UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______________ to ______________

Commission File Number 001-32205

CBRE

CBRE GROUP, INC.
(Exact name of registrant as specified in its charter)

Delaware	**94-3391143**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
2100 McKinney Avenue, Suite 1250, Dallas, Texas	**75201**
(Address of principal executive offices)	(Zip Code)

(214) 979-6100
(Registrant’s telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, $0.01 par value per share	“CBRE”	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The number of shares of Class A common stock outstanding at July 24, 2023 was 309,838,091.

FORM 10-Q
June 30, 2023

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

CBRE GROUP, INC.
CONSOLIDATED BALANCE SHEETS
(Unaudited)
(Dollars in thousands, except share data)

	June 30, 2023	December 31, 2022
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 1,261,174	$ 1,318,290
Restricted cash	96,152	86,559
Receivables, less allowance for doubtful accounts of $ 96,764 and $ 92,354 at June 30, 2023 and December 31, 2022, respectively	5,552,692	5,326,807
Warehouse receivables	1,009,770	455,354
Contract assets	369,652	391,626
Prepaid expenses	352,678	311,508
Income taxes receivable	192,593	81,528
Other current assets	634,997	557,009
Total Current Assets	9,469,708	8,528,681
Property and equipment, net of accumulated depreciation and amortization of $ 1,529,028 and $ 1,386,261 at June 30, 2023 and December 31, 2022, respectively	848,852	836,041
Goodwill	5,043,708	4,868,382
Other intangible assets, net of accumulated amortization of $ 2,062,216 and $ 1,915,725 at June 30, 2023 and December 31, 2022, respectively	2,129,915	2,192,706
Operating lease assets	983,782	1,033,011
Investments in unconsolidated subsidiaries (with $ 944,505 and $ 973,635 at fair value at June 30, 2023 and December 31, 2022, respectively)	1,306,769	1,317,705
Non-current contract assets	140,336	137,480
Real estate under development	212,554	172,253
Non-current income taxes receivable	65,815	51,910
Deferred tax assets, net	306,430	265,554
Other assets, net	1,224,198	1,109,666
Total Assets	$ 21,732,067	$ 20,513,389
LIABILITIES AND EQUITY		
Current Liabilities:		
Accounts payable and accrued expenses	$ 2,886,203	$ 3,078,781
Compensation and employee benefits payable	1,365,963	1,459,001
Accrued bonus and profit sharing	1,013,554	1,691,118
Operating lease liabilities	242,824	229,591
Contract liabilities	263,703	276,334
Income taxes payable	168,702	184,453
Short-term borrowings:		
Warehouse lines of credit (which fund loans that U.S. Government Sponsored Enterprises have committed to purchase)	997,235	447,840
Revolving credit facility	583,000	178,000
Other short-term borrowings	6,199	42,914
Total short-term borrowings	1,586,434	668,754
Current maturities of long-term debt	436,205	427,792
Other current liabilities	189,452	226,170
Total Current Liabilities	8,153,040	8,241,994
Long-term debt, net of current maturities	2,059,797	1,085,712
Non-current operating lease liabilities	1,051,341	1,080,385
Non-current income taxes payable	30,428	54,761
Non-current tax liabilities	138,668	148,806
Deferred tax liabilities, net	280,033	282,073
Other liabilities	1,125,123	1,013,926
Total Liabilities	12,838,430	11,907,657
Commitments and contingencies	—	—
Equity:		
CBRE Group, Inc. Stockholders' Equity:		
Class A common stock; $0.01 par value; 525,000,000 shares authorized; 310,876,434 and 311,014,160 shares issued and outstanding at June 30, 2023 and December 31, 2022, respectively	3,109	3,110
Additional paid-in capital	12,510	—
Accumulated earnings	9,011,227	8,832,943
Accumulated other comprehensive loss	(928,788)	(982,780)
Total CBRE Group, Inc. Stockholders' Equity	8,098,058	7,853,273
Non-controlling interests	795,579	752,459
Total Equity	8,893,637	8,605,732
Total Liabilities and Equity	$ 21,732,067	$ 20,513,389

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(Dollars in thousands, except share and per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Revenue	$ 7,719,863	$ 7,771,278	$ 15,130,977	$ 15,104,211
Costs and expenses:				
Cost of revenue	6,179,496	6,053,984	12,185,910	11,806,178
Operating, administrative and other	1,088,812	1,188,819	2,297,716	2,254,815
Depreciation and amortization	154,387	162,359	315,878	311,391
Asset impairments	—	26,405	—	36,756
Total costs and expenses	7,422,695	7,431,567	14,799,504	14,409,140
Gain on disposition of real estate	9,261	177,226	12,321	198,818
Operating income	306,429	516,937	343,794	893,889
Equity (loss) income from unconsolidated subsidiaries	(7,502)	119,168	134,181	162,039
Other income (loss)	5,612	(6,909)	8,086	(21,373)
Interest expense, net of interest income	42,982	18,518	71,396	31,344
Income before provision for income taxes	261,557	610,678	414,665	1,003,211
Provision for income taxes	55,404	120,762	83,439	117,024
Net income	206,153	489,916	331,226	886,187
Less: Net income attributable to non-controlling interests	4,750	2,594	12,931	6,568
Net income attributable to CBRE Group, Inc.	$ 201,403	$ 487,322	$ 318,295	$ 879,619
Basic income per share:				
Net income per share attributable to CBRE Group, Inc.	$ 0.65	$ 1.50	$ 1.02	$ 2.68
Weighted average shares outstanding for basic income per share	310,857,203	325,415,305	310,662,324	328,692,585
Diluted income per share:				
Net income per share attributable to CBRE Group, Inc.	$ 0.64	$ 1.48	$ 1.01	$ 2.64
Weighted average shares outstanding for diluted income per share	314,282,247	329,843,710	314,821,615	333,514,398

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)
(Dollars in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	**2022**	**2023**	**2022**
Net income	$ 206,153	$ 489,916	$ 331,226	$ 886,187
Other comprehensive income (loss):				
Foreign currency translation gain (loss)	35,945	(303,894)	73,679	(385,179)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	111	107	221	215
Unrealized holding gains (losses) on available for sale debt securities, net of tax	643	(2,116)	573	(3,847)
Other, net of tax	(1)	(100)	5,557	—
Total other comprehensive income (loss)	36,698	(306,003)	80,030	(388,811)
Comprehensive income	242,851	183,913	411,256	497,376
Less: Comprehensive income (loss) attributable to non-controlling interests	17,138	(53,280)	38,969	(71,333)
Comprehensive income attributable to CBRE Group, Inc.	$ 225,713	$ 237,193	$ 372,287	$ 568,709

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(Dollars in thousands)

	Six Months Ended June 30,	
	2023	**2022**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 331,226	$ 886,187
Adjustments to reconcile net income to net cash (used in) provided by operating activities:		
Depreciation and amortization	315,878	311,391
Amortization of financing costs	2,305	3,407
Gains related to mortgage servicing rights, premiums on loan sales and sales of other assets	(45,340)	(87,150)
Asset impairments	—	36,756
Net realized and unrealized (gains) losses, primarily from investments	(2,935)	27,251
Provision for doubtful accounts	6,412	7,781
Net compensation expense for equity awards	38,796	82,322
Equity income from unconsolidated subsidiaries	(134,181)	(162,039)
Distribution of earnings from unconsolidated subsidiaries	183,068	315,255
Proceeds from sale of mortgage loans	4,356,448	7,270,423
Origination of mortgage loans	(4,893,898)	(6,984,779)
Increase (decrease) in warehouse lines of credit	549,395	(259,502)
Tenant concessions received	6,515	4,250
Purchase of equity securities	(8,309)	(13,931)
Proceeds from sale of equity securities	7,503	25,296
(Increase) decrease in real estate under development	(36,542)	74,127
Increase in receivables, prepaid expenses and other assets (including contract and lease assets)	(101,074)	(509,350)
Decrease in accounts payable and accrued expenses and other liabilities (including contract and lease liabilities)	(313,243)	(194,236)
Decrease in compensation and employee benefits payable and accrued bonus and profit sharing	(810,852)	(573,809)
Increase in net income taxes receivable/payable	(157,326)	(60,160)
Other operating activities, net	(49,471)	(138,574)
Net cash (used in) provided by operating activities	(755,625)	60,916
CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital expenditures	(135,012)	(96,722)
Acquisition of businesses, including net assets acquired and goodwill, net of cash acquired	(165,539)	(45,377)
Contributions to unconsolidated subsidiaries	(59,800)	(220,492)
Distributions from unconsolidated subsidiaries	20,787	42,006
Other investing activities, net	(29,754)	(8,357)
Net cash used in investing activities	(369,318)	(328,942)

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)
(Unaudited)
(Dollars in thousands)

	Six Months Ended June 30,	
	2023	**2022**
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from revolving credit facility	3,206,000	310,000
Repayment of revolving credit facility	(2,801,000)	—
Proceeds from notes payable on real estate	219	15,706
Repayment of notes payable on real estate	—	(16,544)
Proceeds from issuance of 5.950% senior notes	975,253	—
Repurchase of common stock	(129,808)	(993,769)
Acquisition of businesses (cash paid for acquisitions more than three months after purchase date)	(68,239)	(28,431)
Units repurchased for payment of taxes on equity awards	(50,217)	(34,841)
Non-controlling interest contributions	1,744	713
Non-controlling interest distributions	(1,398)	(370)
Other financing activities, net	(57,777)	(12,960)
Net cash provided by (used in) financing activities	1,074,777	(760,496)
Effect of currency exchange rate changes on cash and cash equivalents and restricted cash	2,643	(180,543)
NET DECREASE IN CASH AND CASH EQUIVALENTS AND RESTRICTED CASH	(47,523)	(1,209,065)
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH, AT BEGINNING OF PERIOD	1,404,849	2,539,781
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH, AT END OF PERIOD	$ 1,357,326	$ 1,330,716
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid during the period for:		
Interest	$ 91,301	$ 27,745
Income tax payments, net	$ 303,394	$ 336,266

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
CONSOLIDATED STATEMENTS OF EQUITY
(Unaudited)
(Dollars in thousands)

	CBRE Group, Inc. Stockholders'					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at March 31, 2023	$ 3,108	$ —	$ 8,809,824	$ (953,098)	$ 782,576	$ 8,642,410
Net income	—	—	201,403	—	4,750	206,153
Net compensation expense for equity awards	—	20,683	—	—	—	20,683
Units repurchased for payment of taxes on equity awards	—	(4,056)	—	—	—	(4,056)
Foreign currency translation gain	—	—	—	23,557	12,388	35,945
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	111	—	111
Unrealized holding gains on available for sale debt securities, net of tax	—	—	—	643	—	643
Contributions from non-controlling interests	—	—	—	—	1,177	1,177
Distributions to non-controlling interests	—	—	—	—	(1,297)	(1,297)
Other	1	(4,117)	—	(1)	(4,015)	(8,132)
Balance at June 30, 2023	$ 3,109	$ 12,510	$ 9,011,227	$ (928,788)	$ 795,579	$ 8,893,637

	CBRE Group, Inc. Stockholders'					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at March 31, 2022	$ 3,296	$ 409,187	$ 8,758,928	$ (701,440)	$ 812,854	$ 9,282,825
Net income	—	—	487,322	—	2,594	489,916
Net compensation expense for equity awards	—	45,459	—	—	—	45,459
Units repurchased for payment of taxes on equity awards	—	(3,446)	—	—	—	(3,446)
Repurchase of common stock	(75)	(449,342)	(161,892)	—	—	(611,309)
Foreign currency translation loss	—	—	—	(248,020)	(55,874)	(303,894)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	107	—	107
Unrealized holding losses on available for sale debt securities, net of tax	—	—	—	(2,116)	—	(2,116)
Contributions from non-controlling interests	—	—	—	—	503	503
Distributions to non-controlling interests	—	—	—	—	(157)	(157)
Other	—	(1,858)	—	(100)	(946)	(2,904)
Balance at June 30, 2022	$ 3,221	$ —	$ 9,084,358	$ (951,569)	$ 758,974	$ 8,894,984

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
CONSOLIDATED STATEMENTS OF EQUITY (Continued)
(Unaudited)
(Dollars in thousands)

	CBRE Group, Inc. Stockholders'					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at December 31, 2022	$ 3,110	$ —	$ 8,832,943	$ (982,780)	$ 752,459	$ 8,605,732
Net income	—	—	318,295	—	12,931	331,226
Net compensation expense for equity awards	—	38,796	—	—	—	38,796
Units repurchased for payment of taxes on equity awards	—	(16,622)	(33,595)	—	—	(50,217)
Repurchase of common stock	(14)	—	(114,235)	—	—	(114,249)
Foreign currency translation gain	—	—	—	47,641	26,038	73,679
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	221	—	221
Unrealized holding gains on available for sale debt securities, net of tax	—	—	—	573	—	573
Contributions from non-controlling interests	—	—	—	—	1,744	1,744
Distributions to non-controlling interests	—	—	—	—	(1,398)	(1,398)
Other	13	(9,664)	7,819	5,557	3,805	7,530
Balance at June 30, 2023	$ 3,109	$ 12,510	$ 9,011,227	$ (928,788)	$ 795,579	$ 8,893,637

	CBRE Group, Inc. Stockholders'					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at December 31, 2021	$ 3,329	$ 798,892	$ 8,366,631	$ (640,659)	$ 830,924	$ 9,359,117
Net income	—	—	879,619	—	6,568	886,187
Net compensation expense for equity awards	—	82,322	—	—	—	82,322
Units repurchased for payment of taxes on equity awards	—	(34,841)	—	—	—	(34,841)
Repurchase of common stock	(117)	(840,163)	(161,892)	—	—	(1,002,172)
Foreign currency translation loss	—	—	—	(307,278)	(77,901)	(385,179)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	215	—	215
Unrealized holding losses on available for sale debt securities, net of tax	—	—	—	(3,847)	—	(3,847)
Contributions from non-controlling interests	—	—	—	—	713	713
Distributions to non-controlling interests	—	—	—	—	(370)	(370)
Other	9	(6,210)	—	—	(960)	(7,161)
Balance at June 30, 2022	$ 3,221	$ —	$ 9,084,358	$ (951,569)	$ 758,974	$ 8,894,984

The accompanying notes are an integral part of these consolidated financial statements.

CBRE GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Basis of Presentation

Readers of this Quarterly Report on Form 10-Q (Quarterly Report) should refer to the audited financial statements and notes to consolidated financial statements of CBRE Group, Inc., a Delaware corporation (which may be referred to in these financial statements as "the company," "we," "us" and "our"), for the year ended December 31, 2022, which are included in our 2022 Annual Report on Form 10-K (2022 Annual Report), filed with the United States Securities and Exchange Commission (SEC) and also available on our website (www.cbre.com), since we have omitted from this Quarterly Report certain footnote disclosures which would substantially duplicate those contained in such audited financial statements. You should also refer to Note 2, Significant Accounting Policies, in the notes to consolidated financial statements in our 2022 Annual Report for further discussion of our significant accounting policies and estimates.

Considerations Related to Tightening Monetary Policy

The macroeconomic environment remains challenging as central banks have continued to rapidly raise interest rates. The rising rate environment, coupled with large bank failures in early 2023 and ongoing economic uncertainty, has limited credit availability to commercial real estate. Less available and more expensive debt capital has had pronounced effects on our capital markets (mortgage origination and property sales) businesses, making property acquisitions and dispositions harder to finance. Similar factors also impact the timing of and proceeds generated from asset sales within our investment management and development businesses and our ability to obtain debt capital to begin new development projects.

Financial Statement Preparation

The accompanying consolidated financial statements have been prepared in accordance with the rules applicable to quarterly reports on Form 10-Q and include all information and footnotes required for interim financial statement presentation, but do not include all disclosures required under accounting principles generally accepted in the United States (U.S.), or General Accepted Accounting Principles (GAAP), for annual financial statements. In our opinion, all adjustments (consisting of normal recurring adjustments, except as otherwise noted) considered necessary for a fair presentation have been included. The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions about future events, such as weakening global macroeconomic conditions and stress in the banking system, including less available and more expensive debt capital. These estimates and the underlying assumptions affect the reported amounts of assets, liabilities, revenues and expenses. Such estimates include the value of goodwill, intangibles and other long-lived assets, real estate assets, accounts receivable, contract assets, operating lease assets, investments in unconsolidated subsidiaries and assumptions used in the calculation of income taxes, retirement and other post-employment benefits, among others. These estimates and assumptions are based on our best judgment. We evaluate our estimates and assumptions on an ongoing basis using historical experience and other factors, including consideration of the current economic environment, and adjust such estimates and assumptions when facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Changes in these estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods.

2. New Accounting Pronouncements

Recent Accounting Pronouncements Pending Adoption

In June 2022, the Financial Standards Board (FASB) issued Accounting Standards Update (ASU) 2022-03, "*Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*." Topic 820, Fair Value Measurement, states that a reporting entity should consider the characteristics of the asset or liability when measuring the fair value, including restrictions on the sale of the asset or liability, if a market participant would take those characteristics into account and the key to that determination is the unit of account for the asset or liability being measured at fair value. Topic 820 contains conflicting guidance on what the unit of account is when measuring the fair value of an equity security and this has resulted in diversity in practice on whether the effects of a contractual restriction that prohibits the sale of an equity security should be considered in measuring the equity security's fair value. To address this, the amendments in the ASU clarify that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The ASU introduces new disclosure requirements to provide investors with information about the restriction including the nature and remaining duration of the restriction. This guidance is effective for fiscal years beginning after December 15, 2023, and interim periods within those fiscal years. We are

evaluating the effect that this guidance will have on our consolidated financial statements and related disclosures, but do not expect it to have a material impact.

In March 2023, the FASB issued ASU 2023-01, *"Leases (Topic 842): Common Control Arrangements."* This update requires that leasehold improvements associated with common control leases be amortized over the useful life of the leasehold improvements to the common control group (regardless of the lease term) and accounted for as a transfer between entities under common control through an adjustment to equity if, and when, the lessee no longer controls the use of the underlying asset. This update also provides a practical expedient for private companies and not-for-profit entities to use written terms and conditions of a common control arrangement to determine if a lease exists and the classification and accounting for that lease. This guidance is effective for fiscal years beginning after December 15, 2023, and interim periods within those fiscal years. We are evaluating the effect that this guidance will have on our consolidated financial statements and related disclosures, but do not expect it to have a material impact.

In March 2023, the FASB issued ASU 2023-02, *"Investments – Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization method."* This update permits an accounting election to account for tax equity investments, regardless of the tax credit program from which the income tax credits are received, using the proportional amortization method if certain conditions are met. This guidance is effective for fiscal years beginning after December 15, 2023, and interim periods within those fiscal years. We are evaluating the effect that this guidance will have on our consolidated financial statements and related disclosures, but do not expect it to have a material impact.

3. Warehouse Receivables & Warehouse Lines of Credit

Our wholly-owned subsidiary CBRE Capital Markets, Inc. (CBRE Capital Markets) is a Federal Home Loan Mortgage Corporation (Freddie Mac) approved Multifamily Program Plus Seller/Servicer and an approved Federal National Mortgage Association (Fannie Mae) Aggregation and Negotiated Transaction Seller/Servicer. In addition, CBRE Capital Markets' wholly-owned subsidiary CBRE Multifamily Capital, Inc. (CBRE MCI) is an approved Fannie Mae Delegated Underwriting and Servicing (DUS) Seller/Servicer and CBRE Capital Markets' wholly-owned subsidiary CBRE HMF, Inc. (CBRE HMF) is a U.S. Department of Housing and Urban Development (HUD) approved Non-Supervised Federal Housing Authority (FHA) Title II Mortgagee, an approved Multifamily Accelerated Processing (MAP) lender and an approved Government National Mortgage Association (Ginnie Mae) issuer of mortgage-backed securities (MBS). Under these arrangements, before loans are originated through proceeds from warehouse lines of credit, we obtain either a contractual loan purchase commitment from either Freddie Mac or Fannie Mae or a confirmed forward trade commitment for the issuance and purchase of a Fannie Mae or Ginnie Mae MBS that will be secured by the loans. The warehouse lines of credit are generally repaid within a one-month period when Freddie Mac or Fannie Mae buys the loans or upon settlement of the Fannie Mae or Ginnie Mae MBS, while we retain the servicing rights. Loans are funded at the prevailing market rates. We elect the fair value option for all warehouse receivables. At June 30, 2023 and December 31, 2022, all of the warehouse receivables included in the accompanying consolidated balance sheets were either under commitment to be purchased by Freddie Mac or had confirmed forward trade commitments for the issuance and purchase of Fannie Mae or Ginnie Mae mortgage-backed securities that will be secured by the underlying loans.

A rollforward of our warehouse receivables is as follows (dollars in thousands):

Beginning balance at December 31, 2022	$	455,354
Origination of mortgage loans		4,893,898
Gains (premiums on loan sales)		12,185
Proceeds from sale of mortgage loans:		
Sale of mortgage loans		(4,344,263)
Cash collections of premiums on loan sales		(12,185)
Proceeds from sale of mortgage loans		(4,356,448)
Net increase in mortgage servicing rights included in warehouse receivables		4,781
Ending balance at June 30, 2023	$	1,009,770

The following table is a summary of our warehouse lines of credit in place as of June 30, 2023 and December 31, 2022 (dollars in thousands):

			June 30, 2023		December 31, 2022	
Lender	**Current Maturity**	**Pricing**	**Maximum Facility Size**	**Carrying Value**	**Maximum Facility Size**	**Carrying Value**
JP Morgan Chase Bank, N.A. (JP Morgan)	12/15/2023	daily floating rate Secured Overnight Financing Rate (SOFR) rate plus 1.60%, with a SOFR adjustment rate of 0.05%	$ 1,335,000	$ 721,573	$ 1,335,000	$ 330,509
JP Morgan (Business Lending Activity)	12/15/2023	daily floating rate SOFR rate plus 2.75%, with a SOFR adjustment rate of 0.05%	15,000	1,520	15,000	—
Fannie Mae Multifamily As Soon As Pooled Plus Agreement and Multifamily As Soon As Pooled Sale Agreement (ASAP) Program	Cancelable anytime	daily one-month LIBOR plus 1.45%, with a LIBOR floor of 0.25%	650,000	16,295	650,000	—
TD Bank, N.A. (TD Bank) (1)	7/15/2023	daily floating rate SOFR rate 1.30%, with a SOFR adjustment rate of 0.10%	800,000	59,516	800,000	—
Bank of America, N.A. (BofA) (2)	5/22/2024	daily floating rate SOFR rate plus 1.35%, with a SOFR adjustment rate of 0.10%	350,000	198,331	350,000	115,206
BofA (3)	5/22/2024	daily floating rate SOFR rate 1.35%, with a SOFR adjustment rate of 0.10%	250,000	—	250,000	—
MUFG Union Bank, N.A. (Union Bank) (4)			—	—	200,000	2,125
			$ 3,400,000	$ 997,235	$ 3,600,000	$ 447,840

(1) Effective July 1, 2020, this facility was amended and provides for a maximum aggregate principal amount of $ 400.0 million, in addition to an uncommitted $ 400.0 million temporary line of credit. Effective July 15, 2022, this facility was amended with a revised interest rate of daily floating rate SOFR rate plus 1.30%, with a SOFR adjustment rate of 0.10% and a maturity date of July 15, 2023. Effective July 15, 2023, this facility was renewed and amended to a maximum aggregate principal amount of $300.0 million, with an uncommitted $300.0 million temporary line of credit and a maturity date of July 15, 2024. There were no changes to the SOFR rate or the SOFR adjustment rate at renewal. As of June 30, 2023, the uncommitted $400.0 million temporary line of credit was not utilized.

(2) Effective May 24, 2023, this facility was renewed with a revised interest rate of daily floating rate SOFR plus 1.35%, with a SOFR adjustment rate of 0.10% and a maturity date of May 22, 2024.

(3) Effective May 24, 2023, the advised consent line was renewed for $ 250.0 million of capacity with a revised interest rate of daily floating rate SOFR plus 1.35%, with a SOFR adjustment rate of 0.10%, and a maturity date of May 22, 2024.

(4) This facility expired on June 27, 2023, and was not renewed.

During the six months ended June 30, 2023, we had a maximum of $1.1 billion of warehouse lines of credit principal outstanding.

4. Variable Interest Entities (VIEs)

We hold variable interests in certain VIEs primarily in our Real Estate Investments segment which are not consolidated as it was determined that we are not the primary beneficiary. Our involvement with these entities is in the form of equity co-investments and fee arrangements.

As of June 30, 2023 and December 31, 2022, our maximum exposure to loss related to VIEs which are not consolidated was as follows (dollars in thousands):

	June 30, 2023	December 31, 2022
Investments in unconsolidated subsidiaries	$ 169,286	$ 152,762
Co-investment commitments	65,337	83,835
Maximum exposure to loss	$ 234,623	$ 236,597

5. Fair Value Measurements

Topic 820 of the FASB ASC defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Topic 820 also establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 – Quoted prices in active markets for identical assets or liabilities.
- Level 2 – Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
- Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

There have been no significant changes to the valuation techniques and inputs used to develop the recurring fair value measurements from those disclosed in our 2022 Annual Report, except as described below.

The following tables present the fair value of assets and liabilities measured at fair value on a recurring basis as of June 30, 2023 and December 31, 2022 (dollars in thousands):

	As of June 30, 2023			
	Fair Value Measured and Recorded Using			
	Level 1	Level 2	Level 3	Total
Assets				
Available for sale debt securities:				
U.S. treasury securities	$ 12,389	$ —	$ —	$ 12,389
Debt securities issued by U.S. federal agencies	—	11,360	—	11,360
Corporate debt securities	—	44,634	—	44,634
Asset-backed securities	—	1,942	—	1,942
Total available for sale debt securities	12,389	57,936	—	70,325
Equity securities	37,030	—	—	37,030
Investments in unconsolidated subsidiaries	132,602	—	452,887	585,489
Warehouse receivables	—	1,009,770	—	1,009,770
Other assets	—	—	23,535	23,535
Total assets at fair value	$ 182,021	$ 1,067,706	$ 476,422	$ 1,726,149

CBRE GROUP, INC.
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	As of December 31, 2022			
	Fair Value Measured and Recorded Using			
	Level 1	Level 2	Level 3	Total
Assets				
Available for sale debt securities:				
U.S. treasury securities	$ 6,164	$ —	$ —	$ 6,164
Debt securities issued by U.S. federal agencies	—	8,249	—	8,249
Corporate debt securities	—	44,091	—	44,091
Asset-backed securities	—	3,201	—	3,201
Total available for sale debt securities	6,164	55,541	—	61,705
Equity securities	33,724	—	—	33,724
Investments in unconsolidated subsidiaries	160,093	—	460,540	620,633
Warehouse receivables	—	455,354	—	455,354
Other assets	—	—	14,452	14,452
Total assets at fair value	$ 199,981	$ 510,895	$ 474,992	$ 1,185,868

There were no liabilities measured at fair value on a recurring basis as of June 30, 2023 and December 31, 2022.

Fair value measurements for our available for sale debt securities are obtained from independent pricing services which utilize observable market data that may include quoted market prices, dealer quotes, market spreads, cash flows, the U.S. treasury yield curve, trading levels, market consensus prepayment speeds, credit information and the instrument's terms and conditions.

The equity securities are generally valued at the last reported sales price on the day of valuation or, if no sales occurred on the valuation date, at the mean of the bid and ask prices on such date. The above tables do not include our $122.7 million capital investment in certain non-public entities as they are non-marketable equity investment accounted for under the measurement alternative, defined as cost minus impairment. These investments are included in "other assets, net" in the accompanying consolidated balance sheets.

The fair values of the warehouse receivables are primarily calculated based on already locked in purchase prices. At June 30, 2023 and December 31, 2022, all of the warehouse receivables included in the accompanying consolidated balance sheets were either under commitment to be purchased by Freddie Mac or had confirmed forward trade commitments for the issuance and purchase of Fannie Mae or Ginnie Mae mortgage backed securities that will be secured by the underlying loans (See Note 3). These assets are classified as Level 2 in the fair value hierarchy as a substantial majority of inputs are readily observable.

As of June 30, 2023 and December 31, 2022, investments in unconsolidated subsidiaries at fair value using NAV were $359.0 million and $353.0 million, respectively. These investments fall under practical expedient rules that do not require them to be included in the fair value hierarchy and as a result have been excluded from the tables above.

The tables below present a reconciliation for assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (dollars in thousands):

	Investment in Unconsolidated Subsidiaries	Other assets
Balance as of March 31, 2023	$ 456,556	$ 20,445
Transfer in (out)	—	—
Net change in fair value	(3,669)	100
Purchases / Additions	—	2,990
Balance as of June 30, 2023	$ 452,887	$ 23,535
Balance as of December 31, 2022	$ 460,540	$ 14,452
Transfer in (out)	(230)	—
Net change in fair value	(7,423)	3,500
Purchases / Additions	—	5,583
Balance as of June 30, 2023	$ 452,887	$ 23,535

CBRE GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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Net change in fair value, included in the table above, is reported in Net income as follows:

Category of Assets/Liabilities using Unobservable Inputs	Consolidated Statements of Operations
Investments in unconsolidated subsidiaries	Equity income from unconsolidated subsidiaries
Other assets (liabilities)	Other income (loss)

The table below presents information about the significant unobservable inputs used for recurring fair value measurements for certain Level 3 instruments as of June 30, 2023:

	Valuation Technique	Unobservable Input	Range	Weighted Average
Investment in unconsolidated subsidiaries	Discounted cash flow	Discount rate	24.0 %	—
	Monte Carlo	Volatility	40.0% - 69.0%	42.6 %
		Risk free interest rate	4.0 %	
		Discount Yield	25.0 %	—
Other assets	Discounted cash flow	Discount rate	24.0 %	—

There were no asset impairment charges or adjustments recorded during the three and six months ended June 30, 2023.

During the three and six months ended June 30, 2022, we recorded $26.4 million and $10.4 million in non-cash asset impairment charges related to inflationary impact on certain parts of the business and also due to exit of our Advisory Services segment from Russia.

There were no other significant non-recurring fair value measurements recorded during the three and six months ended June 30, 2023 and 2022.

FASB ASC Topic 825, *"Financial Instruments"* requires disclosure of fair value information about financial instruments, whether or not recognized in the accompanying consolidated balance sheets. Our financial instruments are as follows:

- *Cash and Cash Equivalents* and *Restricted Cash* – These balances include cash and cash equivalents as well as restricted cash with maturities of less than three months. The carrying amount approximates fair value due to the short-term maturities of these instruments.
- *Receivables, less Allowance for Doubtful Accounts* – Due to their short-term nature, fair value approximates carrying value.
- *Warehouse Receivables* – These balances are carried at fair value. The primary source of value is either a contractual purchase commitment from Freddie Mac or a confirmed forward trade commitment for the issuance and purchase of a Fannie Mae or Ginnie Mae MBS (see Note 3).
- *Investments in Unconsolidated Subsidiaries* – A portion of these investments are carried at fair value as discussed above. It includes our equity investment and related interests in both public and non-public entities. Our ownership of common shares in Altus Power Inc. (Altus) is considered level 1 and is measured at fair value using a quoted price in an active market. Our ownership of alignment shares of Altus and our investment in Industrious and certain other non-controlling equity investments are considered level 3 which are measured at fair value using Monte Carlo and discounted cash flows. The valuation of Altus' common shares and alignment shares are dependent on its stock price which could be volatile and subject to wide fluctuations in response to various market conditions. Transfer out activities from level 3, as shown in the table above, represent annual conversion of a portion of our alignment shares in Altus to its common shares.
- *Available for Sale Debt Securities* – Primarily held by our wholly-owned captive insurance company, these investments are carried at their fair value.
- *Equity Securities* – Primarily held by our wholly-owned captive insurance company, these investments are carried at their fair value.

CBRE GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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- *Other assets / liabilities* – Represents the fair value of the unfunded commitment related to a revolving facility. Valuations are based on discounted cash flow techniques, for which the significant inputs are the amount and timing of expected future cash flows, market comparables and recovery assumptions. It also includes approximately $10 million of investment in a non-public entity designated as trading debt security that the company purchased in the fourth quarter of 2022 for which cost approximated fair value at June 30, 2023.

- *Short-Term Borrowings* – The majority of this balance represents outstanding amounts under our warehouse lines of credit of our wholly-owned subsidiary, CBRE Capital Markets, and our revolving credit facility. Due to the short-term nature and variable interest rates of these instruments, fair value approximates carrying value (see Notes 3 and 7).

- *Senior Term Loans* – Based upon information from third-party banks (which falls within Level 2 of the fair value hierarchy), the estimated fair value of our senior term loans was approximately $434.6 million and $424.6 million at June 30, 2023 and December 31, 2022, respectively. Their actual carrying value, net of unamortized debt issuance costs, totaled $436.2 million and $427.8 million at June 30, 2023 and December 31, 2022, respectively (see Note 7).

- *Senior Notes* – Based on dealers' quotes (which falls within Level 2 of the fair value hierarchy), the estimated fair value of our5.950% senior notes was $987.1 million at June 30, 2023. The actual carrying value of our5.950% senior notes, net of unamortized debt issuance costs and discount, totaled $973.0 million at June 30, 2023. The estimated fair value of our 4.875% senior notes was $581.9 million and $595.2 million at June 30, 2023 and December 31, 2022, respectively. The actual carrying value of our 4.875% senior notes, net of unamortized debt issuance costs and discount, totaled $597.0 million and $596.4 million at June 30, 2023 and December 31, 2022, respectively. The estimated fair value of our 2.500% senior notes was $400.4 million and $396.8 million at June 30, 2023 and December 31, 2022, respectively. The actual carrying value of our 2.500% senior notes, net of unamortized debt issuance costs and discount, totaled $489.8 million and $489.3 million at June 30, 2023 and December 31, 2022, respectively (See Note 7).

- *Notes Payable on Real Estate* - As of June 30, 2023 and December 31, 2022, the carrying value of our notes payable on real estate, net of unamortized debt issuance costs, was $32.2 million and $52.7 million, respectively. These notes payable were not recourse to CBRE Group, Inc., except for being recourse to the single-purpose entities that held the real estate assets and were the primary obligors on the notes payable. These borrowings have either fixed interest rates or floating interest rates at spreads added to a market index. Although it is possible that certain portions of our notes payable on real estate may have fair values that differ from their carrying values, based on the terms of such loans as compared to current market conditions, or other factors specific to the borrower entity, we do not believe that the fair value of our notes payable is significantly different than their carrying value.

6. Investments in Unconsolidated Subsidiaries

Investments in unconsolidated subsidiaries are accounted for under the equity method of accounting. Our investment ownership percentages in equity method investments vary, generally ranging from 1.0% to 50.0%. The following table represents the composition of investment in unconsolidated subsidiaries under equity method of accounting and fair value option (dollars in thousands):

Investment type	June 30, 2023	December 31, 2022
Real estate investments (in projects and funds)	$ 648,537	$ 622,826
Investment in Altus:		
Class A common stock [1]	132,602	160,093
Alignment shares [2]	42,294	59,530
Subtotal	174,896	219,624
Other [3]	483,336	475,256
Total investment in unconsolidated subsidiaries	$ 1,306,769	$ 1,317,705

(1) CBRE held 24,556,012 and 24,554,201 shares of Altus Class A common stock as of June 30, 2023 and December 31, 2022, respectively.

(2) The alignment shares, also known as Class B common shares, will automatically convert into Altus Class A common shares based on the achievement of certain total return thresholds on Altus Class A common shares as of the relevant measurement date over the seven fiscal years following the merger. As of March 31, 2023 (the second measurement date), 201,250 alignment shares automatically converted into 2,011 shares of Class A common stock, of which CBRE was entitled to 1,811 shares.

(3) Consists of our investments in Industrious and other non-public entities.

Combined condensed financial information for the entities accounted for using the equity method is as follows (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Revenue	$ 559,330	$ 646,576	$ 4,657,503	$ 1,227,692
Operating (loss) income	(58,732)	191,693	3,568,771	465,386
Net (loss) income [1]	(1,114,489)	1,499,234	571,846	2,952,081

(1) Included in net income are realized and unrealized earnings and losses in investments in unconsolidated investment funds and realized earnings and losses from sales of real estate projects in investments in unconsolidated subsidiaries. These realized and unrealized earnings and losses are not included in revenue and operating income.

7. Long-Term Debt and Short-Term Borrowings

Long-Term Debt

Long-term debt consists of the following (dollars in thousands):

	June 30, 2023	December 31, 2022
Senior Euro term loan, with interest of 0.75% plus Euro Interbank Offered Rate (EURIBOR) adj	$ 436,205	$ 427,792
5.950% senior notes due in 2034, net of unamortized discount	975,253	—
4.875% senior notes due in 2026, net of unamortized discount	598,613	598,374
2.500% senior notes due in 2031, net of unamortized discount	493,829	493,476
Total long-term debt	2,503,900	1,519,642
Less: current maturities of long-term debt	436,205	427,792
Less: unamortized debt issuance costs	7,898	6,138
Total long-term debt, net of current maturities	$ 2,059,797	$ 1,085,712

We maintain credit facilities with third-party lenders, which we use for a variety of purposes. On July 9, 2021, CBRE Services, Inc. (CBRE Services) entered into an incremental assumption agreement with respect to its credit agreement, dated October 31, 2017 (such agreement, as amended by a December 20, 2018 incremental term loan assumption agreement, and such, a March 4, 2019 incremental assumption agreement and such, a July 9, 2021 incremental assumption agreement, collectively, the 2021 Credit Agreement) for purposes of increasing the revolving credit commitments previously available under the 2021 Credit Agreement by an aggregate principal amount of $350.0 million.

On December 10, 2021, CBRE Services and certain of the other borrowers entered into a first amendment of the 2021 Credit Agreement which (i) changed the interest rate applicable to revolving borrowings denominated in Sterling from a LIBOR-based rate to a rate based on the Sterling Overnight Index Average (SONIA) and (ii) changed the interest rate applicable to revolving borrowings denominated in Euros from a LIBOR-based rate to a rate based on EURIBOR. The revised interest rates described above went into effect on January 1, 2022.

On August 5, 2022, CBRE Group, Inc., as Holdings, and CBRE Global Acquisition Company, as the Luxembourg Borrower, entered into a second amendment to the 2021 Credit Agreement which, among other things (i) amended certain of the representations and warranties, affirmative covenants, negative covenants and events of default in the 2021 Credit Agreement in a manner consistent with the new 5-year senior unsecured Revolving Credit Agreement (as described below), (ii) terminated all revolving commitments previously available to the subsidiaries of the company thereunder and (iii) reflected the resignation of the previous administrative agent and the appointment of Wells Fargo Bank, National Association as the new administrative agent (the 2021 Credit Agreement, as amended by the first amendment and second amendment is referred to in this Quarterly Report as the 2022 Credit Agreement).

The 2022 Credit Agreement is a senior unsecured credit facility that is guaranteed by CBRE Group, Inc. and CBRE Services. As of June 30, 2023, the 2022 Credit Agreement provided for a €400.0 million term loan facility due and payable in full at maturity on December 20, 2023. A $3.15 billion revolving credit facility, which included the capacity to obtain letters of credit and swingline loans and would have terminated on March 4, 2024, was previously provided under this agreement and was replaced with a new $3.5 billion 5-year senior unsecured Revolving Credit Agreement entered into on August 5, 2022 (as described below).

Borrowings under the euro term loan facility under the 2022 Credit Agreement bear interest at a minimum rate of 0.75% plus EURIBOR and revolving borrowings bear interest, based at our option, on either (1) the applicable fixed rate plus 0.68% to 1.075% or (2) the daily rate plus 0.0% to 0.075% in each case as determined by reference to our Credit Rating (as defined in the 2022 Credit Agreement). As of June 30, 2023, we had $436.2 million of euro term loan borrowings outstanding under the 2022 Credit Agreement (at an interest rate of 0.75% plus EURIBOR), net of unamortized debt issuance costs, included as current maturities of long-term debt in the accompanying consolidated balance sheets.

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Our 2022 Credit Agreement also requires us to maintain a minimum coverage ratio of consolidated EBITDA (as defined in the 2022 Credit Agreement) to consolidated interest expense of 2.00x and a maximum leverage ratio of total debt less available cash to consolidated EBITDA (as defined in the 2022 Credit Agreement) of 4.25x (and in the case of the first four full fiscal quarters following consummation of a qualified acquisition (as defined in the 2022 Credit Agreement), 4.75x) as of the end of each fiscal quarter.

On July 10, 2023, CBRE Group, Inc., CBRE Services and Relam Amsterdam Holdings B.V., a wholly-owned subsidiary of CBRE Services, entered into a new five year senior unsecured Credit Agreement (the 2023 Credit Agreement). The 2023 Credit Agreement provides for a senior unsecured term loan credit facility comprised of (i) tranche A Euro-denominated term loans in an aggregate principal amount of € 366.5 million and (ii) tranche A U.S. Dollar-denominated term loans in an aggregate principal amount of $350.0 million. The proceeds of the term loans under the 2023 Credit Agreement were applied to the repayment of all remaining outstanding loans under the 2022 Credit Agreement, the payment of related fees and expenses and other general corporate purposes. We entered into a cross currency swap to hedge the associated foreign currency exposure related to this transaction.

Borrowings denominated in euros under the 2023 Credit Agreement bear interest at a rate equal to (i) the applicable percentage plus (ii) at our option, either (1) the EURIBOR rate for the applicable interest period or (2) a rate determined by reference to Daily Simple Euro Short-Term Rate (ESTR). Borrowings denominated in dollars under the 2023 Credit Agreement bear interest at a rate equal to (i) the applicable percentage, plus (ii) at our option, either (1) the Term SOFR rate for the applicable interest period plus 10 basis points or (2) a base rate determined by the reference to the greatest of (x) the prime rate, (y) the federal funds rate plus 1/2 of 1% and (z) the sum of (A) Term SOFR rate published by CME Group Benchmark Administration Limited for an interest period of one month and (B) 1.00%. The applicable rate for borrowings under the 2023 Credit Agreement are determined by reference to our Credit Rating (as defined in the 2023 Credit Agreement).

The term loan borrowings under the 2023 Credit Agreement are guaranteed on a senior basis by CBRE Group, Inc. and CBRE Services.

The 2023 Credit Agreement also requires us to maintain a minimum coverage ratio of consolidated EBITDA (as defined in the 2023 Credit Agreement) to consolidated interest expense of 2.00x and a maximum leverage ratio of total debt less available cash to consolidated EBITDA (as defined in the 2023 Credit Agreement) of 4.25x (and in the case of the first four full fiscal quarters following consummation of a qualified acquisition (as defined in the 2023 Credit Agreement), 4.75x) as of the end of each fiscal quarter. In addition, the 2023 Credit Agreement also contains other customary affirmative and negative covenants and events of default.

On June 23, 2023, CBRE Services issued $1.0 billion in aggregate principal amount of 5.950% senior notes due August 15, 2034 (the 5.950% senior notes) at a price equal to 98.174% of their face value. The 5.950% senior notes are unsecured obligations of CBRE Services, senior to all of its current and future subordinated indebtedness, but effectively subordinated to its current and future secured indebtedness (if any) to the extent of the value of the assets securing such indebtedness. The 5.950% senior notes are guaranteed on a senior basis by CBRE Group, Inc. Interest accrues at a rate of 5.950% per year and is payable semi-annually in arrears on February 15 and August 15 of each year, beginning on February 15, 2024. The 5.950% senior notes are redeemable at our option, in whole or in part, on or after May 15, 2034 at a redemption price of 100% of the principal amount on that date, plus accrued and unpaid interest, if any, to, but excluding the date of redemption. At any time prior to May 15, 2034, we may redeem all or a portion of the notes at a redemption price equal to the greater of (1) 100% of the principal amount of the notes to be redeemed and (2) the sum of the present value at the date of redemption of the remaining scheduled payments of principal and interest thereon to May 15, 2034, assuming the notes matured on May 15, 2034, discounted to the date of redemption on a semi-annual basis at an adjusted rate equal to the treasury rate plus 40 basis points, minus accrued interest to the date of redemption, plus, in either case, accrued and unpaid interest, if any, to the redemption date. The amount of the 5.950% senior notes, net of unamortized discount and unamortized debt issuance costs, included in the accompanying consolidated balance sheet was $973.0 million at June 30, 2023.

On March 18, 2021, CBRE Services issued $500.0 million in aggregate principal amount of 2.500% senior notes due April 1, 2031 (the 2.500% senior notes) at a price equal to 98.451% of their face value. The 2.500% senior notes are unsecured obligations of CBRE Services, senior to all of its current and future subordinated indebtedness. The 2.500% senior notes are guaranteed on a senior basis by CBRE Group, Inc. Interest accrues at a rate of 2.500% per year and is payable semi-annually in arrears on April 1 and October 1 of each year.

On August 13, 2015, CBRE Services issued $600.0 million in aggregate principal amount of 4.875% senior notes due March 1, 2026 (the 4.875% senior notes) at a price equal to 99.24% of their face value. The 4.875% senior notes are unsecured obligations of CBRE Services, senior to all of its current and future subordinated indebtedness. The 4.875% senior notes are

guaranteed on a senior basis by CBRE Group, Inc. Interest accrues at a rate of4.875% per year and is payable semi-annually in arrears on March 1 and September 1 of each year.

The indentures governing our 5.950% senior notes, 4.875% senior notes and 2.500% senior notes (1) contain restrictive covenants that, among other things, limit our ability to create or permit liens on assets securing indebtedness, enter into sale/leaseback transactions and enter into consolidations or mergers, and (2) require that the notes be jointly and severally guaranteed on a senior basis by CBRE Group, Inc. and any domestic subsidiary that guarantees the 2022 Credit Agreement, the 2023 Credit Agreement, or the Revolving Credit Agreement. The indentures also contain other customary affirmative and negative covenants and events of default. We were in compliance with the covenants under our debt instruments as of June 30, 2023.

Short-Term Borrowings

Revolving Credit Agreement

On August 5, 2022, we entered into a new 5-year senior unsecured Revolving Credit Agreement (the "Revolving Credit Agreement"). The Revolving Credit Agreement provides for a senior unsecured revolving credit facility available to CBRE Services with a capacity of $3.5 billion and a maturity date of August 5, 2027. Borrowings bear interest at (i) CBRE Services' option, either (a) a Term SOFR rate published by CME Group Benchmark Administration Limited for the applicable interest period or (b) a base rate determined by reference to the greatest of (1) the prime rate determined by Wells Fargo, (2) the federal funds rate plus 1/2 of 1% and (3) the sum of (x) a Term SOFR rate published by CME Group Benchmark Administration Limited for an interest period of one month and (y) 1.00% plus (ii) 10 basis points, plus (iii) a rate equal to an applicable rate (in the case of borrowings based on the Term SOFR rate, 0.630% to 1.100% and in the case of borrowings based on the base rate,0.0% to 0.100%, in each case, as determined by reference to our Debt Rating (as defined in the Revolving Credit Agreement). The applicable rate is also subject to certain increases and/or decreases specified in the Revolving Credit Agreement linked to achieving certain sustainability goals.

The Revolving Credit Agreement requires us to pay a fee based on the total amount of the revolving credit facility commitment (whether used or unused). In addition, the Revolving Credit Agreement also includes capacity for letters of credit not to exceed $300.0 million in the aggregate.

The Revolving Credit Agreement also requires us to maintain a minimum coverage ratio of consolidated EBITDA (as defined in the Revolving Credit Agreement) to consolidated interest expense of 2.00x and a maximum leverage ratio of total debt less available cash to consolidated EBITDA (as defined in the Revolving Credit Agreement) of 4.25x (and in the case of the first four full fiscal quarters following consummation of a qualified acquisition (as defined in the Revolving Credit Agreement),4.75x) as of the end of each fiscal quarter. In addition, the Revolving Credit Agreement also contains other customary affirmative and negative covenants and events of default. We were in compliance with the covenants under this agreement as of June 30, 2023.

As of June 30, 2023, $583.0 million was outstanding under the Revolving Credit Agreement. No letters of credit were outstanding as of June 30, 2023. Letters of credit are issued in the ordinary course of business and would reduce the amount we may borrow under the Revolving Credit Agreement.

Turner & Townsend Revolving Credit Facilities

Turner & Townsend has a revolving credit facility with a capacity of £120.0 million and an additional accordion option of £20.0 million that matures on March 31, 2027. As of June 30, 2023, no amount was outstanding under this revolving credit facility.

Warehouse Lines of Credit

CBRE Capital Markets has warehouse lines of credit with third-party lenders for the purpose of funding mortgage loans that will be resold, and a funding arrangement with Fannie Mae for the purpose of selling a percentage of certain closed multifamily loans to Fannie Mae. These warehouse lines are recourse only to CBRE Capital Markets and are secured by our related warehouse receivables. See Note 3 for additional information.

CBRE GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Unaudited)

8. Leases

We are the lessee in contracts for our office space tenancies and for leased vehicles. These arrangements account for the significant portion of our lease liabilities and right-of-use assets. We monitor our service arrangements to evaluate whether they meet the definition of a lease.

Supplemental balance sheet information related to our leases is as follows (dollars in thousands):

Category	Classification	June 30, 2023	December 31, 2022
Assets			
Operating	Operating lease assets	$ 983,782	$ 1,033,011
Financing	Other assets, net	98,956	91,028
Total leased assets		$ 1,082,738	$ 1,124,039
Liabilities			
Current:			
Operating	Operating lease liabilities	$ 242,824	$ 229,591
Financing	Other current liabilities	35,595	33,039
Non-current:			
Operating	Non-current operating lease liabilities	1,051,341	1,080,385
Financing	Other liabilities	63,804	58,094
Total lease liabilities		$ 1,393,564	$ 1,401,109

Supplemental cash flow information and non-cash activity related to our operating and financing leases are as follows (dollars in thousands):

	Six Months Ended June 30,	
	2023	2022
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 70,753	$ 95,056
Right-of-use assets obtained in exchange for new financing lease liabilities	25,454	16,612
Other non-cash (decreases) increases in operating lease right-of-use assets [(1)]	(37,964)	35,787
Other non-cash increases (decreases) in financing lease right-of-use assets [(1)]	475	(10,427)

(1) The non-cash activity in the right-of-use assets resulted from lease modifications/remeasurements and terminations .

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9. Commitments and Contingencies

We are a party to a number of pending or threatened lawsuits arising out of, or incident to, our ordinary course of business. We believe that any losses in excess of the amounts accrued as liabilities on our consolidated financial statements are unlikely to be significant, but litigation is inherently uncertain and there is the potential for a material adverse effect on our consolidated financial statements if one or more matters are resolved in a particular period in an amount materially in excess of what we anticipated.

In January 2008, CBRE MCI, a wholly-owned subsidiary of CBRE Capital Markets, entered into an agreement with Fannie Mae under Fannie Mae's Delegated Underwriting and Servicing Lender Program (DUS Program) to provide financing for multifamily housing with five or more units. Under the DUS Program, CBRE MCI originates, underwrites, closes and services loans without prior approval by Fannie Mae, and typically, is subject to sharing up to one-third of any losses on loans originated under the DUS Program. CBRE MCI has funded loans with unpaid principal balances of $40.3 billion at June 30, 2023, of which $36.8 billion is subject to such loss sharing arrangements. CBRE MCI, under its agreement with Fannie Mae, must post cash reserves or other acceptable collateral under formulas established by Fannie Mae to provide for sufficient capital in the event losses occur. As of June 30, 2023 and December 31, 2022, CBRE MCI had $ 125.0 million and $113.0 million, respectively, of letters of credit under this reserve arrangement and had recorded a liability of approximately $67.9 million and $65.1 million, respectively, for its loan loss guarantee obligation under such arrangement. Fannie Mae's recourse under the DUS Program is limited to the assets of CBRE MCI, which assets totaled approximately $967.5 million (including $517.0 million of warehouse receivables, a substantial majority of which are pledged against warehouse lines of credit and are therefore not available to Fannie Mae) at June 30, 2023.

CBRE Capital Markets participates in Freddie Mac's Multifamily Small Balance Loan (SBL) Program. Under the SBL program, CBRE Capital Markets has certain repurchase and loss reimbursement obligations. We could potentially be obligated to repurchase any SBL loan originated by CBRE Capital Markets that remains in default for 120 days following the forbearance period, if the default occurred during the first 12 months after origination and such loan had not been earlier securitized. In addition, CBRE Capital Markets may be responsible for a loss not to exceed 10% of the original principal amount of any SBL loan that is not securitized and goes into default after the 12-month repurchase period. CBRE Capital Markets must post a cash reserve or other acceptable collateral to provide for sufficient capital in the event the obligations are triggered. As of both June 30, 2023 and December 31, 2022, CBRE Capital Markets had posted a $5.0 million letter of credit under this reserve arrangement.

We had outstanding letters of credit totaling $220.0 million as of June 30, 2023, excluding letters of credit for which we have outstanding liabilities already accrued on our consolidated balance sheet related to our subsidiaries' outstanding reserves for claims under certain insurance programs as well as letters of credit related to operating leases. The CBRE Capital Markets letters of credit totaling $130.0 million as of June 30, 2023 referred to in the preceding paragraphs represented the majority of the $220.0 million outstanding letters of credit as of such date. The remaining letters of credit are primarily executed by us in the ordinary course of business and expire at the end of each of the respective agreements.

We had guarantees totaling $172.9 million as of June 30, 2023, excluding guarantees related to pension liabilities, consolidated indebtedness and other obligations for which we have outstanding liabilities already accrued on our consolidated balance sheet, and excluding guarantees related to operating leases. The $172.9 million primarily represents guarantees executed by us in the ordinary course of business, including various guarantees of management and vendor contracts in our operations overseas, which expire at the end of each of the respective agreements.

In addition, as of June 30, 2023, we had issued numerous non-recourse carveout, completion and budget guarantees relating to development projects for the benefit of third parties. These guarantees are commonplace in our industry and are made by us in the ordinary course of our Real Estate Investments business. Non-recourse carveout guarantees generally require that our project-entity borrower not commit specified improper acts, with us potentially liable for all or a portion of such entity's indebtedness or other damages suffered by the lender if those acts occur. Completion and budget guarantees generally require us to complete construction of the relevant project within a specified timeframe and/or within a specified budget, with us potentially being liable for costs to complete in excess of such timeframe or budget. While there can be no assurance, we do not expect to incur any material losses under these guarantees.

An important part of the strategy for our Real Estate Investments segment involves investing our capital in certain real estate investments with our clients. For our investment funds, we generally co-invest up to 2.0% of the equity in a particular fund. As of June 30, 2023, we had aggregate future commitments of $89.1 million related to co-investment funds. Additionally, we make selective investments in real estate development projects on our own account or co-invest with our clients with up to 50% of the project's equity as a principal in unconsolidated real estate projects. We had committed capital of $149.8 million and $78.4 million to consolidated and unconsolidated projects, respectively, as of June 30, 2023.

Also refer to Note 15 for the Telford Fire Safety Remediation provision.

10. Income Taxes

Our provision for income taxes on a consolidated basis was $55.4 million for the three months ended June 30, 2023 as compared to a provision for income taxes of $120.8 million for the three months ended June 30, 2022. The decrease of $65.4 million is primarily related to a decrease in earnings. Our effective tax rate increased to 21.2% for the three months ended June 30, 2023 from 19.8% for the three months ended June 30, 2022.

Our provision for income taxes on a consolidated basis was $83.4 million for the six months ended June 30, 2023 as compared to a provision for income taxes of $117.0 million for the six months ended June 30, 2022. The decrease of $33.6 million is primarily related to a decrease from a corresponding change in earnings, offset by a one-time tax benefit in 2022 as a result of legal entity restructuring. Our effective tax rate increased to 20.1% for the six months ended June 30, 2023 from 11.7% for the six months ended June 30, 2022.

Our effective tax rates for the three and six months ended June 30, 2023 were different than the U.S. federal statutory tax rate of 21.0% primarily due to U.S. state taxes and favorable permanent book tax differences.

As of June 30, 2023 and December 31, 2022, the company had gross unrecognized tax benefits of $400.1 million and $391.4 million, respectively. The increase of $8.7 million resulted from the accrual of gross unrecognized tax benefits offset by the release of gross unrecognized tax benefits due to the expiration of statute of limitations in various tax jurisdictions.

11. Income Per Share and Stockholders' Equity

The calculations of basic and diluted income per share attributable to CBRE Group, Inc. stockholders are as follows (dollars in thousands, except share and per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Basic Income Per Share				
Net income attributable to CBRE Group, Inc. stockholders	$ 201,403	$ 487,322	$ 318,295	$ 879,619
Weighted average shares outstanding for basic income per share	310,857,203	325,415,305	310,662,324	328,692,585
Basic income per share attributable to CBRE Group, Inc. stockholders	$ 0.65	$ 1.50	$ 1.02	$ 2.68
Diluted Income Per Share				
Net income attributable to CBRE Group, Inc. stockholders	$ 201,403	$ 487,322	$ 318,295	$ 879,619
Weighted average shares outstanding for basic income per share	310,857,203	325,415,305	310,662,324	328,692,585
Dilutive effect of contingently issuable shares	3,425,044	4,428,405	4,159,291	4,821,813
Weighted average shares outstanding for diluted income per share	314,282,247	329,843,710	314,821,615	333,514,398
Diluted income per share attributable to CBRE Group, Inc. stockholders	$ 0.64	$ 1.48	$ 1.01	$ 2.64

For the three and six months ended June 30, 2023, 1,433,176 and 988,371, respectively, of contingently issuable shares were excluded from the computation of diluted income per share because their inclusion would have had an anti-dilutive effect.

For the three and six months ended June 30, 2022, 1,715,891 and 1,383,041, respectively, of contingently issuable shares were excluded from the computation of diluted income per share because their inclusion would have had an anti-dilutive effect.

On November 19, 2021, our board of directors authorized a program for the repurchase of up to $2.0 billion of our Class A common stock over five years (the 2021 program). On August 18, 2022, our board of directors authorized an additional

$2.0 billion, bringing the total authorized repurchase amount under this program to a total of $4.0 billion. During the three months ended March 31, 2023, we repurchased 1,368,173 shares of our common stock with an average price of $83.48 per share using cash on hand for $114.2 million under the 2021 program. We did not repurchase any of our common stock during the three months ended June 30, 2023 under the 2021 program. As of June 30, 2023, we had approximately $2.0 billion of capacity remaining under the 2021 program. During the three months ended June 30, 2022, we repurchased 7,510,123 shares of our common stock using cash on hand for $611.2 million. During the six months ended June 30, 2022, we repurchased 11,688,509 shares of our common stock using cash on hand for $1.0 billion.

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12. Revenue from Contracts with Customers

We account for revenue with customers in accordance with FASB ASC Topic, "*Revenue from Contracts with Customers*" (Topic 606). Revenue is recognized when or as control of the promised services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to receive in exchange for those services.

Disaggregated Revenue

The following tables represent a disaggregation of revenue from contracts with customers by type of service and/or segment (dollars in thousands):

	Three Months Ended June 30, 2023				
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Corporate, other and eliminations	Consolidated
Topic 606 Revenue:					
Facilities management	$ —	$ 3,686,548	$ —	$ —	$ 3,686,548
Project management	—	1,739,514	—	—	1,739,514
Advisory leasing	813,952	—	—	—	813,952
Advisory sales	397,748	—	—	—	397,748
Property management	480,623	—	—	(3,529)	477,094
Valuation	179,720	—	—	—	179,720
Commercial mortgage origination [1]	32,595	—	—	—	32,595
Loan servicing [2]	18,136	—	—	—	18,136
Investment management	—	—	151,327	—	151,327
Development services	—	—	102,854	—	102,854
Topic 606 Revenue	1,922,774	5,426,062	254,181	(3,529)	7,599,488
Out of Scope of Topic 606 Revenue:					
Commercial mortgage origination	57,691	—	—	—	57,691
Loan servicing	61,208	—	—	—	61,208
Development services [3]	—	—	1,476	—	1,476
Total Out of Scope of Topic 606 Revenue	118,899	—	1,476	—	120,375
Total Revenue	$ 2,041,673	$ 5,426,062	$ 255,657	$ (3,529)	$ 7,719,863

	Three Months Ended June 30, 2022				
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Corporate, other and eliminations	Consolidated
Topic 606 Revenue:					
Facilities management	$ —	$ 3,820,120	$ —	$ —	$ 3,820,120
Project management	—	1,088,025	—	—	1,088,025
Advisory leasing	969,708	—	—	—	969,708
Advisory sales	715,719	—	—	—	715,719
Property management	460,992	—	—	(2,131)	458,861
Valuation	196,539	—	—	—	196,539
Commercial mortgage origination [1]	81,293	—	—	—	81,293
Loan servicing [2]	13,833	—	—	—	13,833
Investment management	—	—	157,554	—	157,554
Development services	—	—	102,839	—	102,839
Topic 606 Revenue	2,438,084	4,908,145	260,393	(2,131)	7,604,491
Out of Scope of Topic 606 Revenue:					
Commercial mortgage origination	79,090	—	—	—	79,090
Loan servicing	70,809	—	—	—	70,809
Development services [3]	—	—	16,888	—	16,888
Total Out of Scope of Topic 606 Revenue	149,899	—	16,888	—	166,787
Total Revenue	$ 2,587,983	$ 4,908,145	$ 277,281	$ (2,131)	$ 7,771,278

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	Six Months Ended June 30, 2023				
	Advisory Services	**Global Workplace Solutions**	**Real Estate Investments**	**Corporate, other and eliminations**	**Consolidated**
Topic 606 Revenue:					
Facilities management	$ —	$ 7,366,709	$ —	$ —	$ 7,366,709
Project management	—	3,397,075	—	—	3,397,075
Advisory leasing	1,522,605	—	—	—	1,522,605
Advisory sales	765,152	—	—	—	765,152
Property management	944,398	—	—	(7,851)	936,547
Valuation	345,332	—	—	—	345,332
Commercial mortgage origination [1]	56,957	—	—	—	56,957
Loan servicing [2]	35,661	—	—	—	35,661
Investment management	—	—	298,817	—	298,817
Development services	—	—	177,111	—	177,111
Topic 606 Revenue	3,670,105	10,763,784	475,928	(7,851)	14,901,966
Out of Scope of Topic 606 Revenue:					
Commercial mortgage origination	104,268	—	—	—	104,268
Loan servicing	121,168	—	—	—	121,168
Development services [3]	—	—	3,575	—	3,575
Total Out of Scope of Topic 606 Revenue	225,436	—	3,575	—	229,011
Total Revenue	$ 3,895,541	$ 10,763,784	$ 479,503	$ (7,851)	$ 15,130,977

	Six Months Ended June 30, 2022				
	Advisory Services	**Global Workplace Solutions**	**Real Estate Investments**	**Corporate, other and eliminations**	**Consolidated**
Topic 606 Revenue:					
Facilities management	$ —	$ 7,620,808	$ —	$ —	$ 7,620,808
Project management	—	2,092,953	—	—	2,092,953
Advisory leasing	1,742,430	—	—	—	1,742,430
Advisory sales	1,335,546	—	—	—	1,335,546
Property management	916,864	—	—	(7,019)	909,845
Valuation	377,681	—	—	—	377,681
Commercial mortgage origination [1]	155,183	—	—	—	155,183
Loan servicing [2]	27,841	—	—	—	27,841
Investment management	—	—	308,121	—	308,121
Development services	—	—	202,494	—	202,494
Topic 606 Revenue	4,555,545	9,713,761	510,615	(7,019)	14,772,902
Out of Scope of Topic 606 Revenue:					
Commercial mortgage origination	150,070	—	—	—	150,070
Loan servicing	130,816	—	—	—	130,816
Development services [3]	—	—	50,423	—	50,423
Total Out of Scope of Topic 606 Revenue	280,886	—	50,423	—	331,309
Total Revenue	$ 4,836,431	$ 9,713,761	$ 561,038	$ (7,019)	$ 15,104,211

(1) We earn fees for arranging financing for borrowers with third-party lender contacts. Such fees are in scope of Topic 606.
(2) Loan servicing fees earned from servicing contracts for which we do not hold mortgage servicing rights are in scope of Topic 606.
(3) Out of scope revenue for development services represents selling profit from transfers of sales-type leases in the scope of Topic 842.

Contract Assets and Liabilities

We had contract assets totaling $510.0 million ($369.7 million of which was current) and $529.1 million ($391.6 million of which was current) as of June 30, 2023 and December 31, 2022, respectively.

We had contract liabilities totaling $270.5 million ($263.7 million of which was current) and $284.3 million ($276.3 million of which was current) as of June 30, 2023 and December 31, 2022, respectively. During the three and six months ended June 30, 2023, we recognized revenue of $17.8 million and $201.0 million that was included in the contract liability balance at December 31, 2022. The majority of contract liabilities are recognized as revenue within 90 days.

13. Segments

We organize our operations around, and publicly report our financial results on,three global business segments: (1) Advisory Services; (2) Global Workplace Solutions and (3) Real Estate Investments. In addition, we also have a "Corporate, other and elimination" segment. Our Corporate segment primarily consists of corporate headquarters costs for executive officers and certain other central functions. We track our strategic non-core non-controlling equity investments in "other" which is considered an operating segment and reported together with Corporate but does not meet the aggregation criteria for presentation as a separate reportable segment. These activities are not allocated to the other business segments. Corporate and other also includes eliminations related to inter-segment revenue.

Segment operating profit (SOP) is the measure reported to the chief operating decision marker (CODM) for purposes of making decisions about allocating resources to each segment and assessing performance of each segment. Segment operating profit represents earnings, inclusive of amounts attributable to non-controlling interest, before net interest expense, write-off of financing costs on extinguished debt, income taxes, depreciation and amortization and asset impairments, as well as adjustments related to the following: certain carried interest incentive compensation expense to align with the timing of associated revenue, fair value adjustments to real estate assets acquired in the Telford acquisition (purchase accounting) that were sold in the period, costs incurred related to legal entity restructuring, efficiency and cost-reduction initiatives, integration and other costs related to acquisitions and a provision associated with Telford's fire safety remediation efforts. This metric excludes the impact of corporate overhead as these costs are reported under Corporate and other.

Summarized financial information by segment is as follows (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Revenue				
Advisory Services	$ 2,041,673	$ 2,587,983	$ 3,895,541	$ 4,836,431
Global Workplace Solutions	5,426,062	4,908,145	10,763,784	9,713,761
Real Estate Investments	255,657	277,281	479,503	561,038
Corporate, other and eliminations [(1)]	(3,529)	(2,131)	(7,851)	(7,019)
Total revenue	$ 7,719,863	$ 7,771,278	$ 15,130,977	$ 15,104,211
Segment Operating Profit				
Advisory Services	$ 315,443	$ 520,657	$ 585,175	$ 986,311
Global Workplace Solutions	232,680	218,296	462,336	421,032
Real Estate Investments	33,131	274,518	164,629	441,570
Total reportable segment operating profit	$ 581,254	$ 1,013,471	$ 1,212,140	$ 1,848,913

(1) Eliminations represent revenue from transactions with other operating segments. See Note 12.

Reconciliation of total reportable segment operating profit to net income is as follows (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Net income attributable to CBRE Group, Inc.	$ 201,403	$ 487,322	$ 318,295	$ 879,619
Net income attributable to non-controlling interests	4,750	2,594	12,931	$ 6,568
Net income	206,153	489,916	331,226	$ 886,187
Adjustments to increase (decrease) net income:				
Depreciation and amortization	154,387	162,359	315,878	311,391
Asset impairments	—	26,405	—	36,756
Interest expense, net of interest income	42,982	18,518	71,396	31,344
Provision for income taxes	55,404	120,762	83,439	117,024
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue	(459)	(7,495)	6,519	15,361
Impact of fair value adjustments to real estate assets acquired in the Telford acquisition (purchase accounting) that were sold in period	—	(1,451)	—	(3,147)
Costs incurred related to legal entity restructuring	—	10,245	—	11,921
Integration and other costs related to acquisitions	36,444	8,209	54,578	16,330
Costs associated with efficiency and cost-reduction initiatives	2,310	—	140,557	—
Provision associated with Telford's fire safety remediation efforts [1]	—	37,505	—	37,505
Corporate and other loss, including eliminations	84,033	148,498	208,547	388,241
Total reportable segment operating profit	$ 581,254	$ 1,013,471	$ 1,212,140	$ 1,848,913

(1) See Note 15 for additional information.

Our CODM is not provided with total asset information by segment and accordingly, does not measure or allocate total assets on a segment basis. As a result, we have not disclosed any asset information by segment.

Geographic Information

Revenue in the table below is allocated based upon the country in which services are performed (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Revenue				
United States	$ 4,211,104	$ 4,436,115	$ 8,355,700	$ 8,567,512
United Kingdom	1,055,985	1,046,493	2,051,413	2,032,491
All other countries	2,452,774	2,288,670	4,723,864	4,504,208
Total revenue	$ 7,719,863	$ 7,771,278	$ 15,130,977	$ 15,104,211

14. Efficiency and Cost-Reduction Initiatives

During the third quarter of 2022, we launched certain cost and operational efficiency initiatives to further improve the company's resiliency in an economic downturn while enabling continued operating platform investments that support future growth. The efficiency initiatives include management and workforce structure simplification, occupancy footprint rationalization and certain third-party spending reductions. As part of this, we incurred certain cash and non-cash charges. Non-cash charges are primarily associated with acceleration of depreciation and write-down of lease and related assets, partially offset by release of lease liability, as part of our lease termination activities. Cash-based charges are primarily related to employee separation benefits, lease and certain contract exit costs, and professional fees. These initiatives were largely completed as of March 31, 2023.

The following table presents the detail of expense incurred by segment (dollars in thousands):

	Six Months Ended June 30, 2023				
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Corporate	Consolidated
Employee separation benefits	$ 19,158	$ 29,858	$ 13,158	$ 2,538	$ 64,712
Lease exit costs	39,273	731	4,204	1,143	45,351
Professional fees and other	5,963	19,209	4,097	1,225	30,494
Subtotal	64,394	49,798	21,459	4,906	140,557
Depreciation expense	5,453	44	3,482	—	8,979
Total	$ 69,847	$ 49,842	$ 24,941	$ 4,906	$ 149,536

Of the total expenses above, $2.3 million were incurred during the three months ended June 30, 2023 and the remaining $147.2 million were incurred during the three months ended March 31, 2023.

The following table shows ending liability balance associated with major cash-based charges (dollars in thousands):

	Employee separation benefits	Professional fees and other
Balance at December 31, 2022	$ 37,014	$ 10,600
Expense incurred	64,712	30,494
Payments made	(77,215)	(41,094)
Balance at June 30, 2023	$ 24,511	$ —

Ending balance related to employee separation benefits was included in “compensation and employee benefits payable” in the accompanying consolidated balance sheets. Of the total charges incurred, net of depreciation expense, $17.3 million was included within the “Cost of revenue” line item and $123.2 million was included in the “Operating, administrative, and other” line item in the accompanying consolidated statement of operations for the six months ended June 30, 2023.

15. Telford Fire Safety Remediation

On March 16, 2023, Telford Homes entered into a legally binding agreement with the U.K. government, under which Telford Homes will (1) take responsibility for performing or funding self-remediation works relating to certain life-critical fire-safety issues on all Telford Homes-constructed buildings of 11 meters in height or greater in England constructed in the last 30 years (in-scope buildings) and (2) withdraw Telford Homes-developed buildings from the government-sponsored Building Safety Fund (BSF) and Aluminum Composite Material (ACM) Funds or reimburse the government funds for the cost of remediation of in-scope buildings.

The accompanying consolidated balance sheets include an estimated liability of approximately $193.2 million and $185.9 million as of June 30, 2023 and December 31, 2022, respectively, related to remediation efforts. The balance increased as of June 30, 2023 primarily due to the movement of foreign exchange rates, partially offset by certain insignificant costs incurred for work performed during the quarter. We did not record any additional provision this quarter as the June 30, 2023 balance remains our best estimate of potential losses associated with overall remediation efforts. The potential liability and number of buildings affected may change as in-scope buildings are assessed, scopes of remediation are agreed with interested parties (freeholders and leaseholders) and the required remediation work is tendered for each building, all of which is anticipated to result in a lengthy process. We will continue to assess new information as it becomes available and adjust our estimated liability accordingly.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is designed to provide the reader of our financial statements with a narrative from the perspective of management on our financial condition, results of operations, liquidity and certain other factors that may affect future results. The MD&A in this Quarterly Report on Form 10-Q (Quarterly Report) for CBRE Group, Inc. for the three and six months ended June 30, 2023 should be read in conjunction with our consolidated financial statements and related notes included in our 2022 Annual Report on Form 10-K (2022 Annual Report) as well as the unaudited financial statements included elsewhere in this Quarterly Report.

In addition, the statements and assumptions in this Quarterly Report that are not statements of historical fact are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 or Section 21E of the Securities Exchange Act of 1934, each as amended, including, in particular, statements about our plans, strategies and prospects as well as estimates of industry growth for the next quarter and beyond. For important information regarding these forward-looking statements, please see the discussion below under the caption "Cautionary Note on Forward-Looking Statements."

Overview

CBRE Group, Inc. is a Delaware corporation. References to "CBRE," "the company," "we," "us" and "our" refer to CBRE Group, Inc. and include all of its consolidated subsidiaries, unless otherwise indicated or the context requires otherwise.

We are the world's largest commercial real estate services and investment firm, based on 2022 revenue, with leading global market positions in our leasing, property sales, occupier outsourcing and valuation businesses. As of December 31, 2022, the company had approximately 115,000 employees (excluding Turner & Townsend Holdings Limited employees) serving clients in more than 100 countries.

We provide services to real estate investors and occupiers. For investors, our services include capital markets (property sales and mortgage origination), mortgage sales and servicing, property leasing, investment management, property management, valuation and development services, among others. For occupiers, our services include facilities management, project management, transaction (property sales and leasing), and consulting services, among others. We provide services under the following brand names: "CBRE" (real estate advisory and outsourcing services); "CBRE Investment Management" (investment management); "Trammell Crow Company" (primarily U.S. development); "Telford Homes" (U.K. development); and "Turner & Townsend Holdings Limited" (Turner & Townsend).

We generate revenue from stable, recurring sources (large multi-year portfolio and per project contracts) and from cyclical, non-recurring sources, including commissions on transactions. Our revenue mix has become more weighted towards stable revenue sources, particularly occupier outsourcing, and our dependence on cyclical property sales and lease transaction revenue has declined. We believe we are well-positioned to capture a substantial and growing share of market opportunities at a time when investors and occupiers increasingly prefer to purchase integrated, account-based services on a national and global basis.

In 2022, we generated revenue from a highly diversified base of clients, including more than 95 of the *Fortune* 100 companies. We have been an S&P 500 company since 2006 and are currently ranked #135 on the *Fortune* 500. We have been voted the most recognized commercial real estate brand in the Lipsey Company survey for 22 years in a row. We have also been rated a World's Most Ethical Company by the Ethisphere Institute for ten consecutive years, and included in the Dow Jones World Sustainability Index for four years in a row (including 2022, the most recent year this ranking is available) and the Bloomberg Gender-Equality Index for four years in a row.

The macroeconomic environment remains challenging as central banks continue to rapidly raise interest rates. The rising rate environment, coupled with large bank failures in early 2023 and ongoing economic uncertainty, have limited credit availability to commercial real estate. Less available and more expensive debt capital has had pronounced effects on our capital markets (mortgage origination and property sales) businesses, making property acquisitions and dispositions harder to finance. Similar factors also impact the timing of and proceeds generated from asset sales within our investment management and development businesses and our ability to obtain debt capital to begin new development projects.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP, which require us to make estimates and assumptions that affect reported amounts. The estimates and assumptions are based on historical experience and on other factors that we believe to be reasonable. Actual results may differ from those estimates. We believe that the following critical accounting policies represent the areas where more significant judgments and estimates are used in the preparation of our consolidated financial statements. A discussion of such critical accounting policies, which include revenue recognition, business combinations, goodwill and other intangible assets, income

taxes, contingencies, and investments in unconsolidated subsidiaries – fair value option can be found in our 2022 Annual Report. There have been no material changes to these policies and estimates as of June 30, 2023.

New Accounting Pronouncements

See Note 2 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

Seasonality

In a typical year, a significant portion of our revenue is seasonal, which an investor should keep in mind when comparing our financial condition and results of operations on a quarter-by-quarter basis. Historically, our revenue, operating income, net income and cash flow from operating activities have tended to be lowest in the first quarter and highest in the fourth quarter of each year. Revenue, earnings and cash flow have generally been concentrated in the fourth calendar quarter due to the focus on completing sales, financing and leasing transactions prior to year-end. The sharp rise in interest rates to combat inflation and resultant banking sector stress and economic uncertainty may cause seasonality to deviate from historical patterns.

Inflation

Our business continues to be affected by high inflation in 2023. Most notably, moves by a number of central banks to tame high inflation by rapidly raising interest rates has sharply increased the cost of debt and limited its availability, resulting in a significant decline in sales and financing transaction activity. In addition, rising price levels across the economy have required us to increase compensation expense to retain top talent and our development business has incurred higher input costs for construction materials. On the other hand, we believe that parts of our business are insulated to some degree against inflation through the ability to raise prices, sometimes through provisions in our service contracts. The company continues to monitor inflation, monetary policy changes in response to inflation and potentially adverse effects on our business.

Items Affecting Comparability

When you read our financial statements and the information included in this Quarterly Report, you should consider that we have experienced, and continue to experience, several material trends and uncertainties that have affected our financial condition and results of operations that make it challenging to predict our future performance based on our historical results. We believe that the following material trends and uncertainties are crucial to an understanding of the variability in our historical earnings and cash flows and the potential for continued variability in the future.

Macroeconomic Conditions

Economic trends and government policies affect global and regional commercial real estate markets as well as our operations directly. These include overall economic activity and employment growth, with specific sensitivity to growth in office-based employment; interest rate levels and changes in interest rates; the cost and availability of credit; and the impact of tax and regulatory policies. Periods of economic weakness or recession, significantly rising interest rates, fiscal uncertainty, declining employment levels, decreasing demand for commercial real estate, falling real estate values, disruption to the global capital or credit markets, or the public perception that any of these events may occur, will negatively affect the performance of our business.

Compensation is our largest expense and our capital markets and leasing professionals generally are paid on a commission and/or bonus basis that correlates with their revenue production. As a result, the negative effects on our operating margins during difficult market conditions, such as the environment that prevailed during the depth of the Covid-19 pandemic or the current rapidly rising interest rate environment and stressed banking sector, are partially mitigated by the inherent variability of our compensation cost structure. In addition, when negative economic conditions have been particularly severe, we have moved decisively to lower operating expenses to improve financial performance. We began such cost reduction efforts in 2022 continuing into 2023. Additionally, our contractual revenue has increased primarily as a result of growth in our occupier outsourcing business, and we believe this contractual revenue should partially offset the negative impacts that macroeconomic deterioration could have on other parts of our business. We also believe that we have significantly improved the resiliency of our business by expanding the business strategically across asset types, clients, geographies and lines of business. Nevertheless, adverse global and regional economic trends will pose significant risks to the performance of our consolidated operations and financial condition.

Effects of Acquisitions and Investments

We have historically made significant use of strategic acquisitions to add and enhance service capabilities around the world. In-fill acquisitions have also played a key role in strengthening our service offerings. The companies we acquired have generally been regional or specialty firms that complement our existing platform, or independent affiliates, which, in some cases, we held a small equity interest.

During the first half of 2023, we completed nine in-fill acquisitions, including four in the Advisory Services segment and five in the Global Workplace Solutions segment totaling $208.4 million in cash and deferred consideration. During 2022, we completed seven in-fill acquisitions in the Advisory Services segment and four in the Global Workplace Solutions segment totaling $205.8 million in cash and deferred consideration.

We believe strategic acquisitions can significantly decrease the cost, time and resources necessary to attain a meaningful competitive position – or expand our capabilities – within targeted markets or business lines. In general, however, most acquisitions will initially have an adverse impact on our operating income and net income as a result of transaction-related expenditures, including severance, lease termination, transaction and deferred financing costs, as well as costs and charges associated with integrating the acquired business and integrating its financial and accounting systems into our own.

Our acquisition structures often include deferred and/or contingent purchase consideration in future periods that are subject to the passage of time or achievement of certain performance metrics and other conditions. As of June 30, 2023, we have accrued deferred purchase and contingent considerations totaling $565.8 million, which is included in "Accounts payable and accrued expenses" and in "Other long-term liabilities" in the accompanying consolidated balance sheets set forth in Item 1 of this Quarterly Report.

International Operations

We conduct a significant portion of our business and employ a substantial number of people outside the U.S. As a result, we are subject to risks associated with doing business globally. Our Real Estate Investments business has significant euro and British pound denominated assets under management, as well as associated revenue and earnings in Europe. In addition, our Global Workplace Solutions business also derives significant revenue and earnings in foreign currencies, such as the euro and British pound sterling. Our business has been impacted by the appreciation of the U.S. dollar against these and other foreign currencies. Further fluctuations in foreign currency exchange rates may continue to produce corresponding changes in our AUM, revenue and earnings.

Our businesses could suffer from the effects of rapid changes in and high levels of interest rates, reduced access to debt capital or liquidity constraints, downturns in general macroeconomic conditions, regulatory or financial market uncertainty, or unanticipated disruptions such as public health crises like Covid-19 and geopolitical events like the war in Ukraine (or the perception that such disruptions may occur).

During the three and six months ended June 30, 2023, approximately 45.3% and 44.7% of our revenue was transacted in foreign currencies. The following table sets forth our revenue derived from our most significant currencies (dollars in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2023		2022		2023		2022	
United States dollar	$ 4,220,293	54.7 %	$ 4,436,115	57.1 %	$ 8,365,103	55.3 %	$ 8,567,512	56.7 %
British pound sterling	1,055,985	13.7 %	1,046,493	13.5 %	2,051,413	13.6 %	2,032,491	13.5 %
Euro	722,234	9.4 %	713,384	9.2 %	1,379,715	9.1 %	1,395,296	9.2 %
Canadian dollar	285,572	3.7 %	324,217	4.2 %	579,823	3.8 %	642,776	4.3 %
Australian dollar	219,772	2.8 %	196,204	2.5 %	410,590	2.7 %	362,143	2.4 %
Indian rupee	158,800	2.1 %	127,620	1.6 %	313,051	2.1 %	247,486	1.6 %
Chinese yuan	135,729	1.8 %	121,580	1.6 %	246,482	1.6 %	239,923	1.6 %
Japanese yen	113,270	1.5 %	95,431	1.2 %	229,055	1.5 %	212,902	1.4 %
Swiss franc	100,334	1.3 %	97,016	1.2 %	196,862	1.3 %	192,573	1.3 %
Singapore dollar	101,219	1.3 %	84,934	1.1 %	195,584	1.3 %	168,060	1.1 %
Other currencies (1)	606,655	7.7 %	528,284	6.8 %	1,163,299	7.7 %	1,043,049	6.9 %
Total revenue	$ 7,719,863	100.0 %	$ 7,771,278	100.0 %	$ 15,130,977	100.0 %	$ 15,104,211	100.0 %

(1) Approximately 46 currencies comprise 7.7% of our revenue for the three and six months ended June 30, 2023, and approximately 48 currencies comprise 6.8% and 6.9% of our revenue for the three and six months ended June 30, 2022.

Although we operate globally, we report our results in U.S. dollars. As a result, the strengthening or weakening of the U.S. dollar will positively or negatively impact our reported results. For example, we estimate that had the British pound sterling-to-U.S. dollar exchange rates been 10% higher during the six months ended June 30, 2023, the net impact would have been a decrease in pre-tax income of $0.9 million. Had the euro-to-U.S. dollar exchange rates been 10% higher during the six months ended June 30, 2023, the net impact would have been an increase in pre-tax income of $5.8 million. These hypothetical calculations estimate the impact of translating results into U.S. dollars and do not include an estimate of the impact that a 10% change in the U.S. dollar against other currencies would have had on our foreign operations.

Fluctuations in foreign currency exchange rates may result in corresponding fluctuations in revenue and earnings as well as the AUM for our investment management business, which could have a material adverse effect on our business, financial condition and operating results. Due to the constantly changing currency exposures to which we are subject and the volatility of currency exchange rates, we cannot predict the effect of exchange rate fluctuations upon future operating results. In addition, fluctuations in currencies relative to the U.S. dollar may make it more difficult to perform period-to-period comparisons of our reported results of operations. Our international operations also are subject to, among other things, geopolitical events and changing regulatory environments, which affect the currency markets and, as a result, may also adversely affect our future financial condition and results of operations. We routinely monitor these risks and related costs and evaluate the appropriate amount of oversight to allocate towards business activities in foreign countries where such risks and costs are particularly significant.

Results of Operations

The following table sets forth items derived from our consolidated statements of operations for the three and six months ended June 30, 2023 and 2022 (dollars in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2023		2022		2023		2022	
Revenue:								
Net revenue:								
Facilities management	$ 1,439,249	18.6 %	$ 1,283,749	16.5 %	$ 2,834,451	18.7 %	$ 2,526,279	16.7 %
Property management	459,223	5.9 %	444,450	5.7 %	900,419	6.0 %	882,544	5.9 %
Project management	765,857	9.9 %	672,218	8.7 %	1,500,631	9.9 %	1,296,180	8.6 %
Valuation	179,720	2.3 %	196,539	2.5 %	345,332	2.3 %	377,681	2.5 %
Loan servicing	79,344	1.0 %	84,642	1.1 %	156,829	1.0 %	158,657	1.1 %
Advisory leasing	813,952	10.5 %	969,708	12.5 %	1,522,605	10.1 %	1,742,430	11.5 %
Capital markets:								
Advisory sales	397,748	5.2 %	715,719	9.2 %	765,152	5.1 %	1,335,546	8.8 %
Commercial mortgage origination	90,286	1.2 %	160,383	2.1 %	161,225	1.1 %	305,253	2.0 %
Investment management	151,327	2.0 %	157,554	2.0 %	298,817	2.0 %	308,121	2.0 %
Development services	104,330	1.4 %	119,727	1.5 %	180,686	1.2 %	252,917	1.7 %
Corporate, other and eliminations	(3,529)	0.0 %	(2,131)	0.0 %	(7,851)	(0.1)%	(7,019)	0.0 %
Total net revenue	4,477,507	58.0 %	4,802,558	61.8 %	8,658,296	57.3 %	9,178,589	60.8 %
Pass through costs also recognized as revenue	3,242,356	42.0 %	2,968,720	38.2 %	6,472,681	42.7 %	5,925,622	39.2 %
Total revenue	7,719,863	100.0 %	7,771,278	100.0 %	15,130,977	100.0 %	15,104,211	100.0 %
Costs and expenses:								
Cost of revenue	6,179,496	80.0 %	6,053,984	77.9 %	12,185,910	80.5 %	11,806,178	78.2 %
Operating, administrative and other	1,088,812	14.1 %	1,188,819	15.3 %	2,297,716	15.2 %	2,254,815	14.9 %
Depreciation and amortization	154,387	2.0 %	162,359	2.1 %	315,878	2.1 %	311,391	2.1 %
Asset impairments	—	0.0 %	26,405	0.3 %	—	0.0 %	36,756	0.2 %
Total costs and expenses	7,422,695	96.1 %	7,431,567	95.6 %	14,799,504	97.8 %	14,409,140	95.4 %
Gain on disposition of real estate	9,261	0.1 %	177,226	2.3 %	12,321	0.1 %	198,818	1.3 %
Operating income	306,429	4.0 %	516,937	6.7 %	343,794	2.3 %	893,889	5.9 %
Equity (loss) income from unconsolidated subsidiaries	(7,502)	(0.1)%	119,168	1.5 %	134,181	0.9 %	162,039	1.1 %
Other income (loss)	5,612	0.1 %	(6,909)	(0.1)%	8,086	0.1 %	(21,373)	(0.2)%
Interest expense, net of interest income	42,982	0.6 %	18,518	0.2 %	71,396	0.5 %	31,344	0.2 %
Income before provision for income taxes	261,557	3.4 %	610,678	7.9 %	414,665	2.8 %	1,003,211	6.6 %
Provision for income taxes	55,404	0.7 %	120,762	1.6 %	83,439	0.6 %	117,024	0.8 %
Net income	206,153	2.7 %	489,916	6.3 %	331,226	2.2 %	886,187	5.8 %
Less: Net income attributable to non-controlling interests	4,750	0.1 %	2,594	0.0 %	12,931	0.1 %	6,568	0.0 %
Net income attributable to CBRE Group, Inc.	$ 201,403	2.6 %	$ 487,322	6.3 %	$ 318,295	2.1 %	$ 879,619	5.8 %
Core EBITDA	$ 503,522	6.5 %	$ 918,592	11.8 %	$ 1,036,111	6.8 %	$ 1,650,655	10.9 %

Net revenue, segment operating profit on revenue margin, segment operating profit on net revenue margin, and core EBITDA are not recognized measurements under accounting principles generally accepted in the United States, or GAAP. When analyzing our operating performance, investors should use these measures in addition to, and not as an alternative for, their most directly comparable financial measure calculated and presented in accordance with GAAP. We generally use these non-GAAP financial measures to evaluate operating performance and for other discretionary purposes. We believe these measures provide a more complete understanding of ongoing operations, enhance comparability of current results to prior periods and may be useful for investors to analyze our financial performance because they eliminate the impact of selected costs and charges that may obscure the underlying performance of our business and related trends. Because not all companies use identical calculations, our presentation of net revenue and core EBITDA may not be comparable to similarly titled measures of other companies.

Net revenue is gross revenue less costs largely associated with subcontracted vendor work performed for clients and generally has no margin. Segment operating profit on revenue margin is computed by dividing segment operating profit by revenue and provides a comparable profitability measure against our peers. Segment operating profit on net revenue margin is computed by dividing segment operating profit by net revenue and is a better indicator of the segment's margin since it does not include the diluting effect of pass through revenue which generally has no margin.

We use core EBITDA as an indicator of the company's operating financial performance. Core EBITDA represents earnings before the portion attributable to non-controlling interests, net interest expense, write-off of financing costs on extinguished debt, income taxes, depreciation and amortization, asset impairments, adjustments related to certain carried interest incentive compensation expense to align with the timing of associated revenue, fair value adjustments to real estate assets acquired in the Telford acquisition (purchase accounting) that were sold in the period, costs incurred related to legal entity restructuring, efficiency and cost-reduction initiatives, integration and other costs related to acquisitions and a provision associated with Telford's fire safety remediation efforts. Core EBITDA excludes the impact of fair value changes on certain non-core non-controlling equity investments that are not directly related to our business segments as these could fluctuate significantly period over period. We believe that investors may find these measures useful in evaluating our operating performance compared to that of other companies in our industry because their calculations generally eliminate the effects of acquisitions, which would include impairment charges of goodwill and intangibles created from acquisitions, the effects of financings and income taxes and the accounting effects of capital spending.

Core EBITDA is not intended to be a measure of free cash flow for our discretionary use because it does not consider certain cash requirements such as tax and debt service payments. This measure may also differ from the amounts calculated under similarly titled definitions in our credit facilities and debt instruments, which are further adjusted to reflect certain other cash and non-cash charges and are used by us to determine compliance with financial covenants therein and our ability to engage in certain activities, such as incurring additional debt. We also use core EBITDA as a significant component when measuring our operating performance under our employee incentive compensation programs.

Core EBITDA is calculated as follows (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	**2022**	**2023**	**2022**
Net income attributable to CBRE Group, Inc.	$ 201,403	$ 487,322	$ 318,295	$ 879,619
Net income attributable to non-controlling interests	4,750	2,594	12,931	6,568
Net income	206,153	489,916	331,226	886,187
Adjustments:				
Depreciation and amortization	154,387	162,359	315,878	311,391
Asset impairments	—	26,405	—	36,756
Interest expense, net of interest income	42,982	18,518	71,396	31,344
Provision for income taxes	55,404	120,762	83,439	117,024
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue	(459)	(7,495)	6,519	15,361
Impact of fair value adjustments to real estate assets acquired in the Telford acquisition (purchase accounting) that were sold in period	—	(1,451)	—	(3,147)
Costs incurred related to legal entity restructuring	—	10,245	—	11,921
Integration and other costs related to acquisitions	36,444	8,209	54,578	16,330
Costs associated with efficiency and cost-reduction initiatives	2,310	—	140,557	—
Provision associated with Telford's fire safety remediation efforts	—	37,505	—	37,505
Net fair value adjustments on strategic non-core investments	6,301	53,619	32,518	189,983
Core EBITDA	$ 503,522	$ 918,592	$ 1,036,111	$ 1,650,655

Three Months Ended June 30, 2023 Compared to the Three Months Ended June 30, 2022

We reported consolidated net income of $201.4 million for the three months ended June 30, 2023 on revenue of $7.7 billion as compared to consolidated net income of $487.3 million on revenue of $7.8 billion for the three months ended June 30, 2022.

Our revenue on a consolidated basis for the three months ended June 30, 2023 decreased by $51.4 million, or 0.7%, as compared to the three months ended June 30, 2022. The revenue decrease is primarily due to a 21.4% decline in our Advisory Services segment which has been significantly impacted by the current macroeconomic conditions and fiscal environment driving down sales and lease revenue. These factors also impacted our Real Estate Investments (REI) segment which experienced an approximate 7.8% revenue decline during the quarter, primarily due to decreased development and construction revenue and lower real estate sales activities in the international development markets. This decline was partially offset by a 10.6% revenue increase in the Global Workplace Solutions (GWS) segment due to new client wins, expansion of services to existing clients, and contributions from strategic in-fill acquisitions. Foreign currency translation had a 1.4% negative impact on total revenue during the three months ended June 30, 2023, primarily driven by weakness in the British pound sterling, Australian dollar and Canadian dollar.

Our cost of revenue on a consolidated basis increased by $125.5 million, or 2.1%, during the three months ended June 30, 2023 as compared to the same period in 2022. This increase was primarily due to higher costs associated with the growth in our Global Workplace Solutions segment. This was partially offset by a decline in cost of revenue in our Advisory Services segment due to lower commission expense and by a decline in cost of revenue in our global development business in our Real Estate Investments segment. Foreign currency translation had a 1.5% positive impact on total cost of revenue during the three months ended June 30, 2023. Cost of revenue as a percentage of revenue increased to 80.0% for the three months ended June 30, 2023 as compared to 77.9% for the three months ended June 30, 2022. This was mainly due to growth in our Global Workplace Solutions segment that generally has a lower gross margin coupled with a decline in Advisory Services that generally has a higher gross margin, thereby increasing the overall cost of revenue as a percentage of revenue and decreasing overall gross margin.

Our operating, administrative and other expenses on a consolidated basis decreased by $100.0 million, or 8.4%, during the three months ended June 30, 2023 as compared to the same period in 2022. The decrease was primarily due to lower incentive compensation expense, partially offset by higher professional fees to support us as we continue to explore various capital allocation opportunities and incremental operating expenses in the GWS segment to support the growth. Foreign currency translation had a 1.1% positive impact on total operating, administrative and other expenses during the three months ended June 30, 2023. Operating expenses as a percentage of revenue decreased to 14.1% for the three months ended June 30, 2023 from 15.3% for the three months ended June 30, 2022, primarily due to variable nature of our incentive compensation expense in the Advisory Services and REI segments.

Our depreciation and amortization expense on a consolidated basis decreased by $8.0 million, or 4.9%, during the three months ended June 30, 2023 as compared to the same period in 2022. This decrease is primarily due to accelerated amortization recorded in the prior year related to loan payoffs in the Capital Markets loan servicing business as compared to minimal such activity in the current quarter.

We did not record any asset impairments for the three months ended June 30, 2023. We recorded $26.4 million in asset impairments on a consolidated basis for the three months ended June 30, 2022 in our Real Estate Investment segment related to Telford Homes.

We recorded equity loss of $7.5 million on unconsolidated subsidiaries for the three months ended June 30, 2023, as compared to equity income of $119.2 million during the three months ended June 30, 2022. This was mainly due to some large unconsolidated deals in the Real Estate Investment segment that generated higher equity earnings in the prior year. Our gain on disposition of real estate on a consolidated basis was $9.3 million for the three months ended June 30, 2023, which was a decrease of $168.0 million over the prior year period, due to fewer property sales of certain consolidated projects within our Real Estate Investments segment.

Our other income on a consolidated basis was $5.6 million for the three months ended June 30, 2023 versus a loss of $6.9 million for the same period in the prior year. Losses incurred last year were primarily due to net unfavorable activity related to unrealized and realized gain/loss on equity and available for sale debt securities owned by our wholly-owned captive insurance company.

Our consolidated interest expense, net of interest income, increased by $24.5 million, or 132.1%, for the three months ended June 30, 2023 as compared to the same period in 2022. This increase was primarily due to the impact of higher interest rates and increased borrowings on the revolving credit facilities.

Our provision for income taxes on a consolidated basis was $55.4 million for the three months ended June 30, 2023 as compared to a provision for income taxes of $120.8 million for the three months ended June 30, 2022. The decrease of $65.4 million is primarily related to a decrease in corresponding earnings. Our effective tax rate increased to 21.2% for the three months ended June 30, 2023 from 19.8% for the three months ended June 30, 2022. Our effective tax rate for the three months ended June 30, 2023 was different than the U.S. federal statutory tax rate of 21.0%, primarily due to U.S. state taxes and favorable permanent book tax differences.

Six Months Ended June 30, 2023 Compared to the Six Months Ended June 30, 2022

We reported consolidated net income of $318.3 million for the six months ended June 30, 2023 on revenue of $15.1 billion as compared to consolidated net income of $879.6 million on revenue of $15.1 billion for the six months ended June 30, 2022.

Our revenue on a consolidated basis for the six months ended June 30, 2023 increased by $26.8 million, or 0.2%, as compared to the six months ended June 30, 2022. The revenue increase reflects growth across our Global Workplace Solutions segment, which increased by 10.8% primarily due to new client wins, expansion of services to existing clients, and contributions from strategic in-fill acquisitions. Advisory Services segment revenue decreased by $940.9 million or 19.5% as all lines of business, except property management, declined this period as compared to the same period in the prior year given the current macroeconomic conditions. Revenue in the Real Estate Investments services segment was down 14.5% due to decreased development and construction revenue and lower real estate sales activities primarily in the international development markets. Foreign currency translation had a 2.4% negative impact on total revenue during the six months ended June 30, 2023, primarily driven by weakness in the British pound sterling, Canadian dollar and Australian dollar.

Our cost of revenue on a consolidated basis increased by $379.7 million, or 3.2%, during the six months ended June 30, 2023 as compared to the same period in 2022. This increase was primarily due to higher costs associated with our Global Workplace Solutions segment given the growth, partially offset by lower cost of revenue in our Advisory Services and Real Estate Investments segments given the variable nature of much of the cost of revenue components for these segments. Foreign currency translation had a 2.4% positive impact on total cost of revenue during the six months ended June 30, 2023. Cost of revenue as a percentage of revenue increased to 80.5% for the six months ended June 30, 2023 as compared to 78.2% for the six months ended June 30, 2022 largely due to a shift in growth composition from the Advisory Services segment, which are generally higher gross margin, to the GWS segment, which is generally lower gross margin.

Our operating, administrative and other expenses on a consolidated basis increased by $42.9 million, or 1.9%, for the six months ended June 30, 2023 as compared to the same period in 2022. The increase was primarily due to an increase in overall expenses to support the growth in the GWS segment, charges associated with efficiency and cost-reduction initiatives as compared to the six months ended June 30, 2022, and higher professional fees to support us as we continue to explore various capital allocation opportunities. This was partially offset by a decrease in overall incentive compensation expense tied to overall company performance. Foreign currency translation also had a 2.3% positive impact on total operating expenses during the six months ended June 30, 2023. Operating expenses as a percentage of revenue increased slightly to 15.2% for the six months ended June 30, 2023 from 14.9% for the six months ended June 30, 2022, primarily due to investments made in the GWS segment in infrastructure to drive business growth.

Our depreciation and amortization expense on a consolidated basis increased by $4.5 million, or 1.4%, during the six months ended June 30, 2023 as compared to the same period in 2022. This increase was primarily due to accelerated depreciation expense as part of our efficiency and cost-reduction initiatives that occurred in first quarter 2023, partially offset by lower amortization expense during the six months ended June 30, 2023 as compared to June 30, 2022 due to accelerated amortization related to loan payoffs in our Capital Markets loan servicing business last year.

We did not record any asset impairments for the six months ended June 30, 2023. Our asset impairments on a consolidated basis totaled $36.8 million for the six months ended June 30, 2022. We recorded $10.4 million in asset impairment during the first quarter of 2022 related to our exit of the Advisory Services business in Russia. We recorded $26.4 million of non-cash asset impairment charges in our Real Estate Investments segment during the second quarter of 2022 related to Telford Homes. The charge is attributable to the effect of elevated inflation on construction, materials and labor costs, which will reduce Telford Homes' profitability because the sales prices for the build-to-rent developments are fixed at the time the developments are sold to a long-term investor. This resulted in a need to impair the goodwill balance associated with the Telford Homes reporting unit, primarily due to an expected reduction in cash flows and profitability.

Our gain on disposition of real estate on a consolidated basis decreased by $186.5 million, during the six months ended June 30, 2023 as compared to the same period in 2022 due to significant gains associated with certain property sales on consolidated deals within our Real Estate Investments segment last year as compared to this year which was affected by the economic uncertainty and higher interest rates.

Our equity income from unconsolidated subsidiaries on a consolidated basis decreased by $27.9 million, or 17.2%, during the six months ended June 30, 2023 as compared to the same period in 2022, primarily driven by a lower equity pickup and fair value adjustment in our non-core investment portfolio this year. In addition, we recorded higher equity earnings associated with property sales reported in our Real Estate Investments segment last year as compared to this year.

Our consolidated interest expense, net of interest income, increased by $40.1 million, or 127.8%, for the six months ended June 30, 2023 as compared to the same period in 2022. This increase was primarily due to the impact of higher interest rates and increased borrowings on the revolving credit facilities.

Our provision for income taxes on a consolidated basis was $83.4 million for the six months ended June 30, 2023 as compared to a provision for income taxes of $117.0 million for the six months ended June 30, 2022. The decrease of $33.6 million is primarily related to a decrease from corresponding earnings, offset by a one-time tax benefit in 2022 as a result of legal entity restructuring. Our effective tax rate increased to 20.1% for the six months ended June 30, 2023 from 11.7% for the six months ended June 30, 2022. Our effective tax rate for the six months ended June 30, 2023 was different than the U.S. federal statutory tax rate of 21.0% primarily due to U.S. state taxes and favorable permanent book tax differences.

Segment Operations

We organize our operations around, and publicly report our financial results on, three global business segments: (1) Advisory Services; (2) Global Workplace Solutions; and (3) Real Estate Investments.

Advisory Services provides a comprehensive range of services globally, including property leasing, capital markets (property sales and mortgage origination), mortgage sales and servicing, property management, and valuation. Global Workplace Solutions provides a broad suite of integrated, contractually-based outsourcing services to occupiers of real estate, including facilities management and project management. Real Estate Investments includes investment management services provided globally and development services in the U.S., U.K. and Continental Europe.

We also have a Corporate and Other segment. Corporate primarily consists of corporate overhead costs. Other consists of activities from strategic non-core, non-controlling equity investments and is considered an operating segment but does not meet the aggregation criteria for presentation as a separate reportable segment and is, therefore, combined with Corporate and reported as Corporate and other. It also includes eliminations related to inter-segment revenue. For additional information on our segments, see Note 13 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

Advisory Services

The following table summarizes our results of operations for our Advisory Services operating segment for the three and six months ended June 30, 2023 and 2022 (dollars in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2023		2022		2023		2022	
Revenue:								
Net revenue:								
Property management	$ 459,223	22.5 %	$ 444,450	17.2 %	$ 900,419	23.1 %	$ 882,544	18.3 %
Valuation	179,720	8.8 %	196,539	7.6 %	345,332	8.9 %	377,681	7.8 %
Loan servicing	79,344	3.9 %	84,642	3.3 %	156,829	4.0 %	158,657	3.3 %
Advisory leasing	813,952	39.9 %	969,708	37.5 %	1,522,605	39.2 %	1,742,430	36.0 %
Capital markets:								
Advisory sales	397,748	19.5 %	715,719	27.7 %	765,152	19.6 %	1,335,546	27.6 %
Commercial mortgage origination	90,286	4.4 %	160,383	6.1 %	161,225	4.1 %	305,253	6.3 %
Total segment net revenue	2,020,273	99.0 %	2,571,441	99.4 %	3,851,562	98.9 %	4,802,111	99.3 %
Pass through costs also recognized as revenue	21,400	1.0 %	16,542	0.6 %	43,979	1.1 %	34,320	0.7 %
Total segment revenue	2,041,673	100.0 %	2,587,983	100.0 %	3,895,541	100.0 %	4,836,431	100.0 %
Costs and expenses:								
Cost of revenue	1,233,594	60.4 %	1,554,472	60.1 %	2,360,346	60.6 %	2,866,763	59.3 %
Operating, administrative and other	498,060	24.4 %	514,412	19.9 %	1,020,924	26.2 %	994,667	20.6 %
Depreciation and amortization	71,699	3.5 %	79,416	3.1 %	150,142	3.9 %	154,303	3.2 %
Asset impairments	—	0.0 %	—	0.0 %	—	0.0 %	10,351	0.2 %
Total costs and expenses	1,803,353	88.3 %	2,148,300	83.1 %	3,531,412	90.7 %	4,026,084	83.3 %
Gain on disposition of real estate	3	0.0 %	—	0.0 %	3	0.0 %	—	0.0 %
Operating income	238,323	11.7 %	439,683	16.9 %	364,132	9.3 %	810,347	16.7 %
Equity income from unconsolidated subsidiaries	1,451	0.1 %	1,505	0.1 %	2,452	0.1 %	11,261	0.2 %
Other income	2,117	0.1 %	53	0.0 %	4,055	0.1 %	49	0.0 %
Add-back: Depreciation and amortization	71,699	3.5 %	79,416	3.1 %	150,142	3.9 %	154,303	3.2 %
Add-back: Asset impairments	—	0.0 %	—	0.0 %	—	0.0 %	10,351	0.2 %
Adjustments:								
Costs associated with efficiency and cost-reduction initiatives	1,853	0.1 %	—	0.0 %	64,394	1.6 %	—	0.0 %
Segment operating profit and segment operating profit on revenue margin	$ 315,443	15.5 %	$ 520,657	20.1 %	$ 585,175	15.0 %	$ 986,311	20.3 %
Segment operating profit on net revenue margin		15.6 %		20.2 %		15.2 %		20.5 %

Three Months Ended June 30, 2023 Compared to the Three Months Ended June 30, 2022

Revenue decreased by $546.3 million, or 21.1%, for the three months ended June 30, 2023 as compared to the three months ended June 30, 2022. The current macroeconomic and fiscal environment has put significant stress on the lending environment making it difficult to access capital at a reasonable cost and therefore capital markets transaction activity has significantly declined. Leasing revenue declined 16.1%, sales revenue was down 44.4% and mortgage origination revenue was down 43.7%. The slowdown in the lending environment also affected appraisal revenue which was down 8.6%. This was partially offset by a modest growth in the property management line of business across the globe. Foreign currency translation had a 1.2% negative impact on total revenue during the three months ended June 30, 2023, primarily driven by weakness in the Australian dollar, Japanese yen and Canadian dollar.

Cost of revenue decreased by $320.9 million, or 20.6%, for the three months ended June 30, 2023 as compared to the same period in 2022, primarily due to lower commission expense tied to a decline in our leasing and capital markets business. Foreign currency translation had a 1.2% positive impact on total cost of revenue during the three months ended June 30, 2023. Cost of revenue as a percentage of revenue slightly increased to 60.4% for the three months ended June 30, 2023 versus 60.1% for the same period in 2022. This was mainly due to a shift in the composition of total revenue as higher margin capital markets revenue decreased as a percentage of total revenue this quarter versus the same period last year and growth in property management.

Operating, administrative and other expenses decreased by $16.4 million, or 3.2%, for the three months ended June 30, 2023 as compared to the three months ended June 30, 2022. This decrease was primarily due to results of our cost-reduction initiatives and lower incentive compensation expense to align with expected segment and company performance. Foreign currency translation had a 1.3% positive impact on total operating expenses during the three months ended June 30, 2023.

In connection with the origination and sale of mortgage loans for which the company retains servicing rights, we record servicing assets or liabilities based on the fair value of the retained mortgage servicing rights (MSRs) on the date the loans are sold. Upon origination of a mortgage loan held for sale, the fair value of the mortgage servicing rights to be retained is included in the forecasted proceeds from the anticipated loan sale and results in a net gain (which is reflected in revenue). Subsequent to the initial recording, MSRs are amortized (within amortization expense) and carried at the lower of amortized cost or fair value in other intangible assets in the accompanying consolidated balance sheets. They are amortized in proportion to and over the estimated period that the servicing income is expected to be received. For the three months ended June 30, 2023, MSRs contributed to operating income $21.1 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $37.1 million of amortization of related intangible assets. For the three months ended June 30, 2022, MSRs contributed to operating income $35.4 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $44.6 million of amortization of related intangible assets. The decline in MSRs was associated with lower origination activity given the higher cost of debt.

Depreciation and amortization expense for the Advisory Services segment decreased by $7.7 million, or 9.7%, during the three months ended June 30, 2023 as compared to the same period in 2022. This decrease is primarily due to accelerated amortization recorded in prior year related to loan payoffs in the Capital Markets loan servicing business as compared to minimal such activity in the current quarter.

Six Months Ended June 30, 2023 Compared to the Six Months Ended June 30, 2022

Revenue decreased by $940.9 million, or 19.5%, for the six months ended June 30, 2023 as compared to the six months ended June 30, 2022, driven by decline in all lines of business except property management. The revenue decrease primarily reflects lower sales, down 42.7%, and leasing revenue, down 12.6%, as well as lower valuation revenue driven by decreased revenue per assignment and lower demand given the market conditions. Commercial mortgage origination revenue was down 47.2%. The current macroeconomic and fiscal environment has continued to put a significant stress on the lending environment making it difficult to access capital at a reasonable cost and therefore capital markets activity has significantly declined. Property management revenue was up 3.0%. Foreign currency translation had a 1.8% negative impact on total revenue during the six months ended June 30, 2023, primarily driven by weakness in Japanese yen, British pound sterling and Australian dollar.

Cost of revenue decreased by $506.4 million, or 17.7%, for the six months ended June 30, 2023 as compared to the same period in 2022, primarily due to variable compensation structure leading to lower commission expense resulting from lower sales and leasing revenue. Foreign currency translation also had a 1.8% positive impact on total cost of revenue during the six months ended June 30, 2023. Cost of revenue as a percentage of revenue increased to 60.6% for the six months ended June 30, 2023 from 59.3% for the six months ended June 30, 2022. This was due to a shift in the composition of total revenue where high margin capital markets revenue decreased as a percentage of total revenue this quarter versus the same period last year offset by growth in property management at a lower margin.

Operating, administrative and other expenses increased by $26.3 million, or 2.6%, for the six months ended June 30, 2023 as compared to the six months ended June 30, 2022. This increase was primarily due to elevated employee separation benefits and lease exit related charges incurred under our efficiency and cost-reduction initiatives in first quarter 2023, partially offset by lower incentive compensation expense to align with expected segment and company performance, as compared to the six months ended June 30, 2022. Foreign currency translation also had a 2.3% positive impact on total operating expenses during the six months ended June 30, 2023.

For the six months ended June 30, 2023, MSRs contributed to operating income $37.8 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $73.7 million of amortization of related intangible assets. For the six months ended June 30, 2022, MSRs contributed to operating income $70.6 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $85.7 million of amortization of related intangible assets. The decline was associated with lower origination activity given the higher cost of debt.

Depreciation expense increased by $8.3 million or 12.0% due to accelerated depreciation expense related to cost-reduction initiatives in first quarter 2023. Amortization expense during the six months ended June 30, 2023 decreased by $12.5 million, as compared to the same period in 2022, primarily due to accelerated amortization related to loan payoffs in the Capital Markets loan servicing business last year.

Global Workplace Solutions

The following table summarizes our results of operations for our Global Workplace Solutions operating segment for the three and six months ended June 30, 2023 and 2022 (dollars in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2023		2022		2023		2022	
Revenue:								
Net revenue:								
Facilities management	$ 1,439,249	26.5 %	$ 1,283,749	26.2 %	$ 2,834,451	26.3 %	$ 2,526,279	26.0 %
Project management	765,857	14.1 %	672,218	13.7 %	1,500,631	14.0 %	1,296,180	13.4 %
Total segment net revenue	2,205,106	40.6 %	1,955,967	39.9 %	4,335,082	40.3 %	3,822,459	39.4 %
Pass through costs also recognized as revenue	3,220,956	59.4 %	2,952,178	60.1 %	6,428,702	59.7 %	5,891,302	60.6 %
Total segment revenue	5,426,062	100.0 %	4,908,145	100.0 %	10,763,784	100.0 %	9,713,761	100.0 %
Costs and expenses:								
Cost of revenue	4,897,144	90.3 %	4,443,566	90.5 %	9,739,793	90.5 %	8,817,533	90.8 %
Operating, administrative and other	306,470	5.6 %	254,962	5.2 %	629,530	5.8 %	494,348	5.0 %
Depreciation and amortization	65,565	1.2 %	70,859	1.5 %	129,120	1.2 %	132,828	1.4 %
Total costs and expenses	5,269,179	97.1 %	4,769,387	97.2 %	10,498,443	97.5 %	9,444,709	97.2 %
Operating income	156,883	2.9 %	138,758	2.8 %	265,341	2.5 %	269,052	2.8 %
Equity income (loss) from unconsolidated subsidiaries	379	0.0 %	(400)	0.0 %	721	0.0 %	463	0.0 %
Other income	1,420	0.0 %	870	0.0 %	1,909	0.0 %	2,359	0.0 %
Add-back: Depreciation and amortization	65,565	1.2 %	70,859	1.5 %	129,120	1.2 %	132,828	1.4 %
Adjustments:								
Integration and other costs related to acquisitions	8,023	0.1 %	8,209	0.1 %	15,447	0.1 %	16,330	0.1 %
Costs associated with efficiency and cost-reduction initiatives	410	0.1 %	—	0.0 %	49,798	0.5 %	—	0.0 %
Segment operating profit and segment operating profit on revenue margin	$ 232,680	4.3 %	$ 218,296	4.4 %	$ 462,336	4.3 %	$ 421,032	4.3 %
Segment operating profit on net revenue margin		10.6 %		11.2 %		10.7 %		11.0 %

Three Months Ended June 30, 2023 Compared to the Three Months Ended June 30, 2022

Revenue increased by $517.9 million, or 10.6%, for the three months ended June 30, 2023 as compared to the three months ended June 30, 2022. The GWS segment has experienced growth from new and existing clients and contributions from certain strategic and in-fill acquisitions. Foreign currency translation had a 1.6% negative impact on total revenue during the three months ended June 30, 2023, primarily driven by weakness in the British pound sterling, Canadian dollar and Australian dollar.

Cost of revenue increased by $453.6 million, or 10.2%, for the three months ended June 30, 2023 as compared to the same period in 2022, driven by the higher revenue leading to higher pass through costs and higher professional compensation to support growth. Foreign currency translation had a 1.5% positive impact on total cost of revenue during the three months ended June 30, 2023. Cost of revenue as a percentage of revenue remained relatively flat at 90.3% for the three months ended June 30, 2023 as compared to 90.5% for the same period in 2022.

Operating, administrative and other expenses increased by $51.5 million, or 20.2%, for the three months ended June 30, 2023 as compared to the three months ended June 30, 2022. This increase was attributable to higher compensation and related benefits from overall growth, costs from acquired entities, and continued investment in overall infrastructure to support current and future growth. Foreign currency translation had a 1.8% positive impact on total operating expenses during the three months ended June 30, 2023.

Six Months Ended June 30, 2023 Compared to the Six Months Ended June 30, 2022

Revenue increased by $1.1 billion, or 10.8%, for the six months ended June 30, 2023 as compared to the six months ended June 30, 2022 due to new clients and expansion of services to existing clients, primarily in the project management space, in addition to growth from certain in-fill acquisitions. Foreign currency translation had a 2.6% negative impact on total revenue during the six months ended June 30, 2023, primarily driven by weakness in the British pound sterling.

Cost of revenue increased by $922.3 million, or 10.5%, for the six months ended June 30, 2023 as compared to the same period in 2022, driven by the higher revenue leading to higher pass through costs and increased professional compensation. Foreign currency translation had a 2.6% positive impact on total cost of revenue during the six months ended June 30, 2023. Cost of revenue as a percentage of revenue decreased slightly to 90.5% for the six months ended June 30, 2023 from 90.8% for the six months ended June 30, 2022, primarily due to increase in project management revenue which generally has higher margins.

Operating, administrative and other expenses increased by $135.2 million, or 27.3%, for the six months ended June 30, 2023 as compared to the six months ended June 30, 2022. The increase in compensation expense was attributable to investment in infrastructure to drive business growth. In addition, the GWS segment incurred approximately $50.0 million in charges related to employee separation benefits, lease exit and contract termination costs under our efficiency and cost-reduction initiatives in the first quarter 2023. Foreign currency translation also had a 3.6% positive impact on total operating expenses during the six months ended June 30, 2023.

Real Estate Investments

The following table summarizes our results of operations for our Real Estate Investments (REI) operating segment for the three and six months ended June 30, 2023 and 2022 (dollars in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2023		2022		2023		2022	
Revenue:								
Investment management	$ 151,327	59.2 %	$ 157,554	56.8 %	$ 298,817	62.3 %	$ 308,121	54.9 %
Development services	104,330	40.8 %	119,727	43.2 %	180,686	37.7 %	252,917	45.1 %
Total segment revenue	255,657	100.0 %	277,281	100.0 %	479,503	100.0 %	561,038	100.0 %
Costs and expenses:								
Cost of revenue	51,420	20.1 %	74,276	26.8 %	89,958	18.8 %	144,329	25.7 %
Operating, administrative and other	176,346	69.0 %	306,455	110.5 %	428,443	89.4 %	553,207	98.6 %
Depreciation and amortization	2,920	1.1 %	3,618	1.3 %	9,381	2.0 %	7,474	1.3 %
Asset impairments	—	0.0 %	26,405	9.5 %	—	0.0 %	26,405	4.7 %
Total costs and expenses	230,686	90.2 %	410,754	148.1 %	527,782	110.2 %	731,415	130.3 %
Gain on disposition of real estate	9,258	3.6 %	177,226	63.9 %	12,318	2.7 %	198,818	35.4 %
Operating income (loss)	34,229	13.4 %	43,753	15.8 %	(35,961)	(7.5) %	28,441	5.1 %
Equity (loss) income from unconsolidated subsidiaries	(3,441)	(1.3) %	172,986	62.4 %	163,234	34.0 %	330,426	58.9 %
Other loss	(118)	0.0 %	(803)	(0.3) %	(3)	0.0 %	(895)	(0.2)%
Add-back: Depreciation and amortization	2,920	1.1 %	3,618	1.3 %	9,381	2.0 %	7,474	1.3 %
Add-back: Asset impairments	—	0.0 %	26,405	9.5 %	—	0.0 %	26,405	4.7 %
Adjustments:								
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue	(459)	(0.2) %	(7,495)	(2.7) %	6,519	1.4 %	15,361	2.7 %
Impact of fair value adjustments to real estate assets acquired in the Telford Acquisition (purchase accounting) that were sold in period	—	0.0 %	(1,451)	(0.5) %	—	0.0 %	(3,147)	(0.5)%
Costs associated with efficiency and cost-reduction initiatives	—	0.0 %	—	0.0 %	21,459	4.4 %	—	0.0 %
Provision associated with Telford's fire safety remediation efforts	—	0.0 %	37,505	13.5 %	—	0.0 %	37,505	6.7 %
Segment operating profit and segment operating profit on revenue margin	$ 33,131	13.0 %	$ 274,518	99.0 %	$ 164,629	34.3 %	$ 441,570	78.7 %

Three Months Ended June 30, 2023 Compared to the Three Months Ended June 30, 2022

Revenue decreased by $21.6 million, or 7.8%, for the three months ended June 30, 2023 as compared to the three months ended June 30, 2022, driven by a decline in real estate sales and lower development and construction fees, primarily in the U.K. Asset management revenue increased 1% while incentive fee revenue experienced a large decline. Foreign currency translation had a 1.1% negative impact on total revenue during the three months ended June 30, 2023, primarily driven by weakness in the British pound sterling.

Cost of revenue decreased by $22.9 million, or 30.8%, for the three months ended June 30, 2023 as compared to the three months ended June 30, 2022. Cost of revenue as a percentage of revenue was 20.1% as compared to 26.8% during the same period in 2022. This was primarily due to a shift in the composition of overall revenue with higher revenue coming from the investment management line of business which has no associated cost of revenue. In addition, the mix of our development revenue shifted more towards development fees versus construction fees. This was partially offset by cost overruns on certain U.K. construction projects. Foreign currency translation had a 1.6% positive impact on total cost of revenue during the three months ended June 30, 2023.

Operating, administrative and other expenses decreased by $130.1 million, or 42.5%, for the three months ended June 30, 2023 as compared to the same period in 2022, primarily due to lower incentive compensation expense to align with business performance. In addition, we recorded $37.5 million in Telford's fire safety provision last year with no such provision in current quarter. Foreign currency translation had a 0.5% positive impact on total operating expenses during the three months ended June 30, 2023.

Equity income from unconsolidated subsidiaries declined by $176.4 million, or 102.0%, during the three months ended June 30, 2023 as compared to the same period in 2022. Gain on disposition of real estate decreased by $168.0 million during the three months ended June 30, 2023 as compared to the same period in 2022. This was primarily due to fewer development sales of consolidated projects affected by the current macroeconomic conditions and higher interest rates.

A roll forward of our AUM by product type for the three months ended June 30, 2023 is as follows (dollars in billions):

	Funds	Separate Accounts	Securities	Total
Balance at March 31, 2023	$ 66.0	$ 72.8	$ 10.1	$ 148.9
Inflows	0.4	1.2	0.5	2.1
Outflows	(1.2)	(0.8)	(0.7)	(2.7)
Market depreciation	(0.4)	(0.3)	—	(0.7)
Balance at June 30, 2023	$ 64.8	$ 72.9	$ 9.9	$ 147.6

AUM generally refers to the properties and other assets with respect to which we provide (or participate in) oversight, investment management services and other advice, and which generally consist of real estate properties or loans, securities portfolios and investments in operating companies and joint ventures. Our AUM is intended principally to reflect the extent of our presence in the real estate market, not the basis for determining our management fees. Our assets under management consist of:

- the total fair market value of the real estate properties and other assets either wholly-owned or held by joint ventures and other entities in which our sponsored funds or investment vehicles and client accounts have invested or to which they have provided financing. Committed (but unfunded) capital from investors in our sponsored funds is not included in this component of our AUM. The value of development properties is included at estimated completion cost. In the case of real estate operating companies, the total value of real properties controlled by the companies, generally through joint ventures, is included in AUM; and
- the net asset value of our managed securities portfolios, including investments (which may be comprised of committed but uncalled capital) in private real estate funds under our fund of funds investments.

Our calculation of AUM may differ from the calculations of other asset managers, and as a result, this measure may not be comparable to similar measures presented by other asset managers.

Six Months Ended June 30, 2023 Compared to the Six Months Ended June 30, 2022

Revenue decreased by $81.5 million, or 14.5%, for the six months ended June 30, 2023 as compared to the six months ended June 30, 2022, largely driven by a decrease in real estate sales and lower development and construction management fees in our development services line of business, primarily in the U.K. Foreign currency translation had a 2.6% negative impact on total revenue during the six months ended June 30, 2023, primarily driven by weakness in the British pound sterling.

Cost of revenue decreased by $54.4 million, or 37.7%, for the six months ended June 30, 2023 as compared to the six months ended June 30, 2022. Cost of revenue as a percentage of revenue was 18.8% for the six months ended June 30, 2023 as compared to 25.7% for the six months ended June 30, 2022. This was primarily due to a shift in the composition of overall revenue with higher revenue coming from the investment management line of business which has no associated cost of revenue. In addition, the mix of our development revenue shifted more towards development fees versus construction fees. This was partially offset by cost overruns on certain U.K. construction projects. Foreign currency translation had a 3.8% positive impact on total cost of revenue during the six months ended June 30, 2023.

Operating, administrative and other expenses decreased by $124.8 million, or 22.6%, for the six months ended June 30, 2023 as compared to the same period in 2022, primarily due to lower incentive compensation expense to align with business performance, $37.5 million in estimated provision related to Telford's fire and building safety remediation work recorded last year with no such provision this year. This was partially off by $21.0 million in charges associated with company's efficiency and cost-reduction savings initiatives from the first quarter in 2023. Foreign currency translation had a 1.8% positive impact on total operating expenses during the six months ended June 30, 2023.

Our equity income from unconsolidated subsidiaries decreased by $167.2 million, or 50.6%, during the six months ended June 30, 2023 as compared to the same period in 2022. Gain on disposition of real estate decreased by $186.5 million during the six months ended June 30, 2023 as compared to the same period in 2022. This was primarily due to fewer development sales of consolidated projects this period compared to a strong six month ended June 30, 2022.

A roll forward of our AUM by product type for the six months ended June 30, 2023 is as follows (dollars in billions):

	Funds	Separate Accounts	Securities	Total
Balance at December 31, 2022	$ 66.2	$ 73.2	$ 9.9	$ 149.3
Inflows	1.8	3.6	0.8	6.2
Outflows	(1.8)	(2.0)	(1.0)	(4.8)
Market (depreciation) appreciation	(1.4)	(1.9)	0.2	(3.1)
Balance at June 30, 2023	$ 64.8	$ 72.9	$ 9.9	$ 147.6

We describe above how we calculate AUM. Also, as noted above, our calculation of AUM may differ from the calculations of other asset managers, and as a result, this measure may not be comparable to similar measures presented by other asset managers.

Corporate and Other

Our Corporate segment primarily consists of corporate overhead costs. Other consists of activities from strategic non-core non-controlling equity investments and is considered an operating segment but does not meet the aggregation criteria for presentation as a separate reportable segment and is, therefore, combined with our core Corporate function and reported as Corporate and other. The following table summarizes our results of operations for our core Corporate and other segment for the three and six months ended June 30, 2023 and 2022 (dollars in thousands):

	Three Months Ended June 30, (1)		Six Months Ended June 30, (1)	
	2023	2022	2023	2022
Elimination of inter-segment revenue	$ (3,529)	$ (2,131)	$ (7,851)	$ (7,019)
Costs and expenses:				
Cost of revenue (2)	(2,662)	(18,330)	(4,187)	(22,447)
Operating, administrative and other	107,936	112,990	218,819	212,593
Depreciation and amortization	14,203	8,466	27,234	16,786
Operating loss	(123,006)	(105,257)	(249,717)	(213,951)
Equity loss from unconsolidated subsidiaries	(5,891)	(54,923)	(32,226)	(180,111)
Other income (loss)	2,193	(7,029)	2,125	(22,886)
Add-back: Depreciation and amortization	14,203	8,466	27,234	16,786
Adjustments:				
Integration and other costs related to acquisitions	28,421	—	39,131	—
Costs incurred related to legal entity restructuring	—	10,245	—	11,921
Costs associated with efficiency and cost-reduction initiatives	47	—	4,906	—
Segment operating loss	$ (84,033)	$ (148,498)	$ (208,547)	$ (388,241)

(1) Percentage of revenue calculations are not meaningful and therefore not included.
(2) Primarily relates to inter-segment eliminations.

Three Months Ended June 30, 2023 Compared to the Three Months Ended June 30, 2022

Core corporate

Operating, administrative and other expenses for our core corporate function were approximately $107.8 million for the three months ended June 30, 2023, as compared to $114.3 million for the three months ended June 30, 2022, a decrease of $6.5 million or 5.7%. This was primarily due to a provision associated with transfer taxes and costs related to previous legal entity restructures that was recorded in the second quarter of 2022 with no comparable activity this quarter, in addition to lower overall incentive compensation expense this quarter to align with expected company performance. This was partially offset by an increase in professional fees incurred as we continue to explore various capital allocation opportunities.

Other (non-core)

We recorded equity loss from unconsolidated subsidiaries of approximately $5.9 million for the three months ended June 30, 2023 from unfavorable fair value adjustments related to certain non-core investments as compared to a $54.9 million net unfavorable adjustment recorded during the three months ended June 30, 2022.

Six Months Ended June 30, 2023 Compared to the Six Months Ended June 30, 2022

Core corporate

Operating, administrative and other expenses for our core corporate function were approximately $218.8 million for the six months ended June 30, 2023, an increase of $7.2 million or 3.4% as compared to the six months ended June 30, 2022. This was primarily due to $4.9 million in charges associated with the efficiency and cost-reduction initiatives executed in the first quarter of 2023, higher professional fees incurred this period as compared to same period last year as we explore various capital allocation opportunities. This was partially offset by lower incentive compensation expense this year and a provision associated with transfer taxes and costs related to previous legal entity restructures recorded last year that did not recur this year.

Other income was approximately $2.4 million for the six months ended June 30, 2023 versus a loss of $13.9 million in the same period last year. This is primarily comprised of net unfavorable activity related to unrealized and realized gain/loss on equity and available for sale debt securities owned by our wholly-owned captive insurance company. These mark to market adjustments were in a net unfavorable position last year.

Other (non-core)

We recorded equity loss of approximately $32.2 million during the six months ended June 30, 2023 as compared to a loss of $180.1 million during the six months ended June 30, 2022 from unfavorable fair value adjustments related to our investment in Altus Power Inc. and certain non-core investments.

Liquidity and Capital Resources

We believe that we can satisfy our working capital and funding requirements with internally generated cash flow and, as necessary, borrowings under our revolving credit facility. Our expected capital requirements for 2023 include up to approximately $326.0 million of anticipated capital expenditures, net of tenant concessions. During the six months ended June 30, 2023, we incurred $128.5 million of capital expenditures, net of tenant concessions received. As of June 30, 2023, we had aggregate future commitments of $89.1 million related to co-investments funds in our Real Estate Investments segment, $23.5 million of which is expected to be funded in 2023. Additionally, as of June 30, 2023, we are committed to fund additional capital of $149.8 million and $78.4 million to consolidated and unconsolidated projects, respectively, within our Real Estate Investments segment. As of June 30, 2023, we had $3.1 billion of borrowings available under our revolving credit facilities (under both the Revolving Credit Agreement, as described below, and the Turner & Townsend revolving credit facility) and $1.3 billion of cash and cash equivalents.

On July 10, 2023, CBRE Group, Inc., CBRE Services and Relam Amsterdam Holdings B.V., a wholly-owned subsidiary of CBRE Services, entered into a new five year senior unsecured Credit Agreement (the 2023 Credit Agreement). The 2023 Credit Agreement provides for a senior unsecured term loan credit facility comprised of (i) tranche A Euro-denominated term loans in an aggregate principal amount of €366.5 million and (ii) tranche A U.S. Dollar-denominated term loans in an aggregate principal amount of $350.0 million. The proceeds of the term loans under the 2023 Credit Agreement were applied to the repayment of all remaining outstanding loans under the 2022 Credit Agreement, the payment of related fees and expenses and other general corporate purposes.

We have historically relied on our internally generated cash flow and our revolving credit facilities to fund our working capital, capital expenditure and general investment requirements (including strategic in-fill acquisitions) and have not sought other external sources of financing to help fund these requirements. In the absence of extraordinary events or a large strategic acquisition, we anticipate that our cash flow from operations and our revolving credit facilities would be sufficient to meet our anticipated cash requirements for the foreseeable future, and at a minimum for the next 12 months. Given compensation is our largest expense and our sales and leasing professionals are generally paid on a commission and/or bonus basis that correlates with their revenue production, the negative effect of difficult market conditions is partially mitigated by the inherent variability of our compensation cost structure. In addition, when negative economic conditions have been particularly severe, we have moved decisively to lower operating expenses to improve financial performance, and then have restored certain expenses as economic conditions improved. We may seek to take advantage of market opportunities to refinance existing debt instruments, as we have done in the past, with new debt instruments at interest rates, maturities and terms we deem attractive. We may also, from time to time in our sole discretion, purchase, redeem, or retire our existing senior notes, through tender offers, in privately negotiated or open market transactions, or otherwise.

In June 2023, we conducted a new issuance for $1.0 billion in aggregate principal amount of 5.950% senior notes due in 2034 (the 5.950% senior notes) generating net proceeds of $975.3 million. In addition, we incurred debt issuance cost of $2.3 million related to this issuance.

As noted above, we believe that any future significant acquisitions we may make could require us to obtain additional debt or equity financing. In the past, we have been able to obtain such financing for material transactions on terms that we believed to be reasonable. However, it is possible that we may not be able to obtain acquisition financing on favorable terms, or at all, in the future.

Our long-term liquidity needs, other than those related to ordinary course obligations and commitments such as operating leases, are generally comprised of three elements. The first is the repayment of the outstanding and anticipated principal amounts of our long-term indebtedness. If our cash flow is insufficient to repay our long-term debt when it comes due, then we expect that we would need to refinance such indebtedness or otherwise amend its terms to extend the maturity dates. We cannot make any assurances that such refinancing or amendments would be available on attractive terms, if at all.

The second long-term liquidity need is the payment of obligations related to acquisitions. Our acquisition structures often include deferred and/or contingent purchase consideration in future periods that are subject to the passage of time or achievement of certain performance metrics and other conditions. As of June 30, 2023 and December 31, 2022, we had accrued deferred purchase consideration totaling $565.8 million ($68.7 million of which was a current liability), and $574.3 million ($117.3 million of which was a current liability), respectively, which was included in “Accounts payable and accrued expenses” and in “Other long-term liabilities” in the accompanying consolidated balance sheets set forth in Item 1 of this Quarterly Report.

In November 2021, our board of directors authorized a program for the company to repurchase up to $2.0 billion of our Class A common stock over five years, effective November 19, 2021 (the 2021 program). In August 2022, our board of directors authorized an additional $2.0 billion, bringing the total authorized repurchase amount under the 2021 program to a total of $4.0 billion. We did not repurchase any of our common stock during the three months ended June 30, 2023 under the 2021 program. During the six months ended June 30, 2023, we repurchased 1,368,173 shares of our Class A common stock with an average price of $83.48 per share using cash on hand for $114.2 million. During the period July 1, 2023 thru July 24, 2023, we repurchased 1,099,745 shares of our Class A common stock with an average price of $85.34 per share using cash on hand for $93.9 million. As of June 30, 2023 and July 24, 2023, we had $2.0 billion and $1.9 billion, respectively, of capacity remaining under the 2021 program.

Our stock repurchases have been funded with cash on hand and we intend to continue funding future repurchases with existing cash. We may utilize our stock repurchase programs to continue offsetting the impact of our stock-based compensation program and on a more opportunistic basis if we believe our stock presents a compelling investment compared to other discretionary uses. The timing of any future repurchases and the actual amounts repurchased will depend on a variety of factors, including the market price of our common stock, general market and economic conditions and other factors.

Historical Cash Flows

Operating Activities

Net cash used in operating activities totaled $755.6 million for the six months ended June 30, 2023 as compared to $60.9 million in net cash provided by operating activities during the six months ended June 30, 2022. The primary driver was significantly lower earnings this quarter as compared to a strong first half in 2022. The other key drivers that contributed to the higher usage were as follows: (1) lower net equity distribution from unconsolidated subsidiaries in the current period as compared to same period in 2022, (2) lower net proceeds from sale of equity securities, (3) certain non-cash charges that contributed to the cash inflow last year that did not recur this year, (4) and net outflow associated with net working capital and real estate under development activities. The net working capital change was mainly due to higher outflow related to accounts payable and accrueds, higher outflow related to net bonus payments, compensation and other employee benefits this year, changes in net income taxes receivable accounts, partially offset by lagged collection of receivables.

Investing Activities

Net cash used in investing activities totaled $369.3 million for the six months ended June 30, 2023, an increase of $40.4 million as compared to the six months ended June 30, 2022. This increase was primarily driven by higher capital expenditures compared to 2022, and higher spend on strategic in-fill acquisitions during this period as compared to the six months ended June 30, 2022. This was partially offset by lower net contributions to unconsolidated subsidiaries as compared to the six months ended June 30, 2022.

Financing Activities

Net cash provided by financing activities totaled $1.1 billion for the six months ended June 30, 2023 as compared to net cash used in financing activities of $760.5 million for the six months ended June 30, 2022. The increased inflow was primarily due to the net proceeds of $975.3 million from the issuance of our 5.950% senior notes, lower repurchase activities, and higher net inflow from our revolving credit facility this period as compared to the same period last year. This was partially offset by $39.8 million in increased outflow related to acquisitions where cash was paid after 90 days of the acquisition date.

Indebtedness

We use a variety of financing arrangements, both long-term and short-term, to fund our operations in addition to cash generated from operating activities. We also use several funding sources to avoid becoming overly dependent on one financing source, and to lower funding costs.

Long-Term Debt

On July 9, 2021, CBRE Services, Inc. (CBRE Services) entered into an additional incremental assumption agreement with respect to its credit agreement, dated October 31, 2017 (such agreement, as amended by a December 20, 2018 incremental term loan assumption agreement, a March 4, 2019 incremental assumption agreement and such July 9, 2021 incremental assumption agreement, collectively, the 2021 Credit Agreement) for purposes of increasing the revolving credit commitments previously available under the 2021 Credit Agreement by an aggregate principal amount of $350.0 million.

On December 10, 2021, CBRE Services and certain of the other borrowers entered into a first amendment to the 2021 Credit Agreement which (i) changed the interest rate applicable to revolving borrowings denominated in Sterling from a LIBOR-based rate to a rate based on the Sterling Overnight Index Average (SONIA) and (ii) changed the interest rate applicable to revolving borrowings denominated in Euros from a LIBOR-based rate to a rate based on Euro Interbank Offered Rate (EURIBOR). The revised interest rates described above went into effect on January 1, 2022.

On August 5, 2022, CBRE Group, Inc., as Holdings, and CBRE Global Acquisition Company, as the Luxembourg Borrower, entered into a second amendment to the 2021 Credit Agreement which, among other things (i) amended certain of the representations and warranties, affirmative covenants, negative covenants and events of default in the 2021 Credit Agreement in a manner consistent with the new 5-year senior unsecured Revolving Credit Agreement (as described below), (ii) terminated all revolving commitments previously available to the subsidiaries of the company thereunder and (iii) reflected the resignation of the previous administrative agent and the appointment of Wells Fargo Bank, National Association as the new administrative agent (the 2021 Credit Agreement, as amended by the first amendment and second amendment is referred to in this Quarterly Report as the 2022 Credit Agreement).

The 2022 Credit Agreement is a senior unsecured credit facility that is guaranteed by CBRE Group, Inc and CBRE Services. As of June 30, 2023, the 2022 Credit Agreement provided for a €400.0 million term loan facility due and payable in full at maturity on December 20, 2023. In addition, a $3.15 billion revolving credit facility, which included the capacity to obtain letters of credit and swingline loans and would have terminated on March 4, 2024, was previously provided under this agreement and was replaced with a new $3.5 billion 5-year senior unsecured Revolving Credit Agreement entered into on August 5, 2022 (as described below).

On July 10, 2023, CBRE Group, Inc., CBRE Services and Relam Amsterdam Holdings B.V., a wholly-owned subsidiary of CBRE Services, entered into a new five year senior unsecured Credit Agreement (the 2023 Credit Agreement). The 2023 Credit Agreement provides for a senior unsecured term loan credit facility comprised of (i) tranche A Euro-denominated term loans in an aggregate principal amount of €366.5 million and (ii) tranche A U.S. Dollar-denominated term loans in an aggregate principal amount of $350.0 million. The proceeds of the term loans under the 2023 Credit Agreement were applied to the repayment of all remaining outstanding loans under the 2022 Credit Agreement, the payment of related fees and expenses and other general corporate purposes.

Borrowings denominated in euros under the 2023 Credit Agreement bear interest at a rate equal to (i) the applicable percentage plus (ii) at our option, either (1) the EURIBOR rate for the applicable interest period or (2) a rate determined by reference to Daily Simple Euro Short-Term Rate (ESTR). Borrowings denominated in dollars under the 2023 Credit Agreement bear interest at a rate equal to (i) the applicable percentage, plus (ii) at our option, either (1) the Term Secured Overnight Financing Rate (SOFR) rate for the applicable interest period plus 10 basis points or (2) a base rate determined by the reference to the greatest of (x) the prime rate, (y) the federal funds rate plus 1/2 of 1% and (z) the sum of (A) Term SOFR rate published by CME Group Benchmark Administration Limited for an interest period of one month and (B) 1.00%. The applicable rate for borrowings under the 2023 Credit Agreement are determined by reference to our Credit Rating (as defined in the 2023 Credit Agreement).

The term loan borrowings under the 2023 Credit Agreement are guaranteed on a senior basis by CBRE Group, Inc. and CBRE Services.

The 2023 Credit Agreement also requires us to maintain a minimum coverage ratio of consolidated EBITDA (as defined in the 2023 Credit Agreement) to consolidated interest expense of 2.00x and a maximum leverage ratio of total debt less available cash to consolidated EBITDA (as defined in the 2023 Credit Agreement) of 4.25x (and in the case of the first four full fiscal quarters following consummation of a qualified acquisition (as defined in the 2023 Credit Agreement), 4.75x) as of the end of each fiscal quarter. In addition, the 2023 Credit Agreement also contains other customary affirmative and negative covenants and events of default.

On June 23, 2023, CBRE Services issued $1.0 billion in aggregate principal amount of its 5.950% senior notes at a price equal to 98.174% of their face value. The 5.950% senior notes are unsecured obligations of CBRE Services, senior to all of its current and future subordinated indebtedness, but effectively subordinated to its current and future secured indebtedness indebtedness (if any) to the extent of the value of the assets securing such indebtedness. The 5.950% senior notes are guaranteed on a senior basis by CBRE Group, Inc. Interest accrues at a rate of 5.950% per year and is payable semi-annually in arrears on February 15 and August 15 of each year, beginning on February 15, 2024. The 5.950% senior notes are redeemable at our option, in whole or in part, on or after May 15, 2034 at a redemption price of 100% of the principal amount on that date, plus accrued and unpaid interest, if any, to, but excluding the date of redemption. At any time prior to May 15, 2034, we may redeem all or a portion of the notes at a redemption price equal to the greater of (1) 100% of the principal amount of the notes to be redeemed and (2) the sum of the present value at the date of redemption of the remaining scheduled payments of principal and interest thereon to May 15, 2034, assuming the notes matured on May 15, 2034, discounted to the date of redemption on a semi-annual basis at an adjusted rate equal to the treasury rate plus 40 basis points, minus accrued interest to the date of redemption, plus, in either case, accrued and unpaid interest, if any, to the redemption date. The amount of the 5.950% senior notes, net of unamortized discount and unamortized debt issuance costs, included in the accompanying consolidated balance sheet was $973.0 million at June 30, 2023.

On March 18, 2021, CBRE Services issued $500.0 million in aggregate principal amount of 2.500% senior notes due April 1, 2031 (the 2.500% senior notes) at a price equal to 98.451% of their face value. The 2.500% senior notes are unsecured obligations of CBRE Services and are guaranteed on a senior basis by CBRE Group, Inc. Interest accrues at a rate of 2.500% per year and is payable semi-annually in arrears on April 1 and October 1 of each year, beginning on October 1, 2021.

On August 13, 2015, CBRE Services issued $600.0 million in aggregate principal amount of 4.875% senior notes due March 1, 2026 (the 4.875% senior notes) at a price equal to 99.24% of their face value. The 4.875% senior notes are unsecured obligations of CBRE Services and are guaranteed on a senior basis by CBRE Group, Inc. Interest accrues at a rate of 4.875% per year and is payable semi-annually in arrears on March 1 and September 1.

The indentures governing our 5.950% senior notes, 4.875% senior notes and 2.500% senior notes contain restrictive covenants that, among other things, limit our ability to create or permit liens on assets securing indebtedness, enter into sale/leaseback transactions and enter into consolidations or mergers.

Our 2023 Credit Agreement and 2022 Credit Agreement are fully and unconditionally guaranteed by CBRE Group, Inc. and CBRE Services. Our Revolving Credit Agreement, 5.950% senior notes, 4.875% senior notes and 2.500% senior notes are fully and unconditionally guaranteed by CBRE Group, Inc.

Combined summarized financial information for CBRE Group, Inc. (parent) and CBRE Services (subsidiary issuer) is as follows (dollars in thousands):

	June 30, 2023	December 31, 2022
Balance Sheet Data:		
Current assets	$ 3,857	$ 8,628
Non-current assets	11,705	13,002
Total assets	$ 15,562	$ 21,630
Current liabilities	$ 598,864	$ 206,026
Non-current liabilities [1]	2,250,270	1,804,975
Total liabilities [1]	$ 2,849,134	$ 2,011,001

	Six Months Ended June 30,	
	2023	2022
Statement of Operations Data:		
Revenue	$ —	$ —
Operating loss	(989)	(1,112)
Net (loss) income	(28,258)	7,875

(1) Includes $190.5 million and $719.3 million of intercompany loan payables to non-guarantor subsidiaries as of June 30, 2023 and December 31, 2022, respectively. All intercompany balances and transactions between CBRE Group, Inc. and CBRE Services have been eliminated.

For additional information on all of our long-term debt, see Note 11 of the Notes to Consolidated Financial Statements set forth in Item 8 included in our 2022 Annual Report and Note 7 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

Short-Term Borrowings

On August 5, 2022, we entered into a new 5-year senior unsecured Revolving Credit Agreement (the "Revolving Credit Agreement"). The Revolving Credit Agreement provides for a senior unsecured revolving credit facility available to CBRE Services with a capacity of $3.5 billion and a maturity date of August 5, 2027.

The Revolving Credit Agreement requires us to pay a fee based on the total amount of the revolving credit facility commitment (whether used or unused). In addition, the Revolving Credit Agreement also includes capacity for letters of credit not to exceed $300.0 million in the aggregate.

As of June 30, 2023, $583.0 million was outstanding under the Revolving Credit Agreement. No letters of credit were outstanding as of June 30, 2023. As of July 24, 2023, $303.0 million was outstanding under the Revolving Credit Agreement. Letters of credit are issued in the ordinary course of business and would reduce the amount we may borrow under the Revolving Credit Agreement.

In addition, Turner & Townsend maintains a £120.0 million revolving credit facility pursuant to a credit agreement dated March 31, 2022, with an additional accordion option of £20.0 million. As of both June 30, 2023 and July 24, 2023, no amounts were outstanding under this revolving credit facility.

For additional information on all of our short-term borrowings, see Notes 5 and 11 of the Notes to Consolidated Financial Statements set forth in Item 8 included in our 2022 Annual Report and Notes 3 and 7 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

We also maintain warehouse lines of credit with certain third-party lenders. See Note 3 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

Off –Balance Sheet Arrangements

We do not have off-balance sheet arrangements that we believe could have a material current or future impact on our financial condition, liquidity or results of operations. Our off-balance sheet arrangements are described in Note 9 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report and are incorporated by reference herein.

Cautionary Note on Forward-Looking Statements

This Quarterly Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. The words "anticipate," "believe," "could," "should," "propose," "continue," "estimate," "expect," "intend," "may," "plan," "predict," "project," "will" and similar terms and phrases are used in this Quarterly Report to identify forward-looking statements. Except for historical information contained herein, the matters addressed in this Quarterly Report are forward-looking statements. These statements relate to analyses and other information based on forecasts of future results and estimates of amounts not yet determinable. These statements also relate to our future prospects, developments and business strategies.

These forward-looking statements are made based on our management's expectations and beliefs concerning future events affecting us and are subject to uncertainties and factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. These uncertainties and factors could cause our actual results to differ materially from those matters expressed in or implied by these forward-looking statements.

The following factors are among those, but are not only those, that may cause actual results to differ materially from the forward-looking statements:

- disruptions in general economic, political and regulatory conditions and significant public health events, particularly in geographies or industry sectors where our business may be concentrated;
- volatility or adverse developments in the securities, capital or credit markets, interest rate increases and conditions affecting the value of real estate assets, inside and outside the U.S.;
- poor performance of real estate investments or other conditions that negatively impact clients' willingness to make real estate or long-term contractual commitments and the cost and availability of capital for investment in real estate;
- foreign currency fluctuations and changes in currency restrictions, trade sanctions and import/export and transfer pricing rules;
- our ability to compete globally, or in specific geographic markets or business segments that are material to us;
- our ability to identify, acquire and integrate accretive businesses;
- costs and potential future capital requirements relating to businesses we may acquire;
- integration challenges arising out of companies we may acquire;
- increases in unemployment and general slowdowns in commercial activity;
- trends in pricing and risk assumption for commercial real estate services;
- the effect of significant changes in capitalization rates across different property types;
- a reduction by companies in their reliance on outsourcing for their commercial real estate needs, which would affect our revenues and operating performance;
- client actions to restrain project spending and reduce outsourced staffing levels;
- our ability to further diversify our revenue model to offset cyclical economic trends in the commercial real estate industry;
- our ability to attract new occupier and investor clients;
- our ability to retain major clients and renew related contracts;
- our ability to leverage our global services platform to maximize and sustain long-term cash flow;
- our ability to continue investing in our platform and client service offerings;
- our ability to maintain expense discipline;
- the emergence of disruptive business models and technologies;
- negative publicity or harm to our brand and reputation;
- the failure by third parties to comply with service level agreements or regulatory or legal requirements;

- the ability of our investment management business to maintain and grow assets under management and achieve desired investment returns for our investors, and any potential related litigation, liabilities or reputational harm possible if we fail to do so;
- our ability to manage fluctuations in net earnings and cash flow, which could result from poor performance in our investment programs, including our participation as a principal in real estate investments;
- the ability of CBRE Capital Markets to periodically amend, or replace, on satisfactory terms, the agreements for its warehouse lines of credit;
- declines in lending activity of U.S. GSEs, regulatory oversight of such activity and our mortgage servicing revenue from the commercial real estate mortgage market;
- changes in U.S. and international law and regulatory environments (including relating to anti-corruption, anti-money laundering, trade sanctions, tariffs, currency controls and other trade control laws), particularly in Asia, Africa, Russia, Eastern Europe and the Middle East, due to the level of political instability in those regions;
- litigation and its financial and reputational risks to us;
- our exposure to liabilities in connection with real estate advisory and property management activities and our ability to procure sufficient insurance coverage on acceptable terms;
- our ability to retain, attract and incentivize key personnel;
- our ability to manage organizational challenges associated with our size;
- liabilities under guarantees, or for construction defects, that we incur in our development services business;
- variations in historically customary seasonal patterns that cause our business not to perform as expected;
- our leverage under our debt instruments as well as the limited restrictions therein on our ability to incur additional debt, and the potential increased borrowing costs to us from a credit-ratings downgrade;
- our and our employees' ability to execute on, and adapt to, information technology strategies and trends;
- cybersecurity threats or other threats to our information technology networks, including the potential misappropriation of assets or sensitive information, corruption of data or operational disruption;
- our ability to comply with laws and regulations related to our global operations, including real estate licensure, tax, labor and employment laws and regulations, fire and safety building requirements and regulations, as well as data privacy and protection regulations, ESG matters, and the anti-corruption laws and trade sanctions of the U.S. and other countries;
- changes in applicable tax or accounting requirements;
- any inability for us to implement and maintain effective internal controls over financial reporting;
- the effect of implementation of new accounting rules and standards or the impairment of our goodwill and intangible assets;
- the performance of our equity investments in companies we do not control; and
- the other factors described elsewhere in this Quarterly Report on Form 10-Q, included under the headings "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies," "Quantitative and Qualitative Disclosures About Market Risk" and Part II, Item 1A, "Risk Factors" or as described in our 2022 Annual Report, in particular in Part II, Item 1A "Risk Factors", or as described in the other documents and reports we file with the Securities and Exchange Commission (SEC).

Forward-looking statements speak only as of the date the statements are made. You should not put undue reliance on any forward-looking statements. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting forward-looking information, except to the extent required by applicable securities laws. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements. Additional information concerning these and other risks and uncertainties is contained in our other periodic filings with the SEC.

Investors and others should note that we routinely announce financial and other material information using our Investor Relations website (https://ir.cbre.com), SEC filings, press releases, public conference calls and webcasts. We use these channels of distribution to communicate with our investors and members of the public about our company, our services and other items of interest. Information contained on our website is not part of this Quarterly Report or our other filings with the SEC.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The information in this section should be read in connection with the information on market risk related to changes in interest rates and non-U.S. currency exchange rates in Part II, Item 7A, “Quantitative and Qualitative Disclosures About Market Risk” in our 2022 Annual Report.

Our exposure to market risk primarily consists of foreign currency exchange rate fluctuations related to our international operations and changes in interest rates on debt obligations. We manage such risk primarily by managing the amount, sources, and duration of our debt funding and by using derivative financial instruments. We apply Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 815, *“Derivatives and Hedging,”* when accounting for derivative financial instruments. In all cases, we view derivative financial instruments as a risk management tool and, accordingly, do not use derivatives for trading or speculative purposes.

Exchange Rates

Our foreign operations expose us to fluctuations in foreign exchange rates. These fluctuations may impact the value of our cash receipts and payments in terms of our functional (reporting) currency, which is the U.S. dollar. See the discussion of international operations, which is included in Item 2. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under the caption “Items Affecting Comparability—International Operations” and is incorporated by reference herein.

Interest Rates

We manage our interest expense by using a combination of fixed and variable rate debt. Historically, we have entered into interest rate swap agreements to attempt to hedge the variability of future interest payments due to changes in interest rates. As of June 30, 2023, we did not have any outstanding interest rate swap agreements.

The estimated fair value of our senior term loans was approximately $434.6 million at June 30, 2023. Based on dealers’ quotes, the estimated fair value of our 5.950% senior notes, 4.875% senior notes and 2.500% senior notes was $987.1 million, $581.9 million and $400.4 million, respectively, at June 30, 2023.

We utilize sensitivity analyses to assess the potential effect on our variable rate debt. If interest rates were to increase 100 basis points on our outstanding variable rate debt at June 30, 2023, the net impact of the additional interest cost would be a decrease of $5.1 million on pre-tax income and an increase of $5.1 million in cash used in operating activities for the six months ended June 30, 2023.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Rule 13a-15(e) and 15d-15(e) of the Securities and Exchange Act of 1934, as amended, requires that we conduct an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report, and we have a disclosure policy in furtherance of the same. This evaluation is designed to ensure that all corporate disclosure is complete and accurate in all material respects. The evaluation is further designed to ensure that all information required to be disclosed in our SEC reports is accumulated and communicated to management to allow timely decisions regarding required disclosures and recorded, processed, summarized and reported within the time periods and in the manner specified in the SEC's rules and forms. Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Our Chief Executive Officer and Chief Financial Officer supervise and participate in this evaluation, and they are assisted by members of our Disclosure Committee. Our Disclosure Committee consists of our General Counsel, our Chief Accounting Officer, Senior Officers of significant business lines and other select employees.

We conducted the required evaluation, and our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures (as defined by Securities Exchange Act Rule 13a-15(e)) were effective as of June 30, 2023 to accomplish their objectives at the reasonable assurance level.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting during the fiscal quarter ended June 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

There have been no material changes to our legal proceedings as previously disclosed in our2022 Annual Report.

Item 1A. Risk Factors

There have been no material changes to our risk factors as previously disclosed in our2022 Annual Report.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 5. Other Information

During the six months ended June 30, 2023,none of our officers or directors adopted or terminated any contract, instruction or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any "non-Rule 10b5-1 trading arrangement".

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Item 6. Exhibits

Exhibit No.	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	SEC File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of CBRE Group, Inc.	8-K	001-32205	3.1	05/23/2018	
3.2	Amended and Restated By-Laws of CBRE Group, Inc.	8-K	001-32205	3.1	02/17/2023	
4.1	Eighth Supplemental Indenture, dated as of June 23, 2023, among CBRE Group, Inc., CBRE Services, Inc. and Computershare Trust Company, National Association, as successor to Wells Fargo Bank, National Association, as trustee, for the issuance of 5.950% Senior Notes due 2034, including the Form of 5.950% Senior Notes due 2034	8-K	001-32205	4.2	06/23/2023	
10.1	Amendment No. 1, dated as of May 3, 2023, to the Revolving Credit Agreement dated as of August 5, 2022, among CBRE Group, Inc., CBRE Services, Inc., the lenders party thereto, the issuing banks party thereto and Wells Fargo Bank, National Association, as administrative agent					X
10.2	Credit Agreement, dated as of July 10, 2023, among CBRE Group, Inc., CBRE Services, Inc., Relam Amsterdam Holdings B.V., the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent	8-K	001-32205	10.1	07/10/2023	
10.3	Guarantee Agreement, dated as of July 10, 2023, among Relam Amsterdam Holdings B.V., CBRE Services, Inc., CBRE Group, Inc. and Wells Fargo Bank, National Association, as administrative agent	8-K	001-32205	10.2	07/10/2023	
22.1	Subsidiary Issuers and Guarantors of CBRE Group, Inc.'s Registered Debt					X
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to §302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to §302 of the Sarbanes-Oxley Act of 2002					X
32	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002					X
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

	CBRE GROUP, INC.
Date: July 27, 2023	/s/ EMMA E. GIAMARTINO
	Emma E. Giamartino *Chief Financial Officer (Principal Financial Officer)*
Date: July 27, 2023	/s/ LINDSEY S. CAPLAN
	Lindsey S. Caplan *Chief Accounting Officer (Principal Accounting Officer)*

AMENDMENT NO. 1 dated as of May 3, 2023 (this "***Amendment***"), to the Revolving Credit Agreement dated as of August 5, 2022 (as amended, restated, supplemented or otherwise modified prior to the date hereof, the "***Revolving Credit Agreement***"), among CBRE SERVICES, INC., a Delaware corporation (the "***Borrower***"), CBRE GROUP, INC., a Delaware corporation, the Lenders from time to time party thereto and WELLS FARGO BANK, NATIONAL ASSOCIATION, as administrative agent (in such capacity "***Wells Fargo***" or the "***Administrative Agent***") for the Lenders.

A. The Borrower has requested that the Revolving Credit Agreement be amended to replace the Sustainability Table set forth therein as Schedule 1.1(d).

B. The Borrower, the Administrative Agent and the Required Lenders have agreed to amend the Revolving Credit Agreement as provided for herein (the Revolving Credit Agreement, as so amended, being referred to herein as the "***Amended Revolving Credit Agreement***"), effective as of the Effective Date (as defined below).

Accordingly, in consideration of the mutual agreements contained herein and for other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereto hereby agree as follows:

SECTION 1. ***Terms Generally***. The rules of construction set forth in Section 1.2 of the Revolving Credit Agreement shall apply *mutatis mutandis* to this Amendment. This Amendment shall be a "Loan Document" for all purposes of the Amended Revolving Credit Agreement and the other Loan Documents. Capitalized terms used but not defined herein have the meanings assigned thereto in the Revolving Credit Agreement.

SECTION 2. ***Amendments to the Revolving Credit Agreement.***

(a) Schedule 1.1(d) of the Revolving Credit Agreement is hereby amended and restated in its entirety as set forth on **Schedule 1.1(d)** hereto.

SECTION 3. ***Representations and Warranties of the Borrower***. To induce the Administrative Agent and the Required Lenders to enter into this Amendment, the Borrower represents and warrants to the Administrative Agent and the Required Lenders that:

(a) This Amendment has been duly authorized, executed and delivered by the Borrower and constitutes a legal, valid and binding obligation of the Borrower enforceable against such Person in accordance with its terms, subject to the effects of bankruptcy, insolvency, fraudulent conveyance, moratorium and other similar laws relating to or affecting creditors' rights generally and to general equitable principles (whether considered in a proceeding in equity or at law) and an implied covenant of good faith and fair dealing.

(b) On and as of the date hereof, each of the representations and warranties made by the Borrower in Article VII of the Amended Revolving Credit Agreement is true and correct in all material respects with the same effect as though made on and as of the date hereof, except (i) to the extent such representations and warranties expressly relate to an earlier date in which case such representations and warranties were true and correct in all material respects as of such earlier date and (ii) to the extent such representations and warranties are already qualified as to materiality, such representations and warranties are true and correct in all respects.

(c) On and as of the date hereof, no Event of Default or Default has occurred and is continuing.

SECTION 4. ***Conditions Precedent to Effectiveness***. This Amendment shall become effective on and as of the date hereof (the "***Effective Date***"), but only if, on or prior to such date, the Administrative Agent (or its counsel) shall have received counterparts of this Amendment that, when taken together, bear the signatures of (i) the Borrower, (ii) the Administrative Agent and (iii) the Lenders that constitute the Required Lenders.

SECTION 5. ***Effect of this Amendment***.

(a) Except as expressly set forth herein, this Amendment shall not by implication or otherwise limit, impair, constitute a waiver of, or otherwise affect the rights and remedies of each of the Administrative Agent, the Lenders or the Issuing Lenders under the Revolving Credit Agreement or any other Loan Document, and shall not alter, modify, amend or in any way affect any of the terms, conditions, obligations, covenants or agreements contained in the Revolving Credit Agreement or any other Loan Document, all of which are ratified and affirmed in all respects and shall continue in full force and effect. Nothing herein shall be deemed to entitle the Borrower to a consent to, or a waiver, amendment, modification or other change of, any of the terms, conditions, obligations, covenants or agreements contained in the Revolving Credit Agreement or any other Loan Document in similar or different circumstances. This Amendment shall apply and be effective only with respect to the provisions of the Revolving Credit Agreement specifically referred to herein. After the Effective Date, any reference to the Revolving Credit Agreement shall mean the Amended Revolving Credit Agreement.

SECTION 6. ***Counterparts***. This Amendment may be executed in any number of counterparts, each of which shall be an original, and all of which, when taken together, shall constitute one agreement. Delivery of an executed signature page of this Amendment by facsimile or other customary means of electronic transmission (e.g., "pdf") shall be effective as delivery of a manually executed counterpart hereof. The words "execution", "signed", "signature", "delivery" and words of like import in or relating to this Amendment and/or any document to be signed in connection with this Amendment and the transactions contemplated hereby shall be deemed to include Electronic Signatures (as defined below), deliveries or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature, physical delivery thereof or the use of a paper-based recordkeeping system, as the case may be. As used herein, "***Electronic Signatures***" means any electronic symbol or process attached to, or associated with, any contract or other record and adopted by a person with the intent to sign, authenticate or accept such contract or record.

SECTION 7. ***Applicable Law***. THIS AMENDMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK. The provisions of Sections 12.6 (*Waiver Of Jury Trial*) and 12.5 (*Governing Law; Jurisdiction, Etc.*) of the Revolving Credit Agreement shall apply to this Amendment to the same extent as if fully set forth herein.

SECTION 8. ***Headings***. The Section headings used herein are for convenience of reference only, are not part of this Amendment and are not to affect the construction of, or to be taken into consideration in interpreting, this Amendment.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the date and year first above written.

CBRE SERVICES, INC., as Borrower

by

/s/ Emma Giamartino

Name: Emma E. Giamartino
Title: Chief Financial Officer

[Signature Page to CBRE Amendment No. 1]

WELLS FARGO BANK, NATIONAL ASSOCIATION, as Administrative Agent

by

/s/ Brian Gilstrap

Name: Brian Gilstrap
Title: Director

AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED, as a Lender

by

/s/ Cynthia Dioquino

Name: Cynthia Dioquino
Title: Director

[Signature Page to CBRE Amendment No. 1]

COMERICA BANK, as a Lender

by

/s/ John Smithson

Name: John Smithson
Title: Vice President

[Signature Page to CBRE Amendment No. 1]

GOLDMAN SACHS BANK USA,
as a Lender

by

/s/ Keshia Leday

Name: Keshia Leday
Title: Authorized Signatory

[Signature Page to CBRE Amendment No. 1]

National Westminster Bank plc, as a Lender

by

/s/ Jonathan Eady

Name: Jonathan Eady
Title: Director

[Signature Page to CBRE Amendment No. 1]

Capital One, N.A., as a Lender

by

/s/ Paul Reutemann

Name: Paul Reutemann
Title: Duly Authorized Signatory

Bank of China, Los Angeles Branch, as a Lender

by

/s/ Jason Fu

Name: Jason Fu
Title: SVP

[Signature Page to CBRE Amendment No. 1]

THE BANK OF NOVA SCOTIA, as a Lender

by

/s/ Robb Gass

Name: Robb Gass
Title: Managing Director

[Signature Page to CBRE Amendment No. 1]

U.S. Bank National Association, as a Lender

by

/s/ Ken Gorski

Name: Ken Gorski
Title: Vice President

[Signature Page to CBRE Amendment No. 1]

Citibank, N.A., as a Lender

by

/s/ James Oleskewicz

Name: James Oleskewicz
Title: Vice President

[Signature Page to CBRE Amendment No. 1]

ING Bank N.V., Dublin Branch, as a Lender

by

/s/ Sean Hassett

Name: Sean Hassett
Title: Director

by

/s/ Cormac Langford

Name: Cormac Langford
Title: Director

[Signature Page to CBRE Amendment No. 1]

BARCLAYS BANK PLC, as a Lender

by

/s/ Timothy Salmon

Name: Timothy Salmon
Title: Director
Executed in NY

HSBC Bank USA, National Association, as a Lender

by

/s/ Matthew Guarnaccia

Name: Matthew Guarnaccia
Title: Senior Vice President
#23439

[Signature Page to CBRE Amendment No. 1]

MORGAN STANLEY BANK, N.A., as a Lender

by

/s/ Yong Sim 5/2/2023

Name: Yong Sim
Title: Authorized Signatory

[Signature Page to CBRE Amendment No. 1]

PNC Bank, National Association, as a Lender

by

/s/ Amanda L. Nelson

Name: Amanda L. Nelson
Title: Senior Vice President

[Signature Page to CBRE Amendment No. 1]

Bank of America, N.A., as a Lender

by

/s/ Suzanne E. Pickett

Name: Suzanne E. Pickett
Title: Senior Vice President

[Signature Page to CBRE Amendment No. 1]

STANDARD CHARTERED BANK, as a Lender

by

/s/ Kristopher Tracy

Name: Kristopher Tracy
Title: Director, Financing Solutions

JPMorgan Chase Bank, N.A., as a Lender

by

/s/ Delia Rodillas

Name: Delia Rodillas
Title: Vice President

Schedule 1.1(d) – Sustainability Table

EXHIBIT 22.1

SUBSIDIARY ISSUERS AND GUARANTORS OF CBRE GROUP, INC.'S REGISTERED DEBT

AT JUNE 30, 2023

CBRE Services, Inc., a subsidiary of CBRE Group, Inc., is the issuer of the 5.950%, 4.875% and 2.500% senior notes (as defined in CBRE Group, Inc.'s Quarterly Report on Form 10-Q for the six months ended June 30, 2023), which are guaranteed by CBRE Group, Inc.

EXHIBIT 31.1

Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) Under the Securities Exchange Act of 1934, as Amended

I, Robert E. Sulentic, certify that:

1) I have reviewed this quarterly report on Form 10-Q of CBRE Group, Inc.;

2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5) The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: July 27, 2023

/s/ ROBERT E. SULENTIC

Robert E. Sulentic

President and Chief Executive Officer

EXHIBIT 31.2

Certification of Chief Financial Officer Pursuant to
Rule 13a-14(a) Under the Securities Exchange Act of 1934, as Amended

I, Emma E. Giamartino, certify that:

1) I have reviewed this quarterly report on Form 10-Q of CBRE Group, Inc.;

2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5) The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: July 27, 2023

/s/ EMMA E. GIAMARTINO

Emma E. Giamartino
Chief Financial Officer (Principal Financial Officer)

EXHIBIT 32

Certifications of Chief Executive Officer and Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act Of 2002

The undersigned, Robert E. Sulentic, Chief Executive Officer, and Emma E. Giamartino, Chief Financial Officer of CBRE Group, Inc. (the "Company"), hereby certify as of the date hereof, solely for the purposes of 18 U.S.C. §1350, that:

(i) the Quarterly Report on Form 10-Q for the period ended June 30, 2023, of the Company (the "Report") fully complies with the requirements of Section 13(a) and 15(d), as applicable, of the Securities Exchange Act of 1934; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

Date: July 27, 2023	/s/ ROBERT E. SULENTIC
	Robert E. Sulentic
	President and Chief Executive Officer
Date: July 27, 2023	/s/ EMMA E. GIAMARTINO
	Emma E. Giamartino
	Chief Financial Officer (Principal Financial Officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.