

Inflation: A Supply *Phenomenon*



Photo: Andy Li on Unsplash

Constrained Supply. The global economy is reopening, with the U.S. leading the way with its vaccine roll-out. While the Delta variant of COVID-19 gives pause, vaccination rates, prior exposure, and focused mediation methods will limit the impact. The challenge for financial markets is that unprecedented monetary and fiscal stimulus delivered high valuations in most asset classes, while supply demand imbalance delivers higher inflation. The *latter is temporary*, while the former more enduring. The catalyst for a valuation reversal is uncertain and fighting the momentum from the wave of monetary stimulus takes

unparalleled resolve. As long as credit remains accessible and innovative technologies deliver compelling narratives, investors face the same burden: exiting before the momentum reverses. In this environment, timing is everything. Now is the moment for active investing to add value.

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Price increases as supply and demand rebalance are temporary distortions of a rebooting economy. Valuations across all asset classes are the greater risk.

Fixed income offers less value than equities, while the commodity bubble will dissipate. Allocation is critical to managing risk.

- Jason Prole

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Highlights

- **Momentum** may overcome high equity valuations in the U.S.
- **Value** and the **Developed ex-US Markets** offer the best reward-to-risk.
- **Interest rates** deliver negative real rates and further losses as rates rise.
- **Credit spreads** offer little reward for their risk.
- **Copper's** ascent is likely over as supply rebalances with demand.
- **U.S. Dollar** strength will continue as higher rates entice investors.

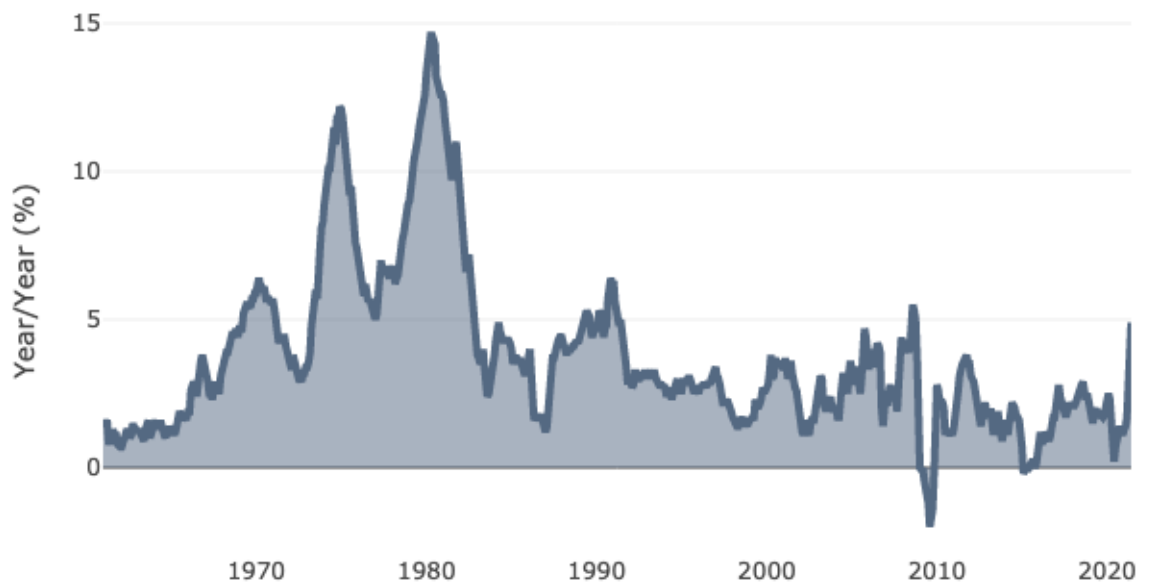
The Macro View

Data Artifacts. The collapse of the global economy in 2020 from the Pandemic was unprecedented in its speed and depth. Demand dried up overnight as quarantines spread across the globe and supply left without a partner. Prices thus dropped and continued through May as the economy remained shuttered. This result is a hallmark of supply-demand analysis in every economist class and was not a surprise. The surprise was that prices did not *fall further*.

The annual change in consumer prices only slowed to a 0.2 percent *increase* in March 2020 (Exhibit 1). It is extraordinary that price levels did not decline on an annual basis in a world without demand. Prices are now accelerating as renewed demand meets constrained supply, with the yearly change jumping to 4.9 percent. Businesses of all stripes voice their concerns of inflation gone wild. The reality is a much tamer beast.

Both results are a function of the composition of consumer prices and the unbendable structure of the underlying data. These data artifacts enable a clearer understanding of future price levels. Critically, *persistent* price increases require a *persistent* supply-demand imbalance, which does not appear the case.

Exhibit 1. U.S. Consumer Price Inflation Year/Year Change (%)



Source: U.S. Bureau of Labor Statistics, retrieved from FRED. CRM Calculations.

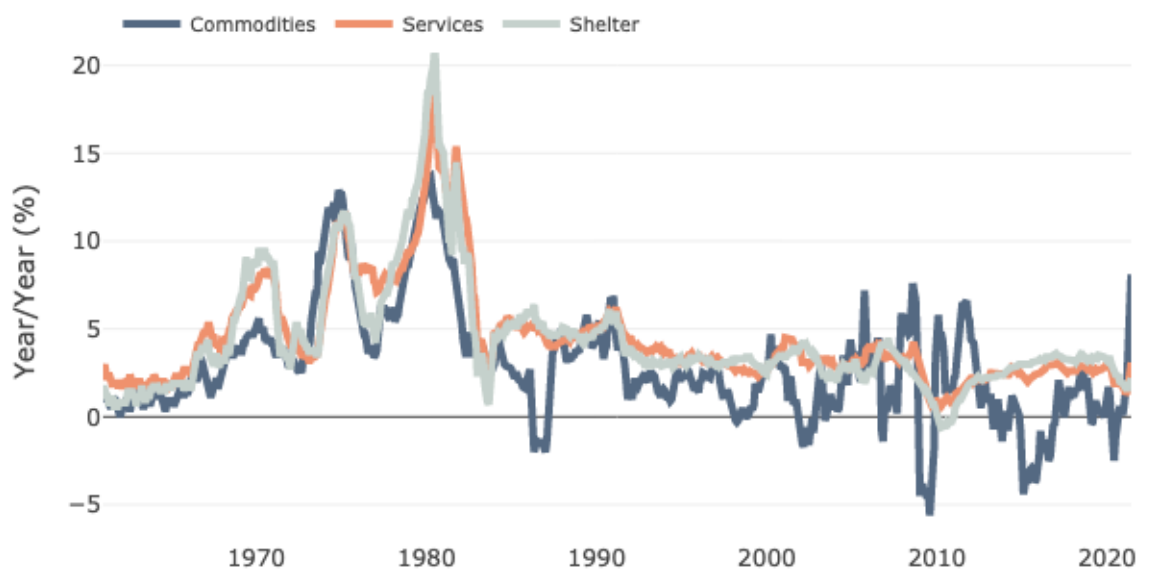
Inflation is near 30-year highs.

The Macro View

Variable Prices. Consumer price levels have three major categories: commodities, services, and shelter. Each has different market dynamics, price discovery processes, and varying price volatility (Exhibit 2). Over the last forty years, the prices of services and shelter are stable while commodity prices meander significantly. These data points are a function of the degree of market competitiveness. The freer the market, the more likely prices will vary as supply and demand conspire to set prices.

Commodities are widely traded in financial markets and supported with robust futures and options markets as a further avenue for price discovery. In contrast, the market for services is opaque, illiquid, and has a supply-demand imbalance (many workers, few employers). Service prices are lower because employers enjoy buyer power. Housing is a similar market that enjoys illiquidity, infrequent trading, complex pricing, and high transaction costs. Thus, the volatile commodity component drives fluctuations in the general level of consumer prices. This insight is critical to understanding *future inflation pressure*.

Exhibit 2. U.S. Consumer Price Index Major Components Year/Year Change (%)



Source: U.S. Bureau of Labor Statistics, retrieved from FRED. CRM Calculations.

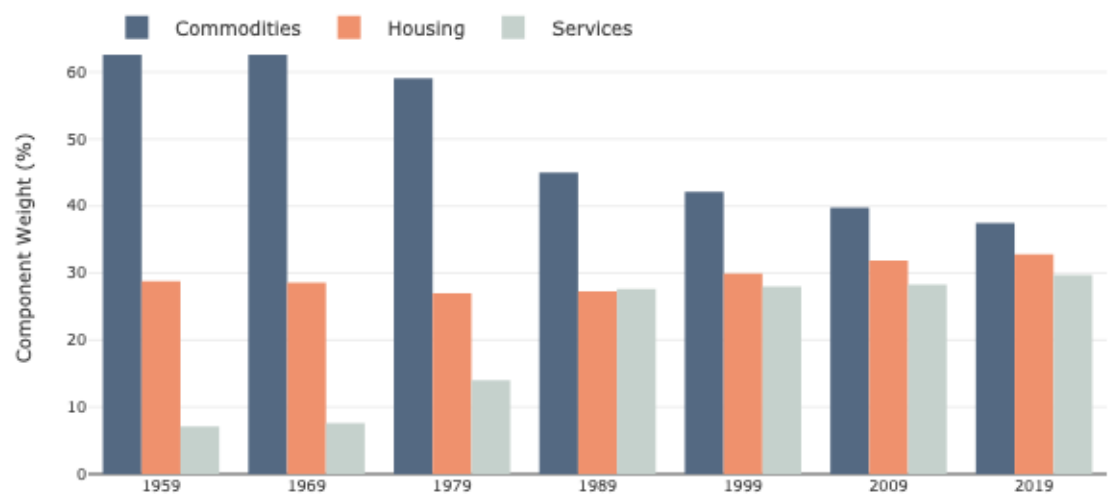
**Commodities
drive the
current
inflation.**

The Macro View

A Matter of Composition. While the volatility of the components is a material contributor to overall price levels, weights also matter. Since the 1950s, commodities weights declined from over 60 percent of the basket to less than 40 percent today (Exhibit 3). The overall price level fluctuations no longer reflect the volatile commodity component, but the more benign service and shelter components. In the last four decades, the only material volatility in services and shelter was during the Great Recession of 2008, when a *housing market collapse drove an employment collapse*. This lower price volatility is primarily a function of the changing weights in the consumer basket.

The weight of services has gained at the expense of commodities. From a supply-demand standpoint, the price weighting moved from a more competitive market (i.e., commodities) to a less competitive market (i.e., services). Since services are a buyer's market (e.g., bargaining power resides with the employer because there are dramatically more employees than employers), the ability for employees to demand higher wages as their costs increase is lower. The result is reduced price volatility.

Exhibit 3. U.S. Consumer Price Index Major Component Weights 1959-2019



Source: U.S. Bureau of Labor Statistics, retrieved from FRED. CRM Calculations.

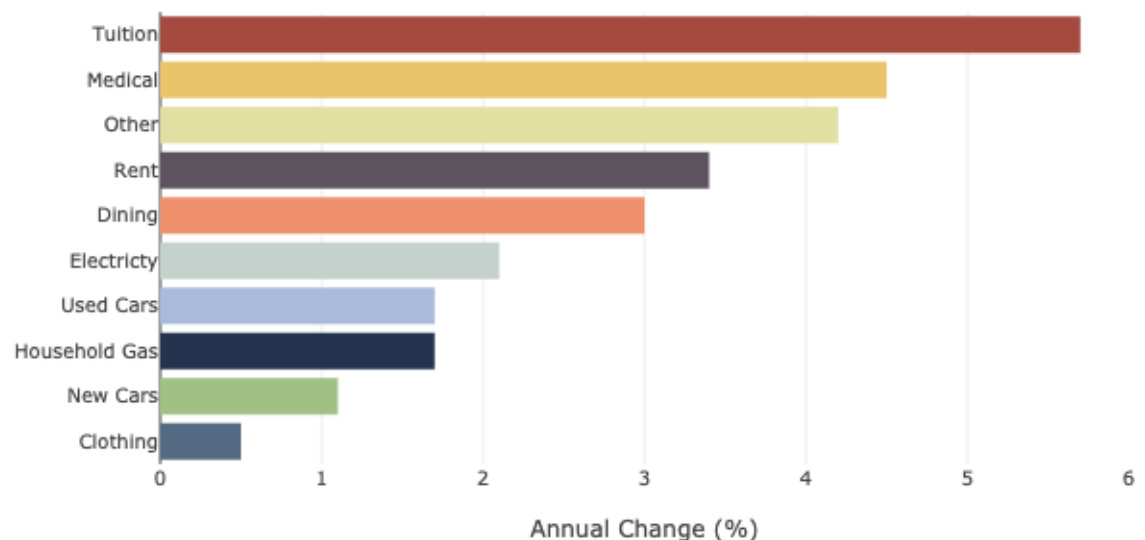
Commodities weights are falling.

The Macro View

Buying Discretion. A consumer price index reflects what people purchase *on average*. While the basket is stable throughout the year, it can change materially during the year as market prices alter consumer behavior, particularly volatile commodities. A material aspect of this behavior change is the *substitution effect*. This behavior occurs when a consumer replaces a high price good (e.g., beef) with a lower priced good (e.g., chicken). The critical element is the consumer's ability to *exercise discretion* to minimize the impact of higher-priced goods.

Buyers are sometimes *price takers* for goods or services and cannot substitute these items. Two of the leading price increases over the four decades come from this category, health care and tuition (Exhibit 4). In contrast, goods with significant import components (e.g., news cars and clothing) saw price increases below the headline level because buyers exercise choice in these markets. As housing and services increasingly dominate the consumer basket, the price impact of the commodities becomes less severe. The trouble with this outcome is that consumers have a higher non-discretionary basket, *limiting their ability to adjust their buying habits*. Thus, sustained changes in wages or housing costs are the critical drivers of future inflation.

Exhibit 4. U.S. Consumer Price Index Subcomponent Change (% Annual) since 1982



Source: U.S. Bureau of Labor Statistics, retrieved from FRED. CRM Calculations. Selected subcomponents of U.S. Consumer Price Index All-Urban Consumers.

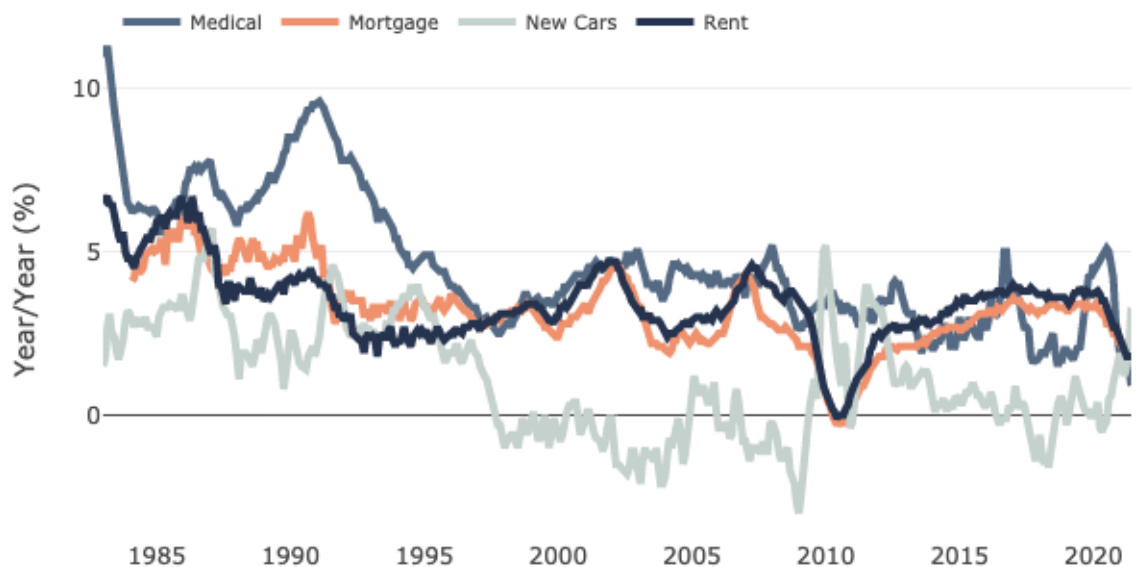
Service price increases lead.

The Macro View

Servicing Housing. In the U.S., housing prices increase are everywhere. Constrained supply and heightened demand are a potent mix to create higher prices. The constrained supply is a function of fewer people moving during a pandemic. At the same time, demand has jumped as financing costs fall. The trouble? A lower finance cost with a higher price delivers an overall *cost* that is essentially *unchanged*, which housing costs and rent prices reflect (Exhibit 5). The reality is that the housing component of inflation is *increasing at a four-decade low*. The supply-demand balance risk is that lifting of moratoriums on evictions and foreclosures could cause a supply shock that *lowers prices*.

For services, medical cost changes reached a peak during the initial stages of the Pandemic yet are now also near four-decade lows. As the Pandemic fades, demand and prices should also recede. While new car prices accelerated recently, they are a function of constrained supply that will reverse as manufacturing restarts. In total, these components account for 45% of the consumer price basket, and the future supply-demand plausibly suggests *weaker prices*. Inflation hawks have commodities as the driving factor, a component that the *consumer's choice can mitigate*. Doves need not cry.

Exhibit 5. U.S. Consumer Price Index Subcomponent Change (% Annual) since 1982



Source: U.S. Bureau of Labor Statistics, retrieved from FRED. CRM Calculations. Selected subcomponents of U.S. Consumer Price Index All-Urban Consumers.

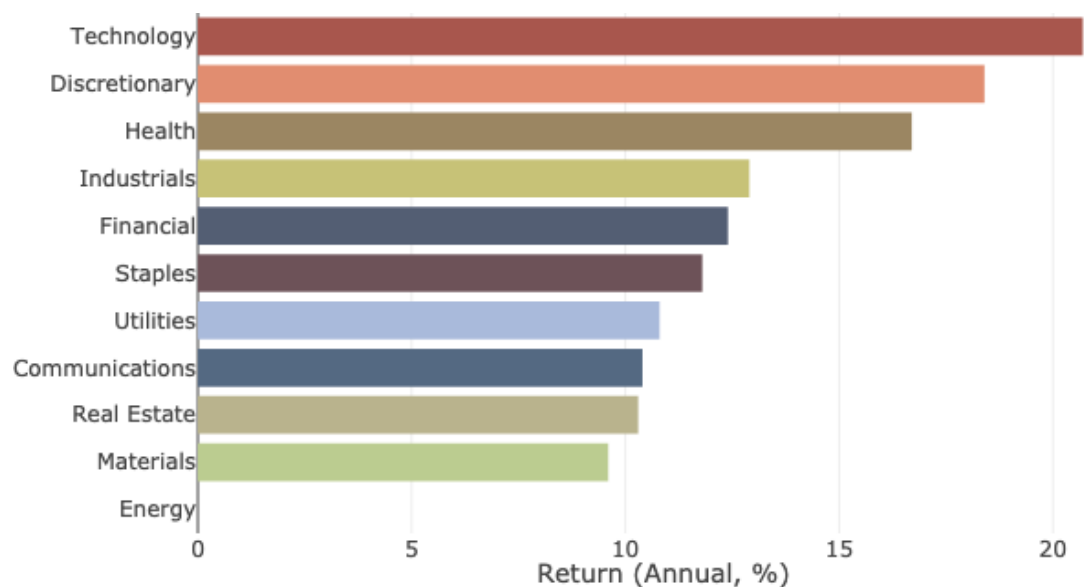
The prices of the largest services are *slowing*.

Equity Markets

The unmatched monetary stimulus continues to ignite equity markets, with new highs arriving daily. As with all prior bull markets, every new high brings renewed questions of sustainability. Whereas unrestrained credit permeating into equity markets ignited most prior bull markets, the root cause varies this time. The conception of this equity bull market was the monetary stimulus in response to the Financial Crisis of 2008. The recent monetary stimulus to counter the Pandemic rebirthed a twelve-year bull market that was aging rapidly. *The expiration of the stimulus will foretell this bull market's demise.*

A differentiating factor of this bull market leadership is the unparalleled divergence of sector returns (Exhibit 6). Technology achieved over 20% annualized returns while the energy sector endured *zero*. In traditional bull markets, the big wave lifts all ships. This time, the wave left one behind. This perplexing outcome belies the reality that the energy sector enjoyed a bubble the decade *before*. As reality must intrude upon all bubbles, the result is more a reflection of investing's most venerable truth: *reversion to the mean*. A decade of euphoria balances a decade of want. The question is whether U.S. Technology will remain the bull market's darling.

Exhibit 6. U.S. Equity Sectors Annualized Returns



Source: IEX Cloud. CRM Calculations. Total returns from December 31st, 2010, to June 30th, 2021.

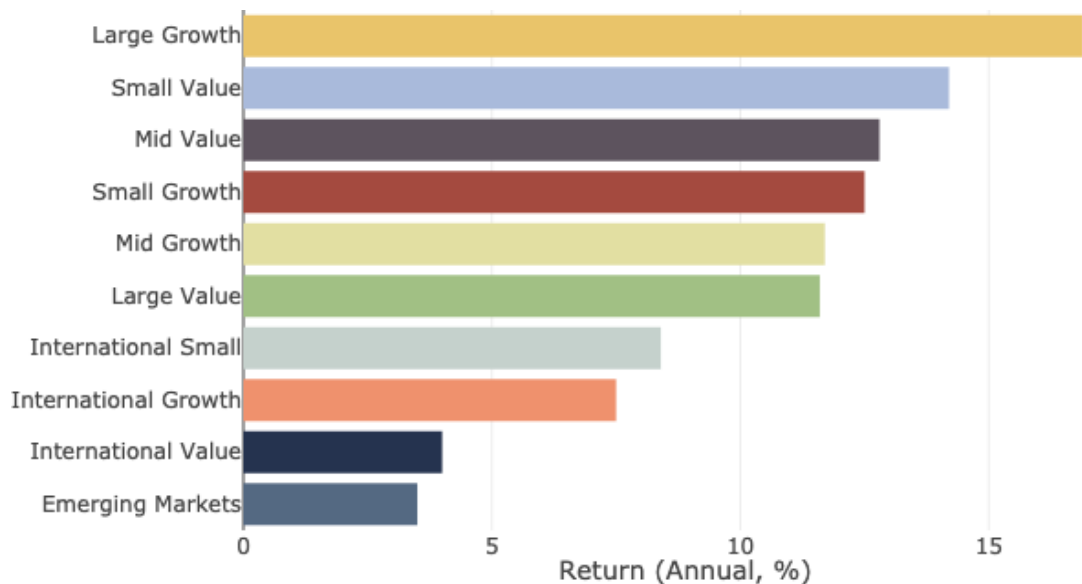
Technology
leads the
way.

Equity Markets

The challenge for sector analysis is that it ignores the variation between company size and growth prospects. Parsing the global equities by style and size tells a modestly different and somewhat conflicting story. The rankings do not show a clear distinction between value or size (Exhibit 7). Large growth stocks in the U.S. outperformed the other divisions. Yet small value equity was the runner-up with mid-cap value on the podium as well.

This outcome presents three interesting artifacts of the data. First, the narrative of the end of value is mostly a red-herring as small and mid-size value stocks outperformed their larger sibling. Active managers who trailed merely ignore the decades of evidence showing size matters in value selection. Second, international stocks trailed U.S. stocks by a wide margin, and Emerging Markets even more so. This outcome has two contributing factors: the popping of the global Energy sector bubble and the third factor in the data, technology. U.S. large growth stocks are largely a function of U.S. technology companies with *global* monopolies (e.g., Google and Facebook with Apple, Microsoft, and Amazon as contenders). The critical question for investors is the *sustainability* of their monopolies because there are *little further market share gains available*.

Exhibit 7. Global Equity Style Annualized Returns



Source: IEX Cloud. CRM Calculations. Total returns from December 31st, 2010, to June 30th, 2021

US Growth returns reflect technology monopolies.

Equity Markets

Secular Concerns. The enduring prominence of the technology sector is a function of the convergence of its paradigm-changing technology and demographics providing new investors (i.e., Millennials) indoctrinated to their many benefits. Critically, the latter offered new investors who extolled their many virtues and started earning income during their ascent. The Boomers enjoyed a parallel euphoria with the *Nifty Fifty* in the later 1960s and early 1970s. Yet, there are critical differences.

This earlier confluence of technology and demographics provided fanciful returns for some, despite eye-watering valuation levels (Exhibit 8). It also delivered despondent returns for others.¹ The difference was the macro environment. They endured materially higher interest rates with the oil supply shocks of the 1970s still to arrive. Materially, U.S. domiciled companies were yet to enjoy the benefits of global supply chains on their costs or the expanded markets to grow revenues. Further, leverage was minuscule compared to contemporary levels, thus limiting the ability to bring forward growth. Even the basket of goods has changed for consumers. Indeed, the world is a different place despite the previous facile comparison. *Future returns* may be different because the growth prospects are *different and company-specific*.

Exhibit 8. Nifty Fifty Leaders Price/Earnings and Subsequent Returns

Nifty Company	P/E	Return	FAANG?	P/E
HP	63.1	11.48	Google	
EDS	49.5	16.1	Facebook	
Sony	50	7.83	Apple	
Walmart	52.3	29	Amazon	
Disney	81.6	8.97	Netflix	

Source: Fesenmaier and Smith, (2002). Annualized returns from 1972 to 2001. Mapping to FANG stocks is for demonstration purposes and is not indicative of future performance.

¹ Fesenmaier, Jeff and Smith, Gary. *The Nifty Fifty Re-Revisited*, *The Journal of Investing*, 11 (3), 2002. pp. 86-90.

Growth prospects dominate valuation.

Equity Markets

Reserve Supremacy. The enduring strength of U.S. equities over the rest of the world continues to beguile investors. The reality is that the reign of U.S. equities has endured for over *120 years*.² The recent performance does not explain all the prior outperformance (Exhibit 9). The U.S. performance doubled that of the rest of the world since 2010. Yet, this performance accounts for only about 50 of the 210 basis points of outperformance since 1900.

There are two means to outperformance: higher growth or lower costs. Credibly, the US is a higher-cost country that *imports lower costs*. Global commodities trade in U.S. dollars. Thus, it may enjoy an overvalued currency from its role as the de facto global reserve currency, which supports lower import costs. Further, it could also enjoy lower financing costs if interest rates are systematically lower than the rest of the world, which would widen margins. Since other companies could enjoy the benefits by listing and reporting in the U.S., this is not a credible *long-term* source of outperformance.

Exhibit 9. Global Equities Relative Performance of US/World ex-US



Source: IEX Cloud. ITOT & ACWX total returns. Ratio increases reflect US outperformance.

U.S. equity leadership continues as it has for *120 years*.

² Elroy Dimson, Paul Marsh, and Mike Staunton. *American Exceptionalism: The Long-Term Evidence*, **The Journal of Portfolio Management**. 47 (7). 2021. pp. 14-26

Equity Markets

Technology Dominance. From the advent of the industrial revolution to automobiles to planes to television, U.S. technology has reigned supreme to the internet age. This outcome created global technology hegemony for U.S. companies. The recent retracement of Growth versus Value equities brings concern from investors about its durability (Exhibit 10). Since investing is a relative game, investors must choose which *prospects are better*.

There is a long list of threats to U.S. technology dominance. The stalwarts of the former technology bubble know (e.g., Yahoo, Blackberry, and Myspace, leaderships can change (e.g., Google, Apple, and Facebook) as innovators jump ahead. Anti-trust activities can distract leaders (e.g., Microsoft), particularly when their business may imperil political stability (e.g., Facebook). Growth is as much about opportunity as it is about superiority.

The critical threat, however, is the source of *further growth*. By definition, *global monopolies* achieved their *addressable market*. Where they haven't reached, they may never reach (e.g., Google in China). To grow from this point requires pricing power, yet this action may heighten inflation risks while alienating customers. A redux of the 1970s is probably not the *preferred path*.

Exhibit 10. U.S. Equities Relative Performance by Style (Growth/Value)



Source: IEX Cloud. IUSG & IUSV total returns. Ratio increases reflect growth outperformance.

**Growth's
reign is near
the end.**

Equity Markets

The Size Fits. The capital flows into small cap stocks reversed as capital flowed back to the technology titans. This bounce reversed the dramatic flows that occurred previously (Exhibit 11). This action is usually the hallmark of investors seeking a safe harbor for an impending storm. Alternately, it could be a function of the standout earnings technology enjoyed over the last year. The critical dimension for the investors is that there is not a noticeable *performance gap* between large and small cap stocks.

Exhibit 11. U.S. Equities Relative Performance by Size (Large/Small)



Source: IEX Cloud. IVV & IJR total returns. Ratio increases reflect large outperformance.

Small stocks
fell after
their
dramatic
ascent.

Higher growth prospects are a hallmark of smaller companies as they innovate to build new markets or capture market share. The recent advantage of larger stocks is undoubtedly a function of the monopolistic advantages, which infers another right upon them. They can buy the future growth of their smaller competitors before they reach the market. The current euphoria in private markets suggests that a public listing is not a burden small companies want in exchange for access capital. This paucity of choice in small stock opportunities may deliver valuation gaps, certainly during a time when their larger competitors may exercise their *pricing power*.

Equity Markets

Emerging Growth. A reversal of capital flows also occurred in the Emerging Markets with the return of U.S. leadership (Exhibit 12). Indeed, the growth story is more straightforward for the Emerging Markets due to their higher population growth rates and productivity expansion. The challenge is that their aggregation belies their distinct growth profiles. The contrast between China and India shows that these markets are not fungible. The investor must distinguish between *people, productivity, and potential*.

Exhibit 12. Global Equities Performance of U.S./Emerging Markets



Source: IEX Cloud. ITOT & EEM total returns. Ratio increases reflect US outperformance.

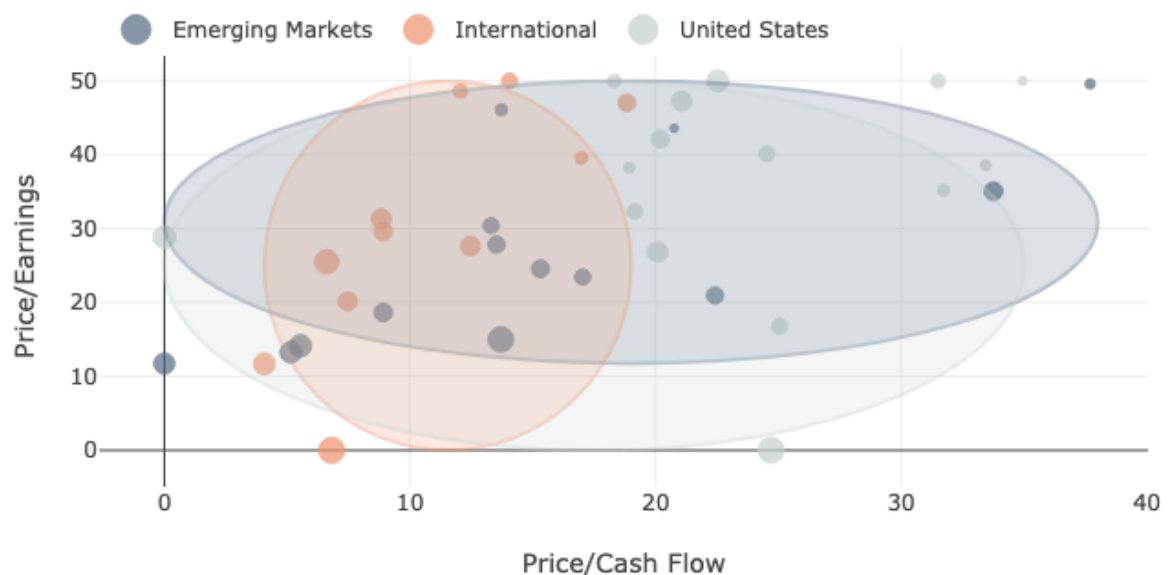
People provide an enormous market yet may not have the income to support consumption growth (e.g., most of Africa). Productivity may deliver value, but other factors limit it (e.g., Japan). It is the confluence of people and productivity in a favorable political environment that offers potential. The U.S. experience in the 20th century suggests one path, while China's recent experience provides a counter argument. Unfortunately, the time frame might be too short to *evaluate either*. Since foretelling the future decades hence is as much art as science, investors should adopt a *total portfolio perspective* to balance the exposures of the disparate growth stories unfolding in the Emerging Markets. When diversifying, it is the *risks avoided that matter*.

Emerging
Markets are
returning.

Equity Markets

Dispersion. Variation in valuations enables allocators to position a portfolio for reversion. The opportunities appear high in the U.S. and Emerging Markets, yet less for international markets (Exhibit 13). The depressed Energy and Financial sectors deliver this higher range of earnings and temper the appearance. Once controlling for these sectors, the ranges are not materially different. This outcome leaves cash flow measures as the *decision variable* for dispersion and where notable outliers exist for the intrepid investor.

Exhibit 13. Global Equity Valuations by Region and Sector



Source: S&P Indices. Size of the marker reflects the dividend yield (larger is higher). Valuation is limited to zero and fifty for ease of exposition. As of June 2021.

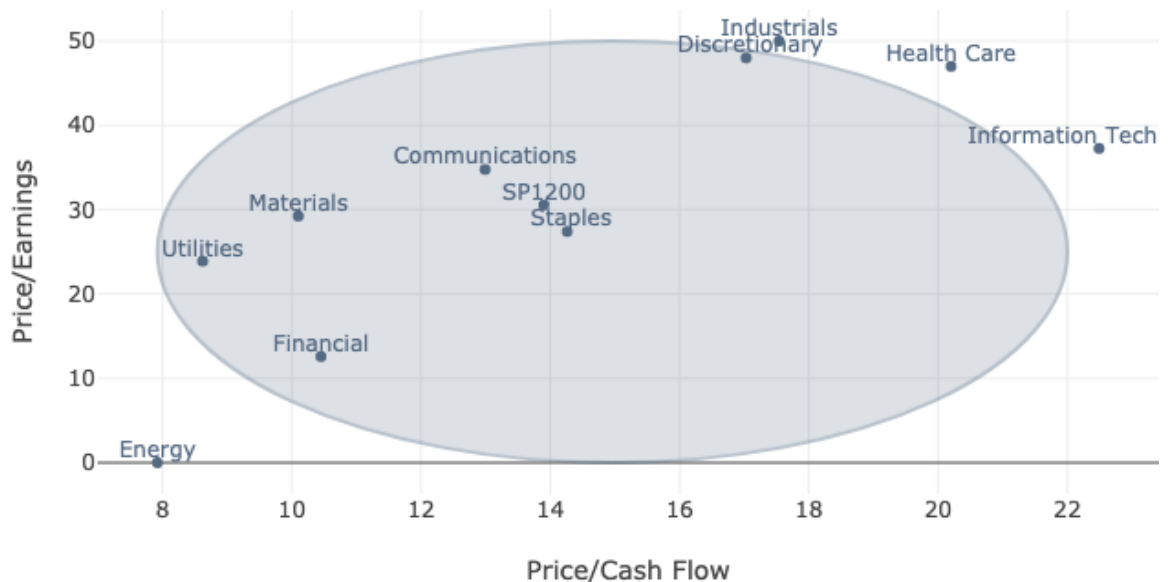
The critical measure for the investor is the degree of dispersion and their average level. The latter is the trouble for the U.S. markets relative to the other regions, which bear the weight of cash flow multiples that are *double the other regions*. These higher multiples suggest either higher U.S. cash flow growth or that repatriated foreign earnings expand faster via higher foreign growth or a falling U.S. Dollar. The challenge is that a lower U.S. Dollar requires that firms do not repatriate their profits; otherwise, the U.S. Dollar would *rise*. This continued action seems *unlikely* in an environment where the call for a global minimum corporate tax is building steam.

Wide
dispersion
provides
opportunity.

Equity Markets

Mean Aversion. The darlings of Pandemic investors, Consumer Discretionary, Information Technology, and Industrials, particularly in the U.S, drive the cash flow dispersion (Exhibit 14). The end of U.S. technology dominance is not near. In contrast, the leadership of Consumer Discretionary and Industrials seems transient because there is not an expectation of further stimulus, and an economy needs to reboot its supply chains *only once*. The challenge for investors is where to go as the prospects for the lowest valued sectors (e.g., Energy) are not compelling in the long term.

Exhibit 14. Global Equity Valuations by Sector



Source: S&P Indices. Valuation limited to zero and fifty for ease of exposition. As of June 2021.

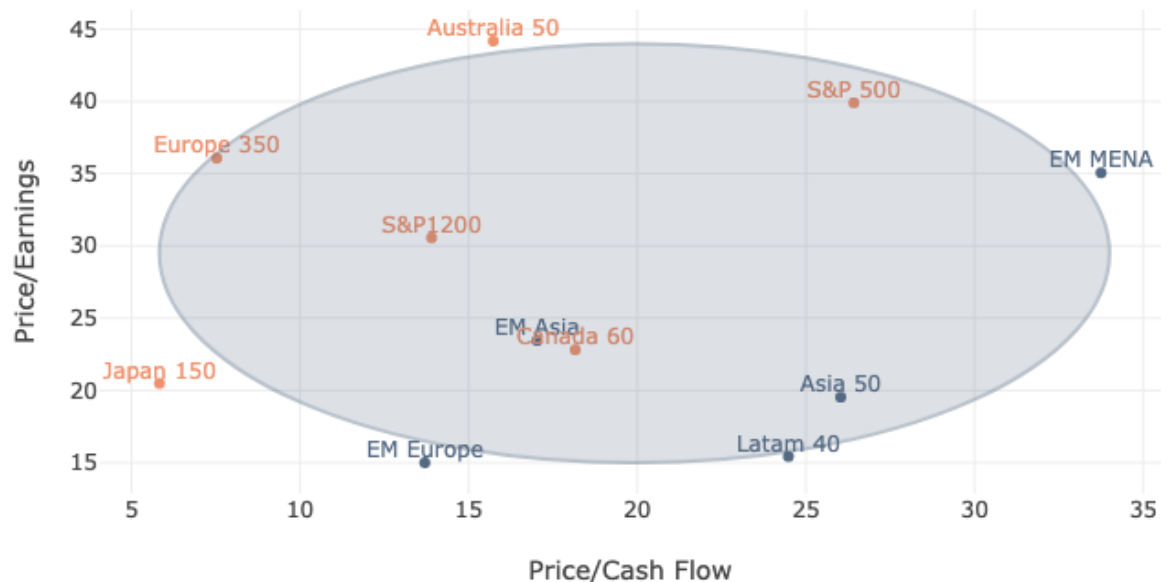
Investors with sufficient time frames would leverage the power of *mean reversion* to rebalance the valuation dispersion in the global markets. The challenge this time is determining the level of the reversion. The Energy and Utility sectors are transforming energy generation and transportation. Whether the Energy sector reverts to its once dominant position as the demand for oil fades is uncertain, and a more distributed future threatens the security of Utility cash flows. As these secular trends unfold, *managing portfolio risk* through tactical asset allocation or stock selection is critical. Active management avoids *averaging down*.

Sector dispersion suggests stock selection.

Equity Markets

Cash Reigns. The inconsistent global response to the Pandemic is a short-run problem. Investing should focus on the long-term and dispersion in global valuations (Exhibit 15). The distinct divergence between developed and emerging markets is apparent. The U.S. market is the lone outlier in this bifurcation. Critically, the difference is between measures of either cash flow or earnings. Since earnings are subject to more discretion, the investor's focus should be on cash flows valuations, where notable outliers across the regions exist.

Exhibit 15. Global Equity Valuations by Region



Source: S&P Indices. Valuation limited to zero and sixty for ease of exposition. As of June 2021.

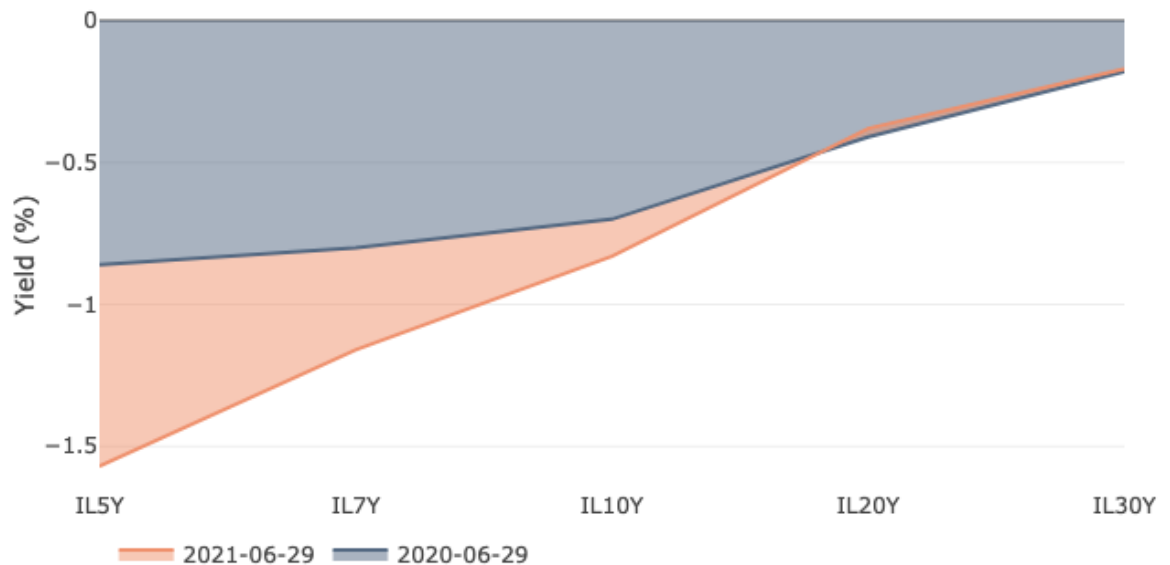
A critical element of investing is receiving payment for the risk accepted. The high cash-flow valuations in the Emerging Markets and the U.S. suggest a misalignment of risk and reward. While the Emerging Markets will surely deliver higher growth, their prices *already reflect that outcome*. Japan's price offers a stark contrast in valuation and a global export engine poised for a worldwide economic rebound. The challenge for the U.S. investor is managing the currency exposure across these regions. Thus, *region selection and portfolio design* are critical components of success in this divergent investing environment.

Developed
market cash
flows are
well priced.

Interest Rates

Price Protection. The U.S. Treasury Inflation-Protected (TIPS) yields are negative across the term structure and moving lower on the front-end (Exhibit 16). To the unfamiliar observer, this outcome suggests that investors are increasingly worried about *deflation*. The reality is that TIPS provide a call option of future inflation that deserve a premium. Thus, the outcome merely reflects investors hedging higher inflation at an *increased cost*. Only time will determine whether paying 1.5% to hedge against inflation that has averaged a similar level over the last two decades is a wise decision.

Exhibit 16. US Treasury Inflation-Protected Yields



Source: Federal Reserve Economic Database

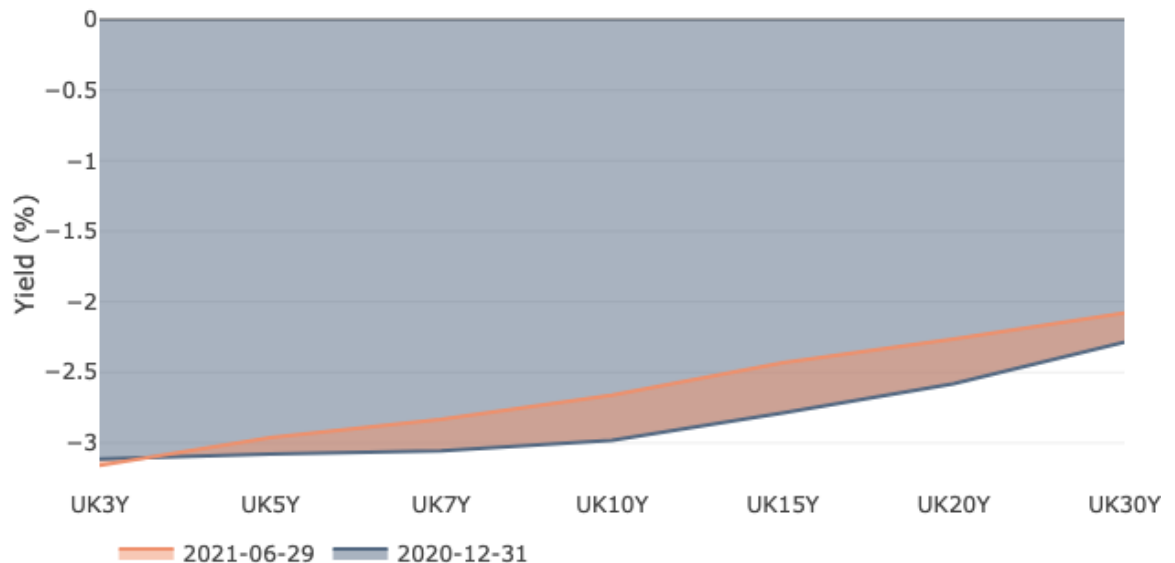
Were inflation a function of monetary policy, the preceding decade of expansive monetary policy should have given rise to rapid inflation. It did not occur because most of the world's economies are open to trade with the currency through import and exports serving as a release valve for monetary policy. Countries with a floating currency and open capital accounts can thus export their inflation to other countries (e.g., the U.S. to China). The result is muted *local goods inflation*. This mechanism does not address non-tradeable goods (e.g., housing and services) that may still inflate. The critical concern for investors is whether supply can meet the demand to mute goods inflation before it passes to services and housing. *Competitive markets indeed.*

Inflation protection is expensive.

Interest Rates

Costly Hedging. While the global markets share a similar yield curve outcome as the U.S., Gilts in the United Kingdom are vastly different in magnitude. Real yields remain nearly double their developed markets contemporaries at more than minus two percent for the next thirty years (exhibit 17). This outcome is broadly suggestive of hedging inflation risk at a cost that appears uneconomical. With inflation for the last two decades falling below these levels, the cost to hedge may deliver *negative returns* to the holder.

Exhibit 17. United Kingdom Gilt Inflation Yields



Source: BOE Database

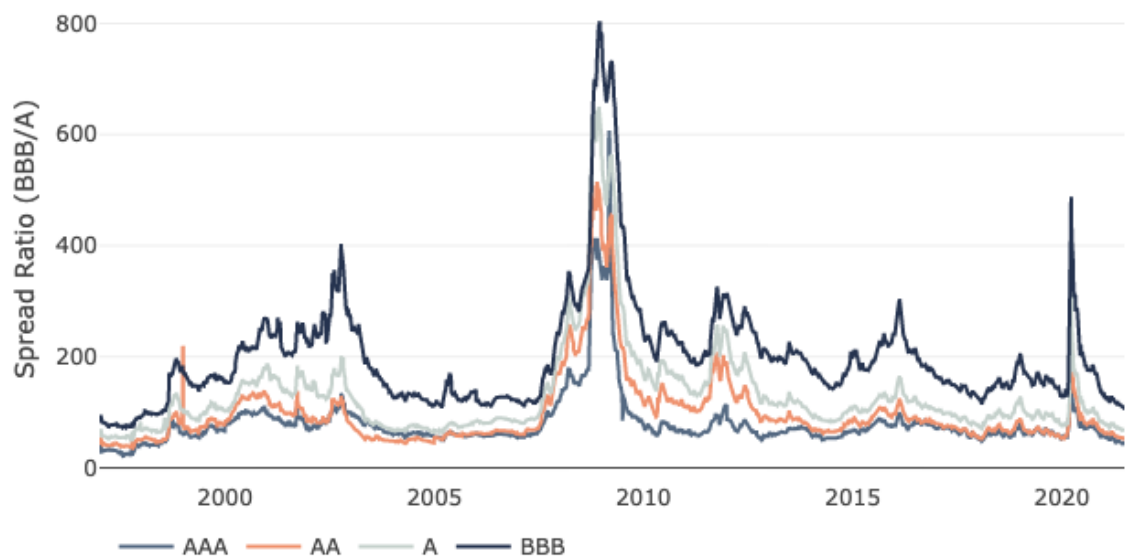
The forlorn investor faces minuscule nominal yields and negative yields in real terms. The sovereign bond market is thus a costly place to play whose lofty valuations may exceed those of the equity markets. The common refrain applies here: is the risk worth the reward? While there are credible arguments that bond yields move lower as the global economic expansion slows, it's not evident that the uncertainty is worth it. Unless the investor is liability-focused, the sovereign bond markets alone offer risk without sufficient reward. In contrast, sovereign bonds play a role in a diversified portfolio that trades off equity and interest rates risks. *Portfolio design is critical.*

Inflation protection in the U.K. is dear.

Credit Spreads

Unrewarded Risk. The credit markets are usually the sober cousin of the exuberant equity markets because they offer no *upside for speculation*. Yet, credit spreads are at their narrowest levels in over twenty years (exhibit 18). These levels are unseen since the excessive monetary stimulus supplied to the Asian financial crisis and the pending Y2K uncertainty. Market participants must believe that the current economic situation is comparable to a time of budget surpluses, modest debt levels, and robust growth. This belief is incongruent with a global economy recovering from the most significant economic contraction in a century *and with monetary support about to dissipate*.

Exhibit 18. U.S. Corporate Investment Grade Spreads



Source: ICE. Federal Reserve Economic Database

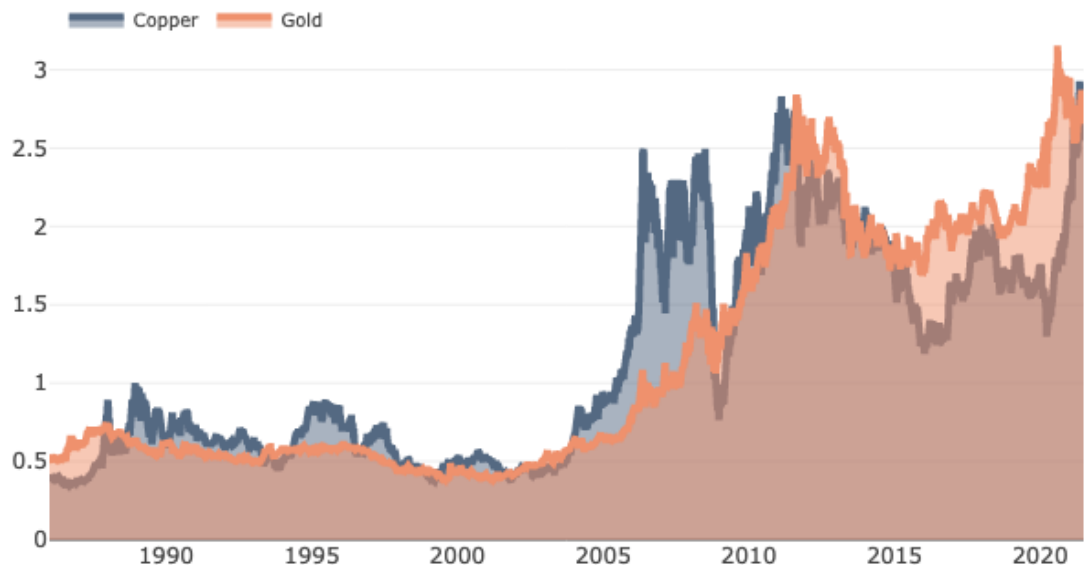
Credit spreads are *too low* for the risk.

In a world where inflation is the concern, credit provides limited protection. This outcome is particularly so when pricing power is limited for firms that must service their debts. Despite the high valuations in the equity markets, a combination of equities and sovereign bonds may offer a more favorable return-to-risk profile. Even cash flow investors may find better *dividend yields* than bond yields. Thus, if an investor must take the company-specific risk, the more rewarding path is via equities, as it's *not evident* that credits offer sufficient reward for their risk. *Caveat emptor*.

Commodities

Deflating Commodities. The economic recovery from the Pandemic was most evident in the ascent of copper, which doubled in value from the nadir of the economic contraction in April of 2020 (Exhibit 19). This ascent delivered a price that is three times the average value of the last three decades and a *forty-five-year high*. It is unlikely that the world’s demand for copper increased at such a rate last year. The recent reversal from its high suggests that this outcome was a temporary phenomenon, not a structural change. One other item that suggests that Dr. Copper’s reign is ending is the gold price.

Exhibit 19. Price Ratio of Gold and Copper to their Average Values



Source: Quandl.

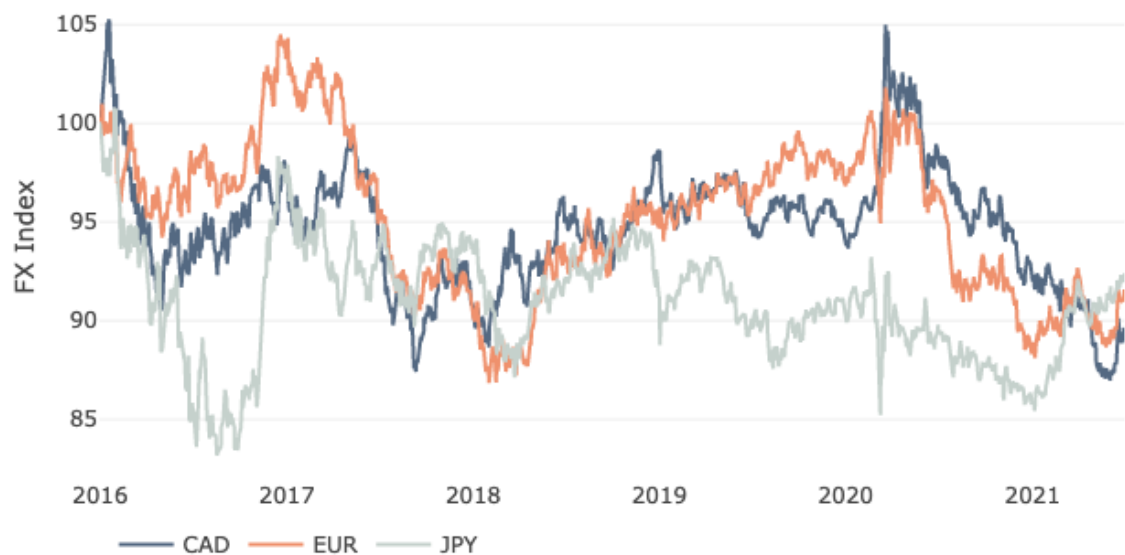
Copper is too high.

Gold is usually a bellwether of uncertainty as investors hoard it during times of uncertainty. The trouble is that gold prices are receding from their highs, which never approached their prior zenith. Investors thus seem less worried about the future because of more certainty in the economic rebound. If this is the case, then copper prices should remain strong as the economic engine goes into a higher gear. This outcome is not evident. The challenge is finding a common theme that drives both lower. While the demise of economic uncertainty is beneficial, the likely culprit is their shared pricing in U.S. Dollars. *Capital flows are critical to commodities and inflation.*

Currencies

Commoditized Currencies. Capital flows to the U.S. during uncertain times as its role of reserve currency kicks in. As uncertainty wanes, so does the demand for the Dollar, which is evident in the second quarter price that abruptly changed course in June (Exhibit 20). The catalyst for higher U.S. interest rates was the expectation for the sooner than anticipated tightening of monetary policy from the Federal Reserve. The action suggested U.S. growth leadership and brought capital back to the U.S., which was poor news for *commodities*. This outcome was evident in the decline of the Canadian and Australian dollars and indicates that *commodity demand is not the driver*.

Exhibit 20. Normalized Currency Rates



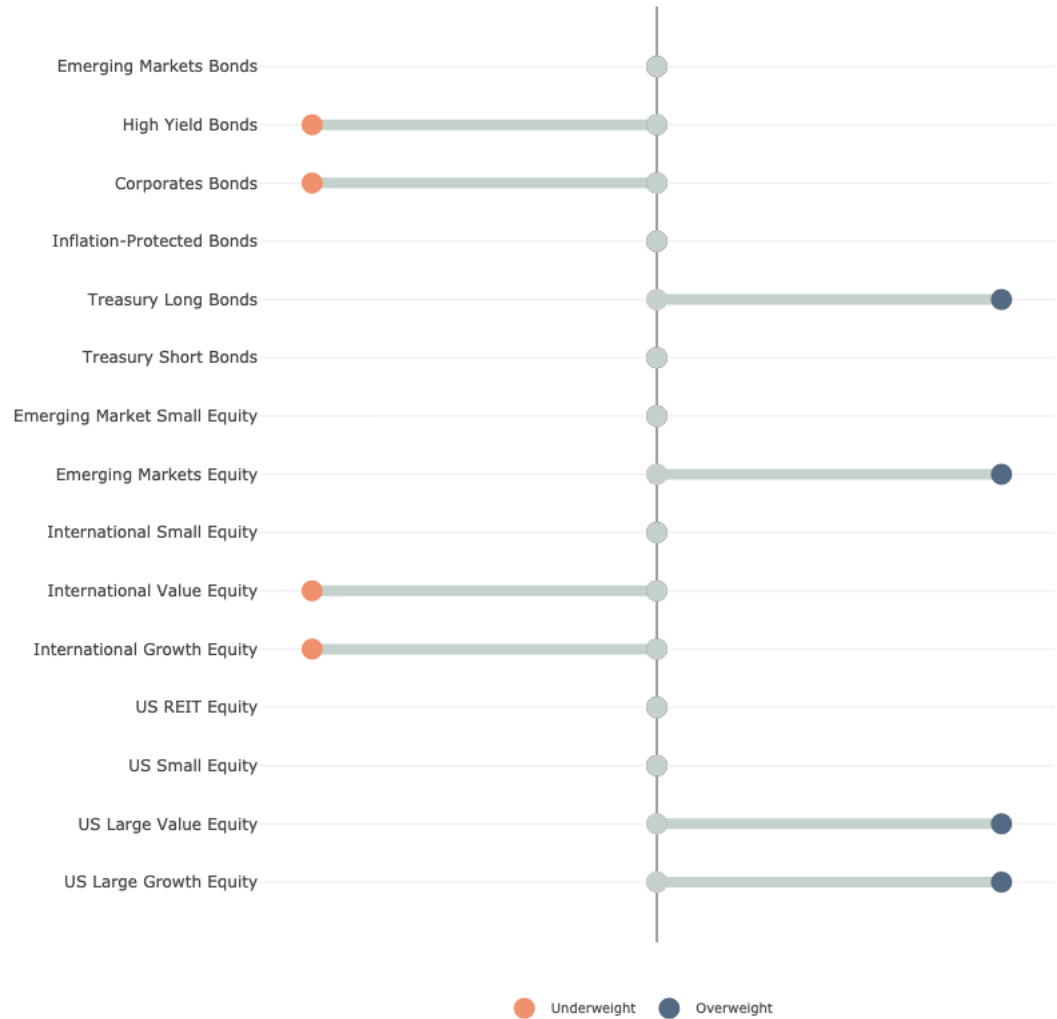
Source: Alphavantage. A higher level indicates a stronger U.S. dollar.

**U.S. dollar
supremacy
is not over.**

A lower US dollar requires either higher growth prospects outside of the U.S. or a robust commodity demand driving prices higher. U.S. economic leadership is predicated on a superior vaccine roll-out in the short term and technology prominence in the long run. Critically, they both provide a means to mitigate inflation pressures by maintaining a strong currency. This outcome is crucial as higher debt service arrives and domestic fiscal policy recedes. As global supply meets demand, inflation *pressure* will fade. The Fed must supply confidence in its monetary policy exit to extinguish these inflation concerns to ensure inflation is a supply and not a *monetary phenomenon*.

Exhibit AI. Tactical Asset Allocation Positioning

Six-to 18-month asset allocation perspective



Note: Positioning is indicative of the themes discussed in this report and valid as of the report date. Views are subject to change. These statements are forward-looking, and there are no assurances that such events will transpire. The positioning does not reflect actual positions and does not consider an investor's objectives, risk preferences, or their current asset allocation. Seek professional advice when undertaking any investment program.

Exhibit A2. Asset Class Performance

Sector	Class	ETF	QTD	YTD	One-Year	Three-Year	Five-Year
Global Equity	Equity	ACWI	7.1	12.3	43.4	14.4	14.7
Global Equity xUS	Equity	ACWX	5.3	9.6	41.7	8.6	10.6
US Total Market	Equity	ITOT	8.1	15.2	47.6	18.9	17.9
US Large Cap	Equity	IVV	8.4	15.2	43.6	18.8	17.7
US Small	Equity	IJR	4.3	23.5	73.4	12.6	16.0
US REIT	Equity	USRT	12.0	22.0	42.0	11.6	7.7
US Small Growth	Equity	IJS	4.9	30.4	83.4	10.9	14.4
US Small Value	Equity	IJT	3.5	16.4	63.3	13.4	16.8
US Mid	Equity	IJH	3.5	17.6	55.1	13.2	14.3
US Mid Growth	Equity	IJJ	3.7	22.9	62.8	11.4	12.7
US Mid Value	Equity	IJK	3.4	12.3	47.4	14.1	15.1
US Large Growth	Equity	IVW	11.8	14.3	47.0	23.1	21.5
US Large Value	Equity	IVE	4.9	16.3	38.1	13.2	12.6
Communications	Equity	VOX	10.8	20.0	55.9	21.8	11.6
Discretionary	Equity	VCR	6.4	14.3	68.6	25.7	22.2
Staples	Equity	VDC	3.0	6.1	25.0	15.4	9.1
Energy	Equity	VDE	12.6	49.1	56.1	-6.5	-0.5
Financial	Equity	VFH	7.5	25.3	62.1	12.2	15.6
Health	Equity	VHT	8.3	11.1	27.8	18.2	15.5
Industrials	Equity	VIS	4.1	16.2	56.1	14.0	15.1
Technology	Equity	VGT	11.4	13.1	54.3	31.2	30.9
Materials	Equity	VAW	4.9	16.0	55.4	13.2	14.1
Utilities	Equity	VPU	-0.5	2.6	10.1	10.4	8.8
International Aggregate	Equity	EFA	5.4	9.6	37.3	7.9	9.6
International Growth	Equity	EFG	7.7	7.2	35.1	11.8	12.0
International Value	Equity	EFV	3.2	11.5	37.9	3.3	6.7
International Small	Equity	SCZ	4.2	9.5	43.5	7.6	10.8
Emerging Markets	Equity	EEM	3.8	7.2	49.2	9.0	13.2
Emerging Markets Small	Equity	EEMS	9.7	19.4	77.4	9.7	12.1
US Aggregate	Bonds	AGG	1.8	-1.7	0.1	5.4	3.4
US Corporate	Bonds	USIG	3.2	-1.2	5.1	7.4	5.1
US Inflation-Protected	Bonds	TIP	3.2	1.5	7.1	6.5	4.5
US Treasury 1-3y	Bonds	SHY	-0.1	-0.1	0.0	2.6	1.6
US Treasury 10-20y	Bonds	TLH	5.2	-7.2	-9.8	6.3	3.0
US Mortgage-Backed	Bonds	MBB	0.3	-0.9	-0.6	3.8	2.3
US Municipal	Bonds	MUB	1.5	0.8	4.0	4.9	3.2
US High Yield	Bonds	HYG	2.0	2.6	12.3	6.4	6.4
International Government	Bonds	IGOV	0.6	-6.1	3.9	2.1	1.9
Emerging Markets	Bonds	EMB	4.3	-1.4	10.2	6.1	5.1
Oil	Alternatives	USO	23.1	51.1	92.7	-22.8	-12.1
Gold	Alternatives	GLD	3.5	-7.1	1.7	10.4	7.4
Commodities	Alternatives	GSG	15.2	30.5	63.8	-3.1	0.9

Artful Questions. Scientific Solutions. TM

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