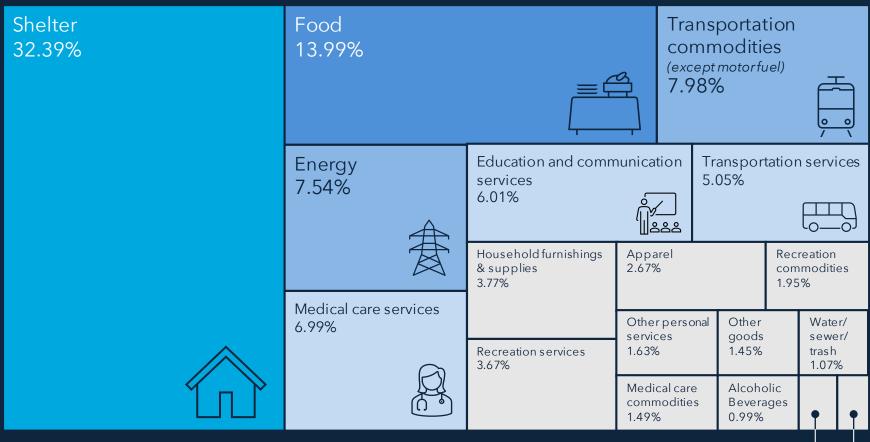


Breakdown of US Inflation Basket

Housing, food and energy prices represent nearly 54% of expenditures in the US consumer CPI bucket, with housing alone accounting for nearly 1/3 of the basket.



Household operations 0.90%

Education & communication commodities 0.47%

Global Corporate & Investment Banking Capital Markets Strategy Team



Tom Joyce

Managing Director Capital Markets Strategist New York, NY

Tom.Joyce@mufgsecurities.com (212) 405-7472



Hailey Orr

Director Capital Markets Strategist New York, NY

Hailey.Orr@mufgsecurities.com (212) 405-7429



Stephanie Kendal

Associate Capital Markets Strategist New York, NY

Stephanie.Kendal@mufgsecurities.com (212) 405-7443

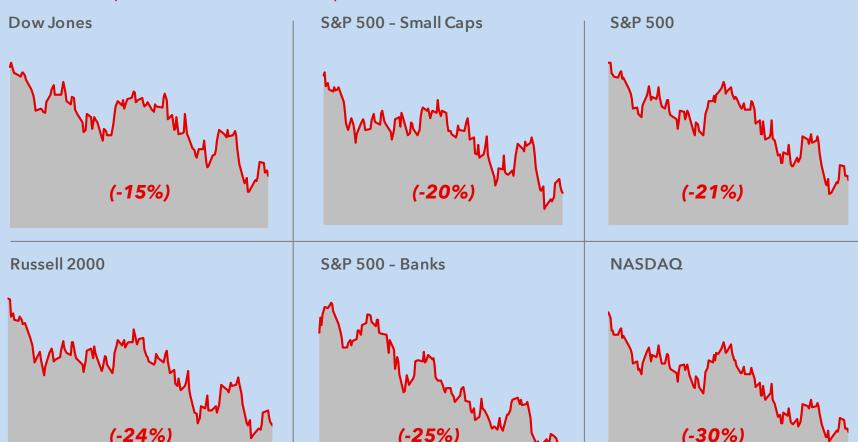
1H 2022 Performance

- 1 Global Equity Markets
- 2 Global Commodity Markets
- 3 Global Credit Markets
- 4 Global FX Markets
- 5 Emerging Markets
- 6 Global ESG Markets



US Equity Markets in 1H 2022

In one of the worst starts to a year on record for US equities, the small-cap Russell 2000 had the worst 1H performance since inception in 1979 and the NASDAQ 100 declined in 5 of 6 months to record its worst half in 20 years (and its worst quarter (Q2) since 2008). Mega-cap stocks (top 10 in the S&P 500) declined 25% in 1H 2022, vs. 21% for the broader S&P.



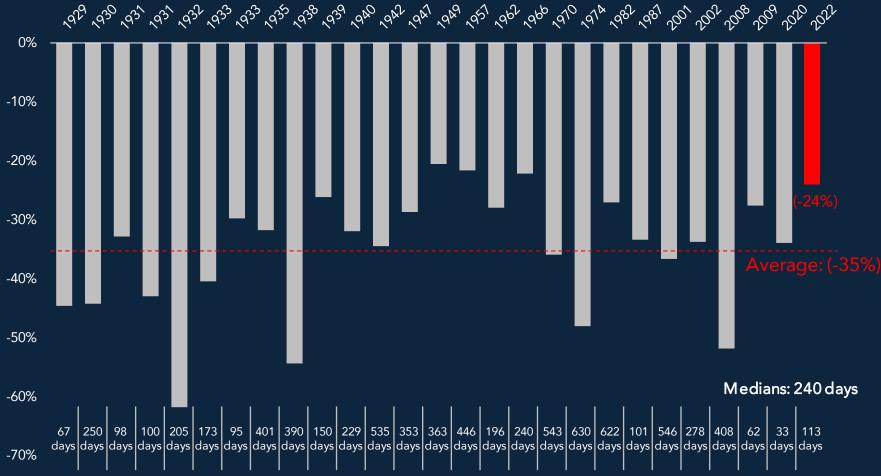
Source: (1-6) Bloomberg. Data as of June 30, 2022.

Stagflation Concerns/JUL 2022/page 6

US Equity Fell into a Bear Market

In 1H 2022, US equities fell into their 27th bear market (decline > 20%) since 1929. Since 1960, stocks have only recorded double digit declines in a 1H on seven occasions, with only two such periods recording larger declines than 1H 2022 (1962 & 1970).

S&P 500 bear markets since 1929 (peak to trough)

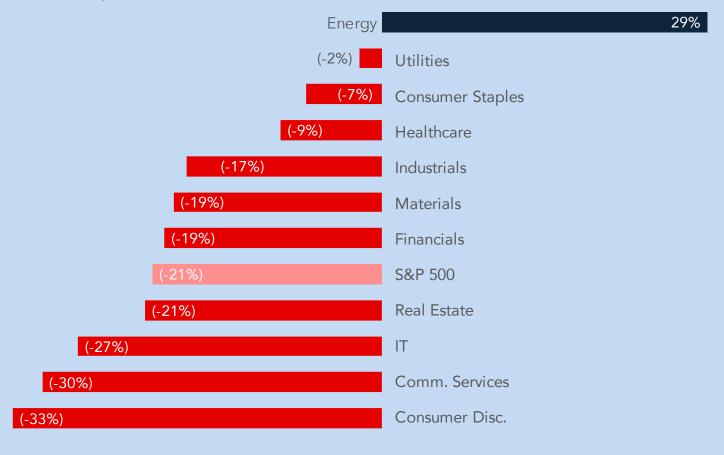


Source: (1) Nicholas Jasinski, Barron's. WSJ. Bloomberg. FT. Oxford Economics ("Equities: Bear Market Begins").

S&P 500 Performance, by Sector, in 1H 2022

Very few financial markets trade well in stagflation environments. Historically, commodities have outperformed during both inflationary periods and Fed tightening cycles.

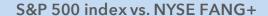
S&P 500 sector performance (1H 2022)



Source: (1) Bloomberg. Data as of June 30, 2022.

The Rotation from Tech to Value in 1H 2022

S&P 500 growth stocks declined 28% vs. a 21% drop for the rest of the index. The FANG+ index, which consists of high growth technology, stocks outperformed in the pandemic recovery period, but declined 34% in 1H 2022. The Russell 1000 large-cap value index outperformed the large-cap growth index by more than 15 percentage points in 1H 2022. The value index had its 2nd best performance since the inception of the Russell indices in 1978.





Source: (1-2) Bloomberg. Data as of June 30, 2022.

S&P growth vs. value



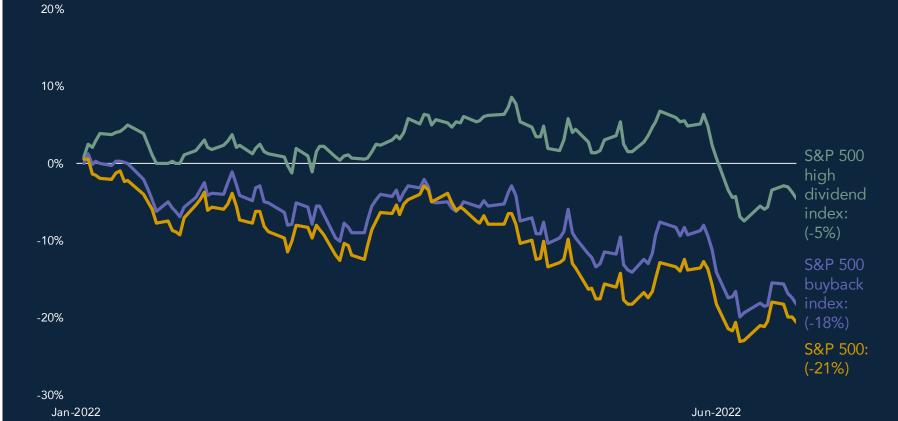
an-2022

Jun-2022

Dividend Stocks Outperformed Buybacks in 1H 2022

S&P 500 companies paid \$138 billion of dividends in Q1 2022, a new record. With inflation and interest rates rising, investors value the free cash offered by high paying dividend stocks over the future profits of high growth stocks, heavy buyback names and the broader market.

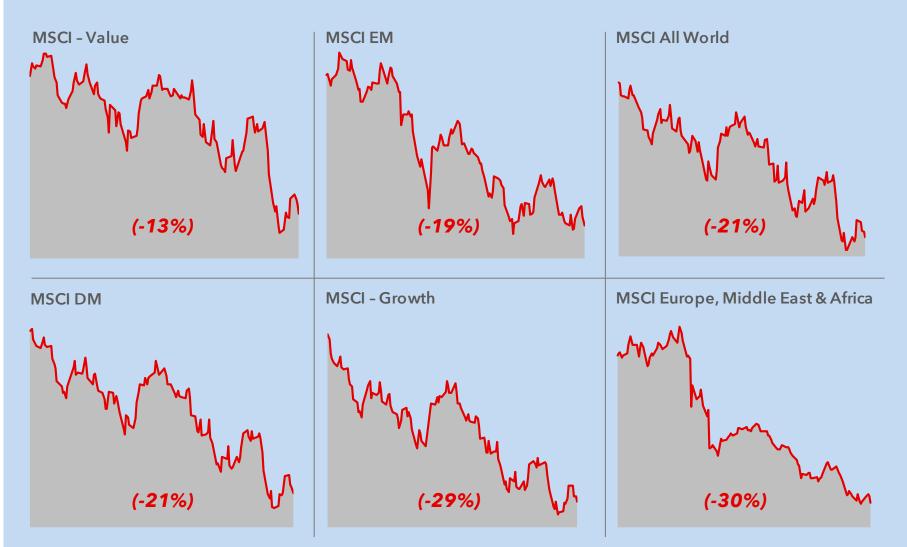
S&P 500 vs. S&P High Dividend Index vs. S&P Buyback Index



Source: (1) Bloomberg. Data as of July 1, 2022.

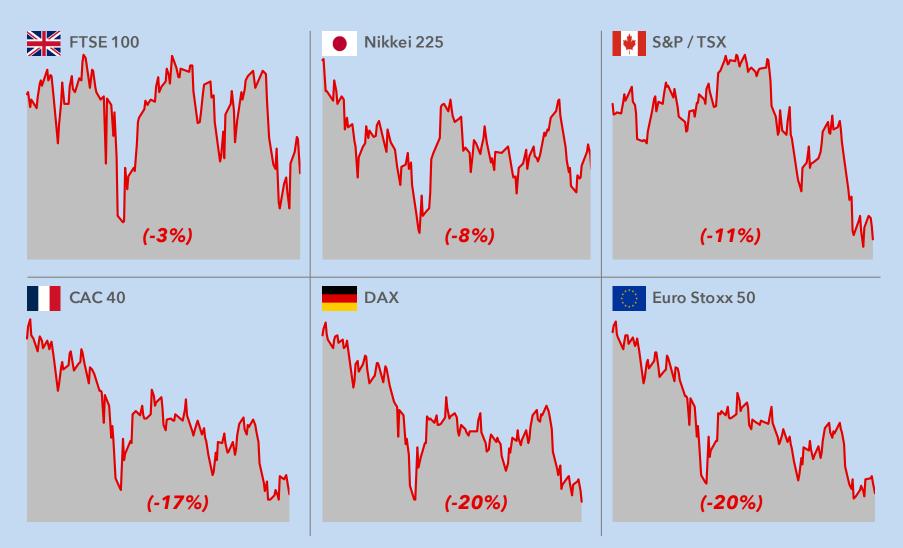


Global Equity Markets in 1H 2022



Source: (1-6) Bloomberg. Data as of June 30, 2022.

Developed Equity Markets in 1H 2022

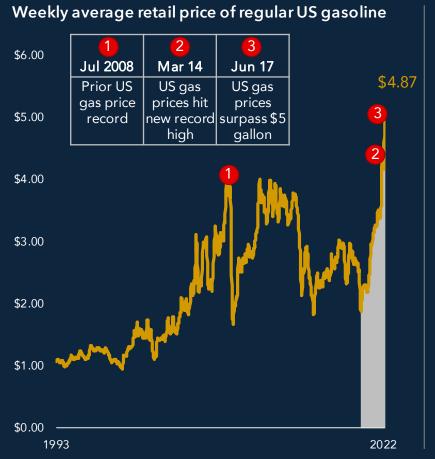


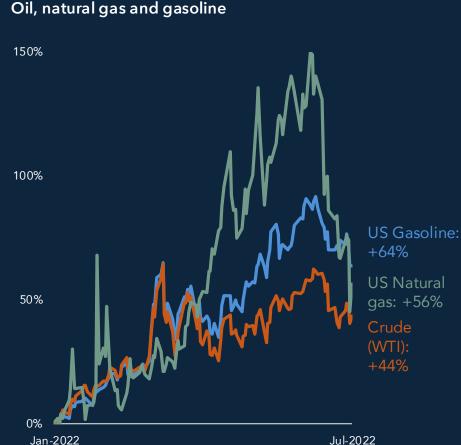
Source: (1-6) Bloomberg. Data as of June 30, 2022.



Historic Surge in US Gas Prices in 1H 2022

Food, shelter and gasoline account for a very high percentage of disposable income for most Americans, and all three are rising rapidly. US gasoline prices surged 64% in 1H 2022, recently climbing above \$5 per gallon for the first time ever. The prior record, reached in July 2008, was surpassed on March 14, three weeks after Russia's invasion of Ukraine.





Source: (1-2) Bloomberg. Data as of July 1, 2022. EIA

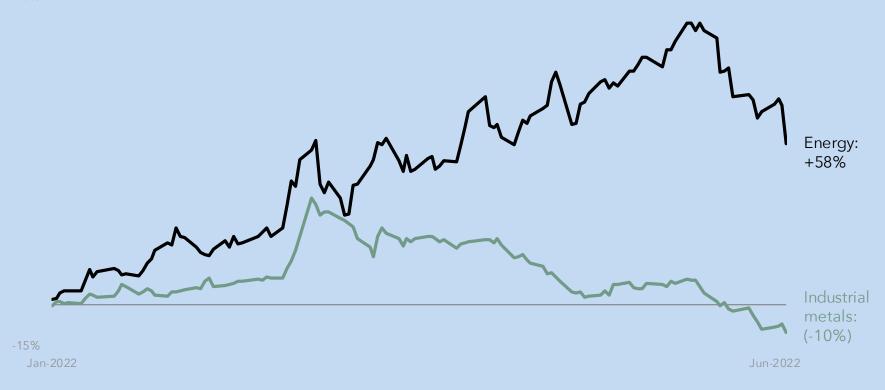
Stagflation Concerns/JUL 2022/page 14

Energy & Industrial Metals Diverged in 1H 2022

The divergence in energy and industrial metals in the 1H 2022 captures much of the market's inflation concerns, with economically sensitive commodities like copper down sharply on recession concerns while energy prices remain elevated on geopolitical risk.

Energy vs. industrial metals, 1H performance

110%



Source: (1) Bloomberg. Data as of June 30, 2022. Energy and industrial metals are Bloomberg sub indexes.

Energy Markets in 1H 2022

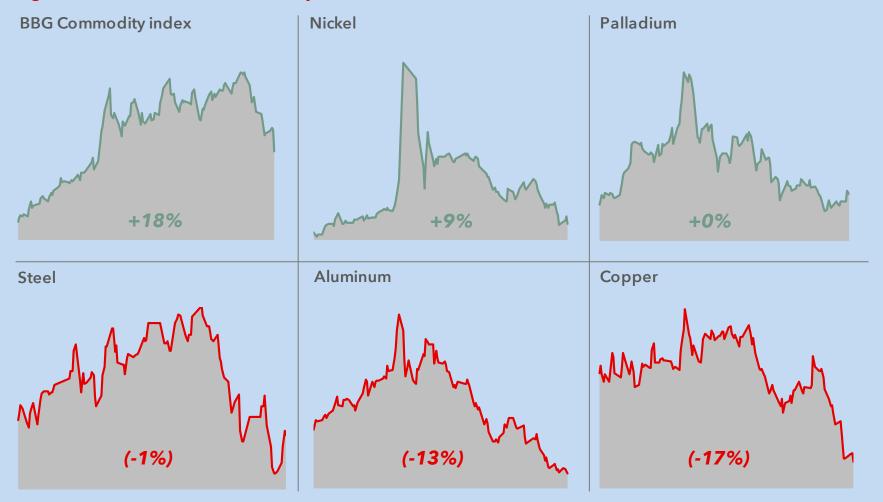


Source: (1-4) Bloomberg. Data as of June 30, 2022.

+45%

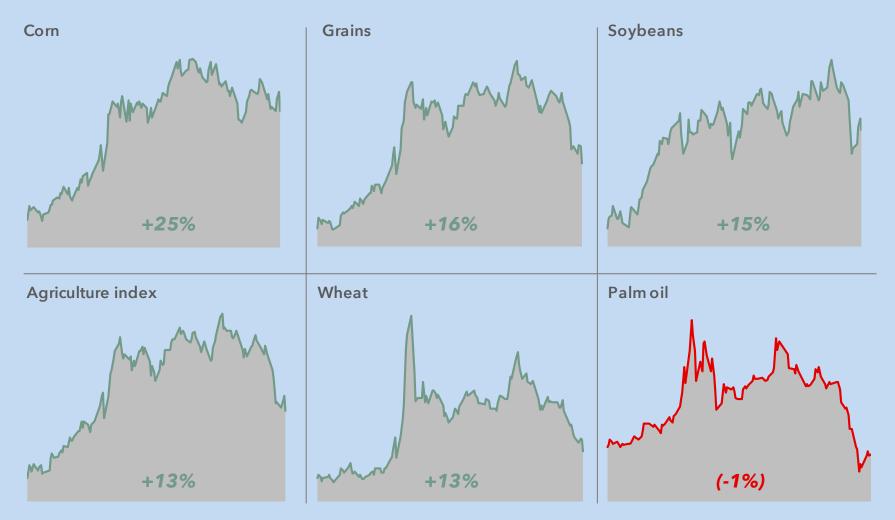
Industrial Metals in 1H 2022

While the Bloomberg Commodity Index gained 18% in 1H 2021, it retraced 17% from its March highs and had its 3rd worst monthly decline since 2008 in June



Source: (1-6) Bloomberg. Data as of June 30, 2022.

Agriculture Markets in 1H 2022



Source: (1-6) Bloomberg. Data as of June 30, 2022.



Worst Bond Market Returns on Record

Since 1976, there have only been 4 years that the US bond market recorded losses, with the 1H 2022, down 10% YTD, the worst start to the year on record.

US aggregate bond index, total annual return

Year	Total annual return
2022YTD	(-10.3%)
1994	(-2.9%)
2013	(-2.0%)
2021	(-1.5%)
1999	(-0.8%)
2018	0.0%
2015	0.5%
1978	1.4%
1979	1.9%
2005	2.4%
2016	2.6%
1980	2.7%
1987	2.8%
1977	3.0%
2017	 3.5%

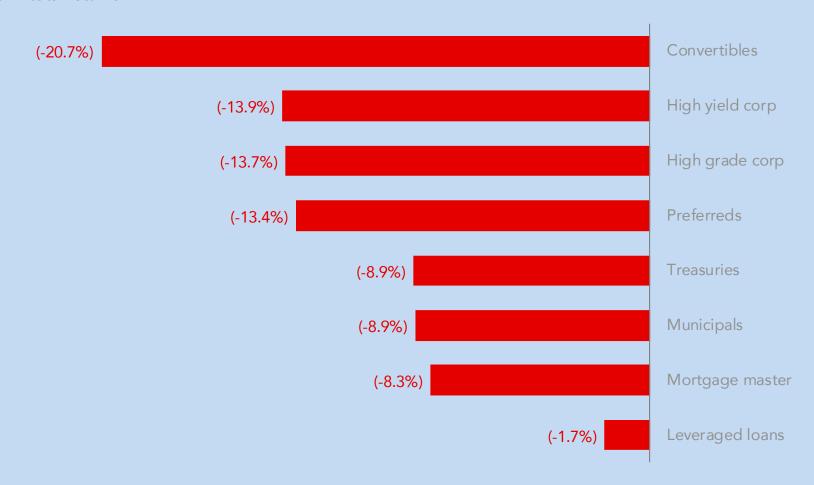
Year	To tal annual return
1996	3.6%
2003	4.1%
2012	4.2%
2006	4.3%
2004	4.3%
2008	5.2%
2009	5.9%
2014	6.0%
1981	6.2%
2010	6.5%
2007	7.0%
1992	7.4%
2020	7.5%
2011	7.8%
1988	7.9%

Year	To tal annual return
1983	8.4%
2001	8.4%
1998	8.7%
2019	8.7%
1990	9.0%
1997	9.7%
1993	9.7%
2002	10.3%
2000	11.6%
1989	14.5%
1984	15.1%
1986	15.3%
1991	16.0%
1995	18.5%
1985	22.1%
1982	32.6%

Source: (1) WSJ, "It's the Worst Bond Market Since 1842. That's Good News" (May 6, 2022). Bloomberg. Data as of June 30, 2022. Bloomberg US aggregate bond index.

Historic Sell-Off in USD Credit Markets in 1H 2022

1H 2022 total returns

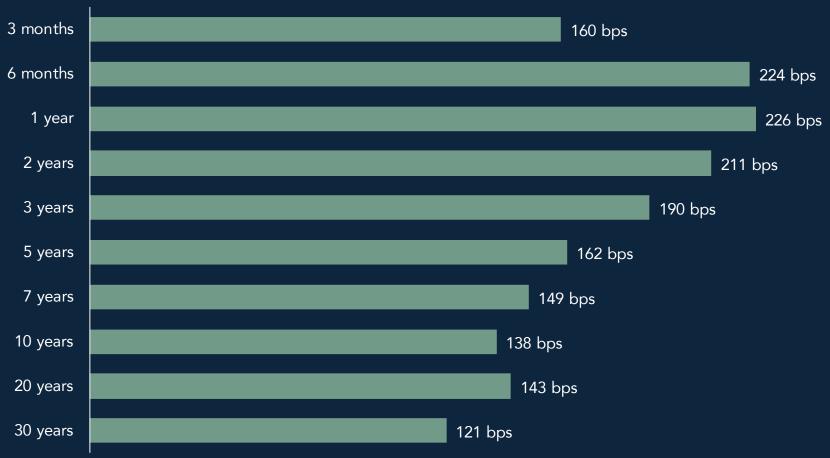


Source: (1) CreditSights, "US Weekly - The Game Has Two Halves" (July 2022). Total returns through July 1, 2022.

UST Rates Sharply Wider in 1H 2022

US Treasuries recorded their worst 1H in over 200 years, with 10 year yields increasing nearly 200 bps to the highest level since 2011 (3.5%) at peak. The 10 year UST ended 1H at nearly double its level at the start of the year.



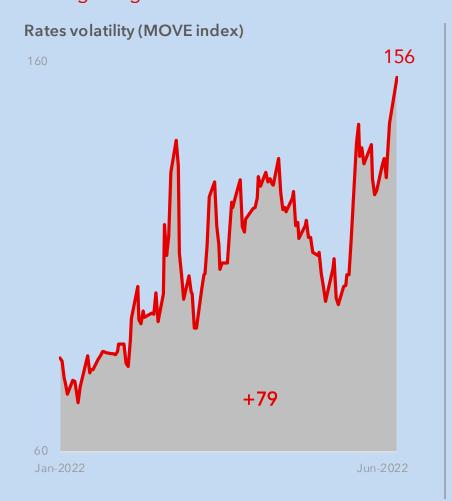


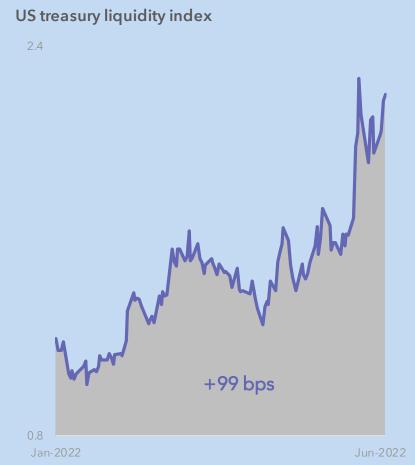
Source: (1) CreditSights, "US Weekly - The Game Has Two Halves" (July 2022). Total returns through July 1, 2022.

Stagflation Concerns / JUL 2022 / page 22

Treasury Market Volatility & Liquidity in 1H 2022

US Treasury market volatility and liquidity indices traded to their highest levels in the 1H 2022 since the beginning of the COVID crisis



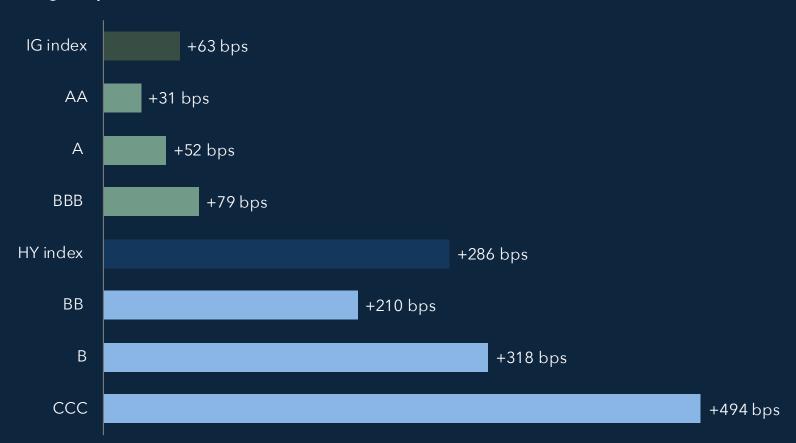


Source: (1-2) Bloomberg. Data as of June 30, 2022.

USD Credit Spreads in 1H 2022

IG spreads ended the 1H 2022 at two year highs after breaching the psychologically important 150 bps resistance level. While HY spreads were also sharply wider over the period, a moderate tightening in spreads could pick up pace later in the year as decelerating growth and inflation "past peak" induce the Fed to significantly slow the pace of tightening.

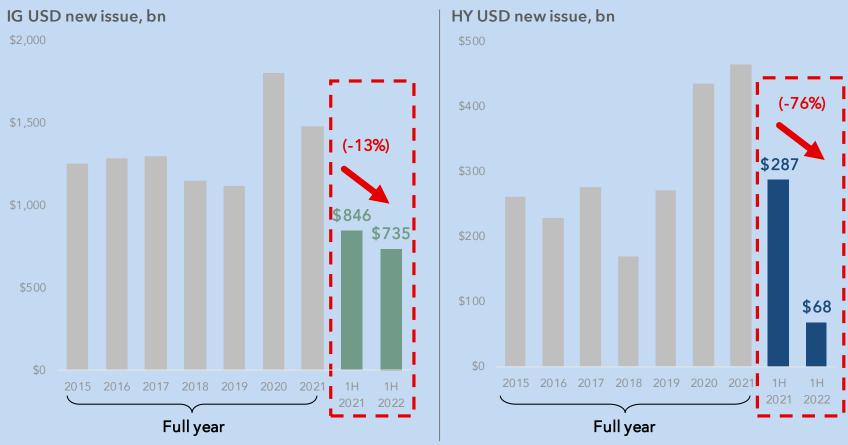
Change in spreads (1H 2022)



Source: (1) Bloomberg. Data as of June 30, 2022. Bloomberg OAS indices.

UST New Issue Market in 1H 2022

Globally, corporates raised \$4.9 tn in funding in 1H 2022, 25% lower than the record setting 1H 2021 period. Equity financing in particular declined nearly 70% in the first six months of the year. While down 13% y/y, USD IG issuance volumes in the 1H 2022 were the 3rd strongest on record given robust Q1 issuance. By comparison, USD HY issuance in 1H 2022 was down 76% y/y on higher volatility and financing costs over the period.



Source: (1-2) IFR. MUFG Syndicate. Data as of June 30, 2022.

US Mortgage Rates Soar

US mortgage rates have soared to levels not seen since November 2008. The effective 30-year fixed rate topped 6% in June, more than 320 bps higher than the 20 year low in February 2021 (including nearly 300 bps since the Fed's hawkish pivot in November).

US 30 year mortgage rates over last 20 years (2002 - 2022)

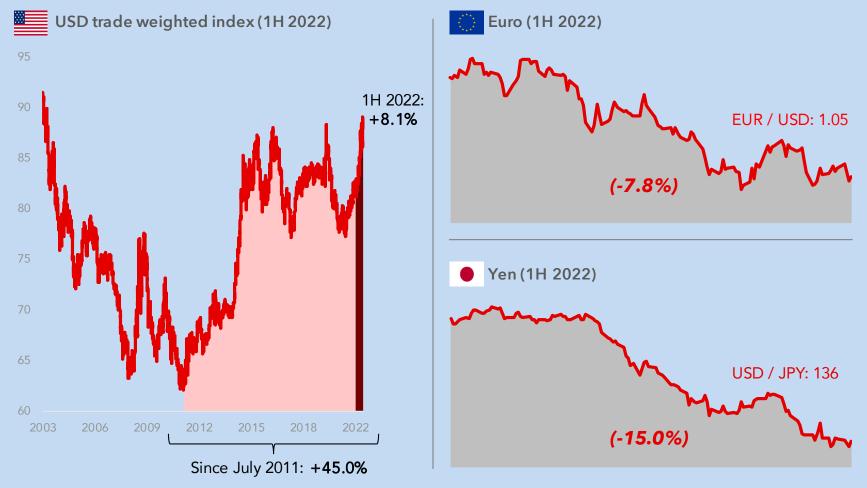


Source: (1) Bloomberg. Data as of June 30, 2022. 30 year mortgage rate index is the Bankrate.com US Home Mortgage 30 year Fixed National Average.



Historic USD Strengthening in 1H 2022

The USD Index rose 8.1% in the 1H 2022 to its highest level in two decades, and its best six month start since 2010. Euro and Yen dropped to their lowest levels in the 1H 2022 in over 20 years.

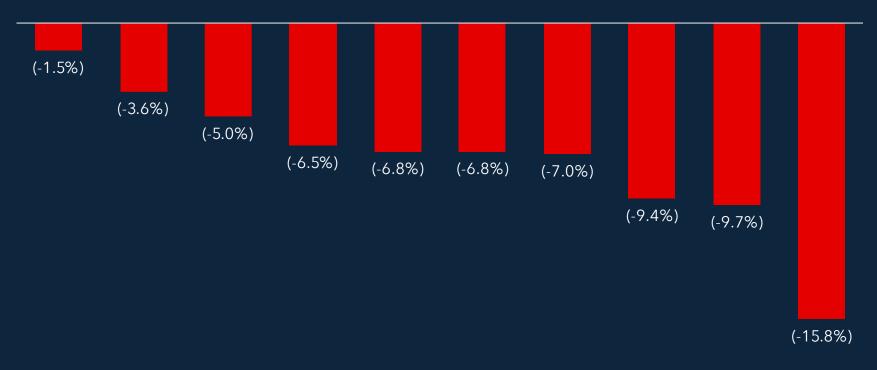


Source: (1-3) Bloomberg. Data as of June 30, 2022. Euro and Yen vs. USD. Yen axis inverted to show depreciation.

G10 Currencies During the Ukraine Crisis

Though traditionally a reliable safe haven in global markets, Yen has been the worst performing G10 currency since the Ukraine invasion began on February 24.

G10 currencies vs US Dollar Since February 24, 2022



Canadian Dollar



Dollar



Australian Swiss Franc New Zealand Dollar



Euro



Danish

Swedish Krona



British Pound



Norwegian Krone









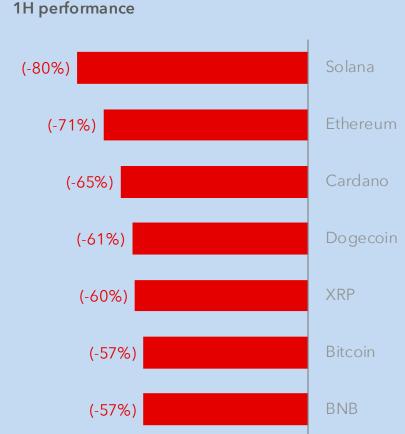
Source: (1) Bloomberg. Data as of July 1, 2022. Performance is vs. USD.

Stagflation Concerns / JUL 2022 / page 29

Cryptocurrencies Plunged in 1H 2022

In 1H 2022, global cryptocurrency markets lost roughly \$2 trillion dollars in market cap. Bitcoin, the largest cryptocurrency by market cap, declined nearly 60% in the first six months of the year.





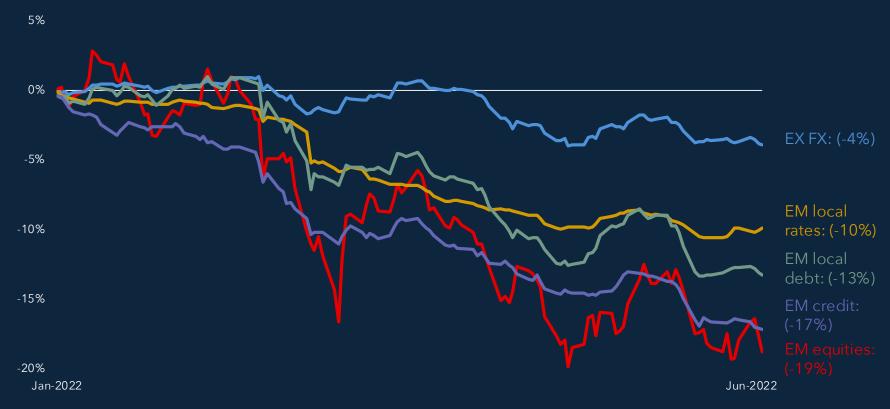
Source: (1-2) Bloomberg. Data as of June 30, 2022. Bloomberg crypto index is BBG Galaxy Crypto Index.



Economic Vulnerabilities in 1H 2022

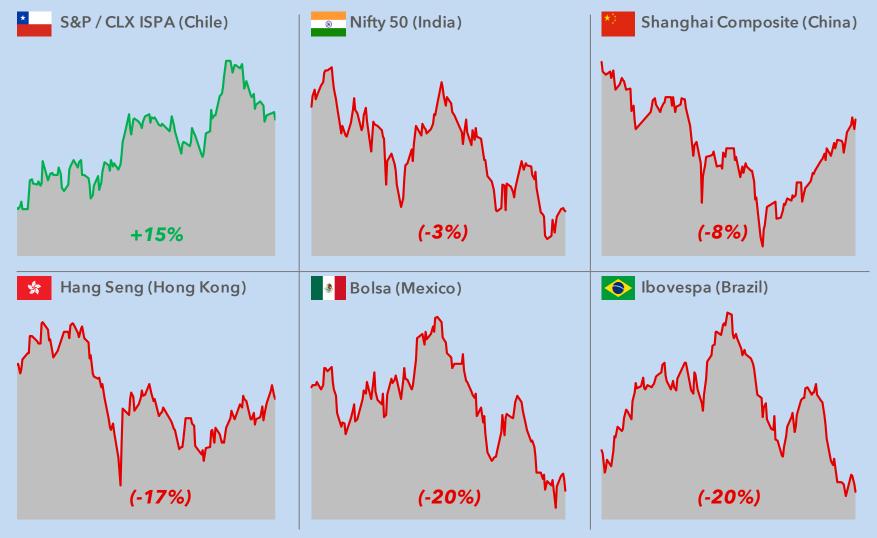
Emerging market economies have been exposed to elevated stagflation risk across multiple dimensions: the Russia-Ukraine crisis, China's lockdown, supply chain dislocations, higher borrowing costs (on policy tightening) and rising commodity prices. EM PMI data suggests that the trend of slower EM economic activity will likely continue for the remainder of the year, while inflation pressures remain sticky and elevated.

YTD performance



Source: (1) MUFG Macro Monthly (Khoman). Bloomberg. Data as of June 30, 2022. EM FX and equities are MSCI. EM local rates is Bloomberg Local Currency Government 10% Country Capped Index. EM Credit is Bloomberg EM Hard Currency Aggregate Index.

Emerging Equity Markets in 1H 2022



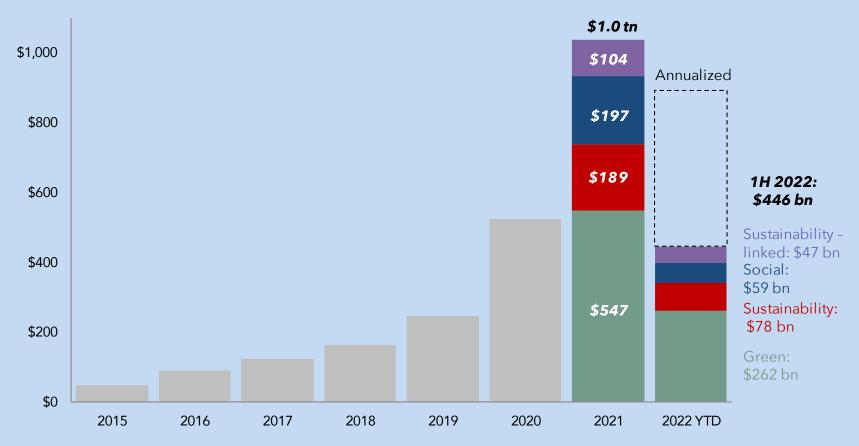
Source: (1-6) Bloomberg. Data as of June 30, 2022.



ESG Issuance in 1H 2022

In 1H 2022, global ESG issuance declined 21% to \$446 bn as rising borrowing costs weighed on issuers

ESG issuance, USD bn

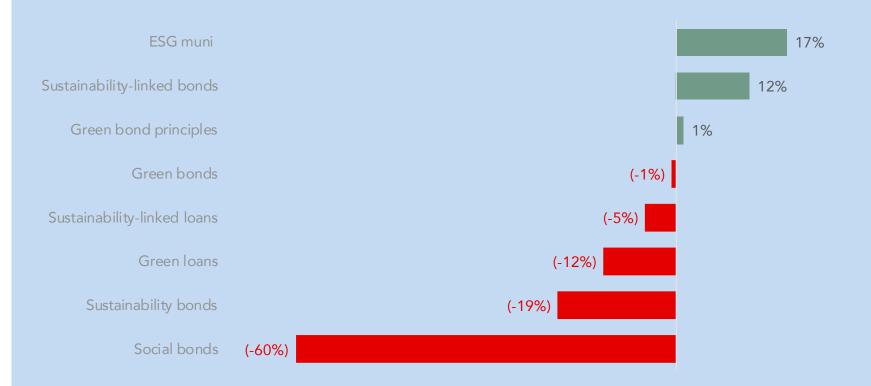


Source: (1) Bloomberg. Data as of June 30, 2022.MUFG Capital Markets. 2022 data is through June 30, 2022. Includes corporate, FIG and SSA volumes and Reg S and 144As.

ESG Issuance in 1H 2022

Across ESG financing markets, social and sustainability bond issuance declined the most in 1H 2022, falling 60% and 19%, respectively. Sustainability-linked bonds, however, increased 12% in 1H 2022 as additional ICMA guidelines created a higher level of clarity and integrity in the market.

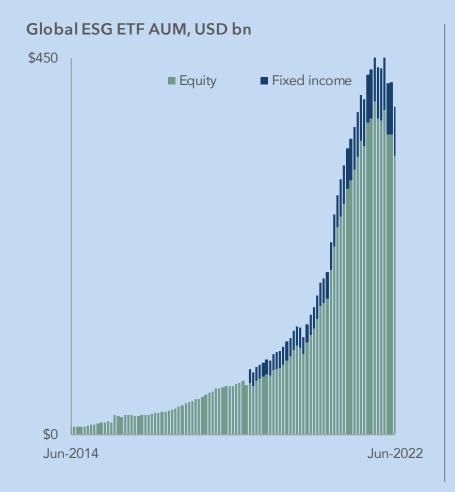
% change in issuance volume in 1H 2022 (y/y)

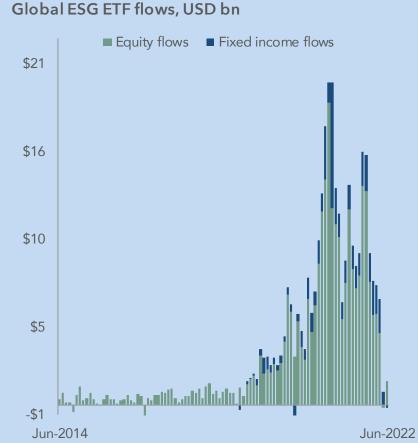


Source: (1) Bloomberg, "Sustainability-Linked Bond Sales Rise as Green, Social Decline" (July 6, 2022).

Volatility Impacting ESG Fund Flows

For the first time in three years, ESG equity ETFs experienced net outflows in the month of May as markets broadly faced higher volatility. The news comes as regulators increase scrutiny on ESG funds.





 $Source: \ (1\hbox{--}2) \ Bloomberg \, Intelligence . \, Data \, through \, June \, 23, \, 2022.$

Mixed ESG Performance in 1H 2022

While ESG funds outperformed for much of the COVID recovery period, the global surge in commodity prices has led to some ESG underperformance in 1H 2022.



Source: (1-4) Bloomberg. Data as of June 30, 2022. ESG ETF is MSCI USA ESG select. Clean energy is S&P 500 global clean energy index. Coal is Dow Jones coal index.

-20%

Jan

Jun

(-2%)

Jun

\$0.8

Jan

About the Authors



Tom Joyce
Managing Director
Capital Markets Strategist
New York, NY

Tom.Joyce@mufgsecurities.com (212) 405-7472

Tom Joyce is a Managing Director and Capital Markets Strategist within MUFG's global capital markets and investment banking business. Based in New York, Tom heads a team that creates customized analytical content for multi-national S&P 500 companies. His team provides in depth analysis on the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Tom has over 25 years of Investment Banking experience in New York, London, Hong Kong, and San Francisco. Over the last 15 years, Tom created and built the Capital Markets Strategy role, advising corporate C-Suite executives (Boards, CEOs, CFOs, and Treasurers) on the pervasive macro forces driving markets. Tom also presents at dozens of corporate events each year including Board meetings, CEO ExCo sessions, CFO and Treasury off-sites, corporate leadership events and conferences.

Tom's educational background includes a year of study at Oxford University from 1991 - 1992, a Bachelor of Arts in Political Science from Holy Cross College in 1993, and a MBA from Kellogg Business School, Northwestern University in 2000.

Tom resides in New Canaan, CT with his wife and four sons, where he coaches youth basketball and serves on the Board of Trust ees of the New Canaan Library, the Board of the New Canaan Football (Soccer) Club and the Holy Cross College President's Council.

About the Authors



Hailey Orr

Director Capital Markets Strategist New York, NY

Hailey.Orr@mufgsecurities.com (212) 405-7429

Hailey Orr is a Director in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Hailey has a decade of Wall Street experience, including three years as a Consumer Sector Specialist in Equity Sales and seven years as a Capital Markets Strategist. Hailey is also a member of MUFG's Inclusion & Diversity Council and has devoted years to participating in and developing Wall Street recruiting programs.

Hailey graduated with honors from the University of Michigan's Ross School of Business with a BBA and a minor in International Studies.

In March 2020, Crain's New York Business Magazine named Hailey one of the "Rising Stars in Banking and Finance".



Stephanie Kendal

Associate Capital Markets Strategist New York, NY

Stephanie.Kendal@mufgsecurities.com (212) 405-7443

Stephanie Kendal is an associate in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Stephanie has spent over three years as a Capital Markets Strategist. At her prior firm, Stephanie was a part of the Americas Women's Network Junior Council and was an active member of the University of Michigan recruiting team.

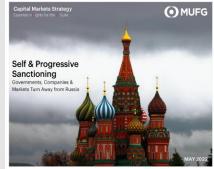
Stephanie graduated with honors from the University of Michigan's Ross School of Business with a BBA.

MUFG's Capital Markets Strategy Team

The MUFG Capital Markets Strategy team provides monthly publications and weekly policy notes, presenting to Boards and C-Suite executives, on a broad range of transformative themes driving the FX, rates and credit markets including: the COVID-19 recovery, ESG's acceleration, tax code policy changes, US-China decoupling, corporate strategy, geopolitical risk and central bank monetary policy.

















MUFG's Capital Markets Strategy Team

























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