FIGURES | U.S. LENDING | Q4 2021

Highly Liquid Commercial Mortgage Market Continues to Expand

▲ 415

▼ 58.6%

▼ 65.3%

▲ 5.01%

▼8.33%*

Lending Momentum Index

Commercial LTV

Multifamily LTV

Average Loan Constant

Average Debt Yield

*Fixed-rate permanent loans only

Arrows indicate change from previous quarter. Source: CBRE Capital Markets, Q4 2021.

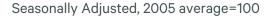
Executive Summary

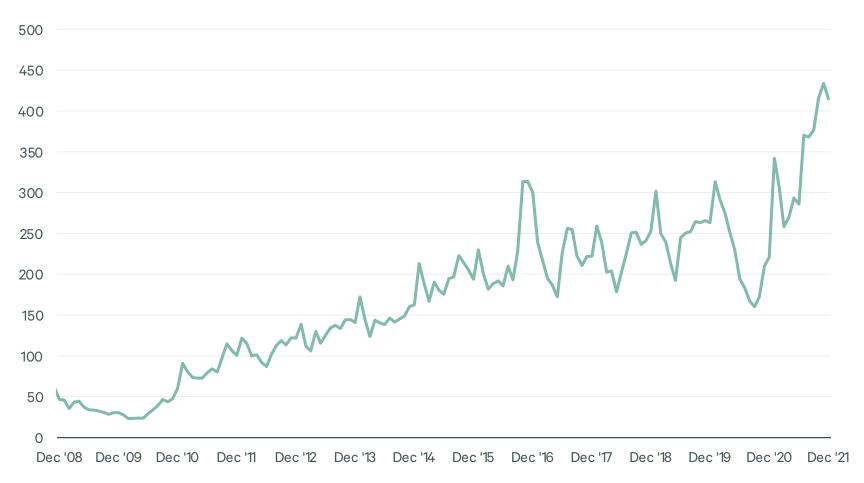
- Commercial lending markets were highly liquid and continued to expand in Q4 2021. Credit spreads on permanent loans remained tight, while underwriting standards were generally unchanged from Q3.
- The CBRE Lending Momentum Index increased by 10.3% quarter-over-quarter and is now 42.2% above its February 2020 pre-pandemic close.
- Bridge lending remained strong in Q4, lifting alternative lenders' and banks' non-agency lending market share.
- CMBS loan origination activity increased its market share in Q4, as loan pricing remained competitive. Spreads on CMBS bond issues have supported higher levels of originations, with 10-year AAA-rated conduit paper trading near swaps + 68 basis points (bps) in recent weeks, consistent with averages over the past year.

- CBRE's loan underwriting measures were mixed in Q4. While the underwritten debt-service coverage
 ratio (DSCR) inched up and loan-to-value ratio (LTV) fell, cap rates and debt yields were lower. The
 percentage of loans carrying full or partial interest-only terms rose to 62.5%.
- As investors anticipate short-term rate hikes, Treasury yields increased. Two-year issues had the largest increase in recent weeks. The benchmark 10-year bond reached 1.81% on January 27, up from 1.52% on September 30.
- Spreads on commercial seven- to 10-year, 55%-to-65% LTV permanent loans tightened by 53 bps quarter-over-quarter to an average of 185 bps. Multifamily spreads tightened by 28 bps to average 173 bps.
- Multifamily agency lending totaled \$46.1 billion in Q4, lifting the 2021 total to \$139.6 billion—12% below 2020's record production volume.

Figure 1 Lending activity increases in Q4

- Lending activity continued to rise in Q4.
 The CBRE Lending Momentum Index closed the year at a value of 415, up by 10.3% from September.
- Lending activity closed Q4 42% higher than just prior to the pandemic in February 2020, reflecting the return of high levels of liquidity in the commercial mortgage market.
- The CBRE Lending Momentum Index tracks loans originated or brokered by CBRE Capital Markets. The index has a base value of 100, which represents average activity for 2005.

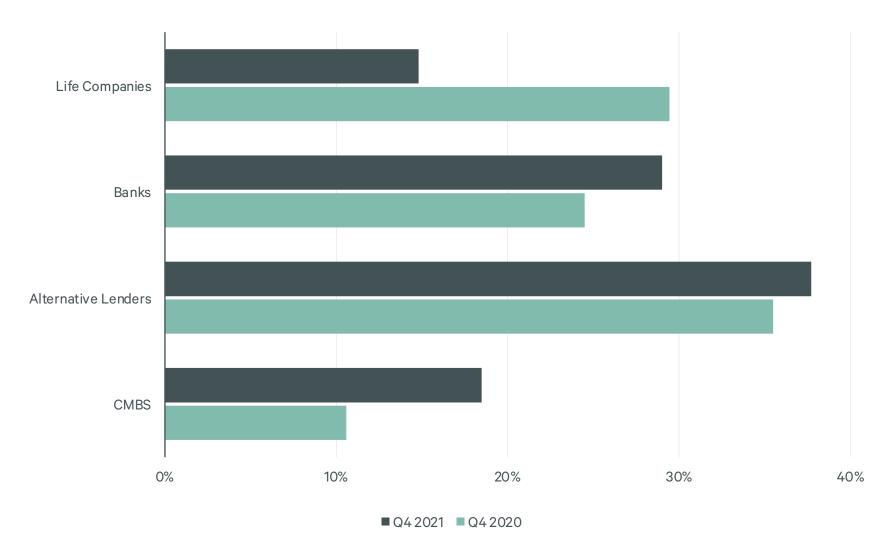




Source: CBRE Capital Markets and CBRE Research, Q4 2021.

Figure 2 Alternative lenders & banks top Q4 originations

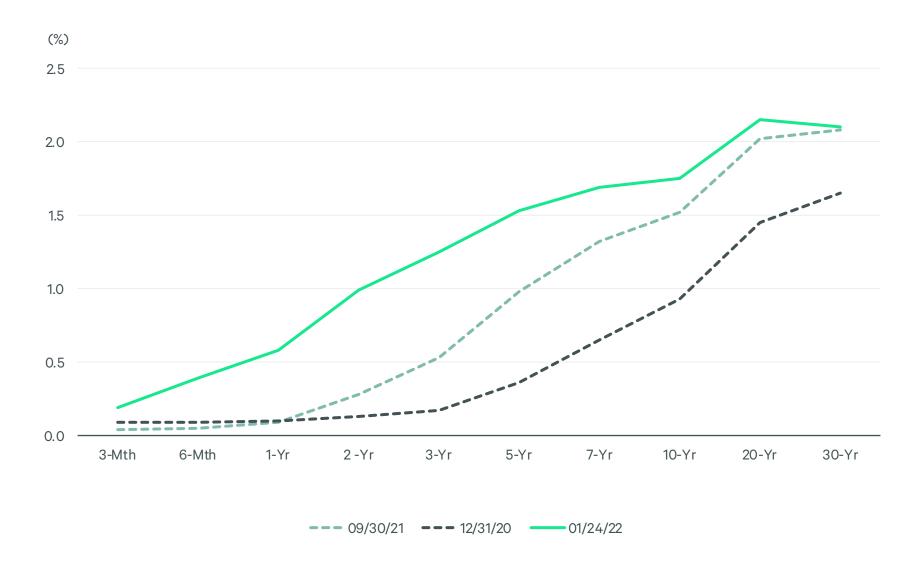
- Alternative lenders (debt funds, pension funds and credit companies) had the largest share of non-agency loan closings in Q4 at 37.7%, down slightly from Q3. The strong collateralized-loan-obligation (CLO) market helped support term-financing of loan portfolios. Overall CLO issuance totaled a record \$45.4 billion in 2021. The Q1 2022 CLO deal pipeline remains active.
- Banks increased their share of non-agency lending volume to 29% in Q4, up from 23.1% in Q3 and 24.5% a year earlier. Bridge loans accounted for 38.5% of banks' total lending volume in Q4, while permanent loans accounted for 35% and construction loans for 21%.
- CMBS originations had a higher share of originations in 2021. In Q4, their share reached 18.5%, up from 17.6% in Q3 and 10.5% from a year ago. Industrywide CMBS origination volume more than doubled year-over-year in 2021 to \$110 billion.
- Life companies' share of commercial mortgage closings fell to 14.8% in Q4 from 20.2% in Q3, mostly in permanent loans on multifamily and industrial properties.



Reflects non-agency commercial/multifamily loans. Source: CBRE Capital Markets and CBRE Research, Q4 2021.

Figure 3 Treasury yield curve anticipates Fed action

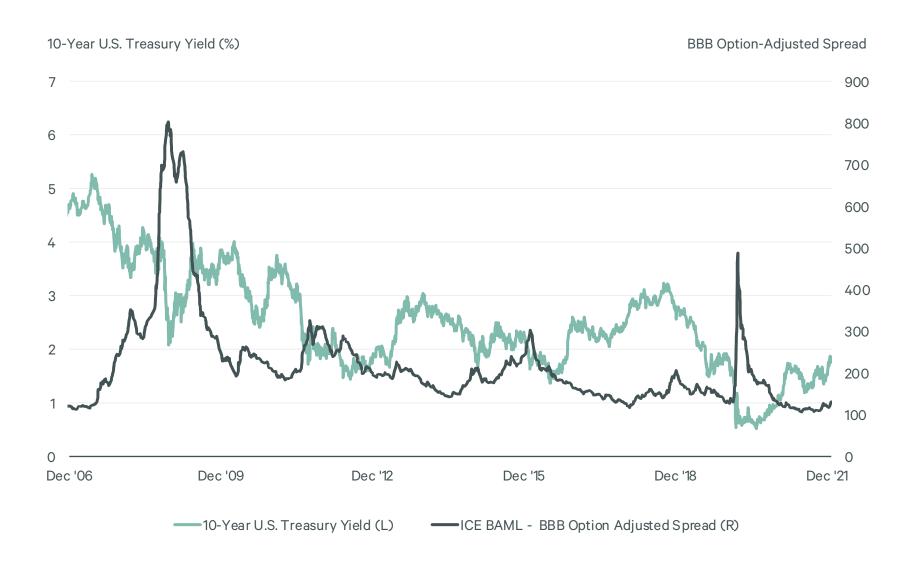
- Rising inflation and the Fed's anticipated interest rate hikes caused yields to increase in December and January. Effects were most pronounced on the two-year note, which saw yields rise by 66 bps between November 30 and January 27.
- Benchmark 10-year Treasury yields closed at 1.81% on January 27, up 29 bps from their September 30 close.



Source: Federal Reserve Bank, October 2021.

Figure 4 10-Year Treasury yield & BBB option-adjusted corporate bond spread

Corporate bond spreads remained tight in Q4 but have widened in recent weeks due to higher levels of market volatility. The Bank of America/Merrill Lynch U.S. Corporate BBB Index closed at a 131-bp spread on January 27, the widest in more than a year. However, spreads are up only 21 bps from their Q3 2021 closing value.



Source: ICE Bank of America/Merrill Lynch, Federal Reserve and CBRE Research, January 2022. Data through 1/27/2022.

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Figure 5 Commercial & multifamily mortgage loan spreads tightened in Q4

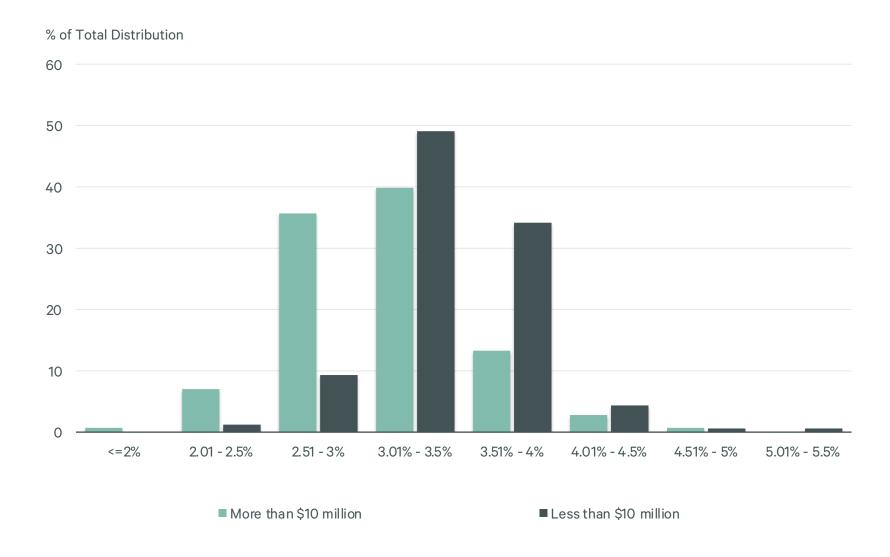
- After widening slightly in Q3, commercial and multifamily mortgage loan spreads tightened in Q4.
- The spread on commercial mortgage loans averaged 185 bps in Q4, down 53 bps from Q3. This sharp decline was largely due to several industrial loans, which were bid aggressively by lenders and carried tighter-than-average spreads. Excluding these loans, the overall commercial spread averaged 201 bps. Compared with a year earlier, spreads were 90 bps tighter.
- The average spread on multifamily mortgages also declined in Q4 to 173 bps, down 21 bps from Q3.
 Multifamily spreads are 28 bps tighter than a year ago.
- Active loan quotes in January indicate that comparable multifamily loan spreads have tightened by approximately 20 bps, while commercial spreads have widened by 14 bps relative to the closed loan averages noted above.
- Benchmark 10-year US Treasury yields averaged
 1.53% in Q4, up from 1.32% in Q3.
- The data reflect fixed-rate deals with a seven- to 10-year term and 55-65% LTV that were closed by CBRE Capital Markets



Source: CBRE Capital Markets and CBRE Research, Q4 2021. Note: Reflects average spreads on 7-10 year, 55%-65% LTV, permanent fixed-rate loans closed by CBRE Capital Markets.

Figure 6 Mortgage rate distribution

- Mortgage markets remain highly competitive, providing borrowers with low-cost financing.
 Approximately 26% of loans carried a mortgage rate of 3% or less in Q4, down from 34% in Q3. Nearly 70% of loans had a mortgage rate of between 3% and 4%, compared with 55% in Q3.
- Larger loans with a balance of at least \$10 million were more likely to have a sub-3% mortgage rate. Almost 43% of these loans had a sub-3% rate, compared with just 11% of smaller loans under \$10 million.



Source: CBRE Research, Q4 2021.

Figure 7 Underwriting measures mixed in Q4

- CBRE's loan underwriting measures changed modestly in Q4. The overall DSCR inched higher, while average LTV fell slightly. Cap rates fell to an average of 5.1% in Q4, down 4 bps from Q3, while debt yields fell by 22 bps to 8.33%.
- The percentage of loans carrying full or partial interest-only terms increased to 62.5% from 61.1% in Q3. Full-term interest-only accounted for 24.9% of loans in Q4, up from 23.3% in Q3. However, this was offset by some fully amortizing loans in the Q4 data set, which increased the overall amortization rate to 24.2% in Q4 from 22.8% in Q3. The amortization rate measures the average percentage of origination balances that pay down over the loan term.

Key Underwriting Measures	Q4 2021	Q3 2021	Q4 2020	
Debt Service Coverage Ratio	1.48	1.47	1.57	1.42
Loan-to-Value (LTV) (%)	63.4	64.9	64.0	65.3
Cap Rate (%)	5.10	5.14	5.40	5.87
Amortization Rate (%)	24.2	22.8	18.6	21.4
Percent Partial or Full Interest-Only	62.5	61.1	66.7	66.4
Percent Full Interest-Only	24.9	23.3	34.3	19.1
Loan Constant (%)	5.01	4.98	4.73	6.25
Interest Rate (%)	3.32	3.32	3.08	4.74
Debt Yield for Fixed-Rate Permanent Loans (%)	8.33	8.55	8.89	9.54

Note: Amortization rate reflects the average percentage of origination balances scheduled to pay down over the loan term. Source: CBRE Research, Q4 2021.

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Figure 8 Commercial & multifamily LTVs fall at year-end

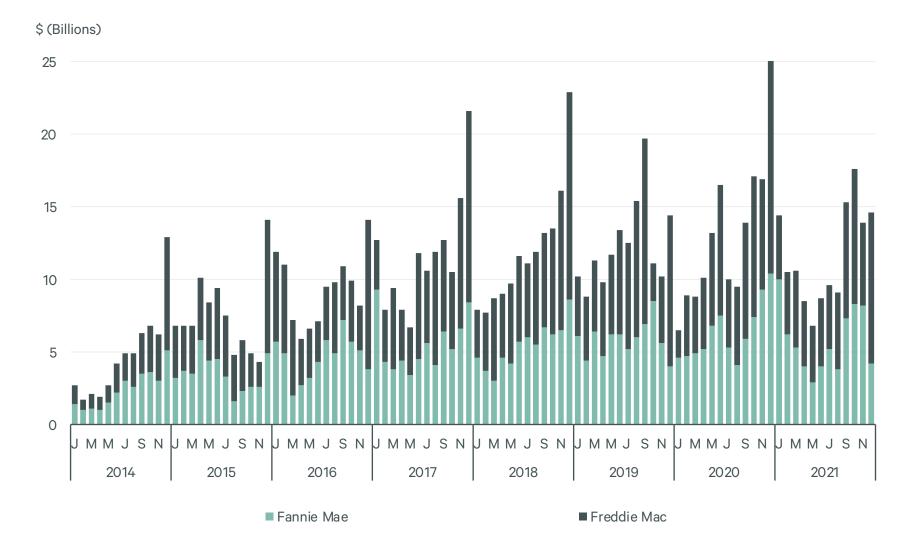
- Commercial and multifamily LTVs fell in Q4 after two consecutive quarterly increases.
- Commercial LTVs averaged 58.6% in Q4, down 70 bps from Q3. Compared with a year ago, they were 30 bps higher but remained below their pre-pandemic level of 61.4% two years ago.
- Multifamily LTVs averaged 65.3% in Q4, down 2.4 percentage points from Q3 and 1.3 percentage points from a year ago. Prior to the pandemic two years ago, they averaged 66.7%.
- LTVs reflect permanent loans closed by CBRE Capital Markets.



Source: CBRE Research, Q4 2021.

Figure 9a Monthly agency multifamily mortgage production

- Agency lending totaled \$46.1 billion in Q4, up from \$34 billion in Q3. For the entire year, origination volume totaled \$139.6 billion, 12% below 2020's record level.
- CBRE's Agency Pricing Index, which reflects the average agency fixed mortgage rates for closed permanent loans with a seven- to 10year term, increased by 15 bps in Q4 and 56 bps from a year ago to average 3.28%.

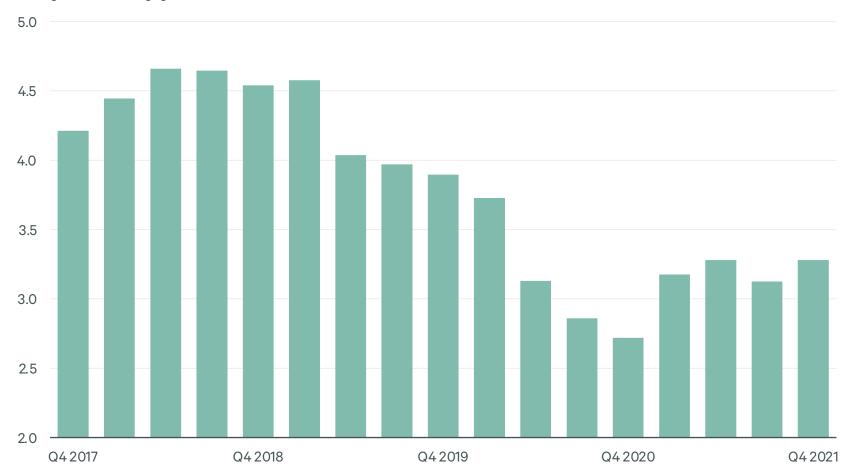


Source: CBRE Capital Markets, Q4 2021.

Figure 9b Quarterly average agency mortgage rate

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Average Closed Mortgage Rate



Reflects average closed mortgage rate for 7-10 year permanent fixed-rate agency loans. Source: CBRE Capital Markets. Q4 2021.

Contacts

Richard Barkham, Ph.D., MRICS

Global Chief Economist & Head of Americas Research +1 617 912 5215 richard.barkham@cbre.com Twitter: @RichardJBarkham

Mark Gallagher, CFA

Senior Strategist Americas Research +1 617 912 5252 mark.gallagher@cbre.com

Brian Stoffers

Global President
Debt & Structured Finance
corpcomm@cbre.com

Jeff Majewski

Executive Managing Director Debt & Structured Finance +18328395094 jeffrey.majewski@cbre.com

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