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 September 30, 2020

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 Number)**
2100 McKinney Avenue, 12th Floor 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

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

None

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 October 20, 2020 was 335,456,246.

FORM 10-Q

September 30, 2020

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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)

	September 30, 2020	December 31, 2019
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 1,481,924	$ 971,781
Restricted cash	164,633	121,964
Receivables, less allowance for doubtful accounts of $111,777 and $72,725 at September 30, 2020 and December 31, 2019, respectively	3,997,998	4,466,674
Warehouse receivables	1,211,886	993,058
Prepaid expenses	284,947	282,741
Contract assets	282,031	328,012
Income taxes receivable	62,736	93,915
Other current assets	285,220	276,319
Total Current Assets	7,771,375	7,534,464
Property and equipment, net	818,333	836,206
Goodwill	3,744,269	3,753,493
Other intangible assets, net of accumulated amortization of $1,496,563 and $1,358,528 at September 30, 2020 and December 31, 2019, respectively	1,333,917	1,379,546
Operating lease assets	1,057,992	997,966
Investments in unconsolidated subsidiaries	392,569	426,711
Real estate under development	228,038	185,508
Non-current contract assets	177,801	201,760
Deferred tax assets, net	95,380	73,864
Non-current income taxes receivable	39,467	139,136
Other assets, net	687,935	668,542
Total Assets	$ 16,347,076	$ 16,197,196
LIABILITIES AND EQUITY		
Current Liabilities:		
Accounts payable and accrued expenses	$ 2,428,845	$ 2,436,084
Compensation and employee benefits payable	1,222,607	1,324,990
Accrued bonus and profit sharing	808,353	1,261,974
Operating lease liabilities	189,641	168,663
Contract liabilities	132,499	108,671
Income taxes payable	50,965	30,207
Short-term borrowings:		
Warehouse lines of credit (which fund loans that U.S. Government Sponsored Enterprises have committed to purchase)	1,191,834	977,175
Other	5,028	4,534
Total short-term borrowings	1,196,862	981,709
Current maturities of long-term debt	1,526	1,814
Other current liabilities	120,974	122,339
Total Current Liabilities	6,152,272	6,436,451
Long-term debt, net of current maturities	1,783,212	1,761,245
Non-current operating lease liabilities	1,125,005	1,057,758
Non-current tax liabilities	84,633	85,966
Deferred tax liabilities, net	71,892	34,593
Non-current income taxes payable	40,562	93,647
Other liabilities	495,198	454,424
Total Liabilities	9,752,774	9,924,084
Commitments and contingencies	—	—
Equity:		
CBRE Group, Inc. Stockholders' Equity:		
Class A common stock; $0.01 par value; 525,000,000 shares authorized; 335,438,893 and 334,752,283 shares issued and outstanding at September 30, 2020 and December 31, 2019, respectively	3,354	3,348
Additional paid-in capital	1,064,849	1,115,944
Accumulated earnings	6,216,292	5,793,149
Accumulated other comprehensive loss	(731,399)	(679,748)
Total CBRE Group, Inc. Stockholders' Equity	6,553,096	6,232,693
Non-controlling interests	41,206	40,419
Total Equity	6,594,302	6,273,112
Total Liabilities and Equity	$ 16,347,076	$ 16,197,196

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 data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue	$ 5,645,142	$ 5,925,101	$ 16,915,694	$ 16,774,684
Costs and expenses:				
Cost of revenue	4,564,579	4,687,336	13,676,790	13,155,160
Operating, administrative and other	794,227	809,584	2,355,099	2,479,857
Depreciation and amortization	127,725	111,560	357,903	323,862
Asset impairments	—	—	75,171	89,037
Total costs and expenses	5,486,531	5,608,480	16,464,963	16,047,916
Gain on disposition of real estate	52,797	9	75,132	19,266
Operating income	211,408	316,630	525,863	746,034
Equity income from unconsolidated subsidiaries	32,376	25,796	72,487	120,233
Other income	7,947	941	12,974	26,163
Interest expense, net of interest income	17,829	21,846	51,795	67,638
Write-off of financing costs on extinguished debt	—	—	—	2,608
Income before provision for income taxes	233,902	321,521	559,529	822,184
Provision for income taxes	49,062	63,468	119,047	169,867
Net income	184,840	258,053	440,482	652,317
Less: Net income attributable to non-controlling interests	708	1,454	2,258	7,578
Net income attributable to CBRE Group, Inc.	$ 184,132	$ 256,599	$ 438,224	$ 644,739
Basic income per share:				
Net income per share attributable to CBRE Group, Inc.	$ 0.55	$ 0.76	$ 1.31	$ 1.92
Weighted average shares outstanding for basic income per share	335,287,245	336,203,747	335,128,531	336,149,719
Diluted income per share:				
Net income per share attributable to CBRE Group, Inc.	$ 0.55	$ 0.75	$ 1.30	$ 1.89
Weighted average shares outstanding for diluted income per share	337,665,848	341,100,182	338,255,859	340,590,007

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 September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net income	$ 184,840	$ 258,053	$ 440,482	$ 652,317
Other comprehensive income (loss):				
Foreign currency translation gain (loss)	106,201	(78,177)	(40,237)	(79,772)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	106	377	320	1,212
Unrealized gains (losses) on interest rate swaps, net of tax	—	7	—	(104)
Unrealized holding gains on available for sale debt securities, net of tax	811	881	1,311	2,341
Other, net	—	7,377	(13,045)	7,378
Total other comprehensive income (loss)	107,118	(69,535)	(51,651)	(68,945)
Comprehensive income	291,958	188,518	388,831	583,372
Less: Comprehensive income attributable to non-controlling interests	708	1,340	2,258	7,445
Comprehensive income attributable to CBRE Group, Inc.	$ 291,250	$ 187,178	$ 386,573	$ 575,927

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

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

	Nine Months Ended September 30,	
	2020	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 440,482	$ 652,317
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	357,903	323,862
Amortization and write-off of financing costs on extinguished debt	4,632	7,196
Gains related to mortgage servicing rights, premiums on loan sales and sales of other assets	(179,506)	(191,103)
Asset impairments	75,171	89,037
Net realized and unrealized gains, primarily from investments	(12,974)	(26,163)
Provision for doubtful accounts	49,498	18,083
Net compensation expense for equity awards	41,841	98,958
Equity income from unconsolidated subsidiaries	(72,487)	(120,233)
Distribution of earnings from unconsolidated subsidiaries	103,796	145,588
Proceeds from sale of mortgage loans	11,565,281	15,786,800
Origination of mortgage loans	(11,727,227)	(15,381,864)
Increase in warehouse lines of credit	214,659	19,849
Increase in advance warehouse funding	—	(376,707)
Tenant concessions received	28,617	18,367
Purchase of equity securities	(8,932)	(81,369)
Proceeds from sale of equity securities	11,210	45,333
Increase in real estate under development	(68,178)	(3,356)
Decrease (increase) in receivables, prepaid expenses and other assets (including contract and lease assets)	610,058	(644,586)
(Decrease) increase in accounts payable and accrued expenses and other liabilities (including contract and lease liabilities)	(128,693)	158,708
Decrease in compensation and employee benefits payable and accrued bonus and profit sharing	(550,932)	(194,592)
Decrease (increase) in net income taxes receivable/payable	118,736	(132,583)
Other operating activities, net	(12,313)	(36,793)
Net cash provided by operating activities	860,642	174,749
CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital expenditures	(190,546)	(196,031)
Acquisition of businesses, including net assets acquired, intangibles and goodwill, net of cash acquired	(25,923)	(14,844)
Contributions to unconsolidated subsidiaries	(72,058)	(84,648)
Distributions from unconsolidated subsidiaries	66,409	20,960
Other investing activities, net	15,631	2,864
Net cash used in investing activities	(206,487)	(271,699)

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)

	Nine Months Ended September 30,	
	2020	**2019**
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from senior term loans	—	300,000
Repayment of senior term loans	—	(300,000)
Proceeds from revolving credit facility	835,671	2,683,000
Repayment of revolving credit facility	(835,671)	(2,631,000)
Proceeds from notes payable on real estate	40,263	5,243
Repayment of notes payable on real estate	(24,704)	—
Repurchase of common stock	(50,028)	(94,088)
Acquisition of businesses (cash paid for acquisitions more than three months after purchase date)	(34,400)	(36,089)
Units repurchased for payment of taxes on equity awards	(41,627)	(16,573)
Non-controlling interest contributions	1,977	46,513
Non-controlling interest distributions	(2,471)	(3,798)
Other financing activities, net	(334)	(5,171)
Net cash used in financing activities	(111,324)	(51,963)
Effect of currency exchange rate changes on cash and cash equivalents and restricted cash	9,981	(12,726)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS AND RESTRICTED CASH	552,812	(161,639)
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH, AT BEGINNING OF PERIOD	1,093,745	863,944
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH, AT END OF PERIOD	$ 1,646,557	$ 702,305
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid during the period for:		
Interest	$ 60,415	$ 80,179
Income tax payments, net	$ 4,137	$ 302,735

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. Shareholders					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at June 30, 2020	$ 3,352	$ 1,046,999	$ 6,032,160	$ (838,517)	$ 41,057	$ 6,285,051
Net income	—	—	184,132	—	708	184,840
Net compensation expense for equity awards	—	22,137	—	—	—	22,137
Units repurchased for payment of taxes on equity awards	—	(4,269)	—	—	—	(4,269)
Foreign currency translation gain	—	—	—	106,201	—	106,201
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	106	—	106
Unrealized holding gains on available for sale debt securities, net of tax	—	—	—	811	—	811
Contributions from non-controlling interests	—	—	—	—	549	549
Distributions to non-controlling interests	—	—	—	—	(1,379)	(1,379)
Other	2	(18)	—	—	271	255
Balance at September 30, 2020	$ 3,354	$ 1,064,849	$ 6,216,292	$ (731,399)	$ 41,206	$ 6,594,302

	CBRE Group, Inc. Shareholders					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at June 30, 2019	$ 3,363	$ 1,162,002	$ 4,898,932	$ (717,660)	$ 43,893	$ 5,390,530
Net income	—	—	256,599	—	1,454	258,053
Net compensation expense for equity awards	—	33,378	—	—	—	33,378
Units repurchased for payment of taxes on equity awards	—	(7,008)	—	—	—	(7,008)
Repurchase of common stock	—	(49,000)	—	—	—	(49,000)
Foreign currency translation loss	—	—	—	(78,063)	(114)	(78,177)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	377	—	377
Unrealized gains on interest rate swaps, net of tax	—	—	—	7	—	7
Unrealized holding gains on available for sale debt securities, net of tax	—	—	—	881	—	881
Contributions from non-controlling interests	—	—	—	—	4,536	4,536
Distributions to non-controlling interests	—	—	—	—	(1,235)	(1,235)
Deconsolidation of investment	—	—	—	—	(26)	(26)
Other	(5)	649	—	7,377	(1,357)	6,664
Balance at September 30, 2019	$ 3,358	$ 1,140,021	$ 5,155,531	$ (787,081)	$ 47,151	$ 5,558,980

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. Shareholders					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at December 31, 2019	$ 3,348	$ 1,115,944	$ 5,793,149	$ (679,748)	$ 40,419	$ 6,273,112
Net income	—	—	438,224	—	2,258	440,482
Net compensation expense for equity awards	—	41,841	—	—	—	41,841
Units repurchased for payment of taxes on equity awards	—	(41,627)	—	—	—	(41,627)
Repurchase of common stock	(11)	(50,017)	—	—	—	(50,028)
Foreign currency translation loss	—	—	—	(40,237)	—	(40,237)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	320	—	320
Unrealized holding gains on available for sale debt securities, net of tax	—	—	—	1,311	—	1,311
Contributions from non-controlling interests	—	—	—	—	1,977	1,977
Distributions to non-controlling interests	—	—	—	—	(2,471)	(2,471)
Other	17	(1,292)	(15,081)	(13,045)	(977)	(30,378)
Balance at September 30, 2020	$ 3,354	$ 1,064,849	$ 6,216,292	$ (731,399)	$ 41,206	$ 6,594,302

	CBRE Group, Inc. Shareholders					
	Class A common stock	Additional paid-in capital	Accumulated earnings	Accumulated other comprehensive loss	Non-controlling interests	Total
Balance at December 31, 2018	$ 3,369	$ 1,149,013	$ 4,504,684	$ (718,269)	$ 71,105	$ 5,009,902
Net income	—	—	644,739	—	7,578	652,317
Net compensation expense for equity awards	—	98,958	—	—	—	98,958
Units repurchased for payment of taxes on equity awards	—	(16,573)	—	—	—	(16,573)
Repurchase of common stock	(11)	(94,077)	—	—	—	(94,088)
Foreign currency translation loss	—	—	—	(79,639)	(133)	(79,772)
Amounts reclassified from accumulated other comprehensive loss to interest expense, net of tax	—	—	—	1,212	—	1,212
Unrealized losses on interest rate swaps, net of tax	—	—	—	(104)	—	(104)
Unrealized holding gains on available for sale debt securities, net of tax	—	—	—	2,341	—	2,341
Contributions from non-controlling interests	—	—	—	—	46,513	46,513
Distributions to non-controlling interests	—	—	—	—	(3,798)	(3,798)
Deconsolidation of investment	—	—	—	—	(67,667)	(67,667)
Other	—	2,700	6,108	7,378	(6,447)	9,739
Balance at September 30, 2019	$ 3,358	$ 1,140,021	$ 5,155,531	$ (787,081)	$ 47,151	$ 5,558,980

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, 2019, which are included in our 2019 Annual Report on Form 10-K (2019 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 2019 Annual Report for further discussion of our significant accounting policies and estimates.

Considerations Related to the COVID-19 Pandemic

The outbreak of the novel coronavirus (COVID-19) global pandemic in the first quarter of 2020 has created a tremendous amount of uncertainty, precipitated a global economic contraction and severely disrupted both business activity and global real estate markets.

From 2010 to early 2020, commercial real estate markets had generally been characterized by increased demand for space, falling vacancies, higher rents and strong capital flows, leading to solid property sales and leasing activity. This healthy backdrop changed abruptly in the first quarter of 2020 with the emergence of the COVID-19 pandemic and resultant sharp contraction of economic activity across much of the world. There has been a significant impact on commercial real estate markets, as many property owners and occupiers have put transactions on hold and withdrawn existing mandates, sharply reducing sales and leasing volumes. We expect to see this trend continue, as concerns about a COVID-19 resurgence are high across our major markets. The recovery of real estate markets around the world remained uncertain as of October 2020.

We expect the effects of COVID-19 will adversely impact our financial position, results of operations, and cash flows for fiscal year 2020. The unaudited consolidated financial statements presented herein reflect our current estimates and assumptions that affect the reported amounts of assets and liabilities and related disclosures as of the date of the financial statements and reported amounts of sales and expenses during the reporting periods presented.

See Note 6 (Fair Value Measurements) and Note 10 (Commitments and Contingencies) for further discussion of COVID-19 considerations.

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 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, including the impact COVID-19 may have on our business. These estimates and the underlying assumptions affect the amounts of assets and liabilities reported and reported amounts of revenue 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.

Certain reclassifications have been made to the 2019 financial statements to conform with the 2020 presentation.

2. New Accounting Pronouncements

Recent Accounting Pronouncements Pending Adoption

In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-14, "*Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans.*" This ASU makes minor changes to the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. This ASU is effective for fiscal years ending after December 15, 2020, with early adoption permitted. ASU 2018-14 only revises disclosure requirements. We are evaluating the effect, if any, that ASU 2018-14 will have on our disclosures, but do not expect it to have a material impact.

In December 2019, the FASB issued ASU 2019-12, "*Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.*" This ASU removes specific exceptions to the general principles in Topic 740 and improves and simplifies financial statement preparers' application of income tax-related guidance. This ASU is effective for fiscal years beginning after December 15, 2020, and interim periods within those years, with early adoption permitted. We are evaluating the effect that ASU 2019-12 will have on our consolidated financial statements and related disclosures, but do not expect it to have a material impact.

In January 2020, the FASB issued ASU 2020-01, "*Investments—Equity Securities (Topic 321), Investments—Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815).*" This ASU, among other things, clarifies that a company should consider observable transactions that require a company to either apply or discontinue the equity method of accounting under Topic 323 and clarifies that, when determining the accounting for certain forward contracts and purchased options a company should not consider, whether upon settlement or exercise, if the underlying securities would be accounted for under the equity method or fair value option. This ASU is effective for fiscal years beginning after December 15, 2020, and interim periods within those years, with early adoption permitted. We are evaluating the effect that ASU 2020-01 will have on our consolidated financial statements and related disclosures.

In March 2020, the FASB issued ASU 2020-04, "*Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting."* This ASU provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another reference rate expected to be discontinued. This ASU is effective for a limited time for all entities through December 31, 2022. We are evaluating the effect that ASU 2020-04 will have on our consolidated financial statements and related disclosures.

3. Telford Acquisition

On October 1, 2019, we acquired Telford Homes Plc (Telford) to expand our real estate development business outside of the U.S. (Telford Acquisition). A leading developer of multifamily residential properties in the London area, Telford is reported in our Real Estate Investments segment. Telford shareholders received £3.50 per share in cash, valuing Telford at £267.1 million, or $328.5 million as of the acquisition date.

The purchase accounting related to the Telford Acquisition has been finalized in the accompanying consolidated financial statements (with no significant changes made in 2020 to the preliminary purchase accounting recorded in 2019). The excess purchase price over the estimated fair value of net assets acquired has been recorded to goodwill. The goodwill arising from the Telford Acquisition consists largely of the synergies and economies of scale expected from combining the operations acquired from Telford with ours. The goodwill recorded in connection with the Telford Acquisition that is deductible for tax purposes was not significant.

4. 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 September 30, 2020 and December 31, 2019, 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, 2019	$	993,058
Origination of mortgage loans		11,727,227
Gains (premiums on loan sales)		51,380
Proceeds from sale of mortgage loans:		
Sale of mortgage loans		(11,513,901)
Cash collections of premiums on loan sales		(51,380)
Proceeds from sale of mortgage loans		(11,565,281)
Net increase in mortgage servicing rights included in warehouse receivables		5,502
Ending balance at September 30, 2020	$	1,211,886

The following table is a summary of our warehouse lines of credit in place as of September 30, 2020 and December 31, 2019 (dollars in thousands):

			September 30, 2020		December 31, 2019	
Lender	**Current Maturity**	**Pricing**	**Maximum Facility Size**	**Carrying Value**	**Maximum Facility Size**	**Carrying Value**
JP Morgan Chase Bank, N.A. (JP Morgan) (1)	10/19/2020	daily floating rate LIBOR plus 1.30%	$ 985,000	$ 336,262	$ 985,000	$ 267,075
JP Morgan (2)	10/19/2020	daily floating rate LIBOR plus 2.75%	15,000	—	15,000	—
Capital One, N.A. (Capital One) (3)	7/27/2020	daily one-month LIBOR plus 1.25%	—	—	200,000	39,538
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 1.35%, with a LIBOR floor of 0.35%	450,000	65,505	450,000	360,784
TD Bank, N.A. (TD Bank) (4)	(4)	daily floating rate LIBOR plus 1.15%	800,000	596,021	800,000	92,266
Bank of America, N.A. (BofA) (5)	5/26/2021	(6)	350,000	189,290	350,000	189,465
BofA	(7)	daily one-month LIBOR plus 1.15%	—	—	250,000	17,457
MUFG Union Bank, N.A. (Union Bank) (8)	(8)	daily floating rate LIBOR plus 1.50%	300,000	4,756	350,000	10,590
			$ 2,900,000	$ 1,191,834	$ 3,400,000	$ 977,175

(1) Effective October 19, 2020, this facility was amended and the maximum facility size was temporarily increased to $1,585.0 million and will revert back to $985.0 million on January 18, 2021. The interest rate increased to a LIBOR daily floating rate, plus 1.60% and the revised maturity date is October 18, 2021.
(2) Effective October 19, 2020 the maturity date was extended to October 18, 2021.
(3) This facility expired on July 27, 2020 and was not renewed.
(4) 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, with an unchanged interest rate and revised maturity date of June 30, 2021. Effective September 21, 2020, CBRE utilized the additional $400.0 million as a temporary increase, which expires on December 31, 2020.
(5) On June 10, 2020, this facility was amended with a revised maturity date of May 26, 2021. The total commitment amount of $350.0 million includes a separate sublimit borrowing in the amount of $100.0 million, which can be utilized for specific purposes as defined within the agreement. As of September 30, 2020, the sublimit borrowing has not been utilized.
(6) Effective July 24, 2020, the interest rate on this facility was as follows: (i) a LIBOR daily floating rate for such day, plus 1.40% on the general facility and (ii) a LIBOR daily floating rate for such day, plus 1.75% on the separate sublimit borrowing.
(7) This facility expired on May 27, 2020 and was not renewed.
(8) On June 28, 2019, we added a new warehouse facility for $200.0 million with Union Bank. This facility contains an accordion feature which allows for temporary increases not to exceed an additional $150.0 million. If utilized, the additional borrowings must be in predefined multiples and are not to occur more than three times within twelve consecutive months. On June 26, 2020, the maturity date was extended to July 28, 2020 and on July 28, 2020 the maturity date was extended to August 27, 2020. Effective August 4, 2020, this facility was amended with a revised interest of LIBOR daily floating rate for such day, plus 1.50% and a maturity date of June 28, 2021. Additionally, this amendment decreased the accordion feature from $150.0 million to $100.0 million, with no changes to the predefined borrowing multiples. On September 22, 2020, the temporary increase of $100.0 million was utilized and expires on January 20, 2021.

During the nine months ended September 30, 2020, we had a maximum of $1.8 billion of warehouse lines of credit principal outstanding.

5. Variable Interest Entities (VIEs)

We hold variable interests in certain VIEs 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 September 30, 2020 and December 31, 2019, our maximum exposure to loss related to VIEs which are not consolidated was as follows (dollars in thousands):

	September 30, 2020	December 31, 2019
Investments in unconsolidated subsidiaries	$ 65,341	$ 30,484
Other current assets	4,219	4,307
Co-investment commitments	53,971	29,696
Maximum exposure to loss	$ 123,531	$ 64,487

6. Fair Value Measurements

Topic 820 of the FASB Accounting Standards Codification (ASC) defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or 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 2019 Annual Report.

For a portion of our investments in unconsolidated subsidiaries reported at fair value, we estimate fair value using the net asset value (NAV) per share (or its equivalent) our investees provide. These investments are considered investment companies, or are the equivalent of investment companies, as they carry all investments at fair value, with unrealized gains and losses resulting from changes in fair value reflected in earnings. Accordingly, we effectively carry our investments at an amount that is equivalent to our proportionate share of the net assets of each investment that would be allocated to us if each investment was liquidated at the net asset value as of the measurement date. As of September 30, 2020, and December 31, 2019, investments in unconsolidated subsidiaries at fair value using NAV were $59.0 million and $45.2 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 below.

The following tables present the fair value of assets and liabilities measured at fair value on a recurring basis as of September 30, 2020 and December 31, 2019 (dollars in thousands):

	As of September 30, 2020			
	Fair Value Measured and Recorded Using			
	Level 1	Level 2	Level 3	Total
Assets				
Available for sale securities:				
Debt securities:				
U.S. treasury securities	$ 7,325	$ —	$ —	$ 7,325
Debt securities issued by U.S. federal agencies	—	10,944	—	10,944
Corporate debt securities	—	47,173	—	47,173
Asset-backed securities	—	2,973	—	2,973
Collateralized mortgage obligations	—	1,357	—	1,357
Total available for sale debt securities	7,325	62,447	—	69,772
Equity securities	40,089	—	—	40,089
Warehouse receivables	—	1,211,886	—	1,211,886
Total assets at fair value	$ 47,414	$ 1,274,333	$ —	$ 1,321,747

	As of December 31, 2019			
	Fair Value Measured and Recorded Using			
	Level 1	Level 2	Level 3	Total
Assets				
Available for sale securities:				
Debt securities:				
U.S. treasury securities	$ 6,998	$ —	$ —	$ 6,998
Debt securities issued by U.S. federal agencies	—	10,639	—	10,639
Corporate debt securities	—	29,098	—	29,098
Asset-backed securities	—	5,152	—	5,152
Collateralized mortgage obligations	—	2,222	—	2,222
Total available for sale debt securities	6,998	47,111	—	54,109
Equity securities	51,399	—	—	51,399
Warehouse receivables	—	993,058	—	993,058
Total assets at fair value	$ 58,397	$ 1,040,169	$ —	$ 1,098,566

There were no significant non-recurring fair value measurements recorded during the three months ended September 30, 2020 and 2019.

The following non-recurring fair value measurements were recorded for the nine months ended September 30, 2020 (dollars in thousands):

	Net Carrying Value as of September 30, 2020	Fair Value Measured and Recorded Using			Total Impairment Charges for the Nine Months Ended September 30, 2020
		Level 1	Level 2	Level 3	
Property and equipment	$ 9,565	$ —	$ —	$ 9,565	$ 21,663
Goodwill	431,389	—	—	431,389	25,000
Other intangible assets	12,842	—	—	12,842	28,508
Total	$ 453,796	$ —	$ —	$ 453,796	$ 75,171

The following non-recurring fair value measurements were recorded for the nine months ended September 30, 2019 (dollars in thousands):

	Net Carrying Value as of September 30, 2019	Fair Value Measured and Recorded Using			Total Impairment Charges for the Nine Months Ended September 30, 2019
		Level 1	Level 2	Level 3	
Other intangible assets	$ 16,000	$ —	$ —	$ 16,000	$ 89,037

During the nine months ended September 30, 2020, we recorded $50.2 million of non-cash asset impairment charges in our Global Workplace Solutions segment and a non-cash goodwill impairment charge of $25.0 million in our Real Estate Investments segment. As a result of the recent global economic disruption and uncertainty due to COVID-19, we deemed there to be triggering events in the first quarter of 2020 that required testing of certain assets for impairment at that time. Based on these tests, we recorded the aforementioned non-cash impairment charges, which were driven by lower anticipated cash flows in certain businesses directly resulting from a downturn in forecasts as well as increased forecast risk due to COVID-19.

During the nine months ended September 30, 2019, we recorded an intangible asset impairment charge of $89.0 million in our Real Estate Investments segment. This non-cash write-off resulted from a review of the anticipated cash flows and a decrease in assets under management in our public securities business driven in part by continued industry-wide shift in investor preference for passive investment programs.

All the above-mentioned asset impairment charges were included within the line item “Asset impairments” in the accompanying consolidated statements of operations. The fair value measurements employed for our impairment evaluations were based on a discounted cash flow approach. Inputs used in these evaluations included risk-free rates of return, estimated risk premiums, terminal growth rates, working capital assumptions, income tax rates as well as other economic variables.

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 4).
- *Investments in Unconsolidated Subsidiaries* – A portion of these investments are carried at fair value. At September 30, 2020, we did not classify any investments as Level 1 in the fair value hierarchy. For investments in unconsolidated subsidiaries that are carried at fair value, we estimate the fair value of each investment using the NAV per share (or its equivalent).
- *Available for Sale Debt Securities* – These investments are carried at their fair value.
- *Equity Securities* – These investments are carried at their fair value.
- *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 4 and 8).
- *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 $752.7 million at September 30, 2020 and $745.5 million at December 31, 2019. Their actual carrying value, net of unamortized debt issuance costs, totaled $765.7 million and $744.6 million at September 30, 2020 and December 31, 2019, respectively (see Note 8).
- *Senior Notes* – Based on dealers' quotes (which falls within Level 2 of the fair value hierarchy), the estimated fair values of our 4.875% senior notes and 5.25% senior notes were $697.4 million and $482.6 million, respectively, at September 30, 2020 and $670.7 million and $478.3 million, respectively, at December 31, 2019. The actual carrying value of our 4.875% senior notes and 5.25% senior notes, net of unamortized debt issuance costs as well as unamortized discount or premium, if applicable, totaled $594.3 million and $423.2 million, respectively, at September 30, 2020 and $593.6 million and $423.0 million, respectively, at December 31, 2019.

7. 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 up to 50.0%.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue	$ 513,792	$ 375,717	$ 1,337,212	$ 1,083,664
Operating income	97,833	191,667	411,291	383,490
Net income	109,251	189,960	267,835	289,437

8. Long-Term Debt and Short-Term Borrowings

Long-Term Debt

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

	September 30, 2020	December 31, 2019
Senior term loans, with interest ranging from 0.75% to 2.69%, due quarterly through 2024	$ 768,988	$ 748,531
4.875% senior notes due in 2026, net of unamortized discount	597,364	597,052
5.25% senior notes due in 2025, net of unamortized premium	425,814	425,952
Other	1,526	1,861
Total long-term debt	1,793,692	1,773,396
Less: current maturities of long-term debt	(1,526)	(1,814)
Less: unamortized debt issuance costs	(8,954)	(10,337)
Total long-term debt, net of current maturities	$ 1,783,212	$ 1,761,245

We maintain credit facilities with third-party lenders, which we use for a variety of purposes. On March 4, 2019, CBRE Services, Inc. (CBRE Services) entered into an incremental assumption agreement with respect to its credit agreement, dated October 31, 2017 (such credit agreement, as amended by a December 20, 2018 incremental loan assumption agreement and such March 4, 2019 incremental assumption agreement, the 2019 Credit Agreement), which (i) extended the maturity of the U.S. dollar tranche A term loans under such credit agreement, (ii) extended the termination date of the revolving credit commitments available under such credit agreement and (iii) made certain changes to the interest rates and fees applicable to such tranche A term loans and revolving credit commitments under such credit agreement. The proceeds from the new tranche A term loan facility under the 2019 Credit Agreement were used to repay the $300.0 million of tranche A term loans outstanding under the credit agreement in effect prior to the entry into the 2019 incremental assumption agreement.

The 2019 Credit Agreement is a senior unsecured credit facility that is jointly and severally guaranteed by us and certain of our subsidiaries. As of September 30, 2020, the 2019 Credit Agreement provided for the following: (1) a $2.8 billion incremental revolving credit facility, which includes the capacity to obtain letters of credit and swingline loans and terminates on March 4, 2024; (2) a $300.0 million incremental tranche A term loan facility maturing on March 4, 2024, requiring quarterly principal payments unless our leverage ratio (as defined in the 2019 Credit Agreement) is less than or equal to 2.50 to 1.00 on the last day of the fiscal quarter immediately preceding any such payment date; and (3) a €400.0 million term loan facility due and payable in full at maturity on December 20, 2023.

The indentures governing our 4.875% senior notes and 5.25% 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. In addition, these indentures require that the 4.875% senior notes and 5.25% senior notes be jointly and severally guaranteed on a senior basis by CBRE Group, Inc. and each domestic subsidiary of CBRE Services that guarantees our 2019 Credit Agreement. Our 2019 Credit Agreement also requires us to maintain a minimum coverage ratio of consolidated EBITDA (as defined in the 2019 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 2019 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 2019 Credit Agreement), 4.75x) as of the end of each fiscal quarter. On this basis, our coverage ratio of consolidated EBITDA to consolidated interest expense was 23.68x for the trailing twelve months ended September 30, 2020, and our leverage ratio of total debt less available cash to consolidated EBITDA was 0.25x as of September 30, 2020.

Short-Term Borrowings

Revolving Credit Facility

The revolving credit facility under the 2019 Credit Agreement allows for borrowings outside of the U.S., with a $200.0 million sub-facility available to CBRE Services, one of our Canadian subsidiaries, one of our Australian subsidiaries and one of our New Zealand subsidiaries and a $300.0 million sub-facility available to CBRE Services and one of our U.K. subsidiaries. Borrowings under the revolving credit facility bear interest at varying rates, based at our option, on either (1) the applicable fixed rate plus 0.680% 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 2019 Credit Agreement). The 2019 Credit Agreement requires us to pay a fee based on the total amount of the revolving credit facility commitment (whether used or unused). As of September 30, 2020, no amount was outstanding under the revolving credit facility other than letters of credit totaling $2.0 million. These letters of credit, which reduce the amount we may borrow under the revolving credit facility, were primarily issued in the ordinary course of business.

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 4 for additional information.

9. Leases

We are the lessee in contracts for our office space tenancies, for leased vehicles and for our wholly-owned subsidiary Hana. 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	September 30, 2020	December 31, 2019
Assets			
Operating lease assets	Operating lease assets	$ 1,057,992	$ 997,966
Financing lease assets	Other assets, net	99,990	94,141
Total leased assets		$ 1,157,982	$ 1,092,107
Liabilities			
Current:			
Operating	Operating lease liabilities	$ 189,641	$ 168,663
Financing	Other current liabilities	37,780	34,966
Non-current:			
Operating	Non-current operating lease liabilities	1,125,005	1,057,758
Financing	Other liabilities	62,331	60,001
Total lease liabilities		$ 1,414,757	$ 1,321,388

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

	Nine Months Ended September 30,	
	2020	2019
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 175,909	$ 149,259
Right-of-use assets obtained in exchange for new financing lease liabilities	34,169	40,819
Other non-cash increases in operating lease right-of-use assets (1)	6,729	35,510
Other non-cash decreases in financing lease right-of-use assets (1)	(471)	(1,011)

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

10. 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 therefore as liabilities on our financial statements are unlikely to be significant, but litigation is inherently uncertain and there is the potential for a material adverse effect on our 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 subject to such loss sharing arrangements with unpaid principal balances of $26.2 billion at September 30, 2020. 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 September 30, 2020 and December 31, 2019, CBRE MCI had a $85.0 million and a $72.0 million, respectively, letter of credit under this reserve arrangement, and had recorded a liability of approximately $56.5 million and $37.0 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 $928.0 million (including $556.4 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 September 30, 2020.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was enacted in the United States in response to the COVID-19 pandemic. The CARES Act, among other things, permits borrowers with government-backed mortgages from Government Sponsored Enterprises who are experiencing a financial hardship to obtain forbearance of their loans. For Fannie Mae loans that we service, CBRE MCI is obligated to advance (for a forbearance period up to 90 consecutive days and potentially longer) scheduled principal and interest payments to Fannie Mae, regardless of whether the borrowers actually make the payments. These advances are reimbursable by Fannie Mae after 120 days. As of September 30, 2020, total advances for principal and interest were $5.2 million.

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 September 30, 2020 and December 31, 2019, CBRE Capital Markets had posted a $5.0 million letter of credit under this reserve arrangement.

We had outstanding letters of credit totaling $104.4 million as of September 30, 2020, 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 $90.0 million as of September 30, 2020 referred to in the preceding paragraphs represented the majority of the $104.4 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 varying dates through October 2021.

We had guarantees totaling $72.4 million as of September 30, 2020, 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 $72.4 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 September 30, 2020, 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 business involves investing our capital in certain real estate investments with our clients. These co-investments generally total up to 2.0% of the equity in a particular fund. As of September 30, 2020, we had aggregate commitments of $84.0 million to fund these future co-investments. Additionally, an important part of our Real Estate Investments business strategy is to invest in unconsolidated real estate subsidiaries as a principal (in most cases co-investing with our clients). As of September 30, 2020, we had committed to fund $41.0 million of additional capital to these unconsolidated subsidiaries.

11. Income Taxes

Our provision for income taxes on a consolidated basis was $49.1 million for the three months ended September 30, 2020 as compared to $63.5 million for the three months ended September 30, 2019. The decrease of $14.4 million is primarily related to the corresponding decrease in our consolidated pre-tax book income. Our effective tax rate increased to 21.0% for the three months ended September 30, 2020 from 19.7% for the three months ended September 30, 2019 primarily due to a larger impact on a percentage basis of unfavorable permanent book tax differences in certain non-U.S. jurisdictions due to lower pre-tax book income.

Our provision for income taxes on a consolidated basis was $119.0 million for the nine months ended September 30, 2020 as compared to $169.9 million for the nine months ended September 30, 2019. The decrease of $50.9 million is primarily related to the corresponding decrease in consolidated pre-tax book income. Our effective tax rate increased to 21.3% for the nine months ended September 30, 2020 from 20.7% for the nine months ended September 30, 2019 primarily due to a larger impact on a percentage basis of unfavorable permanent book tax differences in certain non-U.S. jurisdictions due to lower pre-tax book income.

Our effective tax rate for the three months and nine months ended September 30, 2020 was not significantly different than the U.S. federal statutory tax rate of 21.0%.

As of September 30, 2020, the company had gross unrecognized tax benefits of $142.2 million; a net increase of $1.0 million was recorded over the nine months ended September 30, 2020. The net increase of $1.0 million consists of unrecognized tax benefits of $6.4 million through the six months ended June 30, 2020 and a release of $5.4 million of gross unrecognized tax benefits in the current quarter, primarily related to expiration of statute of limitations in various tax jurisdictions.

The CARES Act has not had, nor is it expected to have, a significant impact on our effective tax rate for 2020.

12. Income Per Share and Stockholders' Equity

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Basic Income Per Share				
Net income attributable to CBRE Group, Inc. shareholders	$ 184,132	$ 256,599	$ 438,224	$ 644,739
Weighted average shares outstanding for basic income per share	335,287,245	336,203,747	335,128,531	336,149,719
Basic income per share attributable to CBRE Group, Inc. shareholders	$ 0.55	$ 0.76	$ 1.31	$ 1.92
Diluted Income Per Share				
Net income attributable to CBRE Group, Inc. shareholders	$ 184,132	$ 256,599	$ 438,224	$ 644,739
Weighted average shares outstanding for basic income per share:	335,287,245	336,203,747	335,128,531	336,149,719
Dilutive effect of contingently issuable shares	2,378,603	4,896,435	3,127,328	4,440,288
Weighted average shares outstanding for diluted income per share	337,665,848	341,100,182	338,255,859	340,590,007
Diluted income per share attributable to CBRE Group, Inc. shareholders	$ 0.55	$ 0.75	$ 1.30	$ 1.89

For the three and nine months ended September 30, 2020, 1,294,385 and 1,191,464, 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 nine months ended September 30, 2019, 320,154 and 447,687, 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.

In October 2016, our board of directors authorized the company to repurchase up to an aggregate of $250.0 million of our Class A common stock over three years. During January 2019, through an existing stock repurchase plan entered into pursuant to Rule 10b5-1 under the Exchange Act (10b5-1 plan), we spent $45.1 million to repurchase 1,144,449 shares of our Class A common stock with an average price paid per share of $39.38.

In February 2019, our board of directors authorized a new program for the company to repurchase up to $300.0 million of our Class A common stock over three years, effective March 11, 2019. The previous program terminated upon the effectiveness of the new stock repurchase program. In each of August and November 2019, our board of directors authorized an additional $100.0 million under our new program, bringing the total authorized amount under the new program to $500.0 million. During the year ended December 31, 2019, under the March 2019 program, and through repurchases under a 10b5-1 plan, we spent $100.0 million to repurchase an additional 1,936,458 shares of our Class A common stock with an average price paid per share of $51.64. During the month of March 2020, through repurchases under a 10b5-1 plan, we spent $50.0 million to repurchase an additional 1,050,084 shares of our Class A common stock with an average price paid per share of $47.62. We did not repurchase any of our stock during the three month periods ended June 30, 2020 and September 30, 2020. As of September 30, 2020, we had $350.0 million of capacity remaining under our current stock repurchase program.

13. 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 in exchange for those services.

Disaggregated Revenue

The following tables represent a disaggregation of revenue from contracts with customers for the three and nine months ended September 30, 2020 and 2019 by type of service and/or segment (dollars in thousands):

	Three Months Ended September 30, 2020			
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Consolidated
Topic 606 Revenue:				
Global workplace solutions	$ —	$ 3,721,365	$ —	$ 3,721,365
Advisory leasing	536,132	—	—	536,132
Advisory sales	346,650	—	—	346,650
Property and advisory project management	545,325	—	—	545,325
Valuation	139,019	—	—	139,019
Commercial mortgage origination (1)	20,040	—	—	20,040
Loan servicing (2)	9,860	—	—	9,860
Investment management	—	—	99,935	99,935
Development services	—	—	68,850	68,850
Topic 606 Revenue	1,597,026	3,721,365	168,785	5,487,176
Out of Scope of Topic 606 Revenue:				
Commercial mortgage origination	108,986	—	—	108,986
Loan servicing	48,153	—	—	48,153
Development services (3)	—	—	827	827
Total Out of Scope of Topic 606 Revenue	157,139	—	827	157,966
Total revenue	$ 1,754,165	$ 3,721,365	$ 169,612	$ 5,645,142

	Three Months Ended September 30, 2019			
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Consolidated
Topic 606 Revenue:				
Global workplace solutions	$ —	$ 3,555,176	$ —	$ 3,555,176
Advisory leasing	781,246	—	—	781,246
Advisory sales	526,104	—	—	526,104
Property and advisory project management	558,039	—	—	558,039
Valuation	154,861	—	—	154,861
Commercial mortgage origination (1)	46,787	—	—	46,787
Loan servicing (2)	8,599	—	—	8,599
Investment management	—	—	104,927	104,927
Development services	—	—	24,286	24,286
Topic 606 Revenue	2,075,636	3,555,176	129,213	5,760,025
Out of Scope of Topic 606 Revenue:				
Commercial mortgage origination	117,052	—	—	117,052
Loan servicing	48,024	—	—	48,024
Total Out of Scope of Topic 606 Revenue	165,076	—	—	165,076
Total revenue	$ 2,240,712	$ 3,555,176	$ 129,213	$ 5,925,101

(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.

	Nine Months Ended September 30, 2020			
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Consolidated
Topic 606 Revenue:				
Global workplace solutions	$ —	$ 11,134,383	$ —	$ 11,134,383
Advisory leasing	1,653,367	—	—	1,653,367
Advisory sales	1,018,853	—	—	1,018,853
Property and advisory project management	1,623,486	—	—	1,623,486
Valuation	418,616	—	—	418,616
Commercial mortgage origination (1)	78,030	—	—	78,030
Loan servicing (2)	30,290	—	—	30,290
Investment management	—	—	324,745	324,745
Development services	—	—	202,776	202,776
Topic 606 Revenue	4,822,642	11,134,383	527,521	16,484,546
Out of Scope of Topic 606 Revenue:				
Commercial mortgage origination	274,523	—	—	274,523
Loan servicing	141,453	—	—	141,453
Development services (3)	—	—	15,172	15,172
Total Out of Scope of Topic 606 Revenue	415,976	—	15,172	431,148
Total revenue	$ 5,238,618	$ 11,134,383	$ 542,693	$ 16,915,694

	Nine Months Ended September 30, 2019			
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Consolidated
Topic 606 Revenue:				
Global workplace solutions	$ —	$ 10,106,543	$ —	$ 10,106,543
Advisory leasing	2,221,674	—	—	2,221,674
Advisory sales	1,378,317	—	—	1,378,317
Property and advisory project management	1,634,745	—	—	1,634,745
Valuation	442,238	—	—	442,238
Commercial mortgage origination (1)	102,471	—	—	102,471
Loan servicing (2)	22,669	—	—	22,669
Investment management	—	—	312,881	312,881
Development services	—	—	101,188	101,188
Topic 606 Revenue	5,802,114	10,106,543	414,069	16,322,726
Out of Scope of Topic 606 Revenue:				
Commercial mortgage origination	322,246	—	—	322,246
Loan servicing	129,712	—	—	129,712
Total Out of Scope of Topic 606 Revenue	451,958	—	—	451,958
Total revenue	$ 6,254,072	$ 10,106,543	$ 414,069	$ 16,774,684

(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 $459.8 million ($282.0 million of which was current) and $529.8 million ($328.0 million of which was current) as of September 30, 2020 and December 31, 2019, respectively.

We had contract liabilities totaling $134.3 million ($132.5 million of which was current) and $115.0 million ($108.7 million of which was current) as of September 30, 2020 and December 31, 2019, respectively. During the nine months ended September 30, 2020, we recognized revenue of $77.9 million that was included in the contract liability balance at December 31, 2019.

14. 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.

Advisory Services provides a comprehensive range of services globally, including property leasing, property sales, mortgage services, property management, project management and valuation. Global Workplace Solutions provides a broad suite of integrated, contractually-based outsourcing services to occupiers of real estate, including facilities management, project management and transaction services. Real Estate Investments includes: (i) investment management services provided globally; (ii) development services in the U.S. and U.K. and (iii) flexible office space solutions.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue				
Advisory Services	$ 1,754,165	$ 2,240,712	$ 5,238,618	$ 6,254,072
Global Workplace Solutions	3,721,365	3,555,176	11,134,383	10,106,543
Real Estate Investments	169,612	129,213	542,693	414,069
Total revenue	$ 5,645,142	$ 5,925,101	$ 16,915,694	$ 16,774,684
Adjusted EBITDA				
Advisory Services	$ 236,369	$ 345,482	$ 662,129	$ 942,860
Global Workplace Solutions	140,523	95,209	355,768	298,948
Real Estate Investments	64,872	13,939	121,522	131,346
Total Adjusted EBITDA	$ 441,764	$ 454,630	$ 1,139,419	$ 1,373,154

Adjusted EBITDA is the measure reported to the chief operating decision maker (CODM) for purposes of making decisions about allocating resources to each segment and assessing performance of each segment. EBITDA represents earnings before net interest expense, write-off of financing costs on extinguished debt, income taxes, depreciation and amortization and asset impairments. Amounts shown for adjusted EBITDA further remove (from EBITDA) the impact of costs associated with transformation initiatives, certain carried interest incentive compensation expense (reversal) to align with the timing of associated revenue, fair value adjustments to real estate acquired in the Telford Acquisition (purchase accounting) that were sold in the period, costs incurred related to legal entity restructuring, integration and other costs related to acquisitions, costs primarily associated with workforce optimization efforts in response to the COVID-19 pandemic and costs associated with our reorganization, including cost-savings initiatives.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net income attributable to CBRE Group, Inc.	$ 184,132	$ 256,599	$ 438,224	$ 644,739
Add:				
Depreciation and amortization	127,725	111,560	357,903	323,862
Asset impairments	—	—	75,171	89,037
Interest expense, net of interest income	17,829	21,846	51,795	67,638
Write-off of financing costs on extinguished debt	—	—	—	2,608
Provision for income taxes	49,062	63,468	119,047	169,867
EBITDA	378,748	453,473	1,042,140	1,297,751
Adjustments:				
Costs associated with transformation initiatives (1)	55,374	—	55,374	—
Carried interest incentive compensation expense (reversal) to align with the timing of associated revenue	3,767	(3,360)	(11,517)	12,284
Impact of fair value adjustments to real estate assets acquired in the Telford Acquisition (purchase accounting) that were sold in period	2,289	—	9,289	—
Costs incurred related to legal entity restructuring	1,061	—	4,995	—
Integration and other costs related to acquisitions	525	4,517	1,544	13,554
Costs associated with workforce optimization efforts (2)	—	—	37,594	—
Costs associated with our reorganization, including cost-savings initiatives (3)	—	—	—	49,565
Adjusted EBITDA	$ 441,764	$ 454,630	$ 1,139,419	$ 1,373,154

(1) Commencing during the quarter ended September 30, 2020, management began the implementation of certain transformation initiatives to enable the company to reduce costs, streamline operations and support future growth. The majority of expenses incurred were cash in nature and primarily related to employee separation benefits, lease termination costs and professional fees. See Note 15 for further discussion.

(2) Primarily represents costs incurred related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. The charges are cash expenditures primarily for severance costs incurred related to this effort. Of the total costs, $7.4 million was included within the "Cost of revenue" line item and $30.2 million was included in the "Operating, administrative, and other" line item in the accompanying consolidated statements of operations for the nine months ended September 30, 2020.

(3) Primarily represents severance costs related to headcount reductions in connection with our reorganization announced in the third quarter of 2018 that became effective January 1, 2019.

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 September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue				
United States	$ 3,162,235	$ 3,442,570	$ 9,632,592	$ 9,851,477
United Kingdom	736,927	758,084	2,188,822	2,003,671
All other countries	1,745,980	1,724,447	5,094,280	4,919,536
Total revenue	$ 5,645,142	$ 5,925,101	$ 16,915,694	$ 16,774,684

15. Transformation Initiatives

During the third quarter of 2020, management embarked on the implementation of certain transformation initiatives to enable the company to reduce costs, streamline operations and support future growth.

As part of these initiatives, we incurred $55.4 million of costs, primarily in cash, related to employee separation benefits, lease termination costs and professional fees during the three months ended September 30, 2020 of which $38.3 million was recorded to the Advisory Services segment and $17.1 million to the Global Workplace Solutions segment. Of the total charges incurred, $15.7 million was included within the "Cost of revenue" line item and $39.7 million was included in the "Operating, administrative, and other" line item in the accompanying consolidated statements of operations for both the three and nine months ended September 30, 2020. Management continues to assess and modify these transformation initiatives based on the company's overall strategic plan and evolving business conditions.

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

This Quarterly Report on Form 10-Q (Quarterly Report) for CBRE Group, Inc. for the three months ended September 30, 2020 represents an update to the more detailed and comprehensive disclosures included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 (2019 Annual Report). Accordingly, you should read the following discussion in conjunction with the information included in our 2019 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 2019 revenue, with leading global market positions in leasing, property sales, occupier outsourcing and valuations. As of December 31, 2019, we operated in more than 530 offices worldwide and had more than 100,000 employees, excluding independent affiliates. We serve clients in more than 100 countries.

Our business is focused on providing services to real estate occupiers and investors. For occupiers, we provide facilities management, project management, transaction (both property sales and leasing) and consulting services, among others. For investors, we provide capital markets (property sales, mortgage origination, sales and servicing), leasing, investment management, property management, valuation and development services, among others. We provide services under the following brand names: “CBRE” (real estate advisory and outsourcing services); “CBRE Global Investors” (investment management); “Trammell Crow Company” (U.S. development); “Telford Homes” (U.K. development) and “Hana” (enterprise-focused flexible workspace solutions).

Our revenue mix has shifted in recent years toward more contractual revenue earned by providing multiple services to occupiers and investors, who increasingly prefer to purchase integrated, account-based services from firms that meet the full spectrum of their needs nationally and globally. We believe we are well-positioned to capture a substantial share of this growing market opportunity. We generate revenue from both management fees (large multi-year portfolio and per-project contracts) and commissions on transactions. Our contractual, fee-for-services businesses generally involve occupier outsourcing (including facilities and project management), property management, investment management, appraisal/valuation and loan servicing.

In 2019, we generated revenue from a highly diversified base of clients, including more than 90 of the *Fortune* 100 companies. We have been an S&P 500 company since 2006 and in 2020 we were ranked #128 on the *Fortune* 500. We have been voted the most recognized commercial real estate brand in the Lipsey Company survey for 19 years in a row (including 2020). We have also been rated a World’s Most Ethical Company by the Ethisphere Institute for seven consecutive years (including 2020) and are included in the Dow Jones World Sustainability Index and the Bloomberg Gender Equality Index.

The outbreak of the novel coronavirus (COVID‑19) global pandemic in the first quarter of 2020 has created a tremendous amount of uncertainty, precipitated a global economic contraction and severely disrupted both business activity and global real estate markets. As of the date of this Quarterly Report, many of our locations and those of our clients remain subject to significant operational limitations intended to stem the spread of COVID‑19 and a substantial portion of our employee population continues to work remotely, even in jurisdictions where government stay-at-home orders have been eased.

Critical Accounting Policies

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. 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, goodwill and other intangible assets, and income taxes can be found in our 2019 Annual Report. There have been no material changes to these policies as of September 30, 2020.

New Accounting Pronouncements

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

Seasonality

Historically, a significant portion of our revenue has been seasonal, which an investor should keep in mind when comparing our financial condition and results of operations on a quarter-by-quarter basis. In a typical year, 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. In light of the severe economic dislocations caused by COVID-19, and the resulting uncertainty in the business outlook, the quarterly distribution of financial results in 2020 may not conform with historical patterns.

Inflation

Our commissions and other variable costs related to revenue are primarily affected by commercial real estate market supply and demand, which may be affected by inflation. However, to date, we believe that general inflation has not had a material impact upon our operations.

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 sales and leasing professionals generally are paid on a commission and/or bonus basis that correlates with their revenue production. As a result, negative effects on our operating margins of difficult market conditions, such as we are currently experiencing with the pandemic, 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. Additionally, our contractual revenue generally has typically increased primarily as a result of growth in our outsourcing business, and we believe this contractual revenue should help offset the negative impacts that macroeconomic deterioration could have on other parts of our business. Nevertheless, adverse global and regional economic trends could pose significant risks to the performance of our consolidated operations and financial condition.

From 2010 to early 2020, commercial real estate markets had generally been characterized by increased demand for space, falling vacancies, higher rents and strong capital flows, leading to solid property sales and leasing activity. This healthy backdrop changed abruptly in the first quarter of 2020 with the emergence of the COVID-19 pandemic and resultant sharp contraction of economic activity across much of the world. There has been a significant impact on commercial real estate markets, as many property owners and occupiers have put transactions on hold and withdrawn existing mandates, sharply reducing sales and leasing volumes. We expect to see this trend continue, as concerns about a COVID-19 resurgence are high across our major markets. The recovery of real estate markets around the world remained uncertain as of October 2020.

COVID-19 is putting downward pressure on parts of our business and creating larger opportunities in other parts. The severe economic effects of the pandemic continued to weigh heavily on higher-margin property lease and sales revenue in the Advisory Services segment. However, global industrial leasing revenue, fueled by e-commerce, and project management activities for occupier clients were resilient during the third quarter. Also, during the third quarter, our Continental Europe business showed signs of recovery and benefited from our diverse service offering during the period.

The performance of our global real estate services and investment businesses depends on an improvement in macroeconomic conditions, including restored business and consumer confidence, sustained economic growth, solid job creation and, stable, functioning global credit markets.

Effects of Acquisitions

We historically have made significant use of strategic acquisitions to add and enhance service competencies around the world. On October 1, 2019, we acquired Telford Homes Plc (Telford) to expand our real estate development business outside the United States (Telford Acquisition). A leading developer of multifamily residential properties in the London area, Telford is reported in our Real Estate Investments segment. Telford was acquired for £267.1 million, or $328.5 million along with the assumption of $110.7 million (£90.0 million) of debt and the acquisition of cash from Telford of $7.9 million (£6.4 million). The Telford Acquisition was funded with borrowings under our revolving credit facility.

Strategic 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 in which, in some cases, we held a small equity interest. During 2019, we completed eight in-fill acquisitions: a leading advanced analytics software company based in the United Kingdom, a commercial and residential real estate appraisal firm headquartered in Florida, our former affiliate in Omaha, a project management firm in Australia, a valuation and consulting business in Switzerland, a leading project management firm in Israel, a full-service real estate firm in San Antonio with a focus on retail, office, medical office and land, and a debt-focused real estate investment management business in the United Kingdom. During the nine months ended September 30, 2020, we acquired leading local facilities management firms in Spain and Italy, a U.S. firm that helps companies reduce telecommunications costs, a leading provider of workplace technology project management, consulting and procurement services to occupiers across the U.S. and a firm specializing in performing real estate valuations in South Korea.

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 agreements often require us to pay deferred and/or contingent purchase price payments, subject to the acquired company achieving certain performance metrics, and/or the passage of time as well as other conditions. As of September 30, 2020, we have accrued deferred consideration totaling $89.7 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 are closely monitoring the impact of the COVID-19 global pandemic on business conditions across all regions worldwide. COVID-19 has significantly impacted our operations and has the potential to further reduce our business activity. In addition, we continue to monitor developments related to the United Kingdom's withdrawal from the European Union (Brexit) and the uncertainty of the long-term economic and trade relationship between the United Kingdom and European Union. The continued uncertainty has the potential to impact our businesses in the United Kingdom and the rest of Europe, particularly sales and leasing activity in the United Kingdom. Any currency volatility associated with COVID-19, Brexit or other economic dislocations could also impact our results of operations.

As we continue to increase our international operations through either acquisitions or organic growth, fluctuations in the value of the U.S. dollar relative to the other currencies in which we may generate earnings could adversely affect our business, financial condition and operating results. Our Real Estate Investments business has a significant amount of euro-denominated assets under management, or AUM, as well as associated revenue and earnings in Europe. In addition, our Global Workplace Solutions business also has a significant amount of its revenue and earnings denominated in foreign currencies, such as the euro and the British pound sterling. Fluctuations in foreign currency exchange rates have resulted and may continue to result in corresponding fluctuations in our AUM, revenue and earnings.

During the nine months ended September 30, 2020, approximately 43.1% of our business was transacted in non-U.S. dollar currencies, the majority of which included the Australian dollar, British pound sterling, Canadian dollar, Chinese yuan, euro, Indian rupee, Japanese yen, Singapore dollar and Swiss franc. The following table sets forth our revenue derived from our most significant currencies (U.S. dollars in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
United States dollar	$ 3,162,235	56.0%	$ 3,442,570	58.1%	$ 9,632,592	56.9%	$ 9,851,477	58.7%
British pound sterling	736,927	13.1%	758,084	12.8%	2,188,822	12.9%	2,003,671	11.9%
euro	645,583	11.4%	600,414	10.1%	1,836,311	10.9%	1,716,278	10.2%
Canadian dollar	184,967	3.3%	204,009	3.4%	549,098	3.2%	562,470	3.4%
Australian dollar	108,060	1.9%	112,543	1.9%	296,124	1.8%	311,185	1.9%
Indian rupee	106,956	1.9%	127,376	2.2%	353,080	2.1%	361,567	2.2%
Chinese yuan	84,985	1.5%	84,464	1.4%	250,816	1.5%	232,113	1.4%
Swiss franc	80,083	1.4%	44,335	0.7%	234,171	1.4%	131,477	0.8%
Japanese yen	74,706	1.3%	79,151	1.3%	236,999	1.4%	222,184	1.3%
Singapore dollar	63,151	1.1%	77,605	1.3%	193,556	1.1%	218,511	1.3%
Other currencies (1)	397,489	7.1%	394,550	6.8%	1,144,125	6.8%	1,163,751	6.9%
Total revenue	$ 5,645,142	100.0%	$ 5,925,101	100.0%	$ 16,915,694	100.0%	$ 16,774,684	100.0%

(1) Approximately 39 currencies comprise 7.1% and 6.8% of our revenues for the three and nine months ended September 30, 2020, respectively, and approximately 38 currencies comprise 6.8% and 6.9% of our revenues for the three and nine months ended September 30, 2019, respectively.

Although we operate globally, we report our results in U.S. dollars. As a result, the strengthening or weakening of the U.S. dollar may 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 nine months ended September 30, 2020, the net impact would have been a decrease in pre-tax income of $1.1 million. Had the euro-to-U.S. dollar exchange rates been 10% higher during the nine months ended September 30, 2020, the net impact would have been an increase in pre-tax income of $6.0 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.

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, political instability and changing regulatory environments, which affect the currency markets and which as a result may 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 nine months ended September 30, 2020 and 2019 (dollars in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Revenue:								
Fee revenue:								
Global workplace solutions	$ 837,698	14.8%	$ 793,213	13.4%	$ 2,400,595	14.2%	$ 2,249,433	13.4%
Property and advisory project management	312,381	5.5%	305,354	5.1%	919,448	5.4%	905,843	5.4%
Valuation	139,019	2.5%	154,861	2.6%	418,616	2.5%	442,238	2.6%
Loan servicing	58,013	1.0%	56,623	0.9%	171,743	1.0%	152,381	0.9%
Advisory leasing	536,132	9.5%	781,246	13.2%	1,653,367	9.8%	2,221,674	13.3%
Capital markets:								
Advisory sales	346,650	6.1%	526,104	8.9%	1,018,853	6.0%	1,378,317	8.2%
Commercial mortgage origination	129,026	2.4%	163,839	2.8%	352,553	2.1%	424,717	2.5%
Investment management	99,935	1.8%	104,927	1.8%	324,745	1.9%	312,881	1.9%
Development services	69,677	1.2%	24,286	0.4%	217,948	1.3%	101,188	0.6%
Total fee revenue	2,528,531	44.8%	2,910,453	49.1%	7,477,868	44.2%	8,188,672	48.8%
Pass through costs also recognized as revenue	3,116,611	55.2%	3,014,648	50.9%	9,437,826	55.8%	8,586,012	51.2%
Total revenue	5,645,142	100.0%	5,925,101	100.0%	16,915,694	100.0%	16,774,684	100.0%
Costs and expenses:								
Cost of revenue	4,564,579	80.9%	4,687,336	79.1%	13,676,790	80.9%	13,155,160	78.4%
Operating, administrative and other	794,227	14.1%	809,584	13.7%	2,355,099	13.9%	2,479,857	14.8%
Depreciation and amortization	127,725	2.2%	111,560	1.9%	357,903	2.1%	323,862	2.0%
Asset impairments	—	0.0%	—	0.0%	75,171	0.4%	89,037	0.5%
Total costs and expenses	5,486,531	97.2%	5,608,480	94.7%	16,464,963	97.3%	16,047,916	95.7%
Gain on disposition of real estate	52,797	0.9%	9	0.0%	75,132	0.4%	19,266	0.1%
Operating income	211,408	3.7%	316,630	5.3%	525,863	3.1%	746,034	4.4%
Equity income from unconsolidated subsidiaries	32,376	0.6%	25,796	0.5%	72,487	0.4%	120,233	0.7%
Other income	7,947	0.1%	941	0.0%	12,974	0.1%	26,163	0.2%
Interest expense, net of interest income	17,829	0.3%	21,846	0.4%	51,795	0.3%	67,638	0.4%
Write-off of financing costs on extinguished debt	—	0.0%	—	0.0%	—	0.0%	2,608	0.0%
Income before provision for income taxes	233,902	4.1%	321,521	5.4%	559,529	3.3%	822,184	4.9%
Provision for income taxes	49,062	0.8%	63,468	1.0%	119,047	0.7%	169,867	1.0%
Net income	184,840	3.3%	258,053	4.4%	440,482	2.6%	652,317	3.9%
Less: Net income attributable to non-controlling interests	708	0.0%	1,454	0.1%	2,258	0.0%	7,578	0.1%
Net income attributable to CBRE Group, Inc.	$ 184,132	3.3%	$ 256,599	4.3%	$ 438,224	2.6%	$ 644,739	3.8%
Adjusted EBITDA	$ 441,764	7.8%	$ 454,630	7.7%	$ 1,139,419	6.7%	$ 1,373,154	8.2%

Fee revenue and adjusted EBITDA are not recognized measurements under 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 charges that may obscure trends in the underlying performance of our business. Because not all companies use identical calculations, our presentation of fee revenue and adjusted EBITDA may not be comparable to similarly titled measures of other companies.

Fee revenue is gross revenue less both client reimbursed costs largely associated with employees that are dedicated to client facilities and subcontracted vendor work performed for clients. We believe that investors may find this measure useful to analyze the company's overall financial performance because it excludes costs reimbursable by clients, and as such provides greater visibility into the underlying performance of our business.

EBITDA represents earnings before net interest expense, write-off of financing costs on extinguished debt, income taxes, depreciation and amortization and asset impairments. Amounts shown for adjusted EBITDA further remove (from EBITDA) the impact of costs associated with transformation initiatives, certain carried interest incentive compensation expense (reversal) 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, integration and other costs related to acquisitions, costs associated with workforce optimization efforts in response to the COVID-19 pandemic and costs associated with our reorganization, including cost-savings initiatives. 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.

Adjusted 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 adjusted EBITDA as a significant component when measuring our operating performance under our employee incentive compensation programs.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net income attributable to CBRE Group, Inc.	$ 184,132	$ 256,599	$ 438,224	$ 644,739
Add:				
Depreciation and amortization	127,725	111,560	357,903	323,862
Asset impairments	—	—	75,171	89,037
Interest expense, net of interest income	17,829	21,846	51,795	67,638
Write-off of financing costs on extinguished debt	—	—	—	2,608
Provision for income taxes	49,062	63,468	119,047	169,867
EBITDA	378,748	453,473	1,042,140	1,297,751
Adjustments:				
Costs associated with transformation initiatives (1)	55,374	—	55,374	—
Carried interest incentive compensation expense (reversal) to align with the timing of associated revenue	3,767	(3,360)	(11,517)	12,284
Impact of fair value adjustments to real estate assets acquired in the Telford Acquisition (purchase accounting) that were sold in period	2,289	—	9,289	—
Costs incurred related to legal entity restructuring	1,061	—	4,995	—
Integration and other costs related to acquisitions	525	4,517	1,544	13,554
Costs associated with workforce optimization efforts (2)	—	—	37,594	—
Costs associated with our reorganization, including cost-savings initiatives (3)	—	—	—	49,565
Adjusted EBITDA	$ 441,764	$ 454,630	$ 1,139,419	$ 1,373,154

(1) Commencing during the quarter ended September 30, 2020, management began the implementation of certain transformation initiatives to enable the company to reduce costs, streamline operations and support future growth. The majority of expenses incurred were cash in nature and primarily related to employee separation benefits, lease termination costs and professional fees. See Note 15 for further discussion.

(2) Primarily represents costs incurred related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. The charges are cash expenditures primarily for severance costs incurred related to this effort. Of the total costs, $7.4 million was included within the "Cost of revenue" line item and $30.2 million was included in the "Operating, administrative, and other" line item in the accompanying consolidated statements of operations for the nine months ended September 30, 2020.

(3) Primarily represents severance costs related to headcount reductions in connection with our reorganization announced in the third quarter of 2018 that became effective January 1, 2019.

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

We reported consolidated net income of $184.1 million for the three months ended September 30, 2020 on revenue of $5.6 billion as compared to consolidated net income of $256.6 million on revenue of $5.9 billion for the three months ended September 30, 2019.

Our revenue on a consolidated basis for the three months ended September 30, 2020 decreased by $280.0 million, or 4.7%, as compared to the three months ended September 30, 2019. The revenue decrease reflects the impact of COVID-19 on our Advisory Services segment, which resulted in lower sales (down 34.1%) and leasing revenue (down 31.4%) as well as decreased commercial mortgage origination activity (down 21.2%). These declines were partially offset by higher revenue in our Global Workplace Solutions segment (up 4.7%) led by growth in our facilities management line of business, driven by its contractual nature, and improved revenue in our Real Estate Investments segment (up 31.3%) largely due to the Telford Acquisition. Foreign currency translation had a 0.6% positive impact on total revenue during the three months ended September 30, 2020, primarily driven by strength in the Australian dollar, British pound sterling and euro, partially offset by weakness in the Argentine peso, Brazilian real and Indian rupee.

Our cost of revenue on a consolidated basis decreased by $122.8 million, or 2.6%, during the three months ended September 30, 2020 as compared to the same period in 2019, primarily driven by lower commission expense. Our sales and leasing professionals generally are paid on a commission basis, which substantially correlates with our sales and lease revenue performance. Accordingly, the decrease in advisory sales and leasing revenue as a result of COVID-19 led to a corresponding decrease in commission expense. Lower bonuses in our Advisory Services segment attributable to lower revenue as a result of COVID-19 also contributed to the variance. Foreign currency translation had a 0.6% negative impact on total cost of revenue during the three months ended September 30, 2020. These items were largely offset by higher costs associated with our Global Workplace Solutions segment. We also incurred $15.7 million of costs (primarily employee separation benefits) related to certain transformation initiatives implemented by the company in the third quarter of 2020. Cost of revenue as a percentage of revenue increased to 80.9% for the three months ended September 30, 2020 from 79.1% for the three months ended September 30, 2019, primarily driven by our mix of revenue, with revenue from our Global Workplace Solutions segment, which has a lower margin than our other revenue streams, comprising a higher percentage of revenue than in the prior year period.

Our operating, administrative and other expenses on a consolidated basis decreased by $15.4 million, or 1.9%, for the three months ended September 30, 2020 as compared to the same period in 2019. The negative impact of COVID-19 on our operating results led to a corresponding decrease in compensation expense for equity awards. In addition, we reduced general business operating expenses such as travel and entertainment, marketing and employee events to improve financial performance for the three months ended September 30, 2020. These items were partially offset by an increase in certain costs as a result of COVID-19, including higher bad debt expense. We also incurred $39.7 million of costs, primarily related to employee separation benefits, lease termination costs and professional fees, as management commenced the implementation of certain transformation initiatives during the quarter ended September 30, 2020 to enable the company to prospectively reduce costs, streamline operations and support future growth. Additionally, investments were made in both people and technology associated with efforts to remediate material weaknesses in our Europe, Middle East and Africa (EMEA) region of our Global Workplace Solutions segment. Foreign currency translation also had a 0.9% negative impact on total operating expenses during the three months ended September 30, 2020. Operating expenses as a percentage of revenue increased slightly to 14.1% for the three months ended September 30, 2020 from 13.7% for the three months ended September 30, 2019, primarily attributable to our Advisory Services segment.

Our depreciation and amortization expense on a consolidated basis increased by $16.2 million, or 14.5%, during the three months ended September 30, 2020 as compared to the same period in 2019. This increase was primarily attributable to a rise in depreciation expense of $15.5 million during the three months ended September 30, 2020 driven by technology-related capital expenditures.

Our gain on disposition of real estate on a consolidated basis was $52.8 million for the three months ended September 30, 2020, which was a substantial increase over the prior year period. These gains resulted from property sales within our Real Estate Investments segment.

Our equity income from unconsolidated subsidiaries on a consolidated basis increased by $6.6 million, or 25.5%, during the three months ended September 30, 2020 as compared to the same period in 2019, primarily driven by higher equity earnings in our investment management line of business within our Real Estate Investments segment, partially offset by lower equity earnings in our Advisory Services segment.

Our consolidated interest expense, net of interest income, decreased by $4.0 million, or 18.4%, for the three months ended September 30, 2020 as compared to the same period in 2019. This was primarily due to lower interest expense on borrowings associated with our credit agreement (driven by lower interest rates) as well as reduced net interest expense overseas associated with cash pooling arrangements.

Our provision for income taxes on a consolidated basis was $49.1 million for the three months ended September 30, 2020 as compared to $63.5 million for the three months ended September 30, 2019. The decrease of $14.4 million was primarily related to the corresponding decrease in our consolidated pre-tax book income. Our effective tax rate increased to 21.0% for the three months ended September 30, 2020 from 19.7% for the three months ended September 30, 2019 primarily due to a larger impact on a percentage basis of unfavorable permanent book tax differences in certain non-U.S. jurisdictions due to lower pre-tax book income.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

We reported consolidated net income of $438.2 million for the nine months ended September 30, 2020 on revenue of $16.9 billion as compared to consolidated net income of $644.7 million on revenue of $16.8 billion for the nine months ended September 30, 2019.

Our revenue on a consolidated basis for the nine months ended September 30, 2020 increased by $141.0 million, or 0.8%, as compared to the nine months ended September 30, 2019. The revenue increase reflects higher revenue in our Global Workplace Solutions segment (up 10.2%) led by growth in our facilities management line of business, driven by its contractual nature, and improved revenue in our Real Estate Investments segment (up 31.1%) largely due to the Telford Acquisition. These increases were partially offset by decreases in revenue in our Advisory Services segment due to the impact of COVID-19, including lower sales (down 26.1%) and leasing revenue (down 25.6%) as well as decreased commercial mortgage origination activity (down 17.0%). Foreign currency translation had a 0.6% negative impact on total revenue during the nine months ended September 30, 2020, primarily driven by weakness in the Australian dollar, Argentine peso, Brazilian real and Indian rupee, partially offset by strength in the British pound sterling.

Our cost of revenue on a consolidated basis increased by $521.6 million, or 4.0%, during the nine months ended September 30, 2020 as compared to the same period in 2019. This increase was primarily due to higher costs associated with our Global Workplace Solutions segment and higher costs in our Real Estate Investments segment due to the Telford Acquisition. We also incurred $15.7 million of costs (primarily employee separation benefits) related to certain transformation initiatives implemented by the company in the third quarter of 2020. These items were partially offset by lower commission expense incurred during the nine months ended September 30, 2020. As previously mentioned, our sales and leasing professionals generally are paid on a commission basis, which substantially correlates with our sales and lease revenue performance. Accordingly, the decrease in advisory sales and leasing revenue led to a corresponding decrease in commission expense. Foreign currency translation had a 0.6% positive impact on total cost of revenue during the nine months ended September 30, 2020. Cost of revenue as a percentage of revenue increased to 80.9% for the nine months ended September 30, 2020 from 78.4% for the nine months ended September 30, 2019, primarily driven by our mix of revenue, with revenue from our Global Workplace Solutions segment, which has a lower margin than our other revenue streams, comprising a higher percentage of revenue than in the prior year period.

Our operating, administrative and other expenses on a consolidated basis decreased by $124.8 million, or 5.0%, for the nine months ended September 30, 2020 as compared to the same period in 2019. The negative impact of COVID-19 on our operating results led to corresponding decreases in bonus, compensation expense for equity awards and carried interest expense. In addition, we reduced certain operating expenses such as travel and entertainment, marketing and employee events to improve financial performance. During the first half of 2019, we incurred $47.0 million of costs in connection with our reorganization, which did not recur in the current period. Foreign currency translation also had a 0.6% positive impact on total operating expenses during the nine months ended September 30, 2020. These items were partially offset by $39.7 million of costs, primarily related to employee separation benefits, lease termination costs and professional fees, as management commenced the implementation of certain transformation initiatives during the quarter ended September 30, 2020 to enable the company to prospectively reduce costs, streamline operations and support future growth. During the nine months ended September 30, 2020, we also incurred higher incremental costs associated with Telford, which we acquired on October 1, 2019 (nine months of operating expenses incurred in 2020 versus $13.3 million of transaction costs incurred pre-acquisition during the nine months ended September 30, 2019), rent expense for our new flexible space offering and higher bad debt expense as a result of COVID-19. We also incurred $30.2 million of costs (mainly severance) primarily related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. Lastly, in the first half of 2020, we saw an increase in charitable donations largely driven by a sizeable donation by the Company to its COVID-19 Relief Fund. Operating expenses as a percentage of revenue decreased to 13.9% for the nine months ended September 30, 2020 from 14.8% for the nine months ended September 30, 2019, reflecting the operating leverage inherent in our business.

Our depreciation and amortization expense on a consolidated basis increased by $34.0 million, or 10.5%, during the nine months ended September 30, 2020 as compared to the same period in 2019. This increase was primarily attributable to a rise in depreciation expense of $34.8 million during the nine months ended September 30, 2020 driven by technology-related capital expenditures.

Our asset impairments on a consolidated basis totaled $75.2 million and $89.0 million for the nine months ended September 30, 2020 and 2019, respectively. During the nine months ended September 30, 2020, we recorded $50.2 million of non-cash asset impairment charges in our Global Workplace Solutions segment and a non-cash goodwill impairment charge of $25.0 million in our Real Estate Investments segment. As a result of the recent global economic disruption and uncertainty due to COVID-19, we deemed there to be triggering events in the first quarter of 2020 that required testing of certain assets for impairment at that time. Based on these tests, we recorded the aforementioned non-cash impairment charges, which were driven by lower anticipated cash flows in certain businesses directly resulting from a downturn in forecasts as well as increased forecast risk due to COVID-19. During the nine months ended September 30, 2019, we recorded a non-cash intangible asset impairment charge of $89.0 million in our Real Estate Investments segment. This non-cash write-off resulted from a review of the anticipated cash flows and the decrease in assets under management in our public securities business driven in part by continued industry-wide shift in investor preference for passive investment programs.

Our gain on disposition of real estate on a consolidated basis increased by $55.9 million, or 290.0%, during the nine months ended September 30, 2020 as compared to the same period in 2019. These gains resulted from property sales within our Real Estate Investments segment.

Our equity income from unconsolidated subsidiaries on a consolidated basis decreased by $47.7 million, or 39.7%, during the nine months ended September 30, 2020 as compared to the same period in 2019, primarily driven by lower equity earnings associated with gains on property sales reported in our Real Estate Investments segment.

Our consolidated interest expense, net of interest income, decreased by $15.8 million, or 23.4%, for the nine months ended September 30, 2020 as compared to the same period in 2019. This was primarily due to lower interest expense on borrowings associated with our credit agreement (driven by lower interest rates) as well as reduced net interest expense overseas associated with cash pooling arrangements.

Our write-off of financing costs on extinguished debt on a consolidated basis was $2.6 million for the nine months ended September 30, 2019. These costs were incurred in connection with the refinancing of our credit agreement.

Our provision for income taxes on a consolidated basis was $119.0 million for the nine months ended September 30, 2020 as compared to $169.9 million for the nine months ended September 30, 2019. The decrease of approximately $50.9 million was primarily related to the corresponding decrease in consolidated pre-tax book income. Our effective tax rate increased to 21.3% for the nine months ended September 30, 2020 from 20.7% for the nine months ended September 30, 2019 primarily due to a larger impact on a percentage basis of unfavorable permanent book tax differences in certain non-U.S. jurisdictions due to lower pre-tax book income. On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was enacted in the United States in response to the COVID-19 pandemic. The CARES Act has not had, nor is it expected to have, a significant impact on our effective tax rate for 2020.

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. For additional information on our segments, see Note 14 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 nine months ended September 30, 2020 and 2019 (dollars in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Revenue:								
Fee revenue:								
Property and advisory project management	$ 312,381	17.8%	$ 305,354	13.6%	$ 919,448	17.6%	$ 905,843	14.5%
Valuation	139,019	7.9%	154,861	6.9%	418,616	8.0%	442,238	7.1%
Loan servicing	58,013	3.3%	56,623	2.5%	171,743	3.3%	152,381	2.4%
Advisory leasing	536,132	30.6%	781,246	34.9%	1,653,367	31.6%	2,221,674	35.5%
Capital markets:								
Advisory sales	346,650	19.8%	526,104	23.5%	1,018,853	19.4%	1,378,317	22.0%
Commercial mortgage origination	129,026	7.3%	163,839	7.3%	352,553	6.7%	424,717	6.8%
Total fee revenue	1,521,221	86.7%	1,988,027	88.7%	4,534,580	86.6%	5,525,170	88.3%
Pass through costs also recognized as revenue	232,944	13.3%	252,685	11.3%	704,038	13.4%	728,902	11.7%
Total revenue	1,754,165	100.0%	2,240,712	100.0%	5,238,618	100.0%	6,254,072	100.0%
Costs and expenses:								
Cost of revenue	1,085,748	61.9%	1,369,710	61.1%	3,210,998	61.3%	3,762,749	60.2%
Operating, administrative and other	480,185	27.4%	530,919	23.7%	1,450,929	27.7%	1,572,233	25.1%
Depreciation and amortization	90,494	5.1%	79,280	3.6%	250,591	4.8%	225,681	3.6%
Operating income	97,738	5.6%	260,803	11.6%	326,100	6.2%	693,409	11.1%
Equity income from unconsolidated subsidiaries	1,183	0.1%	3,616	0.1%	769	0.0%	7,427	0.1%
Other income	7,787	0.4%	2,263	0.1%	14,606	0.3%	5,422	0.1%
Less: Net income attributable to non-controlling interests	155	0.0%	480	0.0%	611	0.0%	470	0.0%
Add-back: Depreciation and amortization	90,494	5.1%	79,280	3.6%	250,591	4.8%	225,681	3.6%
EBITDA	197,047	11.2%	345,482	15.4%	591,455	11.3%	931,469	14.9%
Adjustments:								
Costs associated with transformation initiatives (1)	38,261	2.2%	—	0.0%	38,261	0.7%	—	0.0%
Costs incurred related to legal entity restructuring	1,061	0.1%	—	0.0%	4,995	0.1%	—	0.0%
Costs associated with workforce optimization efforts (2)	—	0.0%	—	0.0%	27,418	0.5%	—	0.0%
Costs associated with our reorganization, including cost-savings initiatives (3)	—	0.0%	—	0.0%	—	0.0%	11,088	0.2%
Integration and other costs related to acquisitions	—	0.0%	—	0.0%	—	0.0%	303	0.0%
Adjusted EBITDA and Adjusted EBITDA on revenue margin	$ 236,369	13.5%	$ 345,482	15.4%	$ 662,129	12.6%	$ 942,860	15.1%
Adjusted EBITDA on fee revenue margin		15.5%		17.4%		14.6%		17.1%

(1) Commencing during the quarter ended September 30, 2020, management began the implementation of certain transformation initiatives to enable the company to reduce costs, streamline operations and support future growth. The majority of expenses incurred were cash in nature and primarily related to employee separation benefits, lease termination costs and professional fees. See Note 15 for further discussion.

(2) Primarily represents costs incurred related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. The charges are cash expenditures primarily for severance costs incurred related to this effort. Of the total costs, $6.1 million was included within the "Cost of revenue" line item and $21.3 million was included in the "Operating, administrative, and other" line item in the accompanying consolidated statements of operations for the nine months ended September 30, 2020.

(3) Primarily represents severance costs related to headcount reductions in connection with our reorganization announced in the third quarter of 2018 that became effective January 1, 2019.

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

Revenue decreased by $486.5 million, or 21.7%, for the three months ended September 30, 2020 as compared to the three months ended September 30, 2019. The revenue decrease primarily reflects the impact of COVID-19, which resulted in lower sales and leasing revenue as well as decreased commercial mortgage origination activity. Foreign currency translation had a 0.4% positive impact on total revenue during the three months ended September 30, 2020, primarily driven by strength in the British pound sterling and euro, partially offset by weakness in the Brazilian real.

Cost of revenue decreased by $284.0 million, or 20.7%, for the three months ended September 30, 2020 as compared to the same period in 2019, primarily due to reduced commission expense resulting from lower sales and leasing revenue as a result of COVID-19. Lower bonuses attributable to lower revenue as a result of COVID-19 also contributed to the decrease. These decreases were partially offset by $11.8 million of costs (primarily employee separation benefits) related to certain transformation initiatives implemented by the company in the third quarter of 2020. In addition, foreign currency translation had a 0.5% negative impact on total cost of revenue during the three months ended September 30, 2020. Cost of revenue as a percentage of revenue was relatively consistent at 61.9% for the three months ended September 30, 2020 versus 61.1% for the same period in 2019.

Operating, administrative and other expenses decreased by $50.7 million, or 9.6%, for the three months ended September 30, 2020 as compared to the three months ended September 30, 2019. The negative impact of COVID-19 on our operating results led to corresponding decreases in bonus and compensation expense for equity awards. In addition, to improve financial performance, we reduced certain operating expenses such as travel and entertainment, marketing, employee events and costs for 3rd party consultants. A reduction to general business operating expenses such as timing for our E&O insurance premium expense for the three months ended September 30, 2020, also contributed to the decline. These items were partially offset by an increase in certain costs as a result of COVID-19, including higher bad debt expense. Foreign currency translation also had a 0.5% negative impact on total operating expenses during the three months ended September 30, 2020. We also incurred $26.5 million of costs, primarily related to employee separation benefits, lease termination costs and professional fees, as management commenced the implementation of certain transformation initiatives during the quarter ended September 30, 2020 to enable the company to prospectively reduce costs, streamline operations and support future growth.

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 September 30, 2020, MSRs contributed to operating income $54.5 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $34.0 million of amortization of related intangible assets. For the three months ended September 30, 2019, MSRs contributed to operating income $59.6 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $32.8 million of amortization of related intangible assets.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

Revenue decreased by $1.0 billion, or 16.2%, for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019. The revenue decrease primarily reflects the impact of COVID-19, which resulted in lower sales and leasing revenue as well as decreased commercial mortgage origination activity. Foreign currency translation had a 0.6% negative impact on total revenue during the nine months ended September 30, 2020, primarily driven by weakness in the Australian dollar, Brazilian real and Indian rupee.

Cost of revenue decreased by $551.8 million, or 14.7%, for the nine months ended September 30, 2020 as compared to the same period in 2019, primarily due to reduced commission expense resulting from lower sales and leasing revenue as a result of COVID-19. Foreign currency translation also had a 0.6% positive impact on total cost of revenue during the nine months ended September 30, 2020. These decreases were partially offset by $11.8 million of costs (primarily employee separation benefits) related to certain transformation initiatives implemented by the company in the third quarter of 2020. Cost of revenue as a percentage of revenue increased slightly to 61.3% for the nine months ended September 30, 2020 from 60.2% for the nine months ended September 30, 2019.

Operating, administrative and other expenses decreased by $121.3 million, or 7.7%, for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019. The negative impact of COVID-19 on our operating results led to corresponding decreases in bonus and compensation expense for equity awards. In addition, to improve financial performance, we reduced certain operating expenses such as travel and entertainment, marketing and employee events. During the first half of 2019, we incurred $10.5 million of costs in connection with our reorganization, which did not recur in the current period. Foreign currency translation also had a 0.7% positive impact on total operating expenses during the nine months ended September 30, 2020. These items were partially offset by $26.5 million of costs, primarily related to employee separation benefits, lease termination costs and professional fees, as management commenced the implementation of certain transformation initiatives during the quarter ended September 30, 2020 to enable the company to prospectively reduce costs, streamline operations and support future growth. We also incurred certain costs as a result of COVID-19, including higher bad debt expense. We also incurred $21.3 million of costs (mainly severance) primarily related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. Lastly, in the first half of 2020, we saw an increase in charitable donations largely driven by a sizeable donation by the Company to its COVID-19 Relief Fund.

For the nine months ended September 30, 2020, MSRs contributed to operating income $127.8 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $96.4 million of amortization of related intangible assets. For the nine months ended September 30, 2019, MSRs contributed to operating income $142.1 million of gains recognized in conjunction with the origination and sale of mortgage loans, offset by $89.8 million of amortization of related intangible assets.

Global Workplace Solutions

The following table summarizes our results of operations for our Global Workplace Solutions operating segment for the three and nine months ended September 30, 2020 and 2019 (dollars in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Revenue:								
Fee revenue:								
Global workplace solutions	$ 837,698	22.5%	$ 793,213	22.3%	$ 2,400,595	21.6%	$ 2,249,433	22.3%
Total fee revenue	837,698	22.5%	793,213	22.3%	2,400,595	21.6%	2,249,433	22.3%
Pass through costs also recognized as revenue	2,883,667	77.5%	2,761,963	77.7%	8,733,788	78.4%	7,857,110	77.7%
Total revenue	3,721,365	100.0%	3,555,176	100.0%	11,134,383	100.0%	10,106,543	100.0%
Costs and expenses:								
Cost of revenue	3,438,447	92.4%	3,317,626	93.3%	10,340,338	92.9%	9,392,411	92.9%
Operating, administrative and other	159,830	4.3%	139,919	3.9%	461,155	4.1%	451,629	4.5%
Depreciation and amortization	31,329	0.8%	29,710	0.9%	92,273	0.8%	89,032	0.9%
Asset impairments	—	0.0%	—	0.0%	50,171	0.5%	—	0.0%
Operating income	91,759	2.5%	67,921	1.9%	190,446	1.7%	173,471	1.7%
Equity income (loss) from unconsolidated subsidiaries	279	0.0%	307	0.0%	606	0.0%	(851)	0.0%
Other income (loss)	43	0.0%	(2,737)	(0.1%)	155	0.0%	(1,231)	0.0%
Less: Net loss attributable to non-controlling interests	—	0.0%	(8)	0.0%	—	0.0%	(271)	0.0%
Add-back: Depreciation and amortization	31,329	0.8%	29,710	0.9%	92,273	0.8%	89,032	0.9%
Add-back: Asset impairments	—	0.0%	—	0.0%	50,171	0.5%	—	0.0%
EBITDA	123,410	3.3%	95,209	2.7%	333,651	3.0%	260,692	2.6%
Adjustments:								
Costs associated with transformation initiatives (1)	17,113	0.5%	—	0.0%	17,113	0.2%	—	0.0%
Costs associated with workforce optimization efforts (2)	—	0.0%	—	0.0%	5,004	0.0%	—	0.0%
Costs associated with our reorganization, including cost-savings initiatives (3)	—	0.0%	—	0.0%	—	0.0%	38,256	0.4%
Adjusted EBITDA and Adjusted EBITDA on revenue margin	$ 140,523	3.8%	$ 95,209	2.7%	$ 355,768	3.2%	$ 298,948	3.0%
Adjusted EBITDA on fee revenue margin		16.8%		12.0%		14.8%		13.3%

(1) Commencing during the quarter ended September 30, 2020, management began the implementation of certain transformation initiatives to enable the company to reduce costs, streamline operations and support future growth. The majority of expenses incurred were cash in nature and primarily related to employee separation benefits, lease termination costs and professional fees. See Note 15 for further discussion.

(2) Primarily represents costs incurred related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. The charges are cash expenditures primarily for severance costs incurred related to this effort. Of the total costs, $1.2 million was included within the "Cost of revenue" line item and $3.8 million was included in the "Operating, administrative, and other" line item in the accompanying consolidated statements of operations for the nine months ended September 30, 2020.

(3) Primarily represents severance costs related to headcount reductions in connection with our reorganization announced in the third quarter of 2018 that became effective January 1, 2019.

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

Revenue increased by $166.2 million, or 4.7%, for the three months ended September 30, 2020 as compared to the three months ended September 30, 2019. The increase was primarily attributable to growth in our facilities management line of business, which is contractual in nature. Foreign currency translation had a 0.7% positive impact on total revenue during the three months ended September 30, 2020, primarily driven by strength in the British pound sterling and euro, partially offset by weakness in the Argentine peso, Brazilian real and Indian rupee.

Cost of revenue increased by $120.8 million, or 3.6%, for the three months ended September 30, 2020 as compared to the same period in 2019, driven by the higher revenue. We also incurred $3.9 million of costs (primarily employee separation benefits) related to certain transformation initiatives implemented by the company in the third quarter of 2020. In addition, foreign currency translation had a 0.7% negative impact on total cost of revenue during the three months ended September 30, 2020. Cost of revenue as a percentage of revenue decreased slightly to 92.4% for the three months ended September 30, 2020 from 93.3% for the same period in 2019.

Operating, administrative and other expenses increased by $19.9 million, or 14.2%, for the three months ended September 30, 2020 as compared to the three months ended September 30, 2019. This increase was largely attributable to $13.2 million of costs, primarily related to employee separation benefits, lease termination costs and professional fees, as management commenced the implementation of certain transformation initiatives during the quarter ended September 30, 2020 to enable the company to prospectively reduce costs, streamline operations and support future growth. In addition, in the nine months ended September 30, 2020, investments were made in both people and technology associated with efforts to remediate material weaknesses in our Europe, Middle East and Africa (EMEA) region. Foreign currency translation also had a 1.4% negative impact on total operating expenses during the three months ended September 30, 2020. These increases were partially offset by a reduction to certain operating expenses, such as travel and entertainment costs, in the third quarter of 2020 as a result of COVID-19.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

Revenue increased by $1.0 billion, or 10.2%, for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019. The increase was primarily attributable to growth in our facilities management line of business, which is contractual in nature. Foreign currency translation had a 0.6% negative impact on total revenue during the nine months ended September 30, 2020, primarily driven by weakness in the Argentine peso, Brazilian real and Indian rupee, partially offset by strength in the British pound sterling.

Cost of revenue increased by $947.9 million, or 10.1%, for the nine months ended September 30, 2020 as compared to the same period in 2019, driven by the higher revenue. We also incurred $3.9 million of costs (primarily employee separation benefits) related to certain transformation initiatives implemented by the company in the third quarter of 2020. Foreign currency translation had a 0.6% positive impact on total cost of revenue during the nine months ended September 30, 2020. Cost of revenue as a percentage of revenue was consistent at 92.9% for the nine months ended September 30, 2020 and September 30, 2019.

Operating, administrative and other expenses increased by $9.5 million, or 2.1%, for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019. This increase was largely attributable to $13.2 million of costs, primarily related to employee separation benefits, lease termination costs and professional fees, as management commenced the implementation of certain transformation initiatives during the quarter ended September 30, 2020 to enable the company to prospectively reduce costs, streamline operations and support future growth. Certain costs were also incurred as a result of COVID-19, including higher bad debt expense, and $3.8 million of costs incurred (mainly severance) primarily related to workforce optimization initiated and executed in the second quarter of 2020 as part of management’s cost containment efforts in response to the COVID-19 pandemic. During the nine months ended September 30, 2020, investments were also made in both people and technology associated with efforts to remediate material weaknesses in our Europe, Middle East and Africa (EMEA) region. Lastly, in the first half of 2020, we also saw an increase in charitable donations largely driven by a sizeable donation by the Company to its COVID-19 Relief Fund. These increases were partially offset by a reduction to certain operating expenses, such as travel and entertainment costs, during the nine months ended September 30, 2020 as a result of COVID-19. Additionally, during the first half of 2019, we incurred $36.3 million of costs in connection with our reorganization, which did not recur in the current period. Foreign currency translation also had a 0.8% positive impact on total operating expenses during the nine months ended September 30, 2020.

Real Estate Investments

The following table summarizes our results of operations for our Real Estate Investments operating segment for the three and nine months ended September 30, 2020 and 2019 (dollars in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Revenue:								
Investment management	$ 99,935	58.9%	$ 104,927	81.2%	$ 324,745	59.8%	$ 312,881	75.6%
Development services	69,677	41.1%	24,286	18.8%	217,948	40.2%	101,188	24.4%
Total revenue	169,612	100.0%	129,213	100.0%	542,693	100.0%	414,069	100.0%
Costs and expenses:								
Cost of revenue	40,384	23.8%	—	0.0%	125,454	23.1%	—	0.0%
Operating, administrative and other	154,212	90.9%	138,746	107.4%	443,015	81.6%	455,995	110.1%
Depreciation and amortization	5,902	3.5%	2,570	2.0%	15,039	2.8%	9,149	2.2%
Asset impairments	—	0.0%	—	0.0%	25,000	4.6%	89,037	21.5%
Gain on disposition of real estate	52,797	31.1%	9	0.0%	75,132	13.8%	19,266	4.7%
Operating income (loss)	21,911	12.9%	(12,094)	(9.4%)	9,317	1.7%	(120,846)	(29.1%)
Equity income from unconsolidated subsidiaries	30,914	18.2%	21,873	17.0%	71,112	13.1%	113,657	27.4%
Other income (loss)	117	0.1%	1,415	1.1%	(1,787)	(0.3%)	21,972	5.3%
Less: Net income attributable to non-controlling interests	553	0.3%	982	0.8%	1,647	0.3%	7,379	1.8%
Add-back: Depreciation and amortization	5,902	3.5%	2,570	2.0%	15,039	2.8%	9,149	2.2%
Add-back: Asset impairments	—	0.0%	—	0.0%	25,000	4.6%	89,037	21.5%
EBITDA	58,291	34.4%	12,782	9.9%	117,034	21.6%	105,590	25.5%
Adjustments:								
Carried interest incentive compensation expense (reversal) to align with the timing of associated revenue	3,767	2.2%	(3,360)	(2.6%)	(11,517)	(2.2%)	12,284	3.0%
Impact of fair value adjustments to real estate assets acquired in the Telford Acquisition (purchase accounting) that were sold in period	2,289	1.3%	—	0.0%	9,289	1.7%	—	0.0%
Integration and other costs related to acquisitions	525	0.3%	4,517	3.5%	1,544	0.3%	13,251	3.1%
Costs associated with workforce optimization efforts (1)	—	0.0%	—	0.0%	5,172	1.0%	—	0.0%
Costs associated with our reorganization, including cost-savings initiatives (2)	—	0.0%	—	0.0%	—	0.0%	221	0.1%
Adjusted EBITDA	$ 64,872	38.2%	$ 13,939	10.8%	$ 121,522	22.4%	$ 131,346	31.7%

(1) Primarily represents costs incurred related to workforce optimization initiated and executed in the second quarter of 2020 as part of management's cost containment efforts in response to the COVID-19 pandemic. The charges are cash expenditures primarily for severance costs incurred related to this effort and were included in the "Operating, administrative, and other" line item in the accompanying consolidated statements of operations for the nine months ended September 30, 2020.

(2) Primarily represents severance costs related to headcount reductions in connection with our reorganization announced in the third quarter of 2018 that became effective January 1, 2019.

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

Revenue increased by $40.4 million, or 31.3%, for the three months ended September 30, 2020 as compared to the three months ended September 30, 2019, primarily driven by the Telford Acquisition in our development services line of business as well as increased asset management fees. These increases were partially offset by lower carried interest revenue and decreases in incentive and development fees due to the impact of COVID-19. Foreign currency translation had a 2.2% positive impact on total revenue during the three months ended September 30, 2020, primarily driven by strength in the British pound sterling and euro.

Cost of revenue was $40.4 million for the three months ended September 30, 2020 and was attributable to Telford, thus there is no prior period comparison.

Operating, administrative and other expenses increased by $15.5 million, or 11.1%, for the three months ended September 30, 2020 as compared to the same period in 2019. This was primarily attributable to an increase in bonuses in our development services line of business given higher gains on property sales and increased equity income from unconsolidated subsidiaries. Foreign currency translation also had a 1.9% negative impact on total operating expenses during the three months ended September 30, 2020. These items were partially offset by a reduction to certain operating expenses, such as travel and entertainment costs, in the third quarter of 2020 as a result of COVID-19.

A roll forward of our AUM by product type for the three months ended September 30, 2020 is as follows (dollars in billions):

	Funds	Separate Accounts	Securities	Total
Balance at June 30, 2020	$ 41.9	$ 61.2	$ 6.5	$ 109.6
Inflows	1.6	1.7	0.3	3.6
Outflows	(0.2)	(1.0)	(0.3)	(1.5)
Market appreciation (depreciation)	1.5	1.0	0.3	2.8
Balance at September 30, 2020	$ 44.8	$ 62.9	$ 6.8	$ 114.5

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.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

Revenue increased by $128.6 million, or 31.1%, for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019, primarily driven by the Telford Acquisition in our development services line of business as well as higher carried interest revenue and increased asset management fees. These increases were partially offset by decreases in acquisition, disposition, incentive and development fees due to the impact of COVID-19. Foreign currency translation had a 0.1% negative impact on total revenue during the nine months ended September 30, 2020, primarily driven by weakness in the euro.

Cost of revenue was $125.5 million for the nine months ended September 30, 2020 and was attributable to Telford, thus there is no prior period comparison.

Operating, administrative and other expenses decreased by $13.0 million, or 2.8%, for the nine months ended September 30, 2020 as compared to the same period in 2019. The negative impact of COVID-19 on our operating results led to a corresponding decrease in carried interest expense. We also reduced certain operating expenses, such as travel and entertainment costs, in the nine months ended September 30, 2020 as a result of COVID-19. During the first half of 2019, we also incurred $5.2 million of costs in connection with our reorganization, which did not recur in the current period. These decreases were partially offset by higher incremental costs associated with Telford, which we acquired on October 1, 2019 (nine months of operating expenses incurred in 2020 versus $13.3 million of transaction costs incurred pre-acquisition during the nine months ended September 30, 2019) and rent expense for our new flexible space offering for the nine months ended September 30, 2020. Foreign currency translation had a negligible impact on total operating expenses during the nine months ended September 30, 2020.

A roll forward of our AUM by product type for the nine months ended September 30, 2020 is as follows (dollars in billions):

	Funds	Separate Accounts	Securities	Total
Balance at January 1, 2020	$ 40.1	$ 64.9	$ 7.9	$ 112.9
Inflows	4.4	5.8	1.1	11.3
Outflows	(1.3)	(6.4)	(1.3)	(9.0)
Market appreciation (depreciation)	1.6	(1.4)	(0.9)	(0.7)
Balance at September 30, 2020	$ 44.8	$ 62.9	$ 6.8	$ 114.5

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.

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. During the nine months ended September 30, 2020, we incurred $161.9 million of capital expenditures, net of tenant concessions received, which includes approximately $71.7 million related to technology enablement. Due to the uncertainty caused by COVID-19, we expect our 2020 net capital expenditures to be meaningfully lower than initially forecast in our 2019 Annual Report. As of September 30, 2020, we had aggregate commitments of $84.0 million to fund future co-investments in our Real Estate Investments business, $10.4 million of which is expected to be funded in 2020. Additionally, as of September 30, 2020, we are committed to fund $41.0 million of additional capital to unconsolidated subsidiaries within our Real Estate Investments business, which we may be required to fund at any time. As of September 30, 2020, we had $2.8 billion of borrowings available under our revolving credit facility and $1.4 billion of cash and cash equivalents available for general corporate use.

We have historically relied on our internally generated cash flow and our revolving credit facility 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 facility 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 generally are 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.

As noted above, we believe that any future significant acquisitions that 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 if we decide to make any further significant acquisitions.

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 price payments in future periods that are subject to the passage of time or achievement of certain performance metrics and other conditions. As of September 30, 2020, we had accrued $89.7 million ($20.6 million of which was a current liability) of deferred purchase consideration, 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.

Lastly, as described in our 2019 Annual Report, our board of directors has authorized a program for the company to repurchase up to $500.0 million of our Class A common stock. As of December 31, 2019, $400.0 million was available for share repurchases under the authorized repurchase program. During the three months ended March 31, 2020, we spent $50.0 million to repurchase, through an existing stock repurchase plan entered into pursuant to Rule 10b5-1 under the Exchange Act, 1,050,084 shares of our Class A common stock with an average price paid per share of $47.62. We did not repurchase any of our stock during the three months ended June 30, 2020 and the three months ended September 30, 2020. As of October 29, 2020, we had $350.0 million of capacity remaining under our current stock repurchase program. Our stock repurchases have been funded with cash on hand and we intend to continue funding future stock repurchases with existing cash. We may utilize our stock repurchase program 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 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 provided by operating activities totaled $860.6 million for the nine months ended September 30, 2020, an increase of $685.9 million as compared to the nine months ended September 30, 2019. The company experienced an overall increase in net working capital of approximately $886.7 million, partially offset by lower net income of $211.8 million as compared to the same period in the previous year. The positive impact from net working capital was largely attributable to a decrease in accounts receivable due to a heightened focus on cash collections across our businesses, and lower corporate income tax payments, partially offset by a net decrease to accounts payable and accrued expenses, as well as compensation payable and accrued bonus.

Investing Activities

Net cash used in investing activities totaled $206.5 million for the nine months ended September 30, 2020, a decrease of $65.2 million as compared to the nine months ended September 30, 2019. This decrease was largely driven by lower capital expenditures, greater distributions received from unconsolidated subsidiaries as well as lower contributions to unconsolidated subsidiaries during the nine months ended September 30, 2020. This was partially offset by higher amounts paid for in-fill acquisitions during the nine months ended September 30, 2020.

Financing Activities

Net cash used in financing activities totaled $111.3 million for the nine months ended September 30, 2020, an increase of $59.4 million as compared to the nine months ended September 30, 2019. The increase was primarily due to a decrease in net borrowings of $52.0 million from our revolving credit facility and $43.2 million in lower net contributions received from non-controlling interests for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019, partially offset by the impact of $44.1 million in less proceeds used for repurchase of common stock during the current period.

Indebtedness

Our level of indebtedness increases the possibility that we may be unable to pay the principal amount of our indebtedness and other obligations when due. In addition, we may incur additional debt from time to time to finance strategic acquisitions, investments, joint ventures or for other purposes, subject to the restrictions contained in the documents governing our indebtedness. If we incur additional debt, the risks associated with our leverage, including our ability to service our debt, would increase.

Long-Term Debt

We maintain credit facilities with third-party lenders, which we use for a variety of purposes. On March 4, 2019, CBRE Services, Inc. (CBRE Services) entered into an incremental assumption agreement with respect to its credit agreement, dated October 31, 2017 (such credit agreement, as amended by a December 20, 2018 incremental loan assumption agreement and such March 4, 2019 incremental assumption agreement, the 2019 Credit Agreement), which (i) extended the maturity of the U.S. dollar tranche A term loans under such credit agreement, (ii) extended the termination date of the revolving credit commitments available under such credit agreement and (iii) made certain changes to the interest rates and fees applicable to such tranche A term loans and revolving credit commitments under such credit agreement. The proceeds from the new tranche A term loan facility under the 2019 Credit Agreement were used to repay the $300.0 million of tranche A term loans outstanding under the credit agreement in effect prior to the entry into this 2019 incremental assumption agreement.

The 2019 Credit Agreement is a senior unsecured credit facility. As of September 30, 2020, the 2019 Credit Agreement provided for the following: (1) a $2.8 billion incremental revolving credit facility, which includes the capacity to obtain letters of credit and swingline loans and terminates on March 4, 2024; (2) a $300.0 million incremental tranche A term loan facility maturing on March 4, 2024, requiring quarterly principal payments unless our leverage ratio (as defined in the 2019 Credit Agreement) is less than or equal to 2.50 to 1.00 on the last day of the fiscal quarter immediately preceding any such payment date; and (3) a €400.0 million term loan facility due and payable in full at maturity on December 20, 2023.

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, but effectively subordinated to all of its current and future secured indebtedness. Interest accrues at a rate of 4.875% per year and is payable semi-annually in arrears on March 1 and September 1.

On September 26, 2014, CBRE Services issued $300.0 million in aggregate principal amount of 5.25% senior notes due March 15, 2025 (the 5.25% senior notes). On December 12, 2014, CBRE Services issued an additional $125.0 million in aggregate principal amount of 5.25% senior notes due March 15, 2025 at a price equal to 101.5% of their face value, plus interest deemed to have accrued from September 26, 2014. The 5.25% senior notes are unsecured obligations of CBRE Services, senior to all of its current and future subordinated indebtedness, but effectively subordinated to all of its current and future secured indebtedness. Interest accrues at a rate of 5.25% per year and is payable semi-annually in arrears on March 15 and September 15.

The indentures governing our 4.875% senior notes and 5.25% 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. In addition, these indentures require that the 4.875% senior notes and the 5.25% senior notes be jointly and severally guaranteed on a senior basis by CBRE Group, Inc. and each domestic subsidiary of CBRE Services that guarantees the 2019 Credit Agreement.

Our 2019 Credit Agreement, 4.875% senior notes and 5.25% senior notes are all fully and unconditionally and jointly and severally guaranteed by us and certain subsidiaries (see Exhibit 22.1 for a listing of all such subsidiary guarantors). Combined summarized financial information for CBRE Group, Inc., (parent); CBRE Services (subsidiary issuer); and the guarantor subsidiaries (collectively referred to as the obligated group), which excludes investment balances in non-guarantor subsidiaries as well as income from consolidated non-guarantor subsidiaries, is as follows (dollars in thousands):

	September 30, 2020	December 31, 2019
Balance Sheet Data:		
Current assets	$ 3,129,883	$ 2,901,618
Noncurrent assets (1)	5,200,369	5,610,084
Total assets (1)	8,330,252	8,511,702
Current liabilities	$ 2,915,488	$ 2,893,775
Noncurrent liabilities	2,215,211	2,201,269
Total liabilities	5,130,699	5,095,044

	Nine Months Ended September 30,	
	2020	2019
Statement of Operations Data:		
Revenue	$ 9,410,167	$ 9,626,821
Operating income	207,270	439,104
Net income	188,518	447,936

(1) Includes $303.1 million and $574.6 million as of September 30, 2020 and December 31, 2019, respectively, of intercompany loan receivables from non-guarantor subsidiaries. All intercompany balances and transactions between CBRE Group, CBRE Services and the guarantor subsidiaries have been eliminated.

The €400.0 million term loan facility under our 2019 Credit Agreement is also jointly and severally guaranteed by five of our foreign subsidiaries. Such subsidiaries have been omitted from the table above given they do not jointly and severally guarantee other amounts under the 2019 Credit Agreement, the 4.875% senior notes or the 5.25% senior notes. Additionally, such subsidiaries if considered in the aggregate as if they were a single subsidiary, would not constitute a significant subsidiary.

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 2019 Annual Report and Note 8 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

Short-Term Borrowings

We maintain a $2.8 billion revolving credit facility under the 2019 Credit Agreement and warehouse lines of credit with certain third-party lenders. For additional information on all of our short-term borrowings, see Note 11 of the Notes to Consolidated Financial Statements set forth in Item 8 included in our 2019 Annual Report and Notes 4 and 8 of the Notes to Consolidated Financial Statements (Unaudited) set forth in Item 1 of this Quarterly Report.

Off –Balance Sheet Arrangements

Our off-balance sheet arrangements are described in Note 10 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 includes 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, 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 United States;
- 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;
- disruptions to business, market and operational conditions related to the COVID-19 pandemic and the impact of government rules and regulations intended to mitigate the effects of this pandemic, including, without limitation, rules and regulations that impact us as a loan originator and servicer for U.S. Government Sponsored Enterprises;
- foreign currency fluctuations and changes in currency restrictions, trade sanctions and import-export and transfer pricing rules;
- 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;
- 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;
- our ability to retain and incentivize key personnel;
- our ability to manage organizational challenges associated with our size;
- negative publicity or harm to our brand and reputation;
- 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;
- declines in lending activity of U.S. Government Sponsored Enterprises, regulatory oversight of such activity and our mortgage servicing revenue from the commercial real estate mortgage market;
- our ability to further diversify our revenue model to offset cyclical economic trends in the commercial real estate industry;
- our ability to attract new user 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;
- 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;
- 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;
- the ability of CBRE Capital Markets to periodically amend, or replace, on satisfactory terms, the agreements for its warehouse lines of credit;
- variations in historically customary seasonal patterns that cause our business not to perform as expected;
- 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;
- liabilities under guarantees, or for construction defects, that we incur in our development services business;
- 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, as well as 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; 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 2019 Annual Report, our Quarterly Report on Form 10-Q for the quarter ended Mach 31, 2020, and our Quarterly Report on Form 10-Q for the quarter ended June, 30, 2020, 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 Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

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 U.S. dollars. 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 September 30, 2020, we did not have any outstanding interest rate swap agreements.

The estimated fair value of our senior term loans was approximately $752.7 million at September 30, 2020. Based on dealers' quotes, the estimated fair values of our 4.875% senior notes and 5.25% senior notes were $697.4 million and $482.6 million, respectively, at September 30, 2020.

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 September 30, 2020, the net impact of the additional interest cost would be a decrease of $5.8 million on pre-tax income and a decrease of $5.8 million in cash provided by operating activities for the nine months ended September 30, 2020.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Rule 13a-15 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 Senior Vice President, Corporate Finance, our Chief Administrative Officer, our Chief Communication Officer, our Vice President of Global SOX Assurance, our 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 not effective as of September 30, 2020 due to the material weaknesses in internal control over financial reporting that was disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 (2019 Annual Report).

Notwithstanding such material weaknesses in internal control over financial reporting, our management concluded that our consolidated financial statements in this Quarterly Report on Form 10-Q present fairly, in all material respects, the company's financial position, results of operations and cash flows as of the dates, and for the periods presented, in conformity with U.S. GAAP.

Remediation

As previously described in Part II, Item 9A of our 2019 Annual Report, we began implementing a remediation plan to address the material weaknesses mentioned above. Such weaknesses will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting during the fiscal quarter ended September 30, 2020 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 our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Item 1A. Risk Factors

There have been no material changes to our risk factors as previously disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020.

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

None.

Item 6. Exhibits

		Incorporated by Reference				
Exhibit No.	**Exhibit Description**	**Form**	**SEC File No.**	**Exhibit**	**Filing Date**	**Filed Herewith**
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	03/27/2020	
10.1	CBRE Group, Inc. Amended and Restated Change in Control and Severance Plan for Senior Management, including form of Designation Letter +					X
22.1	Subsidiary 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

+ Denotes a management contract or compensatory arrangement

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: October 29, 2020

/s/ LEAH C. STEARNS

Leah C. Stearns

Chief Financial Officer (Duly Authorized Officer)

EXHIBIT 10.1

CBRE GROUP, INC.
AMENDED AND RESTATED
CHANGE IN CONTROL AND SEVERANCE PLAN
FOR SENIOR MANAGEMENT

CBRE Group, Inc., a Delaware corporation (the "Company"), has adopted this Amended and Restated Change in Control and Severance Plan for Senior Management (this "Plan"), effective as of August 12, 2020, for the benefit of executives and other members of the senior management of the Company and its Subsidiaries (as defined below) who are eligible to participate in this Plan. The Plan was initially adopted effective as of March 24, 2015.

1. Purposes

The purposes of this Plan are as follows:

(a) To reinforce and encourage the continued attention and dedication of Participants (as defined below) to their assigned duties without the distraction arising from the possibility of a Change in Control (as defined below) of the Company;

(b) To enable and encourage Participants to focus their attention on obtaining the best possible outcome for the Company's shareholders and to make an independent evaluation of all possible transactions, without being influenced by their personal concerns regarding the possible impact of various transactions on the security of their jobs and benefits; and

(c) To provide severance payments and benefits to any Participant who incurs a qualifying termination of employment under the circumstances described herein, whether within a certain period surrounding a Change in Control or outside of such period.

2. Defined Terms

For purposes of this Plan, the following terms shall have the meanings indicated below:

(a) "Base Salary" means, as to any Participant, the amount the Participant is entitled to receive as annual base salary, in each case without reduction for any pre-tax contributions to benefit plans. Base Salary does not include bonuses, incentives, commissions, overtime pay, shift pay, premium pay, cost of living allowances or income from stock options, stock grants or other incentives awarded under the Equity Plan or otherwise.

(b) "Board" means the Board of Directors of the Company.

(c) "Cause" means, with respect to any Participant, the occurrence of any one or more of the following events, in each case, subject to the procedural requirements set forth in Section 9.2:

(i) The Participant's conviction of (or plea of guilty or no contest to) a felony involving moral turpitude;

(ii) The Participant's willful and continued failure to substantially perform the Participant's designated duties or to follow lawful and authorized directions of the Company Group after written notice from or on behalf of the Company Group;

(iii) The Participant's willful misconduct (including willful violation of the Company Group's policies that are applicable to the Participant) or gross negligence that results in material reputational or financial harm to the Company Group;

(iv) Any act of fraud, theft, or any material act of dishonesty by the Participant regarding the Company Group's business;

(v) The Participant's material breach of fiduciary duty to the Company Group (including without limitation, acting in competition with, or taking other adverse action against, the Company Group during the period of the Participant's employment with the Company Group, including soliciting employees of the Company Group for alternative employment);

(vi) Any illegal or unethical act (inside or outside of the Participant's scope of employment) by the Participant that results in material reputational or financial harm to the Company Group;

(vii) The Participant's material misrepresentation regarding personal and/or Company Group performance and/or the Company Group's records for personal or family financial benefit;

(viii) The Participant's material or systematic unauthorized use or abuse of corporate resources of the Company Group for personal or family financial benefit; or

(ix) The Participant's refusal to testify or cooperate in legal proceedings or investigations involving the Company Group.

(d) "Chief Executive Officer" means the Company's Chief Executive Officer.

(e) "Change in Control" has the meaning ascribed to such term in the CBRE Group, Inc. 2019 Equity Incentive Plan (without regard to whether such term is defined in an employment agreement or award agreement).

(f) "Change in Control Protection Period" means the period beginning 120 days prior to the date of a Change in Control and ending on the second anniversary of such Change in Control.

(g) "Code" means the Internal Revenue Code of 1986, as amended.

(h) "Committee" means the Compensation Committee of the Board.

(i) "Company" means CBRE Group, Inc.

(j) "Company Group" means the Company (or, following a Change in Control, the surviving corporation) and each of its Subsidiaries.

(k) "Date of Termination," means (i) if the Participant's employment is terminated by the Company for Cause or by the Participant for Good Reason, the date specified in the Notice of Termination (as determined in accordance with the terms of this Plan), (ii) if the Participant's employment is terminated by the Company other than for Cause, the date on which the Company notifies the Participant of such termination, (iii) if the Participant resigns without Good Reason, the date on which the Participant notifies the Company of such termination, and (iv) if the Participant's employment is terminated by reason of death or Disability, the date of the Participant's death or the 30th day after receipt of such Notice of Termination by the Participant, as the case may be.

(l) "Disability" means a Participant's physical or mental incapacitation such that for a period of six (6) consecutive months, or for an aggregate of nine (9) months in any twenty-four (24) consecutive month period, the Participant is unable to substantially perform his or her duties. Any question as to the existence of a Participant's physical or mental incapacitation as to which the Participant or such Participant's representative, as applicable, and the Company cannot agree shall be determined in writing by a qualified independent physician mutually acceptable to the Participant or such Participant's representative, as applicable, and the Company. If the Participant or such Participant's representative, as applicable, and the Company cannot agree as to a qualified independent physician, each shall appoint such a physician and those two (2) physicians shall select a third (3rd) who shall make such determination in writing. The determination of Disability made in writing to the Company and the Participant or such Participant's representative, as applicable, shall be final and conclusive for all purposes under this Plan.

(m) "Effective Date" means August 12, 2020.

(n) "Eligible Employee" means any employee of the Company Group who is not a party to any individual employment agreement, offer letter or any other similar agreement with any member of the Company Group that provides for severance payments or benefits of any kind upon a termination of employment with the Company Group (excluding, for the avoidance of doubt, any award agreement evidencing the grant of an Equity Award that provides for accelerated or continued vesting, exercisability and/or settlement upon or following a termination of employment).

(o) "ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

(p) "Equity Award" means each stock option, restricted stock unit or other equity or equity-based compensation award in respect of Shares granted to a Participant under the Equity Plan or any other equity-based compensation plan maintained by the Company.

(q) "Equity Multiple" means the following number as applicable: (i) 730 with respect to the Tier I Participant, (ii) 548 with respect to any Tier II Participant, and (iii) 365 with respect to any Tier III Participant.

(r) "Equity Plan" means the CBRE Group, Inc. 2012 Equity Incentive Plan, the CBRE Group, Inc. 2017 Equity Incentive Plan or the CBRE Group, Inc. 2019 Equity Incentive Plan, as applicable, as each may be amended or restated from time to time or any successor to such plans.

(s) "Fair Market Value" has the meaning ascribed to such term in the applicable Equity Plan with respect to the relevant Equity Award.

(t) "Good Reason" means the occurrence of any one or more of the following events without a Participant's prior written consent:

(i) A material adverse change in the Participant's duties or responsibilities (such that the compensation paid to the Participant would not continue to be deemed rational based on the Participant's revised duties or responsibilities);

(ii) A reduction of more than 15% in the Participant's Base Salary as in effect for the 12-month period immediately prior to such reduction, other than in connection with an across-the-board reduction of the base salaries of similarly situated employees or due to changes in the Participant's duties and responsibilities with the Participant's prior written consent;

(iii) A reduction of more than 15% in the Participant's annual target bonus as in effect immediately prior to such reduction or the Participant becoming ineligible to participate in bonus plans applicable to similarly situated employees, other than in connection with an across-the-board reduction of the annual target bonuses of similarly situated employees or due to changes in the Participant's duties and responsibilities with the Participant's prior written consent;

(iv) The failure by the Company to make any annual equity grant to the Participant or a substantial reduction of the Participant's annual equity grant as compared to the annual equity grant made to the Participant in the preceding fiscal year of the Company, unless (A) a reduction of annual equity grants or a change in equity philosophy or practice occurs that does not disproportionately affect the Participant relative to other similarly situated employees who receive equity grants, (B) the Company determines in good faith that such failure to grant or reduction of such grants was fair and equitable either based on the Participant's failure to meet mutually

understood expectations of the Participant's position with the Company or due to the receipt by the Participant of a special one-time equity grant within the 18 months immediately prior to such event, or (C) such failure to grant or reduction of such grants occurs due to changes in the Participant's duties and responsibilities with the Participant's prior written consent;

(v) The failure of any successor to the Company to assume this Plan upon a Change in Control pursuant to Section 11; or

(vi) A change in the Participant's principal place of work to a location of more than 50 miles in each direction from the Participant's principal place of work immediately prior to such change in location; provided, that such change increases the Participant's commute from the Participant's principal residence by more than 50 miles in each direction and more than 3 times per week on average;

provided, that (x) the Participant provides a Notice of Termination to the Company within 90 days of the initial existence of the facts or circumstances constituting such event, (y) the Company fails to cure such facts or circumstances within 30 days after receipt of such Notice of Termination and (z) the Date of Termination of the Participant occurs no later than 30 days after the expiration of the such cure period.

(u) "Non-Section 16 Participant" means any Participant who is not a Section 16 Person.

(v) "Notice of Termination" means a written notice which shall (i) indicate the specific termination provision in this Plan relied upon, (ii) set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of a Participant's employment under the provision so indicated, and (iii) if the Date of Termination is other than the date of receipt of such notice, specify the Date of Termination (which date shall be not more than 30 days after the giving of such notice).

(w) "Participant" means each of the Tier I Participants, the Tier II Participants and the Tier III Participants (collectively, the "Participants").

(x) "Performance-Vesting Equity Award" means any Equity Award that is not a Time-Vesting Equity Award. For the avoidance of doubt, a Performance-Vesting Equity Award shall include any Equity Award that is either expressly and exclusively subject to performance-based vesting or a hybrid of time-based vesting and performance-based vesting.

(y) "Poor Performance" means, with respect to any Participant, the occurrence of any one or more of the following events:

(i) The Participant's consistent and documented failure to successfully execute the basic responsibilities of the Participant's position or to meet performance objectives assigned to the Participant following adequate written notice from or on behalf of the Company Group and an opportunity to improve; or

(ii) The exhibition by the Participant of a pattern of poor decisions on major corporate or personnel matters;

provided, that (x) the Company provides written notice to the Participant of a finding of Poor Performance promptly after becoming aware of the existence of the facts or circumstances constituting such event, and (y) the Participant is provided with a reasonable opportunity to challenge such finding pursuant to procedures established by the Committee.

(z) "Qualifying Termination" means a termination of employment with the Company Group either by (i) the Company (other than for Cause and other than for Poor Performance) or (ii) a Participant for Good Reason. For purposes of clarification, the termination of a Participant's employment by reason of the Participant's death or Disability shall not be deemed a Qualifying Termination.

(aa) "Restricted Period" means the following period of months commencing upon a Qualifying Termination: (i) with respect to the Tier I Participant, 24 months, (ii) with respect to any Tier II Participant, 18 months, and (iii) with respect to any Tier III Participant, 12 months, which period may be reduced or eliminated, in each case, (A) by the Committee (in respect of any Section 16 Participant) or the Company (in respect of any Non-Section 16 Participant), or (B) to the extent required to comply with the applicable laws of the jurisdiction in which the Participant was primarily providing services to the Company immediately prior to such termination.

(bb) "Retirement-Eligible Participant" means, with respect to any Equity Award, any Participant who meets the age and service conditions to be eligible to qualify for "Retirement" (or similar term) under the terms of the award agreement governing such Equity Award and, as a result, is eligible for continued or accelerated vesting of all or any portion of such Equity Award upon a termination of employment due to such Retirement. For clarity, if the Participant is not eligible for continued or accelerated vesting of a portion of an Equity Award on Retirement under the terms of the award agreement (including because the Participant does not satisfy any applicable minimum service requirement after the grant or vesting commencement date of such Equity Award) or the award agreement does not provide for any such continued or accelerated vesting on Retirement, the Participant is not a Retirement-Eligible Participant with respect to such Equity Award (or portion thereof).

(cc) "Section 16 Participant" means any Participant who is a Section 16 Person.

(dd) "Section 16 Person" means an officer of the Company who is subject to the reporting rules under Section 16 of the Securities Exchange Act of 1934, as amended.

(ee) "Separation from Service" has the meaning set forth in Section 409A of the Code and Treasury Regulation Section 1.409A-1(h)).

(ff) "Severance Multiple " means the following number as applicable: (i) 2.0 with respect to the Tier I Participant, (ii) 1.5 with respect to any Tier II Participant, and (iii) 1.0 with respect to any Tier III Participant.

(gg) "Share" has the meaning ascribed to such term in the applicable Equity Plan, with respect to the relevant Equity Award.

(hh) "Subsidiary" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company, if each of the corporations other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain. A corporation that attains the status of a Subsidiary on a date after the Effective Date shall be considered a Subsidiary commencing as of such date.

(ii) "Tier I Participant" means the Chief Executive Officer.

(jj) "Tier II Participant" means (i) any Section 16 Person (other than the Chief Executive Officer) whom the Committee has designated as a Tier II Participant or (ii) any employee of the Company who is not a Section 16 Person whom the Chief Executive Officer has designated as a Tier II Participant, in each case, pursuant to Section 4.1 of this Plan.

(kk) "Tier III Participant" means (i) any Section 16 Person (other than the Chief Executive Officer) whom the Committee has designated as a Tier III Participant or (ii) any employee of the Company who is not a Section 16 Person whom the Chief Executive Officer has designated as a Tier III Participant in this Plan, in each case, pursuant to Section 4.1.

(ll) "Time-Vesting Equity Award" means any Equity Award that is expressly and exclusively subject to periodic or cliff time-based vesting.

3. Administration

3.1 This Plan shall be interpreted, administered and operated by the Committee, which may delegate its duties and powers in whole or in part to any subcommittee thereof or such other persons from time to time as it may designate. The Committee is authorized to interpret this Plan, to establish, amend and rescind any rules and regulations relating to this Plan, to resolve ambiguities under this Plan, and to make any other determinations that it deems necessary or desirable for the administration of this Plan. The Committee may correct any defect or supply any omission or reconcile any inconsistency in this Plan in the manner and to the extent the Committee deems necessary or desirable. The Committee shall have the full power and authority, in its sole discretion but subject to the provisions of this Plan, including, without limitation, the provisions giving the Chief Executive Officer the exclusive right to determine whether any Eligible Employee who is not a Section 16 Person shall be a Tier II Participant or a Tier III Participant, to determine who shall be a Participant and to establish the terms and conditions of any payment or benefit payable under this Plan. Any decision of the Committee in the interpretation and administration of this Plan, as described herein, shall

lie within its sole and absolute discretion and shall be final, conclusive and binding on all parties concerned (including, but not limited to, Participants and their beneficiaries or successors).

3.2 All expenses and liabilities which members of the Committee incur in connection with the administration of this Plan shall be borne by the Company. The Committee may employ attorneys, consultants, accountants, appraisers, brokers, or other persons in connection with such administration, and the Committee, the Company and the Company's officers and directors shall be entitled to rely upon the advice, opinions or valuations of any such persons. No member of Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to this Plan, and all members of the Committee shall be fully protected by the Company in respect of any such action, determination or interpretation.

4. Eligibility and Participation

4.1 Each Eligible Employee who is either (i) a Section 16 Person who has been designated to participate in this Plan as a Tier I, Tier II or Tier III Participant by the Committee, in its sole discretion, or (ii) an employee who is not a Section 16 Person who has been designated to participate in this Plan as a Tier II or Tier III Participant by the Chief Executive Officer, in his sole discretion, shall become a Participant and be eligible to receive payments and benefits under this Plan. Promptly following such designation by the Committee or the Chief Executive Officer, as applicable, the Company shall provide written notice substantially in the form attached hereto as Exhibit A (a "Designation Letter") to each Participant with respect to the Participant's designation as a Tier I, Tier II or Tier III Participant in this Plan.

4.2 None of the Participants shall be eligible to receive any severance payments or benefits under the Company's Highly Compensated Employee Severance Pay Policy or any other severance plan, policy or program of the Company Group as in effect from time to time. Any severance payments or benefits payable to a Participant under this Plan shall be in lieu of any severance payments or benefits to which such Participant may otherwise have been entitled to pursuant to the Company's Highly Compensated Employee Severance Pay Policy or such other severance plan, policy or program of the Company Group as in effect from time to time.

5. Termination Benefits and Payments

5.1 Qualifying Termination Outside of the Change in Control Protection Period. If a Participant incurs a Qualifying Termination at any time outside of the Change in Control Protection Period, the Participant shall be entitled to receive the following payments and benefits, subject to Section 5.3 and Section 14.2:

(a) A single lump-sum payment within 10 days after the Date of Termination (or earlier, to the extent required by applicable law), in an aggregate amount equal to (i) the Participant's earned but unpaid Base Salary and accrued but unpaid vacation pay (if any) through the Date of Termination, and (ii) subject to submission by

the Participant of supporting documentation, any unreimbursed business expenses incurred by the Participant through the Date of Termination in accordance with the Company's reimbursement policy (the amounts described in clauses (i) and (ii), collectively, the "Accrued Obligations");

(b) A single lump-sum payment on the first payroll date following the date on which the Release (as defined below) becomes irrevocable, in an amount equal to (i) the Participant's applicable Severance Multiple, multiplied by (ii) the sum of the Participant's Base Salary and the Participant's annual target bonus, in each case, as in effect on the Date of Termination (without giving effect to any reduction in Base Salary or annual target bonus, respectively, that constitutes Good Reason); provided, that, to the extent required to comply with Section 409A of the Code, if the Release Period spans two calendar years, such amount shall be paid on the first regularly scheduled payroll date that occurs in the second calendar year;

(c) Any unpaid bonus that would have become payable to the Participant in respect of any fiscal year that ends on or before the Date of Termination, where the Participant remained employed through the full fiscal year or performance period but incurs a Qualifying Termination prior to the payment date for such bonus, payable in a single-lump sum on the later of (i) the date on which such bonus would have been paid to the Participant if he had remained employed on the payment date or (ii) the first payroll date following the date on which the Release (as defined below) becomes irrevocable (or, to the extent required to comply with Section 409A of the Code, if the Release Period spans two calendar years, the first regularly scheduled payroll date that occurs in the second calendar year);

(d) A pro rata annual bonus for the fiscal year in which the Date of Termination occurs in an amount equal to the product of:

(i) in respect of any Section 16 Participant, (A) the annual bonus such Participant would have earned for the fiscal year in which the Date of Termination occurs if he had remained employed with the Company Group on the applicable payment date for such annual bonus (but with 100% of such annual bonus calculated solely based on the applicable Company performance metrics with respect to such fiscal year and without regard to any assessment of personal performance) and (B) a fraction, the numerator of which shall be the number of days elapsed through the Date of Termination in the fiscal year in which the Date of Termination occurs and the denominator of which shall be 365, payable in a single lump-sum on the date on which such annual bonus would have been paid to the Participant if he had remained employed on the payment date; or

(ii) in respect of any Non-Section 16 Participant, (A) such Participant's annual target bonus for the fiscal year in which the Date of Termination occurs and (B) a fraction, the numerator of which shall be the number of days elapsed through the Date of Termination in the fiscal year in which the Date of Termination occurs and the denominator of which shall be 365, payable in a single lump-sum on the first payroll date following the date on which the Release becomes irrevocable; provided,

that, to the extent required to comply with Section 409A of the Code, if the Release Period spans two calendar years, such amount shall be paid on the first regularly scheduled payroll date that occurs in the second calendar year;

(e) Any cash, carried interest or similar incentive compensation awards (including a cash long-term incentive plan) (other than Equity Awards) held by the Participant as of the Date of Termination having a performance period that exceeds one year shall be subject to the terms of the applicable plan or grant document with respect to any vesting or payment thereof; provided, that if the applicable plan or grant document does not expressly provide for the treatment of such award upon a Qualifying Termination, then the Committee (in respect of any Section 16 Participant) or the Chief Executive Officer (in respect of any Non-Section 16 Participant) shall determine, in good faith, the treatment of such award consistent with the principles of this Plan, so long as all Participants so affected who then hold such an award are treated in a similar manner in respect of such award;

(f) If the Participant elects to receive group health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985 ("COBRA") following the termination of the Participant's employment, then the Company shall provide such coverage for the 18-month period commencing as of the first day of the month immediately following the Date of Termination (the "Continuation Period"); provided, that the Participant shall continue to pay the same amount of monthly premium as in effect for an active employee with the same coverage; provided, further, that if the Participant becomes employed with another employer during the Continuation Period and is eligible to receive group health insurance coverage under such employer's plans, the Company's obligations under this Section 5.1(f) shall be reduced to the extent comparable coverage is actually provided to the Participant and the Participant's covered dependents, and any such coverage shall be reported by the Participant to the Company. Notwithstanding the foregoing, (A) if any plan pursuant to which the Company is providing such coverage is not, or ceases prior to the expiration of the Continuation Period to be, exempt from the application of Section 409A of the Code under Treasury Regulation Section 1.409A-1(a)(5), or (B) the Company is otherwise unable to continue to cover the Participant under its group health plans or the continuation of such coverage would result in adverse tax consequences for the Participant or other participants in such group health plans or the imposition of fines or penalties on the Company, then, in either case, an amount equal to the difference between the full monthly COBRA premium payment and the current monthly premium the Participant would have paid as an active employee shall thereafter be paid to the Participant as currently taxable compensation in substantially equal monthly installments over the Continuation Period, or the remaining portion thereof (and such payment shall be paid to the Participant on a fully tax grossed up basis);

(g) Upon written request by the Participant, the Company shall, at its sole expense, provide the Participant with reasonable outplacement services with a well-known and reputable outplacement agency for a period of not more than one year following the Date of Termination; and

(h) To the extent not previously vested as of the Date of Termination, any outstanding Equity Awards held by the Participant shall vest and become exercisable as follows; provided, that if the applicable award agreement evidencing any such Equity Award provides for more favorable vesting (determined based on the number of Shares subject to such vesting), then the terms of such award agreement shall instead govern the treatment of such Equity Award:

(i) With respect to any Time-Vesting Equity Award held by the Participant, the vesting of such Equity Award will immediately accelerate with respect to a portion of the unvested Shares subject thereto in an amount equal to (1) the total number of Shares granted under the Equity Award multiplied by a fraction, not to exceed 1, the numerator of which is (x) the number of days the Participant was employed from the Time-Vesting Equity Award's grant date to the Date of Termination, plus (y) the Participant's applicable Equity Multiple, and the denominator of which is the number of days from the grant date to the final vesting date of such Equity Award, less (2) the number of Shares granted under the Equity Award that had vested prior to the Date of Termination, if any, subject to the following terms and conditions:

(A) For any Time-Vesting Equity Award that is an award of (1) (x) restricted stock units and the Participant is not a Retirement-Eligible Participant or (y) restricted stock, 50% of the total Shares that are subject to accelerated vesting as described in Section 5.1(h)(i) above shall be delivered to the Participant at the Date of Termination, and the remaining Shares that are subject to such accelerated vesting will be delivered to the Participant at the end of the Participant's applicable Restricted Period, subject to the Participant's compliance with the restrictive conditions set forth in Section 7 or (2) restricted stock units and the Participant is a Retirement-Eligible Participant, the Shares that are subject to accelerated vesting as described in Section 5.1(h)(i) above shall be delivered to the Participant on the date(s) the restricted stock units subject to such Time-Vesting Equity Award would have otherwise vested, as provided in the grant notice attached to the award agreement pursuant to which the applicable Time-Vesting Equity Award was granted; or

(B) For any Time-Vesting Equity Award that is an award of stock options, 50% of the total Shares underlying the stock options that are subject to accelerated vesting as described in Section 5.1(h)(i) above shall be automatically forfeited by the Participant if the Participant does not satisfy any of the restrictive conditions set forth in Section 7 prior to the end of the Participant's applicable Restricted Period. If the Participant exercises any such stock options prior to the expiration of such Restricted Period, then the Shares acquired upon such exercise shall be held by the Company and may not be sold or transferred by the Participant prior to the end of such Restricted Period, and, if the Participant does not satisfy any such restrictive conditions prior to the end of such Restricted Period, each such Share shall be automatically repurchased by the Company at a repurchase price equal to the lower of the Fair Market Value of such Share and the exercise price per Share of such stock option;

(ii) With respect to any Performance-Vesting Equity Award held by the Participant, a portion of the unvested Shares subject thereto shall remain outstanding and eligible to vest and, if applicable, become exercisable, in accordance with the terms of the applicable award agreement evidencing such award following the completion of the applicable performance period for such Performance-Vesting Equity Award in an amount equal to (1) the total number of Shares, if any, that would have been ultimately awarded thereunder following completion of the performance period applicable to such Performance-Vesting Equity Award multiplied by a fraction, not to exceed 1, the numerator of which is (x) the number of days the Participant was employed from the Performance-Vesting Equity Award's grant date to the Date of Termination, plus (y) the Participant's applicable Equity Multiple, and the denominator of which is the number of days from the grant date to the final vesting date of such Performance-Vesting Equity Award, less (2) the number of Shares granted under the Performance-Vesting Equity Award that had vested prior to the Date of Termination, if any, subject to the following terms and conditions:[1]

(A) Except as otherwise provided in this Section 5.1(h)(ii)(A), for any Performance-Vesting Equity Award that is an award of restricted stock units or restricted stock, 50% of the total Shares that are subject to continued vesting as described in Section 5.1(h)(ii) above and are actually earned based on the level of achievement of the applicable performance goals shall be delivered to the Participant at the end of the applicable performance period, and the remaining Shares that are subject to such continued vesting and that are actually earned based on the level of achievement of the applicable performance goals will be delivered to the Participant at the later of the end of such performance period or the end of the Participant's applicable Restricted Period, subject to the Participant's compliance with the restrictive conditions set forth in Section 7. Notwithstanding the foregoing, if the Participant is a Retirement-Eligible Participant with respect to a Performance-Vesting Equity Award at the time of the Participant's Qualifying Termination, and such award (or portion thereof) has been earned based on the applicable performance-based vesting condition(s) but remains subject to a time-based vesting condition, the Shares that are subject to accelerated vesting as described in Section 5.1(h)(ii) above shall be delivered to the Participant on the date(s) the restricted stock units subject to such Performance-Vesting Equity Award would have otherwise vested, as provided in the grant notice attached to the award agreement pursuant to which the applicable Performance-Vesting Equity Award was granted; or

(B) For any Performance-Vesting Equity Award that is an award of stock options, 50% of the total Shares underlying the stock options that are subject to vesting as described in Section 5.1(h)(ii) above and

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1 *E.g.*, if the performance period on an Adjusted EPS Equity Award granted in February 2019 is fiscal year 2019 and 2020 (with the cliff vest date in February 2022) and the Participant is terminated in August 2020, then the Participant will remain eligible to vest in the calculated portion of the Shares until fiscal year 2020 performance is measurable (*e.g.*, in February 2021) and thereupon (in February 2021) vest into that number of Shares from such portion as is determined based on the level of performance that is achieved.

which actually vest based on the level of achievement of the applicable performance goals shall be automatically forfeited by the Participant if the Participant does not satisfy any of the restrictive conditions set forth in Section 7 prior to the end of the Participant's applicable Restricted Period. If the Participant exercises any such stock options prior to the expiration of such Restricted Period, then the Shares acquired upon such exercise shall be held by the Company and may not be sold or transferred by the Participant prior to the end of such Restricted Period, and, if the Participant does not satisfy any such restrictive conditions prior to the end of such Restricted Period, each such Share shall be automatically repurchased by the Company at a repurchase price equal to the lower of the Fair Market Value of such Share and the exercise price per Share of such stock option.

All other benefits, if any, due to the Participant following a termination pursuant to this Section 5.1 shall be determined in accordance with the plans, policies and practices of the Company as in effect from time to time; provided, that the Participant shall not be entitled to any severance payments or benefits under any other agreement or any severance plan, policy or program of the Company Group. The Participant shall not accrue any additional compensation or other benefits under this Plan following such termination of employment other than as expressly set forth herein.

5.2 Qualifying Termination During the Change in Control Protection Period. If a Participant incurs a Qualifying Termination at any time during the Change in Control Protection Period, the Participant shall be entitled to receive the following payments and benefits, subject to Section 5.3 and Section 14.2:

(a) The Participant shall be entitled to payment of the Accrued Obligations in a single lump-sum within 10 days after the Date of Termination (or earlier, to the extent required by applicable law);

(b) The Participant shall be entitled to the payments and benefits provided in Sections 5.1(b), (c), (d), (e), (f) and (g), subject to the terms and conditions thereof, including, without limitation, the requirement that a condition to the Participant's right to receive such payments and benefits is the Participant's execution, delivery and non-revocation of the Release; and

(c) To the extent not previously vested as of the Date of Termination, any outstanding Equity Awards (including any such Equity Awards that are assumed, converted or replaced pursuant to Section 6) held by the Participant shall vest and, if applicable, become exercisable as follows (in lieu of the vesting described in Section 5.1(h)); provided, that if the applicable award agreement evidencing any such Equity Award provides for more favorable vesting (determined based on the number of Shares subject to such vesting), then the terms of such award agreement shall instead govern the treatment of such Equity Award:

(i) With respect to any Time-Vesting Equity Award held by the Participant, the vesting of such award will immediately accelerate with respect to all of the unvested Shares subject thereto on the Date of Termination (or, in the event that the Participant experiences a Qualifying Termination prior to the occurrence of a Change in Control, upon the occurrence of such Change in Control). In order to accomplish the intention of this provision and notwithstanding any provision of the applicable award agreement or the plan under which such Time-Vesting Equity Award was granted to the contrary, if the Participant experiences a Qualifying Termination prior to the occurrence of a Change in Control, any portion of such Time-Vesting Equity Award that is unvested shall remain outstanding (but with respect to a Time-Vesting Award that is an unvested stock option, shall not be exercisable) for a period of 120 days following the Date of Termination and, (A) if a Change in Control occurs during such 120-day period, such unvested award shall become fully vested upon the occurrence of such Change in Control and if such award is a stock option, shall be exercisable for a period of 20 days following such Change in Control (or, if earlier, the date on which the term of such stock option would expire) or (B) if a Change in Control does not occur prior to the expiration of such 120-day period, the unvested award shall automatically expire upon the expiration of such 120-day period; or

(ii) With respect to any Performance-Vesting Equity Award held by the Participant, the Committee shall (A) determine the projected level of achievement of the applicable performance goals, based upon the actual level of achievement of the performance goals through the date of the Change in Control, and (B) determine the extent to which the vesting of the Shares subject to the Performance-Vesting Equity Award will immediately and fully accelerate based on such projected level of achievement, provided, that any Shares subject to the Performance-Vesting Equity Award that do not vest based on the projected level of achievement will be automatically forfeited upon the Change in Control.[2]

(d) Non-Qualifying Termination. If a Participant's employment with the Company is terminated either (i) by the Company either for Cause or for Poor Performance, (ii) by a Participant without Good Reason or (iii) due to the Participant's death or Disability, then the Participant (or the Participant's beneficiary or estate, as applicable) shall be entitled to payment of the Accrued Obligations in a single lump-sum within 10 days after the Date of Termination (or earlier, to the extent required by applicable law). In no event shall any such Participant otherwise be eligible to receive any payments or benefits under this Plan, except to the extent explicitly required by applicable law; provided, that the Committee may, in its sole discretion, determine to provide for the full or partial vesting of any Equity Award held by the Participant as of the Date of Termination.

2 *E.g.*, if the performance period on an Adjusted EPS Equity Award granted in February 2019 is fiscal year 2019 and 2020 (with a cliff vest date in February 2022) and a Change in Control occurs in November 2020, with the Participant terminating at any time during the period commencing 120 days prior to the Change in Control date and ending immediately prior to the cliff vest date in September 2022, then the Participant will immediately vest as to that number of Shares as is determined based on the level of projected performance determined by the Committee at the Change in Control date.

5.3 Release and Other Conditions to Severance. Any payments or benefits that may be provided to a Participant under Section 5.1 or Section 5.2 of this Plan (other than payment of the Accrued Obligations) shall be conditioned upon the following events:

(a) The Participant's execution, delivery and non-revocation of an effective release of claims against the Company Group, in substantially the Company's standard form for personnel who are similarly situated to the Participant (the "Release"), which Release shall be delivered to the Participant within 5 days following the Date of Termination and which must be executed (and not revoked) by the Participant within sixty (60) days following the Date of Termination (the "Release Period");

(b) At the Company's request, the Participant's return of all property belonging to the Company Group (including, but not limited to, any Company Group-provided laptops, computers, cell phones, wireless electronic mail devices or other equipment, or documents and property belonging to the Company Group); and

(c) The Participant's continued compliance with the conditions set forth in Section 7.

Notwithstanding anything herein to the contrary, if the Committee determines, in its reasonable good faith and discretion, that a Participant has not satisfied any of the conditions precedent or subsequent in Section 7, (i) any entitlement of the Participant to receive any payments or benefits due under this Plan (other than payment of the Accrued Obligations) shall be forfeited (including, without limitation, the forfeiture of any Shares that would have otherwise been delivered to the Participant following the Restricted Period, the forfeiture of stock options and the repurchase of Shares acquired upon the exercise of stock options, in each case, pursuant to Section 5.1(h)), and (ii) the Participant shall be obligated to promptly repay the Company all amounts of payments and benefits the Participant previously received under this Plan (other than the Accrued Obligations); provided, that if a court subsequently determines that the Participant did satisfy such conditions, the Participant's entitlement to receive such payments and benefits shall be reinstated in accordance with the terms thereof.

6. Treatment of Equity Awards Held by Non-Terminated Participants upon a Change in Control

If a Participant remains employed with the Company Group on the date on which a Change in Control occurs, any outstanding Equity Awards then held by the Participant shall, effective upon the consummation of such Change in Control, be treated as follows:

(a) With respect to each Time-Vesting Equity Award held by the Participant:

(i) If such Time-Vesting Equity Award is assumed, converted or replaced by the surviving corporation (including the Company if the Company is the surviving corporation) or its parent with equity or equity-based awards in respect of a publicly traded security having an equivalent value and vesting schedule to those applicable to such Time-Vesting Equity Award immediately prior to such Change in Control, such award as so-assumed, converted or replaced, as applicable, shall remain eligible to vest and become exercisable in accordance with its terms, subject to fully accelerated vesting in the event of a Participant's Qualifying Termination with the surviving corporation or its parent, as applicable, that occurs at any time on or prior to the second anniversary of such Change in Control.

(ii) If such Time-Vesting Equity Award is not so assumed, converted or replaced, the vesting of such award will immediately accelerate with respect to all of the unvested Shares subject thereto.

(b) With respect to each Performance-Vesting Equity Award held by the Participant, if the size of such award is variable based on the achievement of Company performance targets, the Committee shall determine the projected level of achievement of the applicable performance goals, based upon the actual level of achievement of the performance goals through the date of the Change in Control for purposes of determining the number of Shares subject to such Performance-Vesting Equity Award that shall be eligible to vest and, if applicable, become exercisable (the "Vesting Eligible Shares") as follows:

(i) If such Performance-Vesting Equity Award is assumed, converted or replaced by the surviving corporation (including the Company if the Company is the surviving corporation) or its parent with equity or equity-based awards in respect of a publicly traded security having an equivalent value and vesting period (determined as if the applicable performance condition was deemed satisfied with respect to the Vesting Eligible Shares that remain subject thereto after giving effect to the last sentence of this Section 6) to those applicable to such award as in effect immediately prior to such Change in Control, the Vesting Eligible Shares subject to such award as so assumed, converted or replaced, as applicable, shall vest and become exercisable in full on the last day of the applicable vesting period (without regard to the satisfaction of any performance condition) in accordance with the terms of the applicable award agreement evidencing such award, subject to fully accelerated vesting in the event of a Participant's Qualifying Termination with the surviving corporation or its parent, as applicable, that occurs at any time on or prior to the second anniversary of such Change in Control.[3]

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3 *E.g.*, if the performance period on an Adjusted EPS Equity Award granted in February 2019 is fiscal year 2019 and 2020 (with the cliff vest date in February 2022) and a Change in Control occurs in November 2020, then (i) the employee will remain eligible to vest as to that number of shares as is determined based on the level of projected performance determined by the Committee at the Change in Control date and (ii) the portion of the award that is not forfeited following such determination will be converted into a time-based equity award that will cliff vest in February 2022.

(ii) If such award is not so assumed, converted or replaced, the vesting of such award will immediately accelerate with respect to all of the Vesting Eligible Shares subject thereto.

Notwithstanding anything herein to the contrary, any Shares subject to a Performance-Vesting Equity Award that are not Vesting Eligible Shares after giving effect to the Committee's determination pursuant to this Section 6(b) shall be automatically forfeited by the Participant and terminated for no consideration on the date of such Change in Control.

7. Restrictive Conditions

As a condition precedent and subsequent to the receipt of any actual payments and benefits provided to a Participant under Section 5.1 or Section 5.2 of this Plan (other than payment of the Accrued Obligations), the Participant, in order to accept any such benefits and payments under this Plan, must comply with the restrictive conditions precedent and subsequent to receipt thereof, as set forth on Exhibit B attached hereto (the terms of which shall be incorporated into the Release), for the Restricted Period. Upon completion of the Restricted Period, Participant must certify (in writing) to the Company his or her compliance with such conditions. For the avoidance of doubt, the restrictive conditions set forth on Exhibit B shall apply in addition to (and shall not be limited by the provisions of) any other non-competition, non-pooling, non-solicitation, confidentiality, non-disparagement or similar covenants or conditions to which a Participant is subject pursuant to any other plan or agreement containing restrictive covenants or conditions to which such Participant is a party with any member of the Company Group (or, in the case of any plan, as a recipient of any award or benefits thereunder), such that the longest and broadest of such restrictions shall apply (without duplication).

8. Limitation on Payments

(a) Notwithstanding any other provisions of this Plan to the contrary, if any payment or benefit received or to be received by a Participant, whether pursuant to the terms of this Plan or any other plan, arrangement or agreement (all such payments and benefits being hereinafter referred to as the "Total Payments"), would be subject (in whole or part), to the excise tax imposed under Section 4999 of the Code (the "Excise Tax"), then, after taking into account any reduction in the Total Payments provided by reason of Section 280G of the Code in such other plan, arrangement or agreement, the Total Payments shall be reduced as set forth herein, to the extent necessary so that no portion of the Total Payments is subject to the Excise Tax but only if the net amount of such Total Payments, as so reduced (and after subtracting the net amount of federal, state and local income taxes on such reduced Total Payments and after taking into account the phase out of itemized deductions and personal exemptions attributable to such reduced Total Payments), is greater than or equal to the net amount of such Total Payments without such reduction (but after subtracting the net amount of federal, state and local income taxes on such Total Payments and the amount of Excise Tax to which the Participant would be subject in respect of such unreduced Total Payments and after taking into account the phase out of itemized deductions and personal exemptions

attributable to such unreduced Total Payments). The Total Payments shall be reduced by the Company in its reasonable discretion in the following order: (A) the cash severance payment set forth in Section 5.1(b), (B) the payment of a pro-rata bonus for the fiscal year in which the Date of Termination occurs as set forth in Section 5.1(d), (C) the accelerated vesting of any Performance-Vesting Equity Awards as set forth herein, (D) the accelerated vesting of any Time-Vesting Equity Awards as set forth herein, and (E) any other payments or benefits otherwise payable to the Participant on a pro-rata basis or such other manner that complies with Section 409A of the Code; provided, that no such reduction shall apply to any such payment or benefit that constitutes "nonqualified deferred compensation" (within the meaning of Section 409A of the Code) to the extent that such reduction would result in any prohibited acceleration or additional tax under Section 409A of the Code.

(b) For purposes of determining whether and the extent to which the Total Payments will be subject to the Excise Tax, (i) no portion of the Total Payments the receipt or enjoyment of which the Participant shall have waived at such time and in such manner as not to constitute a "payment" within the meaning of Section 280G(b) of the Code shall be taken into account, (ii) no portion of the Total Payments shall be taken into account which, in the opinion of an independent nationally recognized accounting firm or consulting firm ("Independent Advisors") selected by the Company, does not constitute a "parachute payment" within the meaning of Section 280G(b)(2) of the Code (including by reason of Section 280G(b)(4)(A) of the Code) and, in calculating the Excise Tax, no portion of such Total Payments shall be taken into account which, in the opinion of Independent Advisors, constitutes reasonable compensation for services actually rendered, within the meaning of Section 280G(b)(4)(B) of the Code, in excess of the Base Amount (as defined in Section 280G(b)(3) of the Code) allocable to such reasonable compensation, and (iii) the value of any non-cash benefit or any deferred payment or benefit included in the Total Payments shall be determined by the Independent Advisors in accordance with the principles of Sections 280G(d)(3) and (4) of the Code.

9. Termination Procedure

9.1 Notice of Termination. Any purported termination of a Participant's employment by the Company with or without Cause or by the Participant for Good Reason shall be communicated by a Notice of Termination to the other party given in accordance with Section 12. The failure by the Participant or the Company to set forth in the Notice of Termination any fact or circumstance which contributes to a showing of Good Reason or Cause shall not waive any right of the Participant or the Company, respectively, under this Plan or preclude the Participant or the Company from asserting such fact or circumstance in enforcing the Participant's or the Company's rights under this Plan.

9.2 Procedure for Termination for Cause. Any termination of the employment of a Participant shall not be deemed to be for Cause unless and until (a) the Participant has been provided written notice detailing the facts or circumstances constituting such Cause event at least 30 days before the proposed Date of Termination; provided, that the Company shall have the right to suspend the Participant with pay during such period, (b)

the Participant has been provided with a reasonable opportunity, together with counsel for the Participant (at the Participant's option and expense), to be heard by the Committee (in respect of any Section 16 Participant) or a panel of senior executive officers of the Company (in respect of any Non-Section 16 Participant) regarding any disputed facts prior to such proposed Date of Termination, and (c) to the extent capable of cure, the Participant fails to cure such facts or circumstances within such 30 day period; provided, that the Committee or such panel of senior executive officers of the Company, as applicable, shall determine in good faith whether such Cause event exists following such hearing and, if applicable, whether and how such Cause event is capable of being cured. If it is determined that no such Cause event exists and the Company determines to terminate the Participant's employment with the Company, then such termination shall constitute a termination without Cause for purposes of this Plan.

10. No Mitigation or Offset

The Company agrees that, in order for a Participant to be eligible to receive the payments and other benefits described herein, the Participant is not required to seek other employment or to attempt in any way to reduce any amounts payable to the Participant by the Company pursuant to Section 5.1 or 5.2. Further, the amount of any payment or benefit provided for in this Plan (other than pursuant to Section 5.1(f)) shall not be reduced by any compensation earned by the Participant following the Date of Termination as the result of employment by another employer or otherwise, by retirement benefits, by offset against any amount claimed to be owed by the Participant to the Company, or otherwise.

11. Successors; Binding Agreement

(a) The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to expressly assume this Plan and all obligations of the Company hereunder in the same manner and to the same extent that the Company would be so obligated if no such succession had taken place.

(b) This Plan shall inure to the benefit of and shall be binding upon the Company, its permitted successors and assigns.

(c) No right or interest of a Participant under this Plan may be assigned, transferred or alienated, in whole or in part, either directly or by operation of law, and no such right or interest shall be liable for or subject to any debt, obligation or liability of such Participant. Notwithstanding the foregoing, if a Participant dies while any amount would still be payable to the Participant hereunder (other than amounts which, by their terms, terminate upon the death of the Participant) if the Participant had continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Plan to the executors, personal representatives or administrators of the Participant's estate.

12. Notices

For the purpose of this Plan, notices and all other communications provided for in this Plan shall be given in writing and delivered by hand or sent by overnight courier, certified or registered mail, return receipt requested, postage prepaid, and shall be deemed effectively given upon receipt or, in the case of notices delivered by the Company to the Participant, 5 days after deposit in the United States mail, postage prepaid, addressed to the Participant at the last address the Participant provided to the Company and, if to the Company, to the address set forth below, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon actual receipt:

To the Company:
CBRE Group, Inc.
Attention: General Counsel
400 South Hope Street, 25th Floor
Los Angeles, CA 90071

13. Claims Procedure; Arbitration

13.1 Claims Procedure.

(a) With respect to any claim for benefits which are provided exclusively under this Plan, the claim shall be approved or denied by the Committee (in respect of any Section 16 Participant) or a panel of senior executive officers of the Company (in respect of any Non-Section 16 Participant) within 90 days following the receipt of the information necessary to process the claim. If the Committee denies a claim for benefits in whole or in part, it will give written notice of the decision to the claimant or the claimant's authorized representative, which notice will set forth in a manner calculated to be understood by the claimant, stating the specific reasons for such denial, make specific reference to the pertinent Plan provisions on which the decision was based, and provide any other additional information, as applicable, required by Section 503 of ERISA and the regulations thereunder.

(b) With respect to any claim for benefits which, under the terms of this Plan, are provided under another employee benefit plan or program maintained by any member of the Company Group, the Committee shall determine claims regarding the Participant's eligibility under this Plan in accordance with the preceding Section 13.1(a), but the administration of any other claim with respect to such benefits (including the amount of such benefits) shall be subject to the claims procedure specified in such other employee benefit plan or program.

(c) Appeals with respect to any claim for benefits which, under the terms of this Plan, are provided under another employee benefit plan maintained by any member of the Company Group (*e.g.*, group health, life insurance, etc.), shall be subject to the claims and appeals procedure specified in such other employee benefit plan.

13.2 Arbitration. If a Participant and the Company are unable to resolve any controversy or claim arising out of, or relating to, this Plan (after giving effect to Section 13.1), other than any claim with respect to Section 7 (which claim must be brought in court), which cannot be settled amicably by the parties, such controversy shall be finally, exclusively, and conclusively settled by mandatory arbitration conducted expeditiously in accordance with the provisions of the arbitration rules of the state in which the Participant is or was last employed by the Company (e.g., in California, the California Arbitration Act) or in absence of state law, the Federal Arbitration Act, and shall be heard before a retired State or Federal judge in the county containing the Company's office in which the Participant is or was last employed. The decision of the arbitrator shall be final and binding upon all parties thereto and shall be rendered pursuant to a written decision, which contains a detailed recital of the arbitrator's reasoning. Judgment upon the award rendered may be entered in any court having jurisdiction thereof. Each party shall pay his or its own costs for the arbitration, with the cost of the arbitrator to be equally divided between the parties; provided, that the Company shall reimburse the Participant for reasonable attorneys' fees and other actual costs incurred by the Participant in connection with such action if the Participant substantially prevails on at least one material issue in such arbitration (or any related litigation).

13.3 Exclusive Jurisdiction; Waiver of Jury Trial. Notwithstanding anything herein to the contrary, the Company shall have the right to enforce the provisions of Section 7 through an action, suit or proceeding brought in any federal court located in the State of Delaware or any Delaware state court, and each Participant consents to the exclusive jurisdiction and venue of such courts (and of the appropriate appellate courts therefrom) in any such action, suit or proceeding and irrevocably waives, to the fullest extent permitted by law, any right to a jury trial and any objection that such party may now or hereafter have to the laying of the venue of any such action, suit or proceeding in any such court or that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum; provided, that any action, suit or proceeding seeking to enforce a final judgment rendered in such court or an arbitral award pursuant to Section 13.2 may be brought in any court of competent jurisdiction.

14. Section 409A

14.1 To the extent applicable, this Plan shall be interpreted and applied consistent and in accordance with Section 409A of the Code and Department of Treasury regulations and other interpretive guidance issued thereunder. Notwithstanding any provision of this Plan to the contrary, to the extent that the Committee determines that any payments or benefits under this Plan may not be either compliant with or exempt from Section 409A of the Code and related Department of Treasury guidance, the Committee may in its sole discretion adopt such amendments to this Plan or take such other actions that the Committee determines are necessary or appropriate to (i) exempt the compensation and benefits payable under this Plan from Section 409A of the Code and/or preserve the intended tax treatment of such compensation and benefits, or (ii) comply with the requirements of Section 409A of the Code and related Department of Treasury guidance; provided, that this Section 14.1 shall not create any obligation on the part of the Committee to adopt any such amendment or take any other action.

14.2 Notwithstanding anything to the contrary in this Plan, no amounts shall be paid to any Participant under this Plan during the 6-month period following such Participant's Separation from Service to the extent that the Committee reasonably determines that paying such amounts at the time or times indicated in this Plan would result in a prohibited distribution under Section 409A(a)(2)(b)(i) of the Code. If the payment of any such amounts is delayed as a result of the previous sentence, then on the first business day following the end of such 6-month period (or such earlier date upon which such amount can be paid under Section 409A of the Code without resulting in a prohibited distribution, including as a result of the Participant's death), the Participant shall receive payment of a lump-sum amount equal to the cumulative amount that would have otherwise been payable to the Participant during such 6-month period without interest thereon.

14.3 Notwithstanding anything to the contrary herein, to the extent required by Section 409A of the Code, a termination of employment shall not be deemed to have occurred for purposes of any provision of this Plan providing for the payment of amounts or benefits upon or following a termination of employment unless such termination is also a Separation from Service with the Company, and, for purposes of any such provision of this Plan, references to a "resignation," "termination," "termination of employment" or like terms shall mean Separation from Service.

14.4 For purposes of Section 409A of the Code, each payment made under this Plan shall be designated as a "separate payment" within the meaning of Section 409A of the Code.

14.5 Notwithstanding anything to the contrary herein, except to the extent any expense, reimbursement or in-kind benefit provided pursuant to this Plan does not constitute a "deferral of compensation" within the meaning of Section 409A of the Code, (a) the amount of expenses eligible for reimbursement or in-kind benefits provided to the Participant during any calendar year will not affect the amount of expenses eligible for reimbursement or in-kind benefits provided to the Participant in any other calendar year; (b) the reimbursements for expenses for which the Participant is entitled to be reimbursed shall be made on or before the last day of the calendar year following the calendar year in which the applicable expense is incurred; and (c) the right to payment or reimbursement or in-kind benefits hereunder may not be liquidated or exchanged for any other benefit.

15. Termination and Amendment

This Plan, including any Designation Letter, may be amended or terminated, and any provision thereof may be modified (or waived), for one or more Participants at any time by the Committee (in respect of any Section 16 Participant) or the Chief Executive Officer (in respect of any Non-Section 16 Participant) in its sole discretion; provided, that any such amendment, termination or modification adverse to any Participant (including without limitation, any amendment or modification resulting in the removal of a Participant from this Plan or in the demotion of a Participant from a Tier II Participant to a Tier III Participant) shall not become effective until the date which is (i) in respect of any Participant who is employed outside of the Change in Control Period, 12 months following the date of such amendment, termination or modification or (ii) in respect of

any Participant who is employed during the Change in Control Period, the later of (x) 12 months following the date of such amendment, termination or modification or (y) the expiration of the Change in Control Period, in any case, so long as such amendment, termination or modification does not affect any benefits to which a Participant is entitled pursuant to a termination of employment or resignation occurring prior to the date such amendment, termination or modification becomes effective.

16. Miscellaneous

16.1 No Waiver. No waiver by the Company or any Participant, as the case may be, at any time of any breach by the other party of, or of any lack of compliance with, any condition or provision of this Plan to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. All other plans, policies and arrangements of the Company Group in which a Participant participates during the term of this Plan shall be interpreted so as to avoid the duplication of benefits paid hereunder.

16.2 No Right to Employment. Nothing contained in this Plan or any documents relating to this Plan shall (i) confer upon any Participant any right to continue as a Participant or in the employ or service of any member of the Company Group, (ii) constitute any contract or agreement of employment, or (iii) interfere in any way with any "at-will" nature (if applicable) of the Participant's employment with the Company Group.

16.3 Benefits not Assignable. Except as otherwise provided herein or by law, no right or interest of any Participant under this Plan shall be assignable or transferable, in whole or in part, either directly or by operation of law or otherwise, including, without limitation, by execution, levy, garnishment, attachment, pledge or in any manner; no attempted assignment or transfer thereof shall be effective; and no right or interest of any Participant under this Plan shall be liable for, or subject to, any obligation or liability of such Participant. When a payment is due under this Plan to a Participant who is unable to care for his or her affairs, payment may be made directly to the Participant's legal guardian or personal representative.

16.4 Tax Withholding. All amounts payable hereunder shall be subject to withholdings for applicable federal, state, local or non-U.S. taxes and other required payroll deductions, including, in respect of any Equity Awards, under any Company "withhold to cover" or "sell to cover" program as then in effect.

16.5 No Effect on Other Benefits. Amounts payable hereunder shall not be counted as compensation for purposes of determining benefits under other benefit plans, programs, policies and agreements, except to the extent expressly provided therein or herein.

16.6 Governing Law. It is intended that this Plan be an "employee welfare benefit plan" within the meaning of Section 3(1) of ERISA, and this Plan shall be administered in a manner consistent with such intent. This Plan and all rights hereunder shall be governed, construed and interpreted in accordance with ERISA and, to the extent not preempted by federal law, the laws of the State of Delaware.

16.7 Unfunded Obligation. All amounts payable under this Plan shall constitute an unfunded obligation of the Company. Payments shall be made, as due, from the general funds of the Company. This Plan shall constitute solely an unsecured promise by the Company to provide such benefits to Participants to the extent provided herein. For avoidance of doubt, any pension, health or life insurance benefits to which a Participant may be entitled under this Plan shall be provided under other applicable employee benefit plans of the Company Group. This Plan does not provide the substantive benefits under such other employee benefit plans, and nothing in this Plan shall restrict the ability of any member of the Company Group to amend, modify or terminate such other employee benefit plans (whether before or after a Change in Control (but subject to Section 5.2 or 6, as applicable, following a Change in Control)).

16.8 Validity. The invalidity or unenforceability of any provision of this Plan shall not affect the validity or enforceability of any other provision of this Plan, which shall remain in full force and effect.

16.9 Recovery of Overpayments. Notwithstanding the foregoing, the Committee shall have the power, discretion, and authority to take any and all actions it deems necessary or advisable to recover any overpayments made under this Plan, including deducting the amount of any such overpayments made to any Participant from any future payments or benefits to be made or provided to such Participant.

* * *

As adopted by the Compensation Committee
of the Board of Directors of CBRE Group, Inc.
on August 12, 2020.

CBRE GROUP, INC.

By: /s/ LAURENCE H. MIDLER
Name: Laurence H. Midler
Title: Executive Vice President & General Counsel

Exhibit A

Form of Designation Letter

See attached.

CBRE Group, Inc.
400 S. Hope St., 25th Fl.
Los Angeles, CA 90071
(213) 613-3333

[INSERT DATE]

[INSERT NAME]
c/o CBRE, Inc.
400 S. Hope St., 25th Fl.
Los Angeles, CA 90071

Re: The CBRE Group, Inc. Change in Control and Severance Plan for Senior Management

Dear [NAME]:

This letter agreement (the "Designation Letter") relates to the CBRE Group, Inc. Change in Control and Severance Plan for Senior Management (the "Plan"). Through this Designation Letter, you are being offered the opportunity to become a participant in the Plan.

CBRE Group, Inc. (the "Company") has designated you as a Tier [__] Participant (as defined in the Plan) and thereby you are eligible to receive the severance and other benefits set forth in the Plan subject to the terms and conditions thereof. A copy of the Plan has been made available to you. You should read it carefully and become comfortable with its terms and conditions and those set forth below.

By accepting this Designation Letter, you acknowledge the following provisions:

- that you have received and reviewed a copy of the Plan;
- that you understand that participation in the Plan requires that you agree to the terms of the Plan and that you irrevocably and voluntarily agree to those terms; and
- that you have had the opportunity to carefully evaluate this opportunity and desire to participate in the Plan according to the terms and conditions set forth therein.

You hereby agree that (i) your acceptance of this Designation Letter will result in your participation in the Plan subject to the terms and conditions thereof and (ii) this Designation Letter may not be amended, modified or terminated except pursuant to Section 15 of the Plan.

To comply with applicable law and to administer the Plan appropriately, the Company and its agents may accumulate, hold and process your personal data and/or "sensitive personal data" within the meaning of applicable law ("Personal Data"). Personal Data includes, but is not limited to, the information provided to you as part of the Plan and any changes thereto (*e.g.*, benefits and payments set forth in the Plan), other appropriate personal and financial data about you (*e.g.*, name, home address, telephone number, date of birth, nationality, and social security number), and information about your participation in the Plan. By accepting this

Designation Letter, you give your explicit consent to the Company's accumulating, transferring and processing Personal Data as necessary or appropriate for Plan administration. Your Personal Data will be retained only as long as is necessary to administer your participation in the Plan. By accepting this Designation Letter, you also give your explicit consent to the Company's transfer of Personal Data outside the country in which you reside and to a country outside the European Economic Area (including the United States of America, if applicable) where the same level of data protection laws may not apply as in your home country. The legal persons for whom your Personal Data are intended (and by whom your Personal Data may be transferred, processed or exchanged) include the Company, its subsidiaries (or former subsidiaries as are deemed necessary) and any other person that the Company retains or utilizes for Plan administration purposes. You have the right to request a list of the names and addresses of any potential recipients of your Personal Data and to review and correct your Personal Data by contacting the Company's General Counsel. By accepting this Designation Letter, you acknowledge your understanding that the transfer of the information outlined here is important to Plan administration and that failure to consent to the transmission of such information may limit or prohibit your participation in the Plan.

This Designation Letter is subject in all respects to the terms and provisions of the Plan, as amended from time to time. In the event of any conflict between the terms of this Designation Letter and the terms of the Plan, the terms of the Plan shall govern.

Your participation in the Plan will be effective upon your acceptance of this Designation Letter. You will be deemed to have accepted the terms of this Designation Letter unless you otherwise notify the Company in writing within 15 days after the date of your receipt of this Designation Letter.

Sincerely,

CBRE GROUP, INC.

By: ______________________________
Name:
Title:

Exhibit B

Restrictive Conditions

As a condition precedent and subsequent to the receipt of any actual payments and benefits provided to a Participant under Section 5.1 or Section 5.2 of the attached Plan (other than payment of the Accrued Obligations), the Participant, in order to accept any such benefits and payments, must comply with the following restrictive conditions precedent and subsequent to receipt thereof, as set forth below.

1) Confidentiality. The protection of confidential information and trade secrets is essential for CBRE Group, Inc. (the "Company"), its subsidiaries from time to time (collectively with the Company, the "Company Group") and employees' future security. To protect such information, employees may not disclose any trade secrets of confidential information as discussed in detail in the Standards of Business Conduct ("SOBC") as in effect from time to time. The Company's confidentiality policy as set forth in the SOBC is ongoing even after employment with the Company Group terminates.

a) You must acknowledge that all forms, documents, papers, records, files, computer software, application systems and programs, and other materials prepared or received by you that pertain to the Company Group's business, including appraisal reports and all supporting documentation, Company Group letters to you and copies of letters sent by you, are the property of the Company Group; provided, however, that you may have a copy of any documents you signed relating to the obtaining or holding of employment with the Company Group if required by applicable law. You further acknowledge that all information, including information in electronic form, disclosed to or developed by you during your employment by the Company Group relating to the Company Group's business, including, without limitation, the Company Group's strategies and business plans, the identity of and information concerning potential or actual clients, and specialized techniques developed or used by the Company Group are the exclusive property of the Company Group.

b) You agree to maintain as confidential and not to disclose to others or use for any purpose, for so long as you continue to hold or possess it, any Confidential Information to which you have or had access or exposure as a result of the performance of your services for the Company Group.

2) Restrictions. In order to preserve the Confidential Information, and to protect the Company Group's proprietary interest in its trade secrets, and to protect the goodwill of the Company Group, and in consideration of the payments and benefits contained in the Release and other good and valuable consideration, you must agree that, for the Restricted Period, you will not, directly or indirectly: (i) solicit, induce or attempt to induce, on your own behalf or on behalf of any other person or organization, any of the Company Group's clients whom you solicited or with whom you substantially and directly dealt or became acquainted while you were employed with the Company Group for the purpose of either (a) inducing said client to terminate, diminish, or materially alter

in a manner harmful to the Company Group its relationship with the Company Group, or (b) providing, or offering to provide, Conflicting Services to said client; or (ii) solicit for employment, hire or attempt to hire, on your own behalf or on behalf of any other person or organization, any of the Company Group's consultants, personnel or employees (or anyone who was a client, consultant, member of the Company Group's personnel or employee at any time within the twelve (12) month period immediately preceding your Date of Termination). In addition, during the Restricted Period, you must not disparage, criticize or ridicule, or otherwise engage in any conduct that is injurious to the reputation or interest of the Company Group. If any court of competent jurisdiction shall determine that the provisions of this paragraph exceed the time, geographic or scope limitations permitted by applicable law, then such provisions shall nevertheless be enforceable by such court against you upon such shorter term, or within such lesser geographic area or scope, as may be determined by such court to be reasonable and enforceable.

3) Cooperation. You shall cooperate with the Company in any internal investigation or administrative, regulatory or judicial proceeding, or to provide information to the Company for any project or assignment in which you were involved during your employment, as reasonably requested by the Company (including, without limitation, by being available to the Company upon reasonable notice and at mutually-acceptable times and locations) for interviews and factual investigations, providing testimony without requiring service of a subpoena or other legal process, volunteering to the Company all pertinent information that you recall, and turning over to the Company all relevant documents which are requested by the Company and which may come into your possession, all at times and on schedules that are reasonably consistent with your other permitted activities and commitments). Such services will be without additional compensation to you, but the Company will reimburse you for any reasonable travel and out-of-pocket costs and expenses (including, without limitation, attorneys' fees and expenses in accordance with the Company's charter and by-laws and directors and officers insurance policy) incurred by you in providing such cooperation. To the extent consistent with applicable law, you will provide the Company advance written notice of any subpoena or legal proceeding and perform all acts reasonably and commercially practicable, at the Company's expense, to assist the Company to obtain a protective order to the extent the Company seeks such protection. Furthermore, if such a protective order or other remedy is not obtained, or the Company waives compliance with the provision of this Section 3, you will furnish only such information or take only such action which your lawyers advise you is legally advisable and will exercise reasonable commercial efforts to obtain reliable assurance that confidential treatment will be accorded any information so furnished. For avoidance of doubt, nothing in this Section 3 shall require you to cooperate with the Company in any dispute that arises with respect to the Plan (except as otherwise provided in Section 13 of the Plan related to a claim for benefits under the Plan) or on any other any matter in which the Company's and your interests are adverse.

Notwithstanding the foregoing, this Section 3 shall become effective on the applicable date provided in Section 15 of the Plan.

4) Definitions. Defined terms used in this Exhibit B and not otherwise defined in the Plan shall have the meaning set forth below:

a) “Confidential Information” means any information, data and know-how relating to the business of the Company Group or its clients and referral sources that is developed by or disclosed to you or known by you as a result of your relationship with the Company Group (whether constituting a trade secret or not, and whether or not labelled in writing as “confidential”), including, without limitation, the following information: financial information, supply and service information, marketing information, personnel information, the identity of and information concerning potential or actual clients, and specialized techniques developed or used by the Company Group. The term “Confidential Information” does not include information that (i) has become a part of the public domain other than as a result of its wrongful disclosure, or (ii) is or hereafter becomes lawfully obtainable from other sources without an obligation of confidentiality. Any combination of information shall not be deemed within the foregoing exception merely because individual features are in the public domain if the combination itself is not in the public domain.

b) “Conflicting Services” means services of any entity (other than the Company Group) that are the same or substantially similar to those services of the Company Group (x) provided by you (directly or indirectly through others) during the twelve (12) months preceding your Date of Termination, or (y) about which you acquired Confidential Information or trade secrets during your employment by the Company Group.

c) “Territory” means any national, state, provincial, territorial or other jurisdiction globally in which you performed services for the Company Group at any time during the twelve (12) months prior to your Date of Termination, including but not limited to any such jurisdiction in which you, directly or indirectly through others, provided the Company Group’s services to clients or marketed or offered to provide the Company Group’s services.

EXHIBIT 22.1

SUBSIDIARY GUARANTORS OF CBRE GROUP, INC.'S

REGISTERED DEBT

At September 30, 2020

The following is a list of the subsidiaries of CBRE Group, Inc. (the "Company") that were issuers, co-issuers or guarantors of securities registered under the Securities Act of 1933, as amended, for which the Company was an issuer, co-issuer or guarantor as of September 30, 2020. CBRE Services, Inc. is the issuer of the 4.875% senior notes (as defined the Company's Quarterly Report on Form 10-Q for the three months ended September 30, 2020 (the "Quarterly Report")) and the 5.25% senior notes (as defined in the Quarterly Report), each of which is guaranteed by the Company on a joint and several basis. Each subsidiary listed below jointly and severally guarantees the 5.25% senior notes and the 4.875% senior notes:

CBRE, Inc.
CBRE Global Investors, Inc.
CBRE Global Investors, LLC
CB/TCC Global Holdings Limited
CBRE Capital Markets of Texas, LP
CBRE Capital Markets, Inc.
CBRE Clarion CRA Holdings, Inc.
CBRE Clarion REI Holding, Inc.
CBRE Government Services, LLC
CBRE/LJM – Nevada, Inc.
CBRE Partner, Inc.
CBRE Technical Services, LLC
CB/TCC, LLC
Trammell Crow Company, LLC
CBRE GWS LLC
CBRE Business Lending, Inc.
CBRE Consulting, Inc.
CBRE/LJM Mortgage Company, L.L.C.
Insignia/ESG Capital Corporation
Trammell Crow Development & Investment, Inc.
CBRE Holdings, LLC

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: October 29, 2020

/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, Leah C. Stearns, 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: October 29, 2020

/s/ LEAH C. STEARNS

Leah C. Stearns
Chief 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 Leah C. Stearns, 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 September 30, 2020, 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: October 29, 2020

/s/ ROBERT E. SULENTIC
Robert E. Sulentic
President and Chief Executive Officer

/s/ LEAH C. STEARNS
Leah C. Stearns
Chief 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.