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# Drawing Capital

## Macro Outlook & Market Trends for 2022

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## Macro Outlook & Market Trends for 2022

Presented by:

Sean van der Wal and Jugal Lodaya



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# About

Drawing Capital is an innovation-focused investment platform headquartered in Silicon Valley.

Drawing Capital aims to capture the expansion of a technology-forward world by investing in leaders that we believe carry undervalued growth. Our expertise in finance and data science enables us to participate in investment opportunities in public markets not captured by passive investing.

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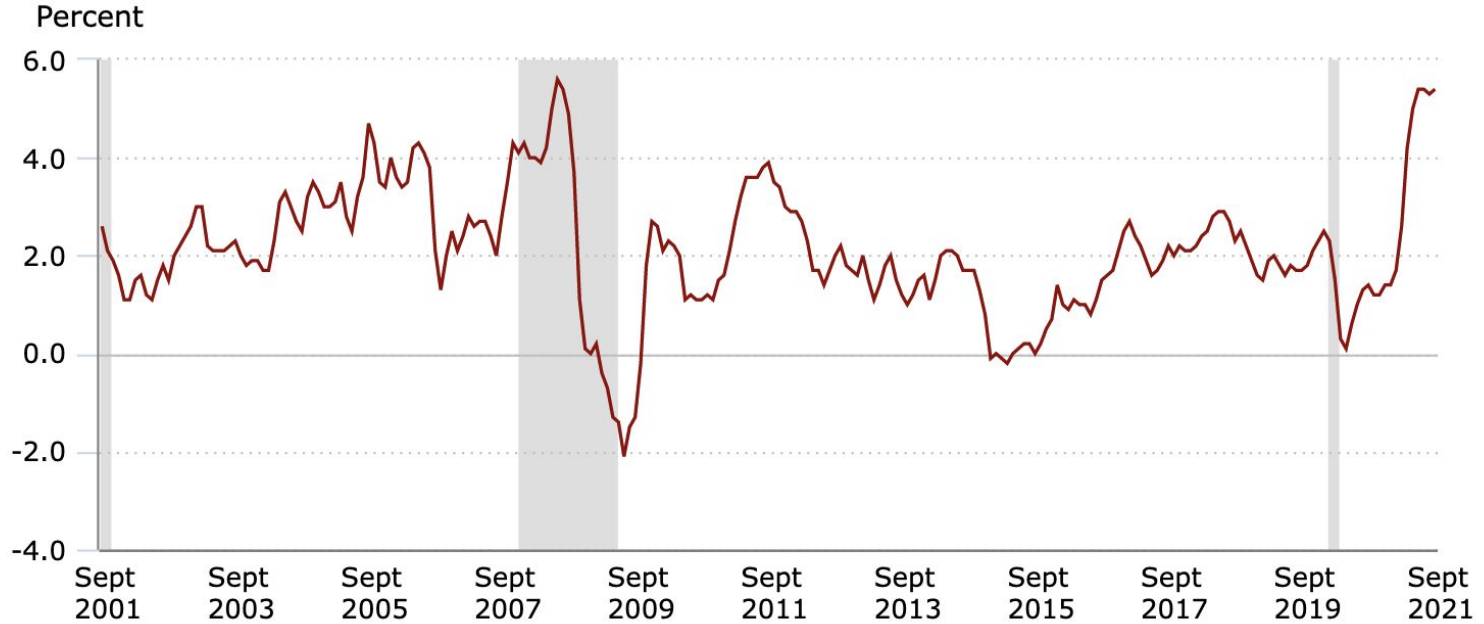
## Inflation & Interest Rates

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- Inflation in the United States has reached a 13-year high.
- Energy prices and supply-side shortages are major contributors to rising prices.
- Interest rates remain near all-time lows with about \$16.5T in negative yielding debt globally.



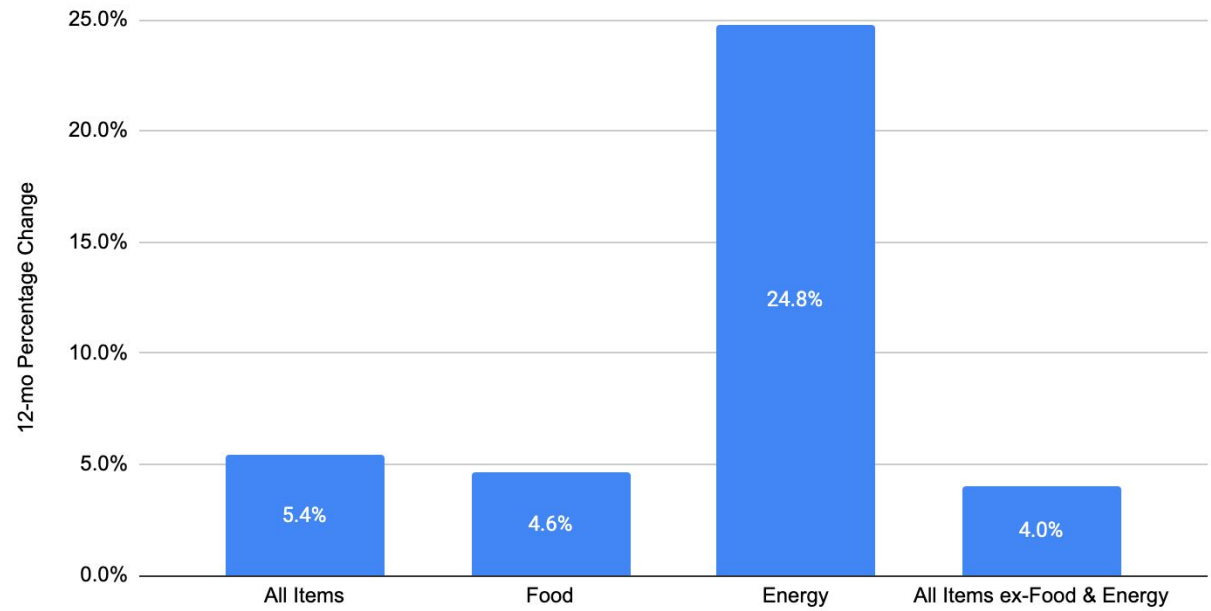
# CPI Recently Reached Its 13-Year High





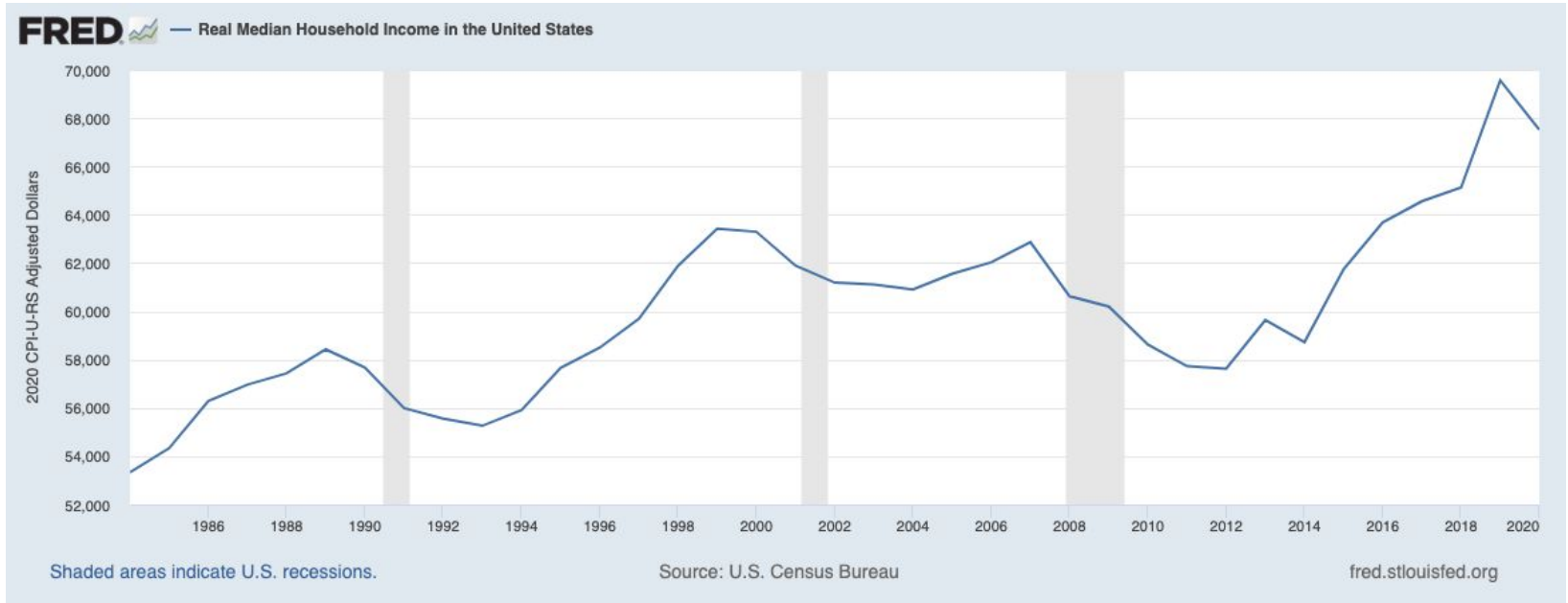


# 12-month Percentage Change, Select CPI Categories



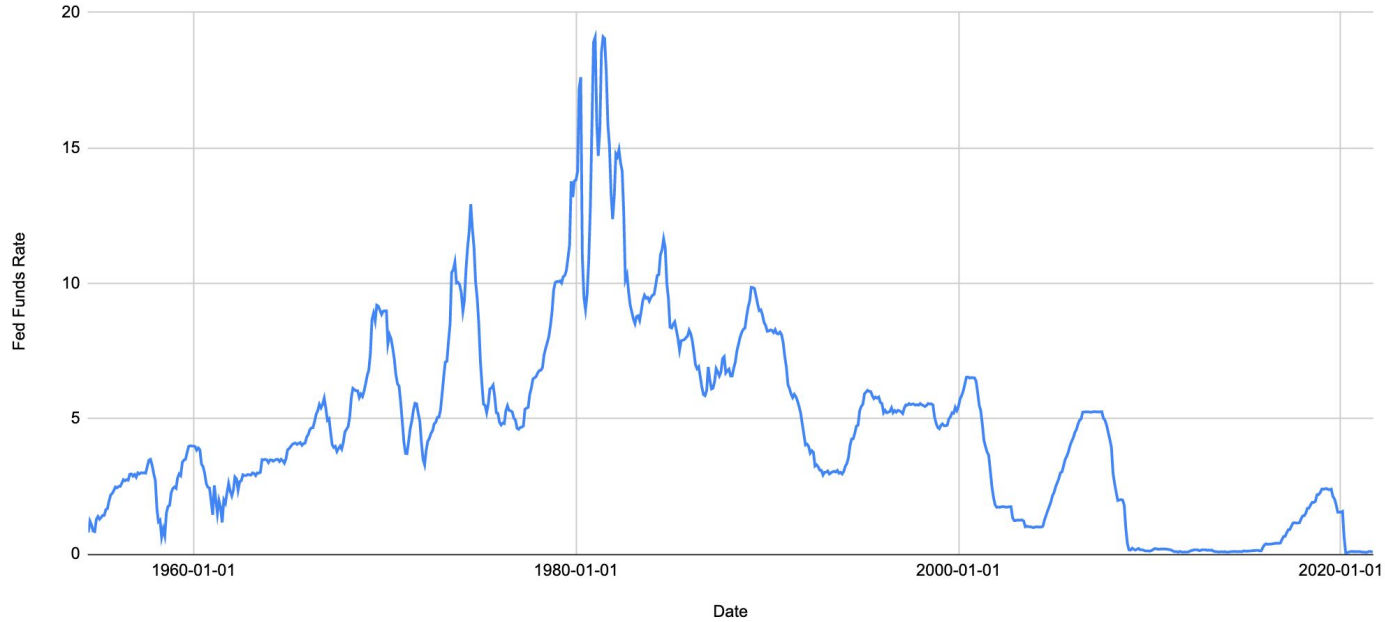


# Median Household Income Has Upward Trend Over Last 10 Years





# Fed Funds Rate Remains at All-Time Lows



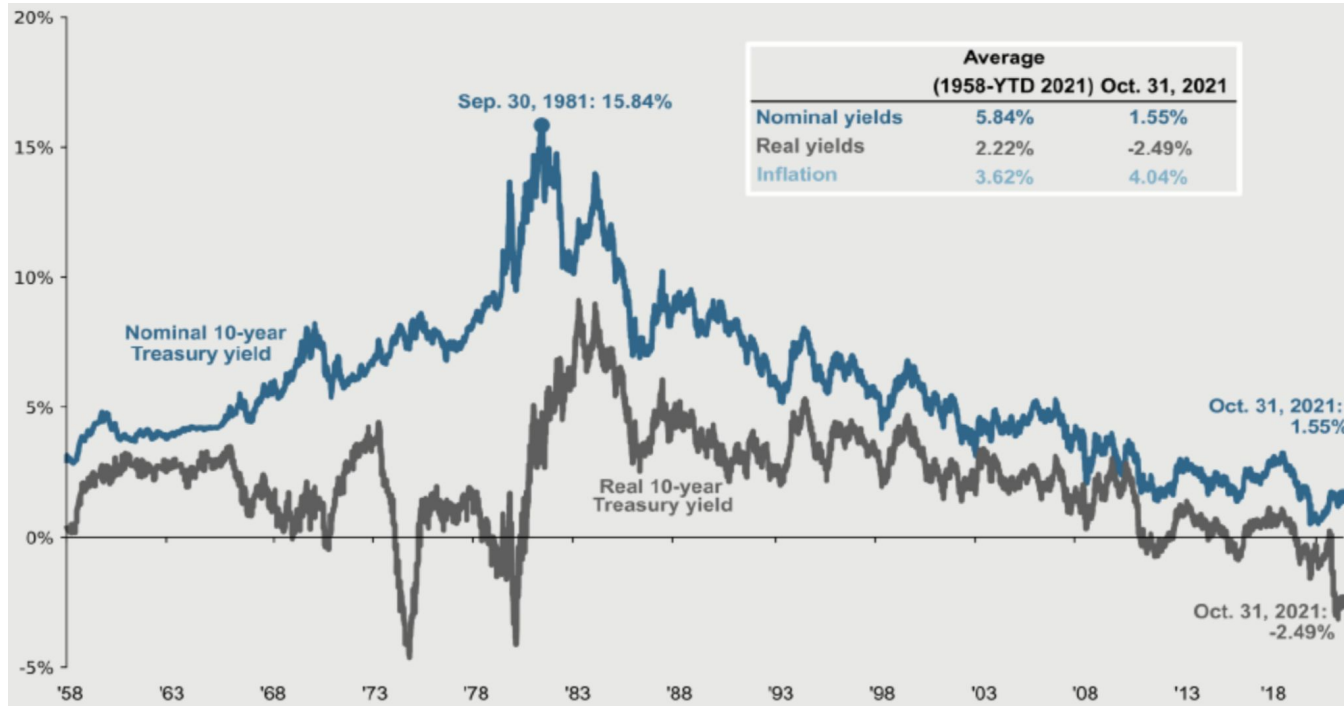


# 30-Yr Fixed Rate Mortgages Also Remain Near All-Time Lows





# Real 10Y U.S. Treasury Yields Are Negative



# Developed Country Bonds Have Low or Negative Yields

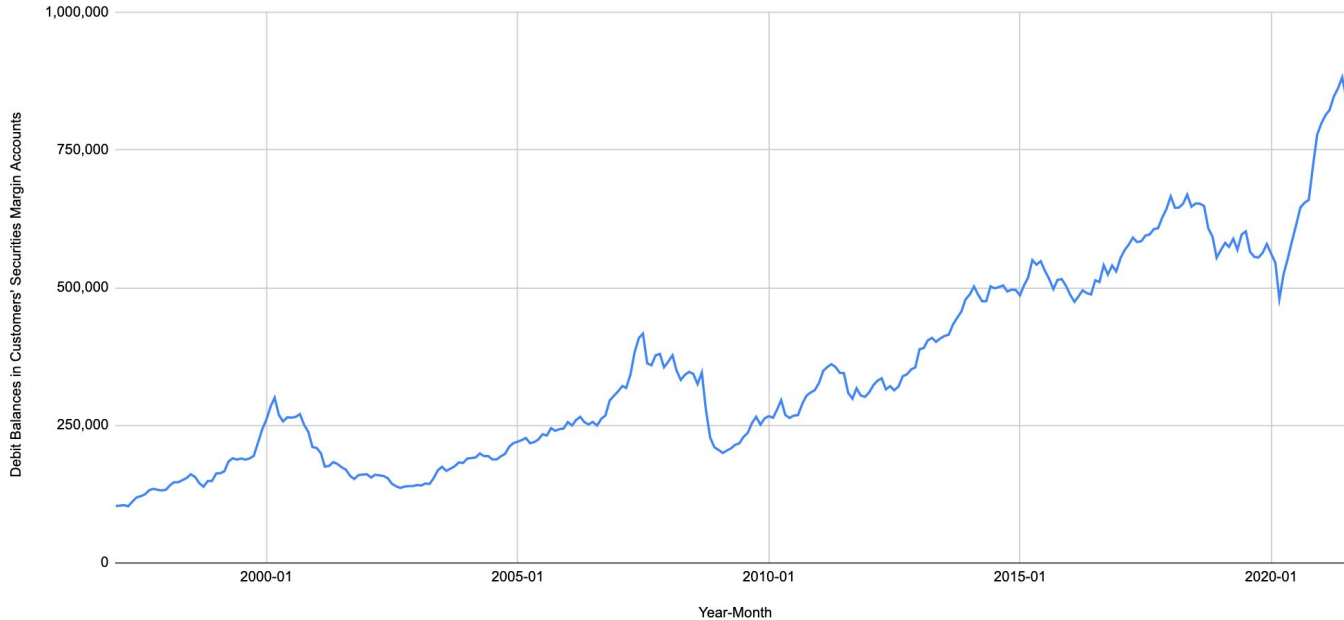
## \$16.5 Trillion

Global outstanding debt with negative yield

	US	CA	GB	DE	FR	IT	JP
1Y	0.13%	0.73%	0.60%	-0.68%	-0.63%	-0.40%	-0.11%
2Y	0.50	1.09	-	-0.58	-0.58	-0.26	-0.10
3Y	0.76	1.16	0.75	-0.58	-0.49	0.01	-0.09
5Y	1.19	1.51	0.83	-0.39	-0.25	0.39	-0.06
7Y	1.46	1.57	0.83	-0.26	-0.07	0.70	-0.03
10Y	1.56	1.73	1.03	-0.11	0.27	1.13	0.10
30Y	1.93	2.00	1.11	0.14	0.87	1.88	0.67



# Debit Balances in Customers' Securities Margin Accounts (\$ millions)





# What Does The Current Environment Tell Us?

1

Record-low interest rates and global yields **push investors towards risk assets** (i.e. equities, venture capital, real estate, and cryptocurrencies).

2

A rise in inflation was originally expected to be transitory, but has now been declared a **longer-term trend**.

3

Historically-low borrowing rates incentivize debt financing and introduce **increased amounts of leverage** in financial markets.



# Market-Implied Asset Allocation Models Based on US Treasury Yields

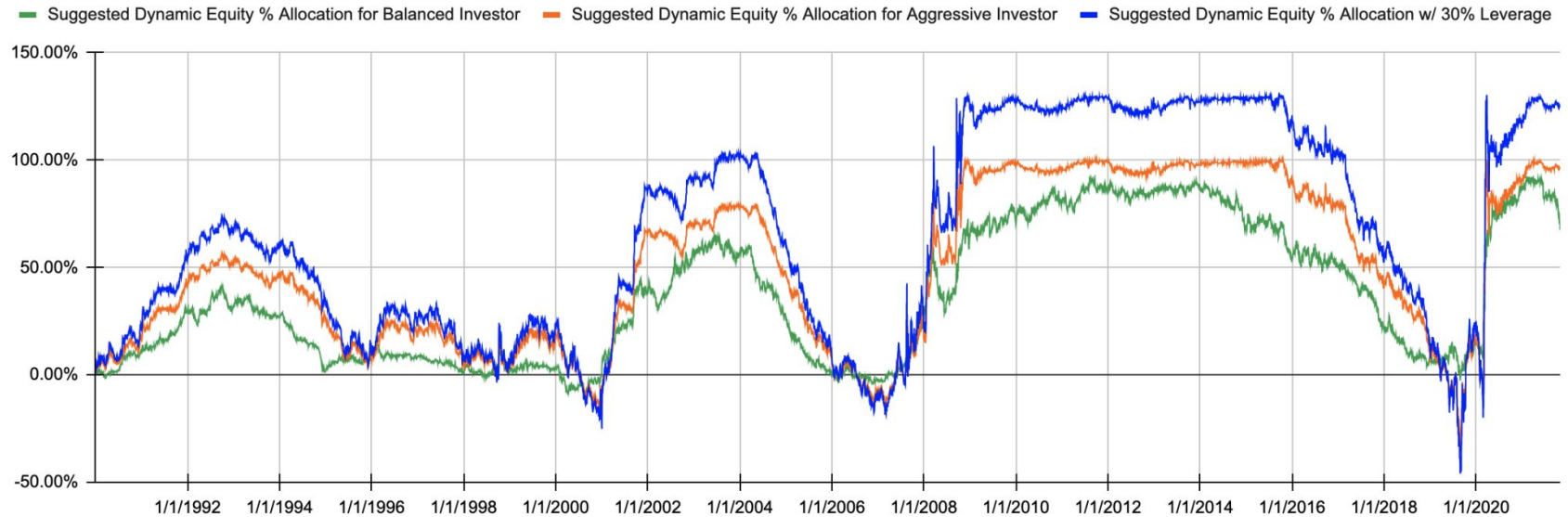
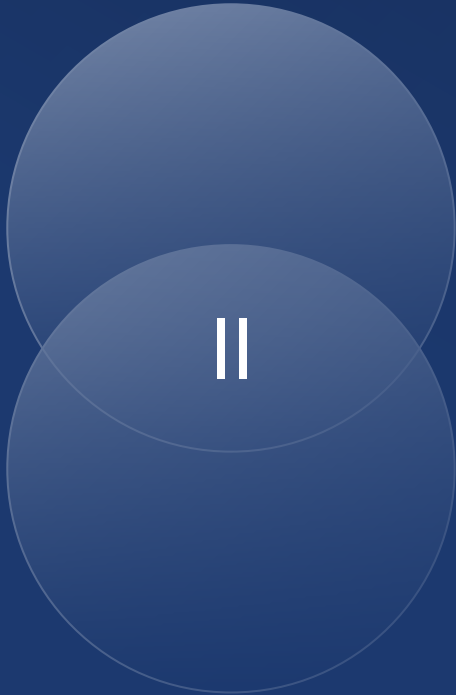


Chart by Drawing Capital and Data from US Treasury (Link: <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/textview.aspx?data=yield>)



## Money Supply & Velocity

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- Definitions for Money Supply and Money Velocity.
- Money Velocity is a leading indicator of Consumer Price Inflation and financial asset inflation.
- Marginal Revenue Product of Debt

# M1/ M2 Money Supply and Money Velocity

## M1

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Coin currency,  
Physical paper,  
Central bank reserves,  
Demand deposits,  
Travelers checks

## M2

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M1 Supply  
+  
Savings deposits,  
Money market shares

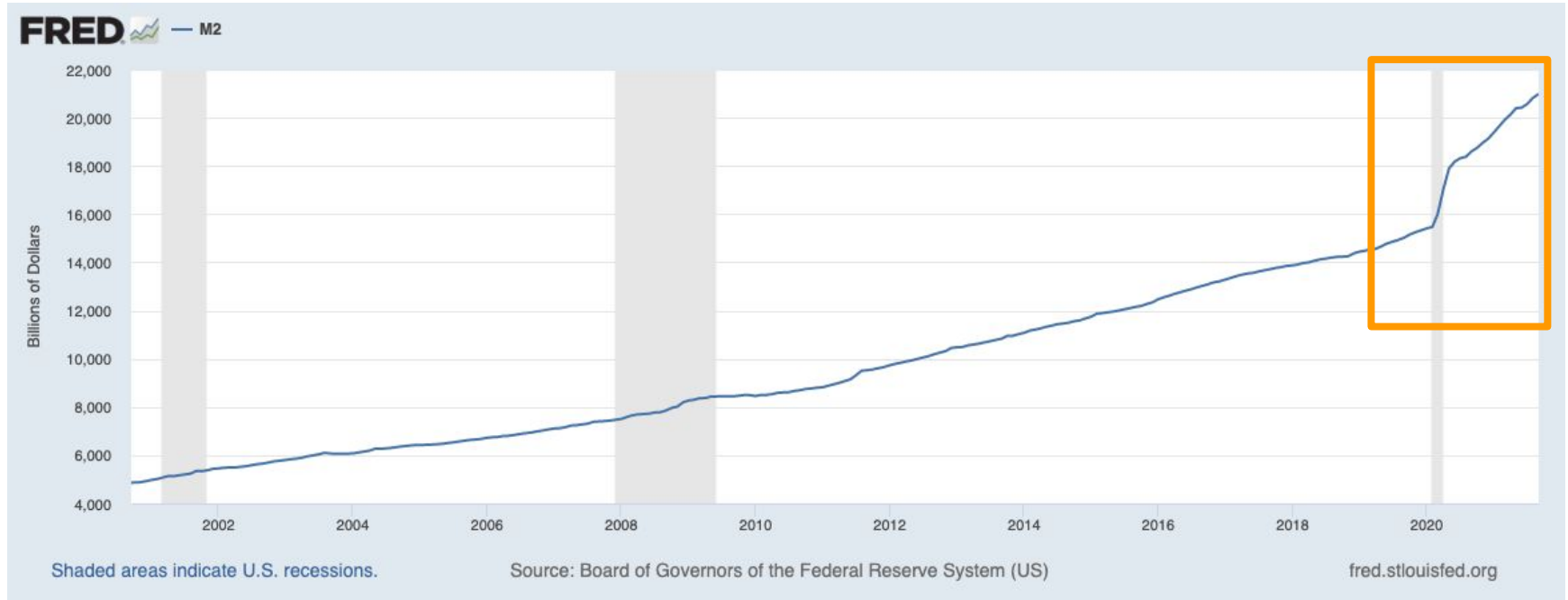
## Velocity

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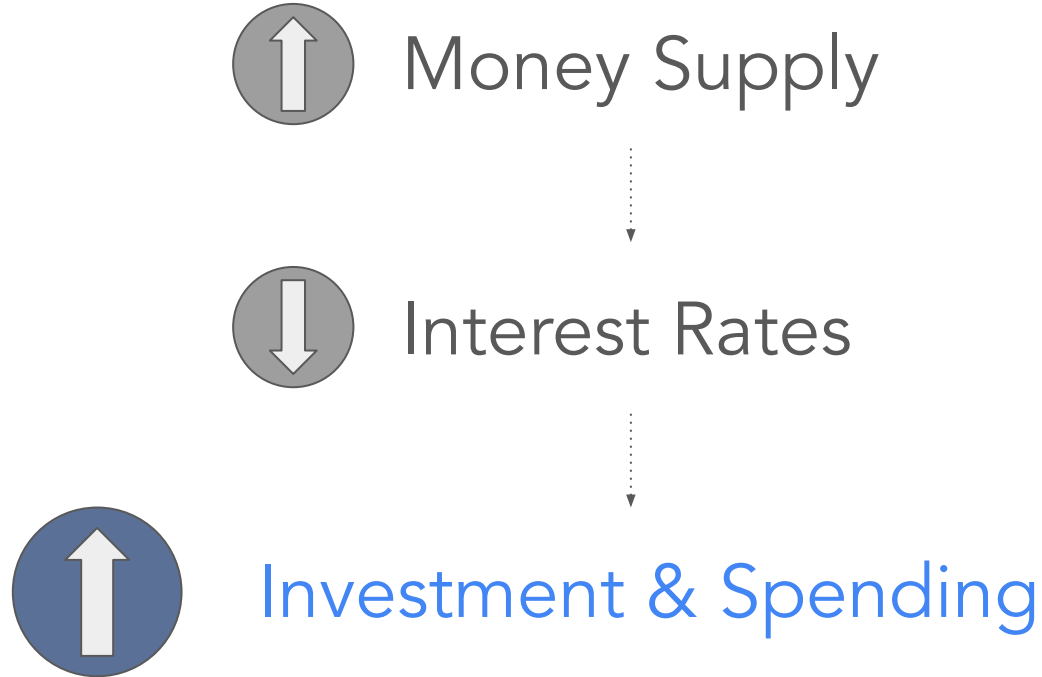
Rate at which money is  
exchanged in an economy  
(higher velocity = greater  
collective spend).



# M2 Money Supply Grew 35.6% in 19 Months



## Effects of Increasing Money Supply

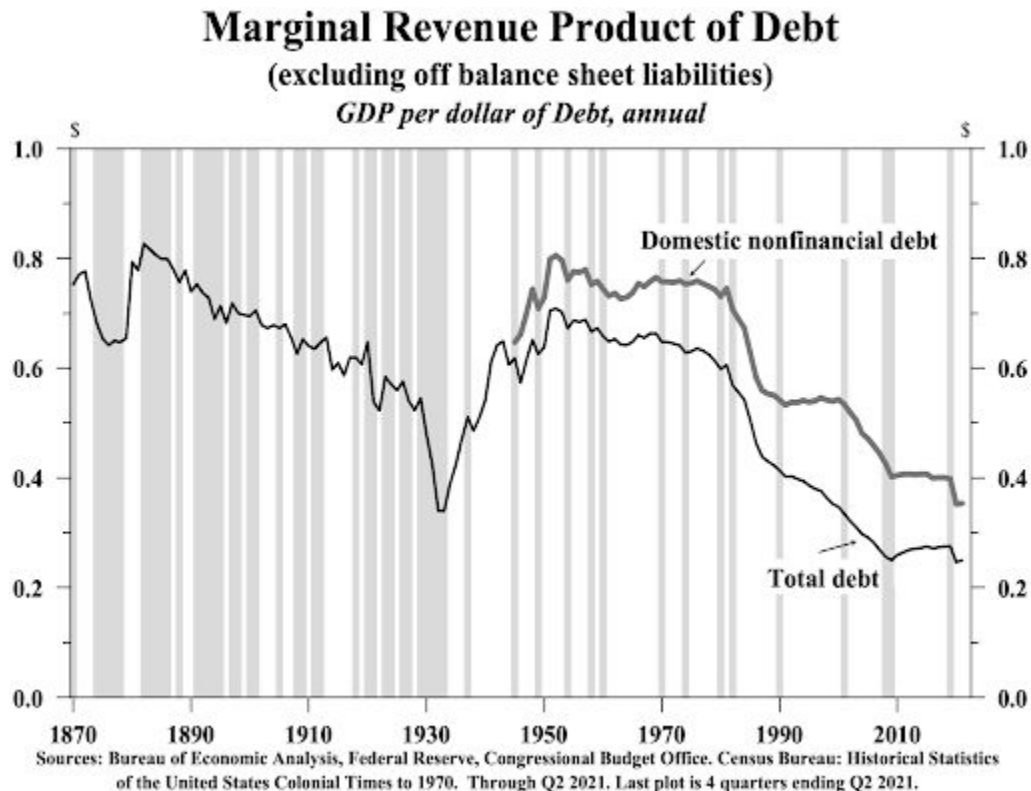




# Velocity of M2 Money Decreased 18.8% from Q1 '20 - Q3 '21



# Marginal Revenue Produced per Dollar of Debt is Decaying





## Policy and Tax Changes

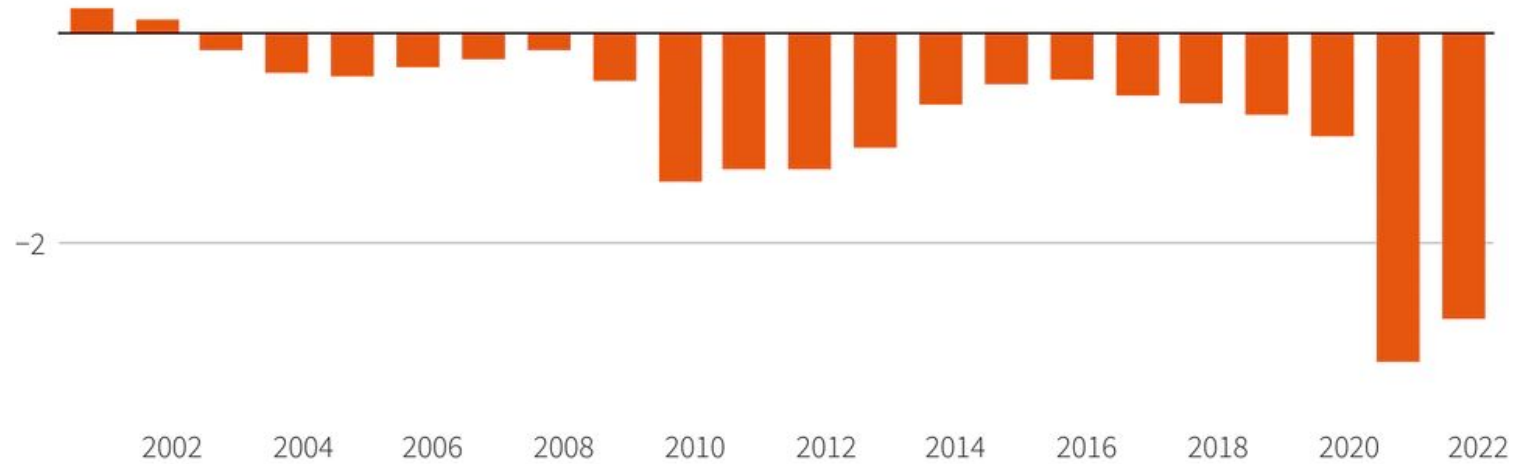
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- In 2021, the U.S. Government has spent \$6.82 trillion, creating the second largest budget gap ever.
- Several tax-related policies have been proposed in order to alleviate the federal budget gap.





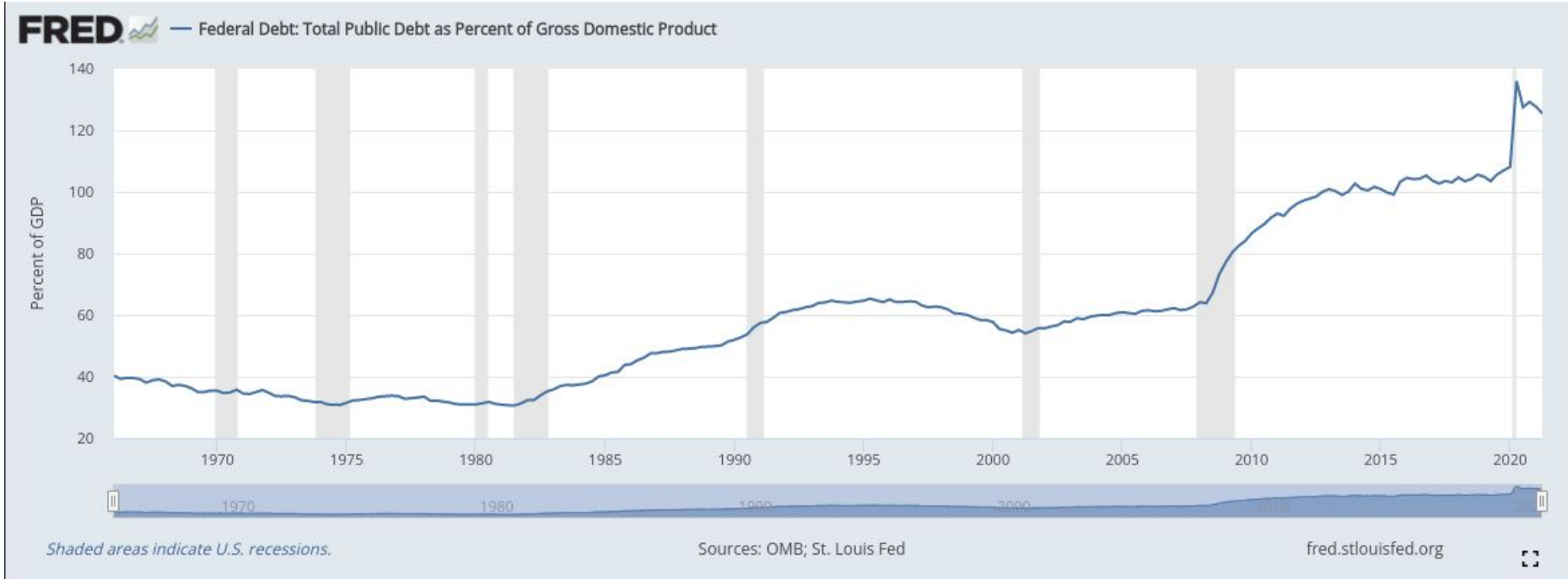
# U.S. Budget Deficit: 2020 and 2021 are the Largest Gaps Ever



Note: Figures are trillions of U.S. dollars

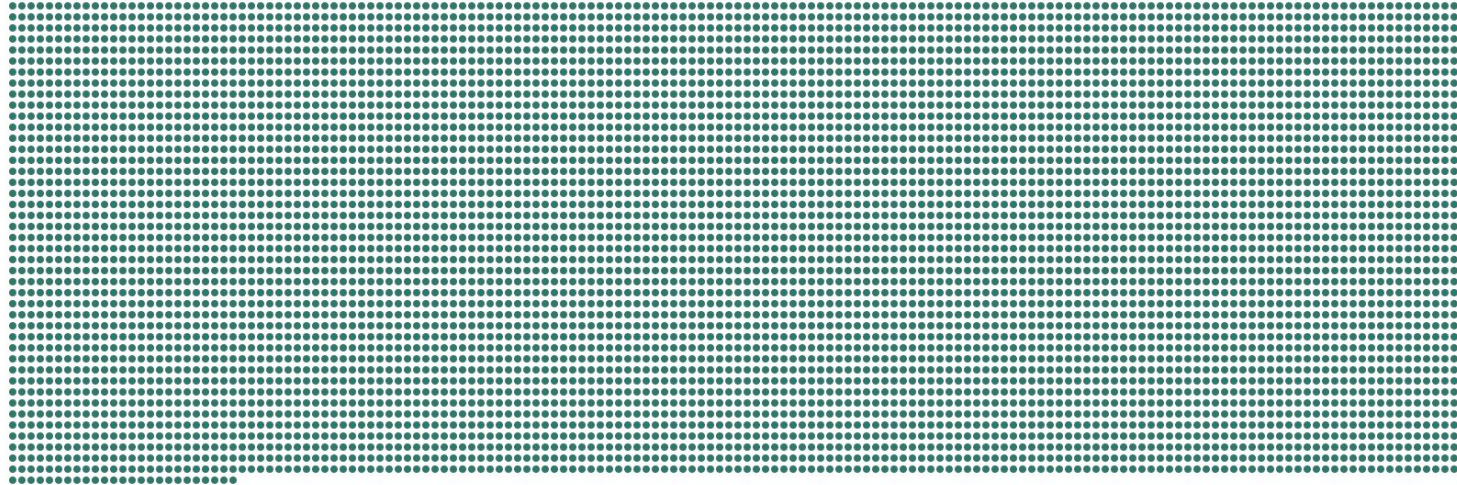


# The Amount of US Public Government Debt Exceeds US GDP



# In 2021, the U.S. Government Spent \$6.82 Trillion

● = \$1 billion

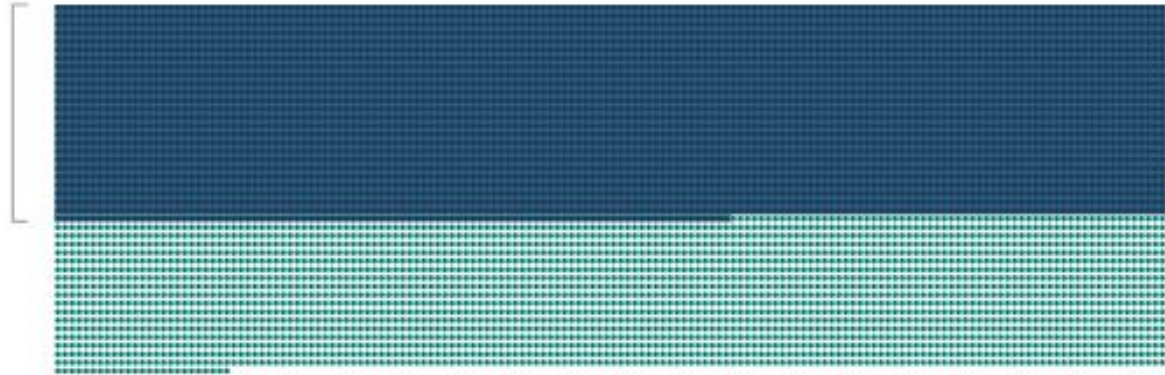


↪ 6,818 dots x \$1 billion = \$6.82 trillion

# The U.S. Government Spent 168% of Its 2021 Revenue

● = \$1 billion

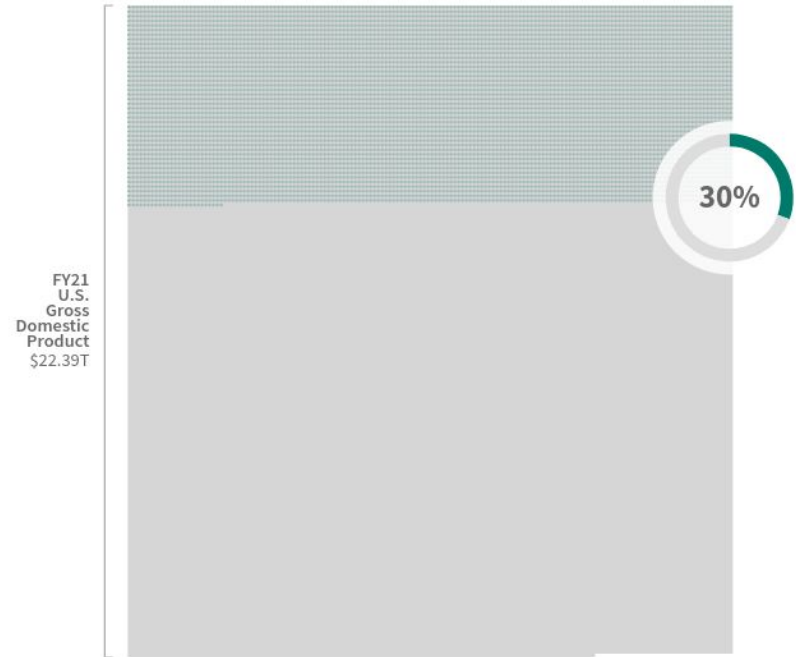
Federal  
Revenue  
\$4.05T



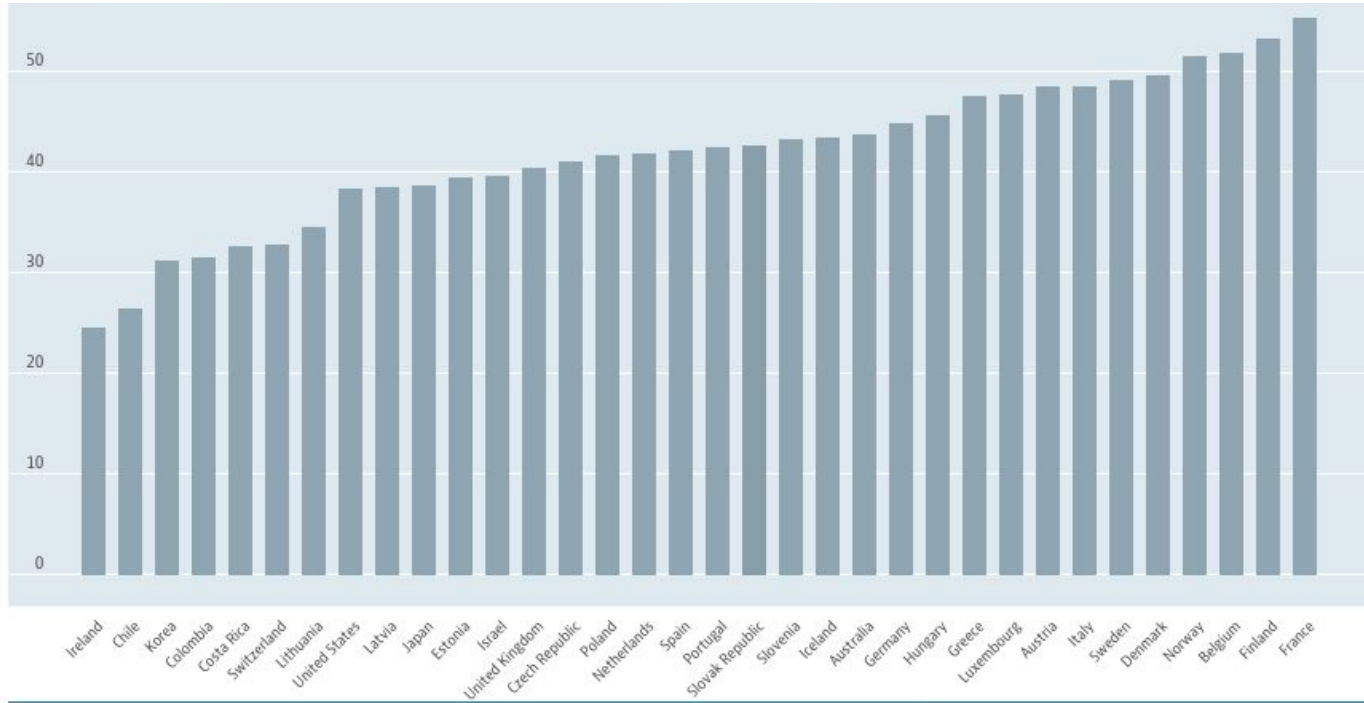
# The U.S. Government Spent 30% of Its 2021 GDP

- Government spending equates to roughly \$3 out of every \$10 of the goods produced and services provided in the United States
- Each dollar of government spending could create more or less than \$1 of GDP depending on individual behaviors and fiscal multipliers.

• = \$1 billion

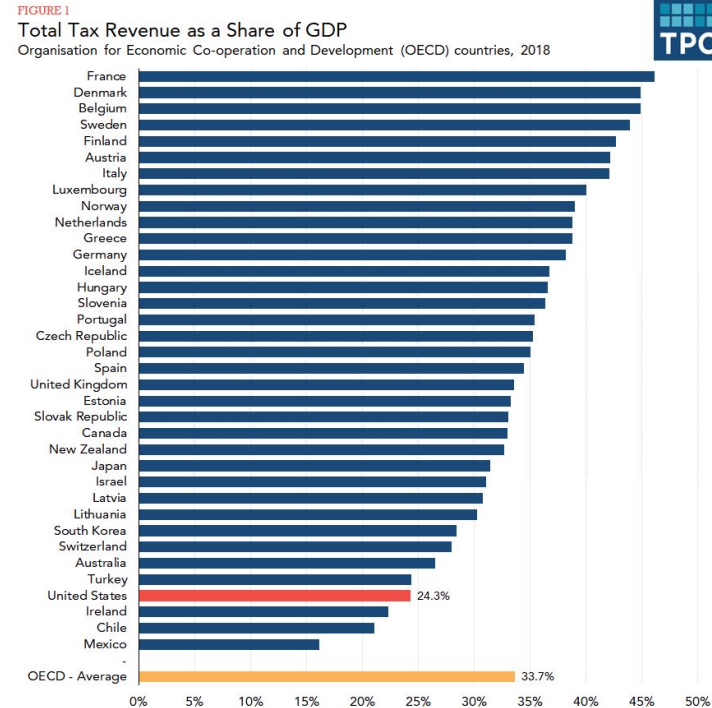


## Other Countries' Expenditures as Percent of GDP (2020)



# Total Tax Revenue as Percent of GDP (2019)

- US taxes are fairly low compared to other countries
- Observing other countries' tax revenue helps us project an upper bound for the future of US tax policies
- Lower tax rates enable individuals to shape the economy; higher tax rates give government more control





## Several Tax-Related Changes Are Being Discussed To Fund Budget

Top income tax rate to 39.6%	Top capital gains rate from 20% to 25%	3% surtax on MFJ income >\$5M
Required distributions on IRA balances >\$10M	Elimination of “back-door” Roth conversions	Wash sale rules to include commodities, digital assets, currencies
Elimination of valuation discounts for non-business assets	Corporate tax increase from 21% to 26.5%	Reduction of Federal estate tax exclusion from \$11.7M to \$6.02M





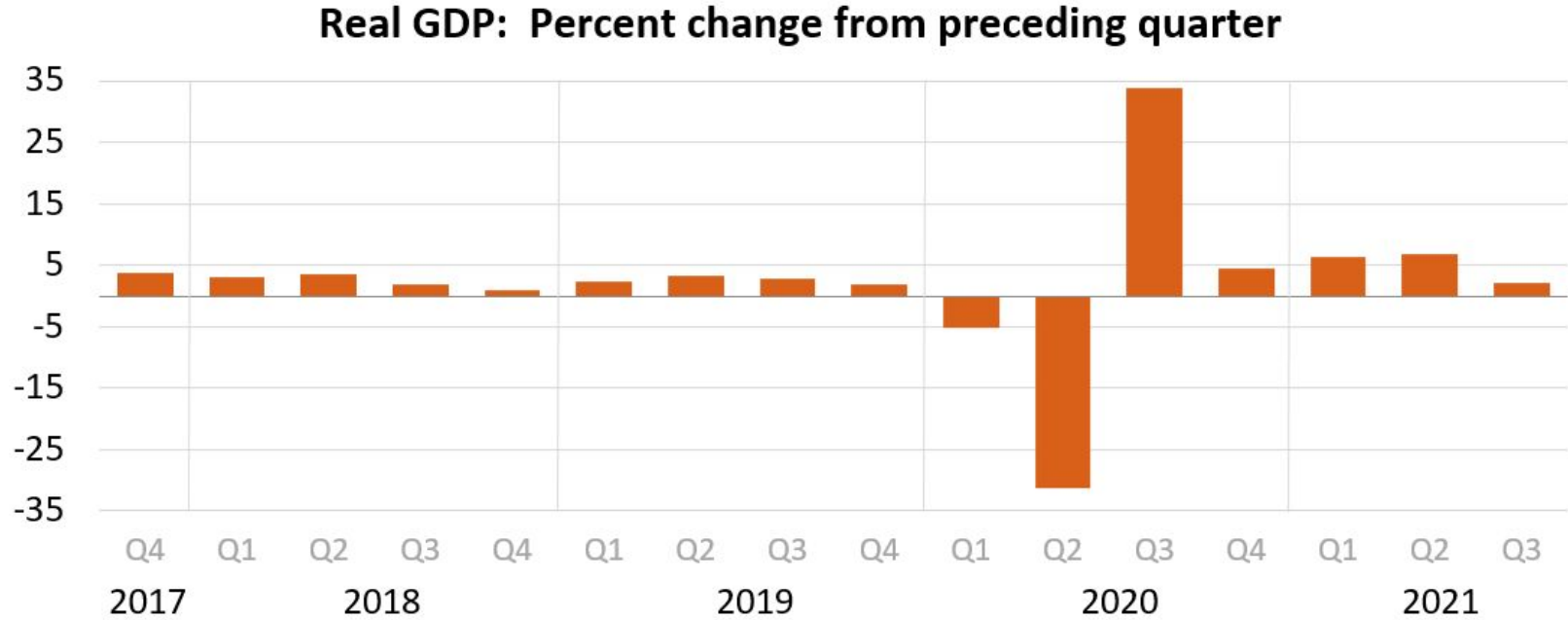
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## Economic Health & Measures

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- Lending rates, unemployment rates, and GDP all help gauge the economic health of a country.
- US GDP is one of many data points to measure the state of the economy.
- GDP growth by itself is not the best indicator of economic productivity.

## Since 2017, US GDP Tends to Grow At Most 5% QoQ (Excluding Covid)



U.S. Bureau of Economic Analysis

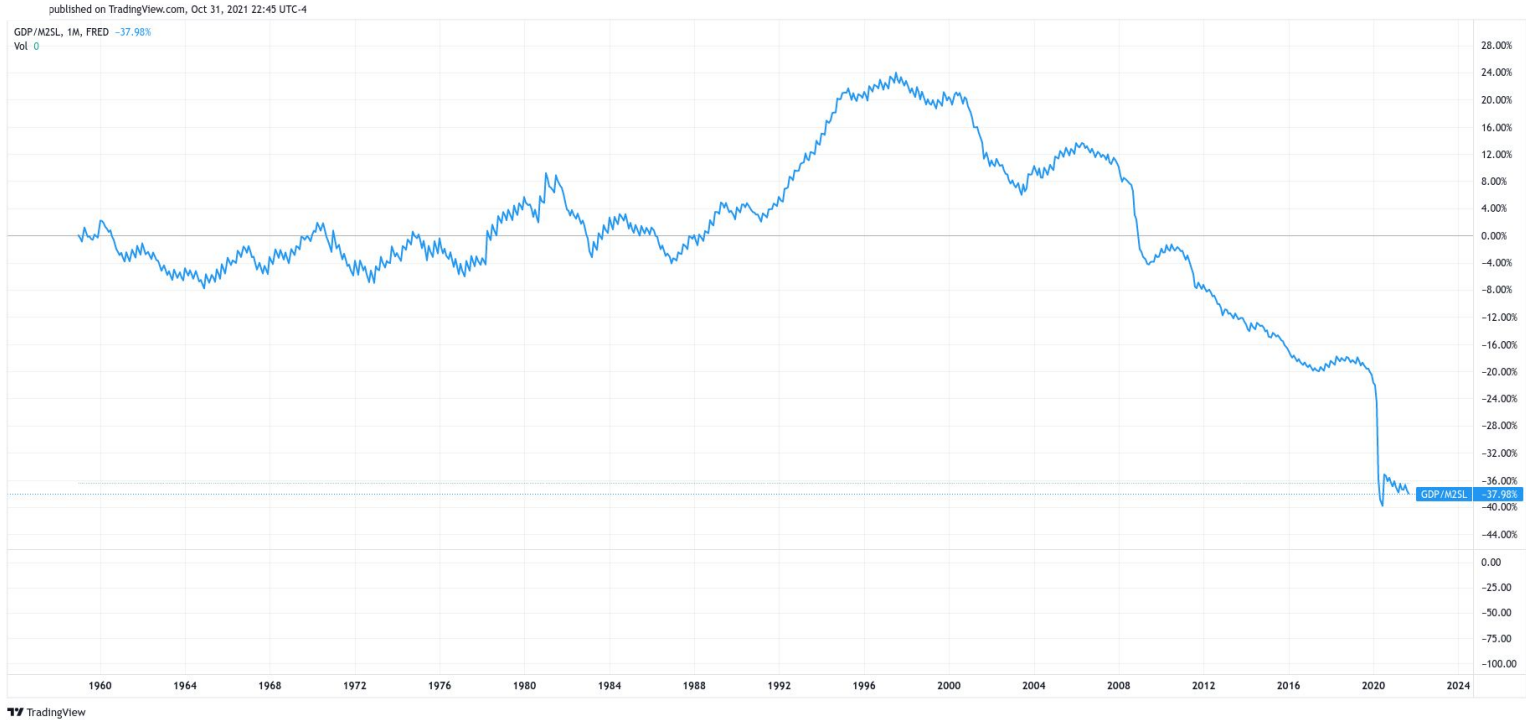
Seasonally adjusted at annual rates

## The Top 5 Countries by GDP

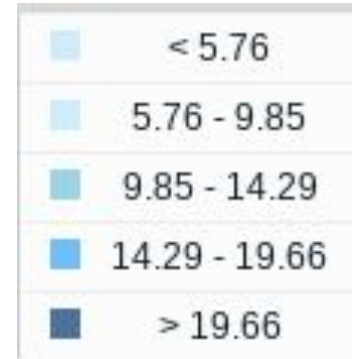
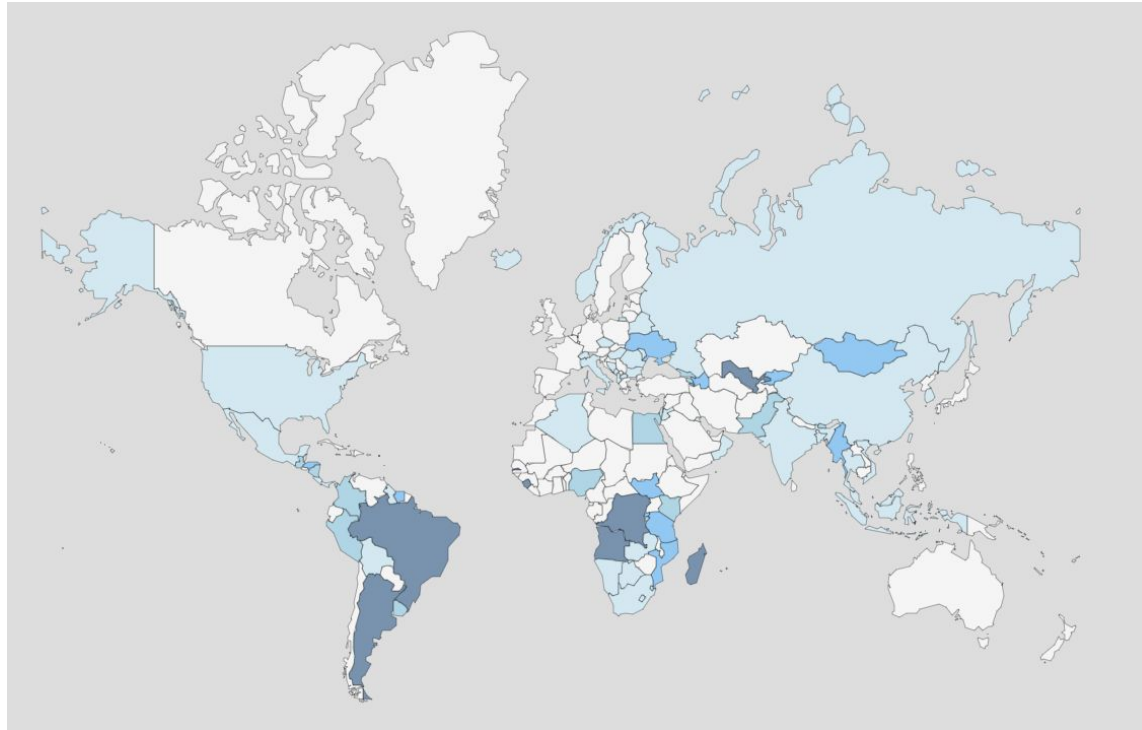
Country	Most Recent Year	Most Recent Value (Millions)	
United States	2020	20,936,600.00	
China	2020	14,722,730.70	
Japan	2020	4,975,415.24	
Germany	2020	3,846,413.93	
United Kingdom	2020	2,707,743.78	
France	2020	2,630,317.73	



# Economic Activity per Dollar Has Fallen ~50% Since 1997



# Lending Rates Around the World

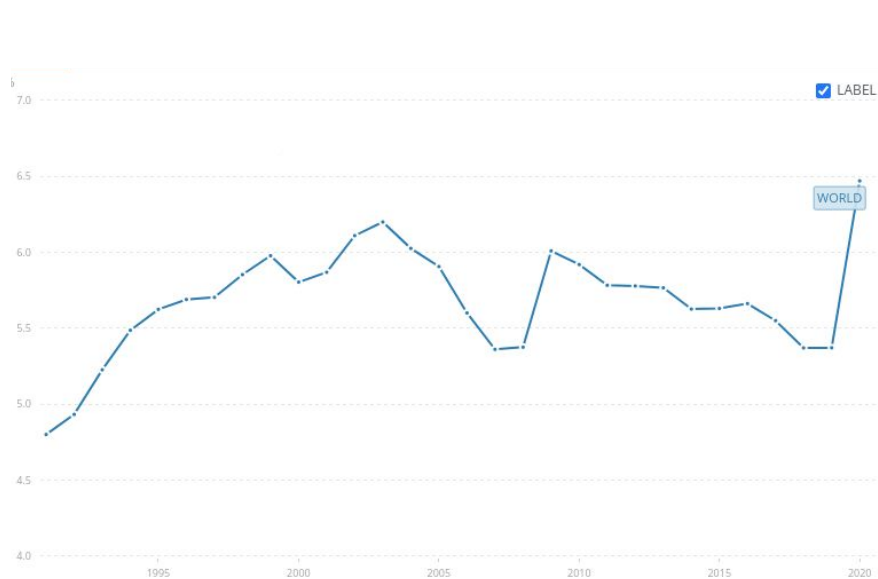


# Lowest and Highest Lending Rates

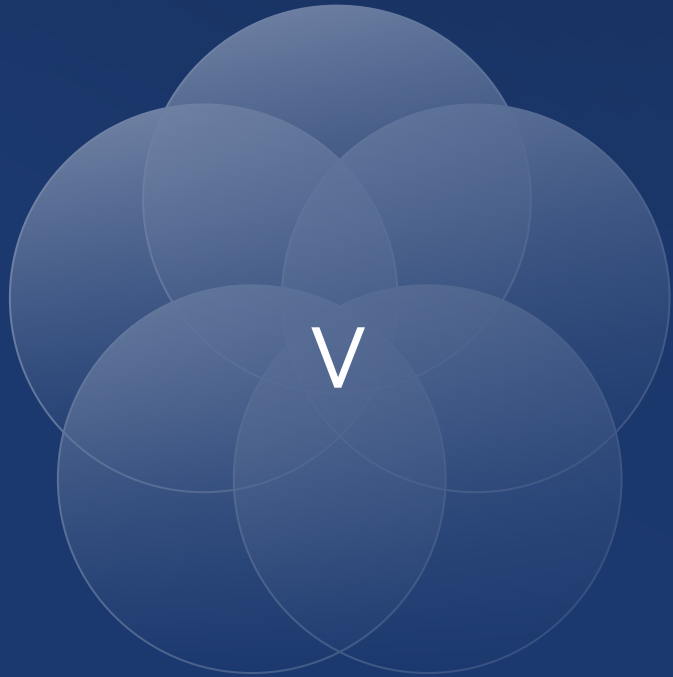
Country	Most Recent Year	Most Recent Value	
New Zealand	2018	0.0	
United Kingdom	2014	0.5	
Japan	2017	1.0	
Netherlands	2013	1.5	
San Marino	2020	1.7	
Hungary	2020	2.0	
Vanuatu	2020	2.1	
Italy	2020	2.3	
Switzerland	2020	2.6	
Norway	2020	2.7	

Country	Most Recent Year	Most Recent Value	
Madagascar	2020	48.9	
Somalia	1988	33.7	
Argentina	2020	29.4	
Brazil	2020	29.0	
Gambia, The	2020	28.0	
Congo, Dem. Rep.	2020	26.0	
Malawi	2019	25.7	
Tajikistan	2019	23.5	
Sierra Leone	2020	23.5	
Lao PDR	2010	22.6	

# Global Unemployment Rates



Country	Most Recent Year	Most Recent Value	
South Africa	2020	28.7	
West Bank and Gaza	2020	27.4	
Lesotho	2020	24.6	
Eswatini	2020	23.4	
Gabon	2020	20.5	
Namibia	2020	20.4	
St. Vincent and the Grenadines	2020	20.3	
Armenia	2020	20.2	
Libya	2020	19.4	
Jordan	2020	18.5	



## Sectors of Interest

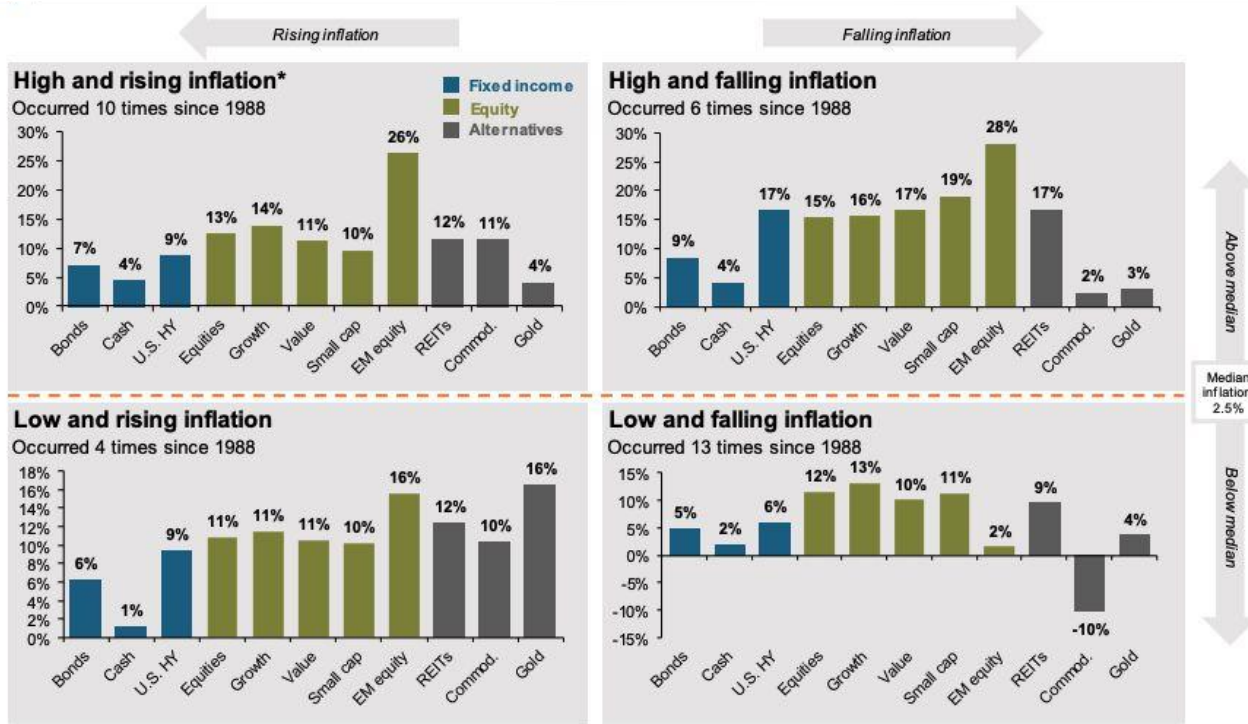
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- Explore asset class performance in changing inflation scenarios.
- Highlight Treasury yields during periods from Quantitative Easing to Quantitative Tapering.
- Highlight impact declining discount rates DCF analysis.





# Asset Class Returns in Different Inflation Environments



# S&P 500 Index Returns in an Environment with Rising US Treasury Yields

Rising Rates Start Date	Rising Rates End Date	Duration (Months)	Change in 10-Year Treasury Yield	S&P 500 Gain/Loss
12/26/62	8/29/66	44.7	1.7%	18.3%
3/16/67	12/29/69	34.0	3.6%	1.3%
3/23/71	9/16/75	54.6	3.2%	-18.1%
12/30/76	9/30/81	57.8	9.0%	8.7%
5/4/83	5/30/84	13.1	3.9%	-7.9%
8/29/86	10/16/87	13.8	3.3%	11.8%
10/15/93	11/7/94	12.9	2.9%	-1.4%
1/19/96	7/8/96	5.7	1.5%	6.7%
10/5/98	1/21/00	15.8	2.6%	45.8%
6/13/03	6/28/06	37.0	2.1%	26.0%
12/30/08	4/5/10	15.4	1.9%	33.3%
7/24/12	12/31/13	17.5	1.6%	38.1%
7/8/16	10/5/18	27.3	1.9%	35.5%
3/9/20	2/25/21	11.8	1.0%	39.4%
	Average	25.8	2.9%	17.0%
	Median	16.6	2.4%	15.0%
	% Positive			78.6%

# 10-Year US Treasury Yield After the Taper Announcement



## Present Value of Future Cash Flows Increases when Discount Rate Decreases

Year	0	1	2	3	4	5	6	7	8	9	10	10
Cash Flow	-\$5,000	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$10,000
Discount Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Present Value	-\$5,000	\$91	\$83	\$75	\$68	\$62	\$56	\$51	\$47	\$42	\$39	\$3,855

Initial Investment	\$5,000
Business Cash Flows Received in 10 Years	\$1,000
Terminal Value of Business at Year 10	\$10,000
Total Gain on Investment (= Terminal Value of Business + Cash Flows Received During Business Ownership - Purchase Price of Business)	\$6,000
Net Present Value of All Cash Flows	-\$530

Year	0	1	2	3	4	5	6	7	8	9	10	10
Cash Flow	-\$5,000	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$10,000
Discount Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Present Value	-\$5,000	\$95	\$91	\$86	\$82	\$78	\$75	\$71	\$68	\$64	\$61	\$6,139

Initial Investment	\$5,000
Business Cash Flows Received in 10 Years	\$1,000
Terminal Value of Business at Year 10	\$10,000
Total Gain on Investment (= Terminal Value of Business + Cash Flows Received During Business Ownership - Purchase Price of Business)	\$6,000
Net Present Value of All Cash Flows	\$1,911

# Summary

- 1 Previously, interest rates and inflation rates were positively correlated. In a post-pandemic investment world, a paradigm shift perhaps will alter the investment landscape to a “high inflation yet low interest rate environment in America. Because the US Dollar is the global reserve currency, this affects the entire world.
- 2 Currently, the US is seeing large amounts of inflation in various commodities. Inflation can occur in multiple forms, such as consumer price inflation, commodity input price inflation, wage/labor inflation, supply shortages, time inflation, shrinkflation, and financial asset inflation.
- 3 The US government’s multi-trillion-dollar annual expenditures grow every year, which constantly outpaces their revenues from taxes and services. This deficit adds to the ~\$29 trillion in US debt.
- 4 Lending rates, GDP growth, and unemployment rates around the world help us understand the upper and lower bounds of a specific country’s future expectations. Comparatively, the US has a low unemployment rate, historically-low benchmark interest rates rates, and rising GDP.
- 5 In a “high inflation yet low interest rate environment” in America, earning positive investment returns with a hurdle rate transitioned from a “nice to have” feature to a “necessary to have” feature. Assets that earn returns below the inflation rate are earning negative inflation-adjusted returns. As a result, there is increased investor emphasis on alternative investments, growth investments, and digital assets.

## Resources



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