



Capital Markets Insights

2021 Year in Review

Executive Summary

Capital Markets Insights – 2021 Year in Review

- Major U.S. indices increased in 2021 as economy began to recover from the impact of Covid-19
- The DJIA gained 18.7%, the S&P 500 added 26.9% and the NASDAQ increased 21.4% since December 31, 2020
- U.S. companies raised a record \$302 billion through stock market listings
- Over 700 SPACs went public in 2021, more than 5 times the number from the year 2020
- Initial jobless claims came in at 198,000 for the week ended December 25, down from nearly 900,000 in early January
- The yield on 10-year U.S. Treasury notes increased from 0.93% as of December 31, 2020 to 1.52% as of December 31, 2021
- The CBOE Volatility Index (“VIX”) closed at 17.22 on December 31, 2021, a 24% decrease since December 31, 2020
- The value of the U.S. Dollar strengthened as the market bet on tighter monetary policy

Top News Stories

Wall Street Journal

1) U.S. Stocks Slip to Close Out Banner Year

- “U.S. stocks ticked lower on the last trading day of 2021, wrapping up a year of repeated records on Wall Street on low interest rates and the rollout of Covid-19 vaccines. The S&P 500 fell 12.55 points, or 0.3%, to 4,766.18, the Dow slid 59.78 points, or 0.2%, to 36,338.30 and the Nasdaq Composite declined 96.59 points, or 0.6%, to 15,644.97.”

2) Strong Labor Market in 2021 Faces Down Omicron Threat

- “U.S. employers added a record number of jobs in 2021, as a gauge of layoffs fell to a half-century low and available positions surged on strong demand for labor during the economy’s recovery from pandemic-related shutdowns. But the pace of labor market gains could slow early next year due to the uncertainty posed by the Omicron variant of Covid-19 pandemic, especially in restaurants, hotels and other venues where people gather.”

3) Gold Heads Toward Largest Percentage Decline Since 2015

- “Most-actively traded gold futures have fallen roughly 4.7% to around \$1,805.80 a troy ounce in 2021, dragged lower by investors’ expectations for the Federal Reserve’s response to price increases. An accelerated pace of monetary tightening likely means increased competition from yield-bearing assets like bonds.”

Top News Stories

Financial Times

1) Deal making Surges Past \$5.8 Trillion to Highest Levels on Record

- “Global mergers and acquisitions for 2021 have soared to their highest levels since records began more than four decades ago, thanks in part to booming markets and widespread stimulus measures. Deals worth more than \$5.8 trillion were agreed worldwide this year, according to figures from Refinitiv, a 64% rise from last year and the fastest pace of growth since the mid-1990s. The value of deals was 54% higher than in 2019 before the pandemic.”

2) U.S. Financial Conditions Remain Easy Even as Fed Pulls Back on Stimulus

- “Measures of financial conditions have only marginally tightened since last week’s Fed meeting, according to economists at Goldman Sachs, who produce a closely followed index that takes into account the shifts in the U.S. stock market, borrowing costs for companies, moves in the dollar and funding costs for the U.S. government. Despite the hawkish pivot, U.S. stocks have stayed buoyant around record-high levels, while yields on U.S. Treasuries remain stubbornly low compared with their historic norms.”

3) Companies Raise Over \$12 Trillion in ‘Blockbuster’ Year For Global Capital Markets

- “Companies raised a record \$12.1 trillion in 2021 by selling stock, issuing debt and inking new loans, as a torrent of central bank stimulus and the rapid recovery from the pandemic propelled many global markets higher. With a few days still left in the year, the cash haul is already up almost 17% from 2020, which was itself a historic year, and almost a quarter above the take in 2019 before the coronavirus crisis, according to Financial Times calculations based on Refinitiv data.”

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	Current						Change from 12/31/2020					
	3-Month	1-Year	3-Year	5-Year	10-Year	20-Year	3-Month	1-Year	3-Year	5-Year	10-Year	20-Year
U.S Treasury Rate	0.06%	0.39%	0.97%	1.26%	1.52%	1.94%	▼ 0.03%	▲ 0.29%	▲ 0.80%	▲ 0.90%	▲ 0.59%	▲ 0.49%
20 Year Average	1.22%	1.42%	1.87%	2.32%	3.00%	3.55%						
Spread Over Treasury:												
A Rated Bonds	0.33%	0.18%	0.26%	0.40%	0.80%	1.00%	▲ 0.21%	▲ 0.02%	▼ 0.01%	▼ 0.02%	▲ 0.11%	▼ 0.06%
BBB Rated Bonds	0.47%	0.43%	0.55%	0.74%	1.19%	1.40%	▲ 0.14%	▲ 0.05%	▲ 0.03%	▲ 0.06%	▲ 0.13%	▼ 0.20%
BB Rated Bonds	1.56%	1.46%	1.66%	2.08%	2.67%	2.86%	▲ 0.72%	▲ 0.22%	▼ 0.43%	▼ 0.53%	▼ 0.47%	▼ 0.98%
B Rated Bonds	1.49%	1.68%	2.48%	3.09%	3.77%	4.23%	▼ 0.35%	▼ 0.64%	▼ 0.73%	▼ 0.77%	▼ 0.31%	▼ 0.64%
B- Rated Bonds	2.64%	2.63%	3.53%	4.14%	4.60%	4.99%	▲ 0.26%	▼ 0.18%	▼ 0.18%	▲ 0.02%	▲ 0.28%	▲ 0.10%








	As of 12/31/2021	Performance Since 9/30/2021	Performance Since 6/30/2021	Performance Since 3/31/2021	1-Year Performance	3-Year Performance	5-Year Performance
Indices							
S&P 500	4,766.18	▲ 10.6%	▲ 10.9%	▲ 20.0%	▲ 26.9%	▲ 90.1%	▲ 112.9%
Dow Jones Industrial Average	36,338.30	▲ 7.4%	▲ 5.3%	▲ 10.2%	▲ 18.7%	▲ 55.8%	▲ 83.9%
NASDAQ Composite Index	15,644.97	▲ 8.3%	▲ 7.9%	▲ 18.1%	▲ 21.4%	▲ 135.8%	▲ 190.6%
FTSE 100 Index	7,384.54	▲ 4.2%	▲ 4.9%	▲ 10.0%	▲ 14.3%	▲ 9.8%	▲ 3.4%
S&P/TSX Composite Index	21,222.84	▲ 5.7%	▲ 5.2%	▲ 13.5%	▲ 21.7%	▲ 48.2%	▲ 38.8%
Hang Seng Index	23,397.67	▼ 4.8%	▼ 18.8%	▼ 17.6%	▼ 14.1%	▼ 9.5%	▲ 6.4%
Germany DAX Index	15,884.86	▲ 4.1%	▲ 2.3%	▲ 5.8%	▲ 15.8%	▲ 50.4%	▲ 38.4%
Paris CAC 40 Index	7,153.03	▲ 9.7%	▲ 9.9%	▲ 17.9%	▲ 28.9%	▲ 51.2%	▲ 47.1%
Singapore FTSE Straits Times Index	3,123.68	▲ 1.2%	▼ 0.2%	▼ 1.3%	▲ 9.8%	▲ 1.8%	▲ 8.4%
Brazil Bovespa Index	104,822.44	▼ 5.5%	▼ 17.3%	▼ 10.1%	▼ 11.9%	▲ 19.3%	▲ 74.0%
Madrid Ibex 35 Index	8,713.80	▼ 0.9%	▼ 1.2%	▲ 1.6%	▲ 7.9%	▲ 2.0%	▼ 6.8%
Volatility Index "VIX"	17.22	▼ 25.6%	▲ 8.8%	▼ 11.2%	▼ 24.3%	▼ 32.3%	▲ 22.6%

Source: S&P Capital IQ and Bloomberg

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Commodity prices have increased over the course of 2021. However, Gold is heading toward its largest annual percentage decline since 2015

	As of 12/31/2021	Performance Since 9/30/2021	Performance Since 6/30/2021	Performance Since 3/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
<u>Commodities</u>							
Crude Oil (\$ per bbl.)	\$75.21	▲ 0.2%	▲ 2.4%	▲ 27.1%	▲ 55.0%	▲ 65.6%	▲ 40.0%
Natural Gas (\$ per mmBTU) (1)	\$3.56	▼ 39.4%	▼ 1.8%	▲ 36.4%	▲ 40.8%	▲ 24.8%	▼ 3.4%
Gold (\$ per troy oz.)	\$1,828.60	▲ 4.1%	▲ 3.2%	▲ 6.6%	▼ 3.5%	▲ 43.0%	▲ 54.5%
Lean Hogs (\$ per lb.)	\$0.81	▼ 4.6%	▼ 21.1%	▼ 22.6%	▲ 15.9%	▲ 19.0%	▲ 5.3%
Live Cattle (\$ per lb.)	\$1.40	▲ 11.1%	▲ 13.8%	▲ 13.7%	▲ 21.5%	▲ 20.8%	▲ 39.1%
Corn (\$ per bu.)	\$5.93	▲ 10.5%	▲ 0.8%	▲ 5.1%	▲ 22.6%	▲ 49.2%	▲ 47.8%
Soybean (\$ per bu.)	\$13.39	▲ 6.6%	▼ 6.3%	▼ 6.8%	▲ 2.2%	▲ 43.2%	▲ 41.0%
Cotton (\$ per lb.)	\$1.13	▲ 6.4%	▲ 32.6%	▲ 39.2%	▲ 44.1%	▲ 53.6%	▲ 59.4%
Sugar (\$ per lb.)	\$0.19	▼ 7.2%	▲ 5.5%	▲ 27.8%	▲ 21.9%	▲ 41.7%	▲ 13.7%
Coffee (\$ per lb.)	\$2.26	▲ 16.5%	▲ 41.5%	▲ 83.1%	▲ 76.3%	▲ 76.2%	▲ 51.1%
<u>Currencies (2)</u>							
Euro (EUR/USD) 	1.14	▲ 1.9%	▲ 4.3%	▲ 3.2%	▲ 7.4%	▲ 0.7%	▼ 7.2%
British Pound (GBP/USD) 	1.35	▼ 0.3%	▲ 2.0%	▲ 1.7%	▲ 1.0%	▼ 5.9%	▼ 8.8%
Mexican Peso (USD/MXN) 	20.50	▲ 0.0%	▲ 2.9%	▲ 0.3%	▲ 3.6%	▲ 4.3%	▼ 0.5%
Brazilian Real (USD/BRL) 	5.57	▲ 2.7%	▲ 11.1%	▼ 1.4%	▲ 7.3%	▲ 43.9%	▲ 71.2%
Japanese Yen (USD/JPY) 	115.14	▲ 3.2%	▲ 3.8%	▲ 4.1%	▲ 11.6%	▲ 4.9%	▼ 1.4%
Canadian Dollar (USD/CAD) 	1.27	▲ 0.1%	▲ 2.1%	▲ 0.6%	▼ 0.6%	▼ 7.3%	▼ 5.8%
Chinese Renminbi (Yuan) (USD/CNY) 	6.35	▼ 1.4%	▼ 1.6%	▼ 3.1%	▼ 2.7%	▼ 7.6%	▼ 8.5%

(1) Per metric million british thermal unit












(2) Percentage change reflects strengthening and weakening of USD

Source: S&P Capital IQ and Bloomberg

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The major U.S. indices reached new highs during 2021 while the Hang Seng and the Brazil Bovespa decreased from 2020 levels.

	FYE 2021	FYE 2020	FYE 2019	FYE 2018	FYE 2017
<i>Indices</i>					
S&P 500 	▲ 26.9%	▲ 16.3%	▲ 28.9%	▼ 6.2%	▲ 19.4%
Dow Jones Industrial Average 	▲ 18.7%	▲ 7.2%	▲ 22.3%	▼ 5.6%	▲ 25.1%
NASDAQ Composite Index 	▲ 21.4%	▲ 43.6%	▲ 35.2%	▼ 3.9%	▲ 28.2%
FTSE 100 Index 	▲ 14.3%	▼ 14.3%	▲ 12.1%	▼ 12.5%	▲ 7.6%
S&P/TSX Composite Index 	▲ 21.7%	▲ 2.2%	▲ 19.1%	▼ 11.6%	▲ 6.0%
Hang Seng Index 	▼ 14.1%	▼ 3.4%	▲ 9.1%	▼ 13.6%	▲ 36.0%
Germany DAX Index 	▲ 15.8%	▲ 3.5%	▲ 25.5%	▼ 18.3%	▲ 12.5%
Paris CAC 40 Index 	▲ 28.9%	▼ 7.1%	▲ 26.4%	▼ 11.0%	▲ 9.3%
Singapore FTSE Straits Times Index 	▲ 9.8%	▼ 11.8%	▲ 5.0%	▼ 9.8%	▲ 18.1%
Brazil Bovespa Index 	▼ 11.9%	▲ 2.9%	▲ 31.6%	▲ 15.0%	▲ 26.9%
Madrid Ibex 35 Index 	▲ 7.9%	▼ 15.5%	▲ 11.8%	▼ 15.0%	▲ 7.4%
Volatility Index "VIX"	▼ 24.3%	▲ 65.1%	▼ 45.8%	▲ 130.3%	▼ 21.4%

Source: S&P Capital IQ and Bloomberg

Top and Bottom S&P 500 Performers

Company	Ticker	Industry	Stock Price on 12/31/2021	% of 52-Week High	1-Year Performance
<u>Top S&P 500 Performers</u>					
Devon Energy	DVN	Oil and Gas	\$44.05	96.7%	▲ 178.6%
Marathon Oil	MRO	Oil and Gas	\$16.42	93.4%	▲ 146.2%
Ford Motor Company	F	Automotive	\$20.77	96.6%	▲ 143.8%
Moderna	MRNA	Biotechnology	\$253.98	51.1%	▲ 143.1%
Fortinet	FTNT	Software	\$359.40	96.7%	▲ 142.0%
<u>Bottom S&P 500 Performers</u>					
Penn National Gaming	PENN	Casinos and Gaming	\$51.85	36.5%	▼ 40.0%
Global Payments	GPN	Technology	\$135.18	61.2%	▼ 37.2%
Las Vegas Sands	LVS	Casinos and Gaming	\$37.64	56.4%	▼ 36.8%
Activision Blizzard	ATVI	Entertainment	\$66.53	63.6%	▼ 28.3%
MarketAxess Holdings	MKTX	Financials	\$411.27	69.8%	▼ 27.9%

Source: S&P Capital IQ and Bloomberg

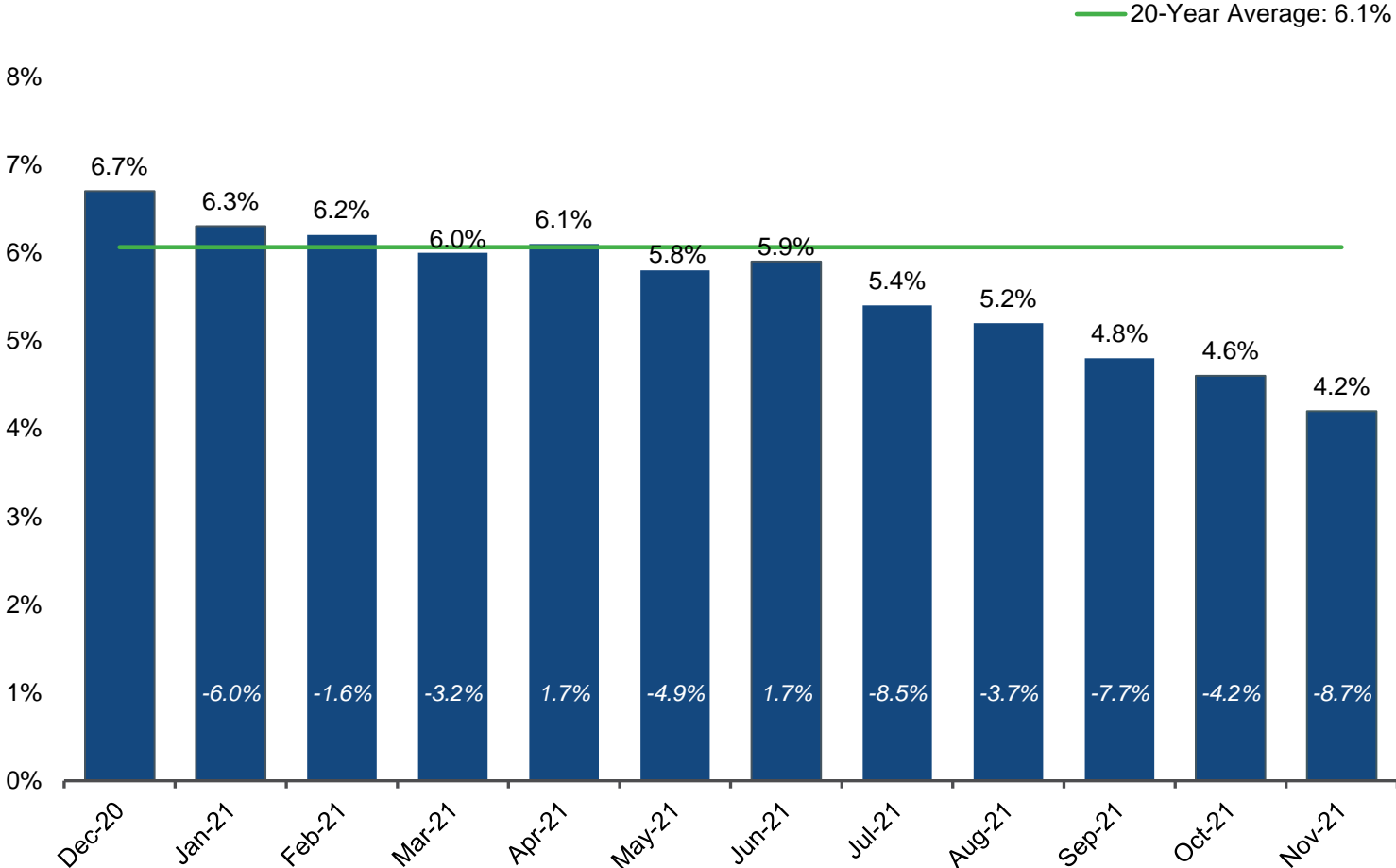
Top and Bottom DJIA Performers

Company	Ticker	Industry	Stock Price on 12/31/2021	% of 52-Week High	1-Year Performance
<u>Top DJIA Performers</u>					
The Home Depot	HD	Retail	\$415.01	98.7%	▲ 56.2%
Microsoft	MSFT	Technology	\$336.32	96.2%	▲ 51.2%
Goldman Sachs	GS	Banking	\$382.55	89.8%	▲ 45.1%
UnitedHealth	UNH	Health Care	\$502.14	98.6%	▲ 43.2%
Cisco Systems	CSCO	Technology	\$63.37	98.6%	▲ 41.6%
<u>Bottom DJIA Performers</u>					
The Walt Disney	DIS	Entertainment	\$154.89	76.3%	▼ 14.5%
Verizon Communications	VZ	Telecommunications	\$51.96	86.8%	▼ 11.6%
Merck	MRK	Pharmaceuticals	\$76.64	83.9%	▼ 6.3%
Boeing	BA	Aerospace and Defense	\$201.32	72.3%	▼ 6.0%
Honeywell	HON	Industrials	\$208.51	88.0%	▼ 2.0%

Source: S&P Capital IQ and Bloomberg

Unemployment

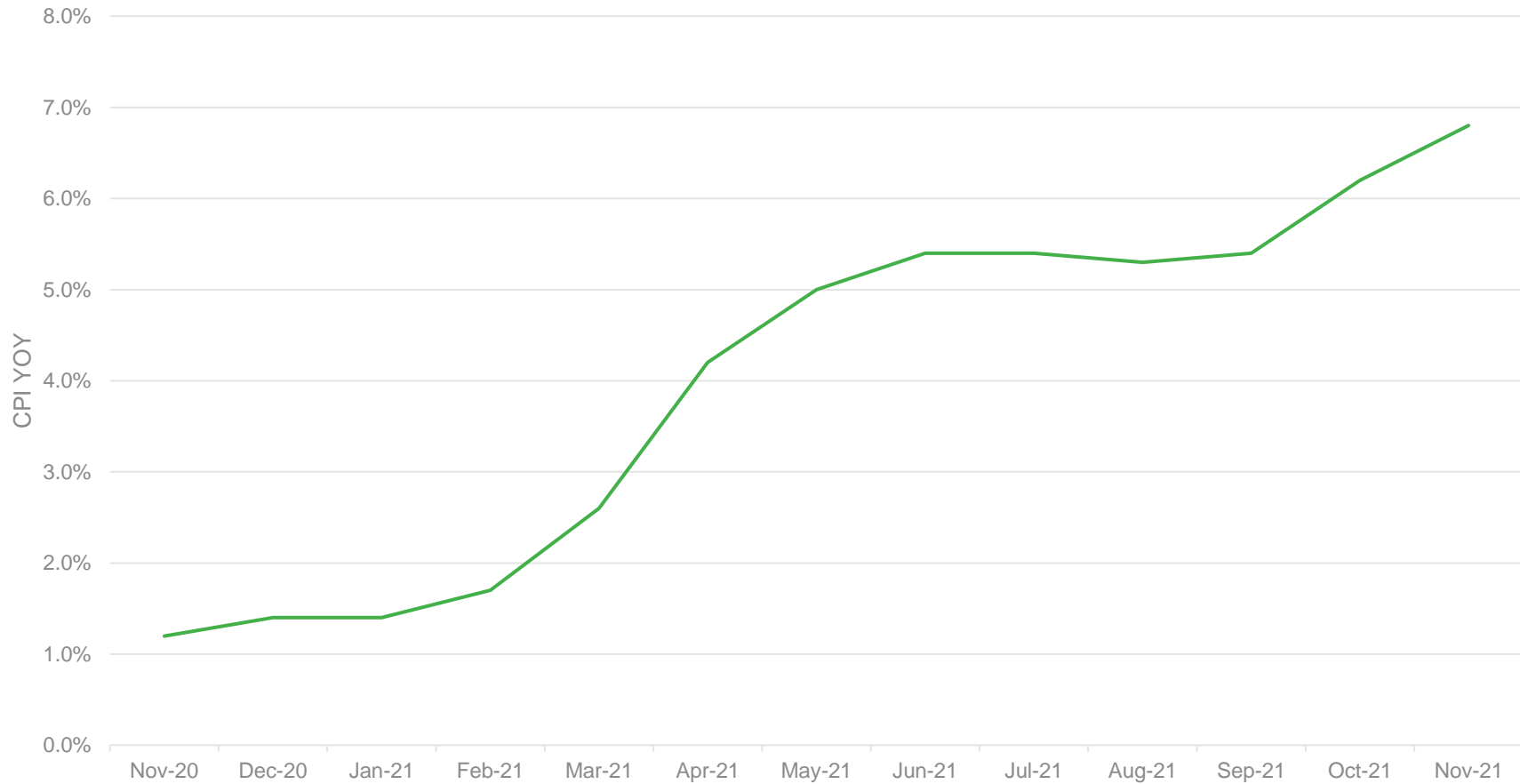
The unemployment rate decreased approximately 2.1% compared to December 2020. The November rate of 4.2% was just above the 5-year low of 3.5%.



Source: Federal Reserve Economic Data

CPI

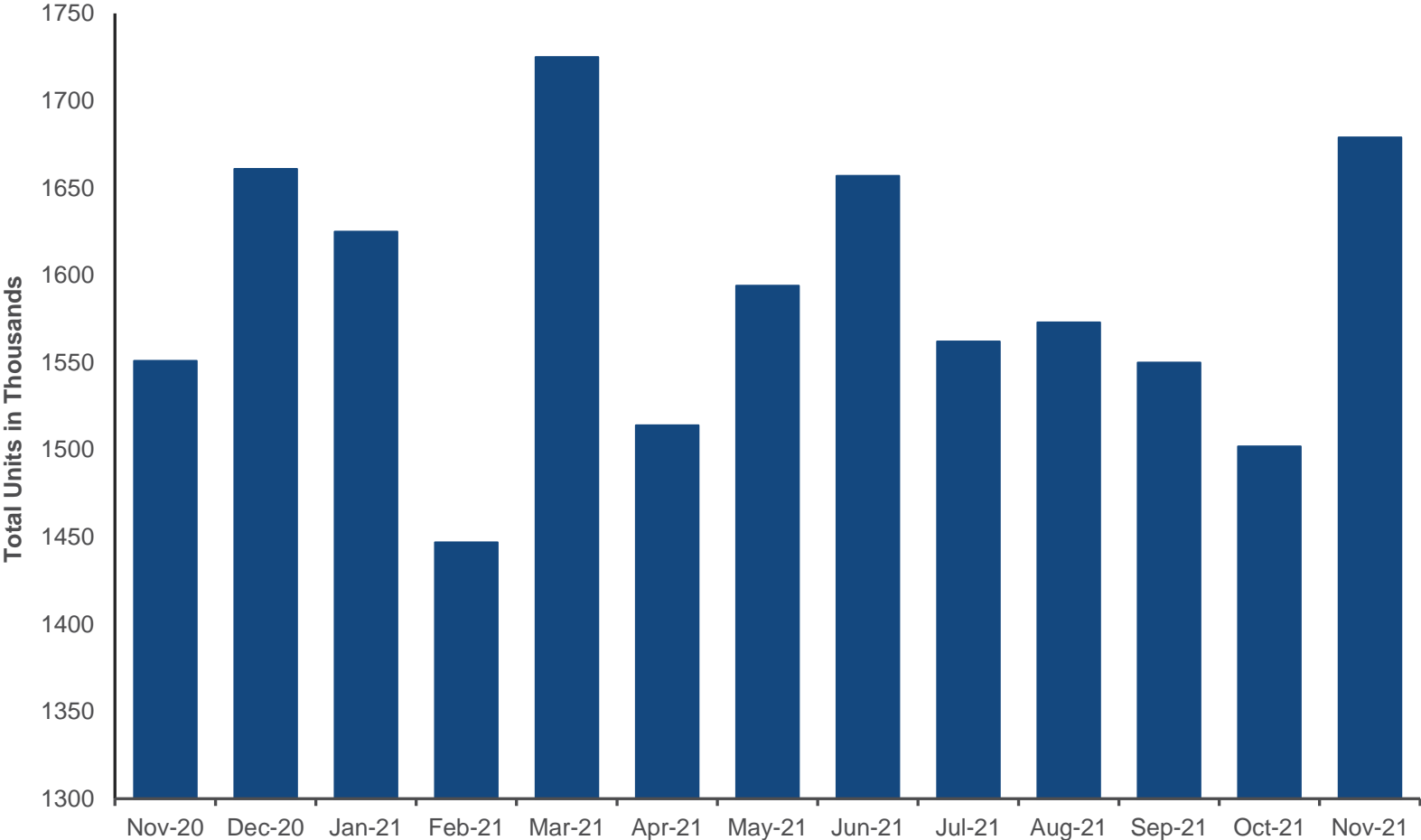
CPI year-over-year growth reached 6.8% in November 2021, the highest increase seen in the past 5 years.



Source: S&P Capital IQ and Bloomberg

Housing Starts

New, privately-owned housing starts were approximately 1.7 million units in November 2021, about 9% higher than November 2020.

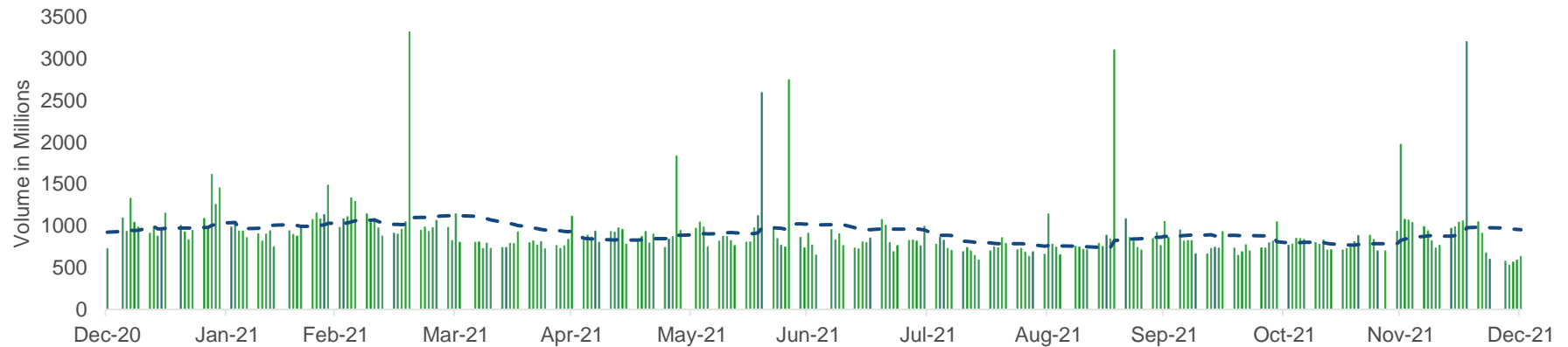


Source: Federal Reserve Bank of St. Louis

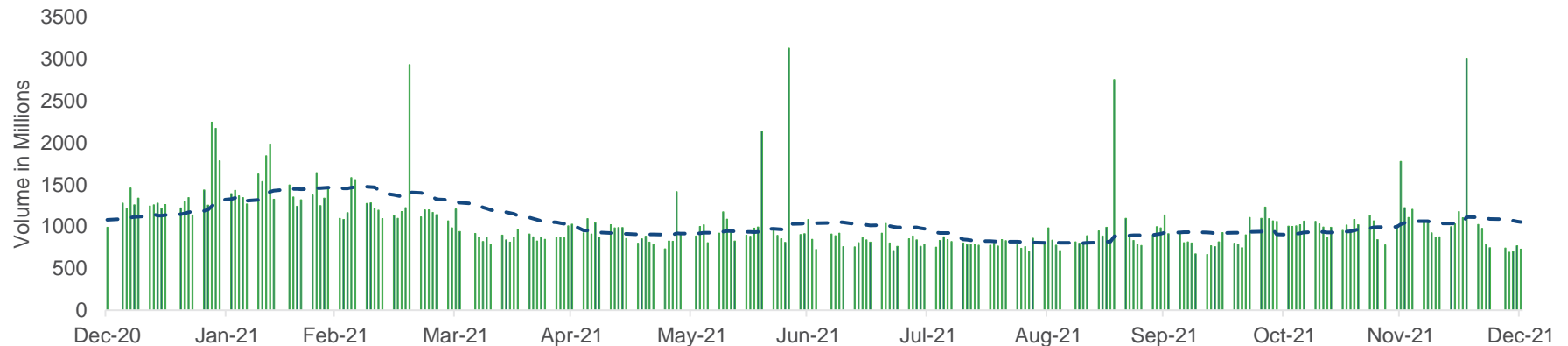
Trading Volume

NYSE trading volumes decreased by approximately 11% on average while NASDAQ trading volumes increased by approximately 13% on average when compared to 2020 levels.

NYSE Volume



NASDAQ Volume



--- 30-Day Moving Average Volume

Notable M&A Deals

Target	Acquirer	Announced	Transaction Value (\$ in millions)	Target's Revenue	P/E Multiple
Telecom Italia	KKR & Co	11/21/2021	\$52,198	\$18,024	NM
Cerner Corporation	Oracle	12/20/2021	\$30,131	\$5,708	53.8
McAfee	Advent International / GIC Pte. / Permira Advisers	11/8/2021	\$20,862	\$1,826	NM
Bank of the West	BMO Harris Bank National	12/20/2021	\$16,300	\$2,661	27.5
CyrusOne	KKR & Co / Global Infrastructure Management	11/15/2021	\$15,639	\$1,156	231.4
Vifor Pharma	CSL Limited	12/14/2021	\$12,830	\$1,896	50.9
Oil and Gas Business of Lundin Energy AB	Aker BP	12/21/2021	\$11,057	NA	NA
CoreSite Realty Corporation	American Tower Investments	11/15/2021	\$9,506	\$639	85.0
Kommstart 157 AB	Aker BP	12/21/2021	\$9,083	NA	NA
PartnerRe	Cov�ea Mutual Group Insurance Company	10/28/2021	\$9,000	\$7,624	17.3

Source: S&P Capital IQ, Mergermarket, and Bloomberg

Notable PE Deals

PE Buyer	Seller	Announced	Transaction Value (\$ in millions)	Target	Industry
KKR & Co	NA	8/20/2021	\$52,198	Telecom Italia	Telecommunication
Ardian / Global Infrastructure Management	Veolia Environnement	4/10/2021	\$36,006	Suez SA	Utilities
Hellman & Friedman / The Carlyle Group / Blackstone Inc.	NA	4/26/2021	\$32,000	Medline Industries	Healthcare
IFM Investors / Qsuper / AustralianSuper	State Street Corporation / BlackRock / UBS Group	6/17/2021	\$24,015	Sydney Airport	Transportation
Advent International Corporation / GIC Pte. / Permira Advisers	McAfee / TPG Global	7/2/2021	\$20,862	McAfee	Software
CDPQ / CVC Capital Partners	BlueFocus Intelligent Communications	2/4/2021	\$20,566	BlueFocus	Marketing
Realty Income Corporation	NA	5/17/2021	\$17,367	VEREIT	Real Estate
KKR & Co / Global Infrastructure Management	NA	4/23/2021	\$15,639	CyrusOne	Real Estate
Brookfield Asset Management / Sunsuper Pty	Singapore Power International / SP eResources	6/15/2021	\$14,322	AusNet Services	Electric Utilities
Clayton, Dubilier & Rice, LLC	NA	7/6/2021	\$14,072	Wm Morrison Supermarkets	Food Retail

Source: S&P Capital IQ, Mergermarket, and Bloomberg

Notable IPOs

In 2021, businesses raised over \$450 billion worldwide through stock market listings, which is about double the number of deals and capital raised in 2020.

Company	Industry	Ticker	Exchange	IPO Date	IPO Proceeds Raised (\$ in millions)	# of Shares Offered	Offering Price	First Trading Day Closing Price	Price as of 12/31/2021	First Day vs. Offering Price	12/31/2021 vs. Offering	12/31/2021 vs. First Day
Rivian Automotive	Automotive	RIVN	NasdaqGS	11/10/2021	\$11,934	153,000,000	\$78.00	\$100.73	\$103.69	▲ 29.1%	▲ 32.9%	▲ 2.9%
Coupang	Retail	CPNG	NYSE	3/12/2021	\$4,550	130,000,000	\$35.00	\$48.47	\$29.38	▲ 38.5%	▼ 16.1%	▼ 39.4%
DiDi Global	Transportation	DIDI	NYSE	6/30/2021	\$4,435	316,800,000	\$14.00	\$14.14	\$4.98	▲ 1.0%	▼ 64.4%	▼ 64.8%
Blackrock Innovation & Growth Trust	Financials	BIGZ	NYSE	3/26/2021	\$4,400	220,000,000	\$20.00	\$20.00	\$14.54	▲ 0.0%	▼ 27.3%	▼ 27.3%
GLOBALFOUNDRIES	Semiconductors	GFS	NasdaqGS	10/28/2021	\$2,585	55,000,000	\$47.00	\$46.40	\$64.97	▼ 1.3%	▲ 38.2%	▲ 40.0%
Nu Holdings	Banking	NU	NYSE	12/9/2021	\$2,530	281,062,825	\$9.00	\$10.33	\$9.38	▲ 14.8%	▲ 4.2%	▼ 9.2%
Bumble	Media	BMBL	NasdaqGS	2/11/2021	\$2,150	50,000,000	\$43.00	\$70.31	\$33.86	▲ 63.5%	▼ 21.3%	▼ 51.8%
Robinhood Markets	Banking	HOOD	NasdaqGS	7/29/2021	\$2,090	55,000,000	\$38.00	\$34.82	\$17.76	▼ 8.4%	▼ 53.3%	▼ 49.0%
BlackRock ESG Capital Allocation Trust	Financials	ECAT	NYSE	9/28/2021	\$2,040	102,000,000	\$20.00	\$20.00	\$18.65	▲ 0.0%	▼ 6.8%	▼ 6.8%
AppLovin	Software	APP	NasdaqGS	4/15/2021	\$2,000	25,000,000	\$80.00	\$65.20	\$94.26	▼ 18.5%	▲ 17.8%	▲ 44.6%

Source: S&P Capital IQ and Bloomberg

Notable SPACs

Over 700 SPACs were listed in 2021, totaling over \$160 billion in gross proceeds. That compares to 248 new SPACs in 2020 with gross proceeds of approximately \$83 billion.

SPAC	IPO Date	Public Proceeds Raised (\$ in millions)	Transaction Announced	Company	Ticker	Industry	Pro Forma EV (\$ in millions)
Soaring Eagle Acquisition Corporation	2/24/2021	\$1,725.00	5/11/2021	Ginkgo Bioworks, Inc.	DNA	BioTech	\$15,164.00
Thoma Bravo Advantage	1/15/2021	\$1,000.00	3/22/2021	ironSource	IS	Technology	\$10,334.00
Reinvent Technology Partners Y	3/16/2021	\$977.50	7/15/2021	Aurora	AUR	Technology	\$10,562.00
CM Life Sciences III Inc.	4/7/2021	\$552.00	8/6/2021	EQRx, Inc.	EQRX	BioTech	\$3,538.00
Khosla Ventures Acquisition Corporation II	3/24/2021	\$416.30	7/6/2021	Nextdoor, Inc.	KIND	TMT	\$3,538.00
Northern Genesis Acquisition Corporation II	1/13/2021	\$414.00	6/23/2021	Embark Trucks II	EMBK	Technology	\$4,545.00
Star Peak Corporation II	1/6/2021	\$402.50	5/10/2021	Benson Hill, Inc.	BHIL	Technology	\$1,351.00
NextGen Acquisition Corporation II	3/23/2021	\$382.60	8/23/2021	Virgin Orbit	VORB	Space	\$3,218.00
GigCapital4, Inc.	2/9/2021	\$358.80	6/4/2021	BigBear.ai	BBAI	Technology	\$1,570.00
Decarbonization Plus Acquisition Corporation III	3/24/2021	\$350.00	6/15/2021	Solid Power, Inc.	SLDP	Electric Vehicle	\$1,246.00

Source: S&P Capital IQ, SPACInsider, and Morning Star

Notable Bankruptcies

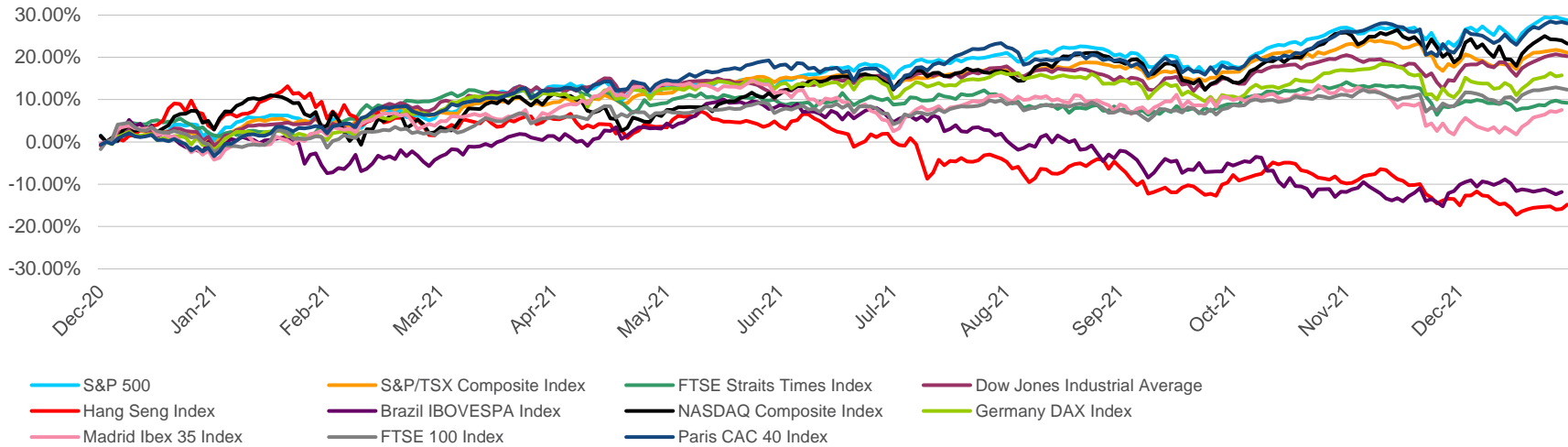
In 2021, Consumer discretionary sector had the most bankruptcy filings followed by real estate.






Company	Date	Industry	Assets	Liabilities
Seadrill Ltd	02/10/2021	Drilling	\$7.29B	\$7.19B
Philippine Airlines	09/03/2021	Airlines	\$4.10B	\$6.01B
Washington Prime Group Inc	06/13/2021	Real Estate	\$4.03B	\$3.47B
GTT Communications, Inc	10/31/2021	Telecom	\$2.80B	\$4.10B
PWM Property Management LLC	10/31/2021	Real Estate	\$2.53B	\$2.17B
Hospitality Investors Trust, Inc	05/19/2021	Real Estate	\$1.70B	\$1.36B
HighPoint Resources Corporation	03/14/2021	Energy	\$826.64M	\$760.43M
Sequential Brands Group, Inc	08/31/2021	Consumer	\$442.77M	\$435.07M
Basic Energy Services, Inc	08/17/2021	Energy	\$331.00M	\$549.00M
Avadim Health, Inc	05/31/2021	Technology	\$187.99M	\$117.57M

Source: Bloomberg

Indices

Global equity indices have generally improved, even as the world deals with ongoing Covid-19 pressures. The S&P saw the highest growth.

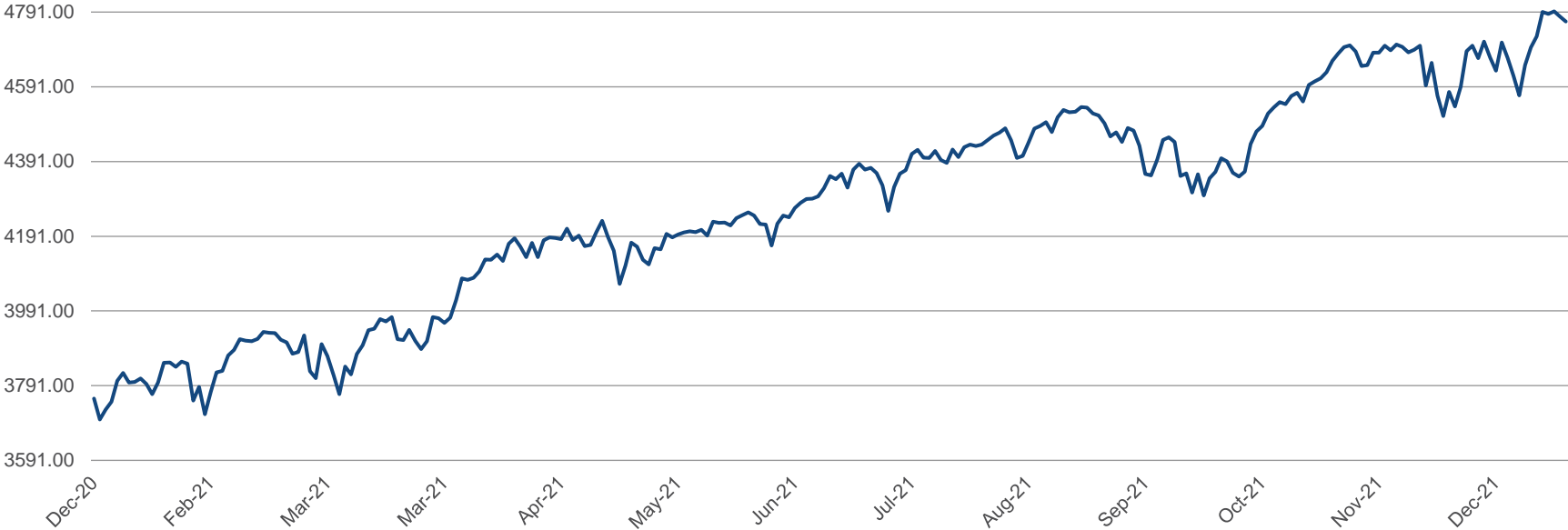


	As of 12/31/2021	Performance Since Q3 2021	Performance Since Q2 2021	Performance Since Q1 2021	Performance Since Q4 2020
Indices					
S&P 500 	4,766.18	▲ 10.6%	▲ 10.9%	▲ 20.0%	▲ 26.9%
Dow Jones Industrial Average 	36,338.30	▲ 7.4%	▲ 5.3%	▲ 10.2%	▲ 18.7%
NASDAQ Composite Index 	15,644.97	▲ 8.3%	▲ 7.9%	▲ 18.1%	▲ 21.4%
FTSE 100 Index 	7,384.54	▲ 4.2%	▲ 4.9%	▲ 10.0%	▲ 14.3%
Hang Seng Index 	23,397.67	▼ 4.8%	▼ 18.8%	▼ 17.6%	▼ 14.1%

Source: S&P Capital IQ and Bloomberg

S&P 500 Performance

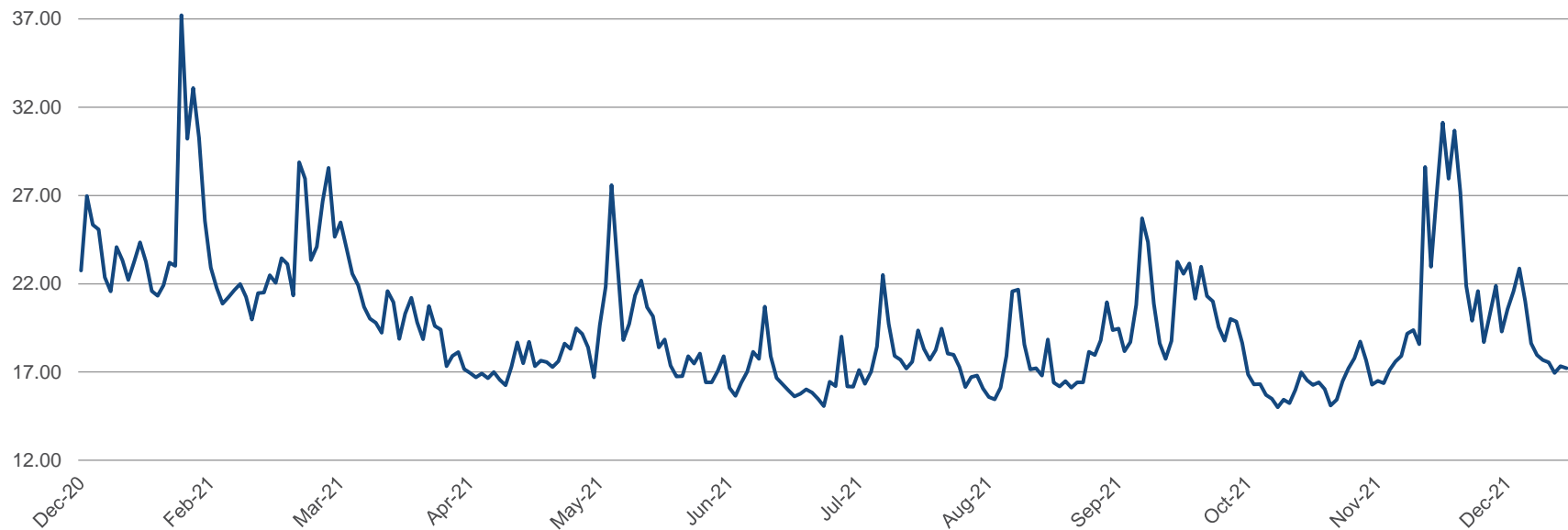
The S&P 500 saw significant growth during the year as investor sentiment improved and fixed income investments failed to prove an attractive alternative.



Source: S&P Capital IQ and Bloomberg

Volatility

The VIX closed at 17.22 on December 31, 2021, which represents a 24.3% decrease since December 31, 2020, and a 53.7% decrease from its peak close in February.



Source: S&P Capital IQ and Bloomberg

Global Cost of Capital Inputs

Data as of November 30, 2021

	Normalized Risk-Free Rate	Duff & Phelps-Recommended Equity Risk Premium
United States (in USD)	2.5%	5.5%
Eurozone* (in EUR)	1.5%	5.5% to 6.0%

These are our latest Equity Risk Premium (ERP) recommendations for the U.S. and the Eurozone (from a German investor perspective), along with accompanying normalized risk-free rates. ERPs are still higher relative to our recommendations prior to the outbreak of COVID-19 in March 2020.

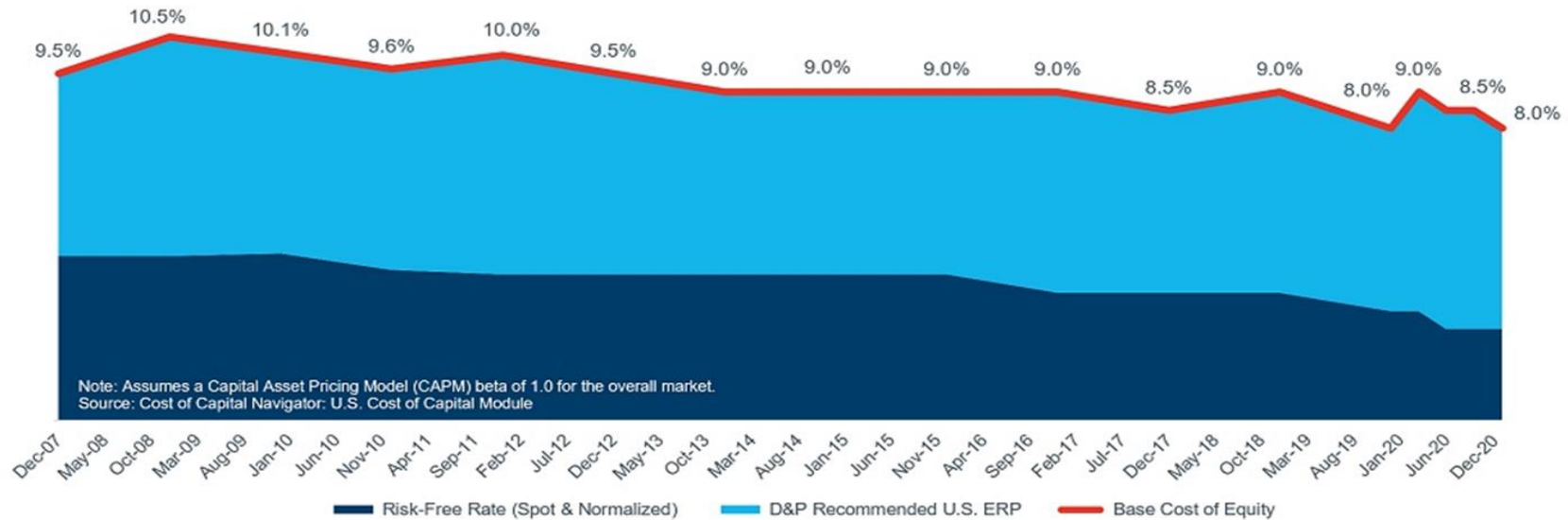
German normalized risk-free rate and Eurozone equity risk premium (ERP) for use in EUR-denominated discount rates from a German investor perspective. Additional country risk adjustments may be warranted when estimating discount rates for other countries in the Eurozone. For more information, visit: <https://www.duffandphelps.com/costofcapital>

ERP

Based on current economic and financial market conditions, Kroll is maintaining its recommended U.S. equity risk premium (“ERP”) of **5.5%**. The current ERP recommendation was developed in conjunction with a “normalized” 20-year yield on U.S. government bonds of 2.5% as a proxy for the risk-free rate (Rf), implying an 8.0% (2.5% + 5.5%) “base” U.S. cost of equity capital estimate as of December 9, 2020. This U.S. cost of equity capital estimate held constant through 2021.

2.5%
Current Normalized
Risk-free Rate

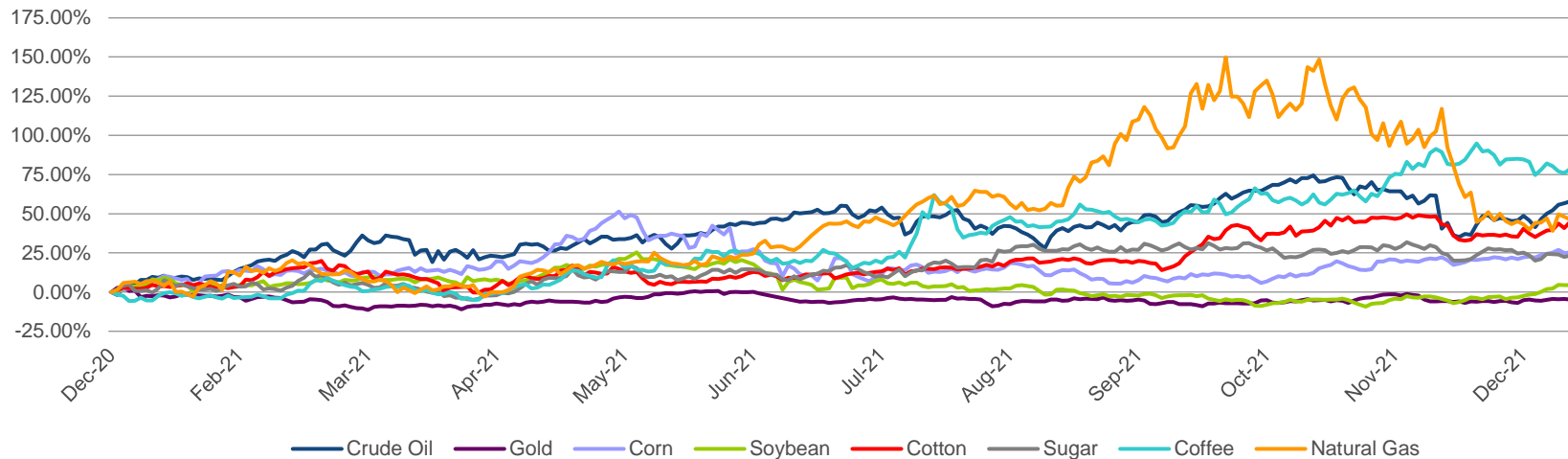
5.5%
Current U.S. ERP
Recommendation



Source: Kroll

Commodities

Commodity prices mostly increased over the course of 2021. Energy prices increased more than other commodities as economic recovery boosted demand for energy.

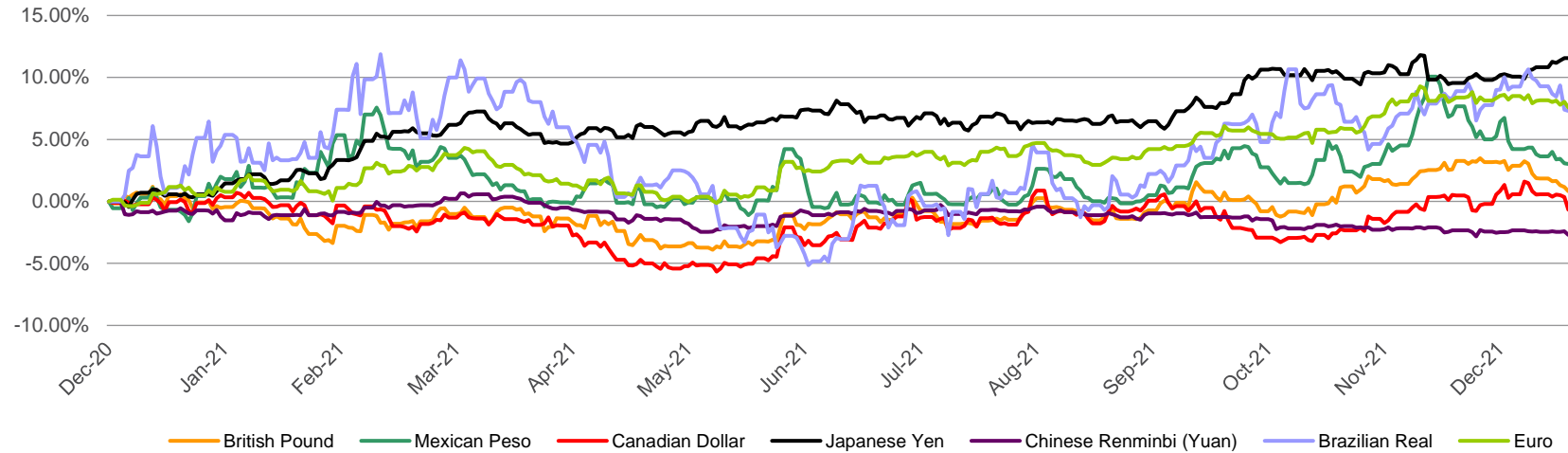


Forecast	Forecast Q1 2022	Forecast Q2 2022	Forecast Q3 2022	Forecast Q4 2022	Forecast FY 2023
Commodities					
Crude Oil (\$ per bbl.)(1)	\$76.60	\$70.90	\$68.80	\$71.10	\$70.95
Natural Gas (£ per therm) (2)	£2.00	£1.60	£1.30	£1.20	£0.80
Gold (\$ per troy oz.)	\$1,775.00	\$1,750.00	\$1,700.00	\$1,680.00	\$1,650.00
Corn (\$ per bu.)	\$5.35	\$5.20	\$5.10	\$5.00	\$4.70
Soybean (\$ per bu.)	\$12.50	\$12.40	\$11.60	\$11.40	\$10.00
Cotton (\$ per lb.)	\$0.92	\$0.89	\$0.86	\$0.83	\$0.82
Sugar (\$ per lb.)	\$0.18	\$0.17	\$0.16	\$0.16	\$0.15
Coffee (\$ per lb.)	\$1.88	\$1.84	\$1.66	\$1.57	\$1.40
Median Forecast as of 12/31/2021					
(1) Dubai Fateh Crude Oil					
(2) UK National Balancing Point Natural Gas £ per therm					

Source: S&P Capital IQ and Bloomberg

Currencies

The value of the U.S. Dollar strengthened against major currencies relative to 2020.



Forecast	Forecast Q1 2022	Forecast Q2 2022	Forecast Q3 2022	Forecast Q4 2022	Forecast FY 2023
Euro (EUR/USD) 	1.12	1.13	1.15	1.15	1.17
British Pound (GBP/USD) 	1.34	1.35	1.36	1.37	1.40
Mexican Peso (USD/MXN) 	21.00	21.02	21.15	21.20	21.05
Brazilian Real (USD/BRL) 	5.60	5.65	5.80	5.75	5.40
Japanese Yen (USD/JPY) 	114.00	115.00	115.00	115.00	115.00
Canadian Dollar (USD/CAD) 	1.26	1.25	1.25	1.24	1.22
Chinese Renminbi (Yuan) (USD/CNY) 	6.40	6.39	6.43	6.44	6.20

Source: S&P Capital IQ and Bloomberg

Current P/E Multiples

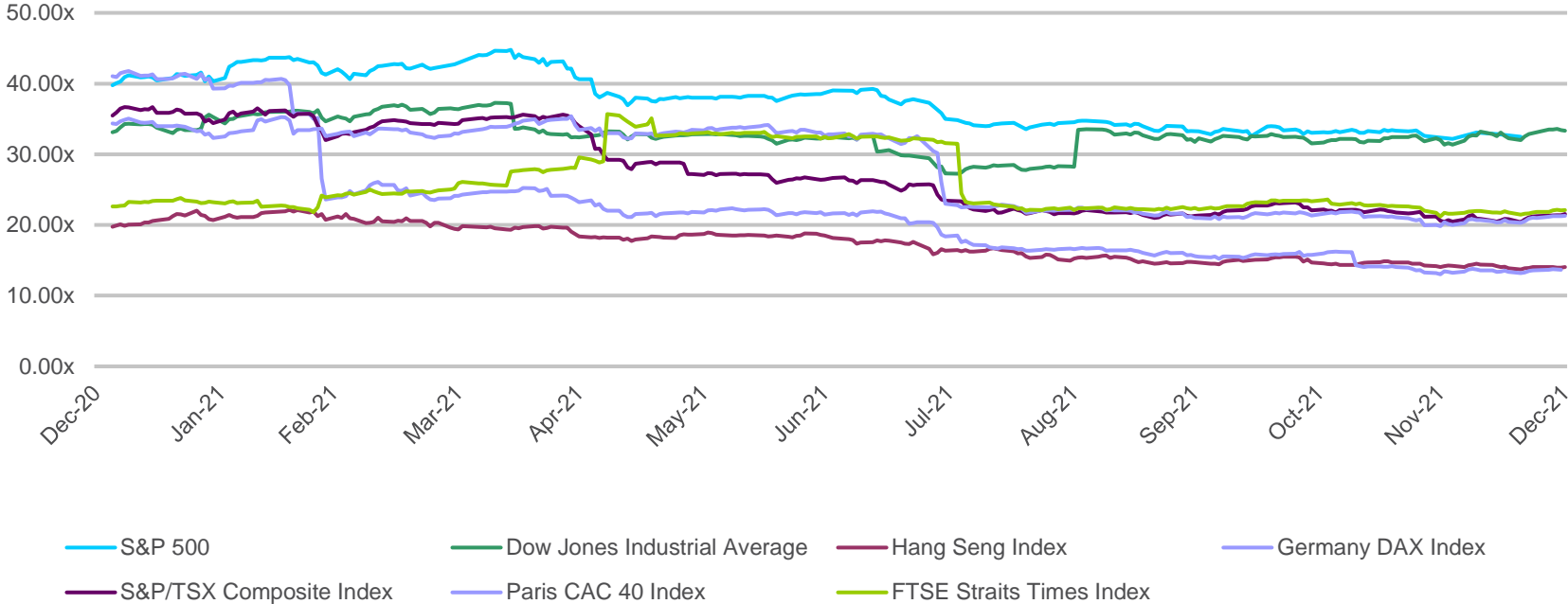
The median LTM P/E multiples decreased **12.9x** for the major indices since December 31, 2020.

Index	FYE 2021	1 Year Change	9/30/2021	6/30/2021	3/30/2021	FYE 2020	FYE 2019
S&P 500	26.2x	▼ 4.5x	23.9x	26.2x	32.1x	30.7x	23.2x
Dow Jones Industrial Average	20.3x	▼ 4.9x	19.0x	21.0x	27.2x	25.2x	22.1x
NASDAQ Composite Index	130.2x	▲ 71.2x	80.8x	71.1x	98.7x	59.0x	40.6x
FTSE 100 Index	17.7x	▼ 67.4x	17.0x	18.4x	88.6x	85.1x	21.5x
S&P/TSX Composite Index	19.2x	▼ 7.8x	18.2x	19.9x	27.7x	27.0x	17.1x
Hang Seng Index	9.3x	▼ 4.8x	9.9x	11.7x	14.8x	14.1x	11.5x
Germany DAX Index	15.3x	▼ 52.2x	15.0x	17.9x	50.9x	67.6x	25.3x
Paris CAC 40 Index	21.7x	▼ 30.2x	19.8x	22.5x	55.2x	51.9x	22.6x
Singapore FTSE Straits Times Index	19.7x	▼ 18.0x	19.5x	23.6x	42.4x	37.7x	12.5x
Brazil Bovespa Index	6.8x	▼ 105.5x	7.5x	10.0x	29.7x	112.4x	18.6x

Source: Capital IQ and Bloomberg

Current P/E Multiples

Median P/E multiples for the S&P 500 decreased 7.3x turns, while the DJIA decreased just 0.2x since December 31, 2020.



Source: Bloomberg

S&P P/E Multiples

	Actual FYE 2017	Actual FYE 2018	Actual FYE 2019	Actual FYE 2020	Actual FYE 2021	Forecast CY 2022
S&P 500	22.5x	16.6x	21.2x	30.7x	26.2x	21.1x



Forecast provided by Capital IQ as of 01/04/2022

Source: Bloomberg

EBITDA Multiples

LTM EBITDA multiples decreased a median 2.1x for the major indices since December 31, 2020.

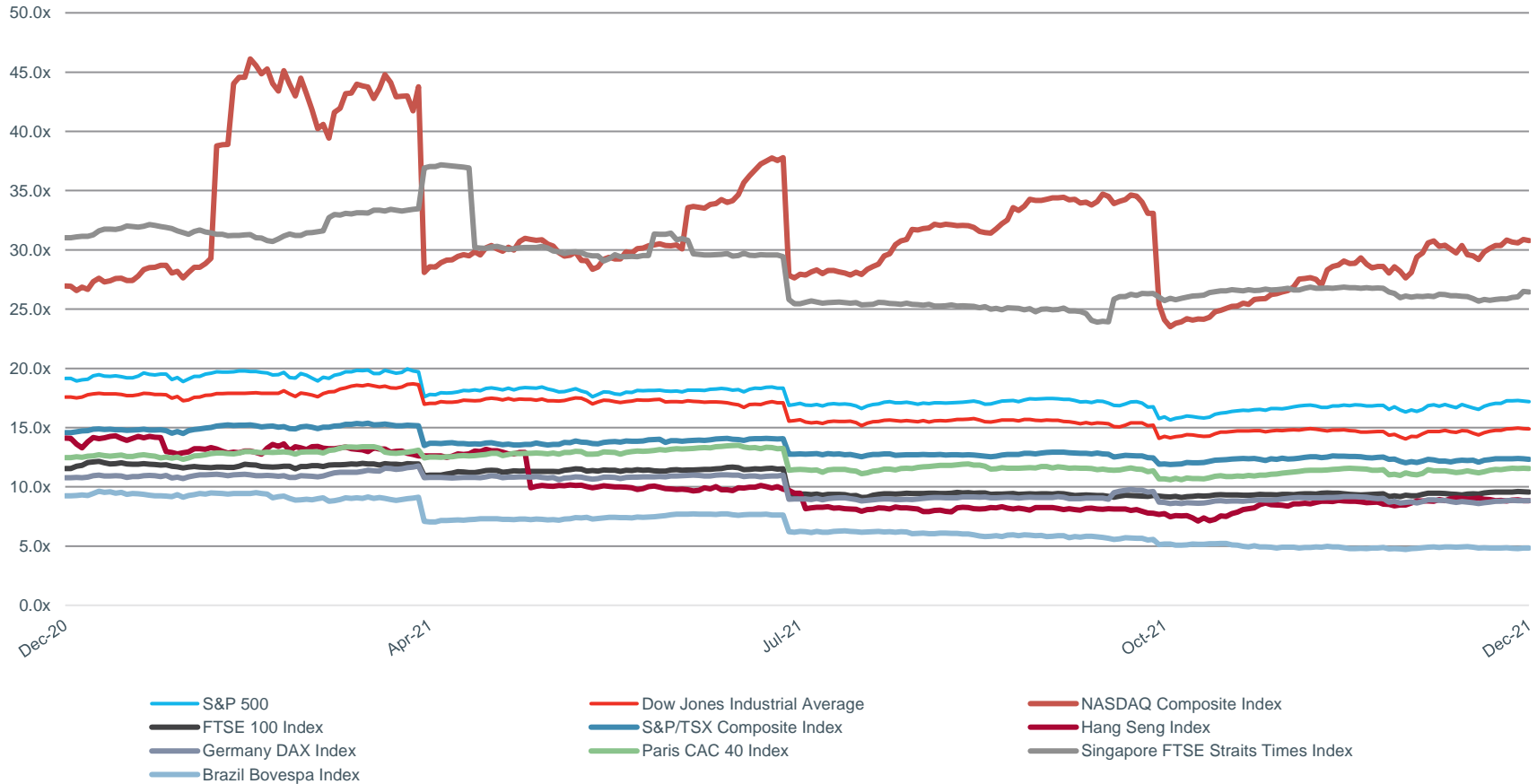
Index	LTM as of 12/31/2021	1-Year Change	9/30/2021	6/30/2021	3/31/2021	FYE 2020	FYE 2019
S&P 500	17.2x	▼ 1.4x	15.8x	16.9x	17.6x	18.5x	13.5x
Dow Jones Industrial Average	14.9x	▼ 1.9x	14.1x	15.6x	17.0x	16.8x	13.2x
NASDAQ Composite Index	30.8x	▲ 0.3x	25.4x	27.8x	28.1x	30.5x	19.9x
FTSE 100 Index	9.6x	▼ 2.6x	9.2x	9.3x	10.9x	12.2x	9.4x
S&P/TSX Composite Index	12.3x	▼ 2.2x	11.9x	12.8x	13.5x	14.5x	11.5x
Hang Seng Index	8.8x	▼ 5.3x	7.7x	9.7x	12.6x	14.1x	8.8x
Germany DAX Index	8.8x	▼ 2.9x	8.7x	8.9x	10.8x	11.7x	8.8x
Paris CAC 40 Index	11.5x	▼ 1.0x	10.7x	11.4x	12.4x	12.5x	10.6x
Singapore FTSE Straits Times Index	26.4x	▲ 10.4x	26.0x	25.8x	36.9x	16.0x	13.9x
Brazil Bovespa Index	4.8x	▼ 7.1x	5.1x	6.2x	7.1x	11.9x	9.5x

Note: Data is based on period date

Source: Bloomberg

EBITDA Multiples

The EBITDA multiple for the NASDAQ Composite index increased **3.8x** (S&P 500 decreased **2.0x** and the DJIA decreased **2.7x**) since December 31, 2020.

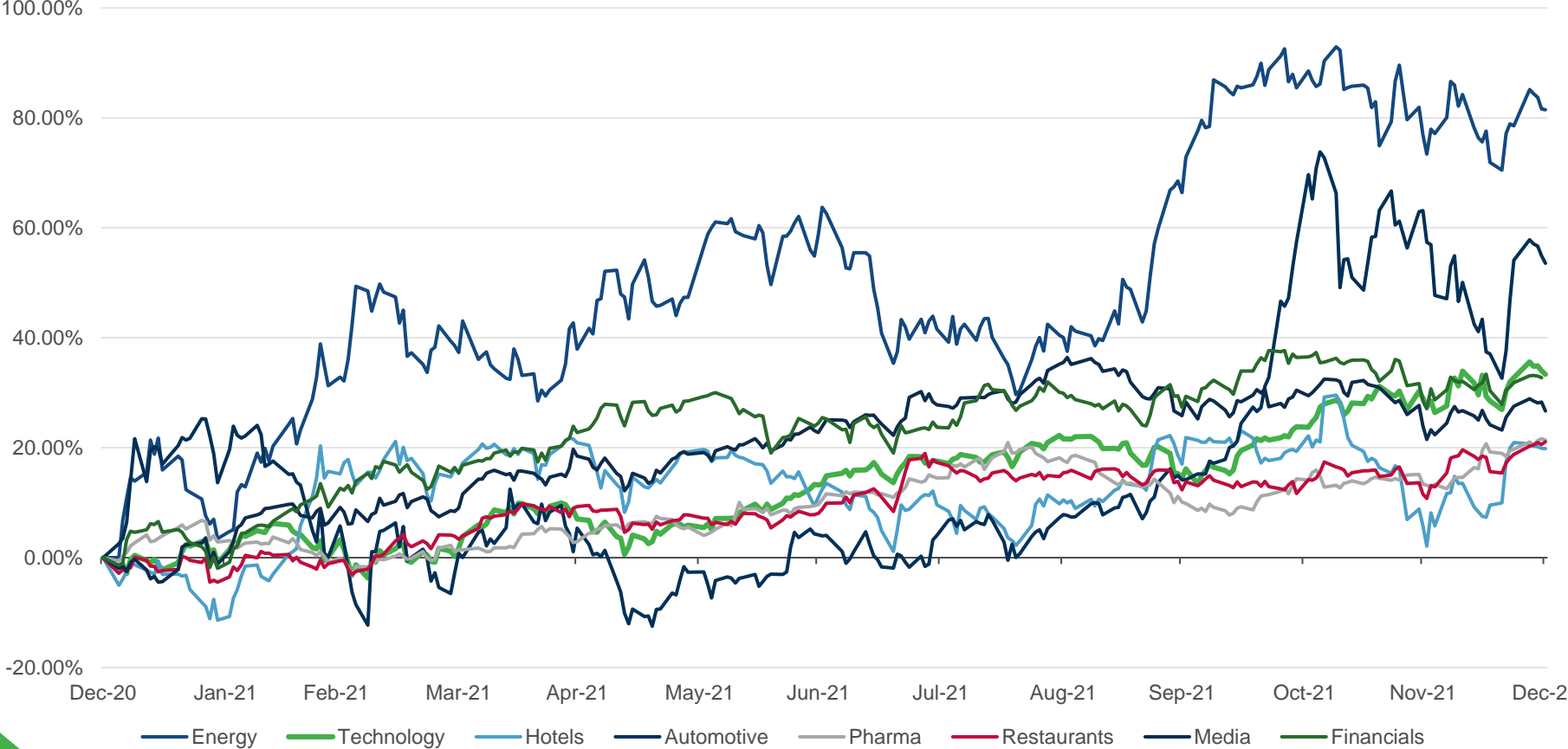


Note: Data is based on period data

Source: Bloomberg, and Capital IQ

Sector Performance ●○○○○○○○

- ▲ 81.4% Energy
- ▲ 53.5% Automotive
- ▲ 33.4% Technology
- ▲ 32.7% Financials
- ▲ 26.7% Media
- ▲ 21.4% Pharma
- ▲ 21.1% Restaurants
- ▲ 19.8% Lodging



Source: S&P Capital IQ and Bloomberg

Energy Sector ●●○○○○○○○○

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
Exxon Mobil	\$61.19	\$259,052	12.1x	12.4x	9.5x	6.1x	5.5x	▼ 3.0%	▲ 48.4%	▼ 10.3%	▼ 32.2%
Chevron	\$117.35	\$226,214	14.0x	12.2x	9.1x	6.2x	5.6x	▲ 12.0%	▲ 39.0%	▲ 7.9%	▼ 0.3%
ConocoPhillips	\$72.18	\$95,202	12.3x	9.9x	7.0x	5.1x	4.3x	▲ 18.5%	▲ 80.5%	▲ 15.8%	▲ 44.0%
EOG Resources	\$88.83	\$51,977	10.3x	8.5x	6.7x	4.9x	4.6x	▲ 6.5%	▲ 78.1%	▲ 1.9%	▼ 12.1%
Pioneer Natural Resources	\$181.88	\$44,403	13.6x	18.3x	11.6x	7.4x	5.3x	▲ 11.9%	▲ 59.7%	▲ 38.3%	▲ 1.0%
Marathon Petroleum	\$63.99	\$39,391	37.3x	13.2x	10.6x	8.5x	7.0x	▲ 5.9%	▲ 54.7%	▲ 8.4%	▲ 27.1%
Phillips 66	\$72.46	\$31,752	17.5x	NM	134.8x	10.4x	7.3x	▼ 15.6%	▲ 3.6%	▼ 15.9%	▼ 16.1%
Valero Energy	\$75.11	\$30,708	53.2x	21.0x	17.0x	10.6x	6.4x	▼ 3.8%	▲ 32.8%	▲ 0.2%	▲ 9.9%
Devon Energy	\$44.05	\$29,811	13.0x	15.9x	9.9x	6.2x	4.8x	▲ 50.9%	▲ 178.6%	▲ 95.4%	▼ 3.5%
Occidental Petroleum	\$28.99	\$27,076	13.5x	8.3x	6.6x	5.1x	4.8x	▼ 7.3%	▲ 67.5%	▼ 52.8%	▼ 59.3%
Average									▲ 64.3%		

Source: S&P Capital IQ and Bloomberg

Technology Sector ○○●○○○○○○

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
Apple	\$177.57	\$2,913,284	30.9x	25.9x	23.8x	23.4x	22.5x	▲ 29.7%	▲ 33.8%	▲ 350.3%	▲ 513.3%
Microsoft	\$336.32	\$2,525,084	36.5x	30.6x	28.8x	25.3x	21.9x	▲ 24.1%	▲ 51.2%	▲ 231.1%	▲ 441.2%
NVIDIA	\$294.11	\$735,275	67.7x	86.6x	74.6x	53.2x	44.0x	▲ 47.0%	▲ 125.3%	▲ 781.2%	▲ 1002.2%
Taiwan Semiconductor	TWD 615.00	\$575,441	23.2x	15.9x	15.6x	0.5x	0.4x	▲ 3.4%	▲ 16.0%	▲ 172.7%	▲ 238.8%
Visa	\$216.71	\$456,944	30.8x	29.9x	27.8x	23.3x	20.3x	▼ 7.3%	▼ 0.9%	▲ 64.2%	▲ 177.8%
Samsung	₩78,300.00	\$441,606	13.1x	5.7x	5.5x	NA	NA	▼ 3.0%	▼ 3.3%	▲ 102.3%	▲ 117.3%
Mastercard	\$359.32	\$353,053	43.5x	37.9x	35.2x	32.9x	26.3x	▼ 1.6%	▲ 0.7%	▲ 90.5%	▲ 248.0%
ASML Holding	\$706.70	\$326,687	51.9x	54.1x	49.4x	46.6x	38.5x	▲ 22.0%	▲ 77.8%	▲ 415.2%	▲ 562.6%
Broadcom	\$665.41	\$274,730	20.1x	21.8x	20.6x	16.2x	15.7x	▲ 39.5%	▲ 52.0%	▲ 161.7%	▲ 276.4%
Adobe	\$567.06	\$269,807	41.1x	47.0x	44.0x	30.8x	26.7x	▼ 3.2%	▲ 13.4%	▲ 150.6%	▲ 450.8%
Average									▲ 36.6%		

Source: S&P Capital IQ and Bloomberg

Hotel Sector ○○○○●○○○○○

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
Airbnb	\$166.49	\$104,254	NM	NM	NM	65.5x	53.3x	▲ 8.7%	▲ 13.4%	NA	NA
Marriott	\$165.24	\$53,816	56.4x	51.4x	38.6x	28.6x	19.0x	▲ 21.0%	▲ 25.3%	▲ 52.2%	▲ 99.9%
Hilton	\$155.99	\$43,478	69.1x	88.1x	52.8x	32.0x	21.8x	▲ 29.3%	▲ 40.2%	▲ 117.3%	▲ 91.2%
Carnival Corporation	\$20.12	\$22,555	NM	NM	NM	16.0x	7.8x	▼ 23.7%	▼ 7.1%	▼ 59.2%	▼ 61.4%
Royal Carribean Cruises	\$76.90	\$19,593	NM	NM	NM	NM	15.6x	▼ 9.8%	▲ 3.0%	▼ 21.4%	▼ 6.3%
InterContinental Hotels	\$47.81	\$11,698	50.8x	43.0x	35.5x	23.7x	16.1x	▼ 0.6%	▲ 1.9%	▲ 7.2%	▲ 19.5%
Hyatt Hotels	\$95.90	\$10,545	NM	NM	NM	41.7x	15.6x	▲ 23.5%	▲ 29.2%	▲ 41.9%	▲ 73.5%
Norwegian Cruise Lines	\$20.74	\$8,646	NM	NM	NM	NM	14.5x	▼ 29.5%	▼ 18.4%	▼ 51.1%	▼ 51.2%
Wyndham Hotels	\$89.65	\$8,353	30.0x	26.5x	21.3x	18.2x	16.5x	▲ 24.0%	▲ 50.8%	▲ 97.6%	NA
Choice Hotels	\$155.99	\$8,640	37.8x	32.5x	23.7x	23.8x	21.4x	▲ 31.2%	▲ 46.2%	▲ 117.9%	▲ 178.3%
Average									▲ 18.4%		

Source: S&P Capital IQ and Bloomberg

Automotive Sector ○○○○●○○○○

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	Enterprise Value (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
Tesla	\$1,056.78	\$1,063,564	\$1,059,068	172.8x	180.8x	147.8x	96.9x	66.7x	▲ 55.5%	▲ 49.8%	▲ 1487.7%	▲ 2372.7%
Toyota	¥2,106	\$253,024	\$406,401	10.7x	10.5x	9.4x	10.9x	9.6x	▲ 8.4%	▲ 32.3%	▲ 64.3%	▲ 53.1%
Volkswagen	€177.48	\$128,339	\$318,178	6.4x	9.7x	9.6x	6.7x	6.3x	▼ 16.0%	▲ 16.4%	▲ 27.8%	▲ 33.1%
Rivian	\$103.69	\$93,354	\$99,283	NM	NM	NM	NM	NM	NA	NA	NA	NA
General Motors	\$58.63	\$85,123	\$182,182	8.7x	10.1x	10.2x	15.2x	11.5x	▼ 0.9%	▲ 40.8%	▲ 75.3%	▲ 68.3%
Ford	\$20.77	\$83,002	\$197,569	10.9x	21.2x	22.0x	14.3x	14.4x	▲ 39.8%	▲ 136.3%	▲ 171.5%	▲ 71.2%
Daimler	€67.59	\$82,236	\$208,219	5.7x	9.4x	9.0x	7.2x	8.1x	▼ 10.2%	▲ 17.0%	▲ 47.2%	▼ 4.4%
BMW	€88.49	\$65,392	\$168,755	5.3x	10.1x	9.0x	7.9x	7.8x	▼ 0.9%	▲ 22.5%	▲ 25.2%	▼ 0.3%
Tata Motors	₹ 482.35	\$23,130	\$36,337	NM	18.7x	11.7x	8.6x	5.5x	▲ 42.1%	▲ 158.7%	▲ 179.5%	▲ 2.3%
Lucid Group	\$38.05	\$62,644	\$58,064	NM	NM	NM	NM	NM	▲ 32.0%	▲ 280.1%	NA	NA
Average										▲ 83.8%		

Source: S&P Capital IQ and Bloomberg

Pharma Sector ○○○○○●○○○

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
Johnson & Johnson	\$171.07	\$450,358	17.5x	14.9x	14.3x	13.6x	12.8x	▲ 3.8%	▲ 8.7%	▲ 32.6%	▲ 48.5%
Roche	379.10 CHF	\$336,558	18.7x	14.8x	15.0x	13.7x	13.5x	▲ 8.8%	▲ 22.7%	▲ 55.8%	▲ 63.0%
Pfizer	\$59.05	\$331,440	14.0x	16.0x	12.5x	11.5x	7.8x	▲ 50.8%	▲ 60.4%	▲ 35.3%	▲ 81.8%
Novo Nordisk	735.00 kr.	\$256,201	35.6x	4.3x	4.2x	3.9x	3.4x	▲ 39.9%	▲ 72.3%	▲ 146.7%	▲ 188.6%
Eli Lilly	\$276.22	\$250,419	34.1x	28.9x	27.2x	27.4x	26.0x	▲ 20.3%	▲ 63.6%	▲ 138.7%	▲ 275.6%
Novartis	80.28 CHF	\$197,007	13.9x	11.9x	11.1x	11.7x	11.4x	▼ 4.8%	▼ 4.0%	▼ 4.5%	▲ 8.3%
Merck & Co.	\$76.64	\$193,588	13.3x	10.5x	10.0x	10.8x	8.5x	▼ 1.5%	▼ 6.3%	▲ 0.3%	▲ 30.2%
AstraZeneca	£86.78	\$182,034	22.8x	31.9x	33.1x	18.8x	13.4x	▼ 0.1%	▲ 18.5%	▲ 47.8%	▲ 95.6%
Bristol-Myers Squibb	\$62.35	\$138,395	8.3x	8.9x	8.5x	7.9x	7.7x	▼ 6.7%	▲ 0.5%	▲ 19.9%	▲ 6.7%
Sanofi	€88.58	\$126,457	13.7x	19.8x	13.0x	11.7x	10.6x	▲ 0.2%	▲ 12.6%	▲ 17.1%	▲ 15.2%
Average									▲ 24.9%		

Source: S&P Capital IQ and Bloomberg

Restaurant Sector ○○○○○○●○○

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
McDonald's	\$268.07	\$200,314	28.5x	23.4x	21.8x	20.2x	19.1x	▲ 16.1%	▲ 24.9%	▲ 51.0%	▲ 120.2%
Starbucks	\$116.97	\$137,229	34.0x	30.7x	24.8x	21.8x	19.5x	▲ 4.6%	▲ 9.3%	▲ 81.6%	▲ 110.7%
Chipotle Mexican Grill	\$1,748.25	\$49,188	69.5x	58.4x	49.6x	44.2x	34.3x	▲ 12.8%	▲ 26.1%	▲ 304.9%	▲ 363.3%
Yum! Brands	\$138.86	\$40,704	30.5x	23.5x	22.8x	22.2x	20.7x	▲ 20.7%	▲ 27.9%	▲ 51.1%	▲ 119.3%
Restaurant Brands International	\$16.51	\$39,879	29.0x	63.5x	42.5x	20.1x	16.8x	▲ 8.5%	▲ 21.1%	▲ 0.1%	▲ 5.8%
Yum China Holdings	\$49.84	\$21,338	33.6x	13.4x	13.7x	13.7x	10.7x	▼ 24.8%	▼ 12.7%	▲ 48.6%	▲ 90.8%
Domino's Pizza	\$564.33	\$20,534	41.4x	30.9x	30.0x	28.9x	26.6x	▲ 21.0%	▲ 47.2%	▲ 127.6%	▲ 254.4%
Darden Restaurants	\$150.64	\$19,551	19.9x	28.0x	20.4x	15.6x	14.5x	▲ 3.2%	▲ 26.5%	▲ 50.9%	▲ 107.2%
Restaurant Brands International	\$60.68	\$19,119	21.9x	16.9x	16.1x	14.9x	13.6x	▼ 5.8%	▼ 0.7%	▲ 16.0%	▲ 27.3%
Sodexo	€77.06	\$12,820	17.8x	25.5x	19.7x	10.7x	9.5x	▼ 2.1%	▲ 11.3%	▼ 13.9%	▼ 29.4%
Average									▲ 18.1%		

Source: S&P Capital IQ and Bloomberg

Media Sector ○○○○○○○○●●

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	1-Yr Forward P/E Multiple	3-Yr Average EV/EBITDA Multiple	LTM EV/EBITDA Multiple	1-Yr Forward EV/EBITDA Multiple	2-Yr Forward EV/EBITDA Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
Disney	\$154.89	\$281,537	37.9x	44.5x	39.2x	23.7x	18.4x	▼ 11.9%	▼ 14.5%	▲ 41.3%	▲ 48.6%
Netflix	\$602.44	\$266,852	56.1x	44.7x	41.4x	41.2x	32.8x	▲ 14.1%	▲ 11.4%	▲ 125.1%	▲ 386.6%
Comcast	\$50.33	\$229,954	15.8x	10.1x	9.7x	9.3x	8.4x	▼ 11.7%	▼ 4.0%	▲ 47.8%	▲ 45.8%
Charter Communications	\$651.97	\$116,892	28.9x	10.9x	10.5x	10.3x	9.6x	▼ 9.6%	▼ 1.4%	▲ 128.8%	▲ 126.4%
Snap	\$47.03	\$75,709	129.6x	NM	NM	160.6x	77.1x	▼ 31.0%	▼ 6.1%	▲ 753.5%	NA
Roblox	\$103.16	\$59,713	NM	NM	NM	92.6x	83.2x	▲ 14.6%	NA	NA	NA
Nintendp	¥53,650.00	\$54,668	15.7x	NM	NM	NM	NM	▲ 9113.7%	▲ 8310.8%	▲ 19999.7%	▲ 25424.2%
Activision Blizzard	\$66.53	\$51,819	17.6x	13.7x	13.3x	12.0x	11.8x	▼ 30.3%	▼ 28.3%	▲ 42.9%	▲ 84.2%
Universal Music Group	€24.78	\$51,104	36.9x	53.7x	33.8x	29.9x	26.1x	▼ 76.9%	▼ 69.8%	▼ 31.7%	NA
Spotify	\$234.03	\$44,829	NM	NM	772.2x	295.0x	179.0x	▼ 15.1%	▼ 25.6%	▲ 106.2%	NA
Average									▲ 908.1%		

Source: S&P Capital IQ and Bloomberg

Financial Sector oooooooo

Performance of Top 10 Firms by Market Capitalization

Company	Stock Price on 12/31/2021	Market Capitalization (\$US mn)	LTM P/E Multiple	1-Yr Forward P/E Multiple	2-Yr Forward P/E Multiple	Current P/BV Multiple	Current P/TBV Multiple	Performance since 6/30/2021	1-Year Performance	3-Year Performance	5-Year Performance
JPMorgan Chase	\$158.35	\$467,966	10.0x	10.6x	13.2x	1.8x	2.3x	▲ 1.8%	▲ 13.6%	▲ 62.2%	▲ 83.5%
Bank of America	\$44.49	\$364,110	13.3x	12.7x	14.0x	1.5x	2.0x	▲ 7.9%	▲ 26.3%	▲ 80.6%	▲ 101.3%
Wells Fargo	\$47.98	\$191,307	11.4x	10.3x	12.9x	1.1x	1.3x	▲ 5.9%	▼ 10.8%	▲ 4.1%	▼ 12.9%
Morgan Stanley	\$98.16	\$176,139	12.5x	NM	13.1x	1.8x	2.4x	▲ 7.1%	▲ 92.0%	▲ 147.6%	▲ 132.3%
Charles Schwab	\$84.10	\$158,999	32.0x	25.9x	22.9x	3.3x	6.1x	▲ 15.5%	▲ 76.8%	▲ 102.5%	▲ 113.1%
Royal Bank of Canada	\$134.25	\$151,137	12.1x	12.0x	11.3x	2.1x	NM	▲ 6.9%	▲ 30.7%	▲ 43.7%	▲ 47.7%
TD Bank	\$96.98	\$139,630	12.6x	12.0x	11.3x	1.9x	2.3x	▲ 11.6%	▲ 33.2%	▲ 42.9%	▲ 46.5%
Goldman Sachs	\$382.55	\$127,610	6.3x	6.4x	9.6x	1.4x	1.5x	▲ 0.8%	▲ 66.4%	▲ 129.0%	▲ 59.8%
American Express	\$163.60	\$126,717	17.1x	17.0x	16.9x	NM	NM	▼ 1.0%	▲ 31.4%	▲ 71.6%	▲ 120.8%
HSBC	£4.49	\$122,187	8.2x	8.6x	9.4x	0.5x	0.6x	▲ 7.5%	▼ 24.2%	▼ 30.6%	▼ 31.7%
Average									▲ 33.5%		

Source: S&P Capital IQ and Bloomberg

Select 2021 Duff & Phelps Opinions Transactions

FAIRNESS OPINION



has signed a definitive merger agreement to be acquired by



FAIRNESS OPINION



has entered into an agreement to acquire



the owner of



FAIRNESS OPINION



has sold



to



FAIRNESS OPINION



has merged with



Buy-side transaction

SOLVENCY OPINION



renamed to



has completed the spin-off of

VICTORIA'S SECRET & CO.

SOLVENCY OPINION



a portfolio company



Leveraged dividend recapitalization transaction

SOLVENCY OPINION



a portfolio company



Leveraged dividend recapitalization transaction

SOLVENCY OPINION



has completed the spin-off of





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