

Global Market Summary 2021 / Q4



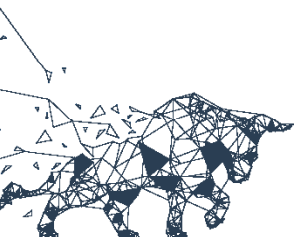
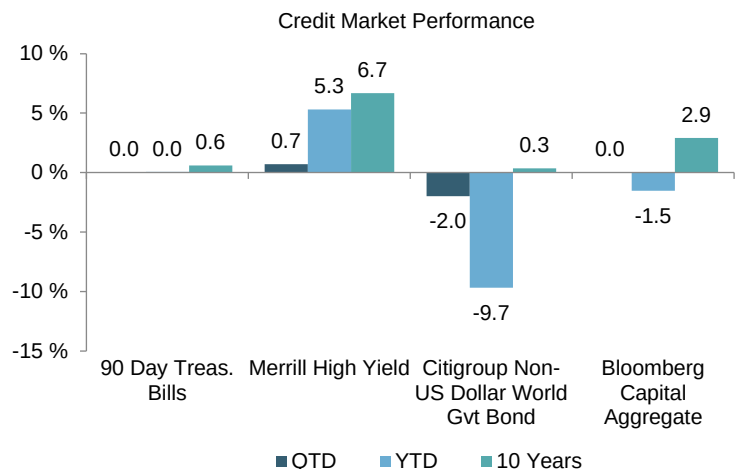
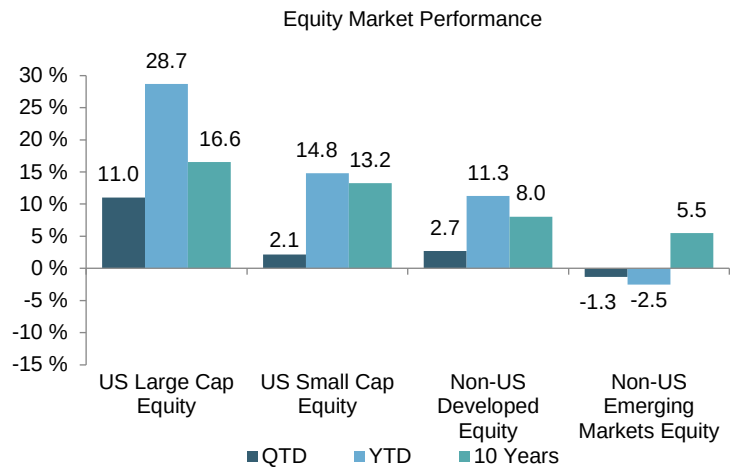


Recalibrating Expectations

US and non-US developed equity markets ended the year on a high note, with the S&P 500 and the MSCI EAFE indices posting gains of 28.7% and 11.3%, respectively. The MSCI Emerging Index ended with a slight decline of -2.5%. The year began with an extraordinary amount of optimism and high expectations, as vaccinations and a better understanding of how to treat COVID-19 brought a sense that

the worst was behind us in terms of the economic fallout from the pandemic. Around the globe, a herculean effort made it possible for 4.5+ billion people (60% of the world's population) to be vaccinated in record time. As infection rates declined, governments quickly dropped restrictions and economic activity resumed at a breakneck pace. A combination of accommodative monetary policies, fiscal stimulus, reduced labor supply, and savings built up during the pandemic led to record levels of demand. In the fourth quarter, inflation took center stage and expectations around Federal Reserve policy and economic growth shifted. This new apprehension was mostly observable in US consumer sentiment surveys, which trended downward, contrasting with the positive data coming from economic indicators.

Long-term investors should expect the process of recalibrating expectations to be bumpy. However, it can also be highly beneficial, as the volatility created by this uncertainty generates the potential for favorable investment opportunities, especially for managers that employ rigorously researched portfolios.





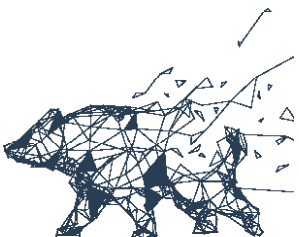
Quarterly Highlights

In the US, rising cases of the Omicron variant, inflation, and the projected pace of the Federal Reserve's ("the Fed") asset tapering and possible interest-rate increases made for a cloudy macroeconomic picture. However, economic indicators showed that the economy overall remained stable. Employment growth during the fourth quarter was positive with 800k-plus jobs created in a tight labor market. In addition, the Markit US Manufacturing and Services Purchasing Managers' Index (PMI) surveys for December came in at 57.5 and 57.6, respectively, indicating that even with the Omicron wave, demand growth for goods and services remains on a solid footing.

Supply-chain disruptions and a shortage of goods and materials coupled with strong demand from consumers led to a record-breaking surge in inflation. CPI data released in December showed that consumer prices rose 6.8% in the twelve months ended in November, the biggest increase since 1982. Similarly, producer prices jumped 9.6%, the largest recorded figure since 2010. While the prices paid by US consumers for various goods increased, especially worthy of note were used car and home prices, which rose 37.3% and 18.1% year over year, respectively. A limited supply of new cars due to supply-chain issues and increased demand pushed up both new and used cars prices. Demographic changes, shifting workplace dynamics, heightened investor activity, and low mortgage rates fueled housing demand just as the supply of homes available for sale reached an all-time low. Phoenix posted the largest gains of any metro area, with home prices in the area rising 30.5%. Cities posting the next-largest gains were Las Vegas (24.1%), San Diego (21.8%), Denver (18.4%), and Miami (16.6%).

The Federal Open Market Committee (FOMC) began the process of moving away from the extraordinary liquidity it provided during the height of the pandemic. Over the course of 2021, the balance sheet of the Fed grew by \$1.4 trillion (to \$8.8 trillion). Asset growth has been driven exclusively by the Fed's purchases of US treasuries and agency mortgages, which equaled between \$90-120 billion (net) per month during the quarter. At its November meeting, the FOMC announced a \$15 billion tapering of asset purchases starting in November (from \$120 billion to \$105 billion) and a total \$30 billion tapering of (the original) asset purchases each month beginning in December (from \$120 to \$90 billion); at this pace, the FOMC's asset purchases will end in March 2022. Meanwhile, the December meeting was notable in that the Summary of Economic Projections (SEP) revealed that the median Fed board member and bank president projects three interest-rate increases by the end of 2022 (from one prior) and, separately, the median member and president projects a total of six interest-rate increases by the end of 2023 (from three to four prior).

After extensive and contentious negotiations over its scope and focus, Congress passed a slimmed down \$ 1.2 trillion bi-partisan infrastructure bill, which was quickly signed into law by President Biden. The Infrastructure Investment and Jobs Act includes funding for broadband access, clear water, electric-grid renewal, and transportation and roads proposals. The bill did not include much of President Biden's "Build Back Better" plan, which included stipulations for "social infrastructure" and a proposal for tackling climate change; negotiations for the plan remain ongoing, but concerns over priorities, costs,





and the potential impact on inflation have stymied progress.

The rapid spread of the Omicron variant and record numbers of infections in several countries prompted governments across the Eurozone to tighten social restrictions. However, overall economic growth remained positive across the region, as it benefited from an increase in global demand and consumer spending. The IHS Markit's Composite PMI came in at 53.3 in December, holding above the 50 mark separating growth from contraction.

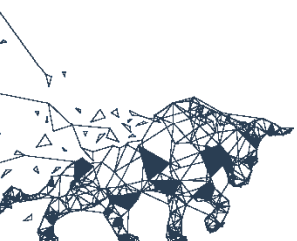
In December, Olaf Scholz became chancellor of Germany, succeeding Angela Merkel, who had helmed Europe's largest economy for 16 years. While Mr. Scholz has called the pandemic his immediate priority, he has outlined a number of other objectives, including upgrading infrastructure to modernize the economy, accelerating measures to combat climate change, and increasing the minimum wage and social housing assistance.

At its most recent meeting, the European Central Bank (ECB) maintained its current interest-rate policy but stated it would stop buying assets under its Pandemic Emergency Purchase Program in March 2022. To smooth the transition, the ECB will temporarily expand another bond-buying program. Although inflation surged to 4.9% in November, the highest number on record for the 19-country currency bloc and more than twice the ECB's 2% target, policy makers at the ECB continue to forecast a decline back to 1.9% by the end of 2022. In their post-meeting commentaries, policy makers signaled that any move towards a tighter monetary policy would occur slowly due to the economic uncertainty caused by the pandemic. ECB President Christine Lagarde has reiterated that an interest-rate increase in 2022 would be "very unlikely as conditions to raise rates are very unlikely to be satisfied next year."

China's economic momentum slowed from earlier in the year due to turmoil in the property and energy sectors, supply-chain issues, and the ongoing COVID-19 pandemic. Economic Indicators were mixed, with some pointing towards slowing retail sales and investment growth. One bright spot was factory output, which ended the year on a strong note, benefiting from an easing of supply-chain constraints and increased energy production. To ensure the country remains on its growth trajectory, the People's Bank of China (PBOC) cut its reserve requirement ratio by 50 basis points, effective December 15 (its second such move this year).

The housing sector, which contributes an estimated 25-30% of China's economic output and serves as a favored vehicle for holding personal wealth, remained under pressure as policy makers seek to root out speculation. China Evergrande Group and Kaisa Group Holdings, two of the country's largest developers, entered restructuring talks with creditors after defaulting on their bond payments. The companies' restructurings followed a wave of defaults among smaller developers and coincide with a widespread slowdown in the housing market.

A virtual summit between President Joe Biden and his Chinese counterpart Xi Jinping did little to improve the strained trade relationships between the two countries. China issued new regulations on overseas share sales by domestic companies, while the Biden





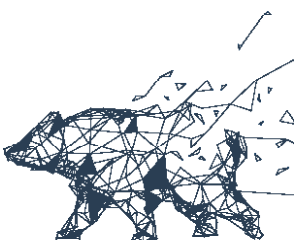
administration extended the Trump-era ban on US investments in Chinese companies that it deems owned or controlled by China's military and added a dozen companies to its blacklist, also signing a bill that effectively bans US imports from Xinjiang province.

After a difficult third quarter for growth, economic activity in Japan rebounded during the fourth quarter. According to data from the cabinet office, Japan's service sector sentiment index rose to 56.4 in December, its fourth straight month of increases, and industrial production jumped 7.2% in November, its largest gain since 1978, as it benefited from a recovered auto industry. Japan's two largest auto manufacturers, Toyota and Honda, announced they'll be returning to usual levels of production by year end. Household spending experienced modest gains as well, with goods consumption and restaurant spending picking up.

During his first policy speech, Prime Minister Fumio Kishida noted a need for fairer distribution and economic growth. Early signs suggest the government will continue with programs adopted by Shinzo Abe, including aggressive monetary policy and sustained structural reform. In November, Kishida's government agreed to a larger-than-expected ¥55.7 trillion fiscal stimulus package. The package includes direct cash transfers to households, a reinstatement of the "Go To Travel" campaign, tax breaks for companies to raise wages, more funding for universities, and digitalization of rural areas to increase productivity. It also includes money to raise semiconductor manufacturing capacity.

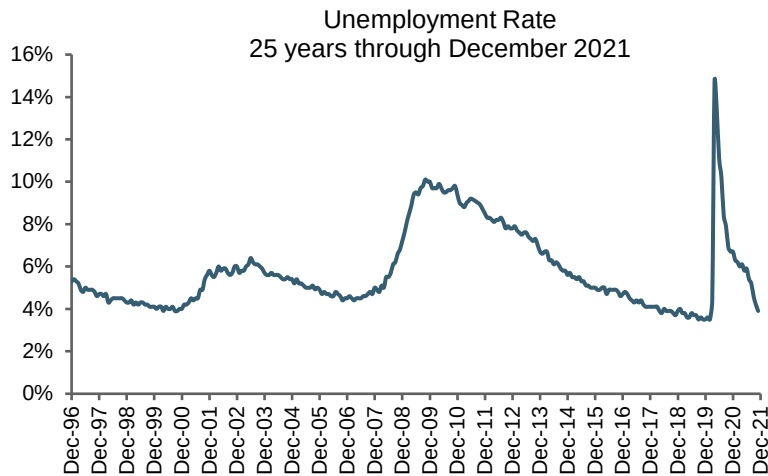
In its most recent policy meeting, the Bank of Japan (BOJ) reduced emergency pandemic funding but maintained its ultra-loose policy and extended financial relief for small firms. BOJ Governor Haruhiko Kuroda stressed that the roll-back of emergency funding was in no way a prelude to a full-blown withdrawal of monetary stimulus, positioning the BOJ as one of the most dovish central banks for the foreseeable future.

The Bloomberg Commodity Index ended the quarter down 1.6%, with gains in metals being the largest contributor to performance. November presented a challenging month, as the pace of the Fed's asset tapering took form and fears increased over rising Omicron-variant cases. Industrial metals rose 8.6% (Bloomberg Industrial Metals Sub-index), outperforming all other Bloomberg Commodity sub-index constituents, ending energy's three-quarter streak. Precious metals also performed well during the quarter, recognizing gains of 4.3% (Bloomberg Precious Metals Subindex), with modest price gains for gold and silver, although the latter was one of the biggest commodity disappointments of 2021. Agriculture posted a positive performance of 6.3% (Bloomberg Agriculture Subindex), with hearty gains recorded for corn, cotton, Kansas wheat, and coffee. The only detractor to performance during the quarter was energy, which posted -13.0% (Bloomberg Energy Index); this decline can be attributed to a sharp fall in the price of natural gas. Even with energy's recent pullback in price, it remains one of the top-performing commodity groups on a one-year change basis, posting a 52.1% increase in price.





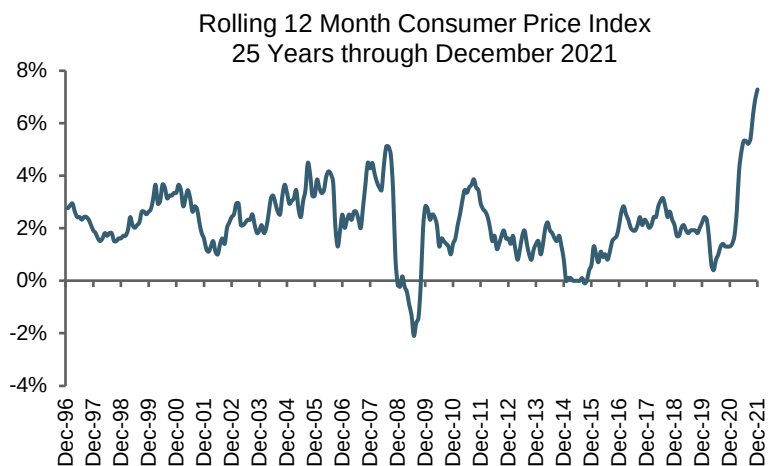
Economic Indicators



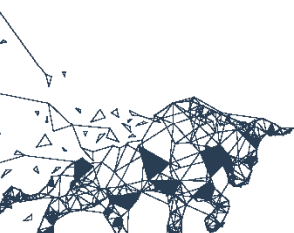
The US economy added 823,000 jobs over the fourth quarter in what was reported to be a tight labor market. December's jobs report showed a steady rate of additions, with 199,000 new jobs created. Over 2021, the US civilian labor force added 1.62 million jobs at an average of 135,000 per month. Non-farm employment has increased by 18.8 million since its trough in April 2020 but is down by 3.6 million (-2.3%) from its pre-pandemic level in February 2020.

In December, notable segments included hospitality and leisure (+53,000), business services (+43,000), manufacturing (+26,000), construction (+22,000), and transportation/warehousing (+19,000). No segments reported meaningful job losses for the month. The unemployment rate continued to fall, reaching a recent low of 3.9% in December, with the current number of unemployed persons at 6.3 million, still above February 2020 levels. Labor-force participation closed the year at a rate of 61.9%, up slightly from 61.5% twelve months prior and 1.5% below its February 2020 level.

The Consumer Price Index for All Urban Consumers (CPI-U) continued to increase, as it has each month since June 2020. Most recently, the CPI-U increased at 0.9%, 0.8%, and 0.5% over October, November, and December, respectively. Over the twelve months ended December, the all-items index increased by 7.0% before seasonal adjustment, the largest single-year increase since 1982. The price of energy led with a 29.3% increase, with the price of gasoline increasing 49.6% over the year.

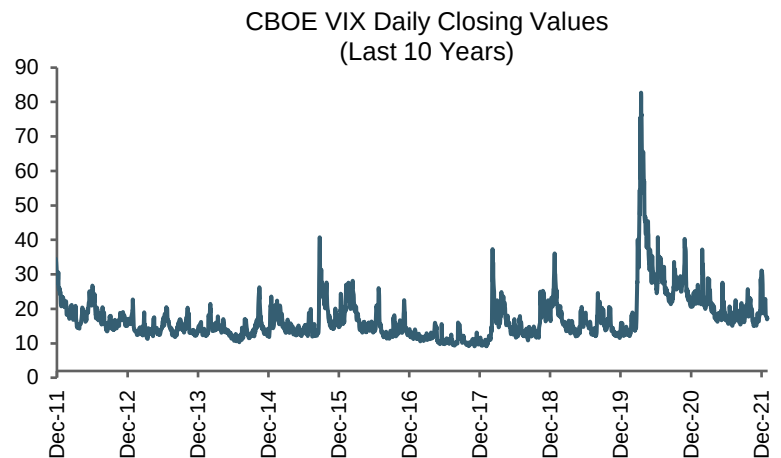


The core index (CPI-U less food and energy) rose 5.5% from December 2020, led by an increase of 37.3% in the price of used cars and trucks due to supply-chain disruption affecting the manufacturing of car components.

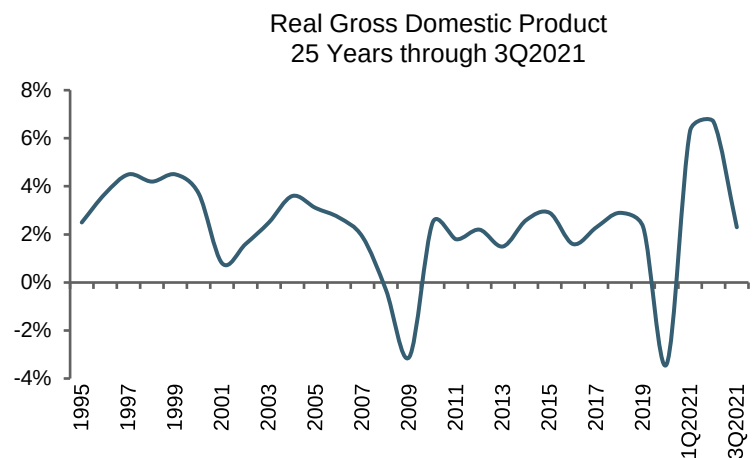




Market volatility, as measured by the VIX Index, closed the first quarter of 2021 at 17.2, just below its five-year average of 18.4 and in line with pre-pandemic levels. The decrease since the end of last quarter reflects continued economic strength coupled with an equity market buoyed by strong earnings announcements.

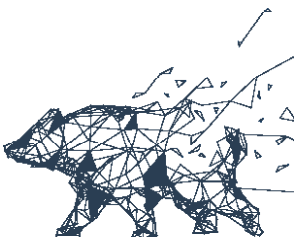


The inflation-adjusted growth of US GDP slowed to 2.3% in the third quarter of 2021, bucking the above-trend growth rate of the preceding three quarters. The increase in real GDP in the third quarter reflected increases in private inventory investment, personal consumption expenditures, state and local government spending, and non-residential fixed investment, which were partly offset by decreases in exports, residential fixed investment, and federal government spending.



The most significant item was an 8.2% increase in household consumption expenditures for services, especially transportation (mainly a rebound in international travel), food/hospitality, and other services. The increase in state and local government spending was led by employee compensation (notably education).

Retail sales increased by 0.3% in November following an increase of 1.8% in October. Total sales for the preceding twelve-month period were up approximately 16.2%. Since the previous quarter, gas stations saw the biggest uptick in sales, registering an 8.6% increase. Compared to the same period last year, sales during the September through November period were higher for gas stations (+46.5%), food service and drinking places (+32.7%), and clothing stores (+28.1%). Few segments saw sales increases below double digits. Notably, the slowest sales growth over the past year was in health and personal care stores (+7.2%) and building materials retailers (+8.3%).

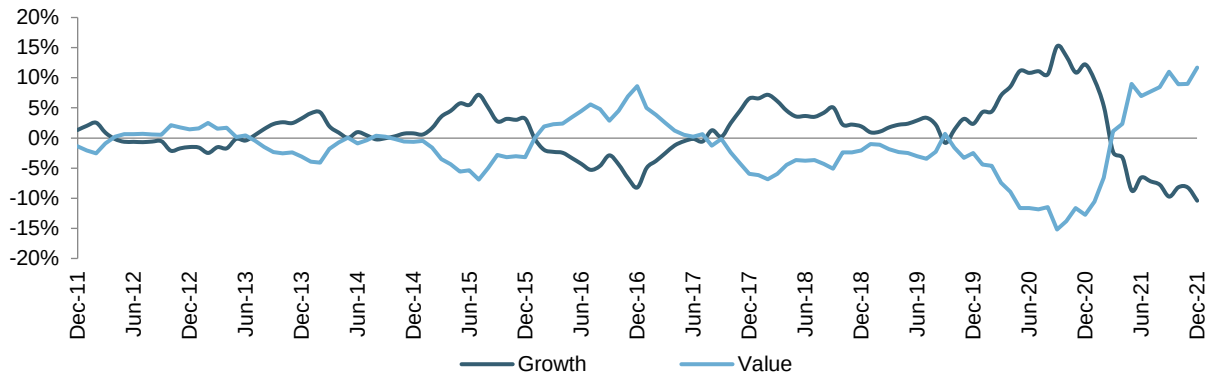




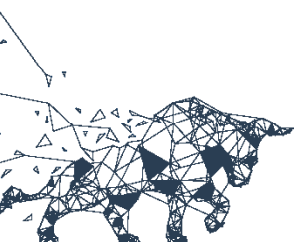
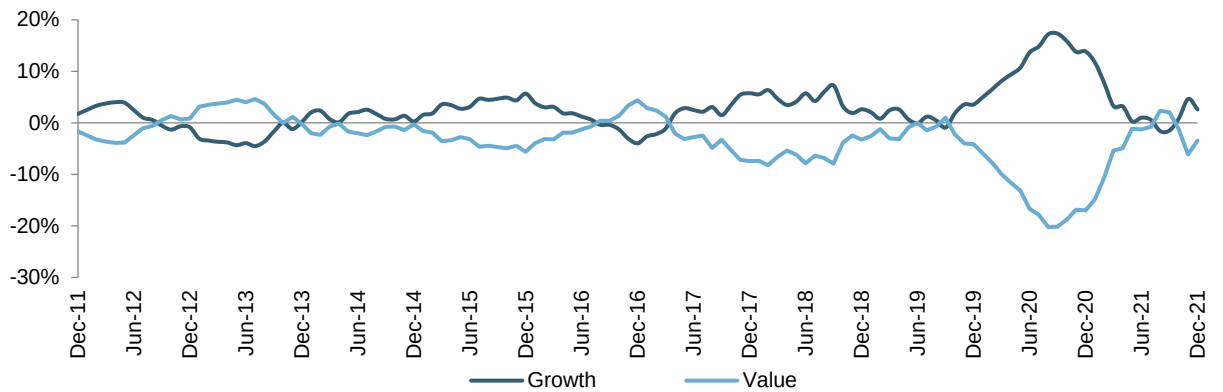
Returns by Style: Performance through December 2021

	Q4 2021	YTD		Q4 2021	YTD
Large Cap Value	7.4%	23.5%	Large Cap Growth	13.7%	31.2%
Mid Cap Value	8.5%	28.3%	Mid Cap Growth	2.9%	12.7%
Small Cap Value	4.4%	28.3%	Small Cap Growth	0.0%	2.8%

Small Cap Value vs. Growth
Rolling 1 Year Performance vs. Russell 2000
12/31/2011 to 12/31/2021



Large Cap Value vs. Growth
Rolling 1 Year Performance vs. Russell Top 200
12/31/2011 to 12/31/2021





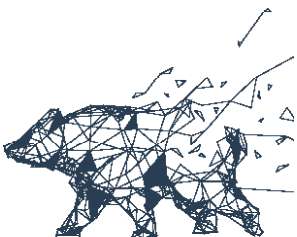
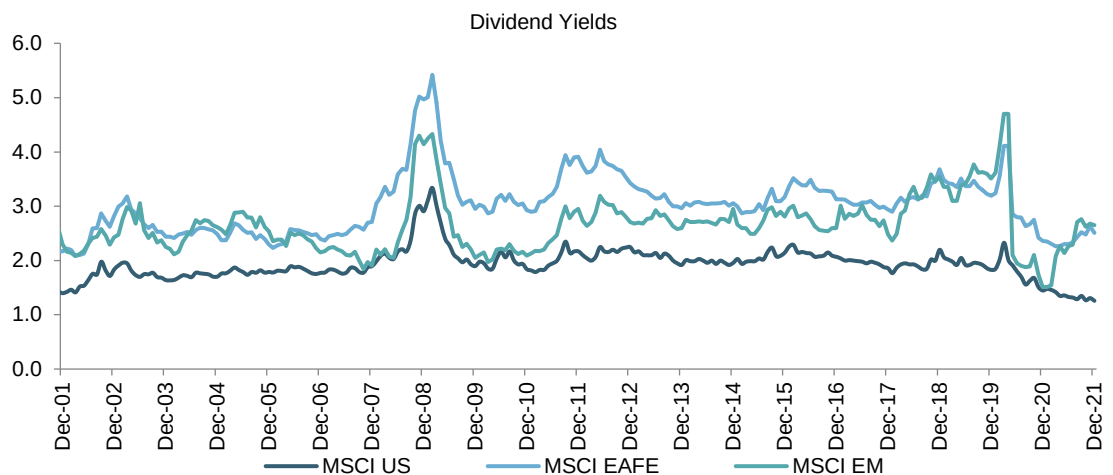
Sector Returns by Capitalization

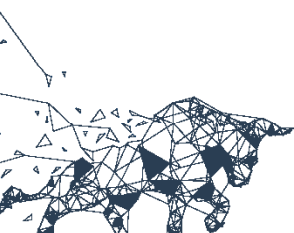
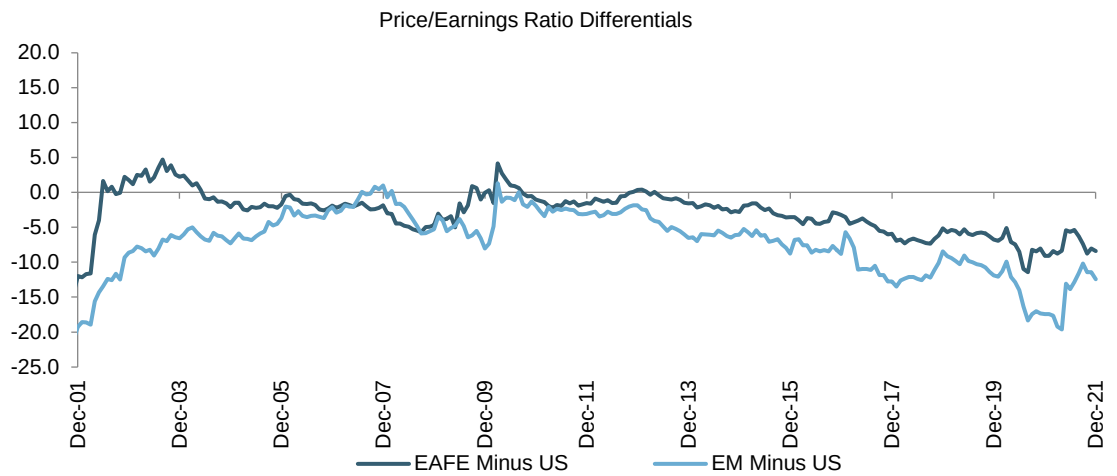
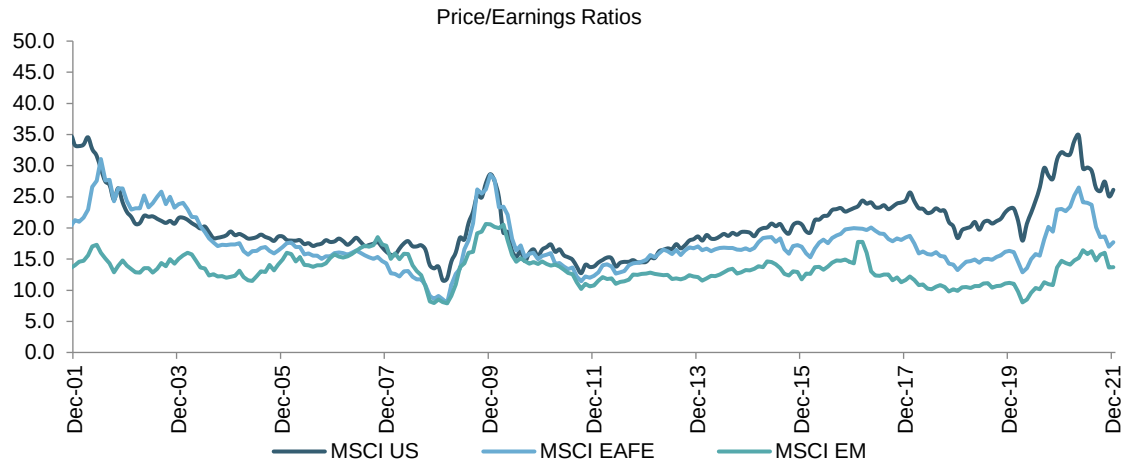
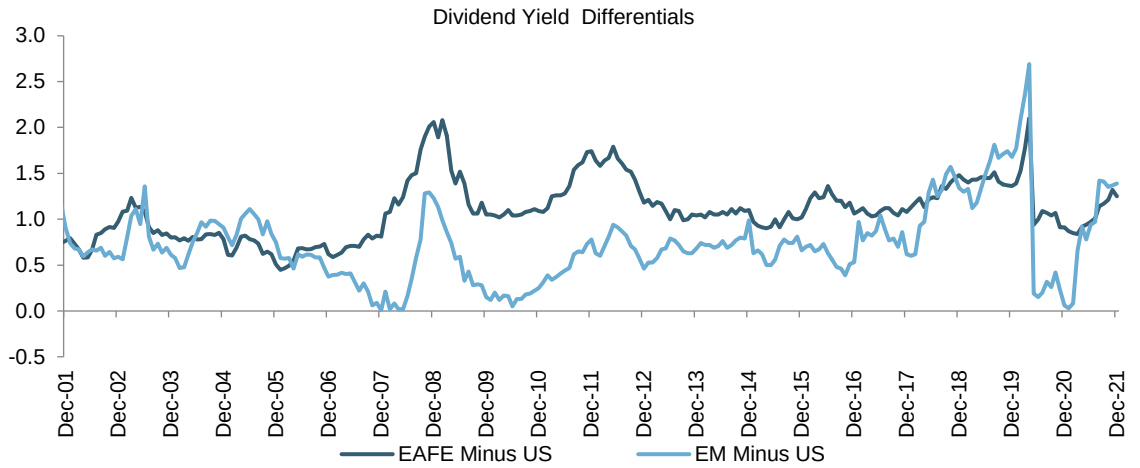
	U.S. Large Cap		U.S. Mid Cap		U.S. Small Cap	
	4Q2021	YTD	4Q2021	YTD	4Q2021	YTD
Basic Materials	15.5	12.8	11.8	38.6	6.3	24.4
Consumer Goods	13.2	19.2	10.3	14.9	4.9	11.3
Consumer Services	10.9	17.8	2.6	16.3	1.1	28.4
Financials	5.1	34.6	5.9	36.0	6.0	30.0
Healthcare	11.8	26.7	0.1	12.1	-10.5	-17.6
Industrials	2.9	11.0	10.1	26.1	8.2	25.4
Oil & Gas	9.1	54.9	6.0	45.3	-3.9	38.2
Real Estate	19.8	41.0	12.6	37.5	10.0	27.5
Technology	16.0	41.8	4.3	14.2	5.2	14.2
Telecommunications	-2.0	3.4	6.4	16.9	5.0	15.7
Utilities	13.4	21.2	12.0	16.2	12.1	10.0

Source: Russell Investments & Industry Classification Benchmark
 *Large Cap: Russell Top 200 Index Mid Cap: Russell Mid Cap Index Small Cap: Russell 2000 Index

From a market-capitalization perspective, large-cap equities outperformed mid- and small-cap equities over the quarter and year. Energy was among the top-performing sectors across all capitalizations for 2021. A rebound in demand as the economy picked up momentum and higher prices for crude oil and natural gas helped the sector rebound from its pandemic lows. Similar to energy, financials was a top-performing sector across all capitalizations. Information technology continued to outperform in the large-capitalization part of the market, but the sector had more muted performance across mid- and small-cap areas. Healthcare also exhibited a large spread in performance across different capitalizations. Large-cap health was positive for the year, as pharmaceutical stocks performed well, while small-cap healthcare declined 17.6% due to biotech.

Global Equity Ratios (source: MSCI - data sourced 'as is')





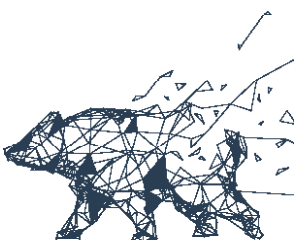
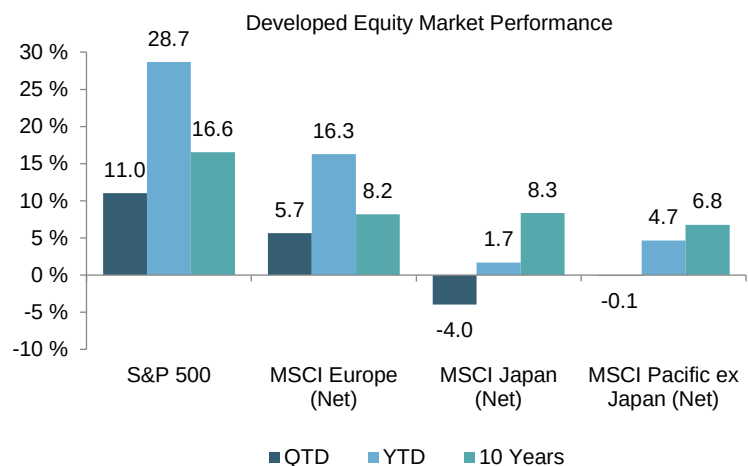
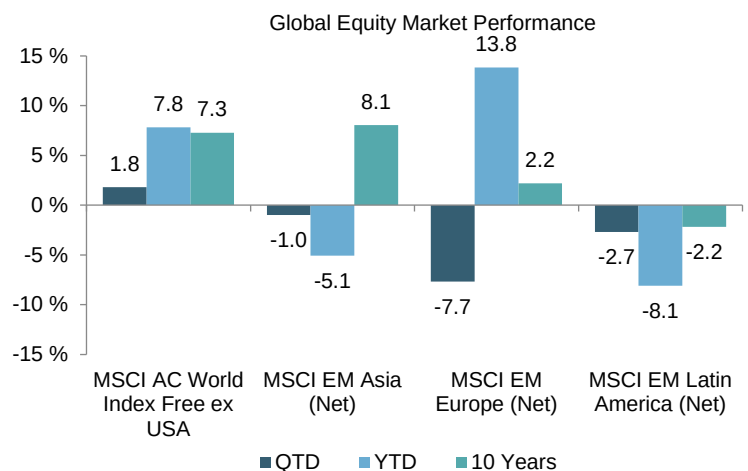


Global Equity Performance

Global equities performed stronger in the final quarter of 2021 as investors focused on economic resilience and corporate earnings. Global equity markets were led by the US, which continued its steady march to new, all-time highs. The MSCI All Country World Index (ACWI) gained 6.7% over the quarter and closed 2021 up 18.5%.

The S&P 500 gained 11.0% in the fourth quarter, bringing its year-to-date performance to 28.7%, making it the best-performing major market of the year. Tech, especially semi-conductors, was especially strong as a result of the ongoing supply/demand imbalance for computer chips. Real estate also performed well, as investors believe the positive outlook for e-commerce could lead to further demand for industrial warehousing.

The MSCI EAFE Index gained 2.7% in the quarter, bringing its year-to-date performance to 11.3%. In Q4, the MSCI Europe Index gained 5.7%. The MSCI Japan fell by 4.0%, erasing the previous quarter's gain. European stocks rounded out the year with a 14.9% gain, while their Japanese counterparts languished at 1.7% due to weakness in China. Much like the US market, European stock markets, including that of the UK, were led by strong returns in the IT hardware and semiconductor sectors. Many European countries instituted increased restrictions on travel and leisure in response to surging Omicron-variant infection rates, which negatively impacted related sectors. However, the broader picture was positive, as corporate earnings improved and the outlook for economic growth solidified despite headwinds caused by the pandemic. Switzerland and France were the best-performing markets in Q4, returning 12.8% and 7.1%, respectively. Despite a decent 5.6% return in December, German equities were one of the worst performers in Q4, being essentially flat; they trailed most other European markets in 2021. Investors in Germany assumed a cautious stance as tensions with Russia flared over gas supply and troops massing on the Ukrainian border. Although there were no surprises or shake ups, the Japanese





parliamentary election subdued stocks early in the quarter, as investors weighed the likelihood of the new government executing on a proposed stimulus package.

The MSCI EM Index had another poor showing in the fourth quarter, falling 1.3%. The most pronounced drop was in Eastern European equities in response to heightened tensions resulting from a perceived increase in military posturing by the Russian Federation along the Ukrainian border and in Kazakhstan. As a result, the MSCI EM Europe Index fell 7.7% in the quarter. Elsewhere in EM, the picture was similarly bleak. EM Latin America fell 2.7% due to a rising dollar dampening exports, while central banks were left with few options for stimulus or currency control as inflation also ticked higher. EM Asia (-1.0%) was also hobbled by renewed pandemic-control movement restrictions in China following the rapid spread of the Omicron variant. The MSCI China Index was down 6.1% in Q4 and finished the year having lost an astonishing 21.7%. Turkey (-11.2%) was the worst-performing EM country in the fourth quarter, as the lira rapidly depreciated amid evaporating confidence. Turkish equities lost over 28% of their value in 2021. The few bright spots in EM in Q4 included Taiwan, which performed well due to its booming semiconductor industry; it gained 8.4% in the quarter and 26.1% for the year. Other notable performers included oil-producing nations, which benefitted from increased prices of crude.

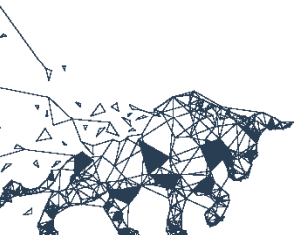
US Valuations

US Large Cap Equity	Quarter Ending 12/31/2021		Quarter Ending 9/30/2021	
	Value	Growth	Value	Growth
Price/Earnings Ratio:	21.9	40.5	23.4	42.6
IBES LT Growth (%):	12.8	20.0	12.5	22.6
1 Year Forward P/E Ratio:	17.0	31.6	16.1	28.7
Negative Earnings (%):	6.3	4.9	8.3	6.6

US Mid Cap Equity	Quarter Ending 12/31/2021		Quarter Ending 9/30/2021	
	Value	Growth	Value	Growth
Price/Earnings Ratio:	21.5	63.7	22.7	87.9
IBES LT Growth (%):	12.8	19.8	11.3	20.2
1 Year Forward P/E Ratio:	17.3	30.6	16.2	30.1
Negative Earnings (%):	9.4	23.3	11.3	27.8

US Small Cap Equity	Quarter Ending 12/31/2021		Quarter Ending 9/30/2021	
	Value	Growth	Value	Growth
Price/Earnings Ratio:	26.6	NA	28.8	136.0
IBES LT Growth (%):	9.5	15.6	9.4	15.4
1 Year Forward P/E Ratio:	13.7	21.4	13.0	20.0
Negative Earnings (%):	23.3	34.1	26.3	40.4

Source: Russell Investments Total Equity Profile





Forward price multiples of US companies expanded in the fourth quarter, particularly in the growth segment as price appreciation outpaced meaningful improvements in the quality of earnings. Multiples of value stocks also increased, but to a more modest degree than their growth counterparts despite a lower starting point. As a result, the valuation dispersion between value and growth stocks in the US remains unusually high. Dispersion is also evident across the size spectrum, with smaller companies posting significantly lower price multiples than their larger counterparts, particularly the small-cap value segment—its average price multiple is now meaningfully below the long-term average. Earnings quality has improved across segments, with a smaller number of companies in the index reporting negative earnings for the quarter. However, forward guidance on earnings carried more indications of negative results going forward for more than half of respondents. Consensus estimates are less optimistic than in previous quarters; however, the earnings growth for the year is still above trend. The S&P 500 is expected to report a year-over-year growth in earnings of 21.7% for the fourth quarter. Analysts project earnings growth of 45.2% for calendar-year 2021. In aggregate, analysts expect the S&P 500 to experience a 12.5% price increase over the next twelve months.

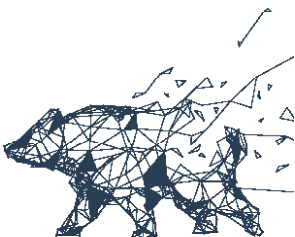
International Valuations

International Equity	Quarter Ending 12/31/2021		Quarter Ending 9/30/2021	
	Value	Growth	Value	Growth
Price/Earnings Ratio:	12.9	30.0	14.5	30.3
IBES LT Growth (%):	14.1	17.4	14.1	16.5
1 Year Forward P/E Ratio:	11.0	25.8	11.3	23.5
Negative Earnings (%):	5.3	5.2	7.5	5.7

Emerging Markets Equity	Quarter Ending 12/31/2021		Quarter Ending 9/30/2021	
	Price/Earnings Ratio:	15.4		16.6
IBES LT Growth (%):	18.5		18.7	
1 Year Forward P/E Ratio:	13.1		12.6	
Negative Earnings (%):	6.3		6.3	

Source: Russell Investments Total Equity Profile

Other developed markets saw forward-multiple expansion in the growth segment but further contraction in value despite improved earnings quality. International value stocks are trading at an 11x forward price multiple (one-third that of US large-cap value), making them the cheapest segment for global equity investors by a substantial margin. Emerging markets had a more mixed result; forward multiples expanded somewhat despite falling prices, while forward earnings slid on negative sentiment around various macro-economic and political developments.





*Non-US Developed/Emerging Cap & Style:
MSCI AC World Ex - US Indices (Source: MSCI - data sourced 'as is')*

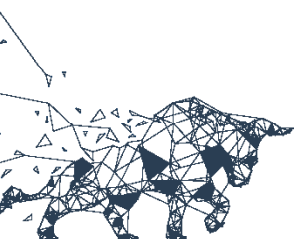
	Q4 2021	YTD		Q4 2021	YTD
Large Cap Value	1.5%	10.7%	Large Cap Growth	2.7%	4.8%
Mid Cap Value	0.2%	9.5%	Mid Cap Growth	1.0%	6.1%
Small Cap Value	0.5%	14.2%	Small Cap Growth	0.7%	11.5%

Country	Best Performing Style
Australia	Growth
Brazil	Value
Canada	Value
China	Value
France	Growth
Germany	Growth
Hong Kong	Value
Indonesia	Value
Italy	Growth
Japan	Growth
Mexico	Growth
Singapore	Value
Spain	Value
Thailand	Growth
United Kingdom	Value

Hedge Fund Performance

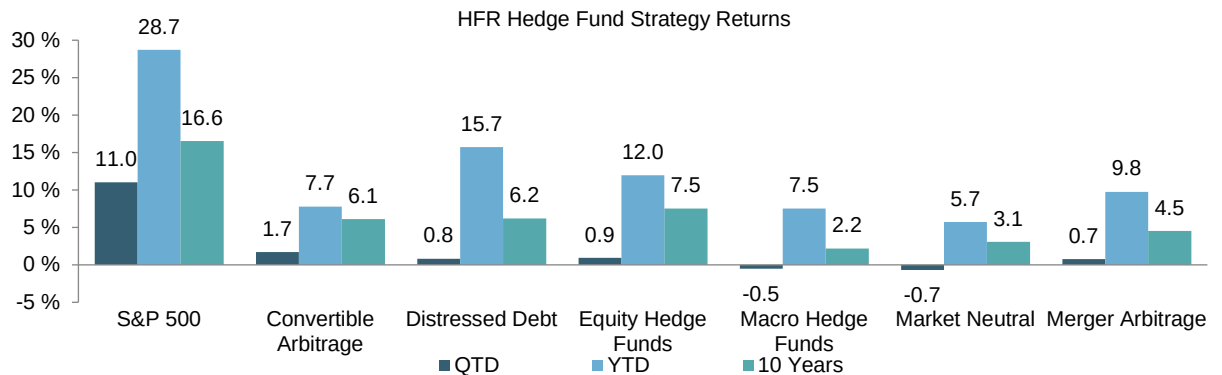
The fourth quarter of 2021 was a period of relatively muted performance across all major hedge-fund strategies. Hedged equity strategies outperformed all other hedge-fund strategies; however, the group experienced a wide range of performance, as managers with greater exposure to disruptive technology and internet companies experienced a significant drawdown when growth stocks sold off late in the quarter. For the year, distressed strategies were the top performers, aided by a pro-risk environment that had a positive impact on their restructurings and primary market credit investments made during the market turmoil of 2020. Managers also benefited from a rebound in the energy sector, where the rally in prices had a positive impact on cash flows and potential recoveries. Lagging all others, market-neutral strategies were hurt by their short portfolios. According to eVestment, industry-wide asset flows into hedge funds are expected to be positive for 2021—the industry's first positive year of flows since 2017. Year to date through November, multi-strategy, managed futures, and event-driven hedge-fund strategies have experienced the largest inflows, while long/short equity, macro, and directional credit have had the largest outflows.

The GS Hedge Fund VIP Index, which comprises the 50 equities most widely held by

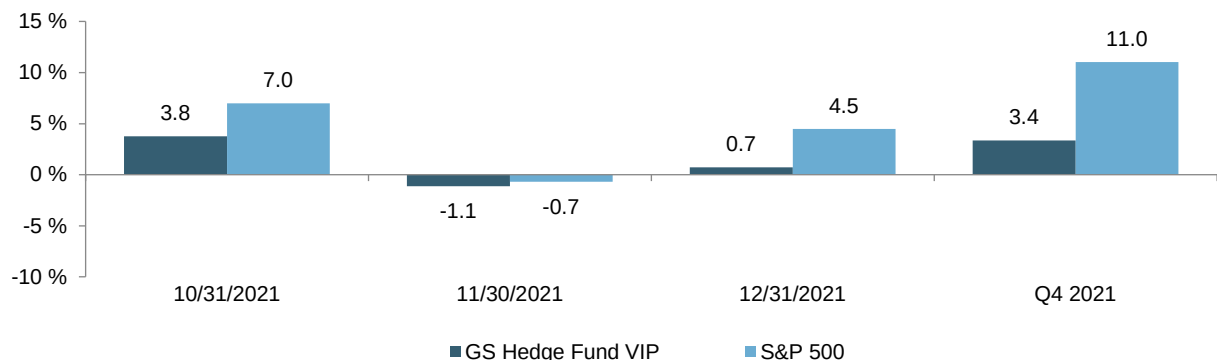




hedge funds, appreciated by 3.4% in the fourth quarter of 2021, underperforming the S&P 500 Index by 760 basis points. According to data published by Morgan Stanley's Prime Brokerage Group, December was the worst month for manager alpha since 2009, as crowded names detracted from performance. Hedge funds were net sellers of tech stocks in late November/early December, shifting away from the "growthier" pockets of the market, as rates are increasingly expected to rise. For the year, alpha generation was greatest in the energy, utilities, and healthcare sectors. Gross exposure decreased during the quarter, as managers were net sellers of North American and Asian equities; despite selling, net figures remained relatively stable, as managers' long portfolios trended upwards with the markets. US-focused gross portfolio exposure ended the quarter at 189%, while gross exposure in Europe- and Asia-focused portfolios ended the quarter at 180% and 131%, respectively. Year to date for US-focused managers, the largest positive changes in aggregate exposure occurred in healthcare, real estate, and energy, while the largest declines occurred among financials, consumer discretionary, and consumer services.



GS Hedge Fund VIP Index
(The 50 stocks most widely held by Hedge Funds)

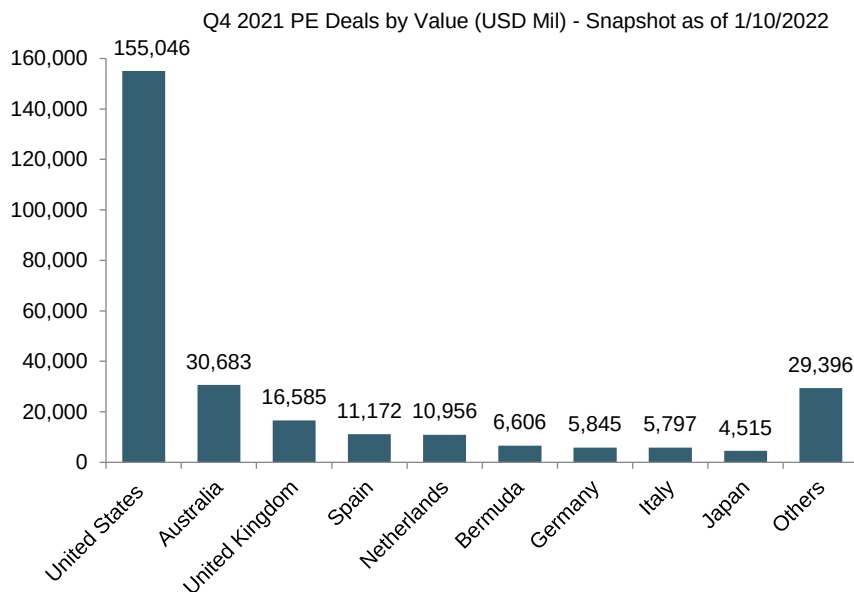
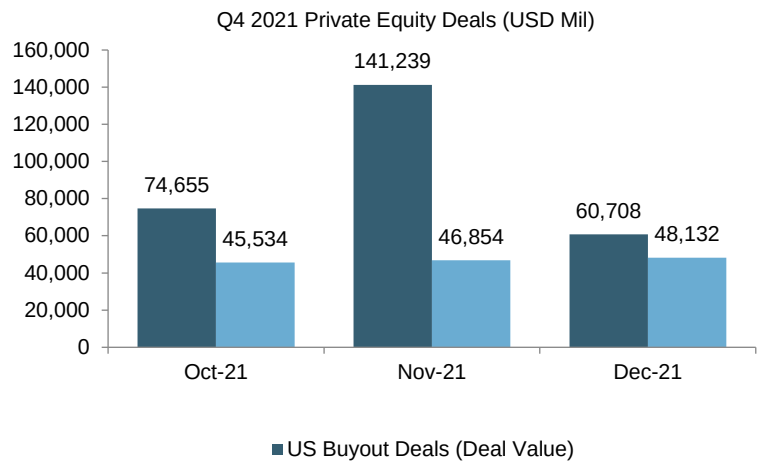




Private Equity Performance

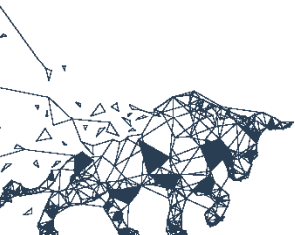
Global M&A volumes topped \$5 trillion for the first time ever, comfortably eclipsing the previous record of \$4.55 trillion set in 2007 (as recorded by Dealogic data). The overall value of M&A stood at \$5.8 trillion in 2021, up 64% from a year earlier (according to Refinitiv). Flush with cash and encouraged by soaring stock-market valuations, large buyout funds, corporates, and financiers struck 62,193 deals

in 2021, up 24% from the same period one year earlier, as all-time records tumbled each month of the year. Accommodative monetary policies from the US Federal Reserve fueled a stock-market rally and gave company executives access to cheap financing, which in turn emboldened them to go after large targets. The United States led the way for M&A, accounting for nearly half of global volume—the value of M&A nearly doubled to \$2.5 trillion in 2021, despite a tougher antitrust environment under the Biden administration.



Private-equity firms had a blockbuster year for deal making, largely driven by technology investments. Private-equity firms backed technology-sector deals valued at more than \$400 billion in 2021, a record. As of mid-December, private-equity firms had announced a backing of US technology deals totaling \$401.71 billion, including new purchases,

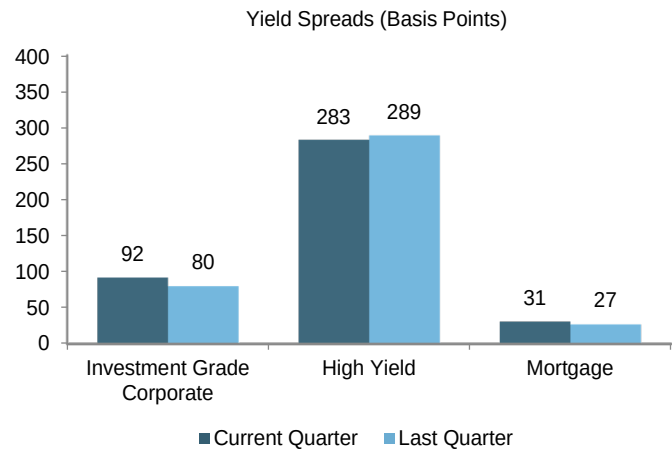
asset sales, and add-on deals; this accounted for 41% of a record \$990.25 billion in total private-equity deals through mid-December (according to data provider Dealogic). The tech-deal value for 2021, which more than doubled from its 2020 level of \$196.34 billion, reflects the highest figure since Dealogic began tracking the data in 1995. In 2020, tech transactions also represented 41% of total private-equity deals, which totaled \$474.06 billion.



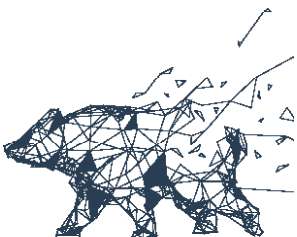
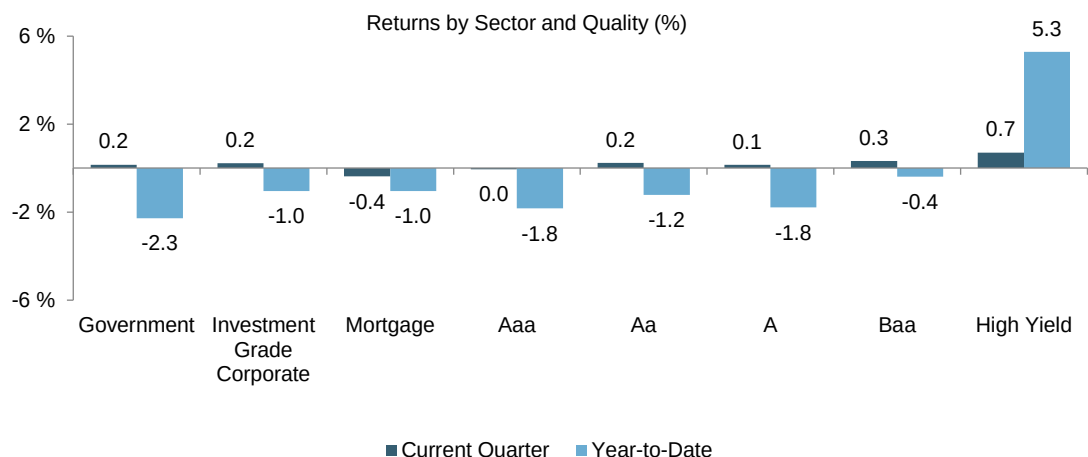


US Spread Products

The investment-grade corporate bond market returned 0.2% for the quarter. The primary driver of the slightly positive return was yield, which overcame the negative price impact from an increase in the general level of interest rates and a slight uptick in credit spreads. This market's option-adjusted spread (OAS) increased by 8 bps to end the quarter at 92 bps; despite this increase, the OAS was noticeably below its historical average (~139 bps). By credit quality, riskier credits generally outperformed: Aa-rated corporates returned 20 bps, A-rated corporates returned 10 bps, and Baa-rated corporates returned 30 bps. The best-performing sectors for the quarter were transportation (93 bps), basic industry (71 bps), and communications (65 bps). This market's issuance totaled approximately \$300 billion for the quarter, an increase of approximately 33% from the fourth quarter of 2020.



The high-yield corporate bond market returned 0.7% for the quarter. The primary drivers of the positive return were yield and a slight decrease in credit spreads, which overcame the negative price impact from a meaningful increase in intermediate-term interest rates. This market's OAS decreased by 6 bps to end the quarter at 283 bps, which is below the historical average by nearly one standard deviation (~267 bps). By credit quality, performance was mixed: Ba-rated bonds returned 75 bps, B-rated bonds returned 84 bps, and Caa-rated bonds returned 54 bps. The best-performing sectors in this market were energy (1.5%), consumer cyclical (89 bps), and basic industry (82 bps). This market's issuance totaled approximately \$75 billion for the quarter, a decrease of approximately 23% from the fourth quarter of 2020.





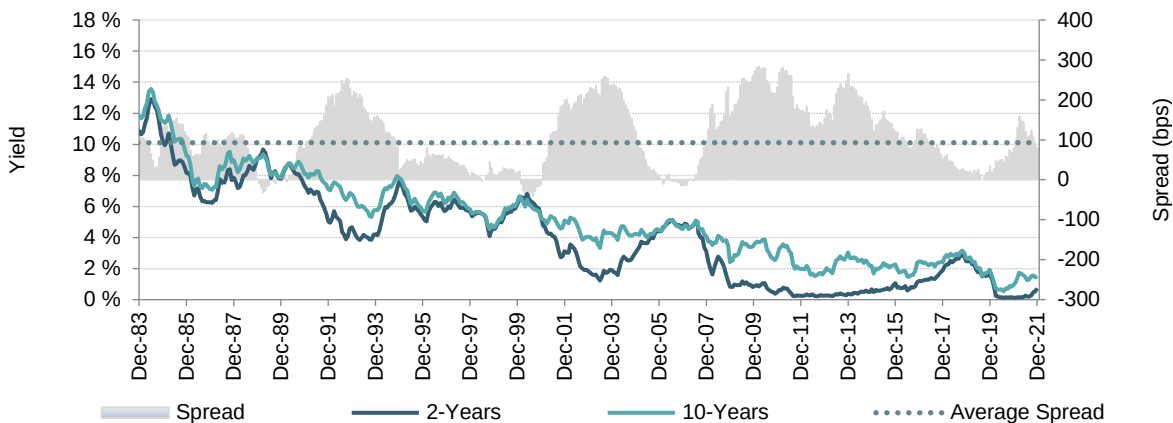
Yield Curve

For the quarter, US Treasury yields increased meaningfully on the front end of the curve but fell on the back end. Yields increased on the two-year note (+45 bps to 73 bps), five-year note (+28 bps to 1.26%), and seven-year note (+12 bps to 1.44%), but the ten-year note's yield remained unchanged (1.52%) and the 30-year bond's yield fell (-18 bps to 1.90%). In addition, the two- to ten-year spread decreased (-45 bps to 79 bps).

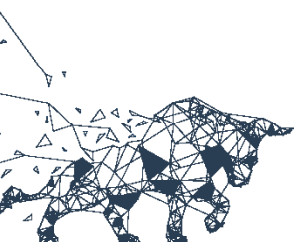
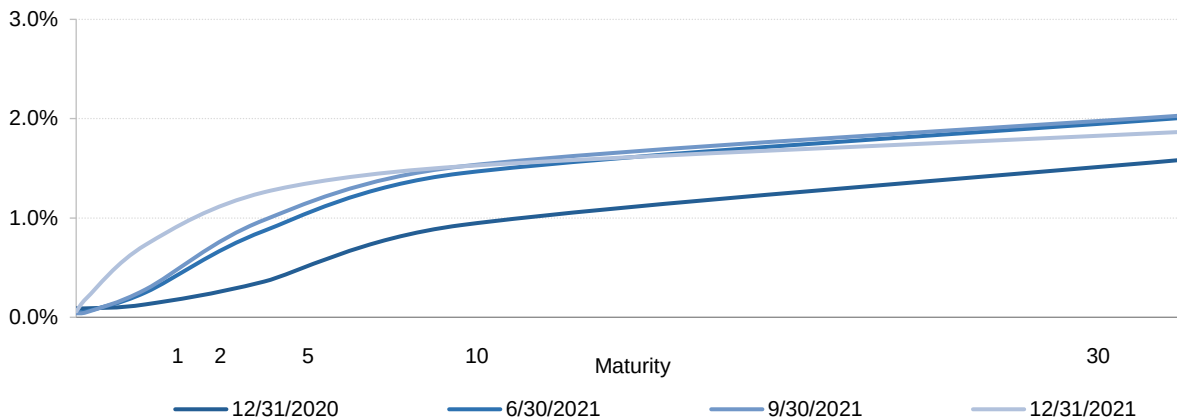
The increase in interest rates on the front end of the curve is mostly attributable to the bond market's and Fed's acknowledgement that growth and inflation have reached levels not seen since the 1980s, and that excessively high inflation will be more persistent than "transitory." The decrease in interest rates on the back end of the curve is mostly attributable to less-than-expected long-dated Treasury supply, a yield advantage that favors the US relative to Europe and Japan, and stable long-term inflation expectations that remain anchored near the Fed's longer-term target of 2%.

At the end of the quarter, the federal-funds futures market priced in a 58% chance of a 25-bps interest-rate increase at the FOMC meeting scheduled for March 2022 and two additional 25-bps interest-rate increases for the remainder of 2022 (three in total), which is in line with the Fed's median policy-rate expectation for 2022.

2 Year vs. 10 Year Treasury Yields



Treasury Yield Curve





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