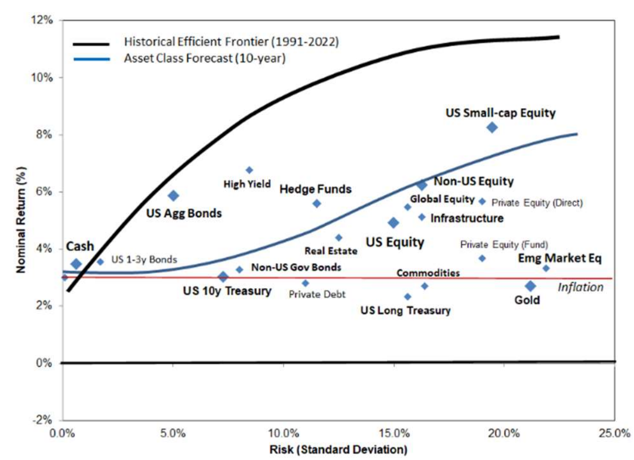
Short-term bond funds with higher credit exposure enjoy higher yield without much interest rate risk, particularly as credit spreads widened. We remain overweight cash, which is the only true safe haven for investors—not gold or bitcoin, and certainly not commodities. These speculative securities are neither a store of value, nor do provide for costless liquid exchange like currencies with the benefit of a *fixed income* yield.

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. 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.

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.

10-year Asset Class Return and Risk Forecast



Source: Strategic Frontier Management, January 2023

Retirement savings and dismal pension funding will suffer if equities and bonds lag inflation, as we expect. Average US CPI inflation of 3% is more likely now that higher inflation expectations were unleashed. This should *increase fixed income volatility, including private debt.* We believe cash or short-term and floating rate bonds are better cheap *alternative investments* on a risk adjusted basis than nearly any other public or private market.

We also 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. 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 Q1/2021 was *withering of Emerging Market comparative advantages.* Russia, China, and Brazil are among the largest market capitalizations in Emerging Market indices, but we also believe Socialist countries are now in economic decline, losing comparative advantages by limiting free market competition, while being overly reliance on cheap labor, lax regulation, and/or abundant commodities.

China has increased its dominant market share of cheaper and strategic exported basic materials (i.e., aluminum, steel, chemicals, etc.), consumer goods, electronic components, pharmaceuticals, and parts. They have excelled at labor intensive goods and basic resources, focusing on nationally strategic items to importing countries at lower cost—this has driven global disinflation, as well. However, we expect China's comparative advantages are sunsetting, and will be increasingly difficult to maintain with increased automation and desire of developed countries to become less reliant on China for strategic basic resources, parts, and components—higher energy costs will hurt too. We must not cede our energy production advantages (inc. natural gas and oil) to China just as we re-shore our strategic needs in basic resources, higher value goods, innovation, transportation, and services.

We concluded long ago commodities, gold, and particularly cryptocurrencies are imprudent strategic asset allocations given low return with high volatility—we've noted input costs can't exceed output costs, thus commodity returns can't exceed inflation for any longer horizon. Cryptocurrencies have 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 currencies with lower volatility yielding income on deposits. Higher interest rates increased the hurdle for cryptocurrencies (and commodities) 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, certainly not the SEC, OCC, Federal Reserve, or US Treasury.

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Fundamental Reversion to Regular Order

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.

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.