CRE 2024 Outlook: Too Early to Get Positive

Summary

We forecast additional declines of 1% in CRE volumes and 5-10% in CRE values, before a market bottom in 1H24 and slow-building recovery starting in 2025. Upcoming $600+ billion in maturing debt and ongoing pressure on asset values will be significant sources of stress. Hence, we remain cautious on the commercial mortgage REITs (CMREITs) based on credit, while upside in CRE broker volumes will hinge on 2025 visibility. Sector-wise, office poses a secular risk and multifamily issues are emerging in floating-rate, bridge, and/or peak vintage loans. In housing, we anticipate 2% growth in home prices and sales amidst tight inventory, favoring homebuilders and single-family rental (SFR) REITs. **Top picks:** LADR, DBRG, DHI, LEN, and TOL. **Ratings changes:** upgrading DHI; downgrading WD and NREF on balanced risk/reward.

Key Points

- **We expect 2024 CRE volumes to decline by 1% and values by 5-10%,** equivalent to peak-to-trough declines of 55-60% and 25-30%. Values are down 15-20% from the peak, suggesting we are two-thirds through correction. We expect CRE distress in maturing loans as borrowers evaluate defensive vs. strategic capital allocation. While our framework implies 1-3% loan losses, we expect aggregate losses at the higher end, particularly in transitional loans and office. Losses vary widely given CRE's concentrated nature, workout process, and company-specific liquidity.
- **In housing, we forecast home prices and sales to increase 2%.** Affordability will remain constrained as low inventory and income growth support high home prices, while 30-year mortgage rates hover near 7%. This benefits the homebuilders, who offer new product and mortgage incentives, and SFRs, who offer a bridge to homeownership.

Stock recommendations: our top Outperform-rated picks are LADR, DBRG, and homebuilders DHI, LEN, and TOL.

- ***LADR - a quasi "blind-pool mortgage REIT"*** with strong liquidity, recent loan vintage, diverse liability structure, and seasoned management, suggesting the ability to take advantage of CRE dislocation to generate outsized returns.
- ***DBRG - strong AUM and EPS growth*** based on digital infrastructure; financial simplification a catalyst.
- ***Homebuilders - upgrade DHI to Outperform; reiterate Outperform on LEN and TOL*** on KBW "Sideways" housing thesis, which benefits homebuilders through market share gains and stable margins, resulting in positive earnings/book value growth.

Remain cautious on CMREITs due to credit including CMTG, GPMT, and battleground stocks ABR and BXMT. Sector valuations at 0.8x BV and 12% yields imply 2-5% loan losses, the upper bound of our methodology but not extreme.

Estimates and price targets.

- We increase homebuilder estimates 3-5% and price targets 10-15% in concert with "*Sideways: Why KBW Expects a Flat Housing Market in 2024-2025*."
- We increase our LADR price target by 9% on a positive outlook and CRE broker price targets by 23% on lower rates (from the October peak) and a valuation roll-forward. We reduce our ABR target by 3% on bridge multifamily caution.

Ratings changes: We reduce WD and NREF to Market Perform from Outperform on more balanced risk/reward profiles relative to peers.

Jade J. Rahmani
+12128873882
jrahmani@kbw.com

Ryan Tomasello
+12128877740
rtomasello@kbw.com

Jason Sabshon
+12128877742
sabshonj@kbw.com

Glossary of Terms

Please refer to important disclosures and analyst certification information on pages 40 - 43.

	Market	Rating		Target		Current Qtr.		2023E EPS		2024E EPS	
Symbol	**Price**	**To**	**From**	**To**	**From**	**To**	**From**	**To**	**From**	**To**	**From**
ABR	$14.19	Market Perform	Market Perform	$14.00	$14.50	$0.41	$0.41	$2.15	$2.15	$1.62	$1.62
CBRE	$82.30	Market Perform	Market Perform	$93.00	$78.00	$1.18	$1.18	$3.64	$3.64	$4.33	$4.33
DHI	$139.80	Outperform	Market Perform	$164.00	$148.00	$2.91	$2.86	$13.85	$13.85	$14.58	$14.15
JLL	$164.24	Market Perform	Market Perform	$180.00	$160.00	$3.50	$3.50	$6.66	$6.66	$12.08	$12.08
KBH	$55.58	Market Perform	Market Perform	$63.00	$56.00	$1.65	$1.65	$6.84	$6.84	$7.20	$7.20
LADR	$11.24	Outperform	Outperform	$12.25	$11.25	$0.26	$0.26	$1.28	$1.28	$1.20	$1.20
LEN	$140.53	Outperform	Outperform	$168.00	$145.00	$4.62	$4.62	$13.55	$13.55	$14.95	$14.87
MTH	$154.63	Market Perform	Market Perform	$176.00	$160.00	$5.14	$5.14	$19.68	$19.68	$18.73	$18.26
NMRK	$8.75	Market Perform	Market Perform	$9.50	$7.00	$0.45	$0.45	$1.04	$1.04	$0.84	$0.84
NREF	$15.83	Market Perform	Outperform	$16.00	$16.00	$0.45	$0.45	$1.86	$1.86	$1.95	$1.95
TOL	$92.41	Outperform	Outperform	$112.00	$100.00	$1.73	$1.80	$12.40	$11.89	$12.19	$11.88
WD	$96.68	Market Perform	Outperform	$105.00	$85.00	$0.98	$0.98	$3.22	$3.22	$3.92	$3.92

Executive Summary

- **In 2024, we forecast additional declines of 1% in CRE volumes and 5-10% in CRE values, before a market bottom in 1H24 and slow-building recovery starting in 2025.** Our forecast equates to peak-to-trough declines of 55-60% and 25-30%. Values are down 15-20% from the peak, suggesting we are two-thirds through correction (based on value indications from closed transactions, not a universal repricing).

- **Upcoming $600+ billion in maturing debt and ongoing pressure on asset values will be significant sources of stress.** While our framework implies 1-3% loan losses, we expect aggregate losses at the higher end, particularly in transitional loans and office. Losses vary widely given CRE's concentrated nature, workout process, and company-specific liquidity.

- **Sector-wise, office will remain firmly in the crosshairs due to secular changes, but multifamily is not immune,** particularly properties acquired at the late '21 – early '22 market-peak. Pages 26-34 review office and multifamily fundamentals.

- **In housing,** we expect sales to increase 2%, including 5% for new and 1% for existing**,** and home prices to rise 2%. Affordability metrics will remain low as tight inventory and solid income growth support stable home prices, while 30-year FRMs remain in the high-6s to low-7s.

- **In SFR, we anticipate ongoing rent growth** due to limited home supply. On the other hand, debt financing remains a challenge as cap rates have not reset significantly compared to financing costs, posing obstacles to portfolio growth.

- **Stock recommendations:** our top Outperform-rated picks are LADR, DBRG, and homebuilders DHI, LEN, and TOL.

  - **LADR – quasi "blind-pool mortgage REIT"** with strong liquidity, recent loan vintage, diverse liability structure, and seasoned management, suggesting the ability to take advantage of CRE dislocation to generate outsized returns.

  - **DBRG – strong AUM and EPS growth** based on digital infrastructure; financial simplification a catalyst.

  - **Homebuilders** – rate LEN and TOL and upgrade DHI at Outperform due to KBW "Sideways" housing thesis, which benefits homebuilders through market share gains and stable margins, resulting in positive earnings/book value growth.

  - **Remain cautious on CMREITs due to credit** including CMTG, GPMT, and battleground stocks ABR and BXMT. Sector valuations at 0.8x BV and 12% dividend yields imply 2-5% loan losses, the upper bound of our methodology but not extreme.

  - **We reduce ratings on WD and NREF** to Market Perform from Outperform on more balanced risk/reward profiles relative to peers.

Stocks We Recommend in 2024

Commercial Mortgage REITs

We remain cautious on the CMREITs due to credit including CMTG, GPMT, and battleground stocks ABR and BXMT.

Our top pick is Ladder Capital (LADR) while several names could become attractive when the credit outlook stabilizes including Starwood Property Trust (STWD), KKR Real Estate Finance Trust (KREF), and Ares Commercial Real Estate (ACRE).

- **Sector view.** We expect ongoing CRE distress in 2024 as maturing loans have difficulty refinancing or extending, lenders manage credit exposure and liquidity, and borrowers evaluate access to capital and where to deploy. There is approximately $5.7 trillion of commercial mortgage debt outstanding including $3.6 trillion in CRE and $2.1 trillion in multifamily. Commercial mortgage loans are typically balloon maturities with 7-10 year durations, resulting in $400-$600 billion of annual loan maturities. CMREITs have $130 billion of assets and $24 billion of common equity market capitalization. Loan durations average three years, suggesting $40 billion of loans slated for maturity.

- **In an environment of increasing dislocation, we believe LADR is best positioned** to outperform peers based on strong liquidity, unencumbered assets, and diverse liability structure. LADR's assets are 60% CRE loans, 15% owned real estate, and 25% cash/securities. Liabilities are 40% unsecured debt and 80% non-mark-to-market. We believe LADR could deliver outsized returns from increased capital deployment.

- **We maintain Underperform ratings on CMTG and GPMT.** CMTG's heavy transitional loans have greater risk and are a significant part of the portfolio, with unfunded commitments totaling 16.7% of assets vs. a 7.6% peer average. CMTG has above-peer repo exposure at 74% of liability structure vs. the 41% peer average. Additionally, valuation remains elevated at 0.8x P/B and a 7.7% dividend yield.

- **In GPMT's case, while valuation looks attractive, ROE is below peers,** office exposure is elevated at 44% and book value has declined by 17% since 2Q22, signalling portfolio decline, credit issues, and muted originations. Additionally, a significant portion of GPMT's loan book appears past initial maturity, implying a need for modification and/or delayed business plan. On the other hand, liquidity is solid with unrestricted cash at $178 million (5.7% of assets) while leverage of 2.5x is below peers.

- **Turning to battleground stocks ABR and BXMT, we remain cautious on credit and believe it's too early to get positive on both stocks.** In ABR's case, while GSE multifamily servicing provides a resilient income stream and refinancing advantage over peers, ABR's balance sheet grew 46% from mid-2021 through mid-2022 when cap rates and interest rates reached record lows. While liquidity remains strong, credit has been deteriorating with a $100mm Q/Q increase in non-performing loans (NPLs) in 3Q23 and we are cautious about the risk of additional non-performance.

- **In BXMT's case,** management has done a good job mitigating credit risk, reducing aggregate leverage, and increasing liquidity in 2023. However, BXMT's CECL reserve of 1.95% remains below the average of 2.3% for banks and 2.7% for CMREIT peers while office and multifamily exposure totals 36% and 26% and leverage totals 4.3x.

- **Putting commercial mortgage REIT valuations in context,** the sector trades at 0.79x book value including larger caps at 0.9-1.0x, small-to-midcap names at 0.7x, pure play names at 0.7x, and diversified names at 0.9x. Historically, the sector has traded at fairly consistent PBV multiples of 0.9-1.15x and trough valuations (ex. Global Financial Crisis) of 0.7-0.8x. Legacy CMREITs, which had higher leverage, subordinate assets, and mark-to-market risk, reached 0.6x through August 2008 before declining further in the wake of the GFC.

- **On dividend yield,** the CMREITs trade at 12.1% including larger cap names at 11.0%, small-to-midcap names at 12.0%, pure play names at 12.2%, and diversified names at 10.7%. Historically, the sector has traded at dividend yields of 7.5-9.0%. We estimate that the spread between dividend yields and interest rates continues to exceed historical levels. We estimate a dividend yield spread over treasuries of 750-800 bps (vs. a historical 650 bps) and a spread over the high yield bond index of 375-400 bps (vs. a historical 35 bps). Loan portfolios and liabilities are primarily floating rate-based and duration matched, although higher rates present a risk to valuations and credit.

- **Our price targets equate to an average 0.8x book value and 12% dividend yield,** driven by a weighting of multiples and dividend yields to reflect the cautious outlook. We increase our price target for LADR by 9% on a positive outlook and reduce our target for ABR by 3% on caution toward bridge multifamily.

CRE Brokers

- **Sector view.** Higher for longer interest rates have been a headwind to transaction volumes, particularly in 2H23. Moving forward, the timing of market bottom is critical as growth has potential to inflect positively in the subsequent periods. Despite positive long-term drivers, the current macro environment presents downside risk to consensus earnings estimates. Our current estimates are 1-3% below the consensus. We expect CRE capital markets volumes to decline 1% Y/Y and asset values to decline by 5-10% varying by property type and geography. We expect leasing revenue to be flat Y/Y, occupier outsourcing to grow 8%, and overall revenue to increase by 4%. While all property types have faced the challenges posed by higher rates, office is the most at-risk due to secular changes related to hybrid work. We estimate office comprises 20% of investment sales volumes and 50% of leasing. Longer-term, positive secular trends should persist in CRE including institutional investor allocations, consolidation of service providers, technology investment, and outsourcing of property management.

- **Stock recommendations.** We downgrade Walker & Dunlop (WD) to Market Perform from Outperform on valuation and await a better entry point. The shares have risen 36% in the last month and 23% year-to-date. While multifamily capital flows should eventually rebound when CRE volumes stabilize and GSE multifamily originations should be resilient given FHFA multifamily lending caps, we believe current originations are muted and the GSEs have signaled tightening lending standards (as suggested by year-to-date originations, scrutiny on brokered volumes, and select cases of loan putbacks). That said, the GSEs have historically provided stable capital and market share, which benefits WD more than peers. 90% of WD's transactions are multifamily and WD ranks #1 with Fannie Mae and #3-4 with Freddie Mac.

- **Turning to the major CRE brokers, we are on the sidelines.** We see CBRE as well positioned to weather the downturn and capture external growth opportunities in recovery driven by leading share/scale, diversification, initiatives in project management and infrastructure, and strong balance sheet. That said, we are cautious on the recovery in real estate investment (REI) earnings as we believe Trammell Crow needs improved capital markets and supply absorption for earnings to recover.

- **We rate JLL and NMRK at Market Perform.** While JLL's valuation is attractive, equity income and performance fees, historically 7-12% of earnings, are a risk to the outlook.

- **Valuing NMRK remains a challenge** as significant equity-based compensation is not comparable to peers. On enterprise value (EV) to fee revenue, valuation is 10-20% below peers, which likely reflects earnings complexity and corporate/share structure. That said, we are impressed by NMRK's market share gains in capital markets and expect the company to benefit when recovery takes hold.

- **We raise our price targets for the CRE brokers by 23%** based on lower rates (since the October peak) and a roll-forward of valuation. Our price targets equate to 2024-2025 cash EPS and normalized EBITDA multiples of 15-20x and 10-12x. Our price targets are sensitive to changes in the earnings outlook based on many factors including company-specific operations. Therefore, an approximate 5% increase or decrease to our earnings estimates would likely result in a corresponding 5% increase or decrease to our price target, all else equal.

Housing – Homebuilders and Single-Family Rental (SFR) REITs.

- **Sector view.** In housing, we expect 2024-2025 home sales to grow 1.6-2.4% following 2023's 15.4% decline. We expect home prices to increase by 2% annually (from 2% in 2023 and 13% in 2022). This results in affordability metrics remaining elevated, with principal & income (P&I) forecasted at 24.7% in 2024 from 25.5% in 2023 vs. the long-run average of 18.2% and 2002-2004 average of 19.4%. We view tight existing home inventory paired with our expectation for 30-Year FRMs to remain at 6.75-7.00% and sticky home prices as the drivers for lower affordability. See our concurrently published, "*Sideways: Why KBW Expects a Flat Housing Market in 2024-2025.*"

- **In SFR,** we expect resiliency to continue as rent growth is driven by low home supply. Additionally, SFR serves as a bridge to homeownership, in our view, which should continue to benefit the sector as affordability metrics remain historically low. On the other hand, historically low existing home inventory, low cap rates, and high securitization/financing costs remain overhangs for portfolio growth. Thus far, tenant credit has remained resilient and we expect that to continue barring a worse than forecasted economic scenario.

Homebuilders

Our top picks are DR Horton (DHI), Lennar (LEN), and Toll Brothers (TOL).

- **Stock recommendations.** We upgrade DHI to Outperform and reiterate Outperform-rating on LEN and TOL with each poised for strong earnings and book value growth. We expect new home sales to grow at 5% annually, above the 1-2% we expect for existing home sales. We believe homebuilders will continue to gain market share as they offer new product and mortgage incentives (rate buydowns) to help solve for today's housing inventory shortage and affordability challenges. Given each company's size, scale, diversification, and balance sheet strength, we see them as well-positioned with DHI as the industry leader, LEN as increasingly resembling DHI across most metrics, and TOL the only public homebuilder focused on the affluent segment. Applying current valuation to forward book value implies 20% upside. While we believe KBH and MTH should also have upside based on our thesis, we rate the shares at Market Perform on geographic mix and a discount for size/scale.

- **We raise our price targets by 10-15%, unchanged,** reflecting a 3-4% increase in estimates and average price-to-book value multiples of 1.5-1.8x. Our price targets are sensitive to changes in the earnings outlook based on many factors including company-specific operations. Therefore, an approximate 5% increase or decrease to our earnings estimates would likely result in a corresponding 5% increase or decrease to our price target, all else equal.

Single-Family Rental REITs

- We expect resiliency to continue as rent growth is driven by low home supply. Additionally, SFR serves as a bridge to homeownership, in our view, which should continue to benefit the sector as affordability metrics remain historically low. On the other hand, historically low existing home inventory, low cap rates, and high securitization/financing costs remain overhangs for portfolio growth. Thus far, tenant credit has remained resilient and we expect that to continue, barring a worse-than-forecasted economic scenario.

- We rate shares of Invitation Homes (INVH), American Homes 4 Rent (AMH), and Tricon Residential (TCN) Market Perform. While we are not recommending the stocks, we are positively inclined toward INVH based on relative valuation. We estimate INVH trades at a 9-12% discount to AMH on P/FFO and P/AFFO and up to a 20% discount on implied economic cap rate. For TCN, we believe the main challenge relates to cost of capital above acquisition cap rates, which limits growth.

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Exhibit 1: Ratings, Price Target, and Estimates Summary

					Yield			YTD Performance		KBW EPS			Consensus EPS		
Company	Ticker	Current Price	Rating	Price Target	Forward Dividend	Forward Yield	Potential Upside	Nominal	Incl. Div.	2023E	2024E	2025E	2023E	2024E	2025E
Commercial Mortgage REITs															
Arbor Realty Trust	ABR	$14.41	MP	$14.00	$1.76	12.2%	9.4%	9.2%	19.6%	$2.15	$1.62	$1.56	$2.18	$1.82	$1.94
Ares Commercial Real Estate	ACRE	$10.49	MP	$9.75	$1.32	12.6%	5.6%	1.9%	10.8%	$0.31	$0.81	$1.09	$0.44	$1.00	$1.15
Apollo Commercial Real Estate	ARI	$11.45	MP	$10.00	$1.40	12.2%	(0.4%)	6.4%	15.0%	$1.00	$1.18	$1.28	$1.22	$1.17	$1.29
Blackstone Mortgage Trust	BXMT	$21.77	MP	$22.00	$2.48	11.4%	12.4%	2.8%	10.5%	$2.87	$2.48	$2.51	$2.96	$2.32	$2.60
Claros Mortgage Trust	CMTG	$13.07	UP	$9.75	$1.00	7.7%	(17.8%)	(11.1%)	(5.2%)	$0.24	$0.88	$0.98	$0.55	$1.06	$1.18
DigitalBridge Group	DBRG	$16.98	OP	$19.50	$0.04	0.2%	15.1%	55.2%	54.5%	$0.37	$0.75	$0.95	$0.43	$0.65	$0.87
Granite Point Mortgage Trust	GPMT	$5.59	UP	$5.25	$0.80	14.3%	8.3%	4.2%	14.7%	$0.24	$0.34	$0.47	$0.29	$0.15	$0.59
KKR Real Estate Finance	KREF	$12.96	MP	$12.25	$1.52	11.7%	6.3%	(7.2%)	0.9%	$1.48	$1.26	$1.45	$1.61	$1.22	$1.75
Ladder Capital Corp.	LADR	$11.33	OP	$12.25	$0.96	8.5%	16.6%	12.8%	19.1%	$1.28	$1.20	$1.42	$1.31	$1.22	$1.40
NexPoint Real Estate Finance	NREF	$15.95	MP	$16.00	$2.00	12.5%	12.9%	0.4%	14.0%	$1.86	$1.95	$1.98	$1.90	$1.92	$2.00
Ready Capital Corporation	RC	$10.81	MP	$10.00	$1.54	14.3%	6.8%	(3.0%)	5.4%	$1.16	$1.04	$1.22	$1.25	$1.31	$1.45
Starwood Property Trust	STWD	$20.47	MP	$20.00	$1.92	9.4%	7.1%	11.6%	18.7%	$1.87	$1.91	$2.13	$1.94	$1.98	$2.06
Average						**10.6%**	**6.9%**	**6.9%**	**14.8%**						
Median						**12.0%**	**7.7%**	**3.5%**	**14.4%**						
CRE Brokers															
CBRE Group	CBRE	$82.44	MP	$93.00	$0.00	0.0%	12.8%	7.1%	6.9%	$3.64	$4.33	$5.18	$3.66	$4.42	$5.52
Jones Lang LaSalle	JLL	$165.97	MP	$180.00	$0.00	0.0%	8.5%	4.1%	5.2%	$6.66	$12.08	$15.17	$7.10	$11.61	$14.79
Newmark Group	NMRK	$8.76	MP	$9.50	$0.20	2.3%	10.7%	9.9%	11.2%	$1.04	$0.84	$1.22	$1.03	$1.02	$1.26
Walker & Dunlop, Inc.	WD	$97.70	MP	$105.00	$2.52	2.6%	10.1%	24.5%	25.3%	$3.22	$3.92	$5.27	$3.99	$4.50	$5.28
Average						**1.2%**	**10.5%**	**11.4%**	**12.1%**						
Median						**1.1%**	**10.4%**	**8.5%**	**9.0%**						
Homebuilders															
D.R. Horton	DHI	$139.49	OP	$164.00	$1.20	0.9%	18.4%	56.5%	57.8%	$13.85	$14.58	$14.97	$13.82	$13.99	$15.10
KB Home	KBH	$55.97	MP	$63.00	$0.60	1.1%	13.6%	75.7%	77.6%	$6.84	$7.20	$7.45	$6.91	$7.23	$7.48
Lennar	LEN	$140.41	OP	$168.00	$1.50	1.1%	20.7%	55.1%	56.8%	$13.55	$14.95	$15.68	$13.57	$14.52	$16.15
Meritage Homes	MTH	$155.85	MP	$176.00	$1.08	0.7%	13.6%	69.0%	70.2%	$19.68	$18.73	$19.76	$19.71	$18.70	$20.26
Toll Brothers	TOL	$92.88	OP	$112.00	$0.87	0.9%	21.5%	86.1%	87.8%	$12.40	$12.19	$12.56	$12.36	$12.22	$12.76
Average						**0.9%**	**17.6%**	**68.5%**	**70.1%**						
Median						**0.9%**	**18.4%**	**69.0%**	**70.2%**						
Single-Family Rental REITs															
American Homes 4 Rent	AMH	$35.48	MP	$37.00	$0.88	2.5%	6.8%	17.7%	19.0%	$1.64	$1.74	$1.82	$1.65	$1.76	$1.86
Invitation Homes	INVH	$33.51	MP	$37.00	$1.12	3.3%	13.8%	13.1%	15.8%	$1.77	$1.88	$1.96	$1.77	$1.88	$1.96
Tricon Residential	TCN	$7.90	MP	$9.00	$0.23	2.9%	16.9%	2.5%	4.7%	$0.55	$0.60	$0.72	$0.56	$0.60	$0.70
Average						**2.9%**	**10.3%**	**11.1%**	**13.2%**						
Median						**2.9%**	**10.3%**	**13.1%**	**15.8%**						

Note: Our price targets are sensitive to changes in the earnings outlook based on many factors including company-specific operations. Therefore, an approximate 5% increase or decrease to our earnings estimates would likely result in a corresponding 5% increase or decrease to our price targets, all else equal. Pricing in this report is as of 12.12.23 intraday.

Source: Company reports, FactSet, and KBW Research.

Sector Outlooks – Discussion

Commercial Mortgage REITs (CMREITs)

- **Credit deterioration continued** throughout 2023 due to rising interest rates, illiquidity, and declining investor/lender appetite. While the office sector has faced the most stress, other sectors are not immune, notably multifamily. In general, stabilized, cash-flowing multifamily has been resilient while peak-era transitional and new construction projects are facing more challenges.

- **In aggregate, CRE problem loans** totalled 5.26% of assets for our coverage in 3Q23, up 257 bps from a year ago. As of 3Q23, CECL allowances totalled 2.7% of loans and 10.7% of book value vs. 1.2% and 5.4% a year ago, respectively. Based on historical delinquencies, loss severities, and assumed probability of default, we estimate cumulative loan losses of 0-3% translating to equity losses of 0-8.5% (after leverage) through a credit cycle. In the current cycle, we expect losses to be at the higher end of that range and above for transitional deals. Losses will vary widely as a result of CRE concentration risk and how companies approach asset management and liquidity.

- **Originations.** We project 2024 loan originations of $21.0 billion, up 156% from a projected $8.2 billion in 2023. Along with a modest increase in repayments, this translates to loan portfolio growth of 4.4% (from a projected -7.8% in 2023).

- **We forecast average net spread expansion** of 10 basis points (bps) to 1.83% in 2024 from a projected 1.73% in 2023 (loan yields, less financing costs). Assuming 2-3x leverage, net spreads should produce low-double-digit gross return on investment (ROIs) (before expenses).

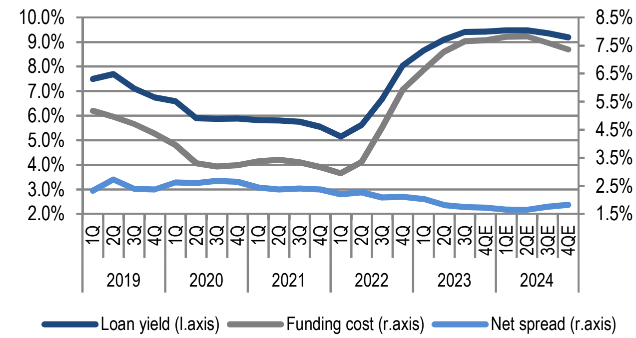
Exhibit 2: Commercial mREIT Originations

	Loan Originations		Loan Portfolio		Y/Y Δ	
Ticker	2023E	2024E	2023E	2024E	Originations	Portfolio
BXMT	$1,777	$4,590	$23,424	$24,140	158.3%	3.1%
STWD	$1,493	$3,453	$14,435	$14,478	131.3%	0.3%
ABR	$1,312	$4,200	$12,466	$13,765	220.2%	10.4%
RC	$771	$1,655	$9,308	$9,819	114.8%	5.5%
ARI	$716	$2,225	$7,870	$8,834	210.8%	12.3%
KREF	$754	$1,639	$7,529	$7,717	117.5%	2.5%
CMTG	$833	$1,268	$7,038	$6,956	52.2%	(1.2%)
LADR	$130	$1,000	$3,304	$3,635	669.2%	10.0%
GPMT	$73	$283	$2,781	$2,579	287.0%	(7.2%)
ACRE	$297	$685	$2,199	$2,453	131.0%	11.5%
NREF	$79	$80	$1,422	$1,445	0.8%	1.6%
Total	**$8,233**	**$21,076**	**$91,775**	**$95,820**	**156.0%**	**4.4%**

Note: Excludes CMBS conduit originations.

Source: Company reports and KBW Research.

Exhibit 3: Commercial mREIT Portfolio Spreads



Source: Company reports and KBW Research.

Exhibit 4: Commercial Mortgage REIT Forecast and Valuation Summary

				Current		P/E			KBW EPS			
Ticker	Rating	Price	Price Target	Dividend Yield	Price/ BVPS	2023E	2024E	2025E	2023E	2024E	2025E	2024E Dividend
ABR	MP	$14.41	$14.00	11.9%	1.17x	6.7x	8.9x	9.2x	$2.15	$1.62	$1.56	$1.76
ACRE	MP	$10.49	$9.75	12.6%	0.83x	33.8x	12.9x	9.6x	$0.31	$0.81	$1.09	$1.32
ARI	MP	$11.45	$10.00	12.2%	0.79x	11.4x	9.7x	8.9x	$1.00	$1.18	$1.28	$1.40
BXMT	MP	$21.77	$22.00	11.4%	0.84x	7.6x	8.8x	8.7x	$2.87	$2.48	$2.51	$2.48
CMTG	UP	$13.07	$9.75	7.7%	0.80x	54.5x	14.9x	13.3x	$0.24	$0.88	$0.98	$1.00
GPMT	UP	$5.59	$5.25	14.3%	0.42x	23.3x	16.4x	11.9x	$0.24	$0.34	$0.47	$0.80
KREF	MP	$12.96	$12.25	13.3%	0.80x	8.8x	10.3x	8.9x	$1.48	$1.26	$1.45	$1.52
LADR	OP	$11.33	$12.25	8.1%	0.82x	8.9x	9.4x	8.0x	$1.28	$1.20	$1.42	$0.96
NREF	MP	$15.95	$16.00	12.5%	0.89x	8.6x	8.2x	8.1x	$1.86	$1.95	$1.98	$2.00
RC	MP	$10.81	$10.00	13.3%	0.75x	9.3x	10.4x	8.9x	$1.16	$1.04	$1.22	$1.54
STWD	MP	$20.47	$20.00	9.4%	0.97x	10.9x	10.7x	9.6x	$1.87	$1.91	$2.13	$1.92
Average				**11.5%**	**0.83x**	**16.7x**	**11.0x**	**9.6x**				
Median				**12.2%**	**0.82x**	**9.3x**	**10.3x**	**8.9x**				

Note: MP=Market Perform, OP=Outperform, UP=Underperform.

Source: Company reports, FactSet, and KBW Research.

Exhibit 5: Commercial Mortgage REIT Portfolio Mix and Geography Summary

PROPERTY TYPE

ABR		ACRE		ARI		BXMT		GPMT		CMTG	
Multifamily	90%	Office	39%	Hotel	24%	Office	36%	Office	44%	Multifamily	43%
SFR	8%	Multifamily	26%	Office	19%	Multifamily	26%	Multifamily	33%	Hotel	19%
Land	1%	Mixed-use	7%	Resi/Condo	15%	Hospitality	17%	Hotel	7%	Office	17%
Other	1%	Industrial	11%	Retail	17%	Industrial	10%	Retail	10%	For Sale Condo	5%
		Resi/Condo	7%	Healthcare	6%	Retail	4%	Industrial	4%	Land	8%
		Other	10%	Mixed Use	8%	Other	7%	Other	3%	Retail	2%
				Industrial	4%					Other	5%
				Other	7%						

KREF		LADR		NREF		RC		STWD	
Multifamily	41%	Multifamily	36%	Multifamily	50%	Multifamily	69%	Multifamily	34%
Office	25%	Office	27%	SFR	44%	Mixed use	9%	Office	24%
Industrial	14%	Mixed use	18%	Storage	2%	Retail	5%	Hotel	16%
Life Science	9%	Hotel	3%	Life Sciences	4%	Office	5%	Mixed use	7%
Hospitality	5%	Retail	4%			Other	12%	Residential	2%
Other	6%	Industrial	8%					Retail	2%
		Manuf. housing	3%					Industrial	9%
		Other	1%					Other	7%

GEOGRAPHY

ABR		ACRE		ARI		BXMT		GPMT		CMTG	
NC	7%	Southeast	24%	New York City	21%	NY	15%	Northeast	27%	NY	22%
TX	24%	West	16%	UK	31%	CA	13%	Southwest	21%	CA	23%
FL	15%	Northeast/Mid-Atlantic	29%	Other Europe	17%	FL	7%	West	13%	TX	8%
GA	9%	Midwest	20%	West	7%	TX	6%	Midwest	16%	VA / DC	7%
Other	45%	Southwest	11%	Midwest	7%	Other US	23%	Southeast	24%	GA	7%
				Southeast	7%	UK	15%			Other	33%
				Northeast	6%	Ireland	5%				
				Other	4%	Spain	5%				
						Australia	6%				
						Other Int'l	5%				

KREF		LADR		NREF		RC		STWD	
CA	17%	Northeast	31%	GA	21%	CA	10%	Northeast	16%
TX	15%	South	35%	FL	17%	TX	20%	Southeast	17%
MA	11%	Midwest	11%	TX	14%	AZ	6%	Southwest	16%
FL	10%	Southwest	11%	MD	4%	FL	7%	West	9%
VA	7%	West	10%	CA	6%	GA	7%	Mid-Atlantic	10%
PA	5%	Various	2%	MN	4%	Other	50%	Midwest	3%
NY	6%			AZ	3%			UK	13%
DC	6%			NC	3%			AUS	7%
Other	23%			Other	28%			Other Int'l	9%

Source: Company reports and KBW Research.

Exhibit 6: Loan Loss Reserve Summary

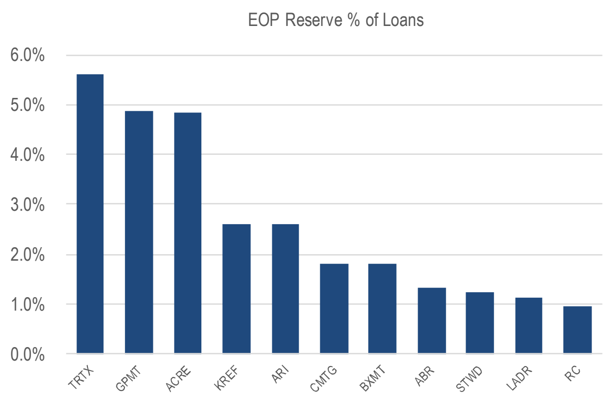
$ in millions

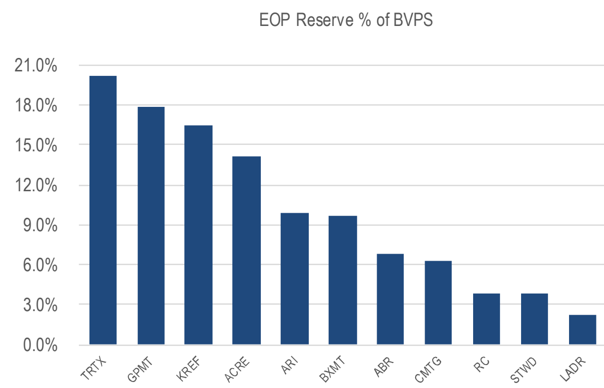
Sorted by Reserve % of Loans

			Loan Loss Allowance			
Ticker	3Q Provision	% of Loans	EOP	Per share	% of Loans	% of BVPS
TRTX	$75.8	1.91%	$236.7	$3.04	5.61%	20.2%
GPMT	$31.0	1.06%	$148.9	$2.89	4.87%	17.9%
ACRE	$3.2	0.15%	$112.4	$2.08	4.85%	14.1%
KREF	$8.8	0.12%	$221.7	$3.21	2.60%	16.5%
ARI	($5.8)	(0.07%)	$224.3	$1.59	2.59%	9.9%
CMTG	$110.2	1.53%	$154.9	$1.10	1.82%	6.3%
BXMT	$96.9	0.41%	$477.0	$2.76	1.81%	9.6%
ABR	$18.7	0.14%	$184.1	$0.90	1.32%	6.8%
STWD	$52.6	0.26%	$271.3	$0.84	1.24%	3.8%
LADR	$7.5	0.22%	$40.6	$0.32	1.12%	2.3%
RC	$19.4	0.17%	$100.4	$0.58	0.94%	3.9%
Average/total	**$398.9**	**0.57%**	**$2,071.9**		**2.78%**	**10.74%**
Median		**0.24%**			**2.20%**	**9.77%**

Sorted by Reserve % of BVPS

			Loan Loss Allowance			
Ticker	3Q Provision	% of Loans	EOP	Per share	% of Loans	% of BVPS
TRTX	$75.8	1.91%	$236.7	$3.04	5.61%	20.2%
GPMT	$31.0	1.06%	$148.9	$2.89	4.87%	17.9%
KREF	$8.8	0.12%	$221.7	$3.21	2.60%	16.5%
ACRE	$3.2	0.15%	$112.4	$2.08	4.85%	14.1%
ARI	($5.8)	(0.07%)	$224.3	$1.59	2.59%	9.9%
BXMT	$96.9	0.41%	$477.0	$2.76	1.81%	9.6%
ABR	$18.7	0.14%	$184.1	$0.90	1.32%	6.8%
CMTG	$110.2	1.53%	$154.9	$1.10	1.82%	6.3%
RC	$19.4	0.17%	$100.4	$0.58	0.94%	3.9%
STWD	$52.6	0.26%	$271.3	$0.84	1.24%	3.8%
LADR	$7.5	0.22%	$40.6	$0.32	1.12%	2.3%
Average/total	**$398.9**	**0.57%**	**$2,071.9**		**2.78%**	**10.74%**
Median		**0.24%**			**2.20%**	**9.77%**



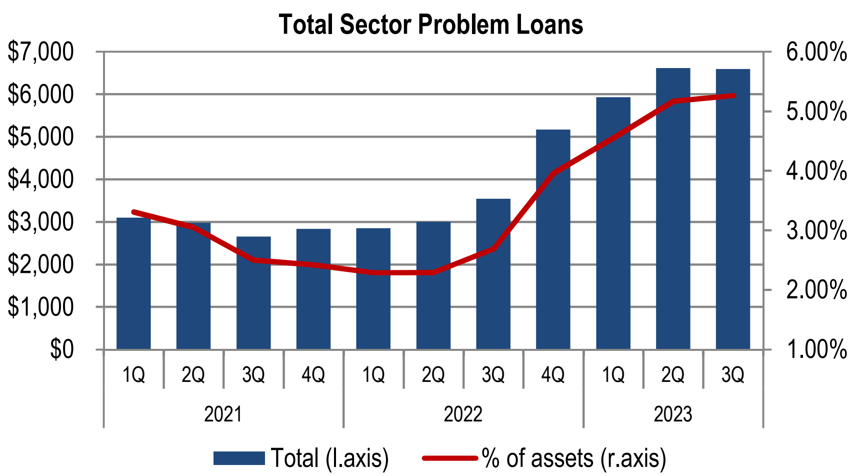


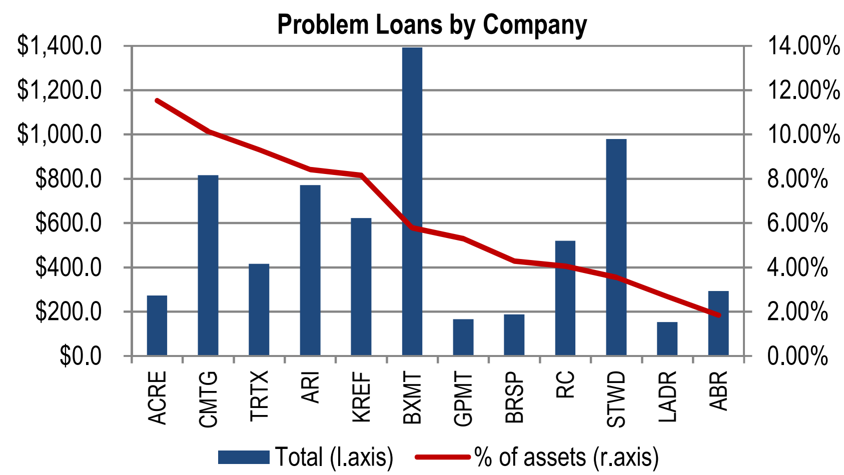
Source: Company reports and KBW Research.

Exhibit 7: Portfolio Credit Quality

$ in millions

	2021				2022				2023			% of	
Ticker	**1Q**	**2Q**	**3Q**	**4Q**	**1Q**	**2Q**	**3Q**	**4Q**	**1Q**	**2Q**	**3Q**	**Assets**	**Comments**
ABR	$282.8	$172.7	$168.1	$159.9	$159.9	$158.0	$158.0	$158.0	$202.6	$239.0	$293.1	1.84%	Impaired loans
ARI	$404.7	$478.3	$481.8	$486.8	$565.3	$598.9	$486.8	$962.0	$953.0	$928.0	$770.0	8.41%	Risk-4 and 5-rated loans + all of 111 W 57th St
ACRE	$66.8	$31.3	$45.3	$45.0	$44.8	$44.8	$100.8	$99.1	$173.3	$170.8	$272.4	11.53%	Non-accrual loans + REO
BXMT	$338.7	$338.7	$337.2	$299.2	$284.8	$284.8	$284.8	$929.1	$997.7	$1,085.6	$1,391.5	5.79%	Risk-5 Rated Loans
BRSP	$322.0	$301.6	$141.9	$169.5	$174.4	$174.4	$344.0	$344.5	$238.4	$96.4	$186.6	4.29%	Risk-5 rated, nonaccrual and foreclosed loans
GPMT	$89.6	$259.6	$177.8	$168.1	$124.2	$207.9	$330.1	$262.8	$207.2	$207.3	$165.9	5.30%	Risk 5 rated loans + write-offs + REO
KREF	$70.1	$70.1	$70.1	$79.5	$78.6	$78.6	$431.1	$570.2	$425.7	$630.7	$621.8	8.15%	Risk-5 rated loans + REO
LADR	$236.6	$234.3	$198.6	$177.5	$176.0	$180.4	$148.9	$156.9	$155.4	$189.5	$152.8	2.67%	Non-accrual loans + foreclosed properties
RC	$150.6	$170.2	$148.9	$99.5	$183.9	$243.7	$249.8	$242.8	$251.7	$521.4	$518.6	4.05%	Non-accrual loans
STWD	$531.7	$357.9	$367.0	$654.7	$648.3	$754.3	$668.1	$783.7	$1,099.8	$1,153.0	$984.4	3.57%	Credit deteriorated loans, 90+ days past due, and foreclosures
TRTX	$31.2	$31.2	$31.2	$23.0	$23.0	$23.0	$167.5	$190.4	$550.1	$607.9	$415.1	9.31%	Non-accrual loans + REO
CMTG	$572.5	$529.2	$485.9	$470.4	$387.8	$252.5	$174.4	$470.4	$670.5	$785.6	$815.3	10.13%	Non-accrual loans + REO
Total	**$3,097**	**$2,975**	**$2,654**	**$2,833**	**$2,851**	**$3,001**	**$3,544**	**$5,170**	**$5,925**	**$6,615**	**$6,588**		
% of assets (wtd)	*3.31%*	*3.05%*	*2.50%*	*2.42%*	*2.29%*	*2.29%*	*2.69%*	*3.96%*	*4.55%*	*5.17%*	*5.26%*		



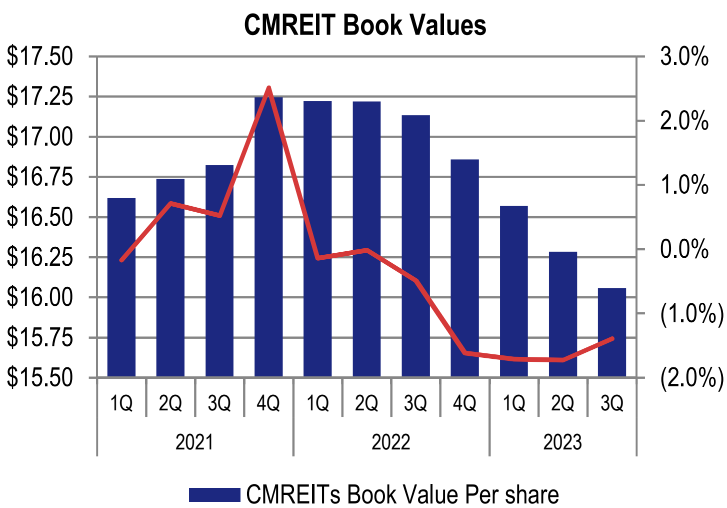


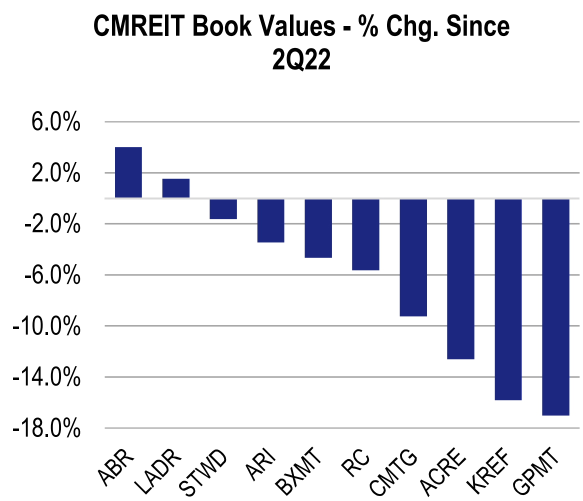
Source: Company reports and KBW research.

CMREIT sector book value per share has declined by 6.5% on average and 7.6% ex. ABR since 2Q22. There is wide dispersion amongst companies: on the low end are companies that have faced credit concerns over the last few quarters (GPMT, KREF, ACRE, CMTG). On the opposite end are those where credit has held up relatively well thus far (ABR, LADR).

Exhibit 8: CMREIT Book Values

Ticker	% Chg. Since 2Q22	2021				2022				2023		
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
ABR	*4.0%*	$9.78	$10.32	$10.49	$11.29	$11.55	$11.80	$11.84	$12.04	$12.14	$12.20	$12.28
LADR	*1.5%*	$13.88	$13.79	$13.78	$13.79	$13.52	$13.57	$13.63	$13.66	$13.64	$13.72	$13.77
STWD	*-1.6%*	$17.07	$17.08	$17.14	$20.74	$21.26	$21.51	$21.69	$21.70	$21.37	$21.46	$21.15
ARI	*-3.5%*	$15.06	$15.19	$15.28	$15.19	$14.81	$14.97	$15.92	$15.54	$15.42	$14.47	$14.45
BXMT	*-4.7%*	$26.35	$26.68	$26.92	$27.22	$27.21	$27.17	$27.20	$26.26	$26.28	$26.30	$25.90
RC	*-5.7%*	$14.90	$14.88	$15.07	$15.36	$15.21	$15.28	$15.40	$15.20	$15.07	$14.52	$14.42
CMTG	*-9.3%*	$18.80	$18.80	$18.82	$18.40	$18.26	$18.08	$18.06	$17.59	$17.38	$17.08	$16.40
ACRE	*-12.6%*	$14.23	$14.45	$14.31	$14.39	$14.54	$14.44	$14.09	$13.73	$13.15	$12.77	$12.62
KREF	*-15.8%*	$18.89	$18.91	$19.09	$19.37	$19.46	$19.36	$18.28	$18.00	$17.16	$16.38	$16.29
GPMT	*-17.0%*	$17.22	$17.27	$17.33	$16.70	$16.39	$16.01	$15.24	$14.86	$14.08	$13.93	$13.28
Average	**-6.5%**	**$16.62**	**$16.74**	**$16.82**	**$17.25**	**$17.22**	**$17.22**	**$17.13**	**$16.86**	**$16.57**	**$16.28**	**$16.06**
% Chg. Q/Q		***(0.2%)***	***0.7%***	***0.5%***	***2.5%***	***(0.1%)***	***(0.0%)***	***(0.5%)***	***(1.6%)***	***(1.7%)***	***(1.7%)***	***(1.4%)***
% Chg. ex. ABR	**-7.6%**	***(0.6%)***	***0.4%***	***0.4%***	***2.2%***	***(0.3%)***	***(0.2%)***	***(0.5%)***	***(1.9%)***	***(1.9%)***	***(1.9%)***	***(1.6%)***





Source: Company reports; KBW Research.

Our scenario analysis (base case and stress) suggests a 130-180% increase in CECL reserves and 6-9% decrease in book value for the CMREITs. This suggests downside risks to stocks on lower book values and multiples (historical trough of 0.5-0.6x vs. current 0.8x).

Exhibit 9: CMREITs CECL Reserve Scenario – Analysis Shows Book Value Risk

	ABR	ACRE	ARI	BXMT	CMTG	GPMT	KREF	LADR	RC	STWD	BRSP	FBRT	TRTX	Average
Portfolio Metrics														
Loan portfolio	$13,122	$2,180	$8,001	$23,716	$7,186	$2,918	$7,755	$3,381	$9,815	$15,130	$3,110	$4,951	$3,970	**$8,095**
Risk 4-5 rated loans	$685	$463	$762	$4,357	$1,291	$579	$1,187	$153	$1,285	$984	$609	$83	$638	**$1,006**
Current Portfolio, % Risk 4-5 Rated Loans	*5.2%*	*21.2%*	*9.5%*	*18.4%*	*18.0%*	*19.8%*	*15.3%*	*4.5%*	*13.1%*	*6.5%*	*19.6%*	*1.7%*	*16.1%*	***13.0%***
CECL reserve	$184	$112	$220	$463	$142	$145	$219	$40	$100	$271	$89	$38	$213	**$172**
% of loan portfolio	*1.4%*	*5.2%*	*2.8%*	*2.0%*	*2.0%*	*5.0%*	*2.8%*	*1.2%*	*1.0%*	*1.8%*	*2.9%*	*0.8%*	*5.4%*	***2.6%***
% of book value	*7.3%*	*16.5%*	*10.8%*	*10.4%*	*6.2%*	*21.2%*	*19.4%*	*2.3%*	*4.0%*	*4.0%*	*5.9%*	*2.9%*	*22.8%*	***10.3%***
CECL reserve, % Risk 4-5 Rated Loans	*26.9%*	*24.3%*	*28.9%*	*10.6%*	*11.0%*	*25.1%*	*18.5%*	*25.9%*	*7.8%*	*27.6%*	*14.6%*	*45.4%*	*33.4%*	***23.1%***
Office, % of Portfolio	0.6%	39.0%	19.0%	36.0%	17.0%	43.7%	24.9%	23.7%	5.0%	23.1%	32.5%	5.6%	23.9%	**22.6%**
Book Value Per Share	$12.28	$12.62	$14.45	$25.90	$16.25	$13.28	$16.29	$13.77	$14.42	$21.15	$11.55	$15.76	$12.04	**$15.37**
CECL Reserve Analysis - Base Case Scenario														
Expected Office Loans Risk Rated 4-5	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	**35.0%**
Expected Non-Office Loans Risk Rated 4-5	12.5%	15.0%	20.0%	15.0%	20.0%	15.0%	15.0%	10.0%	20.0%	15.0%	15.0%	15.0%	15.0%	**15.6%**
Expected Total Loans Risk Rated 4-5	**12.6%**	**22.8%**	**22.9%**	**22.2%**	**22.6%**	**23.7%**	**20.0%**	**15.9%**	**20.7%**	**19.6%**	**21.5%**	**16.1%**	**19.8%**	**20.0%**
Increase in risk 4-5 rated loans from current portfolio	7.4%	1.6%	13.3%	3.8%	4.6%	3.9%	4.7%	11.4%	7.7%	13.1%	1.9%	14.4%	3.7%	7.0%
Increase in CECL Reserve from current reserve	**$261**	**$8**	**$308**	**$97**	**$36**	**$29**	**$67**	**$100**	**$59**	**$547**	**$9**	**$325**	**$49**	**$146**
% Increase in CECL Reserve	***142%***	***7%***	***140%***	***21%***	***25%***	***20%***	***31%***	***252%***	***58%***	***201%***	***10%***	***865%***	***23%***	***138%***
Per share	***$1.28***	***$0.15***	***$2.18***	***$0.56***	***$0.26***	***$0.55***	***$0.97***	***$0.79***	***$0.34***	***$1.69***	***$0.07***	***$3.91***	***$0.64***	***$1.03***
% of book value	***10.4%***	***1.2%***	***15.1%***	***2.2%***	***1.6%***	***4.2%***	***5.9%***	***5.7%***	***2.4%***	***8.0%***	***0.6%***	***24.8%***	***5.3%***	***6.7%***
Total CECL Reserve % of loans	***3.4%***	***5.5%***	***6.6%***	***2.4%***	***2.5%***	***6.0%***	***3.7%***	***4.1%***	***1.6%***	***5.4%***	***3.1%***	***7.3%***	***6.6%***	***4.5%***
CECL Reserve Analysis - Stress Case Scenario														
Existing CECL Reserve on risk 4-5 rated loans	26.9%	24.3%	28.9%	10.6%	11.0%	25.1%	18.5%	25.9%	7.8%	27.6%	14.6%	45.4%	33.4%	**23.1%**
Increase in risk 4-5 rated loans (Base Case Scenario)	7.4%	1.6%	13.3%	3.8%	4.6%	3.9%	4.7%	11.4%	7.7%	13.1%	1.9%	14.4%	3.7%	**7.0%**
Expected CECL reserve on risk 4-5 rated loans	27.5%	20.0%	20.0%	15.0%	20.0%	28.5%	15.0%	20.0%	25.0%	15.0%	20.0%	20.0%	20.0%	**20.5%**
Increase in CECL Reserve from current reserve	$11	$0	$0	$230	$146	$24	$0	$0	$350	$0	$36	$0	$0	$61
Cumulative increase in CECL Reserve: Base + Stress	**$272**	**$8**	**$308**	**$326**	**$182**	**$52**	**$67**	**$100**	**$409**	**$547**	**$45**	**$325**	**$49**	**$207**
% Increase in CECL Reserve	***148%***	***7%***	***140%***	***70%***	***129%***	***36%***	***31%***	***252%***	***407%***	***201%***	***50%***	***865%***	***23%***	***182%***
Per share	***$1.33***	***$0.15***	***$2.18***	***$1.89***	***$1.29***	***$1.01***	***$0.97***	***$0.79***	***$2.38***	***$1.69***	***$0.34***	***$3.91***	***$0.64***	***$1.43***
% of book value	***10.8%***	***1.2%***	***15.1%***	***7.3%***	***7.9%***	***7.6%***	***5.9%***	***5.7%***	***16.5%***	***8.0%***	***3.0%***	***24.8%***	***5.3%***	***9.2%***
Total CECL Reserve % of loans	***3.5%***	***5.5%***	***6.6%***	***3.3%***	***4.5%***	***6.8%***	***3.7%***	***4.1%***	***5.2%***	***5.4%***	***4.3%***	***7.3%***	***6.6%***	***5.1%***

Note: Figures are as of 3Q23. STWD risk 4-5 rated loans include non-accrual loans and REO/foreclosures. BRSP, FBRT, and TRTX are not covered. Analysis shows hypothetical reserve impact based on generic scenario assumptions.
Source: Company reports; KBW Research.

CMREIT risk exposures include liquidity, leverage, credit facility borrowings, office, multifamily, & loan maturities. Companies with outsized risk exposures include CMTG and GPMT, while, conversely, LADR, STWD, and FBRT (not covered) have relatively favorable attributes.

Exhibit 10: CMREIT Risk Profile – Analysis Shows Concentrations

Metric	ABR	ACRE	ARI	BXMT	CMTG	GPMT	KREF	LADR	RC	STWD	BRSP	FBRT	TRTX	Average
Leverage														
Debt / equity	3.6x	2.4x	3.0x	4.3x	2.5x	2.5x	4.2x	2.5x	3.6x	2.9x	2.2x	2.6x	2.4x	**3.0x**
Debt / capital	78%	71%	75%	81%	71%	71%	82%	71%	78%	75%	68%	72%	71%	**74%**
Liquidity														
Unrestricted cash	$1,000	$114	$308	$421	$243	$178	$108	$798	$182	$203	$236	$411	$287	**$345**
Approved and undrawn capacity	$500	$75	$133	$1,344	$136	NA	$608	$324	$400	$893	$165	NA	$31	**$419**
KBW liquidity est. (cash+approved undrawn)	$1,500	$189	$441	$1,765	$379	$178	$716	$1,122	$582	$1,096	$401	$411	$317	**$700**
Liquidity as % of assets	10.1%	8.0%	4.8%	7.3%	4.7%	5.7%	9.4%	20.5%	4.6%	4.5%	9.2%	7.0%	7.1%	**7.9%**
Liquidity + unencumbered assets	NA	NA	$1,245	NA	$961	$178	$739	$2,953	$2,200	$5,193	NA	NA	$328	
Liability structure														
% Credit Facilities	26%	55%	50%	66%	74%	46%	25%	16%	25%	58%	42%	12%	32%	**41%**
Unfunded commitments														
Total	$1,080	$139	$693	$2,672	$1,342	$142	$1,008	$258	$857	$1,363	$201	$388	$248	**$799**
% of assets	7.1%	5.9%	7.6%	11.1%	16.7%	4.5%	13.2%	4.7%	6.7%	5.0%	4.6%	6.6%	5.6%	**7.6%**
Portfolio composition														
% Office loans	1%	39%	19%	36%	17%	44%	25%	24%	5%	23%	32%	6%	24%	**23%**
% Multifamily loans	88%	26%	15%	26%	43%	33%	41%	32%	69%	33%	52%	75%	48%	**45%**
% Senior debt	96%	98%	95%	100%	98%	100%	99%	87%	97%	94%	97%	96%	100%	**97%**
Problem Loans (% of Assets)	1.9%	11.5%	8.4%	5.8%	10.1%	5.3%	8.2%	2.8%	4.1%	3.6%	4.3%	2.4%	9.3%	**6.0%**
Geographic Distribution														
Northeast/ Mid-Atlantic	NA	28%	27%	21%	35%	25%	38%	32%	0%	25%	14%	11%	33%	**24%**
Midwest	NA	18%	7%	3%	6%	16%	4%	11%	0%	3%	0%	3%	4%	**6%**
Southeast	NA	27%	7%	13%	15%	23%	16%	34%	13%	17%	6%	42%	15%	**19%**
Southwest	NA	10%	0%	8%	14%	22%	16%	12%	20%	15%	35%	35%	15%	**17%**
West	NA	16%	7%	19%	30%	15%	26%	10%	16%	10%	45%	4%	33%	**19%**
International	NA	0%	48%	35%	0%	0%	0%	0%	0%	30%	0%	0%	0%	**9%**

Note: Figures are as of 3Q23. BRSP, FBRT, and TRTX are not covered.

Source: Company reports; KBW Research.

CRE Loan Loss Framework

Credit risk in commercial real estate lending is asymmetrical because CRE loans are large and structured as balloon maturities (typically 10-year loans that amortize over 30 years). As a result, the absence of broad signals of credit deterioration or impairment so far this cycle does not offer any guarantee against principal loss.

The exhibit below shows KBW's CRE loan loss framework based on two methodologies:

1. **Basic:** A simpler methodology of estimating delinquencies, default probabilities (since lenders can modify delinquent loans as a mitigating tactic), and loss severities (based on commercial real estate price declines and lender-incurred costs upon foreclosure). Our methodology (delinquency rate x default probability x loss severity) implies potential cumulative loss rates of 0-2.5% at the loan level, which translates to equity losses of 0.5-8.5% after factoring in leverage.

2. **Detailed:** A more detailed scenario analysis modeling first mortgage and subordinate mortgage losses and incorporates an assumption for modification/foreclosure costs and property expenses/capex. The analysis shows cumulative loss rates of 0-3.3% on first mortgage loans, implying 0-13% equity losses after leverage, and cum. losses of 0-8.5% on subordinate mortgage loans, implying 0-30% equity losses after leverage. Assuming a portfolio mix of 75% first mortgages and 25% subordinate mortgages would imply an average equity loss of 4.2%.

Exhibit 11: KBW CRE Loss Framework – Basic

	Low	High	Avg.
Delinquency rate	4%	8%	6%
Default probability	25%	75%	50%
Loss severities	20%	40%	30%
Cum. loss	0.2%	2.4%	1.3%
Leverage (debt/equity)	1.5	2.5	1.9
Equity loss	0.5%	8.4%	3.8%

Source: KBW Research.

Exhibit 12: KBW CRE Loss Framework – Detailed

KBW CRE Loss Model	Low	High	Avg.
First Mortgage Loss			
Ending LTV	50.0%	75.0%	62.5%
Default rate (delinq. assumption * default %)	1.0%	7.5%	4.3%
Property price decline	20.0%	40.0%	30.0%
Modification/foreclosure costs	0.6%	2.5%	1.6%
Property expenses/capex	5.0%	15.0%	10.0%
Total collateral losses	**25.6%**	**57.5%**	**41.6%**
Remaining collateral basis	74.4%	42.5%	58.5%
Equity cushion remaining	24.4%	(32.5%)	(4.1%)
Loss severity	**0.0%**	**43.3%**	**6.5%**
Total, first mortgage cumulative loss	**0.0%**	**3.3%**	**0.3%**
Corporate leverage (assets/equity)	1.5x	3.0x	2.3x
Total loss to equity	**0.0%**	**13.0%**	**0.9%**
Subordinate Mortgage Loss			
Ending LTV	70.0%	85.0%	77.5%
Beginning LTV	50.0%	50.0%	50.0%
Default rate (delinq. assumption * default %)	1.0%	7.5%	4.3%
Total collateral losses (from above)	**25.6%**	**57.5%**	**41.6%**
Remaining collateral basis	74.4%	42.5%	58.5%
Equity cushion remaining	4.4%	(42.5%)	(19.1%)
Loss severity for first mortgage	0.0%	15.0%	7.5%
Remaining collateral proceeds for sub. position	24.4%	0.0%	8.5%
Loss severity for sub. position	**0.0%**	**100.0%**	**100.0%**
Interest expense (to first mortgage holder)	5.6%	12.9%	9.2%
Total, sub. mortgage cumulative loss	**0.1%**	**8.5%**	**4.6%**
Corporate leverage (assets/equity)	1.5x	2.5x	2.0x
Total loss to equity	**0.1%**	**29.6%**	**13.9%**
Avg. loss to equity (assuming 75% 1st mtg./25% sub. debt)			**4.2%**

Source: KBW Research.

Although the methodologies mentioned above suggest potential losses of 1-3%, they do not directly factor in recession risk. Factoring in the risk of a moderate to severe recession, our potential loss rates would roughly double to 3.0-6.0% based on the assumptions below:

- Peak delinquencies of 10-12% from average delinquency rates in prior cycles of 4-8% (based on ranges from banks, life insurers, CMBS, and CMREITs)
- Peak default probabilities of 50-75% from a base case assumption of 25-75%
- Loss severities of 30-50% from a base case assumption of 20-40%

Based on these assumptions, potential loan losses would increase to 3.0-5.6% (from 1-3%).

Illustratively this would imply equity or book value losses of 9-22% (from 3.5-13.0%) at 2.0-3.0x leverage (debt-to-equity).

Exhibit 13: KBW CRE Recession Loss Framework – Basic

	Low	High	Avg.
Delinquency rate	10.0%	12.0%	11.0%
Default probability	50.0%	75.0%	62.5%
Loss severity	30.0%	50.0%	40.0%
Cumulative loan losses	**1.5%**	**4.5%**	**3.0%**
Leverage (debt/equity)	1.5x	3.0x	2.1x
Cumulative equity loss	**3.8%**	**18.0%**	**9.2%**

Source: KBW Research.

Exhibit 14: KBW CRE Recession Loss Framework – Detailed

KBW CRE Loss Model	Low	High	Avg.
First Mortgage Loss			
Ending LTV	50.0%	80.0%	65.0%
Default rate (delinq. assumption * default %)	2.4%	9.0%	5.7%
Property price decline	30.0%	50.0%	40.0%
Modification/foreclosure costs	0.6%	5.0%	2.8%
Property expenses/capex	5.0%	15.0%	10.0%
Total collateral losses	**35.6%**	**70.0%**	**52.8%**
Remaining collateral basis	64.4%	30.0%	47.2%
Equity cushion remaining	14.4%	(50.0%)	(17.8%)
Loss severity	**0.0%**	**62.5%**	**27.4%**
Total, first mortgage cumulative loss	**0.0%**	**5.6%**	**1.6%**
Corporate leverage (assets/equity)	1.5x	3.0x	2.3x
Total loss to equity	**0.0%**	**22.5%**	**5.1%**
Subordinate Mortgage Loss			
Ending LTV	70.0%	85.0%	77.5%
Beginning LTV	50.0%	50.0%	50.0%
Default rate (delinq. assumption * default %)	2.4%	9.0%	5.7%
Total collateral losses (from above)	**35.6%**	**70.0%**	**52.8%**
Remaining collateral basis	64.4%	30.0%	47.2%
Equity cushion remaining	(5.6%)	(55.0%)	(30.3%)
Loss severity for first mortgage	0.0%	40.0%	20.0%
Remaining collateral proceeds for sub. position	14.4%	0.0%	0.0%
Loss severity for sub. position	**28.0%**	**100.0%**	**100.0%**
Interest expense (to first mortgage holder)	5.6%	12.9%	9.2%
Total, sub. mortgage cumulative loss	**0.8%**	**10.2%**	**6.2%**
Corporate leverage (assets/equity)	1.5x	2.5x	2.0x
Total loss to equity	**2.0%**	**35.6%**	**18.7%**
Avg. loss to equity (assuming 75% 1st mtg./25% sub. debt)			**8.5%**

Source: KBW Research.

Valuing the CMREITs using a required dividend yield of 11.00-11.50%, implies a P/B multiple of 0.77x to 0.87x, a 13-23% discount. In the three scenarios below, Bull Case, Base Case, and Bear Case, we assume market P/B multiples of 0.80x, 0.70x, and 0.60x. We believe that the additional discount of -3% to +31% in excess of required dividend yield is accounting for credit loss, leverage, and a liquidity cushion. Adding this to existing CECL reserves implies cumulative loan losses of 2.2% to 5.1%.

Exhibit 15: Commercial Mortgage REIT - Implied Credit Loss Analysis

Implied cum. loss %	Bull Case	Base Case	Bear Case
Leverage (debt/equity)	2.50x	3.00x	4.50x
Current dividend	$1.94	$1.90	$1.45
Book value	$22.86	$20.00	$14.55
Return on equity	8.50%	9.50%	10.00%
Required dividend yield	11.00%	11.25%	11.50%
Implied stock price at required yield	$17.66	$16.89	$12.65
Implied P/B at required dividend yield	0.77x	0.84x	0.87x
Price decline from BV	**-22.7%**	**-15.6%**	**-13.0%**
Current stock price	$18.29	$14.00	$8.73
Current P/BV	0.80x	0.70x	0.60x
Price decline from BV	-20.0%	-30.0%	-40.0%
Price decline attributable to credit loss & liquidity	**3.5%**	**-17.1%**	**-31.0%**
Liquidity cushion	(39)	181	245
***Assumes 50% of gap between current stock price and higher dividend yield is liquidity cushion*			
Cumulative loan losses			
$ magnitude of equity loss	(39)	181	245
Current CECL reserve	260	260	260
Total cum. loss	221	441	505
Implied cum. loan loss % of loans	**-2.2%**	**-4.4%**	**-5.1%**

Source: Trepp; KBW Research.

Commercial Real Estate Brokers

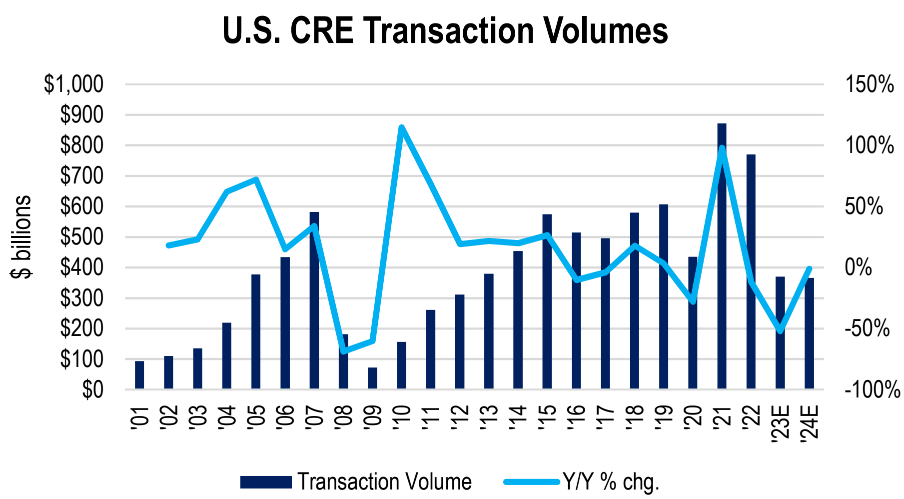
We expect the CRE market correction to bottom in 2024, with the decline in capital markets volumes decelerating in 1H2024 and the potential for growth to inflect positively in the second half.

- **Across business lines, we forecast fee revenue growth of +3.8% in 2024** from -9.3% in 2023 and +4.4% in 2022.
- **In capital markets,** we project a decline of -1.0% Y/Y in 2024 from -34.8% in 2023. We forecast transaction volumes to gain momentum in 2025, with growth resuming at +17.3% Y/Y. In the near term, we expect CRE transactions to remain muted as many investors are on the sidelines to allow for price discovery and stabilization in the macroeconomic environment.
- **In leasing,** we forecast revenue growth of +1% Y/Y in 2024, compared with -11.7% in 2023. We expect volumes to rebound in 2025 with leasing revenue +15% Y/Y. A portion of leasing volume can be considered as recurring due to significant repeat account-based business at lease expiration (around 35-50%).
- **Outsourcing** is a consistent area of growth, adding to revenue stability due to contractual fees. We forecast average revenue growth of 8.3% in 2024 from 9.5% in 2023.

- **EBITDA.** In concert with modest revenue growth, we project adjusted EBITDA to increase 14.1% Y/Y (vs. -25.6% in 2023 and -6.1% in 2022).

Exhibit 16: Historical CRE Transaction Volumes

$ in millions



Source: Real Capital analytics, CBRE, and KBW Research.

Exhibit 17: CRE Brokers – Forecast Summary

	2024E Revenue Growth				2024E Adj. EBITDA			KBW EPS		
Ticker	Total	Cap. Mkts.	Leasing	Outsourcing	Y/Y	Margin	Margin Y/Y	2023E	2024E	2025E
CBRE	6.6%	0.7%	(0.6%)	11.5%	10.1%	12.1%	0.4%	$3.64	$4.33	$5.18
JLL	2.3%	1.0%	(0.8%)	5.2%	47.4%	14.5%	4.4%	$6.66	$12.08	$15.17
NMRK	(1.2%)	(20.1%)	4.6%	9.3%	(8.6%)	15.1%	(1.2%)	$1.04	$0.84	$1.22
WD	7.3%	14.3%	NA	NA	7.5%	31.5%	0.0%	$3.22	$3.92	$5.27
Average	**3.8%**	**(1.0%)**	**1.1%**	**8.6%**	**14.1%**	**18.3%**	**0.9%**			
Median	**4.5%**	**0.8%**	**(0.6%)**	**9.3%**	**8.8%**	**14.8%**	**0.2%**			

Note: Based on fee revenue where disclosure is available. For WD, capital markets includes loan origination fees and property sales brokerage fees.

Source: Company reports and KBW Research.

Exhibit 18: CRE Brokers – Valuation Summary

Ticker	Rating	Price	Price Target	P/E 2024E	P/E 2025E	Normalized P/E 2024E	Normalized P/E 2025E	EV/EBITDA 2024E	EV/EBITDA 2025E	Normalized EV/EBITDA 2024E	Normalized EV/EBITDA 2025E
CBRE	MP	$82.44	$93.00	19.0x	15.9x	18.6x	15.8x	12.1x	10.3x	12.6x	10.7x
JLL	MP	$165.97	$180.00	13.7x	10.9x	13.8x	11.0x	9.0x	7.6x	9.0x	7.6x
NMRK	MP	$8.76	$9.50	8.5x	10.5x	19.7x	12.6x	7.5x	5.6x	10.6x	7.9x
WD	MP	$97.70	$105.00	24.9x	18.5x	18.3x	16.1x	11.9x	10.5x	13.2x	11.5x
Average				**16.5x**	**14.0x**	**17.6x**	**13.9x**	**10.1x**	**8.5x**	**11.4x**	**9.4x**
Median				**16.4x**	**13.4x**	**18.5x**	**14.2x**	**10.4x**	**9.0x**	**11.6x**	**9.3x**

Rating: MP=Market Perform, OP=Outperform. Normalized EBITDA based on KBW estimates.

Source: Company reports and KBW Research.

Earnings sensitivity scenarios. The CRE brokers are sensitive to growth or declines in transaction-based businesses, particularly capital markets and leasing.

- Overall, we estimate 15% growth or decline in capital markets would impact earnings by 3-11% while 15% growth or decline in leasing would impact earnings by 4-10%. This results in a combined earnings impact of 8-19%, which is before any impact to investment management and other businesses.

Exhibit 19: CRE Brokers – Earnings Sensitivity Scenarios

Units in millions, except per share.

Capital Markets

	Scenario 1: 5% Increase in Cap. Mkts.				Scenario 2: 15% Increase in Cap. Mkts.			
	2024E				2024E			
	CBRE	JLL	NMRK	WD	CBRE	JLL	NMRK	WD
KBW EPS	$4.33	$12.08	$0.84	$3.92	$4.33	$12.08	$0.84	$3.92
Capital markets Y/Y growth	*0.9%*	*1.0%*	*(15.5%)*	*14.3%*	*0.9%*	*1.0%*	*(15.5%)*	*14.3%*
Capital markets revenue ($ mil.)	$1,969	$1,221	$597	$519	$1,969	$1,221	$597	$519
Margin	*20.0%*	*20.0%*	*25.0%*	*25.0%*	*20.0%*	*20.0%*	*25.0%*	*25.0%*
Capital markets EPS	$1.00	$3.90	$0.50	$2.93	$1.00	$3.90	$0.50	$2.93
% of total	*23.2%*	*32.3%*	*59.1%*	*74.9%*	*23.2%*	*32.3%*	*59.1%*	*74.9%*
Assumed capital markets increase	**5.0%**	**5.0%**	**5.0%**	**5.0%**	**15.0%**	**15.0%**	**15.0%**	**15.0%**
Capital markets revenue	$2,068	$1,282	$626	$545	$2,265	$1,404	$686	$597
Y/Y growth	*(33.0%)*	*(32.8%)*	*(35.0%)*	*(17.5%)*	*(26.6%)*	*(26.4%)*	*(28.8%)*	*(9.6%)*
Margin	*20.0%*	*20.0%*	*25.0%*	*25.0%*	*20.0%*	*20.0%*	*25.0%*	*25.0%*
EPS change	$0.05	$0.19	$0.02	$0.15	$0.15	$0.58	$0.07	$0.44
% change in EPS	**1.2%**	**1.6%**	**3.0%**	**3.7%**	**3.5%**	**4.8%**	**8.9%**	**11.2%**

Leasing

	Scenario 1: 5% Increase in Leasing			Scenario 2: 15% Increase in Leasing		
	2024E			2024E		
	CBRE	JLL	NMRK	CBRE	JLL	NMRK
KBW EPS	$4.33	$12.08	$0.84	$4.33	$12.08	$0.84
Leasing Y/Y growth	*(12.8%)*	*(0.8%)*	*4.6%*	*(12.8%)*	*(0.8%)*	*4.6%*
Leasing revenue ($ mil.)	$3,377	$2,242	$829	$3,377	$2,242	$829
Margin	*15.0%*	*15.0%*	*20.0%*	*15.0%*	*15.0%*	*20.0%*
Leasing EPS	$1.29	$5.37	$0.55	$1.29	$5.37	$0.55
% of total	*29.8%*	*44.4%*	*65.7%*	*29.8%*	*44.4%*	*65.7%*
Assumed leasing increase	**5.0%**	**5.0%**	**5.0%**	**15.0%**	**15.0%**	**15.0%**
Leasing revenue	$3,545	$2,354	$870	$3,883	$2,579	$953
Y/Y growth	*(8.4%)*	*(14.0%)*	*4.6%*	*0.3%*	*(5.8%)*	*14.6%*
Margin	*15.0%*	*15.0%*	*20.0%*	*15.0%*	*15.0%*	*20.0%*
EPS change	$0.06	$0.27	$0.03	$0.19	$0.81	$0.08
% change in EPS	**1.5%**	**2.2%**	**3.3%**	**4.5%**	**6.7%**	**9.9%**

Source: Company reports and KBW Research.

Homebuilders

- **We forecast EPS growth of 3% in 2024.** We project 5.8% delivery growth paired with 7% community count growth, implying a small decrease in absorption pace (organic sales per community).

- **We forecast flat average selling price (ASP) growth in 2024,** a small improvement from 2023's projected decrease of 1.5%.

- **We expect gross margins to decrease by 45 bps in 2024 to an average of 23.5%.** This follows a projected decline of 292 bps in 2023.

Exhibit 20: Homebuilder Forecast and Valuation summary

				Price-to-Book Value			P/E			KBW EPS				2024E		Gross Margin	
Ticker	Rating	Price	Price Target	Current	Forward	2024-25E TBV chg. Y/Y	2023E	2024E	2025E	2023E	2024E	2025E	2024-25E vs. Prior Est.	Delivery Growth	Comm. Count Δ	2024E	Y/Y Δ
DHI	OP	$139.49	$164.00	2.08x	1.68x	*+20.1%*	10.1x	9.6x	9.3x	$13.85	$14.58	$14.97	*+5.0%*	6.4%	7.0%	23.7%	0.41%
LEN	OP	$140.41	$168.00	1.80x	1.52x	*+16.0%*	10.4x	9.4x	9.0x	$13.55	$14.95	$15.68	*+1.8%*	8.0%	5.1%	23.3%	(0.22%)
KBH	MP	$55.97	$63.00	1.17x	1.04x	*+13.4%*	8.2x	7.8x	7.5x	$6.84	$7.20	$7.45	*+0.9%*	3.3%	3.6%	20.8%	(0.26%)
MTH	MP	$155.85	$176.00	1.30x	1.12x	*+14.1%*	7.9x	8.3x	7.9x	$19.68	$18.73	$19.76	*+4.0%*	6.5%	8.1%	23.4%	(1.52%)
TOL	OP	$92.88	$112.00	1.42x	1.20x	*+23.3%*	7.5x	7.6x	7.4x	$12.40	$12.19	$12.56	*+4.0%*	4.7%	10.8%	26.3%	(0.65%)
Average				**1.55x**	**1.31x**	**17.4%**	**8.8x**	**8.5x**	**8.2x**				**3.1%**	**5.8%**	**6.9%**	**23.5%**	**(0.45%)**
Median				**1.42x**	**1.20x**	**16.0%**	**8.2x**	**8.3x**	**7.9x**				**4.0%**	**6.4%**	**7.0%**	**23.4%**	**(0.26%)**

Rating: MP=Market Perform, OP=Outperform.

Note:

Source: Company reports and KBW Research.

- **Earnings sensitivity.** Assuming 5-10% higher delivery growth, 50-100 bp higher gross margins, and 20-50 bps lower SG&A, we estimate a 9-22% increase in earnings, all else equal. Assuming 10-15% lower delivery growth, 100-150 bp lower gross margins, and 20-50 bps higher SG&A, we estimate a 15-30% reduction in earnings, all else equal.

Exhibit 21: Homebuilder Earnings Sensitivity: Upside and Downside Scenarios

Upside Sensitivity

Homebuilder Sensitivity Analysis: Upside							Scenario One:						Scenario Two:					
Units shown							*5% higher growth, 0.5% higher gross margin, 0.2% lower SG&A*						*10% higher growth, 1% higher gross margin, 0.5% lower SG&A*					
2024E	**DHI**	**LEN**	**KBH**	**MTH**	**TOL**	**Avg.**	**DHI**	**LEN**	**KBH**	**MTH**	**TOL**	**Avg.**	**DHI**	**LEN**	**KBH**	**MTH**	**TOL**	**Avg.**
Deliveries	88,182	77,135	13,546	14,533	10,048		92,328	80,706	14,202	15,215	10,528		96,474	84,277	14,858	15,897	11,007	
% chg. y/y	6.4%	8.0%	3.3%	6.5%	4.7%	**5.8%**	11.4%	13.0%	8.3%	11.5%	9.7%	**10.8%**	16.4%	18.0%	13.3%	16.5%	14.7%	**15.8%**
ASP	$381	$449	$486	$427	$975		$381	$449	$486	$427	$975		$381	$449	$486	$427	$975	
% chg. y/y	(0.1%)	0.2%	1.0%	(1.6%)	(5.2%)	**(1.1%)**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**
Housing revenue	$33,627	$34,656	$6,578	$6,201	$9,792		$35,208	$36,260	$6,897	$6,492	$10,260		$36,789	$37,865	$7,215	$6,783	$10,727	
% chg. y/y	6.3%	8.5%	4.3%	4.9%	(0.7%)	**4.6%**	11.3%	13.5%	9.3%	9.8%	4.0%	**9.6%**	16.3%	18.5%	14.4%	14.7%	8.7%	**14.5%**
Gross margin	23.9%	23.2%	21.1%	23.4%	26.5%		24.4%	23.7%	21.6%	23.9%	27.0%		25.4%	24.7%	22.6%	24.9%	28.0%	
% chg. y/y	0.4%	(0.2%)	(0.2%)	(1.5%)	(1.1%)	**(0.5%)**	0.9%	0.3%	0.3%	(1.0%)	(0.6%)	**(0.0%)**	1.9%	1.3%	1.3%	(0.0%)	0.4%	**1.0%**
SG&A	7.1%	7.0%	9.8%	9.9%	9.9%		6.9%	6.8%	9.6%	9.7%	9.7%		6.6%	6.5%	9.3%	9.4%	9.4%	
% chg. y/y	0.0%	0.0%	(0.2%)	(0.1%)	0.7%	**0.1%**	(0.2%)	(0.2%)	(0.4%)	(0.3%)	0.5%	**(0.1%)**	(0.5%)	(0.5%)	(0.7%)	(0.6%)	0.2%	**(0.4%)**
EPS	$14.58	$14.95	$7.20	$18.73	$12.19		$15.73	$16.33	$7.94	$20.43	$13.23		$17.43	$18.38	$9.11	$23.04	$14.75	
% chg. from prior							**7.9%**	**9.2%**	**10.3%**	**9.1%**	**8.5%**	**9.0%**	**19.6%**	**22.9%**	**26.5%**	**23.1%**	**21.0%**	**22.6%**

Downside Sensitivity

Homebuilder Sensitivity Analysis: Downside							Scenario One:						Scenario Two:					
Units shown							*10% lower growth, 1.0% lower gross margin, 0.2% higher SG&A*						*15% lower growth, 1.5% lower gross margin, 0.5% higher SG&A*					
2024E	**DHI**	**LEN**	**KBH**	**MTH**	**TOL**	**Avg.**	**DHI**	**LEN**	**KBH**	**MTH**	**TOL**	**Avg.**	**DHI**	**LEN**	**KBH**	**MTH**	**TOL**	**Avg.**
Deliveries	88,182	77,135	13,546	14,533	10,048		79,891	69,993	12,235	13,169	9,088		75,745	66,422	11,579	12,486	8,608	
% chg. y/y	6.4%	8.0%	3.3%	6.5%	4.7%	**5.8%**	(3.6%)	(2.0%)	(6.7%)	(3.5%)	(5.3%)	**(4.2%)**	(8.6%)	(7.0%)	(11.7%)	(8.5%)	(10.3%)	**(9.2%)**
ASP	$381	$449	$486	$427	$975		$381	$449	$486	$427	$975		$381	$449	$486	$427	$975	
% chg. y/y	(0.1%)	0.2%	1.0%	(1.6%)	(5.2%)	**(1.1%)**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**
Housing revenue	$33,627	$34,656	$6,578	$6,201	$9,792		$30,465	$31,447	$5,941	$5,619	$8,857		$28,884	$29,842	$5,623	$5,327	$8,389	
% chg. y/y	6.3%	8.5%	4.3%	4.9%	(0.7%)	**4.6%**	(3.7%)	(1.5%)	(5.8%)	(5.0%)	(10.2%)	**(5.3%)**	(8.7%)	(6.6%)	(10.9%)	(9.9%)	(15.0%)	**(10.2%)**
Gross margin	23.9%	23.2%	21.1%	23.4%	26.5%		22.9%	22.2%	20.1%	22.4%	25.5%		21.4%	20.7%	18.6%	20.9%	24.0%	
% chg. y/y	0.4%	(0.2%)	(0.2%)	(1.5%)	(1.1%)	**(0.5%)**	(0.6%)	(1.2%)	(1.2%)	(2.5%)	(2.1%)	**(1.5%)**	(2.1%)	(2.7%)	(2.7%)	(4.0%)	(3.6%)	**(3.0%)**
SG&A	7.1%	7.0%	9.8%	9.9%	9.9%		7.3%	7.2%	10.0%	10.1%	10.1%		7.6%	7.5%	10.3%	10.4%	10.4%	
% chg. y/y	0.0%	0.0%	(0.2%)	(0.1%)	0.7%	**0.1%**	0.2%	0.2%	0.0%	0.1%	0.9%	**0.3%**	0.5%	0.5%	0.3%	0.4%	1.2%	**0.6%**
EPS	$14.58	$14.95	$7.20	$18.73	$12.19		$12.55	$12.55	$5.94	$15.79	$10.38		$10.83	$10.46	$4.76	$13.13	$8.83	
% chg. from prior							**(13.9%)**	**(16.1%)**	**(17.5%)**	**(15.7%)**	**(14.9%)**	**(15.6%)**	**(25.7%)**	**(30.0%)**	**(33.9%)**	**(29.9%)**	**(27.5%)**	**(29.4%)**

Source: Company reports and KBW Research.

Single-Family Rental REITs

- **NOI growth.** For AMH, INVH, and TCN, we forecast average total portfolio NOI growth of 5.5% in 2024, compared to a projected 8.6% in 2023. This is driven by average portfolio growth of 1.6%, rent growth of 4.5%, flattish occupancy, and flattish NOI margins.
- **Same home performance.** For INVH and AMH, we forecast average same home NOI growth of 3.0% in 2024 (from a projected 5.1% in 2023) driven by core revenue growth of 3.9% (from 6.6%) and expense growth of 5.6% (from 9.8%).

Exhibit 22: Single-Family Rental REITs – Forecast Summary

	2024E			NOI Margin		KBW Core FFO			KBW AFFO		
Ticker	Avg. Occupancy	Portfolio Growth	NOI Growth	2024E	Y/Y ∆	2023E	2024E	2025E	2023E	2024E	2025E
INVH	96.8%	0.6%	7.2%	64.5%	0.7%	$1.77	$1.88	$1.96	$1.48	$1.58	$1.65
AMH	96.1%	2.3%	7.2%	63.7%	0.0%	$1.64	$1.74	$1.82	$1.45	$1.52	$1.59
TCN	97.3%	1.8%	2.1%	65.4%	(1.7%)	$0.55	$0.60	$0.72	$0.44	$0.49	$0.59
Average	**96.7%**	**1.6%**	**5.5%**	**64.5%**	**(0.3%)**						
Median	**96.8%**	**1.8%**	**7.2%**	**64.5%**	**0.0%**						

Source: Company reports and KBW Research.

Exhibit 23: Single-Family Rental REITs – Same Home Summary

	INVH			AMH			Average		
Y/Y	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
Rental revenues	6.6%	4.1%	3.2%	6.5%	3.6%	3.6%	**6.5%**	**3.9%**	**3.4%**
Core revenues	6.7%	4.0%	3.3%	6.6%	3.7%	3.8%	**6.6%**	**3.9%**	**3.6%**
Core expenses	10.6%	5.9%	4.2%	8.9%	5.4%	4.3%	**9.8%**	**5.6%**	**4.2%**
NOI	**4.9%**	**3.1%**	**2.8%**	**5.4%**	**2.8%**	**3.6%**	**5.1%**	**3.0%**	**3.2%**
NOI after capex	**4.4%**	**2.9%**	**2.7%**	**4.5%**	**2.1%**	**3.6%**	**4.5%**	**2.5%**	**3.2%**
Average Occupancy	**97.3%**	**96.8%**	**96.8%**	**96.7%**	**96.1%**	**96.0%**	**97.0%**	**96.5%**	**96.4%**

Source: Company Reports and KBW Research.

Exhibit 24: Single-Family Rental REITs – Valuation Summary

				P/FFO			P/AFFO				
Ticker	Rating	Price	Price Target	2023E	2024E	2025E	2023E	2024E	2025E	Economic Cap Rate	Dividend Yield
INVH	MP	$33.51	$37.00	18.9x	17.8x	17.1x	22.6x	21.2x	20.3x	5.6%	3.3%
AMH	MP	$35.48	$37.00	21.6x	20.4x	19.5x	24.5x	23.3x	22.3x	4.7%	2.5%
TCN	MP	$7.90	$9.00	14.4x	13.2x	11.0x	18.0x	16.1x	13.4x	5.7%	3.0%
Average				**18.3x**	**17.1x**	**15.9x**	**21.7x**	**20.2x**	**18.7x**	**5.4%**	**2.9%**
Median				**18.9x**	**17.8x**	**17.1x**	**22.6x**	**21.2x**	**20.3x**	**5.6%**	**3.0%**

Rating: MP=Market Perform

Source: Company Reports and KBW Research.

Office and Multifamily – Review of Fundamentals

Office Update

With office undergoing a secular correction and go-forward demand still in question, we expect continued stress. The sector remains challenged, with distress anticipated to increase as maturing loans come due over the next several years. While best-in-class and true Class A properties have been resilient thus far, the outlook for rest of the sector is bleak due to declining demand. Debt and equity capital remains scarce, especially as banks have reduced their direct CRE lending activities and other market participants stay away from office due to heightened uncertainties. Tenant improvements have become very costly for equity owners, requiring owners to evaluate further investment to support a building vs. allocation to more attractive opportunities. While return to office momentum is hotly debated, it is generally agreed that hybrid/remote work will remain part of the workplace moving forward and office vacancy is expected to increase in the coming years as leases expire. Additionally, for office and CRE as a whole, higher for longer interest rates apply pressure with higher debt service costs and add refinancing risk. **At-Risk Markets.** As shown below, many markets have elevated vacancy and negative absorption while San Francisco, Austin, Seattle, and Los Angeles in particular show a combination of rising vacancy, increasing supply, and slowing rent growth.

Exhibit 25: Office Analysis by Market

Market	Avg. Asking Rent ($ PSF) 3Q23	% Y/Y Chg., Asking Rent	Vacancy 3Q23	Vacancy, Y/Y Chg. (bps)	Net Absorption, % Total Inventory	YTD Deliveries + SF Under Construction, % Total Inventory
Atlanta	$32	2.70%	23.50%	180	(1.19%)	1.8%
Austin	$46	0.22%	25.40%	360	(2.57%)	10.8%
Boston	$46	5.79%	15.60%	370	(2.42%)	2.2%
Charlotte	$33	0.76%	22.30%	380	(3.71%)	4.2%
Chicago	$34	0.97%	23.70%	250	(1.85%)	0.8%
Columbus	$21	(0.79%)	26.00%	340	(3.12%)	1.7%
Dallas	$30	1.58%	22.90%	250	(0.24%)	3.6%
Denver	$33	1.65%	22.90%	250	(2.14%)	2.0%
Houston	$31	(1.17%)	25.30%	120	(1.05%)	0.5%
Indianapolis	$21	(0.37%)	22.00%	230	(2.01%)	0.5%
Jacksonville	$23	0.00%	19.70%	(120)	1.78%	0.0%
Los Angeles - CBD	$44	(1.94%)	26.60%	420	(4.28%)	0.0%
Los Angeles - Non-CBD	$45	(0.98%)	23.00%	250	(1.28%)	2.3%
Miami	$50	5.66%	15.60%	(60)	0.69%	3.6%
Minneapolis	$28	(0.14%)	26.50%	210	(2.81%)	0.4%
Nashville	$34	3.11%	18.40%	10	2.06%	6.9%
New York - Downtown	$56	(0.48%)	23.90%	190	(2.34%)	0.0%
New York - Midtown	$77	1.74%	21.40%	50	1.59%	2.0%
New York - Midtown South	$76	2.27%	22.40%	110	0.90%	6.4%
Orlando	$27	2.66%	15.20%	190	(1.60%)	1.8%
Philadelphia	$29	2.25%	20.80%	320	(3.20%)	0.7%
Phoenix	$29	2.89%	27.20%	470	(4.20%)	0.9%
Portland	$33	7.04%	20.30%	360	(2.79%)	1.4%
Richmond	$21	2.20%	8.40%	(10)	(0.21%)	1.7%
San Francisco	$33	0.42%	30.40%	730	(6.97%)	0.6%
San Jose	$54	3.17%	16.40%	500	(1.67%)	1.8%
Seattle + Puget Sound	$44	(2.26%)	19.80%	510	(3.38%)	6.6%
Tampa + St. Petersburg	$30	1.19%	20.10%	(40)	(0.13%)	0.6%
Washington DC	$55	(1.10%)	20.00%	110	(1.06%)	0.6%
Average	**$38**	**1.35%**	**21.58%**	**239**	**(1.70%)**	**2.29%**
25th Percentile	**$29**	**(0.43%)**	**24.60%**	**365**	**(2.97%)**	**2.96%**
75th Percentile	**$46**	**2.68%**	**19.75%**	**110**	**(0.23%)**	**0.58%**

Source: Cushman & Wakefield; KBW Research.

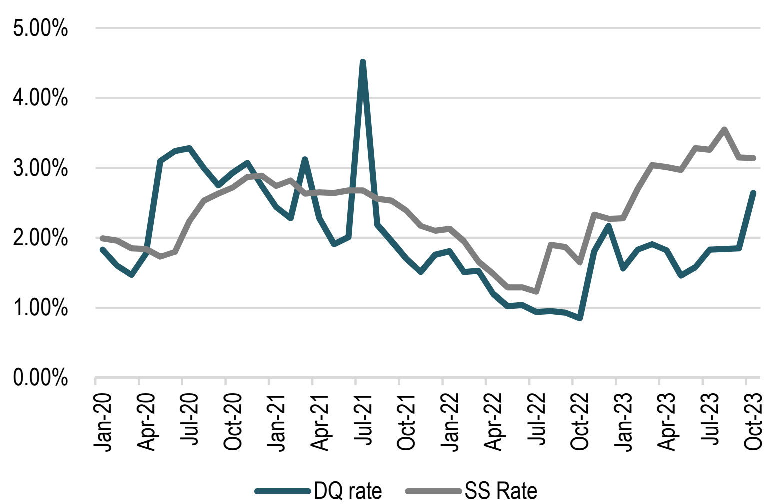
Multifamily Update

Multifamily's past resilience, aided by low rates and counter-cyclical factors, is challenged as current conditions lack these factors, leading to deteriorating fundamentals, excess supply in boom markets, and increasing credit issues. However, absent a worse than expected economic scenario, we expect distress to be concentrated in floating-rate, bridge, and/or peak vintage loans (mid-2021 to mid-2022).

Significant positive drivers exist for the sector, notably the rising costs of homeownership, the essential need of shelter, ongoing positive job growth and household formation, and the GSEs as a critical provider of liquidity. As of August 2023, the monthly cost differential between renting vs. buying a single-family residence increased to the widest level in over 50 years at $1,850 vs. $2,700 per month (Source: Visual Capitalist).

Despite the favorable economic backdrop, credit performance in multifamily has started to show some cracks. CRE CLOs, which are typically collateralized by loans on transitional properties, saw the multifamily special servicing rate increase by 175 bps M/M to 2.11% in September per Morningstar. Trepp CMBS 2.0+, which tracks credit performance on pools collateralized by stabilized loans post-2008 vintage, had the multifamily delinquency rate increase to 2.64% in October, +79 bps M/M. On the other hand, credit performance has been resilient on agency loans, as delinquency rates were 0.54% for Fannie Mae and 0.24% for Freddie Mac in September. This is as expected, as agency loans have historically lower delinquency and default rates compared to other loan types.

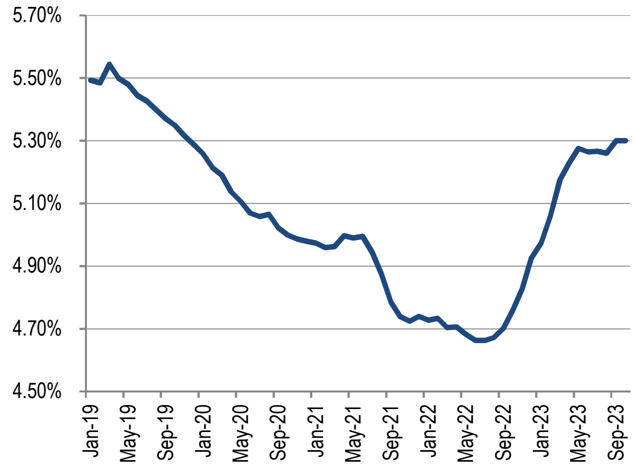
Exhibit 26: Multifamily CMBS 2.0+ Special Servicing (SS) and Delinquency (DQ) Rates



Source: Trepp; KBW Research.

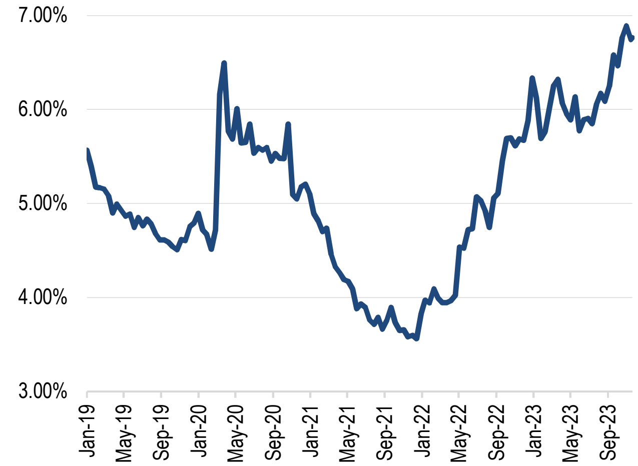
During October, reported multifamily cap rates were 5.30% on average, 64 bps higher than the valuation peak of 4.66% in July 2022. Cap rates implied by multifamily equity REITs have been quicker to adjust at 6.8%, on average, as of late-November, meaningfully above the March 2022 valuation peak of 3.9%. Cap rates have generally trended upward alongside rates moving higher, slowing rent growth, and greater stress in multifamily credit. Real Capital Analytics' (RCA) Commercial Property Price Index suggests that values have declined 16% from the July 2022 peak and -10% Y/Y.

Exhibit 27: Multifamily Reported Cap Rates



Source: Real Capital Analytics (RCA); KBW Research.

Exhibit 28: Multifamily REIT Implied Cap Rates



Source: FactSet; KBW Research.

On the supply side, new multifamily stock has increased but is more concentrated to certain markets than others. In aggregate, multifamily units under construction totaled 700k in October which equates to 2% of renter-occupied households. On a geographic basis, new multifamily deliveries are the highest in Sunbelt markets—Nashville, Austin, and Orlando in particular. Occupancy has come under pressure in certain markets as well, -277 bps Y/Y in Nashville, -223 bps in Salt Lake City, -219 bps in Columbus, and -202 bps in Austin. As shown below, the peak-to-trough declines in rent growth have been the sharpest in Sunbelt markets, at -3,150 bps in Las Vegas, -3,140 bps in Austin, -3,330 in Orlando, -3,210 in Phoenix, -3,190 in Tampa, and -2,930 in Jacksonville.

Exhibit 29: Multifamily Performance by Location

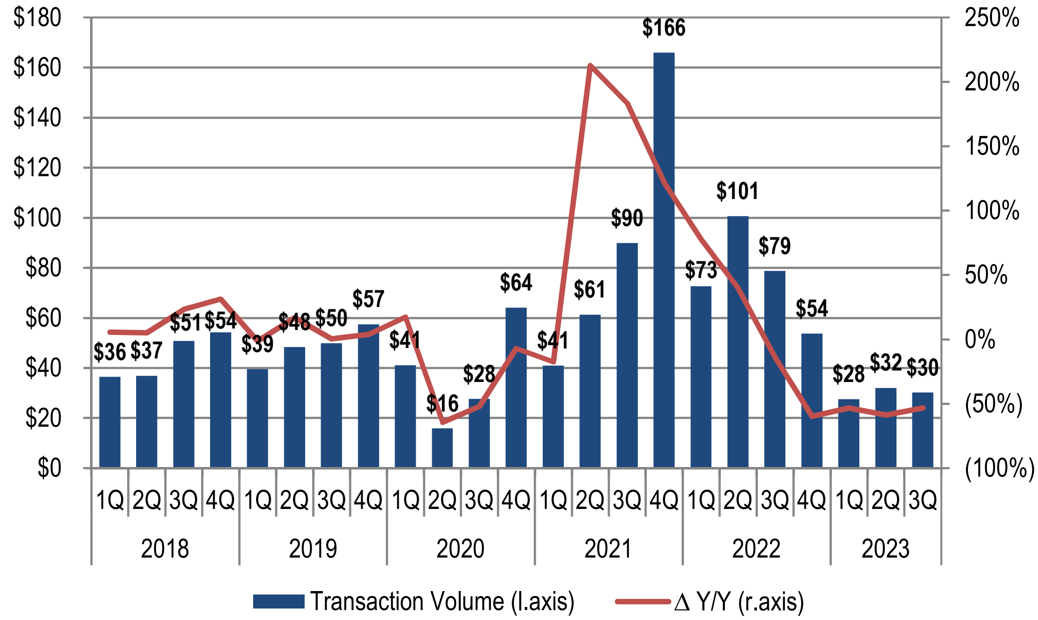
Market	Oct-23 Rent Growth Y/Y	Jan-22 Rent Growth Y/Y	*Peak-to-Trough Rent Growth Chg. bps*	Occupancy Oct-23	*Occupancy Chg. Y/Y*	*3Q23 LTM Deliveries as % of Inventory*	2023 Population Growth
Atlanta	-6.4%	17.4%	-2,380	92.48%	-159	2.60%	1.42%
Austin	-6.7%	24.7%	-3,140	91.46%	-202	6.50%	2.06%
Boston	2.7%	24.1%	-2,140	94.35%	-51	1.50%	0.53%
Charlotte	-2.4%	20.2%	-2,260	92.74%	-82	4.80%	2.86%
Chicago	2.3%	15.8%	-1,350	93.97%	-86	NA	0.53%
Cleveland	-0.7%	8.6%	-930	94.11%	-169	NA	0.17%
Columbus	-0.4%	10.8%	-1,120	93.56%	-219	NA	1.24%
Dallas-Fort Worth	-2.4%	18.5%	-2,090	92.39%	-147	3.00%	1.23%
Denver	-0.6%	16.8%	-1,740	92.70%	-121	3.10%	1.09%
Houston	0.5%	11.8%	-1,130	92.39%	-100	2.20%	1.58%
Jacksonville	-3.2%	26.1%	-2,930	93.48%	-74	6.10%	1.22%
Las Vegas	-3.8%	27.7%	-3,150	93.14%	-64	NA	1.86%
Los Angeles	-1.2%	16.2%	-1,730	94.99%	-73	2.30%	0.51%
Miami	-2.0%	26.4%	-2,840	93.89%	-143	3.10%	0.83%
Milwaukee	2.2%	9.6%	-740	93.31%	-28	NA	0.48%
Minneapolis	-0.9%	6.0%	-690	90.15%	-16	3.70%	0.80%
Nashville	-3.7%	21.5%	-2,510	91.41%	-277	7.00%	1.62%
New York	1.2%	33.6%	-3,240	96.74%	-35	1.30%	0.51%
Orlando	-3.6%	29.7%	-3,330	93.45%	-120	6.30%	1.62%
Philadelphia	-1.3%	15.4%	-1,670	93.97%	-43	2.30%	0.62%
Phoenix	-4.4%	27.7%	-3,210	93.19%	-61	3.90%	1.27%
Portland	-5.8%	10.0%	-1,580	92.45%	-194	NA	1.05%
Raleigh-Durham	-3.8%	21.1%	-2,490	93.18%	-156	NA	2.84%
Sacramento	-3.8%	15.3%	-1,920	94.37%	-99	NA	1.33%
Salt Lake City	-5.0%	18.6%	-2,350	91.41%	-223	7.30%	0.92%
San Francisco	-4.8%	16.9%	-2,170	94.85%	-25	NA	0.45%
Seattle	-2.3%	20.4%	-2,270	94.27%	-34	3.00%	0.86%
Tampa	-2.3%	29.7%	-3,190	93.45%	-100	NA	1.09%
Washington D.C.	1.5%	14.0%	-1,250	94.70%	-21	2.60%	1.00%
Average	**(2.1%)**	**19.1%**	**-2,120**	**93.3%**	**-108**	**3.8%**	**1.2%**
25th Percentile	**(3.8%)**	**14.7%**	**-2,885**	**92.5%**	**-158**	**6.1%**	**0.6%**
75th Percentile	**(0.5%)**	**25.4%**	**-1,465**	**94.2%**	**-47**	**2.3%**	**1.5%**

Source: CBRE; Apartment List; Macrotrends; KBW Research.

Multifamily transaction volumes have slowed meaningfully from peak levels, at $30bn in 3Q23, -62% Y/Y vs. $79bn in 3Q22 and $90bn in 3Q21. GSE originations totaled $29.8bn in 3Q23, which was +3.8% vs. 2Q23, including $16.5bn for Fannie Mae (+3.8% Y/Y) and -9.5% for Freddie Mac (-9.5% Y/Y). In October, origination volumes totaled $8.6bn which is meaningfully lower than Oct-2022, -37.2% Y/Y. For 2024, the FHFA announced lending caps of $70bn for each GSE ($140bn total) vs. $75bn in 2023 and $78bn in 2022. We do not view this as a significant headwind as annualized YTD volumes thru October total ~$100bn and 3Q volumes run-rate at ~$10bn per month, both of which are below the 2024 cap.

Exhibit 30: Multifamily Quarterly Investment Sales Volume

$ in billions



Source: Real Capital Analytics (RCA); KBW Research.

Multifamily Case Study

Below we analyze two purchase scenarios for a hypothetical 100-unit multifamily property.

- **Bear Case.** The going in cap rate is 4.00% on Year 1 NOI, resulting in a purchase price of $22.1 mil. (inc. 1.5% closing costs). Rent growth declines from +15% in Year 2 to -2% in Year 3, and then grows at +3% annually. Operating expenses increase by 10% in Year 2 and trend down to +3% Y/Y in Year 5. The acquisition loan is floating-rate, 3-year term at SOFR + 400, and SOFR increases from 0.05% in Year 1 to 5.25% in Year 3, causing DSCR to decline from 1.38x in Year 1 to 0.73x in Year 3. The acquisition debt is refinanced in Year 4 with 6.50% fixed rate, 30-Year amortizing permanent debt. The permanent loan is sized to 1.25x DSCR on Year 4 NOI, resulting in proceeds of $11.3 mil., requiring the borrower to contribute $4.2 mil. of equity to fully repay the acquisition loan. In Year 5, the property is sold at a 5.75% cap rate for $19.8 mil. and $9.2 mil. is returned as sponsor equity after mortgage repayment. This results in a net capital loss of $1.0 mil., -3.1% IRR, and 0.84x equity multiple.

Exhibit 31: Illustrative Multifamily Acquisition Model – Bear Case

Year	0	1	2	3	4	5
Rent Per Unit (100 Units)		$1,500	$1,725	$1,691	$1,741	$1,793
Rent Growth Y/Y			*15.0%*	*-2.0%*	*3.0%*	*3.0%*
Rental Income		$1,800,000	$2,070,000	$2,028,600	$2,089,458	$2,152,142
Other Income ($50/Unit Per Month, +4% Y/Y)		$60,000	$62,400	$64,896	$67,492	$70,192
Total Rental Income		**$1,860,000**	**$2,132,400**	**$2,093,496**	**$2,156,950**	**$2,222,333**
Y/Y Growth, %			*14.6%*	*-1.8%*	*3.0%*	*3.0%*
Vacancy & Credit Loss		($279,000)	($255,888)	($209,350)	($194,125)	($177,787)
% Rental Income		*15.0%*	*12.0%*	*10.0%*	*9.0%*	*8.0%*
Effective Gross Income		**$1,581,000**	**$1,876,512**	**$1,884,146**	**$1,962,824**	**$2,044,547**
Total Operating Expenses		($711,450)	($782,595)	($837,377)	($879,245)	($905,623)
Y/Y Growth, %			*10.0%*	*7.0%*	*5.0%*	*3.0%*
Net Operating Income (NOI)		**$869,550**	**$1,093,917**	**$1,046,770**	**$1,083,579**	**$1,138,924**
NOI Margin (%)		*55.0%*	*58.3%*	*55.6%*	*55.2%*	*55.7%*
Implied Cap On Purchase		*4.0%*	*5.0%*	*4.8%*	*5.0%*	*5.2%*
SOFR		0.05%	1.75%	5.25%	5.00%	4.00%
Acquisition Debt Service (S+400 Floating)		($628,656)	($892,536)	($1,435,818)		
Refinance Debt Service (6.50% Fixed)					($866,863)	($866,863)
Free Cash Flow		**$240,894**	**$201,381**	**($389,049)**	**$216,716**	**$272,061**
DSCR		*1.38x*	*1.23x*	*0.73x*	*1.25x*	*1.31x*
Returns Analysis						
Year	**0**	**1**	**2**	**3**	**4**	**5**
Purchase Price + Closing Costs	($22,174,800)					
Mortgage Advance	$15,522,360					
Refinance Proceeds (Equity Contribution)					($4,202,360)	
Property Sale Proceeds						$19,807,370
Mortgage Repayment						($10,565,333)
Levered Free Cash Flow		$240,894	$201,381	($389,049)	$216,716	$272,061
Cap Rate	*4.00%*	*4.50%*	*5.00%*	*5.50%*	*5.50%*	*5.75%*
Levered FCF	**($6,652,440)**	**$240,894**	**$201,381**	**($389,049)**	**($3,985,644)**	**$9,514,097**
Net Capital Gain (Loss)	**($1,070,760)**					
Levered IRR	**-3.1%**					
Equity Multiple	**0.84x**					

Source: KBW Research.

- **Bull Case.** The going in cap rate is 4.75% on Year 1 NOI, resulting in a purchase price of $18.6 mil. (inc. 1.5% closing costs). Rent growth slows from +12.5% in Year 2 to +6% in Year 3, +4% in Year 4, and +3% in Year 5. Operating expenses increase by 8% in Year and 5% Y/Y thereafter. The acquisition loan is floating-rate, 3-year term at SOFR + 400, and SOFR increases from 0.05% in Year 1 to 5.25% in Year 3, causing DSCR to decline from 1.64x in Year 1 to 1.07x in Year 3. The acquisition debt is refinanced in Year 4 with 6.50% fixed rate, 30-Year amortizing permanent debt. The permanent loan is sized to 1.25x DSCR on Year 4 NOI, resulting in proceeds of $14.0 mil. and a $966k cash-out to the sponsor. In Year 5, the property is sold at a 6.00% cap rate for $22.8 mil. and $9.6 mil. is returned as sponsor equity after mortgage repayment. This results in a net capital gain of $6.4 mil., 18.0% IRR, and 2.14x equity multiple.

Exhibit 32: Illustrative Multifamily Acquisition Model – Bull Case

Year	0	1	2	3	4	5
Rent Per Unit (100 Units)		$1,500	$1,688	$1,789	$1,866	$1,922
Rent Growth Y/Y			*12.5%*	*6.0%*	*4.3%*	*3.0%*
Rental Income		$1,800,000	$2,025,000	$2,146,500	$2,238,800	$2,305,963
Other Income ($50/Unit Per Month, +4% Y/Y)		$60,000	$62,400	$64,896	$67,492	$70,192
Total Rental Income		**$1,860,000**	**$2,087,400**	**$2,211,396**	**$2,306,291**	**$2,376,155**
Y/Y Growth, %			*12.2%*	*5.9%*	*4.3%*	*3.0%*
Vacancy & Credit Loss		($279,000)	($208,740)	($110,570)	($115,315)	($118,808)
% Rental Income		*15.0%*	*10.0%*	*5.0%*	*5.0%*	*5.0%*
Effective Gross Income		**$1,581,000**	**$1,878,660**	**$2,100,826**	**$2,190,977**	**$2,257,347**
Total Operating Expenses		($711,450)	($768,366)	($806,784)	($847,124)	($889,480)
Y/Y Growth, %			*8.0%*	*5.0%*	*5.0%*	*5.0%*
Net Operating Income (NOI)		**$869,550**	**$1,110,294**	**$1,294,042**	**$1,343,853**	**$1,367,868**
NOI Margin (%)		*55.0%*	*59.1%*	*61.6%*	*61.3%*	*60.6%*
Implied Cap On Purchase		*4.7%*	*6.1%*	*7.1%*	*7.3%*	*7.5%*
SOFR		0.05%	1.75%	5.25%	5.00%	4.00%
Acquisition Debt Service (S+400 Floating)		($529,470)	($751,717)	($1,209,284)		
Refinance Debt Service (6.50% Fixed)					($1,075,083)	($1,075,083)
Free Cash Flow		**$340,080**	**$358,577**	**$84,758**	**$268,771**	**$292,785**
DSCR		*1.64x*	*1.48x*	*1.07x*	*1.25x*	*1.27x*

Returns Analysis

Year	0	1	2	3	4	5
Purchase Price + Closing Costs	($18,676,200)					
Mortgage Advance	$13,073,340					
Refinance Proceeds (Equity Contribution)					$966,660	
Property Sale Proceeds						$22,797,793
Mortgage Repayment						($13,104,000)
Levered Free Cash Flow		$340,080	$358,577	$84,758	$268,771	$292,785
Cap Rate	*4.75%*	*5.25%*	*5.25%*	*5.50%*	*5.75%*	*6.00%*
Levered FCF	**($5,602,860)**	**$340,080**	**$358,577**	**$84,758**	**$1,235,431**	**$9,986,578**

Net Capital Gain (Loss)	**$6,402,563**
Levered IRR	**18.0%**
Equity Multiple	**2.14x**

Source: KBW Research.

D.R. Horton	$2.74	$4.02	$4.29	$6.42	$11.43	$16.53	$13.85	$14.58	$14.97	$2.76	$2.73	$3.90	$4.45	$2.91	$3.27	$4.17	$4.24
Fiscal year ends 9/30																	
($ in millions; unless otherwise indicated)										Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.
										2023				2024E			
	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	1Q	2Q	3Q	4Q	1QE	2QE	3QE	4QE
HOMEBUILDING																	
Deliveries (units)	45,751	51,857	56,975	65,388	81,965	82,744	82,917	88,182	92,591	17,340	19,664	22,985	22,928	18,736	20,549	24,594	24,304
Yr/Yr % chg.	13.5%	13.3%	9.9%	14.8%	25.4%	1.0%	0.2%	6.4%	5.0%	(5.7%)	(0.8%)	7.9%	(1.2%)	8.0%	4.5%	7.0%	6.0%
Avg. selling price ($ in thous.)	$298	$299	$297	$299	$323	$385	$382	$381	$385	$387	$379	$379	$383	$383	$379	$381	$383
Yr/Yr % chg.	2.1%	0.2%	(0.6%)	0.7%	8.1%	19.1%	(0.9%)	(0.1%)	0.9%	6.9%	0.2%	(3.2%)	(5.1%)	(1.0%)	0.0%	0.5%	0.0%
Deliveries ($$)	13,653	15,502	16,925	19,561	26,503	31,862	31,641	33,627	35,614	6,709	7,450	8,703	8,779	7,177	7,785	9,359	9,306
Yr/Yr % chg.	15.9%	13.5%	9.2%	15.6%	35.5%	20.2%	(0.7%)	6.3%	5.9%	0.8%	(0.7%)	4.4%	(6.3%)	7.0%	4.5%	7.5%	6.0%
Orders (units)	46,605	52,740	56,565	78,458	81,378	76,137	78,342	88,412	91,949	13,382	23,142	22,879	18,939	18,400	25,456	24,481	20,075
Yr/Yr % chg.	14.2%	13.2%	7.3%	38.7%	3.7%	(6.4%)	2.9%	12.9%	4.0%	(37.8%)	(4.9%)	37.1%	39.4%	37.5%	10.0%	7.0%	6.0%
Backlog (units)	12,329	13,371	13,613	26,683	26,096	19,489	15,197	15,427	14,785	15,531	19,009	18,903	15,197	14,862	19,769	19,655	15,427
Yr/Yr % chg.	7.4%	8.5%	1.8%	96.0%	(2.2%)	(25.3%)	(22.0%)	1.5%	(4.2%)	(46.9%)	(43.7%)	(35.1%)	(22.0%)	(4.3%)	4.0%	4.0%	1.5%
Cancellation rate (%)	22%	22%	21%	20%	17%	21%	20%	20%	20%	27%	18%	18%	21%	18%	20%	20%	20%
Impairments/Write-downs	40	49	53	23	25	57	61	52	60	24	14	9	13	10	12	15	15
Total Lots	249,000	289,000	307,000	376,900	530,000	573,000	568,400			551,000	547,000	555,100	568,400				
INCOME STATEMENT																	
Revenue																	
Home Sales	13,653	15,502	16,925	19,561	26,503	31,861	31,641	33,627	35,614	6,709	7,450	8,703	8,779	7,177	7,785	9,359	9,306
Land/Lot Sales	88	122	92	83	102	62	102	100	103	35	20	31	17	20	20	25	35
Total Revenue	13,742	15,624	17,017	19,644	26,605	31,923	31,743	33,727	35,717	6,744	7,470	8,734	8,796	7,197	7,805	9,384	9,341
Gross margin																	
Before charges	19.9%	21.3%	20.2%	21.8%	25.5%	28.7%	23.6%	23.9%	23.2%	24.2%	21.6%	23.3%	25.1%	24.2%	23.8%	23.8%	23.8%
After charges	19.6%	21.0%	19.9%	21.7%	25.4%	28.5%	23.4%	23.7%	23.1%	23.8%	21.4%	23.2%	25.0%	24.0%	23.6%	23.6%	23.6%
SG&A as % of sales	8.9%	8.6%	8.7%	8.2%	7.3%	6.8%	7.1%	7.1%	7.1%	7.8%	7.3%	6.7%	6.6%	7.8%	7.5%	6.7%	6.6%
Net income	1,038	1,460	1,619	2,374	4,176	5,857	4,746	4,841	4,905	959	942	1,335	1,510	979	1,091	1,380	1,392
GAAP EPS	$2.74	$3.80	$4.29	$6.42	$11.43	$16.53	$13.85	$14.58	$14.97	$2.76	$2.73	$3.90	$4.45	$2.91	$3.27	$4.17	$4.24
Operating EPS	$2.76	$4.02	$4.17	$6.14	$11.25	$16.34	$13.85	$14.58	$14.97	$2.76	$2.73	$3.90	$4.45	$2.91	$3.27	$4.17	$4.24
Book Value Per Share (Calculated)	$20.68	$24.25	$27.85	$33.29	$42.52	$57.04	$68.74	$84.65	$98.34	$59.71	$61.74	$64.97	$68.74	$71.92	$75.50	$80.02	$84.65
Diluted shares (millions)	378.9	383.7	377.4	370.2	365.8	354.8	343.4	332.6	327.7	346.9	344.9	342.3	339.3	336.6	333.9	331.2	328.5
BALANCE SHEET / CASH FLOW																	
Cash & equivalents	1,017	1,154	1,094	2,616	3,038	2,155	3,116	5,884	8,379	2,245	2,659	2,813	3,116	3,309	3,899	4,834	5,884
Inventory	9,237	9,875	10,286	11,015	13,908	17,324	18,156	18,904	19,844	17,706	17,571	17,978	18,156	18,646	18,834	18,919	18,904
Total assets	12,185	14,115	15,607	18,912	24,016	30,351	32,582	37,124	41,605	30,265	31,171	32,323	32,582	33,485	34,500	35,806	37,124
Debt	2,872	3,084	2,937	3,647	4,709	4,561	4,000	4,000	4,000	4,184	4,235	4,398	4,000	4,000	4,000	4,000	4,000
Shareholders' equity	7,747	8,984	10,021	11,840	14,887	19,396	22,696	27,138	31,519	20,153	20,713	21,656	22,696	23,574	24,564	25,844	27,138
Cash from operations	435	545	892	1,422	534	562	3,642	3,325	3,186	829	645	788	2,043	328	726	1,078	1,192
D&A	55	62	72	80	74	81	92	97	103	20	27	24	21	21	23	27	27
Chg. in Inventory	(947)	(1,057)	(592)	(1,064)	(3,465)	(3,462)	(365)	(800)	(1,000)	(317)	185	(207)	(26)	(500)	(200)	(100)	0
Capital expenditures	(157)	(138)	(127)	(97)	(94)	(148)	(149)	(158)	(167)	(48)	(32)	(29)	(40)	(34)	(37)	(44)	(44)
Free cash flow (ex. inventory)	1,279	1,526	1,429	2,469	3,979	3,957	3,950	4,064	4,122	1,118	454	990	2,050	815	912	1,161	1,175
as % of sales	9.3%	9.8%	8.4%	12.6%	15.0%	12.4%	12.4%	12.1%	11.5%	16.6%	6.1%	11.3%	23.3%	11.3%	11.7%	12.4%	12.6%
METRICS																	
Debt/equity	37%	34%	29%	31%	32%	24%	18%	15%	13%	21%	20%	20%	18%	17%	16%	15%	15%
Debt/capital	27%	26%	23%	24%	24%	19%	15%	13%	11%	17%	17%	17%	15%	15%	14%	13%	13%
Net debt/capital	19%	18%	16%	8%	10%	11%	4%	-7%	-16%	9%	7%	7%	4%	3%	0%	-3%	-7%

Source: Company data; KBW Research.

Lennar Corporation (LEN)	$3.83	$6.32	$5.76	$7.87	$14.28	$15.76	$13.55	$14.95	$15.68	$2.06	$3.01	$3.87	$4.62	$2.58	$3.55	$3.90	$4.93
Fiscal year ends 11/30																	
($ in millions; unless otherwise indicated)										Feb	May	Aug	Nov	Feb	May	Aug	Nov
										2023E				2024E			
	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	Q123	Q2	Q3	Q4	Q124	Q2	Q3	Q4
HOMEBUILDING																	
Deliveries (units)	43,828	45,627	51,491	52,925	59,825	66,399	71,421	77,135	79,449	13,659	17,074	18,559	22,129	14,752	18,440	20,044	23,899
Yr/Yr % chg.	65.0%	4.1%	12.9%	2.8%	13.0%	11.0%	7.6%	8.0%	3.0%	8.9%	3.2%	7.6%	10.3%	8.0%	8.0%	8.0%	8.0%
Avg. selling price ($ in thous.)	$400	$413	$400	$394	$424	$480	$449	$449	$452	$448	$449	$448	$448	$449	$449	$449	$450
Yr/Yr % chg.	10.4%	3.4%	-3.2%	-1.4%	7.6%	13.1%	-6.5%	0.2%	0.5%	-1.9%	-6.9%	-8.6%	-7.0%	0.2%	0.0%	0.2%	0.2%
Deliveries ($$)	$17,512	$18,858	$20,596	$20,876	$25,380	$31,846	$32,036	$34,656	$35,874	$6,126	$7,667	$8,318	$9,924	$6,626	$8,281	$9,006	$10,743
Yr/Yr % chg.	82.1%	7.7%	9.2%	1.4%	21.6%	25.5%	0.6%	8.2%	3.5%	6.9%	-3.9%	-1.6%	2.5%	8.2%	8.0%	8.3%	8.3%
Orders (units)	45,294	45,826	51,439	56,169	64,543	61,105	68,509	73,181	75,376	14,194	17,885	19,666	16,764	15,613	19,316	20,649	17,602
Yr/Yr % chg.	65.5%	1.2%	12.2%	9.2%	14.9%	-5.3%	12.1%	6.8%	3.0%	-9.9%	0.5%	36.9%	27.0%	10.0%	8.0%	5.0%	5.0%
Cancellation rate (%)	17%	18%	17%	15%	11%	19%	16%	16%	18%	21%	14%	13%	18%	18%	18%	18%	18%
Total Lots	179,000	270,000	313,000	306,000	439,000	447,000				389,000	387,000	391,000					
INCOME STATEMENT																	
Sales																	
Homebuilding	11,035	18,811	20,560	20,840	25,348	31,779	31,940	34,656	35,874	6,094	7,637	8,286	9,924	6,626	8,281	9,006	10,743
Land	165	267	224	123	168	143	71	75	79	10	16	20	25	10	17	21	26
Total sales	11,200	19,078	20,784	20,964	25,516	31,922	32,012	34,731	35,953	6,104	7,653	8,306	9,949	6,636	8,298	9,027	10,770
Gross margin																	
Before charges	22.1%	19.6%	20.6%	22.8%	26.8%	27.5%	23.4%	23.2%	23.2%	21.2%	22.5%	24.4%	24.5%	22.8%	23.1%	23.3%	23.5%
After charges	22.1%	19.6%	20.6%	22.8%	26.8%	27.5%	23.4%	23.2%	23.2%	21.2%	22.5%	24.4%	24.5%	22.8%	23.1%	23.3%	23.5%
SG&A as % of sales	9.2%	8.5%	8.3%	8.1%	7.1%	6.2%	7.0%	7.0%	7.0%	7.4%	6.7%	7.0%	6.8%	7.3%	6.8%	7.1%	6.8%
Net income	811	1,696	1,849	2,465	4,430	4,614	3,877	4,185	4,370	597	872	1,109	1,300	725	995	1,090	1,375
EPS	$3.83	$6.32	$5.76	$7.87	$14.28	$15.76	$13.55	$14.95	$15.68	$2.06	$3.01	$3.87	$4.62	$2.58	$3.55	$3.90	$4.93
Tangible book value per share	$32.64	$33.74	$39.44	$46.46	$57.05	$71.23	$82.50	$97.33	$111.02	$72.66	$75.05	$77.87	$82.50	$85.55	$88.21	$92.59	$97.33
Diluted shares (millions)	233.7	308.6	318.4	309.4	306.6	289.8	283.8	280.0	278.6	286.1	284.9	282.9	281.4	280.9	280.3	279.8	279.2
BALANCE SHEET																	
Cash & equivalents	2,292	1,350	1,211	2,719	2,757	4,639	5,127	8,991	13,046	4,080	4,024	3,904	5,127	5,765	6,678	7,690	8,991
Receivables, net	138	237	329	299	490	674	844	844	844	560	620	844	844	844	844	844	844
Total Inventory	10,861	17,069	17,777	16,925	18,715	21,432	22,050	22,050	22,050	21,628	21,687	22,050	22,050	22,050	22,050	22,050	22,050
Investments in unconsolidated entities	901	997	1,009	953	972	1,173	1,157	1,157	1,157	1,179	1,137	1,157	1,157	1,157	1,157	1,157	1,157
Other assets	863	1,356	1,022	1,191	1,091	1,323	1,550	1,451	1,348	1,413	1,582	1,579	1,550	1,531	1,507	1,482	1,451
Financial services	1,690	2,347	3,006	2,777	2,964	3,254	2,335	2,335	2,335	2,213	2,265	2,335	2,335	2,335	2,335	2,335	2,335
Total assets	18,745	28,566	29,360	29,935	33,208	37,984	38,632	42,397	46,349	36,573	36,858	37,438	38,632	39,252	40,141	41,127	42,397
Accounts payable	605	1,155	1,069	1,037	1,321	1,616	1,722	1,722	1,722	1,491	1,701	1,722	1,722	1,722	1,722	1,722	1,722
Consolidated inventory not owned, liab.	381	176	260	707	977	1,968	2,301	2,301	2,301	1,867	2,015	2,301	2,301	2,301	2,301	2,301	2,301
Senior notes and other debts payable	6,410	8,544	7,777	5,956	4,652	4,047	3,320	3,320	3,320	4,033	3,852	3,320	3,320	3,320	3,320	3,320	3,320
Other liabilities	1,316	1,903	1,901	2,226	2,920	3,348	2,601	2,601	2,601	2,937	2,433	2,601	2,601	2,601	2,601	2,601	2,601
Financial services	1,178	1,538	2,056	1,644	1,906	2,354	1,333	1,333	1,333	1,318	1,312	1,333	1,333	1,333	1,333	1,333	1,333
Total liabilities	10,759	13,883	13,326	11,836	12,211	13,744	11,650	11,650	11,650	12,018	11,697	11,650	11,650	11,650	11,650	11,650	11,650
Shareholders' equity	7,872	14,582	15,950	17,995	20,816	24,101	26,851	30,616	34,567	24,418	25,015	25,657	26,851	27,470	28,360	29,345	30,616
METRICS																	
Debt/equity	0.81	0.59	0.49	0.33	0.22	0.17	0.12	0.11	0.10	0.17	0.15	0.13	0.12	0.12	0.12	0.11	0.11
Debt/capital	0.45	0.37	0.33	0.25	0.18	0.14	0.11	0.10	0.09	0.14	0.13	0.11	0.11	0.11	0.10	0.10	0.10
Net debt/capital	0.34	0.33	0.29	0.15	0.08	(0.03)	(0.07)	(0.23)	(0.39)	(0.00)	(0.01)	(0.02)	(0.07)	(0.10)	(0.13)	(0.17)	(0.23)

Note: Homebuilding metrics include historical CAA beginning 2016.

Source: Company repports; KBW Research.

KB Home (KBH)	$1.82	$2.77	$2.87	$3.14	$6.03	$9.13	$6.84	$7.20	$7.45	$1.45	$1.94	$1.80	$1.65	$1.46	$1.81	$1.93	$2.00
Fiscal year ends 11/30																	
($ in millions; unless otherwise indicated)										Feb.	May	Aug.	Nov.	Feb.	May	Aug.	Nov.
Source: Company data; KBW Research											2023E				2024E		
	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	1Q23	Q2	Q3	Q4E	1Q24E	Q2E	Q3E	Q4E
INCOME STATEMENT																	
Construction:																	
Housing	4,335	4,517	4,511	4,151	5,695	6,880	6,308	6,578	6,907	1,379	1,758	1,574	1,598	1,395	1,659	1,735	1,789
Land	21	17	27	17	10	0	6	0	0	0	0	6	0	0	0	0	0
Total	4,356	4,534	4,538	4,168	5,705	6,880	6,314	6,578	6,907	1,379	1,758	1,580	1,598	1,395	1,659	1,735	1,789
Construction and land costs:																	
Housing	3,628	3,729	3,683	3,366	4,466	5,211	4,978	5,209	5,474	1,083	1,387	1,235	1,273	1,106	1,314	1,373	1,416
Land	19	15	26	15	3	3	5	0	0	0	0	5	0	0	0	0	0
Total	3,646	3,744	3,709	3,380	4,469	5,213	4,983	5,209	5,474	1,083	1,387	1,240	1,273	1,106	1,314	1,373	1,416
Gross profit b/f charges	735	819	846	816	1,248	1,702	1,344	1,386	1,451	301	376	340	328	293	349	366	378
Inventory impairments	(25)	(29)	(17)	(29)	(12)	(35)	(13)	(16)	(18)	(5)	(4)	(1)	(3)	(4)	(4)	(4)	(4)
Land write-downs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross profit, net	710	790	829	787	1,236	1,667	1,331	1,370	1,433	296	371	339	325	289	345	362	374
Selling, general, and administrative	426	444	497	471	574	630	628	644	685	139	169	160	160	143	163	167	172
Goodwill impairment / loss on loan guaranty	0	0	0	0	0	0	0	0	0								
Operating profit	283	346	331	316	661	1,037	703	725	748	156	202	179	165	146	182	195	202
Non-operating expenses:																	
Interest income	1	4	2	3	1	0	13	22	22	0	2	5	5	5	5	5	5
Interest incurred	171	150	143	124	121	121	107	107	107	28	26	27	27	27	27	27	27
Interest capitalized	(171)	(150)	(143)	(124)	(121)	(121)	(107)	(107)	(107)	(28)	(26)	(27)	(27)	(27)	(27)	(27)	(27)
Loss on early redemption	6									0	0	0					
Interest expense, net	(6)	0	(7)	0	(5)	(4)	0	0	0	0	0	0	0	0	0	0	0
Equity in earnings (loss) from unconsol. entities	(1)	2	(2)	12	(0)	(1)	(1)	(1)	(1)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Construction pre-tax income (loss)	277	351	325	332	657	1,033	714	747	769	156	204	185	170	152	188	200	207
Financial services pre-tax income (loss)	13	17	23	33	38	38	37	37	38	6	11	10	9	7	9	10	10
Pre-tax income	290	368	348	364	695	1,072	751	784	807	162	215	195	179	159	197	210	217
Income taxes	(109)	(198)	(79)	(68)	(131)	(255)	(175)	(188)	(194)	(37)	(51)	(45)	(43)	(38)	(47)	(51)	(52)
Tax rate (%)	37.7%	23.5%	22.8%	18.6%	18.8%	23.8%	23.3%	24.0%	24.0%	22.6%	23.5%	22.9%	24.0%	24.0%	24.0%	24.0%	24.0%
Net Income from cont. operations	181	170	269	296	565	816	576	596	614	126	164	150	136	121	150	160	165
Disc. operations / gain on sale																	
Net Income	181	170	269	296	565	816	576	596	614	126	164	150	136	121	150	160	165
PER SHARE DATA																	
GAAP EPS	$1.82	$1.58	$2.87	$3.14	$6.03	$9.13	$6.84	$7.20	$7.45	$1.45	$1.94	$1.80	$1.65	$1.46	$1.81	$1.93	$2.00
EPS from cont. ops.	$1.83	$1.58	$2.87	$3.20	$6.04	$9.13	$6.84	$7.20	$7.45	$1.45	$1.94	$1.80	$1.65	$1.46	$1.81	$1.93	$2.00
Operating EPS (ex. charges)	$1.86	$2.77	$2.72	$3.04	$5.77	$9.05	$6.84	$7.20	$7.45	$1.45	$1.94	$1.80	$1.65	$1.46	$1.81	$1.93	$2.00
Dividend	$0.10	$0.10	$0.23	$0.42	$0.60	$0.60	$0.60	$0.60	$0.60	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15
Book value per share (calculated)	$22.19	$23.61	$26.75	$29.30	$34.42	$43.16	$49.32	$56.15	$63.52	$44.27	$46.07	$47.77	$49.32	$50.68	$52.40	$54.24	$56.15
Tangible book value per share	$22.19	$23.61	$26.75	$29.30	$34.42	$43.16	$49.32	$56.15	$63.52	$44.27	$46.07	$47.77	$49.32	$50.68	$52.40	$54.24	$56.15
Diluted shares outstanding (units)	98.3	97.5	94.0	94.1	93.6	89.4	83.9	82.7	82.3	86.0	84.3	82.7	82.7	82.7	82.7	82.7	82.7
Avg. basic shares outstanding (units)	85.8	87.8	88.0	90.5	90.4	86.9	81.4	80.2	79.8	83.5	81.8	80.2	80.2	80.2	80.2	80.2	80.2
Avg. share dilution (units)	12.4	9.8	6.0	3.6	3.2	2.5	2.5	2.6	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
GROWTH & PROFITABILITY																	
Construction																	
Annual Revenue Growth (%)																	
Housing	21%	4%	0%	-8%	37%	21%	-8%	4%	5%	-1%	3%	-14%	-17%	1%	-6%	10%	12%
Land																	
Total Revenue Growth	22%	4%	0%	-8%	37%	21%	-8%	4%	5%	-1%	3%	-14%	-17%	1%	-6%	10%	12%
Gross Margin b/f charges	*16.9%*	*18.1%*	*18.7%*	*19.6%*	*21.8%*	*24.8%*	*21.3%*	*21.1%*	*21.0%*	*21.8%*	*21.4%*	*21.5%*	*20.5%*	*21.0%*	*21.1%*	*21.1%*	*21.1%*
Housing	16.9%	18.1%	18.7%	19.6%	21.8%	24.8%	21.3%	21.1%	21.0%	21.8%	21.4%	21.5%	20.5%	21.0%	21.1%	21.1%	21.1%
Land	11.0%	9.4%	4.1%	11.6%	68.6%	NA	NA	NA	12.5%	NA	NA	18.6%	11.5%	12.5%	12.5%	12.5%	12.5%
gross margin ex. capitalized interest	*21.8%*	*22.5%*	*22.2%*	*22.7%*	*24.4%*	*26.8%*	*23.4%*	*23.1%*	*23.1%*	*24.5%*	*23.2%*	*23.4%*	*22.6%*	*23.3%*	*22.9%*	*23.1%*	*23.3%*
Gross margin analysis, reported																	
Housing	16.3%	17.5%	18.3%	18.9%	21.6%	24.3%	21.1%	20.8%	20.7%	21.5%	21.1%	21.5%	20.3%	20.7%	20.8%	20.9%	20.9%
Consolidated Gross Margin, b/f charges	16.9%	18.1%	18.6%	19.6%	21.9%	24.7%	21.3%	21.1%	21.0%	21.8%	21.4%	21.5%	20.5%	21.0%	21.1%	21.1%	21.1%
Consolidated Gross Margin, reported	16.3%	17.4%	18.3%	18.9%	21.7%	24.2%	21.1%	20.8%	20.7%	21.5%	21.1%	21.5%	20.3%	20.7%	20.8%	20.9%	20.9%
Homebuilder SG&A as % of homebuilder sales	9.8%	9.8%	11.0%	11.3%	10.1%	9.2%	10.0%	9.8%	9.9%	10.1%	9.6%	10.2%	10.0%	10.2%	9.8%	9.6%	9.6%
Homebuilder operating margin, reported	6.5%	7.6%	7.3%	7.6%	11.6%	15.1%	11.1%	11.0%	10.8%	11.4%	11.5%	11.3%	10.3%	10.5%	11.0%	11.2%	11.3%
Homebuilder operating margin, reported, b/f charges	7.1%	8.3%	7.7%	8.3%	11.8%	15.6%	11.3%	11.3%	11.1%	11.7%	11.7%	11.4%	10.5%	10.8%	11.2%	11.5%	11.5%
SG&A Y/Y % Chg.	9.5%	4.2%	12.0%	-5.3%	22.0%	9.6%	-0.2%	2.6%	6.4%	-2.3%	0.3%	-1.9%	2.9%	2.5%	-3.8%	4.3%	7.6%
Total operating margin, reported	6.7%	8.1%	7.7%	8.7%	12.2%	15.6%	11.9%	11.9%	11.7%	11.8%	12.2%	12.3%	11.2%	11.4%	11.9%	12.1%	12.1%
Total operating margin, b/f charges	7.2%	8.8%	8.1%	9.4%	12.4%	16.1%	12.1%	12.2%	11.9%	12.1%	12.5%	12.4%	11.4%	11.7%	12.1%	12.4%	12.4%
SG&A	426	444	497	471	574	630	628	644	685	139	169	160	160	143	163	167	172
Fixed	188	196	257	237	266	251	263	274	285	63	67	69	64	66	70	72	66
Variable	238	248	240	234	309	378	365	371	401	76	102	91	96	77	93	95	106
Variable cost % of sales	5.5%	5.5%	5.3%	5.6%	5.4%	5.5%	5.8%	5.6%	5.8%	5.5%	5.8%	5.8%	6.0%	5.5%	5.6%	5.5%	5.9%
Fixed Cost % of sales	4.3%	4.3%	5.7%	5.7%	4.7%	3.7%	4.2%	4.2%	4.1%	4.6%	3.8%	4.4%	4.0%	4.7%	4.2%	4.1%	3.7%
Total SG&A %	**9.84%**	**9.83%**	**11.03%**	**11.34%**	**10.09%**	**9.15%**	**9.96%**	**9.79%**	**9.92%**	**10.10%**	**9.62%**	**10.17%**	**10.00%**	**10.23%**	**9.81%**	**9.63%**	**9.60%**
% chg. Y/Y	9.5%	4.2%	12.0%	-5.3%	22.0%	9.6%	-0.2%	2.6%	6.4%	-2.3%	0.3%	-1.9%	2.9%	2.5%	-3.8%	4.3%	7.6%
% of rev. growth	44.0%	102.2%	14057%	65.5%	59.7%	46.7%	2.7%	61.1%	127.1%	203.8%	13.5%	13.7%	-16.5%	207.9%	66.9%	43.9%	63.1%
Orders & Deliveries																	
Orders	10,900	11,014	12,841	13,404	16,206	10,856	11,590	12,693	13,201	2,142	3,936	3,097	2,415	2,678	4,172	3,283	2,560
Y/Y	*6.0%*	*1.0%*	*16.6%*	*4.4%*	*20.9%*	*(33.0%)*	*6.8%*	*9.5%*	*4.0%*	*(49.1%)*	*0.6%*	*51.8%*	*249%*	*25.0%*	*6.0%*	*6.0%*	*6.0%*
Deliveries	10,909	11,317	11,871	10,672	13,472	13,738	13,115	13,546	14,223	2,788	3,666	3,375	3,286	2,879	3,409	3,578	3,681
Y/Y	*11.0%*	*3.7%*	*4.9%*	*(10.1%)*	*26.2%*	*2.0%*	*(4.5%)*	*3.3%*	*5.0%*	*(2.8%)*	*5.7%*	*(6.6%)*	*(13.2%)*	*3.3%*	*(7.0%)*	*6.0%*	*12.0%*

Meritage Homes Corporation	$3.90	$5.61	$6.39	$11.02	$19.30	$26.75	$19.68	$18.73	$19.76	$3.54	$5.02	$5.98	$5.14	$3.70	$4.79	$5.06	$5.18
Fiscal year ends 12/31																	
($ in millions; unless otherwise indicated)										Mar.	Jun.	Sept.	Dec.	Mar.	Jun.	Sept.	Dec.
Source: Company data; KBW Research										2023E				2024E			
	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	Q123	Q2	Q3	Q4E	Q123E	Q2E	Q3E	Q4E
INCOME STATEMENT																	
Revenue																	
Home closing revenue	3,187	3,475	3,605	4,464	5,095	6,207	5,913	6,201	6,704	1,262	1,542	1,610	1,499	1,264	1,550	1,675	1,712
Land closing revenue	40	39	46	18	37	61	57	60	75	17	24	3	12	15	15	15	15
Total closing revenue	3,227	3,513	3,650	4,482	5,132	6,269	5,970	6,261	6,779	1,279	1,567	1,613	1,511	1,279	1,565	1,690	1,727
Cost of revenue																	
Home closings	(2,625)	(2,843)	(2,924)	(3,484)	(3,676)	(4,434)	(4,443)	(4,752)	(5,162)	(979)	(1,166)	(1,181)	(1,116)	(967)	(1,186)	(1,286)	(1,314)
Land closings	(36)	(42)	(47)	(39)	(26)	(50)	(54)	(55)	(69)	(16)	(24)	(3)	(11)	(14)	(14)	(14)	(14)
Total cost of revenue	(2,660)	(2,884)	(2,971)	(3,523)	(3,703)	(4,484)	(4,496)	(4,807)	(5,231)	(995)	(1,190)	(1,183)	(1,127)	(981)	(1,200)	(1,299)	(1,327)
Gross profit, before charges	568	632	685	963	1,417	1,798	1,474	1,454	1,548	284	377	430	383	298	366	391	399
Home closing gross profit, b/f charges	564	635	686	984	1,418	1,786	1,471	1,449	1,542	282	377	430	382	297	364	389	398
Home closing impairments/write-downs	(2)	(3)	(6)	(3)	0	(13)	0	0	0	0	0	0	0	0	0	0	0
Home closing gross profit, net	562	632	681	980	1,418	1,773	1,471	1,449	1,542	282	377	430	382	297	364	389	398
Land closing gross profit, b/f charges	4	(3)	(1)	(21)	(1)	12	3	5	6	1	0	0	1	1	1	1	1
Land closing impairment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Land closing gross profit, net	4	(3)	(1)	(21)	(1)	12	3	5	6	1	0	0	1	1	1	1	1
Total gross profit, net	566	629	680	960	1,417	1,785	1,474	1,454	1,548	284	377	430	383	298	366	391	399
Commissions and other sales costs	(222)	(242)	(247)	(288)	(285)	(323)	(371)	(386)	(409)	(83)	(96)	(99)	(93)	(83)	(96)	(104)	(103)
G&A expenses	(124)	(138)	(146)	(159)	(181)	(193)	(222)	(227)	(238)	(48)	(52)	(63)	(59)	(50)	(55)	(60)	(62)
Goodwill-related impairments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest expense	(4)	(1)	(8)	(2)	(0)	(0)	0	0	0	0	0	0	0	0	0	0	0
Other income (incld. fin. services)	31	35	25	23	5	21	57	60	65	12	10	18	17	12	15	16	16
Income before income taxes	248	283	303	534	955	1,289	938	900	966	165	239	286	248	177	230	243	251
Income taxes	(104)	(56)	(53)	(110)	(217)	(297)	(208)	(204)	(227)	(34)	(53)	(64)	(57)	(40)	(52)	(55)	(58)
Tax rate	34.2%	19.7%	17.6%	20.6%	22.8%	23.0%	22.1%	22.6%	23.5%	20.6%	22.0%	22.4%	23.0%	22.5%	22.5%	22.5%	23.0%
Net income	143	227	250	423	737	992	731	697	739	131	187	222	191	137	178	188	193
PER SHARE DATA																	
GAAP EPS	$3.42	$5.61	$6.39	$11.02	$19.30	$26.75	$19.68	$18.73	$19.76	$3.54	$5.02	$5.98	$5.14	$3.70	$4.79	$5.06	$5.18
Operating EPS	$3.90	$5.24	$5.94	$10.77	$19.30	$26.36	$19.60	$18.73	$19.76	$3.45	$5.02	$5.98	$5.14	$3.70	$4.79	$5.06	$5.18
Dividend							$1.08	$1.08	$1.16	$0.27	$0.27	$0.27	$0.27	$0.27	$0.27	$0.27	$0.27
Tangible Book value per share (calculated)	$38.28	$43.25	$50.74	$61.60	$80.66	$107.10	$125.09	$143.41	$162.98	$110.03	$114.66	$119.88	$125.09	$128.68	$133.37	$138.33	$143.41
Diluted shares outstanding	42.2	40.7	39.0	38.5	38.2	37.1	37.1	37.2	37.4	37.1	37.2	37.1	37.1	37.1	37.2	37.2	37.3
Avg. basic shares outstanding	40.3	40.1	38.3	37.7	37.6	36.7	36.7	36.7	36.9	36.7	36.8	36.6	36.6	36.6	36.7	36.7	36.8
Avg. share dilution	1.9	0.6	0.7	0.7	0.6	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5
GROWTH & PROFITABILITY																	
Annual revenue growth																	
Home closing	6.1%	9.0%	3.7%	23.9%	14.1%	21.8%	-4.7%	4.9%	8.1%	1.3%	9.5%	2.6%	-24.5%	0.2%	0.5%	4.0%	14.2%
Land closing																	
Total revenue growth	6.5%	8.9%	3.9%	22.8%	14.5%	22.1%	-4.8%	4.9%	8.3%	-0.6%	10.9%	2.2%	-24.1%	0.0%	-0.1%	4.8%	14.3%
Gross margin b/f charges																	
Home closing	17.7%	18.3%	19.0%	22.0%	27.8%	28.8%	24.9%	23.4%	23.0%	22.4%	24.4%	26.7%	25.5%	23.5%	23.5%	23.3%	23.3%
Land closing	10.9%	-7.2%	-2.3%	-18.6%	-2.9%	18.9%	5.2%	8.5%	8.5%	8.3%	0.7%	8.9%	9.0%	8.5%	8.5%	8.5%	8.5%
gross margin ex. amort interest	*19.7%*	*20.4%*	*21.3%*	*24.0%*	*29.1%*	*29.7%*	*25.9%*	*24.4%*	*23.9%*	*23.4%*	*25.5%*	*27.8%*	*26.6%*	*24.7%*	*24.5%*	*24.2%*	*24.2%*
Gross margin after charges																	
Home closing	17.6%	18.2%	18.9%	22.0%	27.8%	28.6%	24.9%	23.4%	23.0%	22.4%	24.4%	26.7%	25.5%	23.5%	23.5%	23.3%	23.3%
Land closing																	
Gross margin b/f charges	17.6%	18.0%	18.8%	21.5%	27.6%	28.7%	24.7%	23.2%	22.8%	22.2%	24.1%	26.6%	25.4%	23.3%	23.4%	23.1%	23.1%
Impairments/write-downs as % of sales	-0.1%	-0.1%	-0.2%	-0.1%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross margin, reported	17.6%	17.9%	18.6%	21.4%	27.6%	28.5%	24.7%	23.2%	22.8%	22.2%	24.1%	26.6%	25.4%	23.3%	23.4%	23.1%	23.1%
Commissions as % of home closing revenues	7.0%	7.0%	6.8%	6.4%	5.6%	5.2%	6.3%	6.2%	6.1%	6.6%	6.2%	6.2%	6.2%	6.6%	6.2%	6.2%	6.0%
G&A as % of sales	3.9%	4.0%	4.1%	3.6%	3.6%	3.1%	3.8%	3.7%	3.6%	3.8%	3.4%	3.9%	4.0%	3.9%	3.5%	3.6%	3.6%
Total	10.8%	10.9%	10.9%	10.0%	9.2%	8.3%	10.0%	9.9%	9.7%	10.3%	9.6%	10.1%	10.2%	10.5%	9.7%	9.8%	9.6%
Incremental margin	*3.0%*	*4.3%*	*9.3%*	*21.9%*	*38.2%*	*37.3%*	*25.7%*	*18.9%*	*-3.1%*	*-785.6%*	*-74.1%*	*-138.3%*	*21.0%*	*587.2%*	*-188.7%*	*-62.9%*	*1.5%*
Y/Y % chg.	*2.0%*	*10.0%*	*3.3%*	*13.8%*	*4.5%*	*10.6%*	*14.8%*	*3.4%*	*5.6%*	*23.5%*	*26.1%*	*28.4%*	*-8.8%*	*2.3%*	*2.0%*	*1.0%*	*8.4%*
Operating margin	6.8%	7.1%	7.9%	11.4%	18.5%	20.2%	14.8%	13.4%	13.3%	12.0%	14.6%	16.6%	15.3%	12.9%	13.7%	13.4%	13.6%
Operating margin b/f charges	6.9%	7.2%	8.0%	11.5%	18.5%	20.4%	14.8%	13.4%	13.3%	12.0%	14.6%	16.6%	15.3%	12.9%	13.7%	13.4%	13.6%
EBITDA margin	7.4%	7.8%	8.6%	12.1%	19.0%	20.6%	15.2%	13.8%	13.7%	12.4%	15.0%	17.0%	15.7%	13.3%	14.1%	13.8%	14.0%

Toll Brothers	$3.18	$4.69	$4.04	$3.44	$6.66	$11.05	$12.40	$12.19	$12.56	$1.70	$2.85	$3.73	$4.11	$1.73	$3.20	$3.40	$3.86
Thumbnail																	
Fiscal year ends 10/31										Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.
($ in millions; unless otherwise indicated)										2023				2024E			
	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	Q123	Q2	Q3	Q4	Q124E	Q2E	Q3E	Q4E
HOMEBUILDING																	
Completed Contracts (units)	7,151	8,265	8,107	8,496	9,986	10,515	9,597	10,048	10,434	1,826	2,492	2,524	2,755	1,872	2,616	2,665	2,895
Yr/Yr % chg.	17.3%	15.6%	-1.9%	4.8%	17.5%	5.3%	-8.7%	4.7%	3.8%	-5.3%	3.5%	4.6%	-26.8%	2.5%	5.0%	5.6%	5.1%
Avg. selling price ($ in thous.)	$813	$864	$873	$817	$844	$924	$1,028	$975	$985	$958	$999	$1,059	$1,071	$999	$962	$968	$977
Yr/Yr % chg.	-4.1%	6.3%	1.1%	-6.5%	3.4%	9.4%	11.3%	-5.2%	1.1%	9.5%	9.9%	13.4%	12.7%	4.2%	-3.7%	-8.6%	-8.8%
Completed Contracts ($$)	$5,815	$7,143	$7,081	$6,938	$8,431	$9,712	$9,864	$9,792	$10,279	$1,750	$2,490	$2,673	$2,951	$1,869	$2,516	$2,579	$2,828
Yr/Yr % chg.	12.5%	22.8%	-0.9%	-2.0%	21.5%	15.2%	1.6%	-0.7%	5.0%	3.6%	13.8%	18.5%	-17.6%	6.8%	1.0%	-3.5%	-4.2%
Orders (units)	8,175	8,519	8,075	9,932	12,472	8,255	8,077	10,206	10,614	1,461	2,333	2,245	2,038	2,045	2,975	2,750	2,435
Yr/Yr % chg.	21.7%	4.2%	-5.2%	23.0%	25.6%	-33.8%	-2.2%	26.4%	4.0%	-50.1%	-18.8%	77.3%	71.8%	40.0%	27.5%	22.5%	19.5%
Backlog (units)	5,851	6,105	6,198	7,791	10,277	8,017	6,497	6,655	6,835	7,652	7,493	7,214	6,497	6,670	7,029	7,114	6,655
Yr/Yr % chg.	24.9%	4.3%	1.5%	25.7%	31.9%	-22.0%	-19.0%	2.4%	2.7%	-32.1%	-36.2%	-31.9%	-19.0%	-12.8%	-6.2%	-1.4%	2.4%
Cancellation rate (%)	5.8%	6.4%	7.6%	8.1%	3.9%	10.9%	11.6%	7.5%	6.5%	14.3%	11.5%	9.8%	10.8%	7.5%	7.5%	7.5%	7.5%
Impairments/Write-downs	15	35	42	60	27	33	61	20	20	21	16	3	21	5	5	5	5
Total Lots	48,300	53,400	59,200	63,200	80,900	76,000	71,300			71,300	71,300	70,200	70,700				
INCOME STATEMENT																	
Total Revenue	5,815	7,143	7,081	6,938	8,431	9,710	9,867	9,792	10,279	1,749	2,490	2,675	2,952	1,869	2,516	2,579	2,828
Gross margin																	
Before charges	21.8%	21.1%	20.4%	19.8%	22.8%	25.8%	27.6%	26.5%	25.9%	26.8%	27.0%	27.9%	28.2%	26.6%	26.4%	26.4%	26.6%
After charges	21.5%	20.6%	19.8%	18.9%	22.5%	25.5%	26.9%	26.3%	25.7%	25.6%	26.4%	27.8%	27.5%	26.3%	26.2%	26.2%	26.4%
SG&A as % of sales	10.5%	9.6%	10.4%	11.2%	10.9%	10.1%	9.2%	9.9%	9.9%	12.1%	9.1%	8.6%	8.2%	12.4%	9.8%	9.3%	8.9%
Net income	535	748	590	447	834	1,285	1,372	1,281	1,297	192	320	415	446	185	339	356	400
GAAP EPS	$3.18	$4.89	$4.04	$3.44	$6.66	$11.05	$12.40	$12.19	$12.56	$1.70	$2.85	$3.73	$4.11	$1.73	$3.20	$3.40	$3.86
Operating EPS	$3.04	$4.69	$3.91	$3.36	$6.56	$10.10	$12.40	$12.19	$12.56	$1.70	$2.85	$3.73	$4.11	$1.73	$3.20	$3.40	$3.86
Book Value Per Share (Calculated)	$28.44	$32.15	$35.74	$38.29	$43.32	$53.19	$63.25	$80.81	$96.11	$55.67	$57.73	$60.85	$63.25	$66.47	$70.68	$75.65	$80.81
Diluted shares (millions)	169.5	154.2	146.5	131.2	125.8	118.0	111.0	105.4	103.2	112.3	112.2	111.1	108.4	106.9	106.2	104.7	103.7
BALANCE SHEET / CASH FLOW																	
Cash & equivalents	715	1,182	1,286	1,371	1,638	1,347	1,300	2,880	4,479	792	762	1,033	1,300	1,566	1,978	2,407	2,880
Inventory	7,281	7,598	7,873	7,659	7,916	8,733	9,058	9,013	8,968	9,099	9,108	9,204	9,058	9,046	9,035	9,024	9,013
Total assets	9,445	10,245	10,828	11,066	11,538	12,289	12,527	14,033	15,555	11,985	11,989	12,354	12,527	12,776	13,169	13,579	14,033
Debt	3,220	3,698	3,921	3,958	3,563	3,329	2,860	2,860	2,860	3,212	2,834	2,830	2,860	2,860	2,860	2,860	2,860
Shareholders' equity	4,537	4,769	5,119	4,927	5,340	6,022	6,813	8,319	9,842	6,217	6,436	6,710	6,813	7,062	7,455	7,865	8,319
Cash from operations	960	602	438	1,008	1,303	1,082	1,606	1,449	1,470	270	390	447	499	229	379	397	443
D&A	25	25	72	69	76	84	86	98	103	15	22	23	26	19	25	26	28
Chg. in Inventory	130	(144)	(40)	0	0	75	100	25	25	25	25	25	25	6	6	6	6
Capital expenditures	(29)	(28)	(87)	(110)	(67)	(106)	(108)	(69)	(72)	(19)	(27)	(29)	(32)	(13)	(18)	(18)	(20)
Free cash flow (ex. inventory)	827	743	463	967	1,312	985	1,484	1,453	1,476	241	360	416	467	228	381	398	446
as % of sales	14.2%	10.4%	6.5%	13.9%	15.6%	10.1%	15.0%	14.8%	14.4%	13.8%	14.4%	15.6%	15.8%	12.2%	15.1%	15.4%	15.8%
METRICS																	
Debt/equity	71%	78%	77%	80%	67%	55%	42%	34%	29%	52%	44%	42%	42%	41%	38%	36%	34%
Debt/capital	42%	44%	43%	45%	40%	36%	30%	26%	23%	34%	31%	30%	30%	29%	28%	27%	26%
Net debt/capital	36%	35%	34%	34%	26%	25%	19%	0%	-20%	28%	24%	21%	19%	15%	11%	5%	0%

Source: Company data; KBW Research.

Companies Mentioned in This Report

- •Arbor Realty Trust, Inc. (ABR: $14.19,Market Perform)
- •Ares Commercial Real Estate Corp (ACRE: $10.38,Market Perform)
- •AMH (AMH: $35.49,Market Perform)
- •Blackstone Mortgage Trust, Inc. (BXMT: $21.63,Market Perform)
- •Claros Mortgage Trust, Inc. (CMTG: $13.04,Underperform)
- •DigitalBridge Group, Inc. (DBRG: $17.03,Outperform)
- •Granite Point Mortgage Trust Inc. (GPMT: $5.53,Underperform)
- •Invitation Homes Inc. (INVH: $33.54,Market Perform)
- •KKR Real Estate Finance Trust Inc. (KREF: $12.92,Market Perform)
- •Newmark Group, Inc. (NMRK: $8.75,Market Perform)
- •Ready Capital Corporation (RC: $10.80,Market Perform)
- •Starwood Property Trust, Inc. (STWD: $20.53,Market Perform)
- •Tricon Residential, Inc. (TCN: $7.94,Market Perform)
- •Walker & Dunlop, Inc. (WD: $96.68,Market Perform)
- •CBRE Group, Inc. (CBRE: $82.30,Market Perform)
- •Jones Lang LaSalle, Inc. (JLL: $164.24,Market Perform)
- •D.R. Horton, Inc. (DHI: $139.80,Outperform)
- •KB Home (KBH: $55.58,Market Perform)
- •Meritage Homes Corporation (MTH: $154.63,Market Perform)
- •Lennar Corporation (LEN: $140.53,Outperform)
- •Apollo Commercial Real Estate Finance, Inc. (ARI: $11.44,Market Perform)
- •Ladder Capital Corp. (LADR: $11.24,Outperform)
- •Toll Brothers, Inc. (TOL: $92.41,Outperform)

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Market Perform	**292**	**51.77**	**286**	**97.95**	**77**	**26.37**
Underperform	**39**	**6.91**	**39**	**100.00**	**12**	**30.77**
Suspended	**12**	**2.13**	**12**	**100.00**	**2**	**16.67**
Covered -Not Rated	**1**	**0.18**	**1**	**100.00**	**0**	**0.00**

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