Angelo Gordon's Capital Markets Perspectives

FIRST QUARTER 2022

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Angelo Gordon's Capital Markets Perspectives (CMP) is a quarterly publication that provides information and our portfolio managers' views on the credit, real estate, and private equity markets. We hope you find this to be a valuable resource and enjoy our latest look at the markets.

Angelo Gordon is a privately-held registered investment advisor dedicated to alternative investing. The firm was founded in 1988 and currently manages approximately $48 billion. We seek to generate absolute returns with low volatility by exploiting inefficiencies in selected markets and capitalizing on situations that are not in the mainstream of investment opportunities. We creatively seek out new opportunities that allow us to remain a leader in alternative investments.

We have expertise in a broad range of absolute return strategies for both institutional and high net worth investors. Our dedicated team of employees seeks to deliver consistent, positive returns in all market environments. We have built our name on our breadth of talent, intensive research, and risk averse approach to investing. Our long-term experience gives us the insight and patience to turn our vision into profitable, stable businesses.

Co-CIO Overview

In the fourth quarter of 2021, concerns surrounding the Fed's pivot on inflation – including its December announcement regarding the scaling back of asset purchases and three interest rate hikes in 2022 – led to periods of spiking volatility across interest rates, credit, and equities.

In high yield, despite the intra-quarter volatility, U.S. and European bonds posted moderately positive or broadly flat fourth quarter performance, ending the year with gains of 6.0% and 4.5%, respectively. In the U.S., spreads marginally tightened during the quarter, while European high yield spreads widened. The default picture remained benign, with both U.S. and European defaults at or near all-time lows and the recovery rate of defaulted European leveraged loans rising to 84%, significantly above the historical average. "Default deflation" is expected to be temporary; nonetheless, analyst estimates of the near-term default rate remain well below the historical average.

In residential and consumer debt, spreads were mixed amid broader macroeconomic concerns and year-end illiquidity. Legacy RMBS spreads were broadly flat during the fourth quarter, ending full year 2021 50-70 basis points tighter, while new issue AAAs ended the year up to 35 basis points wider. Despite some spread widening around year-end, esoteric sectors – including auto – ended the year tighter by double or triple digits, primarily due to the scarcity value of select underlying collaterals, such as rental cars and containers. Fundamentally, stimulus payments and strong labor conditions continue to support U.S. mortgages and consumers, and U.S. home prices set another record-high during the quarter.

In convertible bonds, convertible arbitrage strategies outperformed their long-only peers, which posted negative performance during the quarter. Issuance was led by the U.S., with Asian – particularly Chinese and Japanese – issuers coming back into the fray after a recent pause. Issuance is expected to remain robust in 2022, bolstered by a rising rate environment and supportive equity markets. In the SPAC market, quarterly issuance volume increased after a slow summer. The new deals came with improved terms, which offset recent weakness in secondary market performance.

In merger arbitrage, the return of leveraged buyouts boosted deal volume, which ended 2021 up 15% year-over-year. After a period of deleveraging in the summer, spreads normalized over the quarter, with prior concerns about regulators' tougher stance on antitrust issues having yet to play out or impact M&A volume. In a recent survey of dealmakers and advisers, two-thirds of the respondents expected deal volume to rise in 2022.

Turning to real estate, the global commercial real estate market in many ways demonstrated a return to normalcy during the fourth quarter. Investment volumes are now at or above historical averages, and pricing has returned to pre-pandemic levels across most geographies. However, headwinds remain in certain asset classes and geographies, particularly in the face of economic slowdowns tied to the Omicron variant. Green shoots have begun to emerge in some of the out-of-favor sectors – such as hotel and office – in certain markets, though widespread recovery has not been persistent. As central banks begin to address inflationary pressures, investors may view allocations to real estate as potential mitigants to rising rates given that real estate leases are embedded with structural features that have historically been correlated with cyclicality in inflation.

In the U.S., transaction volumes were up 97% year-over-year in the fourth quarter and set an annual record in 2021. Multifamily and industrial assets, along with certain niche property sectors, have continued to demonstrate exceptionally strong fundamentals and attract increased investor capital. Investment activity has finally started to improve in both office and hotel, though varied by geography. With regard to valuations, Green Street's Commercial Property Price Index increased 24% in 2021, though they suggest that real estate continues to be undervalued relative to investment grade and high yield bonds.

In Europe, the Omicron variant has significantly slowed economic activity, muting the GDP recovery seen in prior quarters. Real estate investment activity has returned to historical averages, with smaller increases in office and hotel as compared to multifamily and industrial assets. Although rent levels have recovered to pre-pandemic levels, projections on rental growth and leasing activity are expected to remain below historical levels.

The rapid pace of economic growth demonstrated across Asia post-pandemic has slowed somewhat, particularly in Japan and South Korea; however, real estate fundamentals remain strong in the region. Across Asia, logistics has continued to exhibit persistent rent and occupancy growth. Meanwhile, office fundamentals have remained strong in Japan, Korea, and certain markets in China. The Hong Kong office market – which has been slow to recover since the onset of the pandemic – has begun to show signs of improvement, supported by strong export growth and more domestic investment activity.

Josh Baumgarten
Co-Chief Executive Officer
Co-Chief Investment Officer
Head of Credit

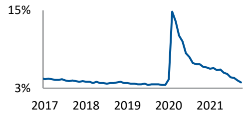
Adam Schwartz
Co-Chief Executive Officer
Co-Chief Investment Officer
Head of Real Estate

Economic Dashboard & Market Indices

Job Market

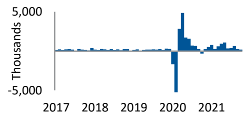
U.S.—Unemployment Rate
As of 12/31/2021

Latest Level	3.9
Change from Prior Period	▼ (0.3)
Frequency	Monthly



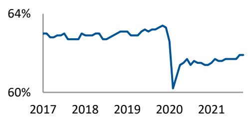
U.S.—Non-Farm Payroll
As of 12/31/2021

Latest Level	199.0
Change from Prior Period	▼ (50.0)
Frequency	Monthly



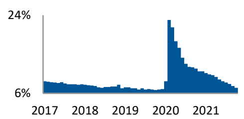
U.S.—Labor Participation Rate
As of 12/31/2021

Latest Level	61.9
Change from Prior Period	0.0
Frequency	Monthly



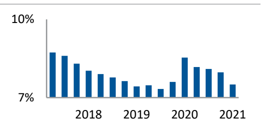
U.S.—U-6 Unemployed & Margin & Part-Time as Percent of Labor Force & Margin
As of 12/31/2021

Latest Level	7.3
Change from Prior Period	▼ (0.4)
Frequency	Monthly



Eurozone Unemployment Rate
As of 9/30/2021

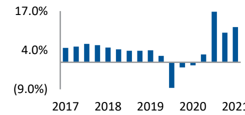
Latest Level	7.5
Change from Prior Period	▼ (0.6)
Frequency	Quarterly



GDP Growth

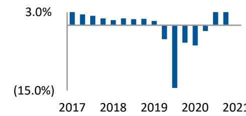
U.S.—GDP Y-o-Y (%)
As of 12/31/2021

Latest Level	11.7
Change from Prior Period	▲ 1.9
Frequency	Quarterly



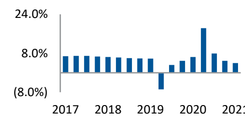
Eurozone—GDP Y-o-Y (%)
As of 9/30/2021

Latest Level	3.9
Change from Prior Period	▼ (10.5)
Frequency	Quarterly



China—GDP Y-o-Y (%)
As of 12/31/2021

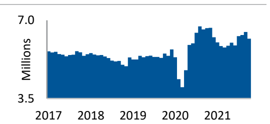
Latest Level	4.0
Change from Prior Period	▼ (3.9)
Frequency	Quarterly



Housing

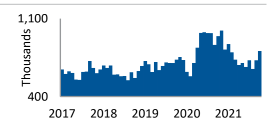
Existing Home Sales
As of 12/31/2021

Latest Level	6.2
Change from Prior Period	▼ (0.3)
Frequency	Monthly



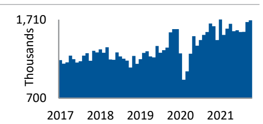
New Home Sales
As of 12/31/2021

Latest Level	811.0
Change from Prior Period	▲ 86.0
Frequency	Monthly



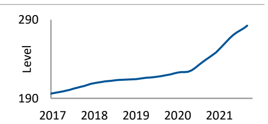
Housing Starts
As of 12/31/2021

Latest Level	1,702.0
Change from Prior Period	▲ 24.0
Frequency	Monthly



Case-Shiller Index of Home Value in 20 Cities
As of 11/30/2021

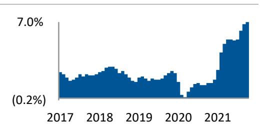
Latest Level	282.5
Change from Prior Period	▲ 3.3
Frequency	Monthly



Inflation

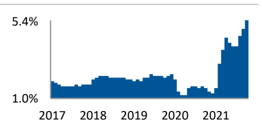
U.S. Consumer Price Index (CPI) Y-o-Y (%)
As of 12/31/2021

Latest Level	7.0
Change from Prior Period	▲ 0.2
Frequency	Monthly



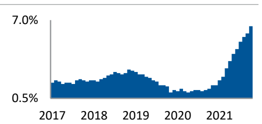
U.S. CPI Goods Less Food & Energy Y-o-Y (%)
As of 12/31/2021

Latest Level	5.5
Change from Prior Period	▲ 0.5
Frequency	Monthly



U.S. Producer Price Index (PPI) Y-o-Y (%)
As of 12/31/2021

Latest Level	6.5
Change from Prior Period	▲ 0.6
Frequency	Monthly



Note: All charts are based on a five-year trend.
Source: Bloomberg (All).

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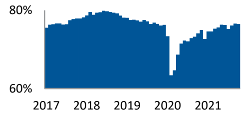
Economic & Market Confidence

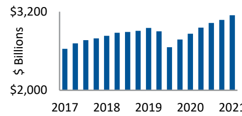
Capacity Utilization as a Percent of Capacity — As of 12/31/2021

Latest Level	76.5
Change from Prior Period	▼ (0.1)
Frequency	Monthly



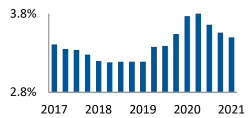
Private Fixed Investment Nonresidential SAAR — As of 12/31/2021

Latest Level	3,145.5
Change from Prior Period	▲ 71.6
Frequency	Quarterly



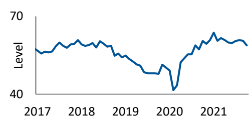
Residential Fixed Investment as a Percent of GDP — As of 12/31/2021

Latest Level	3.5
Change from Prior Period	▼ (0.1)
Frequency	Quarterly



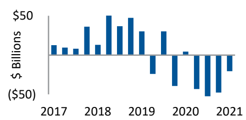
ISM Manufacturing Index — As of 12/31/2021

Latest Level	58.8
Change from Prior Period	▼ (1.8)
Frequency	Monthly



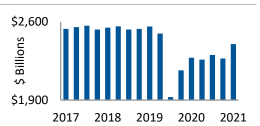
Manufacturing Inventory Change Q-o-Q ($) — As of 12/31/2021

Latest Level	(20.5)
Change from Prior Period	▲ 27.1
Frequency	Quarterly



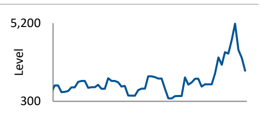
Exports of Goods/Services — As of 12/31/2021

Latest Level	2,401
Change from Prior Period	▲ 128
Frequency	Quarterly



Shipping Rates — As of 12/31/2021

Latest Level	2,217
Change from Prior Period	▼ (801)
Frequency	Quarterly

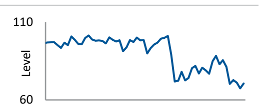


Personal Income Level — As of 11/30/2021

Latest Level	20,868
Change from Prior Period	▲ 90
Frequency	Monthly

Michigan Consumer Confidence Sentiment — As of 12/31/2021

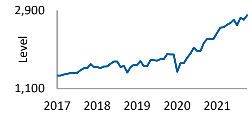
Latest Level	70.6
Change from Prior Period	▲ 3.2
Frequency	Monthly



Equity

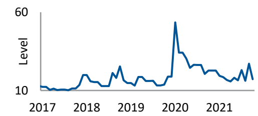
U.S. Equity Markets—Russell 3000 — As of 12/31/2021

Latest Level	2,788.1
Change from Prior Period	▲ 102.6
Frequency	Monthly



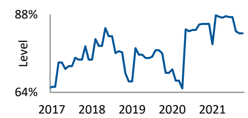
U.S. Equity—VIX — As of 12/31/2021

Latest Level	17.2
Change from Prior Period	▼ (10.0)
Frequency	Monthly

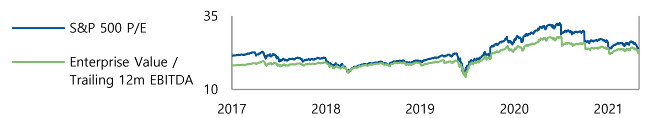


S&P 500 Percentage Exceeding Earning Estimates — As of 12/31/2021

Latest Level	82.2
Change from Prior Period	0.0
Frequency	Monthly

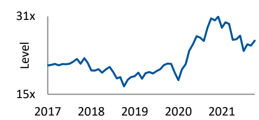


S&P 500 Historical Valuation Levels — As of 12/31/2021



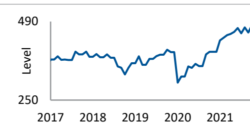
Trailing P/E on S&P 500 — As of 12/31/2021

Latest Level	26.0
Change from Prior Period	▲ 1.0
Frequency	Monthly



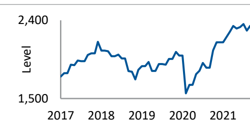
Equity Markets—Euro Stoxx — As of 12/31/2021

Latest Level	478.8
Change from Prior Period	▲ 22.3
Frequency	Monthly



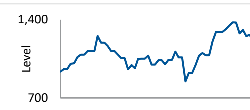
Equity Markets—MSCI EAFE — As of 12/31/2021

Latest Level	2,336.1
Change from Prior Period	▲ 112.4
Frequency	Monthly

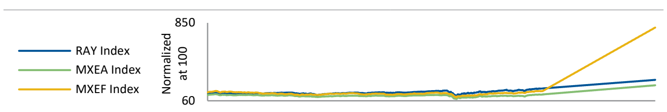


Equity Markets—MSCI EM — As of 12/31/2021

Latest Level	1,232.0
Change from Prior Period	▲ 19.6
Frequency	Monthly



Russell 3000 & MSCI EAFE & MSCI EM — As of 12/31/2021

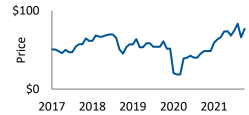


Note: All charts are based on a five-year trend.
Source: Bloomberg (All).

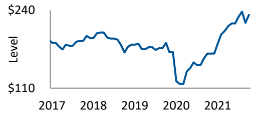
Economic Dashboard & Market Indices *(continued)*

Commodities

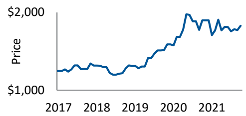
WTI Crude Oil Price	As of 12/31/2021
Latest Level	77.0
Change from Prior Period	▲ 10.8
Frequency	Monthly



Reuters/Jefferies Commodity Index	As of 12/31/2021
Latest Level	232.4
Change from Prior Period	▲ 13.2
Frequency	Monthly

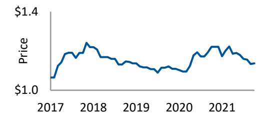


Gold	As of 12/31/2021
Latest Level	1,829.2
Change from Prior Period	▲ 54.7
Frequency	Monthly

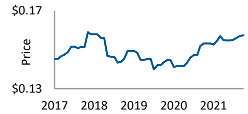


Foreign Exchange Rates

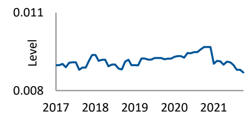
Euro Spot Rate vs. 1 USD	As of 12/31/2021
Latest Level	1.14
Change from Prior Period	0.0
Frequency	Monthly



Yuan Spot Rate vs. 1 USD	As of 12/31/2021
Latest Level	0.1573
Change from Prior Period	▲ 0.0002
Frequency	Monthly

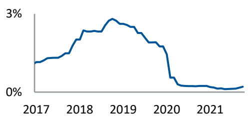


Yen Spot Rate vs. 1 USD	As of 12/31/2021
Latest Level	0.0087
Change from Prior Period	▼ (0.0002)
Frequency	Monthly

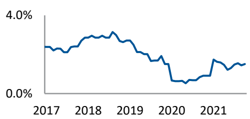


Rates

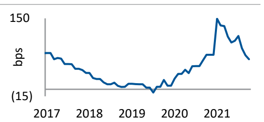
Libor 3M	As of 12/31/2021
Latest Level	0.21
Change from Prior Period	▲ 0.04
Frequency	Monthly



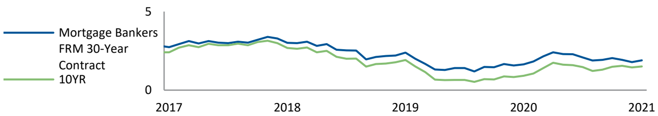
Treasury 10-Yr Yield	As of 12/31/2021
Latest Level	1.51
Change from Prior Period	▲ 0.07
Frequency	Monthly



Swaps 2-Yr vs. 10-Yr	As of 12/31/2021
Latest Level	63.51
Change from Prior Period	▼ (8.29)
Frequency	Monthly



30-Yr Mortgage & 10-Yr Treasury — As of 12/31/2021



Note: All charts are based on a five-year trend.
Source: Bloomberg (All).

Performing Credit

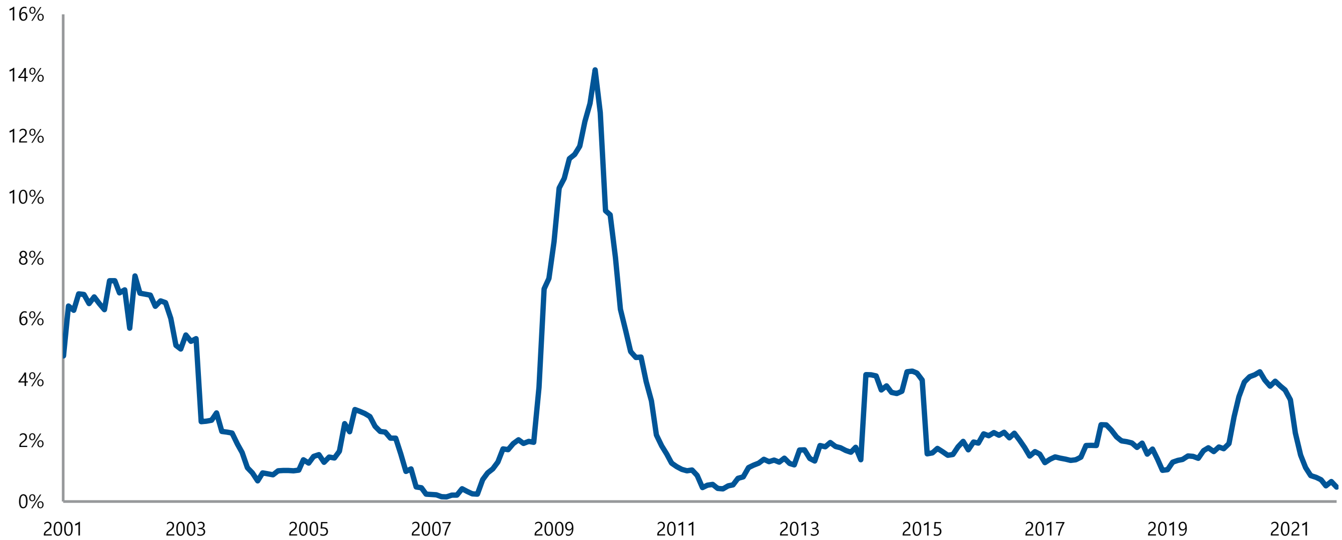
In 2021, the U.S. leveraged loan market benefited from rising rate concerns, and this trend is expected to continue in 2022. The J.P. Morgan U.S. Leveraged Loan Index posted an annual return of 5.1% in 2021, outperforming the J.P. Morgan U.S. High Yield Index by 10 basis points; leveraged loans ended the year with a 5.32% yield to maturity while high yield posted a 4.71% yield to worst. Meanwhile, the J.P. Morgan European Leveraged Loan and High Yield Indexes posted annual returns of 3.4% and 5.0%, respectively. In terms of issuance, 2021 saw record volume in the leveraged loan market; annual U.S. issuance amounted to $787 billion—bringing the total size of the U.S. loan market to $1.45 trillion—while the European institutional leveraged loan market saw €112 billion of issuance, well ahead of the peak volume of €101 billion achieved in 2017.

The trailing 12-month default rate continues to be low for both U.S. high yield and leveraged loans, ending the year at 0.29% and 0.65%, respectively. Looking ahead, the default rate for loans and bonds is expected to remain modest, with a projected rate of 0.75% in 2022 and 1.25% in 2023; this is well below the long-term averages for high yield bonds and leveraged loans, which are 3.4% and 3.0%, respectively. In Europe, after months of zero defaults, the high yield market ended the year with a 0.9% default rate—half of its long-term average. Recoveries were also noteworthy, as the 2021 average of 84% far exceeded the long-term pre-pandemic average of 31%; this brought the annual loss rate to 0.14%—the lowest it's been since 2004, when the European high yield market totaled just €50 billion.

While the "default deflation" may be transitory, we believe loan demand will remain strong, as floating rate products have historically experienced an increase in investor focus in a stable-to-rising rate environment. December marked loan funds' thirteenth consecutive month of inflows. Despite current concerns about Omicron, fundamentals remain strong and record levels of private equity dry powder are expected to continue to support issuance volumes. Demand for CLO debt and equity remains robust, as CLOs benefit from low spreads, and locking in low spreads in the current environment will position CLOs well, as they typically have a five-year investment period.

U.S. Leveraged Loan Default Rate

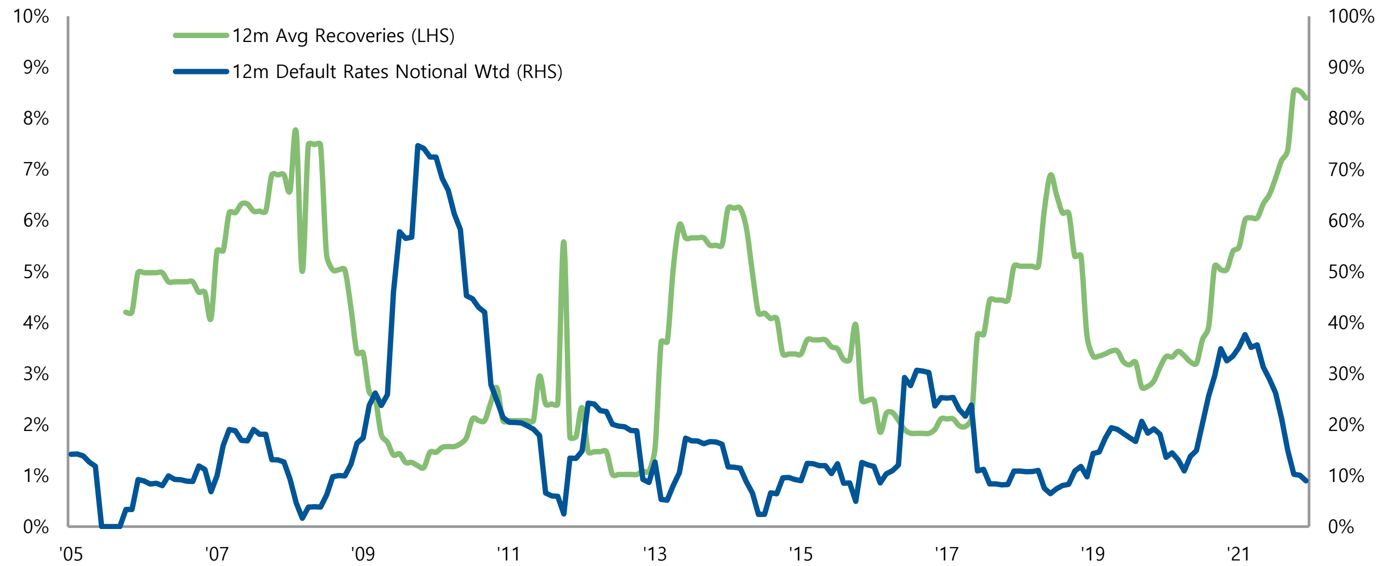
Par-Weighted Default Rate



Note: Represents the last 12-month default rate.
Source: J.P. Morgan.

In the U.S., the default rate for loans and high yield is at or near all-time lows. Although this "default deflation" may be transitionary, analysts expect the default rate will remain well below the historical average in the near term.

European Default Rate

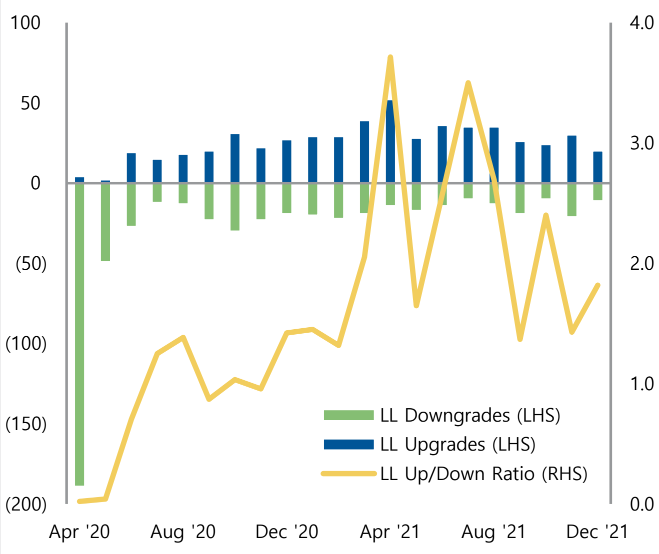


Source: J.P. Morgan.

The default environment remained similarly benign in Europe, with the dramatic increase in the recovery rate for defaulted securities being particularly noteworthy, as it rose to 84% for the full year—well above the historical average.

Leveraged Loan Upgrades

Number of Issuers

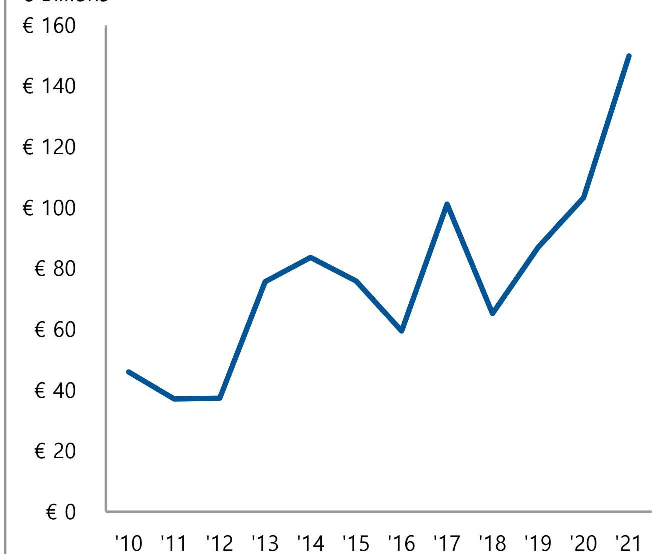


Source: J.P. Morgan Research.

Rating upgrades continue to outpace downgrades due to improved fundamentals and the strength of the corporate balance sheet.

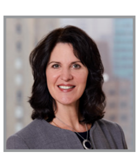
European High Yield Issuance

€ Billions



Note: Figures represent European high yield bond issuance.
Source: J.P. Morgan.

The issuance trend in Europe mirrored that of the U.S., with issuance volume hitting a record level as corporate borrowers flocked to the wide-open capital markets.



Maureen D'Alleva
Portfolio Manager

For more information on Performing Credit, click here.

Distressed Debt

The U.S. high yield market gained a modest 0.75% in the fourth quarter and ended December with a 6.0% return for calendar year 2021. In Europe, high yield performance was marginally negative at -0.02% for the three-month period ended December 31, 2021, which resulted in a full-year return of 4.5% for euro-currency high yield.

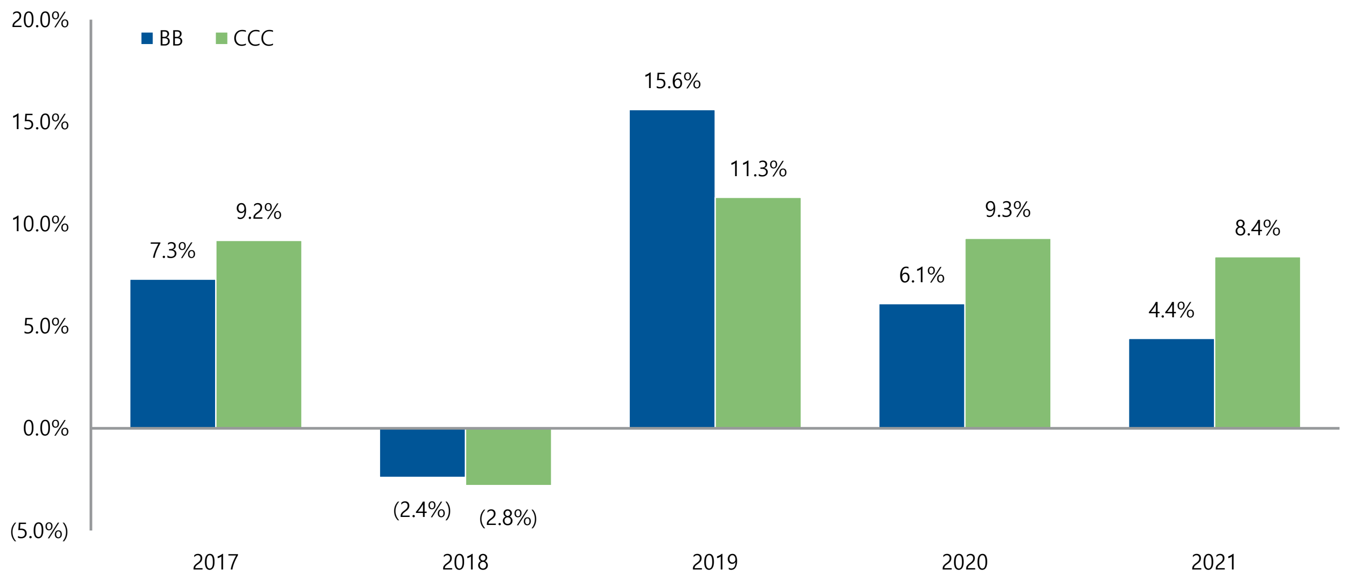
High yield bond spreads remained steady quarter-over-quarter, decreasing 10 basis points in the U.S. to end December at 375 basis points, while widening 29 basis points in Europe to close the fourth quarter at 384 basis points. There was modest return variance across bond ratings in the fourth quarter, which allowed lower-quality to maintain its outperformance over higher-rated segments. For full year 2021, CCC-rated bonds returned 8.4% in the U.S. and 11.1% in Europe, while BBs returned 4.4% in the U.S. and 2.6% in Europe. U.S. sector returns were also generally banded in the fourth quarter, ranging from -1.5% for broadcasting to 2.3% for diversified media over the three-month period. For the year, energy and transportation led—at 14.7% and 12.2%, respectively—while broadcasting and cable satellite lagged, returning 0.5% and -1.3%, respectively.

There were $3.1 billion of defaults and distressed exchange transactions in the fourth quarter, bringing the full-year 2021 total to 21 companies that defaulted on a combined $13.0 billion of debt. This was the lowest annual level since 2007 and a significant decline from the $141 billion of defaults in 2020. The U.S. high yield default rate ended the year at a record-low 0.3%, meaningfully below the long-term historical average of 3.8%. In the fourth quarter, the European high yield market experienced its first default since June, which brought the full-year total to six companies defaulting on a combined €3.5 billion, equating to a default rate of 0.9% for 2021.

U.S. high yield added over $73 billion of new issuance in the fourth quarter, lifting the full-year total to $483 billion—a new annual record, surpassing the $449 billion raised in 2020. Similar to past years, refinancing again accounted for the largest use of proceeds—at 60% of gross volume—followed by acquisition financing and general corporate purposes at 20% and 16%, respectively. In Europe, high yield primary issuance increased to €30 billion in the fourth quarter, raising the full-year supply to a record €150 billion—a 45% increase over the previous record set in 2020.

U.S. high yield funds recorded $1.1 billion of outflows in the fourth quarter, bringing full-year withdrawals to approximately $13.6 billion, as compared to $44.3 billion of inflows in 2020. In Europe, high yield funds experienced outflows of €500 million, dampening cumulative inflows to €320 million as of year-end.

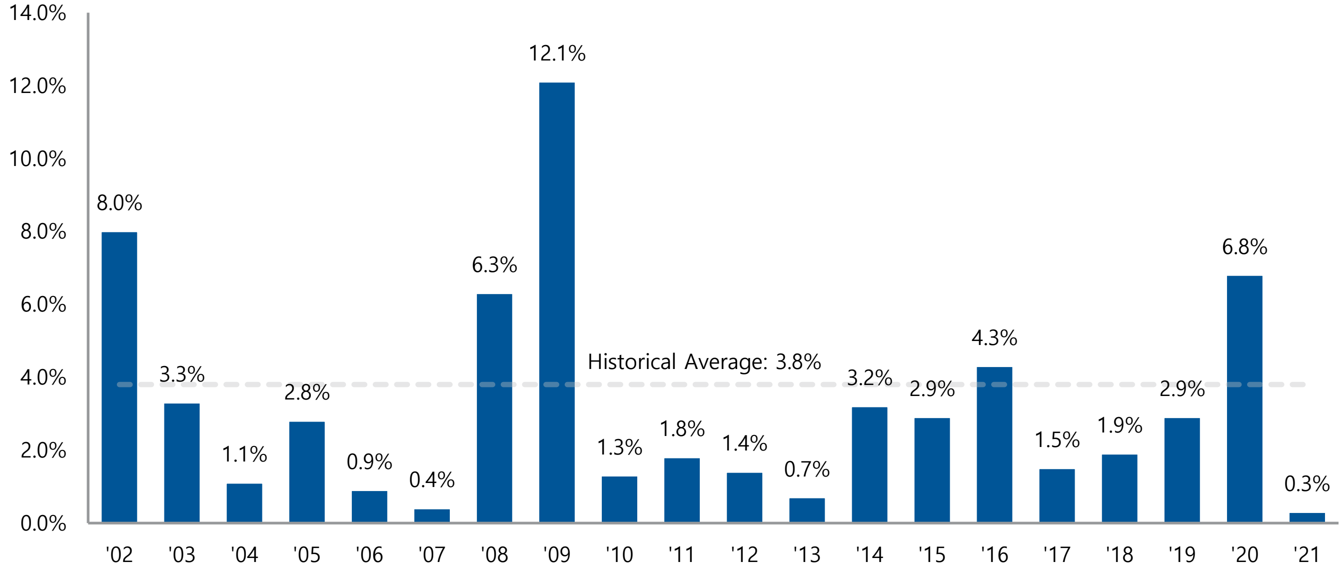
Returns of BB-Rated vs. CCC-Rated U.S. High Yield Bonds



Source: J.P. Morgan.

Lower-quality has outperformed higher-rated bonds over the past two years.

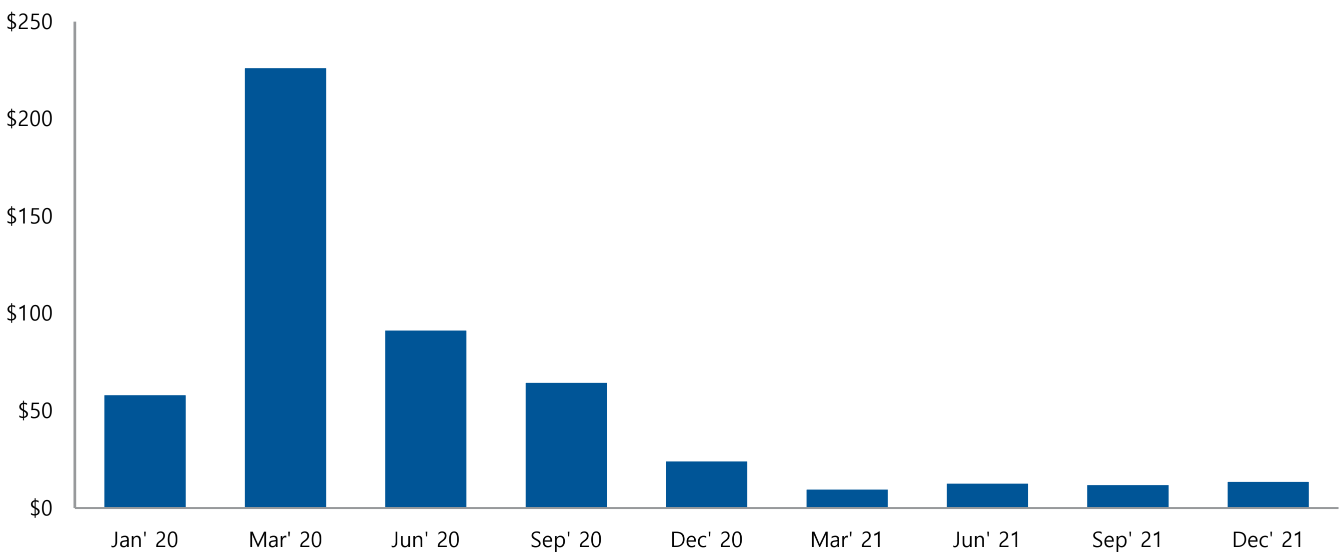
U.S. High Yield Bond Default Rate



Source: J.P. Morgan.

The record-low default rate in 2021 is well below the 3.8% historical average.

Sub-$70 Price High Yield Bonds
$ Billions



Source: J.P. Morgan.

Bonds priced below $70 represent less than 1% of the U.S. high yield universe.

Ryan Mollett
Global Head of Distressed & Corporate Special Situations

For more information on Distressed Debt, click here.

Commercial Real Estate Debt

The fourth quarter of 2021 was challenging, but the commercial real estate debt markets performed reasonably well. The period started with fatigue from the sheer number of new transactions coming to market. In spite of this, issuance volumes remained high throughout the quarter, leading to a number of post-GFC annual records. Total 2021 U.S. non-agency CMBS volume of $110.56 billion was 14% higher than the post-2007 peak, driven by a 233% year-over-year increase in single-asset/single-borrower (SA/SB) deals. Agency CMBS issuance increased 1.8% year-over-year, marking seven consecutive years of record volume. Lease-backed securitizations totaled $7.78 billion, a 20% increase from the prior record set all the way back in 2001. Finally, commercial real estate (CRE) CLO issuance of $45.4 billion was more than five times the 2020 total and over 230% higher than the prior peak. Non-agency CMBS issuance showed solid diversity by property type, led by office—which accounted for 28.9% of the activity—and followed by industrial with 21.8%, multifamily with 15.7%, hotel with 12.0%, and retail with 9.4%. 64.3% of this volume was floating rate—a sharp reversal from the 2020 level of just 23.9%.

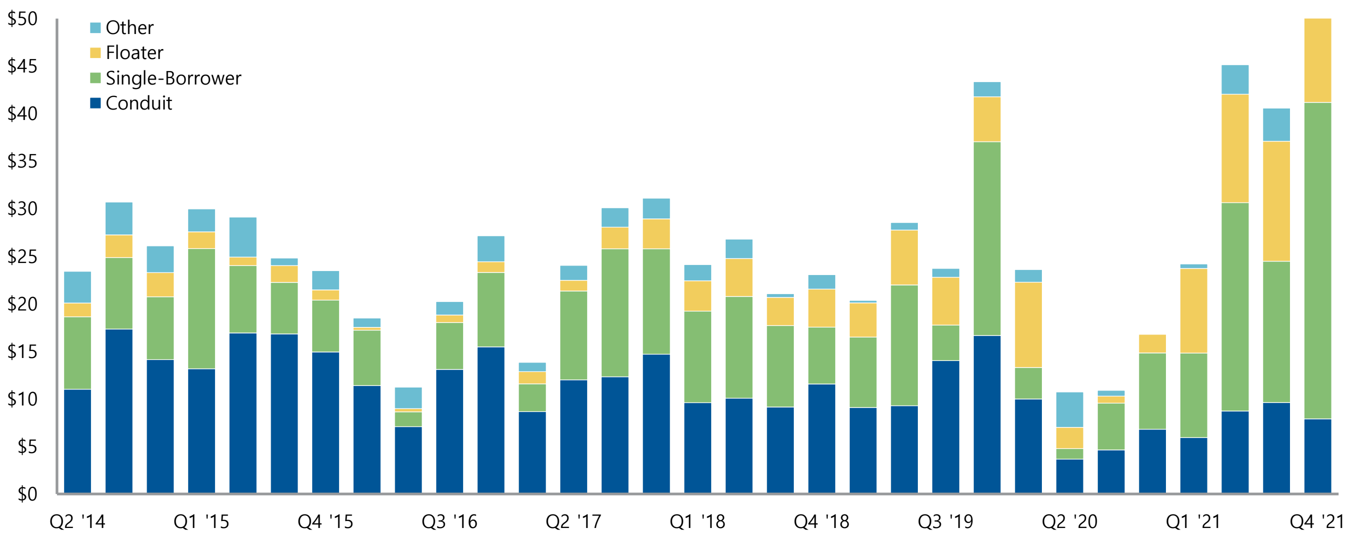
Inflation concerns accelerated during the quarter, with the Federal Reserve retiring the use of the term "transitory" and accelerating the pace of its reduction of monthly bond purchases. This puts the Fed on pace to potentially start raising interest rates near the end of the first quarter of 2022. Fiscal policy also had an eventful quarter, as President Biden's Build Back Better Act was put on hold. It remains to be seen whether certain aspects of the bill will eventually pass, but another very large round of federal spending appears unlikely. In late November, laboratories in Africa announced the discovery of the new Omicron variant. This highly contagious but less virulent strain of COVID-19 has spurred much conversation about the possibility that the world may be getting closer to a transition from pandemic to endemic.

In light of the aforementioned fundamental and technical headwinds, CMBS spreads held in reasonably well. We saw 10-year AAA spreads move five basis points wider, while spreads on 10-year BBB-rated bonds widened by approximately 30 basis points. Compared to the start of 2021, those 10-year AAA spreads were four basis points tighter, whereas BBB spreads ended the year 40 basis points tighter.

In December, the percentage of CMBS loans with a special servicer declined for the fifteenth consecutive month, falling to 6.75%. This represents a 308-basis point decline from the beginning of 2021 and a drop of nearly 400 basis points from the 2020 peak. Once again, the sectors hardest hit in 2020 led the recovery in the fourth quarter, with the specially serviced rate for hotel loans dropping from a peak of 26.04% to 13.72% and retail declining from 18.32% to 12.73%. Loans backed by industrial and multifamily properties continued their strong performance, ending the year with specially served rates of 0.60% and 2.11%, respectively. Office special servicing rates increased by 55 basis points during the quarter, rising to 3.23%, as a handful of larger loans were transferred.

Quarterly Private Label Issuance

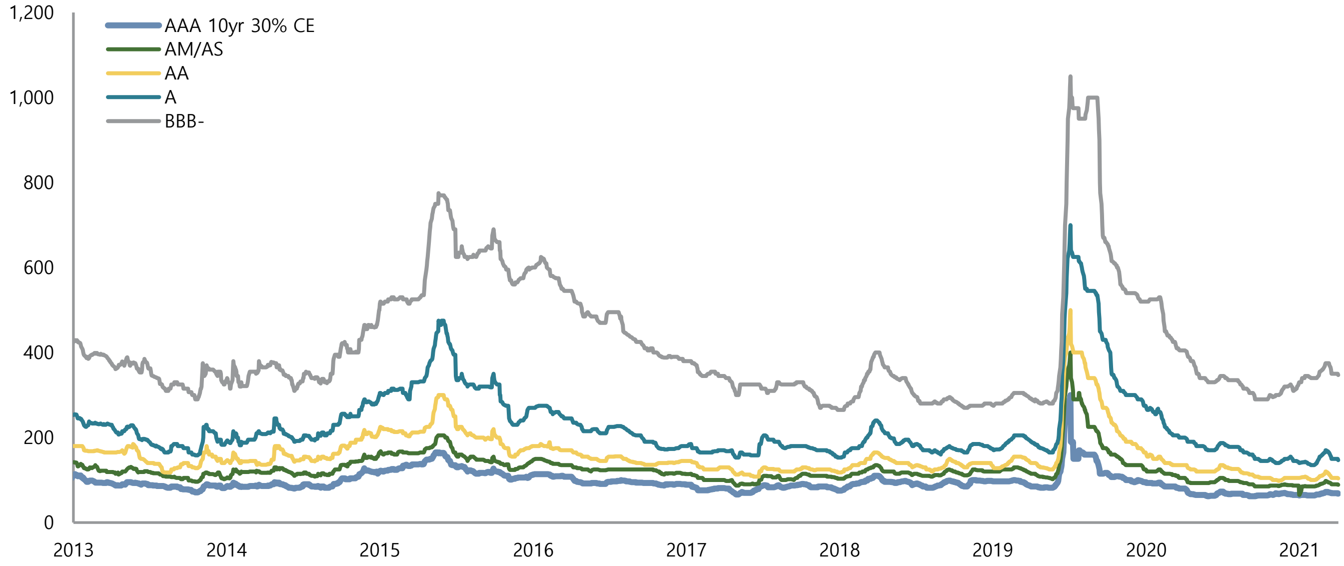
$ Billions



Sources: Credit Suisse, Commercial Mortgage Alert.

Issuance volumes in Q4 2021 set a post-GFC record, led by a large increase in single-borrower transactions.

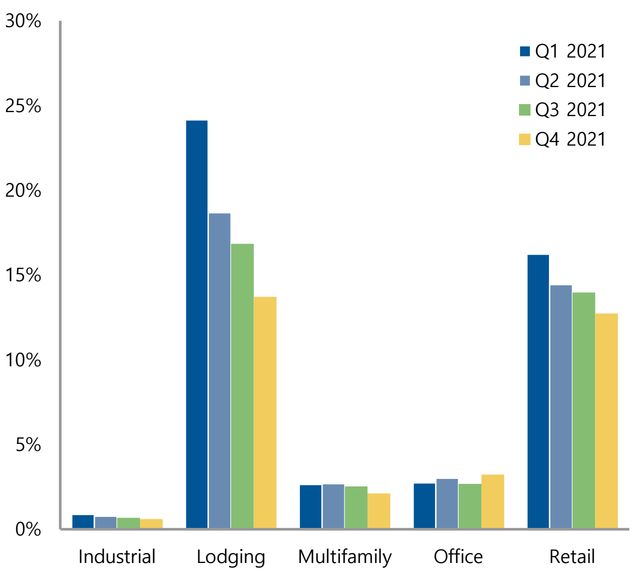
CMBS New Issue Spread



Sources: Trepp, Goldman Sachs Investment Research.

New issue spreads continued to widen from their summer lows, as supply volumes and broader macroeconomic concerns weighed on sentiment.

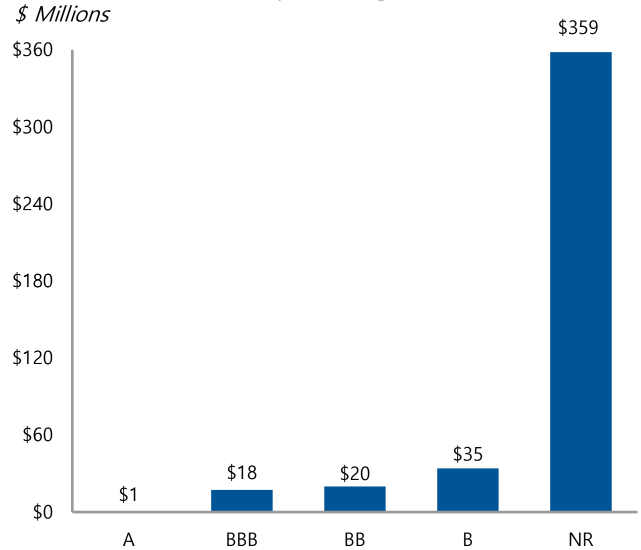
CMBS Special Servicing Rate



Note: As of December 31, 2021.
Source: Trepp.

Delinquency rates continue to decline, led by curing in the hotel and retail sectors, but offset to a small degree by an increase in office delinquencies.

Interest Shortfall by Rating
$ Millions



Note: CGCMT 2016-P5 revised its June 2021 remit to remove the interest shortfall to classes A and B. Ratings have been clubbed to letter.
Source: Intex Data.

Interest shortfalls in conduit CMBS are concentrated in the non-rated, first-loss portion of the capital structure.

Andrew Solomon
Portfolio Manager

For more information on Commercial Real Estate Debt, click here.

Residential & Consumer Debt (RMBS/ABS)

Spreads for securitized residential and consumer debt sectors were mixed during the fourth quarter amid broader market volatility and year-end illiquidity. Credit risk transfer (CRT) and other new issue senior tranches were 10-20 basis points wider, while legacy RMBS sectors were generally unchanged. Credit cards and most student loan tranches were little changed, while auto and esoteric spreads largely widened as much as 20-30 basis points.

For the full year, new issue RMBS AAA tranches were mostly wider by 15-35 basis points, while legacy RMBS tightened by 50-70 basis points. Changes in the spreads of CRT tranches were small. Spreads for several consumer sectors—including credit cards, student loans, and some esoteric sectors—finished the year tighter by double or triple digits; in esoteric sectors, this was primarily due to scarcity value of the underlying collateral, namely rental cars and containers.

Quarterly new issuance of RMBS rose 14% to $55 billion in the fourth quarter on higher CRT and single-family rental (SFR) issuance. Agency-eligible and jumbo 2.0 were the most active sectors during the fourth quarter, each around $10.5 billion, followed by non-QM (NQM) at $8.6 billion. While ABS issuance fell 15% to $65 billion, esoteric ABS activity rose over 50% to $25 billion. Auto was the most active ABS sector, with quarterly issuance near $26 billion.

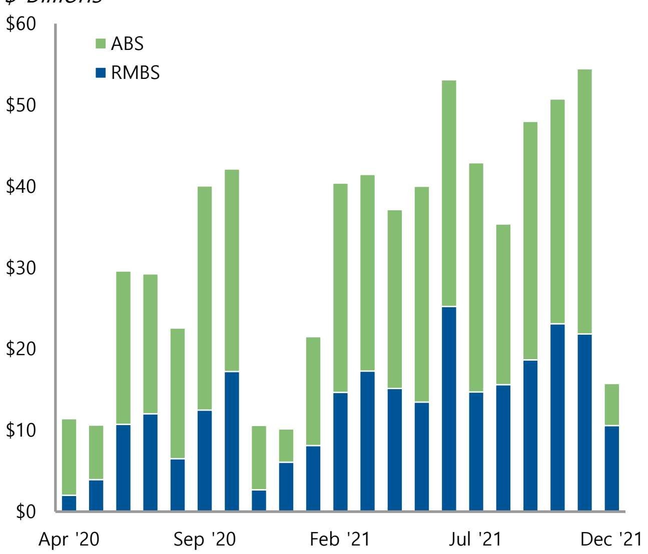
RMBS issuance for the full year came to $200 billion, easily surpassing the post-GFC peak of $137 billion in 2019, though some of 2021's issuance was delayed from 2020. The rise was mostly due to jumbo 2.0 and agency-eligible, though NQM, SFR, and non-performing loans also saw meaningful annual increases. Full-year issuance of ABS came to $282 billion, up over 50% from 2021 and 17% higher than 2019. Issuance for all ABS sectors rose in 2021, most notably autos and esoteric/other ABS, which comprised around two-thirds of the growth.

Mortgage and consumer fundamentals continued to be favorable, aided by residual support from federal stimulus and payment accommodations, the positive effects of which should persist into 2022. Household balance sheets have benefitted from post-GFC de-levering and strong labor conditions. Mortgage underwriting remains near historic tights, currently around 2014 levels, according to the Mortgage Bankers Association.

Home prices set another record high, according to S&P/CoreLogic Case-Shiller's latest reading in October, and annual growth fell only slightly to 19.1%—edging down from its peak of 20% in August. Limited availability of homes against fundamentally strong housing demand has been a driving factor for persistent home price appreciation. Used vehicle prices reached a record high as well, according to the Manheim indices, ending 2021 nearly 47% higher, also supported by limited inventory. The seasonally adjusted annualized rate (SAAR) of auto sales ended the year at 12.44 million units, down from 16.27 million in December 2020 and 16.7 million in December 2019.

RMBS and ABS Issuance

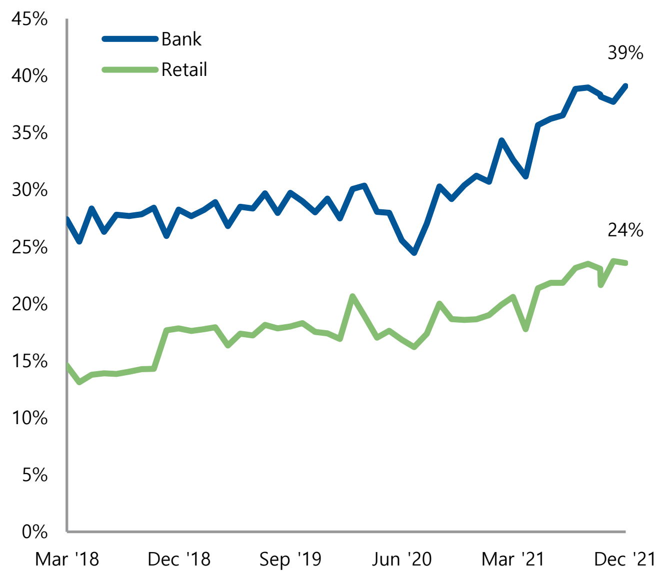
$ Billions



Source: Bank of America Securities.

Mortgage and consumer new issue markets were active during the fourth quarter of 2021.

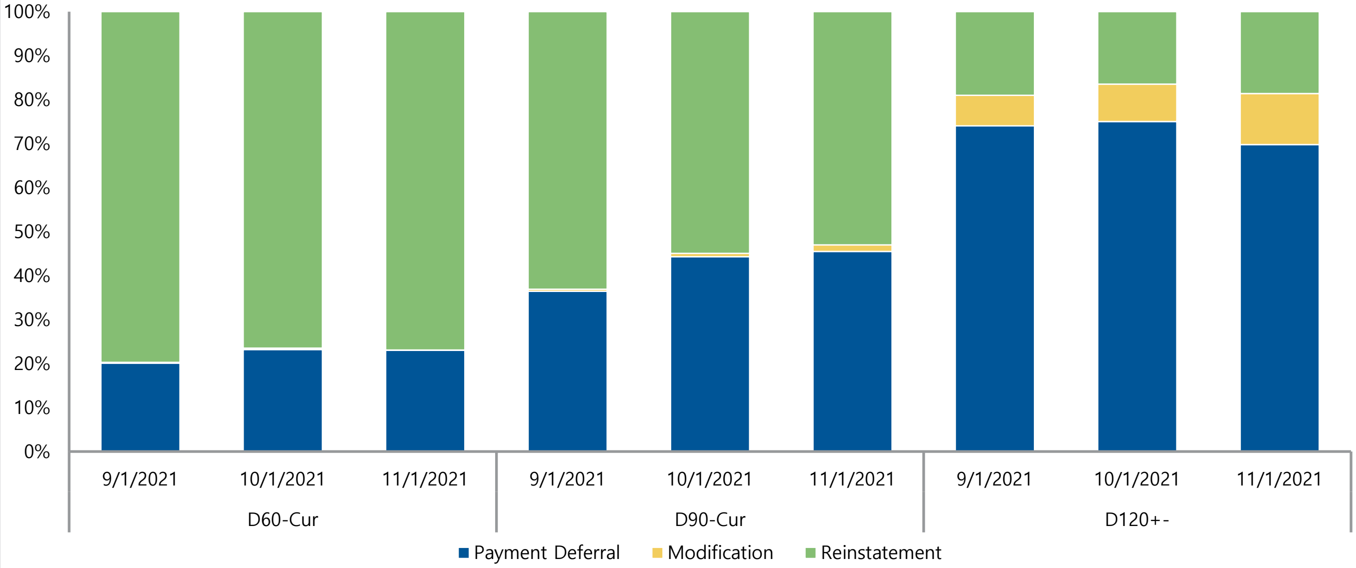
Credit Card Principal Payment Rate



Source: Intex.

Monthly credit card payment rates rose during the pandemic and remain at elevated levels.

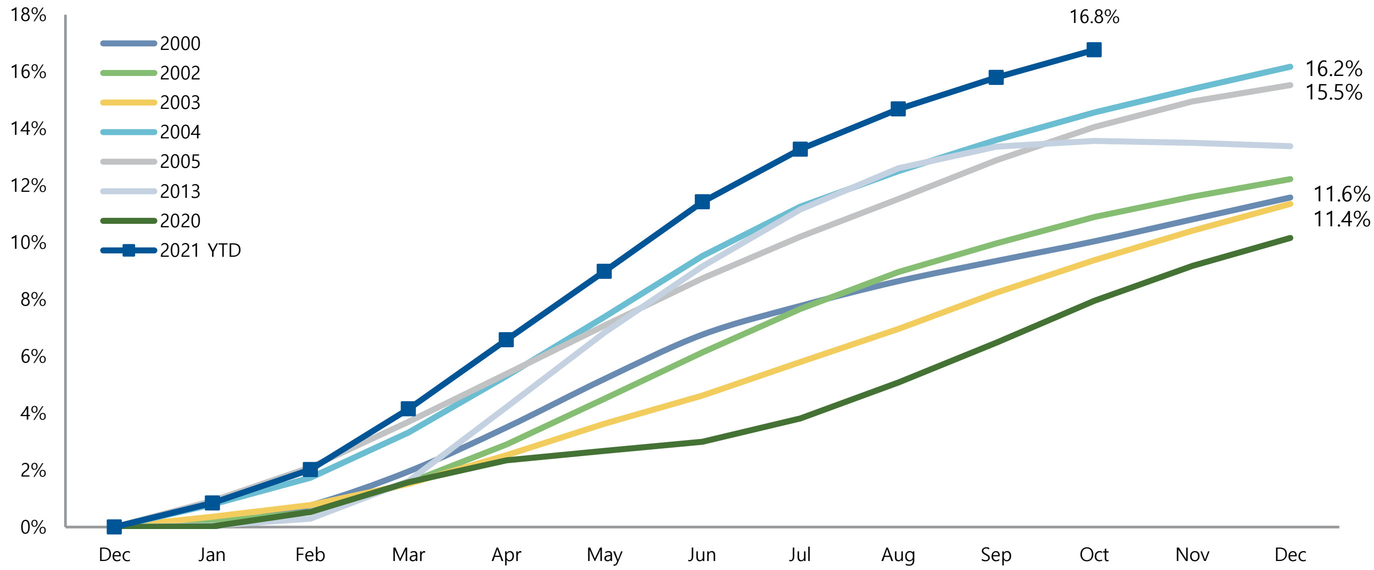
CRT Forbearance Cures by Resolution



Sources: Freddie Mac, 1010data.

Payment deferrals remain the predominant source of forbearance workouts as GSE forbearances reach their 18-month expiration.

Annual Home Price Appreciation



Source: CoreLogic Case-Shiller.

Home price appreciation through 2021 has been greater than any year since 2000.

TJ Durkin
Co-Portfolio Manager

Yong Joe
Co-Portfolio Manager

For more information on Residential & Consumer Debt, click here.

Energy

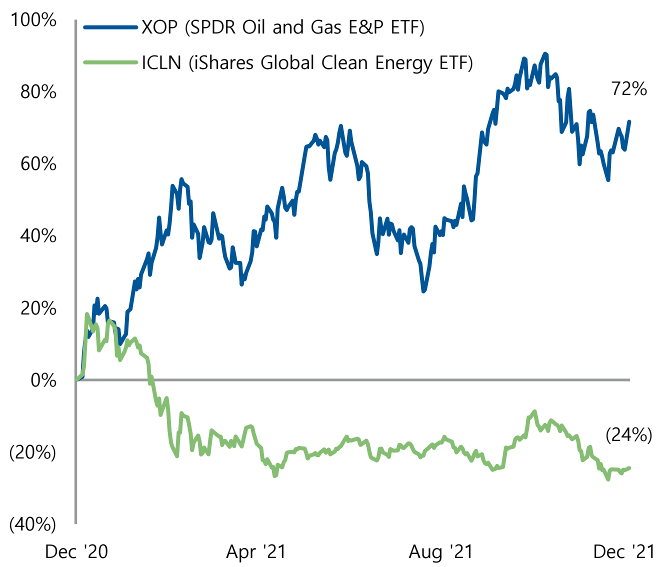
Economic inflation, energy inflation, and the pace of energy transition spending are sources of concern and risk. More transition and reopening inflation are likely to come, and the coupling of predictable and affordable power supply with baseload demand remains vital to avoiding an energy inflation spiral.

Phrases like “super cycle” are increasingly being used to refer to the opportunity in the traditional energy space given OPEC’s lack of spare capacity, faltering U.S. shale supply, rising cost inflation, strong demand recovery, and the growing use of oil as an inflation hedge. In addition, a capital strangulation is underway, resulting from a dearth of public and private equity capital and divestment-focused ESG strategies.

The resulting risk reduction is already visible in energy fundamentals and capital markets, manifested in growing free cash flow yields, falling leverage, and growing economies of scale through active M&A. Private oil and gas operators, unconstrained by the public markets’ requirements of capital efficiency, are seeking to grow through the drill bit and exit into the growing consolidation trend.

The recent performance of traditional energy stocks and bonds, versus the underlying commodity, provides anecdotal evidence of risk reduction and implies a delinking of the securities and the commodity. The industry’s move to cash payouts should shorten investment duration, lessen acreage reliance, and mute the previously strong correlation.

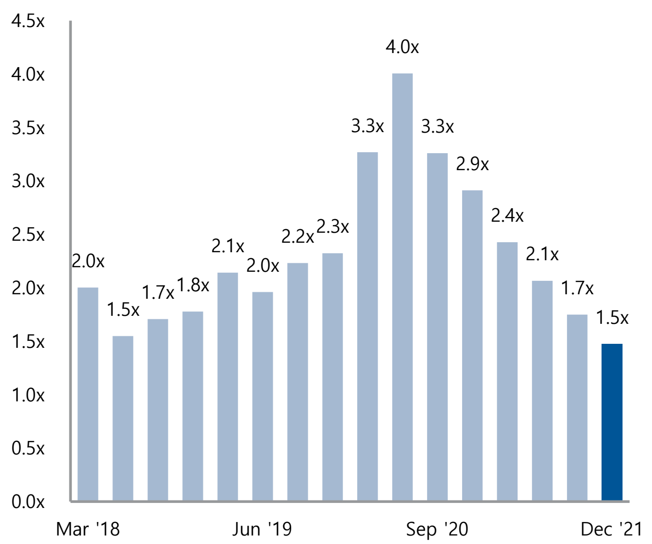
Traditional vs. Clean Energy Performance



Note: Traditional energy represented by XOP and clean energy represented by ICLN.
Source: Bloomberg.

Traditional energy outperformed clean energy last year.

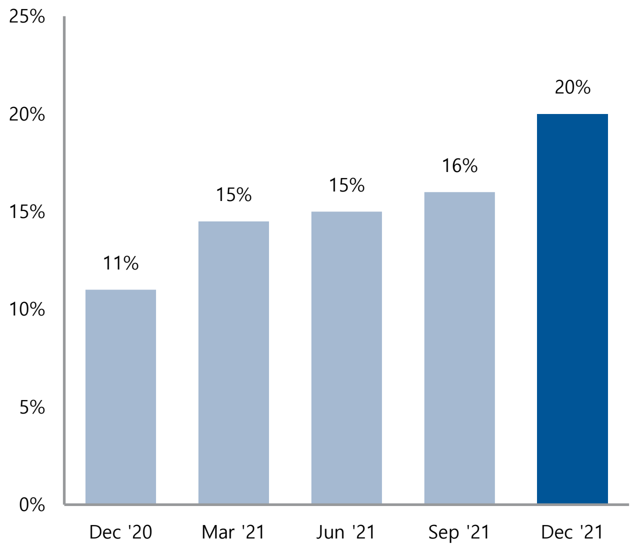
E&P Leverage: Median Net Debt/NTM EBITDA



Note: Universe includes APA, AR , ATH, BRY, BTE, CDEV, CHK, CLR, CNX, CPE, CRK, EQT, LPI, MEG, MTDR, MUR, OVV, OXY, PDC, ROCC, RRC, SM, SWN, MGY, and W&T.
Sources: Bloomberg, CapIQ.

Risk reduction is being seen across the E&P universe, as operators are using free cash flow to reduce debt.

E&P 2022E FCF Yields (Median)



Note: Universe includes APA, CDEV, CIVI, CLR, COP, CPE, CTRA, DEN, DVN, EOG, FANG, HES, LPI, MRO, MTDR, MUR, NOG, OAS, OVV, OXY, PDC, PXD, SM, and WLL.
Source: Stifel Research.

The E&P universe offers attractive free cash flow yields.

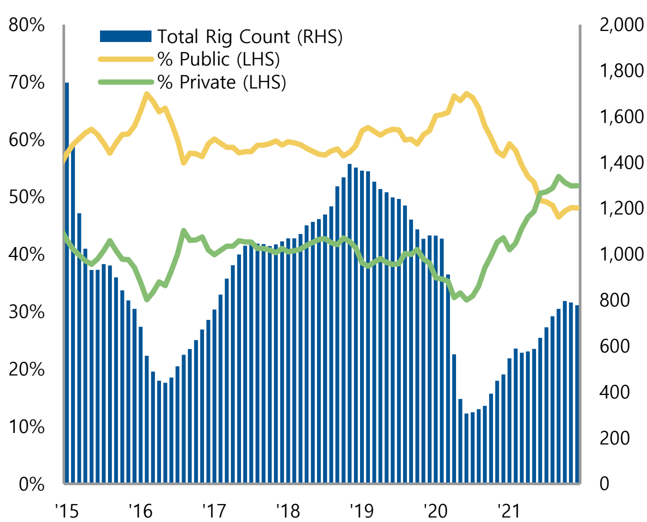
E&P Corporate M&A

$ Billions

Note: 2019 figures exclude APC / OXY valued at $57bn.
Source: Enverus.

Robust E&P M&A activity is de-risking issuers through increased economies of scale.

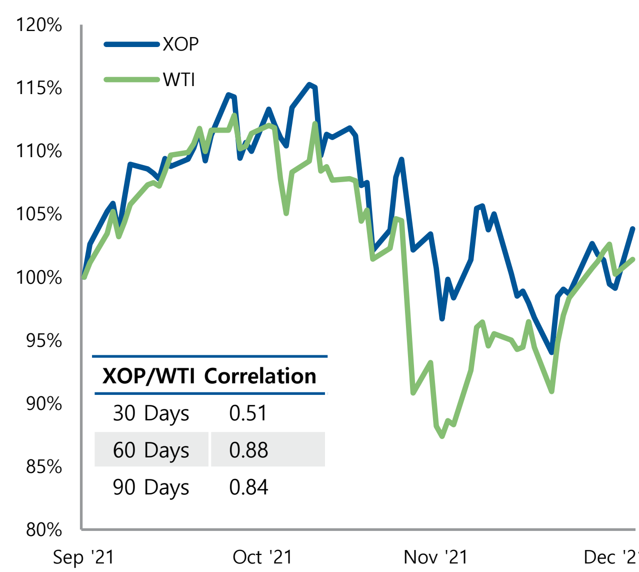
North America Rig Count: Public vs. Private



Source: Enverus.

Hoping to participate in the consolidation trend and exit, private operators are seeking growth through the drill bit.

WTI vs. XOP Performance



Source: Bloomberg.

The recent delinking of stocks and the underlying commodity may be a reflection of increased dividend payouts.

Todd Dittmann
Portfolio Manager

For more information on Energy, click here.

Middle Market Direct Lending

Syndicated middle market loan volume increased to $52 billion in the fourth quarter of 2021, representing the second-highest quarterly level since the second quarter of 2018. Syndicated middle market loan issuance totaled $188 billion in full year 2021, the highest volume witnessed since 2014 and easily topping the $101 billion posted in 2020. Middle market institutional loan volume slipped to $9.9 billion in the fourth quarter, though it was still the third-highest quarterly level since the third quarter of 2019. Institutional loan issuance finished the year at $40 billion, up 75% from pandemic-impacted 2020 but still significantly below the high of $60 billion recorded in 2018.

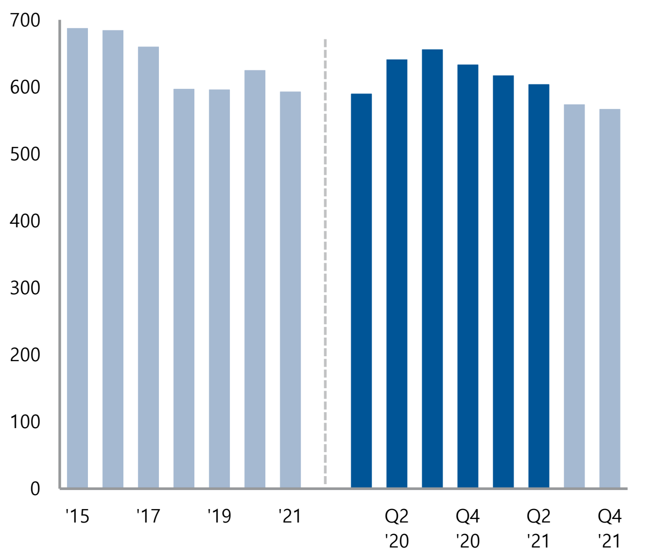
One area that spotlights the level of activity is "megatranche" loans, which are unitranche loans that are greater than $1 billion in size. 27 megatranche loans totaling $49 billion were issued in 2021, with the largest being the $3.4 billion unitranche loan to finance Harvest Partners' acquisition of Galway Insurance Holdings. With an average debt-to-EBITDA ratio of 7.4x and covenant-lite structures, these jumbo unitranche financings have allowed private equity sponsors in sectors with high enterprise multiples—like software, healthcare, and financial services—to replace the public markets in the underwriting process. It also bears mentioning that only a small group of lenders offer these jumbo financings.

Fourth quarter unitranche and stretch senior volume more than doubled from the prior high set in 2019, with new highs set in both the large corporate and middle markets. Preliminary data shows average blended spreads of 568 basis points in the fourth quarter of 2021, marking the fifth consecutive quarter of declining spreads amid a competitive market environment. The annual average unitranche spread of 5.94% edged below the previous lows set in 2018 and 2019. First-lien institutional loan pricing (non-unitranche) was relatively stable on a quarterly basis in 2021, ranging from 489 basis points to 501 basis points.

2021's $8.8 billion of middle market covenant-lite loan issuance, which was well above 2020's $3.6 billion, marked a return to greater risk acceptance in the market. Covenant-lite now represents more than 20% of the institutional middle market lending market; its market share is higher than it was in 2019 and 2020, but it is still a far cry from the 44% seen in 2017.

Increased competition is also readily evident in acceptable leverage. 84% of lenders are willing to lend at leverage multiples greater than 5.5x EBITDA, and 32% of lenders are willing to lend at leverage multiples above 7.0x EBITDA—elevated from 23% of lenders in the third quarter of 2021 and markedly higher than the 4% seen at the end of 2019.

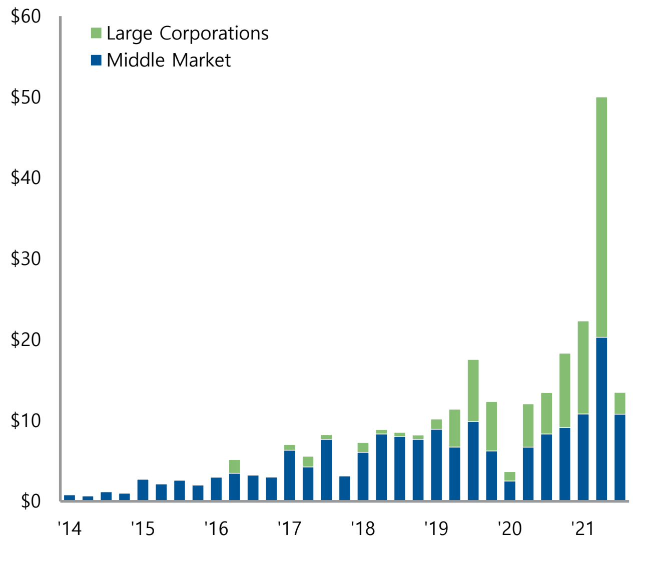
Annual Unitranche Average Blended Spread
bps



Source: Refinitiv.

Unitranche spreads hit a record low of 5.68% in Q4 2021, and unitranche rates have tightened 100 basis points from their 2020 wides.

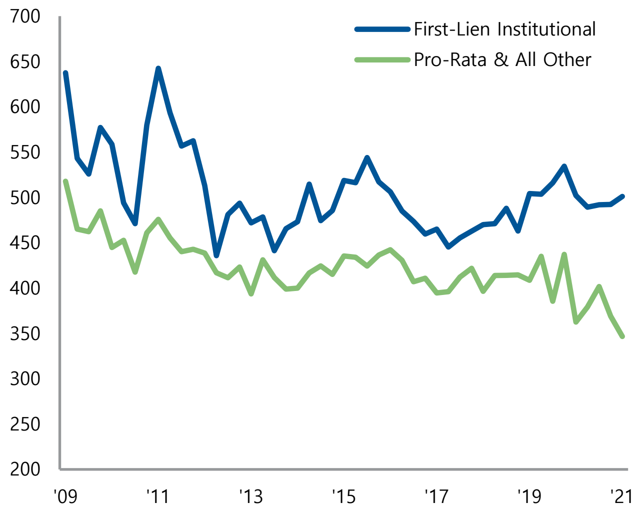
Unitranche Issuance
$ Billions



Source: Refinitiv.

Both middle market and large-cap unitranche issuance reached historic levels in the second half of 2021.

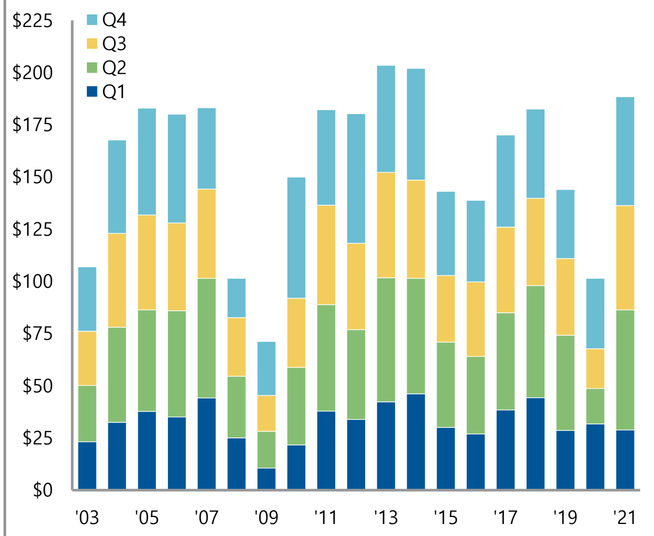
Senior Spread on Middle Market Sponsored Loans
bps



Source: Refinitiv.

Middle market sponsored loans continue to offer incremental returns, as spreads for these loans have held steady at about 5.0%.

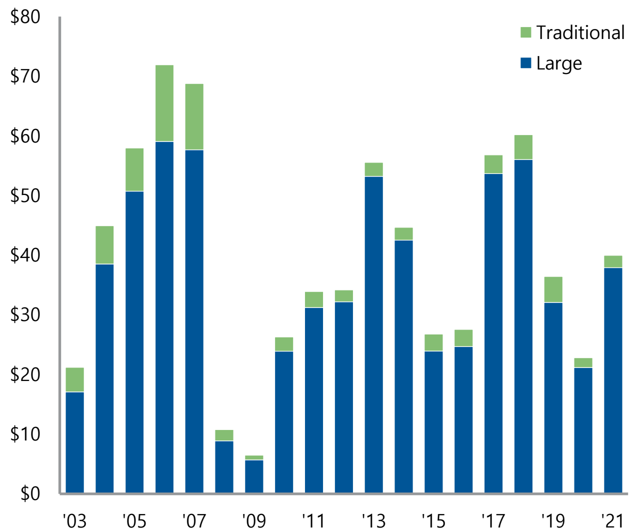
Syndicated Loan Issuance
$ Billions



Source: Refinitiv.

2021 syndicated middle market loan originations were up 100% over the post-GFC lows seen in 2020 but still off historical highs.

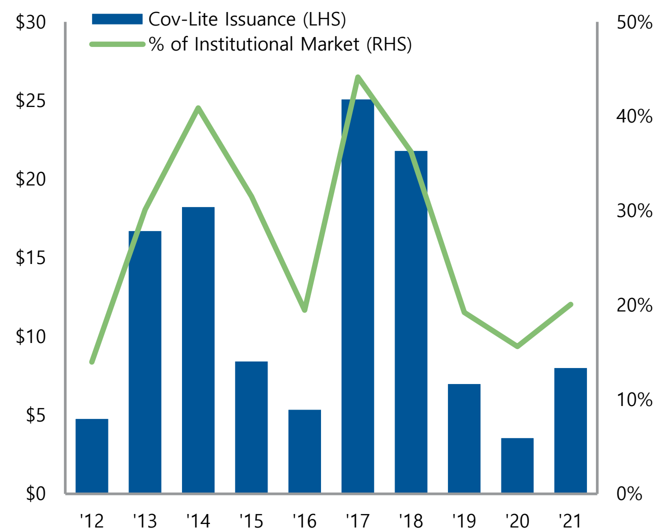
Middle Market Institutional Volume
$ Billions



Source: Refinitiv.

Institutional middle market loan volumes rose from 2020 but trail 2017 and 2018.

Middle Market Covenant-Lite Volume
$ Billions



Source: Refinitiv.

Covenant-lite volume and market acceptance have bounced back from 2020, reflecting a return to greater risk acceptance in the market.

Trevor Clark
Portfolio Manager

For more information on Middle Market Direct Lending, click here.

Merger Arbitrage

Flush with cash and encouraged by strong equity markets, corporations and private equity firms pursued M&A to enhance growth, acquire new capabilities, or streamline their corporate structures. The spread of Omicron, continued supply chain issues, the expectation of interest rate increases, high inflation, and a tougher antitrust environment did little to dampen the robust enthusiasm and strong rebound in the M&A market. Announced deal value and deal count increased 15% and 75% year-over-year, respectively. At year-end, the deal universe had an average adjusted annualized spread of 8.1%, aggregated deal value declined slightly to $361 billion, and the total arbitrage profit pool stood at $19.8 billion.

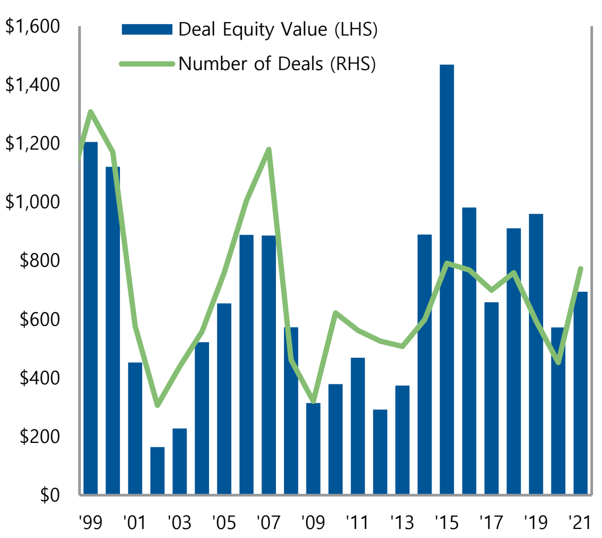
The fourth quarter saw a slight sequential and year-over-year decline in announced deal value, though remained in line with historical averages. One of the main storylines this year, which continued to play out in the fourth quarter, was the return of LBOs. As more PE firms have become quasi-strategics, with bolt-on acquisitions and roll-up strategies, LBO activity reached a post-GFC high. With global PE firms still flush with over $2 trillion of dry powder and holding an antitrust advantage over strategics in the current environment, LBO deal count and total value are expected to continue growing in 2022.

Deal outcomes for the year were very favorable, seeing 23 deals with at least one price bump and only two deal terminations. The market-cap-weighted gross spread traded in a wide range, 3% to 11%, driven by large-cap deals widening after the U.S. Department of Justice (DOJ) forced a termination of the Willis Towers Watson/Aon plc deal. After a short—albeit uncomfortable—period of portfolio de-risking for arbitrage investors, spreads tightened during September and normalized in the fourth quarter.

While the prevailing fear of the Biden administration's tougher stance on antitrust matters has yet to play out, now is not the time for investors to let their guard down. Neither FTC Chair Lina Khan nor DOJ Assistant Attorney General Jonathan Kanter have challenged a deal, but they have yet to fully assemble their respective teams. There are some upcoming high-profile deals that will likely garner plenty of attention and start to give investors a sense of how aggressive both the FTC and DOJ plan to be.

Moving forward, much will hinge on the confidence management teams and company boards have in consumers. While interest rates are set to lift off this year, they are still historically low, and the financial system continues to be awash with cash. In a recent Grant Thornton survey of dealmakers and advisors, approximately two-thirds of the respondents said they believe deal volumes will grow in 2022. Looking beyond financial conditions and growth incentives, traditional industrial, financial, and healthcare companies will continue to acquire tech companies in an effort to digitize their businesses. Additionally, the war for talent has just started, and with a very tight labor market, M&A is one way for companies to acquire the talent they seek.

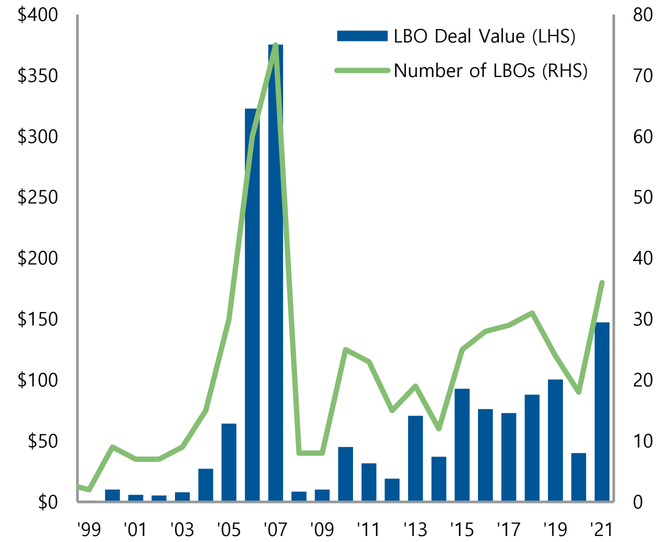
Annual U.S. Deal Activity
$ Billions



Source: Bloomberg.

Led by mid-size deals, U.S. M&A rebounded as companies continue to address their post-pandemic needs.

U.S. LBO Activity
$ Billions



Source: Bloomberg.

With private equity dry powder at record levels, LBO activity had its best year since the global financial crisis.

Mark Wojtusiak
Head of Merger Arbitrage

For more information on Merger Arbitrage, click here.

Convertible Arbitrage

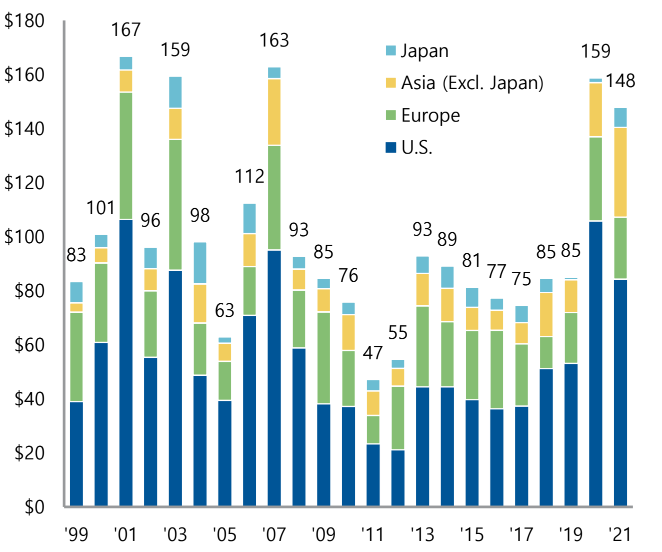
COVID-19 dominated headlines again during the fourth quarter, as a new and highly transmissible variant began to spread rapidly around the globe. Stubbornly high inflation and corresponding expectations that central banks would reduce stimulus measures also remained a concern. Nonetheless, global equity markets proved very resilient once more, and the MSCI World Index gained 7.83% in local currency terms during the quarter, taking the annual return to 22.45%. This marked the third consecutive year of solid double-digit returns in global equities. Global convertible bonds, however, were not able to keep up the pace, causing long-only strategies to underperform on a delta-adjusted basis. Global convertibles lost 0.59% in the fourth quarter, reducing the annual return to 4.02%. Convertible arbitrage strategies had a better risk-adjusted—albeit also muted—absolute performance, with the HFRX Relative Value Fixed Income Convertible Arbitrage Index adding 0.31% in the fourth quarter to take the annual return to 3.62%.

The primary market for convertibles remained active in the fourth quarter, with $23.7 billion of new deals pricing globally. Total 2021 issuance came to $147.8 billion, just shy of last year's total but still very strong by historical standards. Deal volume was strongest in the U.S., which accounted for $84.3 billion, followed by Asia—excluding Japan and including a large number of China ADR issuers—with $33.2 billion, Europe with $22.9 billion, and Japan with $7.4 billion. A rising interest rate environment combined with accommodating equity markets should support new issuance going into 2022. In our view, catalysts for higher market volatility—including the future course of the pandemic, inflation, policy responses, and geopolitics—remain plentiful and may underpin valuations.

After a lackluster summer, the global primary market for SPACs saw a strong increase in volumes, with $35 billion of issuance recorded in the fourth quarter, leading to an annual total of $172.2 billion. Terms for new deals improved significantly due to weaker secondary market performance, and the enhanced risk/reward profile of the instrument brought investors back to the negotiating table. Higher warrant coverage, a shorter timeframe for sponsors to find a target, a staggered promote, and overfunding of the trust became regular features in SPAC IPO discussions. The pipeline for the first quarter of 2022 looks solid, giving investors the opportunity to lock in low-risk yields with upside optionality.

Annual Convertible Issuance by Region

$ Billions

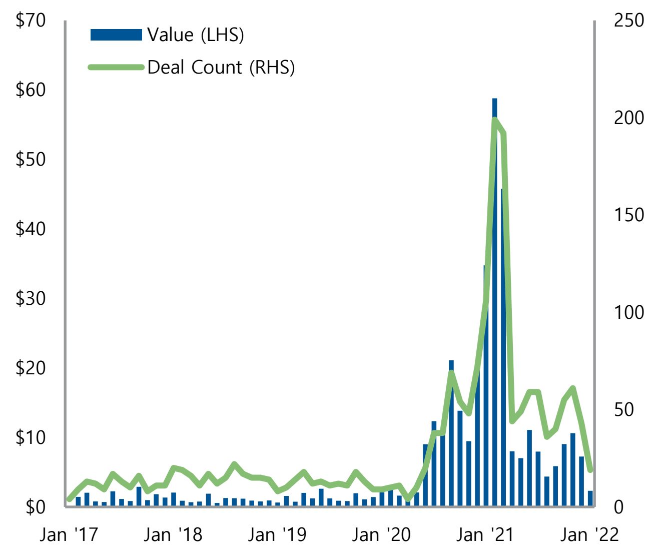


Source: Bank of America Merrill Lynch.

Global convertible new issuance in 2021 came close to 2020's very strong level.

Global SPAC Deal Activity

$ Billions



Source: Bloomberg.

SPAC issuance peaked in the first quarter of 2021.

Gary Wolf
Head of Convertible Arbitrage

For more information on Convertible Arbitrage, click here.

U.S. Real Estate

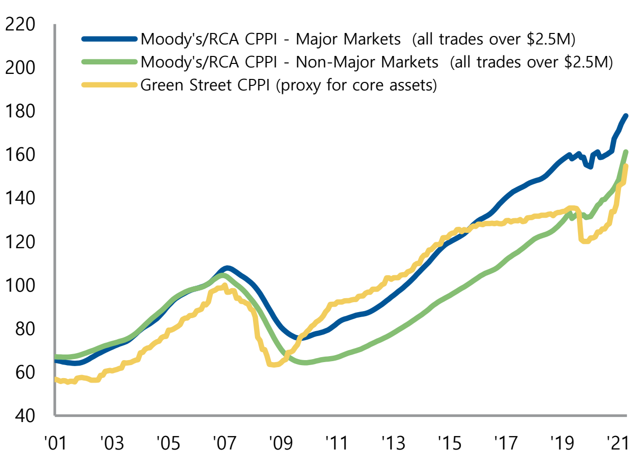
The fourth quarter of 2021 continued the trend seen all year; commercial property markets remained robust, and transactions surged—up 97% year-over-year—setting an annual record nearly $200 billion above previous peaks. Robust portfolio and individual deal volume aided the record-setting year, and apartment and industrial transactions were the driving force by property type. Laggards like office are seeing increased activity, albeit skewed to suburban locations, prime properties in central business districts, and markets specific to life sciences. Lodging continues to experience a recovery in transaction volumes, posting the highest growth rate year-over-year of any property type. The geographic mix of transaction volumes in 2021 shifted meaningfully, with last year marking the first time that neither of the top two most active markets was one of the six major metros. Los Angeles remained in the top five, but Manhattan notched its worst-ever ranking, coming in ninth.

Real estate markets remain bifurcated. Apartments, industrial, and most niche property types continue to benefit from secular and behavioral shifts against the backdrop of the ongoing pandemic. The Delta variant gave way to Omicron, and with each variant came challenges to normalization progress, including return to office plans and some travel. Nevertheless, the economic backdrop is largely still heading in the right direction; consumer balance sheets are flush, savings rates have normalized, and the U.S. labor market is at or on course for maximum employment in the near term. Meanwhile, incomes are increasing, including—most notably—for lower-wage earners, and their propensity to spend bodes well for a virtuous economic cycle. Alongside this positive economic progress lies a more persistent challenge from inflation. The Federal Reserve Board has sprung into action, moving up its timeline for asset purchase tapering and putting the market on notice that more rapid and frequent rate hikes are probable if inflation and employment maintain their current torrid pace. In general, the mechanics of real estate leases are embedded with structural features commonly accepted to correlate with cyclicality in market pricing or inflation. Typically, commercial leases have annual escalations loosely or directly tied to inflation measures and, in many cases, the ability to pass through increased expenses. The ability to raise rents and generate income growth over sustained periods can lead to asset price appreciation, which further provides a hedge against inflation.

On the valuation front, the Green Street Commercial Property Price Index increased 24% in 2021. U.S. REIT shares have continued to rally alongside ongoing liquidity and market rent growth. Public company valuations vary by property type, but on average, core property types imply a roughly neutral signal for the direction of private market property valuations. Green Street Advisors' model, which tracks the relative value relationship between private real estate and fixed income (investment grade and high yield), pegged real estate at 19% undervalued.

Commercial Real Estate Price Indices

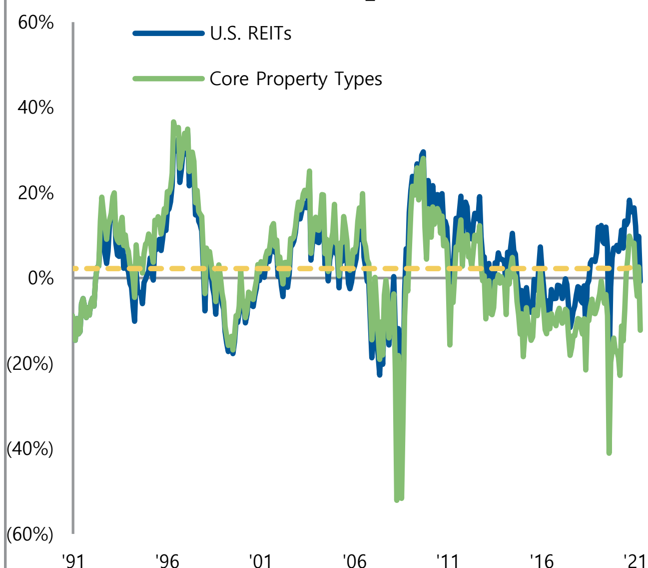
Index



Note: For this chart, Green Street CPPI was indexed to 100 at its 2007 peak (Aug 2007) and Moody's CPPI was indexed at 100 in Dec 2006. Major markets include Boston, Chicago, Washington D.C. Metro, Los Angeles Metro, New York City Metro, and San Francisco Metro.
Sources: Moody's CPPI = Moody's/RCA All Property Types; Green Street CPPI = Major Sectors; Moody's – Commercial Property Price Index (Moody's CPPI).

Private real estate pricing has surged ahead of pre-pandemic levels, but with significant variation by property type.

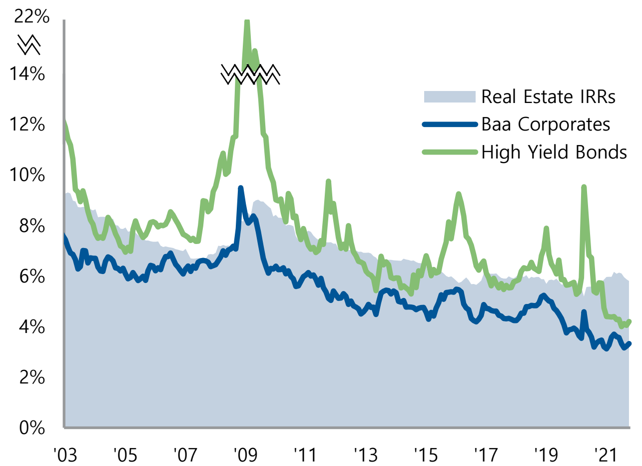
Public-Private Price Comparison



Note: Core Property Types include Office, Retail, Apartment, and Industrial.
Source: Green Street Advisors.

U.S. REIT valuations vary. Discounts have persisted for sectors pressured by pandemic-induced behavioral changes. Strong private markets have translated into larger-than-average premiums for alternative property sectors.

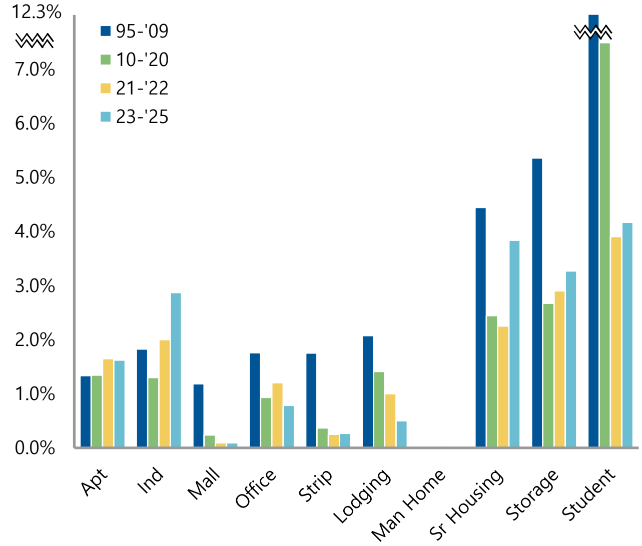
Unlevered Total Return Expectations on Real Estate vs. Corporate Bond Yields



Note: Real Estate IRRs is an equal-weighted average of the asset-weighted averages for the five major property sectors (apartment, industrial, mall, office, and strip center). Sources: Green Street Advisors (October '20), Moody's (Baa Corporates), BAML (High Yield Bonds).

Unlevered real estate has historically offered a return between investment grade and high yield bonds. Real estate is currently undervalued compared to debt.

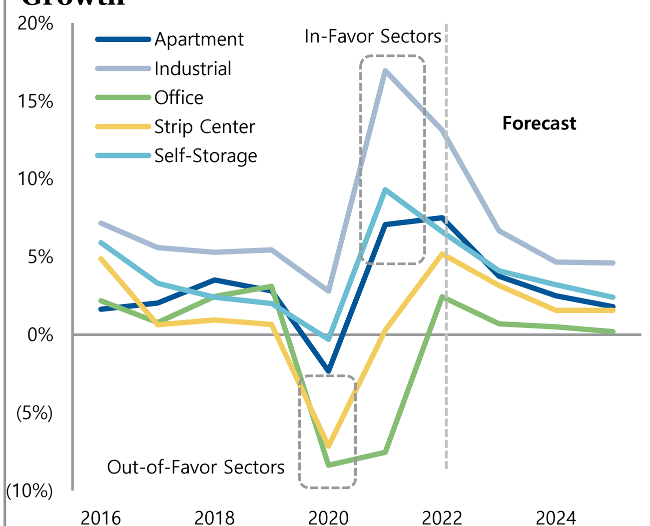
Supply by Sector



Note: Estimates are not shown because impact has not been quantified.
Source: Green Street Advisors.

New deliveries are waning for property types facing challenges, while apartments, industrial, and alternative sectors are experiencing surging supply alongside elevated levels of demand.

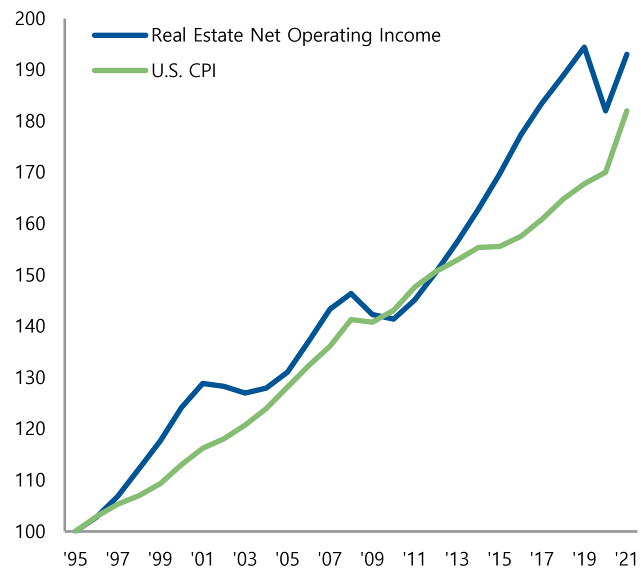
Market RevPAF Growth: Occupancy & Rent Growth



Note: Self-storage forecast is lagging. All other sectors have been updated as of 9/30/2021.
Source: Green Street Advisors.

Multifamily, industrial, and alternative sectors surpassed pre-pandemic levels and have bright prospects for growth; office and retail remain on a slower recovery trajectory.

Net Operating Income vs. CPI



Source: Green Street Advisors.

In general, the mechanics of real estate leases are embedded with structural features commonly accepted to correlate with cyclicality in market pricing or inflation.

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Europe Real Estate

The Omicron variant has dominated conversation in Europe in late 2021 and early 2022. Like the U.S., the region has seen a surge in COVID-19 cases; however, vaccination rates are high in most countries, so unlike last winter, governments have avoided large-scale lockdowns. The Netherlands and Austria are two exceptions to this trend, but most countries have only imposed restrictions on certain high-risk activities.

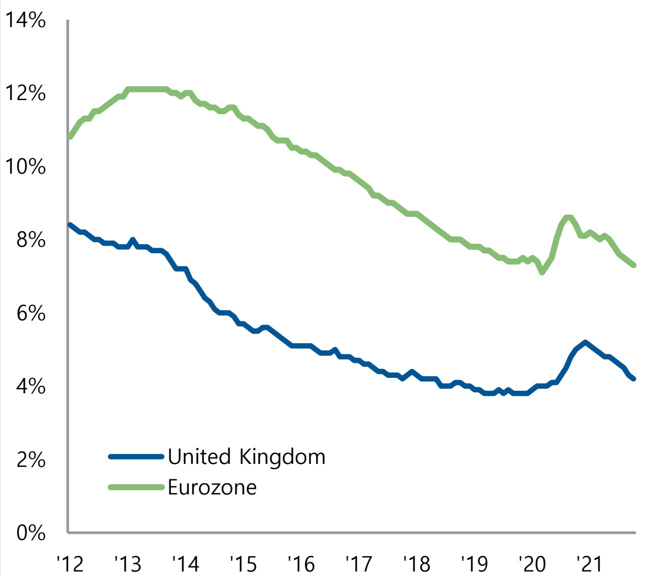
Despite lighter social restrictions and limited mandated business closures, the new variant is dampening economic activity. The eurozone economy likely grew a mere 0.2% during the fourth quarter and is expected to grow only slightly more in the first quarter of 2022. However, the minimal increase is better than the 0.5% contraction witnessed in both the fourth quarter of 2020 and the first quarter of 2021, when there were Europe-wide lockdowns. Eurozone unemployment dropped to 7.2% in late 2021, representing a modest increase in the overall workforce. Inflation rates continue to rise, with headline inflation reaching 5.0% in December; however, declining energy inflation may push levels lower in 2022.

Following a slow 2020, eurozone real estate investment activity picked up during 2021. At the end of the third quarter, overall investment activity was up 21% year-over-year and almost reached the five-year average of pre-pandemic years. As expected, the logistics sector saw the most activity, with a 59% increase in transaction volume. The office and hotel sectors saw smaller increases of 2% and 8%, respectively, while retail dropped by 12%. 2021 European non-performing and non-core loan sales will surpass €114 billion, which is close to the 2019 level of €119 billion. Lenders are likely realizing they need to move already-impaired positions, as they expect more impairment in the coming years. Overall commercial real estate rents ended the third quarter down 1.5% year-over-year but likely recovered their cumulative decrease by the end of 2021, with increasing leasing absorption and growing rent for industrial, office, and retail sectors. However, rental growth and leasing remain well below historical averages and peak levels.

The UK economy is still recovering from the multiple pandemic-related lockdowns of 2021 and recent uncertainty due to Omicron. After growing by 0.6% in the third quarter, GDP likely contracted slightly at the end of 2021. Labor shortages persisted through the end of 2021, even with government furlough schemes ceasing at the end of the third quarter. CPI inflation reached approximately 5% at the end of 2021, with utility prices jumping nearly 12% in the fourth quarter.

UK real estate investment volume was strong in the third quarter of 2021, representing an increase of approximately 32% year-over-year. Industrial, office, and retail sectors all saw an increase in transactions compared to 2020. Unsurprisingly, industrial was the top performer of the year, with estimated returns of 28% and rental growth of 6.3% year-over-year.

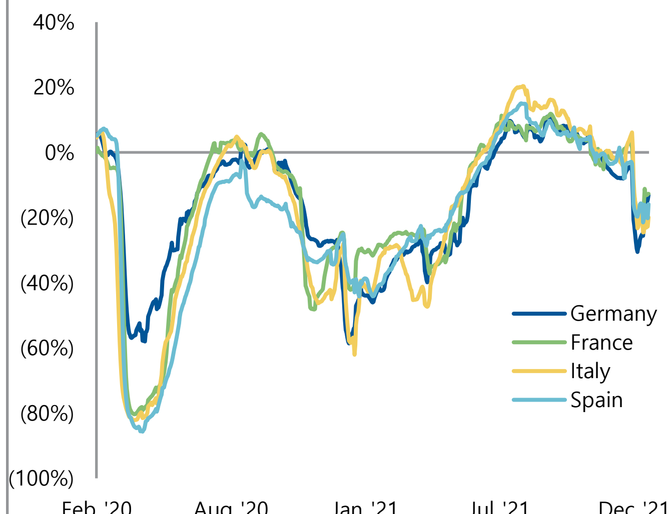
Unemployment Rate



Source: Capital Economics.

Unemployment edged down in late 2021, but many companies are reporting labor shortages even as government support programs have expired.

Advanced Economy COVID-19 Mobility Trackers

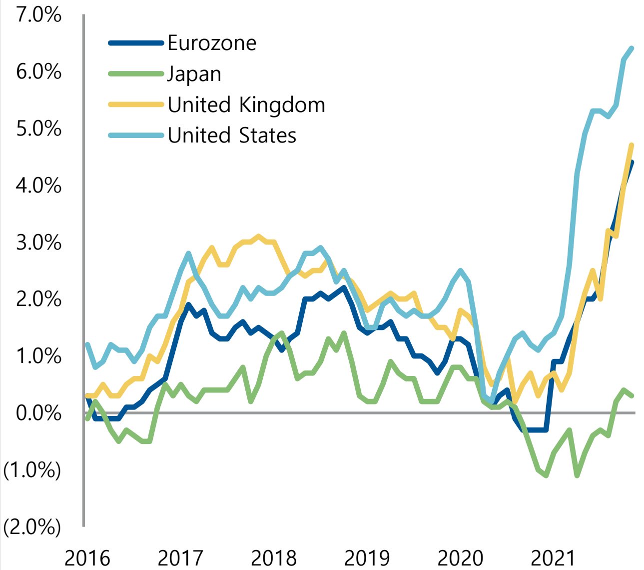


Note: Trackers expressed as a % difference from January 1 – February 6, 2020 mean level of 7DMA.
Sources: Google, Apple, Capital Economics.

The emergence of the Omicron variant caused mobility to drop across the continent, but this surge has been noticeably less impactful than prior years.

Europe Real Estate *(continued)*

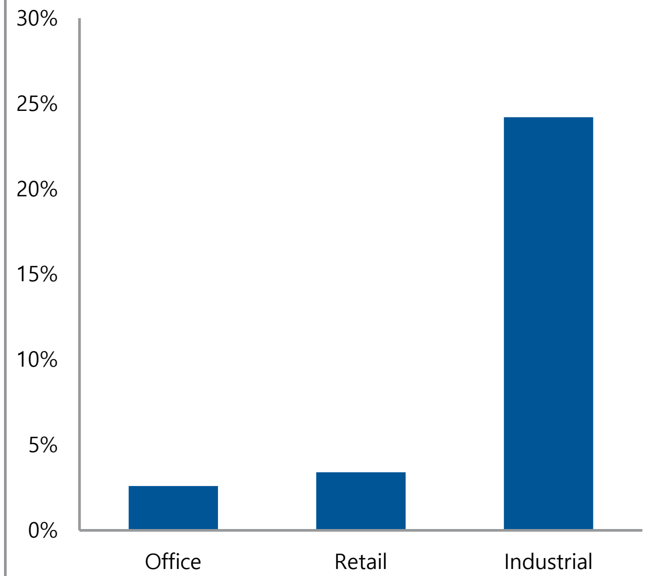
Headline Inflation



Sources: ONS, Eurostat, BLS, Capital Economics.

Inflation continues to increase rapidly in the UK and the eurozone, though both regions remain below the U.S. levels.

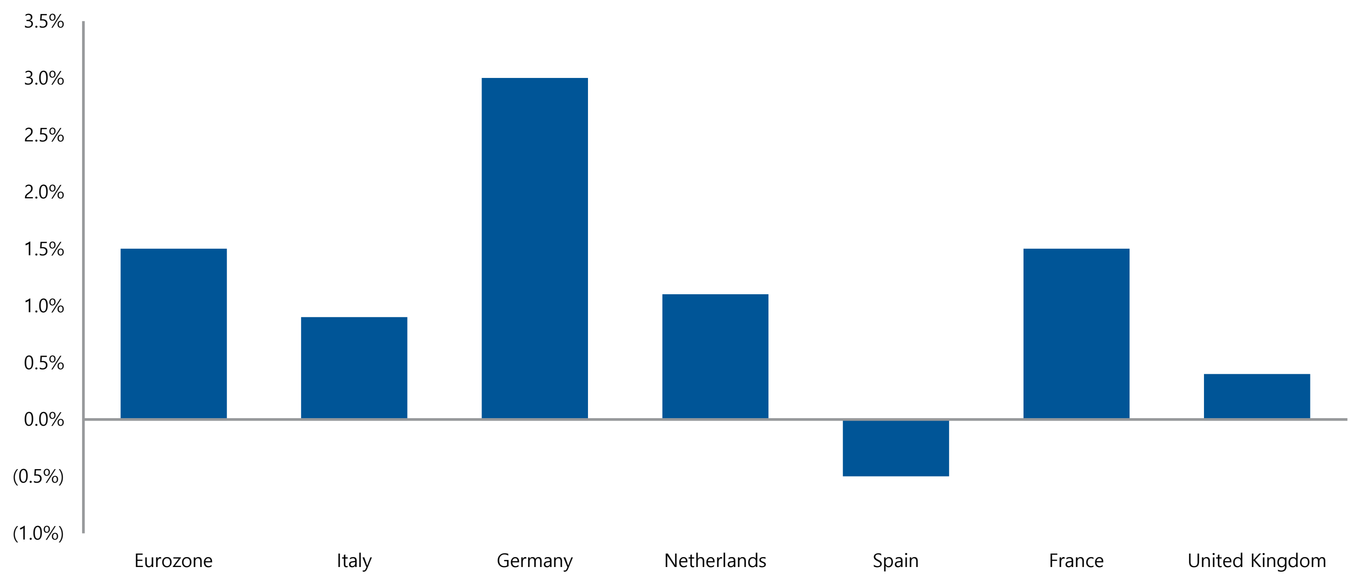
UK Capital Value Growth



Source: Capital Economics.

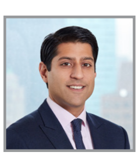
UK property values were up in 2021 compared to 2020, with the industrial sector continuing to outperform and the office and retail sectors finally generating some interest after a year of minimal demand.

Office Rental Value Growth



Source: Capital Economics.

Office rents have rebounded from their 2020 lows, as demand increased across most European countries.



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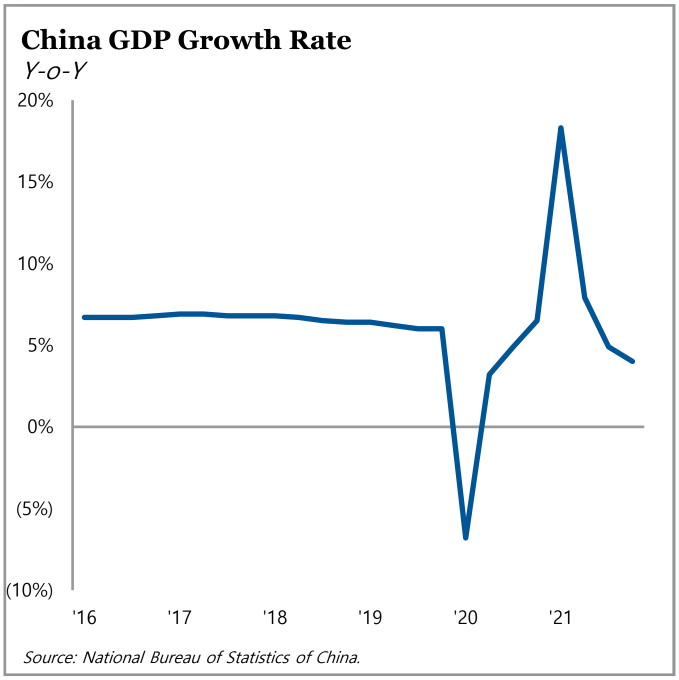
Asia Real Estate: China

In the third quarter of 2021, China's economy grew 4.9% year-over-year or 0.2% quarter-over-quarter, expanding 9.8% in the first three quarters of 2021. The slower pace of expansion in the third quarter can be attributed to power shortages, a fresh COVID-19 outbreak in Jiangsu province, and the impact of the government's deleveraging policy. The deleveraging policy has caused highly geared domestic developers, most notably China Evergrande, to encounter well-publicized financial difficulties. Fixed-asset investment in high-tech manufacturing grew by 25% year-over-year in the first three quarters of 2021. China's central bank cut the required reserve ratio by an additional 0.5 percentage points in early December, its second move in 2021, which will release approximately RMB 1.2 trillion to the market to bolster slowing economic growth.

In Beijing, there was a notable pickup in office leasing demand, mainly driven by the continuing relocation trend. Two new buildings were delivered in the third quarter, adding 210,000 square meters of office space to the leasing market. Net absorption increased significantly to 346,000 square meters, with domestic companies accounting for 92% of the leasing demand in the third quarter. Leasing activity from the IT and finance industries remained strong, respectively accounting for 33% and 32% of transacted space in the third quarter. Overall, rents decreased 5.4% year-over-year and 0.4% quarter-over-quarter, while vacancy dropped considerably, falling 1.6 percentage points quarter-over-quarter to 12.7%. In the Zhongguancun submarket of Beijing, rents increased slightly—up 0.2% quarter-over-quarter—and vacancy remained at 2.4%, the lowest level in the city.

Industrial and logistics real estate remained resilient in the major submarkets due to limited supply and strong leasing demand from third-party logistics companies and online retailers. In Shanghai, industrial rents rose 2.8% year-over-year; meanwhile, vacancy dropped significantly—down 1.5 percentage points to 4.4%—due to strong take-up of the newly completed supply in emerging submarkets. Two new completions of 183,500 square meters were delivered to the market, and absorption totaled 210,000 square meters in the third quarter.

In terms of overall market activity, total commercial real estate transaction volume amounted to RMB 200 billion in the first three quarters of 2021, a 42% increase year-over-year. While domestic investors dominated the market, cross-border investment has picked up substantially in recent quarters, accounting for 32% of the overall investment volume in the third quarter of 2021. Business parks and logistics warehouses remained the most popular asset classes, as they are positioned to benefit from the structural upgrade of China's economy toward innovation growth, as well as the continued expansion of e-commerce and third-party logistics companies.



China's GDP growth returned to normal levels after a strong recovery in early 2021.

CNY remained strong during the quarter.

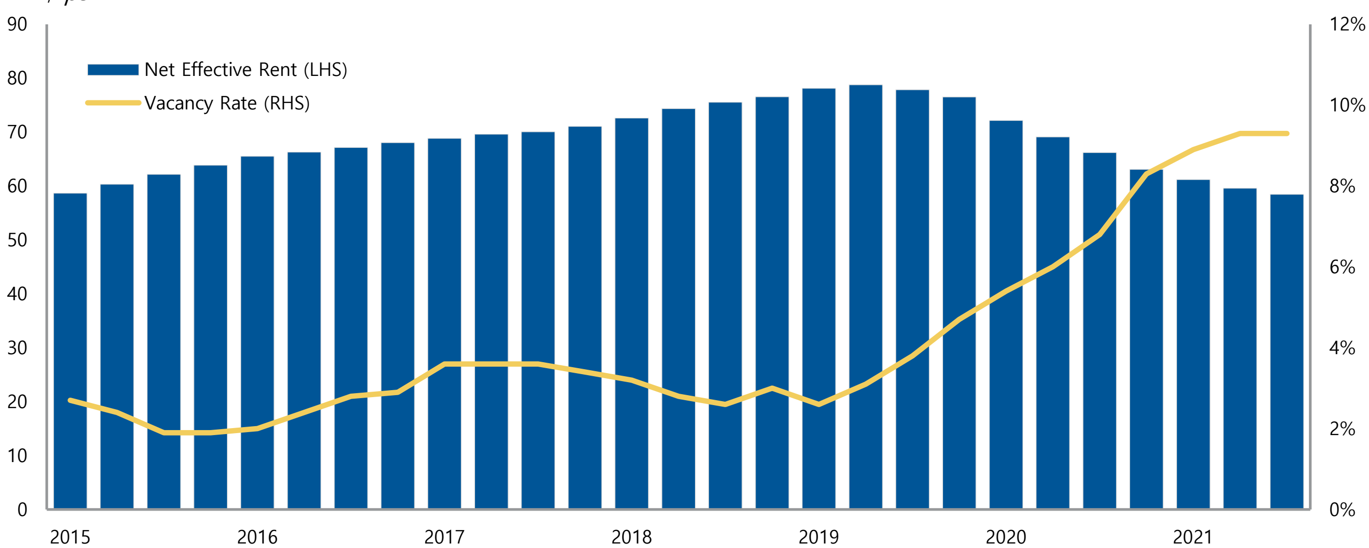
Asia Real Estate: Hong Kong

Hong Kong's economy grew 5.4% year-over-year in the third quarter of 2021. The improvement was attributed to strong export growth alongside a rebound in global demand. However, the economic recovery remained uneven, with exports performing well and consumption levels recovering while inbound tourism remained frozen. Total exports of goods saw strong growth, increasing 14.2% year-over-year, underpinned by the revival of major economies and vibrant regional trade flows. Private consumption expenditure grew 7.1% year-over-year due to the stability of the pandemic situation locally, improved labor market conditions, and the consumption voucher scheme. The unemployment rate declined meaningfully, falling from 5.5% in the second quarter to 4.5% in the third quarter—visibly lower than its peak of 7.2% in December 2020.

With limited supply, residential prices rose 7.3% year-over-year in the third quarter. In August 2021, residential prices reached a new high, breaking the previous record set two years ago—before the social unrest and the outbreak of COVID-19. Industrial buildings remained keenly sought-after, with HK$7.9 billion worth of industrial assets changing hands in the third quarter—the highest of any sector. Five of the ten largest deals completed in the third quarter involved industrial properties. Commercial real estate investment transaction volume rose 11% quarter-over-quarter to HK$19.2 billion, indicating improving purchasing momentum. Domestic investors collectively deployed HK$6.2 billion in the third quarter of 2021, 32% of the quarter's total, which is the highest among all buyer categories. As of September 2021, Hong Kong's office vacancy remained flat at 9.3%; the decline in rents slowed to 1.5% in the third quarter, following a decline of 2.6% in the second quarter. The rental gap between the central business district (Central) and decentralized office areas narrowed, as some domestic firms returned to Central.

Hong Kong Overall Grade A Office Vacancy Rate & Net Effective Rent

HK$ psf



Note: Vacancy rate includes confirmed leasing stock that is currently vacant or becoming vacant over the next 12 months.
Source: Savills.

Hong Kong's office vacancy remained high, at 9.3%, as rents weakened.

Asia Real Estate: Japan

In the third quarter of 2021, Japan's real GDP fell 0.9% quarter-over-quarter due to sluggish consumer spending and capital expenditure. The pandemic-related state of emergency—which had been in place since April 2021—was lifted in October, and GDP in the fourth quarter of 2021 is expected to increase due to the recovery in consumption. The unemployment rate remained low at 2.8%, supported by large-scale government stimulus measures including employment subsidies, and the number of corporate bankruptcies reached a record low despite the pandemic. Under new Prime Minister Fumio Kishida, the Bank of Japan is also expected to continue its active quantitative easing policy, with 10-year government bond yields expected to remain below 0.10% in 2022.

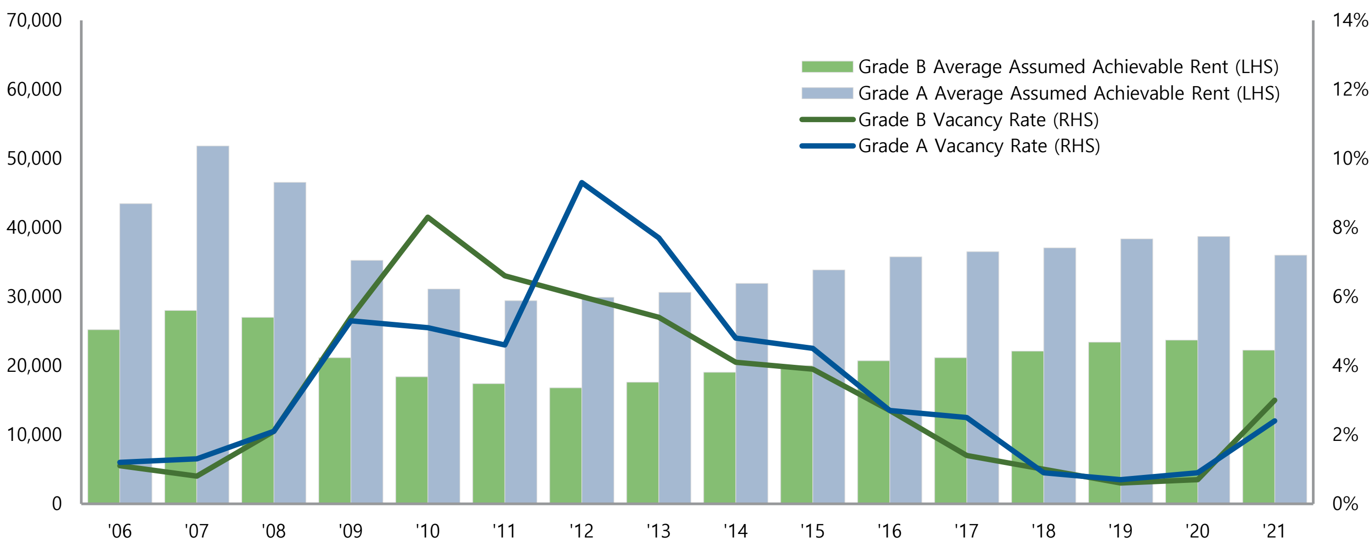
Real estate fundamentals in the office sector remain healthy despite the pandemic, with Grade A office vacancy rates in the third quarter of 2021 remaining low at 2.4% in Tokyo and 1.9% in Osaka. Vacancy rates are expected to rise slightly due to the economic slowdown and the increase in companies seeking to lower costs; however, while some companies are working to reduce costs, we are seeing others that are looking to expand and are considering moving to higher-quality, better-located office buildings.

Logistics fundamentals remain strong, with vacancy rates for large multi-tenant facilities in Greater Tokyo remaining low, at 2.6% in the third quarter. The e-commerce market continues to grow, with tenants moving to new facilities from older warehouses. Investor interest in the logistics sector, from both domestic and international buyers, continues to be robust.

Despite the pandemic, real estate investment activity in the office, logistics, and residential sectors has been resilient. In the third quarter, real estate transaction volume increased 77% year-over-year, primarily due to several large transactions. More Japanese companies are evaluating options to sell non-core assets to improve their balance sheets, and we believe this trend will continue in 2022.

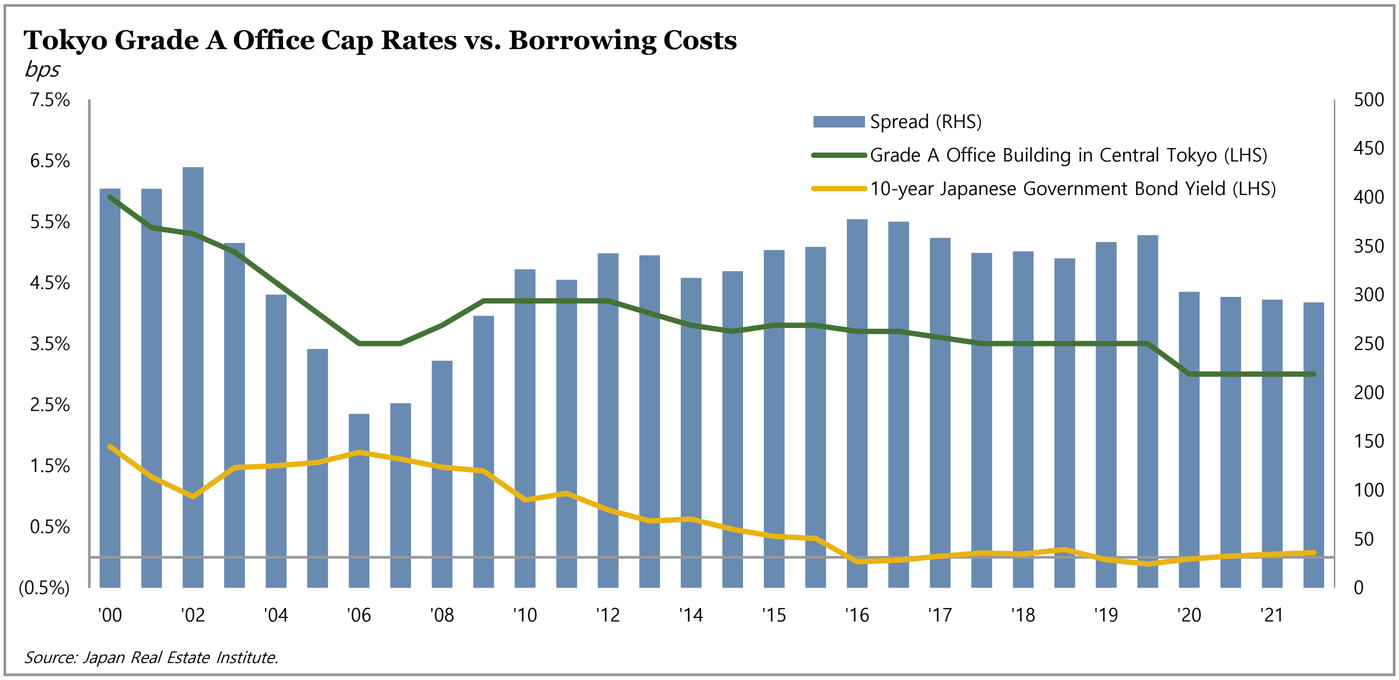
Tokyo's 23 Wards Grade A & B Office Rent And Vacancy

JPY/tsubo/mon

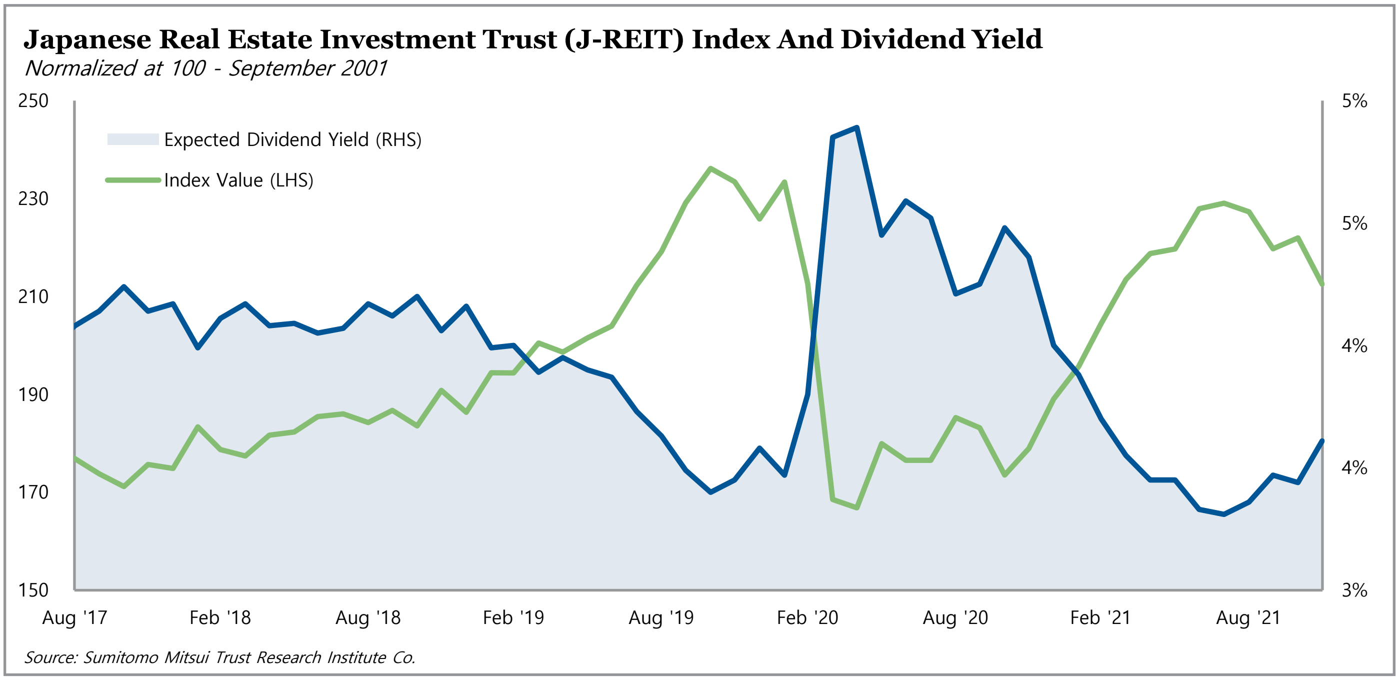


Note: One tsubo is equal to approximately 3.3 square meters.
Source: CBRE.

Tokyo office fundamentals remained strong.



Tokyo Grade A office cap rate spreads remain wide as compared to historical lows.



J-REIT yields continue to remain at low levels, driving up property values.

Asia Real Estate: South Korea

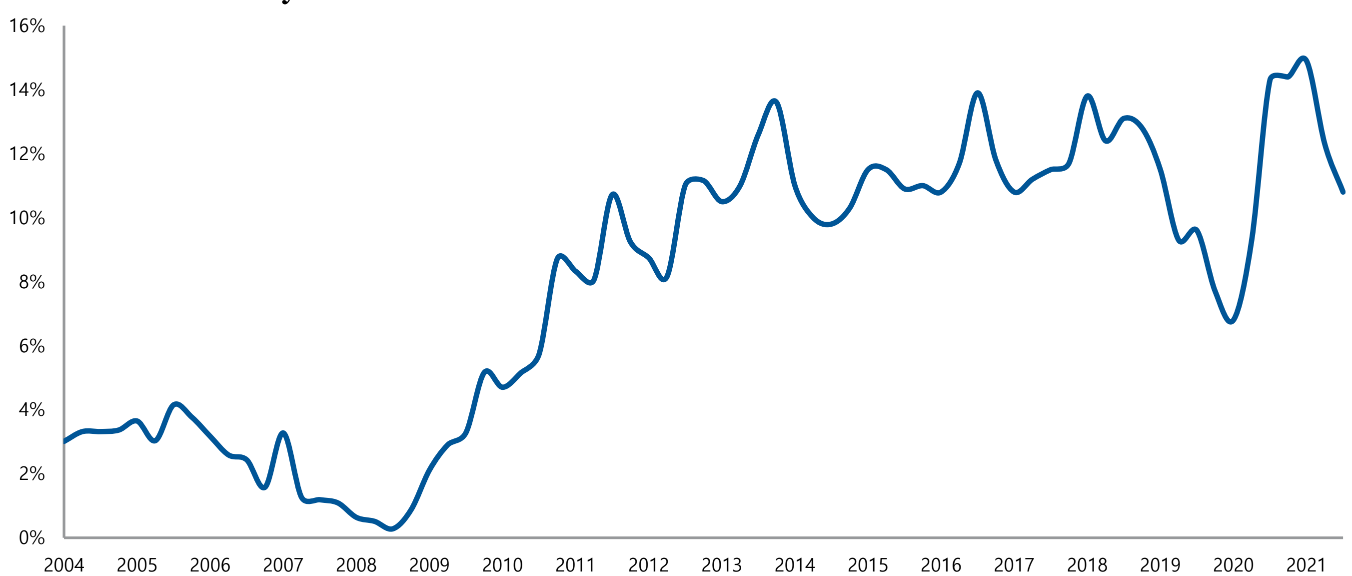
In the third quarter of 2021, South Korea's GDP growth moderated to 0.3% quarter-over-quarter due to the high base effect from the second quarter. The growth can mainly be attributed to a rebound in exports. 2022 GDP is projected to grow 3.0%, with an expected recovery in both domestic demand and exports. The Bank of Korea (BoK) raised base rates 25 basis points to 1.0% in November 2021 and implied the possibility of additional rate hikes in 2022. Although the country's vaccination rate reached 80% as of December and the government has started offering booster shots, the Omicron variant caused COVID-19 cases to increase to a daily average of 5,902 in the final month of 2021, resulting in some social gathering restrictions.

During the quarter, the spread between prime office cap rates and Korean government bond yields tightened 10 basis points to 230 basis points, primarily due to higher bond yields. Meanwhile, prime office cap rates remained steady at 4.0%. Investment activity in the commercial office sector continued its momentum, with transaction volume totaling KRW 10.5 trillion in the first nine months of 2021, which is 80% of full year 2020's record-high transaction volume of KRW 13.1 trillion. Prime office vacancy in Seoul declined from 14.9% in the first quarter to 10.8% in the third quarter, down 410 basis points, mainly due to strong leasing demand for large vacancies in newly supplied Grade A office properties. With limited Grade A office supply coming in the near term, vacancy rates in the major business districts are expected to further stabilize in 2022.

Leasing and investment momentum in the logistics sector remained resilient, with the ongoing pandemic accelerating the continued growth of the e-commerce industry. Modern logistics facilities in the greater Seoul area have only frictional vacancy, at just 1.7% as of the third quarter—down 100 basis points from the second quarter. Cap rates for logistics assets have compressed significantly over the last three years. The spread between logistics asset cap rates and prime office cap rates has contracted from 140 basis points in 2020 to only 60 basis points in 2021, as institutional investors continue to increase their appetite for stabilized industrial assets.

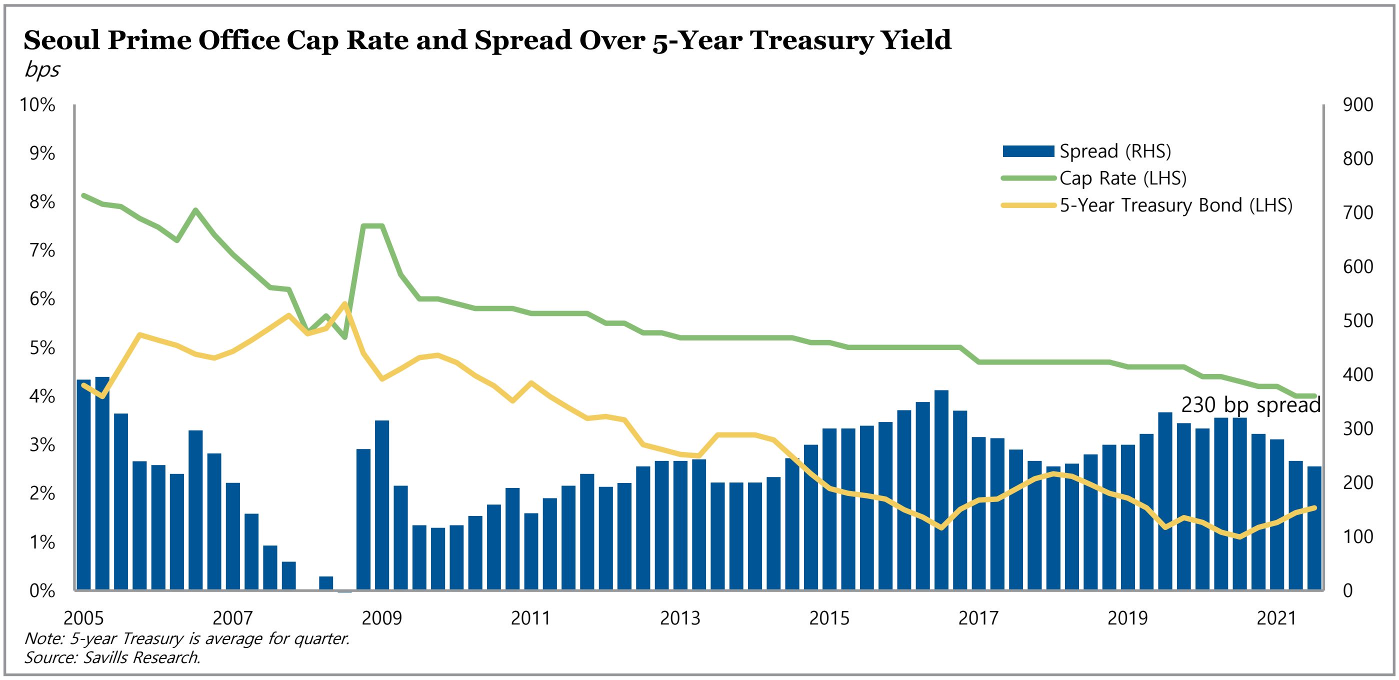
The residential market in Seoul continued to rise in the fourth quarter, with apartment prices increasing 15.6% year-over-year as of December 2021. However, the rate of growth in residential pricing declined from 4.3% to 2.2%, down 210 basis points, amid the government's tight regulatory measures aimed at curbing speculative investments.

Seoul Office Vacancy Rate

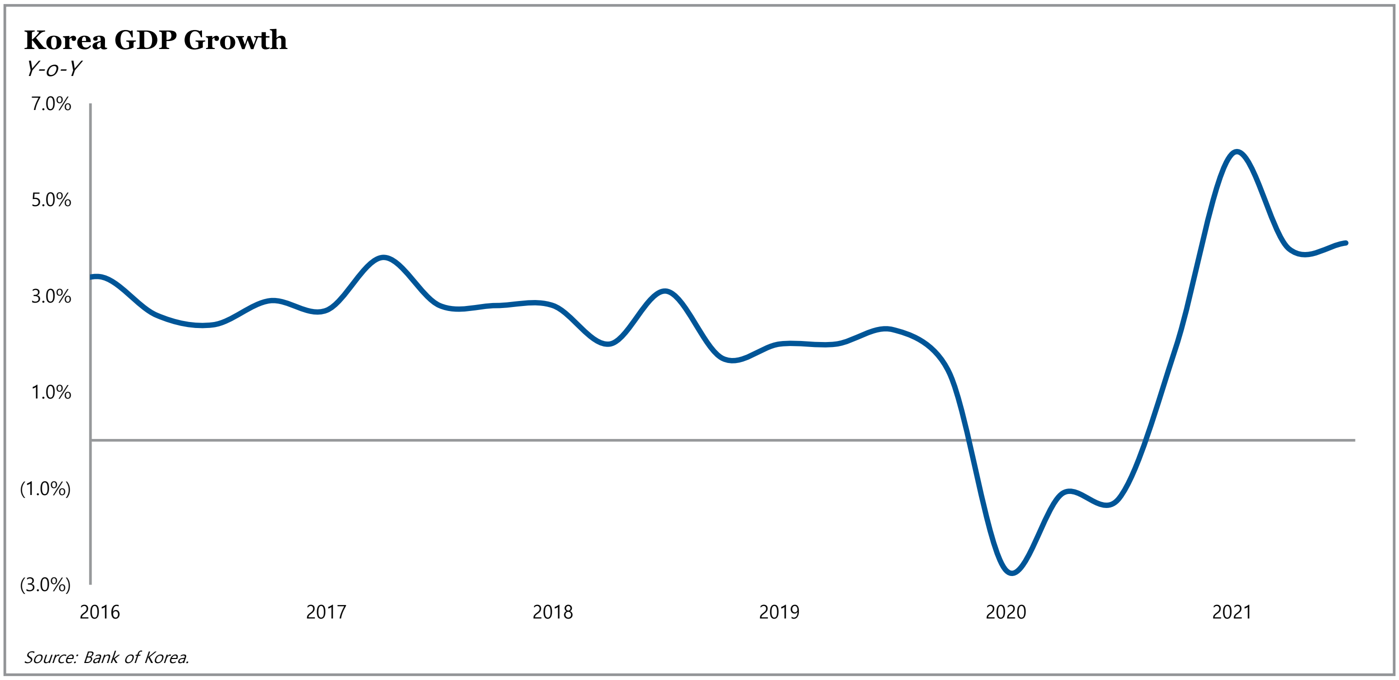


Source: Jones Lang Lasalle Research.

Significant absorption of office space during the quarter helped to reduce vacancy in the Seoul office market.



Cap rates spreads have tightened as Treasury yields have seen some improvement.



Following sluggish growth in 2020, the Korean economy recovered in 2021.

Wilson Leung
Co-Portfolio Manager
Head of Asia Real Estate

Steven Cha
Co-Portfolio Manager
Asia Real Estate

For more information on Asia Real Estate, click here.

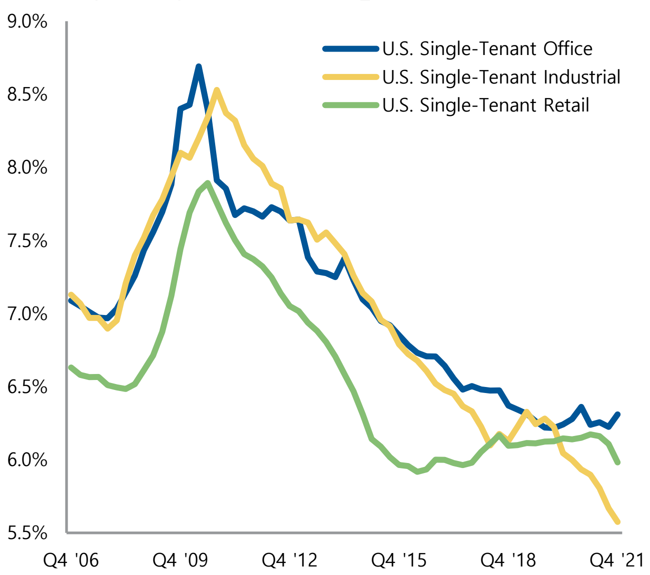
Net Lease Real Estate

As of the fourth quarter of 2021, the trailing 12-month U.S. single-tenant transaction volume totaled $85 billion, according to Real Capital Analytics (RCA). Volume has steadily increased since the second quarter of 2020 and reached an all-time high in the most recent quarter. Single-tenant retail transaction volume remains 15% below all-time highs and office remains 4% below all-time highs, while industrial has climbed to levels that are 12% above the previous record high.

In the fourth quarter of 2021, single-tenant cap rates averaged 5.96%, according to RCA, which is an all-time low. Trends in cap rates have started to become more distinct. In recent quarters, there has been a fairly constant theme of compressing industrial cap rates and relatively stable office and retail cap rates. In the fourth quarter of 2021, industrial cap rates continued their downward trend; however, retail and office cap rates started to diverge, with retail compressing and office showing signs of weakness.

Reflecting on 2021, the rise in prices and transaction volume as well as NOI growth—both of which relate to our commentary here—were certainly key themes. There was also much discussion about real estate gaining traction as a viable alternative to fixed income and more lenient lending standards, and we expect these topics will remain points of focus moving into 2022.

Average Single-Tenant Cap Rates

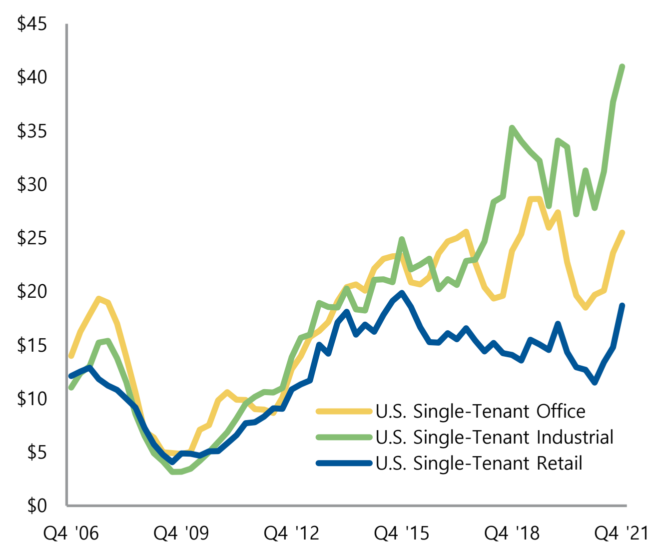


Source: Real Capital Analytics.

Single-tenant retail cap rates started to diverge from office cap rates, with office showing signs of weakness.

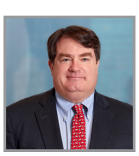
12-Month Rolling Single-Tenant Deal Volume

$ Billions



Source: Real Capital Analytics.

Single-tenant volume reached an all-time high, led by industrial.



Gordon Whiting
Portfolio Manager

For more information on Net Lease Real Estate, click here.

Private Equity

2021 was a record-setting year on a variety of fronts for the private equity industry. Deal volume and exits achieved all-time highs during 2021. Despite the challenges COVID-19 presented to the global economy, private equity once again proved that it is a resilient asset class.

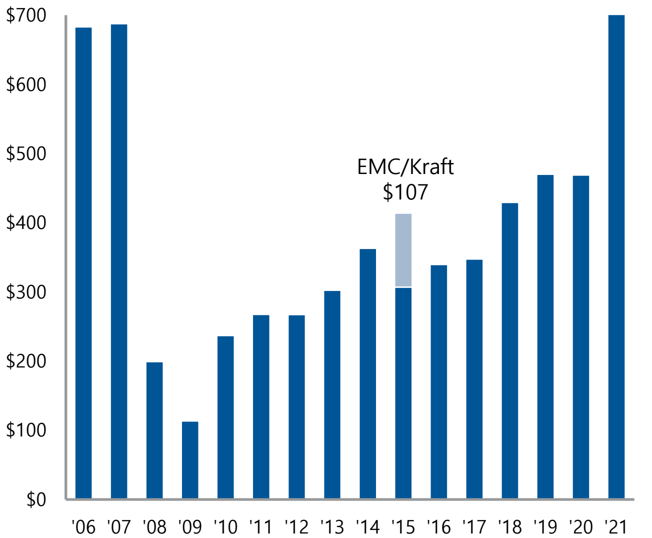
Both North American and global deal volume eclipsed prior records set in 2006 and 2007, respectively. Notably, volume in 2021 was significantly higher than it was in 2020. 2021 deal volume in North America totaled $471 billion, as compared to $246 billion in 2020—a year-over-year increase of approximately 90%. For additional context, before last year, 2020 marked the highest level of North American deal volume witnessed since 2006. Additionally, 2021 global volume increased nearly 75% year-over-year to $814 billion. Consistent with North American volume, prior to 2021, 2020 global volume represented the highest level witnessed since 2007.

Dry powder at December 31st stood at $870 billion, a decrease of 3% from September 30th levels. While the quarterly trend of setting all-time records for dry powder took a pause in the fourth quarter of 2021, dry powder remains high from a historical perspective. Further, we have continued to see greater equilibrium in fundraising and deployment of capital as the quarter-over-quarter changes in dry powder levels have become smaller. Also demonstrating strength were the transaction multiples paid. Average multiples paid in calendar 2021 stood at 11.2x, below the record of 11.6x set in 2020 but still the third-highest level on record. Average leverage for buyouts in full year 2021 was 5.7x multiple of EBITDA, which is consistent with prior years. In calendar 2021, the number of exits and dollar volume also set all-time records and were up markedly from calendar 2020, respectively increasing approximately 50% and 70% year-over-year.

2021 was arguably the strongest year in private equity history. Deal volume, exit volume, and number of exits all broke records, while dry powder and transaction multiples were near record levels. The strength of private equity since the outbreak of the pandemic has been striking. 2020 was a very good year for the asset class, followed by an even better 2021. Robust earnings by portfolio companies coupled with bullish financing, merger, and equity markets contributed to the resilience of the asset class. As we turn our focus to 2022, Omicron and the possible continued emergence of new COVID-19 variants, a tight labor supply, geopolitical concerns, and other factors could have an adverse impact on the private equity sector's ability to repeat its stellar 2021 performance.

Global LBO Deal Value

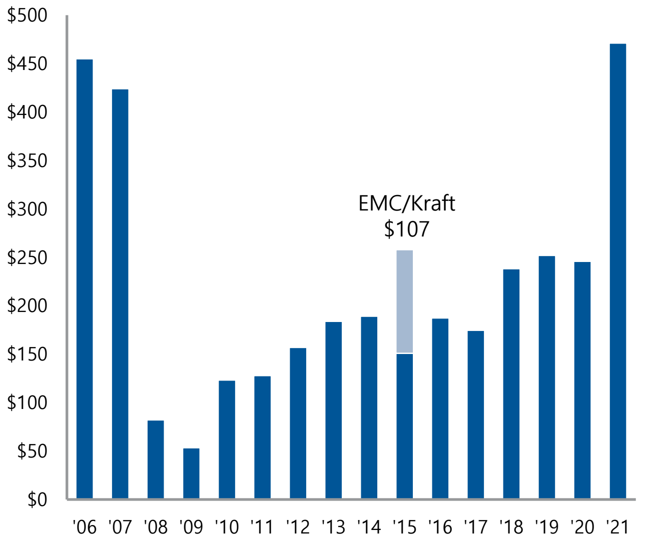
$ Billions



Source: Preqin.

North America LBO Deal Value

$ Billions

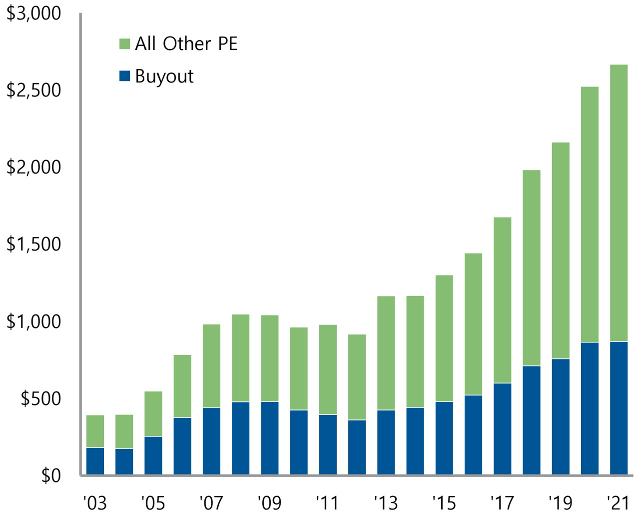


Source: Preqin.

Full year 2021 deal volume increased approximately 90% in North America and 75% globally on a year-over-year basis.

Global Private Equity Dry Powder

$ Billions

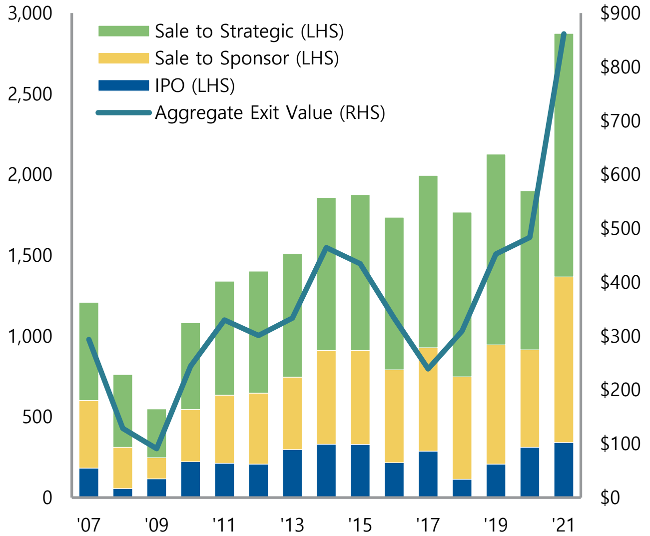


Note: All other PE Funds = Real Estate, Venture, Infrastructure, Growth, Distressed, Mezzanine, Other.
Source: Preqin.

Buyout dry powder at December 31, 2021 stood at $870 billion, flat with year-end 2020.

Private Equity Exits

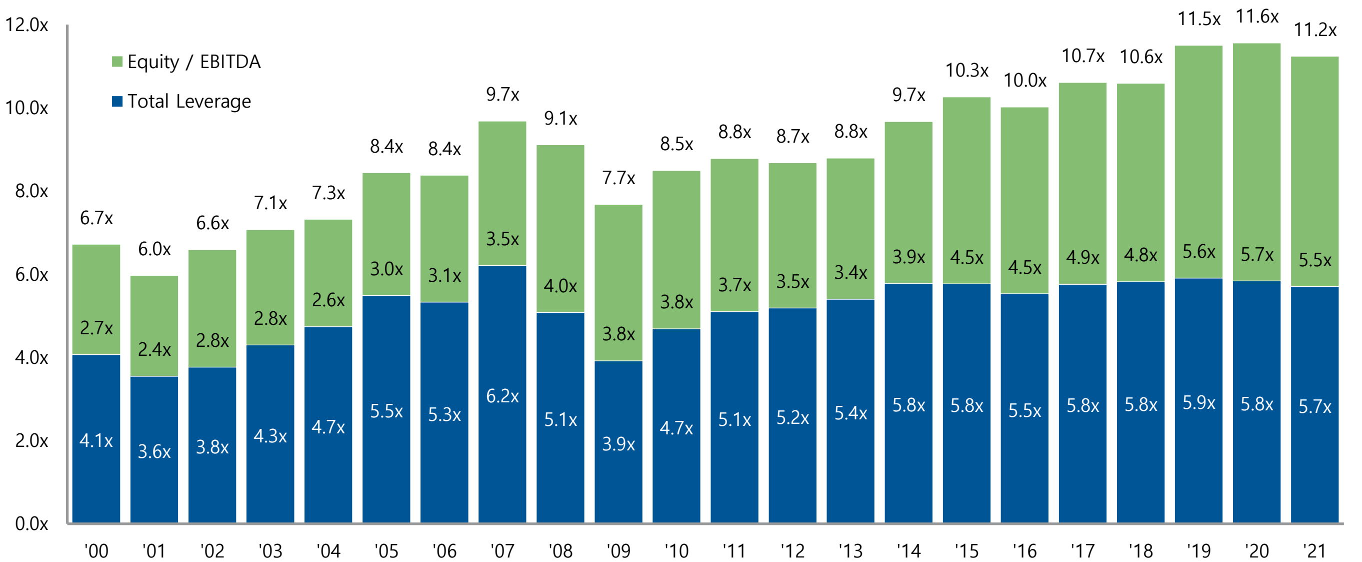
Number of Exits *Value of Exits ($ Billions)*



Note: Sale to Sponsor includes management-led buyouts.
Source: Preqin.

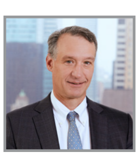
The number of exits and dollar volume in full year 2021 increased approximately 50% and 70%, respectively, on a year-over-year basis.

LBO Purchase Price Breakdown



Source: S&P Capital IQ LCD.

LBO multiples for calendar 2021 averaged 11.2x, which—although lower than 2020—represented the third-highest year on record.



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