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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM 8-K**

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**CURRENT REPORT**  
Pursuant to Section 13 OR 15(d) of the  
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): September 6, 2019

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**CBRE GROUP, INC.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction  
of incorporation)

**001-32205**  
(Commission  
File Number)

**94-3391143**  
(IRS Employer  
Identification No.)

**400 South Hope Street**  
**25th Floor**  
**Los Angeles, California**  
(Address of Principal Executive Offices)

**90071**  
(Zip Code)

**(213) 613-3333**  
Registrant's Telephone Number, Including Area Code

**Not Applicable**  
(Former Name or Former Address, if Changed Since Last Report)

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12(b))
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

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

Indicate by check mark whether the registrant is an emerging growth company, as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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.

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This Current Report on Form 8-K is filed by CBRE Group, Inc., a Delaware corporation (the “Company”), in connection with the matters described herein.

**Item 7.01 Regulation FD Disclosure.**

On September 6, 2019, the Company posted an investor presentation to its website at <https://ir.cbre.com/events-and-presentations/presentations/default.aspx>. A copy of the investor presentation is attached as Exhibit 99.1 to this Current Report on Form 8-K.

The information included in this Current Report on Form 8-K under this Item 7.01 (including Exhibit 99.1 hereto) is being “furnished” and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, except as expressly set forth by specific reference in such filing.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits

**Exhibit  
No.**

**Description**

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<a href="#">99.1</a> *	<a href="#">CBRE Investor Presentation</a>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

\* Furnished herewith.

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**Signature**

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 hereunto duly authorized.

Date: September 6, 2019

CBRE GROUP, INC.

By: /s/ Dara A. Bazzano  
Dara A. Bazzano  
*Senior Vice President, Global Finance and  
Chief Accounting Officer*

# CBRE GROUP, INC. INVESTOR OVERVIEW

September 2019

**CBRE**

A nighttime photograph of a city skyline, likely New York City, featuring the Manhattan Bridge on the left and several illuminated skyscrapers, including One World Trade Center, in the center. The lights from the buildings and bridge are reflected in the water in the foreground. The overall color palette is dominated by deep blues and teals, with warm yellow and white lights from the city.

## Forward-Looking Statements

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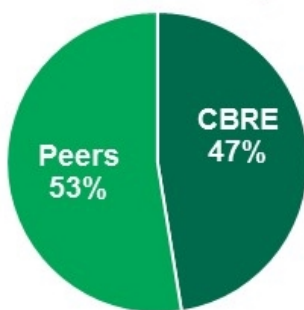
This presentation contains statements that are forward looking within the meaning of the Private Securities Litigation Reform Act of 1995. These include statements regarding CBRE's future growth momentum, operations, market share, business outlook, and financial performance expectations. These statements are estimates only and actual results may ultimately differ from them. Except to the extent required by applicable securities laws, we undertake no obligation to update or publicly revise any of the forward-looking statements that you may hear today. Please refer to our second quarter earnings release, furnished on Form 8-K, our most recent annual report filed on Form 10-K, and our most recent quarterly report filed on Form 10-Q and in particular any discussion of risk factors or forward-looking statements therein, which are available on the SEC's website ([www.sec.gov](http://www.sec.gov)), for a full discussion of the risks and other factors that may impact any forward-looking statements that you may hear today. We may make certain statements during the course of this presentation, which include references to "non-GAAP financial measures," as defined by SEC regulations. Where required by these regulations, we have provided reconciliations of these measures to what we believe are the most directly comparable GAAP measures, which are attached hereto within the appendix.

## The Global Leader in an Expanding Industry

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### CRE Services Market Capitalization<sup>1</sup>



### Global Market Leadership

- #1 Leasing
- #1 Property Sales
- #1 Outsourcing
- #1 Appraisal & Valuation
- #1 Property Management
- #1 US Commercial Developer

See slide 48 for footnotes



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**CBRE  
STRATEGIC  
PRIORITIES**

Intense Focus on Client Outcomes

Top Talent: Leadership and Production

Premier Platform, Notably Digital & Technology

Scale, Connectivity and Culture

Strategic Investment, Notably M&A and Digital & Tech

Thoughtful, Intensive Cost Management

# Where Does CBRE Derive Its Revenue?

Global market leader across virtually all CBRE business lines



Deploy institutional capital into real estate development

Represent buyers and sellers of real estate; arrange financing

Represent tenants and landlords in leasing transactions

Manage Properties (Over 6 billion square feet):

- Outsourcing – manage facilities and projects for occupiers
- Property Management – for investor owned property

Investment Management – deploy institutional capital into real estate

Provide valuations and mortgage servicing

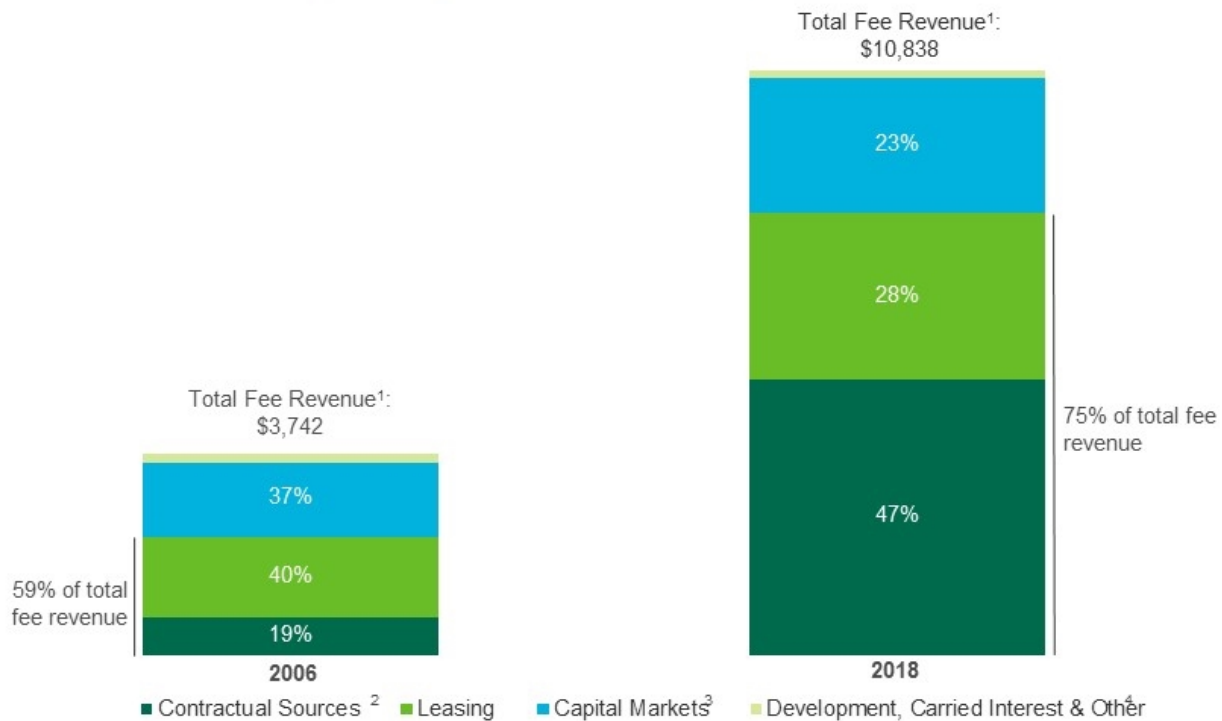
See slide 48 for footnotes





## Growing into a Better Balanced and More Resilient Business

Contractual revenues today are larger than the entire company in 2006



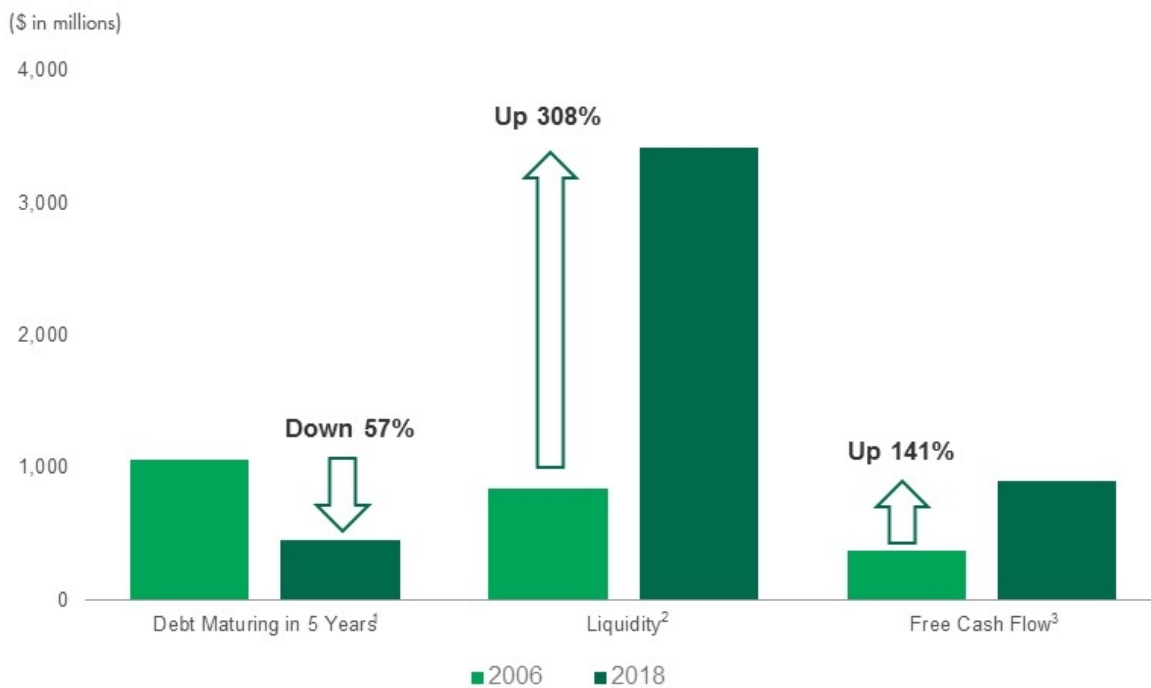
\$ in millions

(%) – share of total fee revenue

Note: 2018 fee revenue reflects ASC 606. We have not restated 2006 figures, and fee revenue for 2006 continues to be reported under the accounting standards in effect for that period.

See slide 48 for footnotes

## CBRE's Financial Flexibility Has Improved Dramatically



Note: As of December 31, 2006 and 2018, respectively.

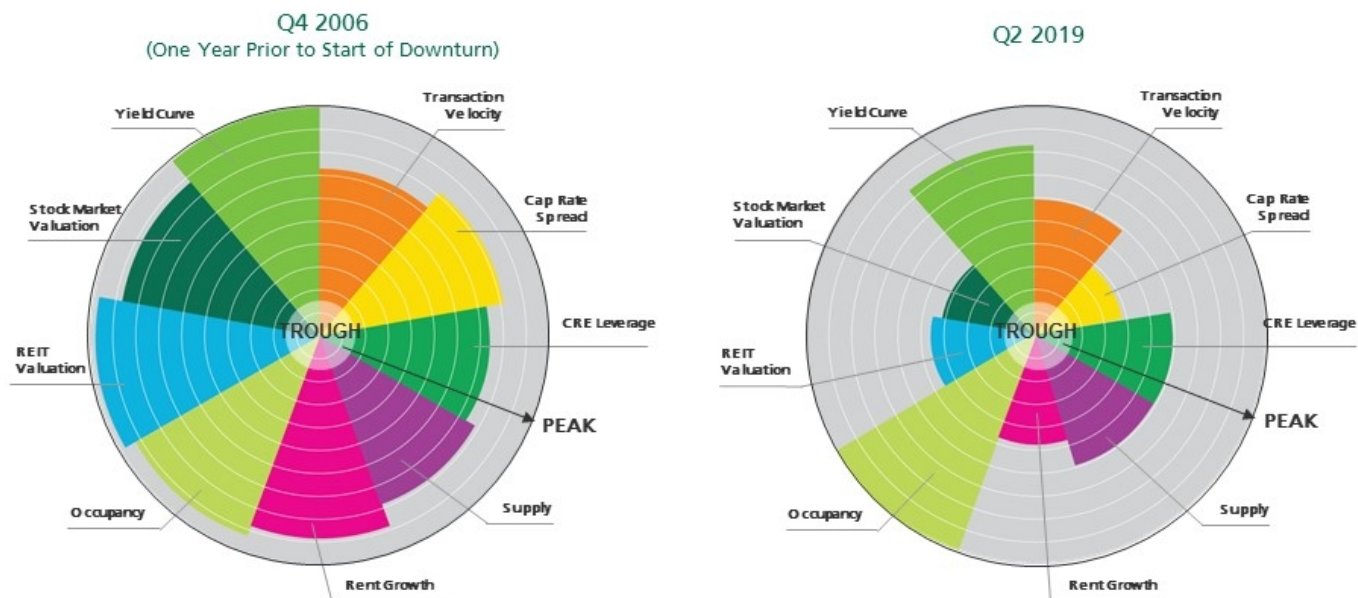
**CBRE**

See slide 48 for footnotes

INVESTOR DECK | 7

## CBRE Cycle Radar – Markets in Balance

Current measures of economic and CRE cycle suggest an extended cycle from here



CBRE proprietary Cycle Radar for Commercial Real Estate charts measure relative percentile for each metric at a point in time against the trailing 16 year history. The outside line represents the highest observed value for each metric over the last 16 years and the middle of the chart represents the lowest observed value.

See slide 51 for footnotes and methodology

Source: Real Capital Analytics, CBRE-Econometric Advisors, Federal Reserve, BoA Merrill Lynch, Fitch



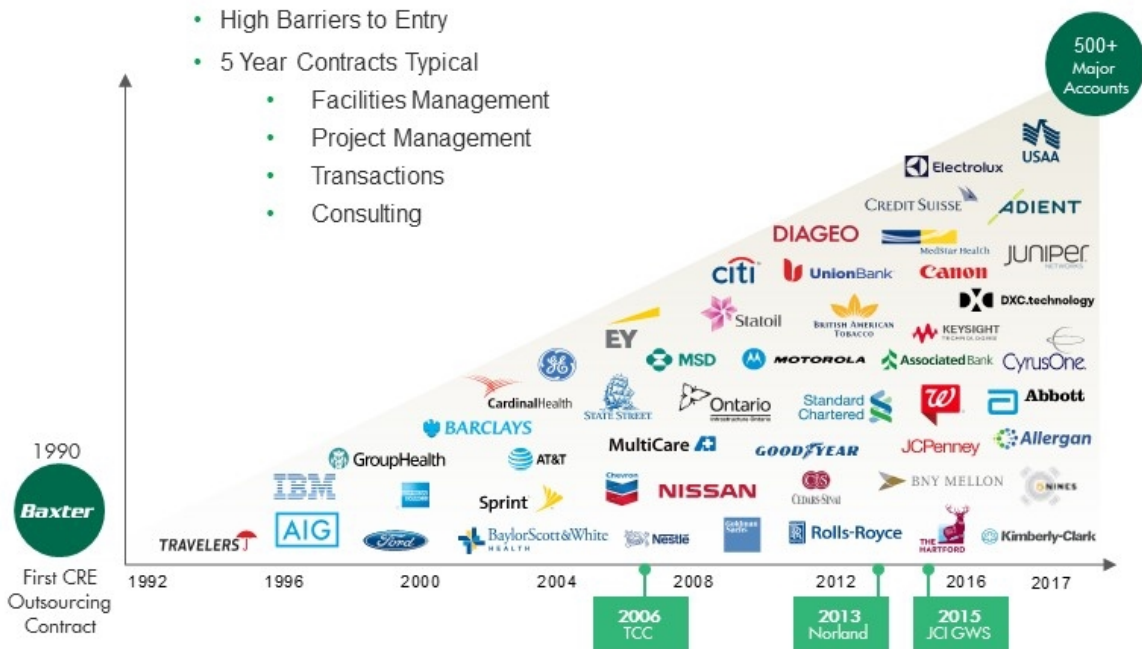
## Three Structural Tailwinds for Commercial Real Estate Services

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1. **Outsourcing** – Occupier Acceptance of Outsourced Commercial Real Estate Services
2. **Asset Allocation** – By Institutional Investors to the Commercial Real Estate Asset Class
3. **Consolidation** – Customers are Driving Consolidation to Global Industry Leaders

# Tailwind 1 – Occupiers of Real Estate Increasingly Turn to Outsourcing

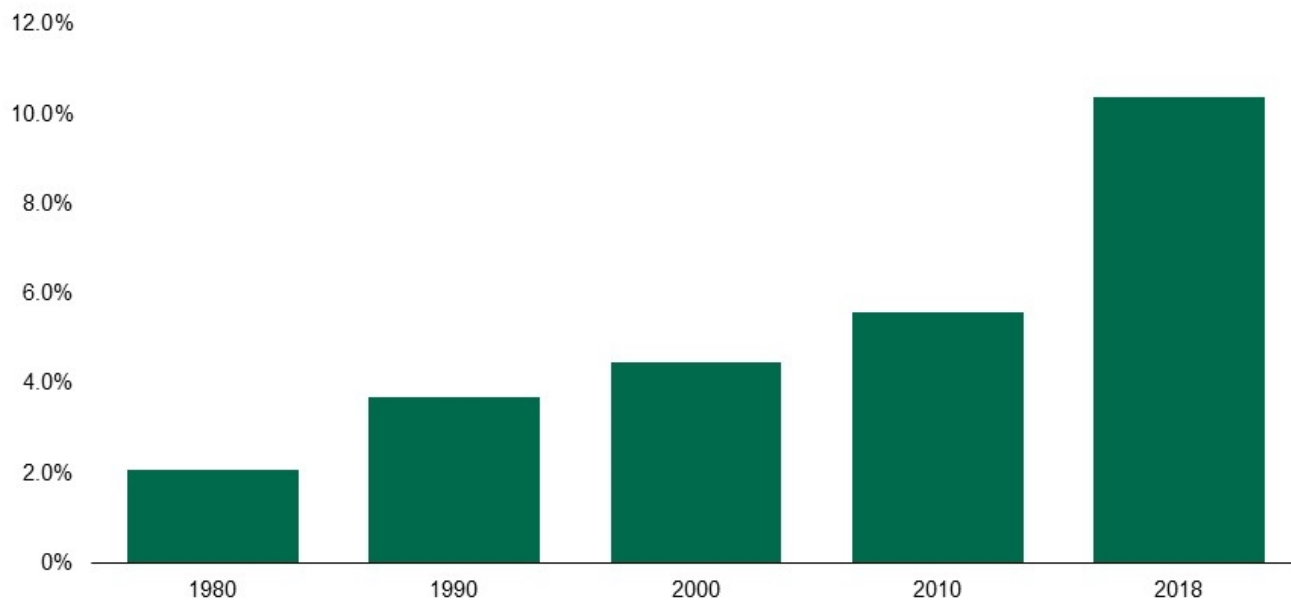
CBRE's market leading position driven by both organic growth and strategic M&A



## Tailwind 2 – Increasing Institutional Ownership of CRE Drives Demand for Services

Institutions are more frequent users of CRE services vs. legacy ownership

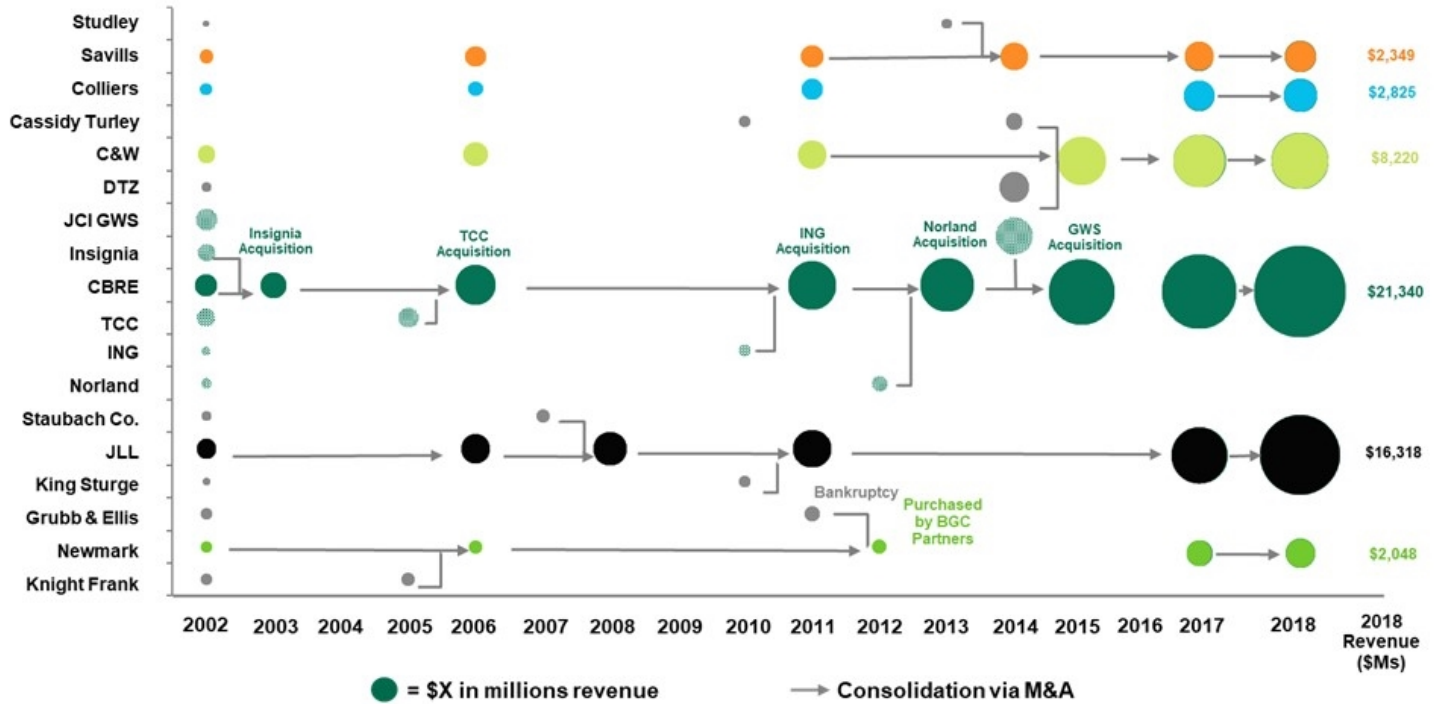
Institutional Asset Allocation to Real Estate has Increased Strongly Over Time



Source: NAIOP, Federal Reserve Board of Governors, The Conference Board, Pension & Investments, Hodes Weill & Associates

## M&A: CBRE Holds the Market Leading Position in a Consolidating Industry

### CBRE has pursued and won 5 of the 12 mergers noted below (did not bid on other 7)



Notes: Revenues of private companies are estimated; CBRE 2015 gross revenue includes four months of actual gross revenue from the acquired GWS business while under our ownership, annualized for illustrative purposes; other public companies are as reported, with Savills revenue translated to US Dollars. C&W's 2015 revenue is a pro forma figure to adjust for the acquisitions of Cassidy Turley and DTZ. 2017 and prior figures have not been adjusted for ASC 606. 2018 figures reflect ASC 606 and are not directly comparable to prior year figures.



## We Believe Digital Opportunities Significantly Exceed Disruption Risk

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- Focused technology investments further differentiating CBRE and its professionals
  - CBRE can make impactful investments at a smaller percentage of company spend vs others
- 

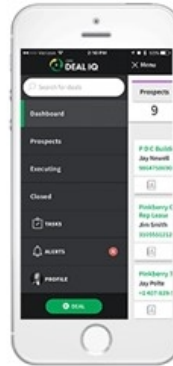
### Sample of CBRE Technology Investments

CBRE Floored



SaaS Interactive Creation of 3D Floor Plans and Virtual Environments

CBRE Deal IQ



SaaS CRM and Deal Management Platform

Deal Flow & Connector

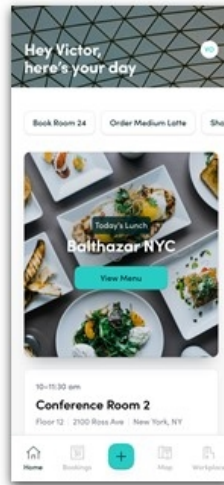


CBRE's Listing and Digital Marketing Platform



# host

- Experience 'platform as a service' (patent pending)
- 80+ active client opportunities with recurring annual SaaS revenue



PERSONALIZED HOME SCREEN

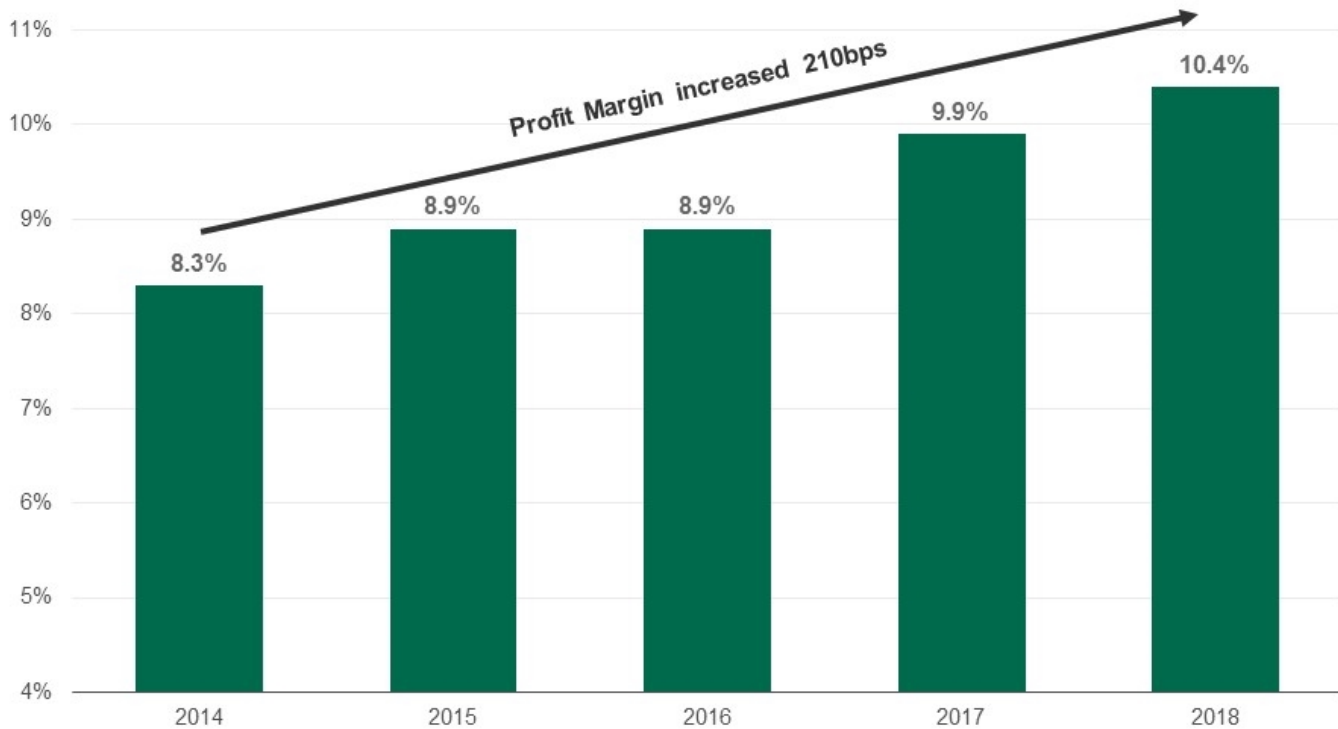


ROOM BOOKING



MAPPING & WAYFINDING

## CBRE Has Increased Profit Margin While Improving Business Mix



Note: Profit margin defined as adjusted net income/fee revenue<sup>2</sup>.

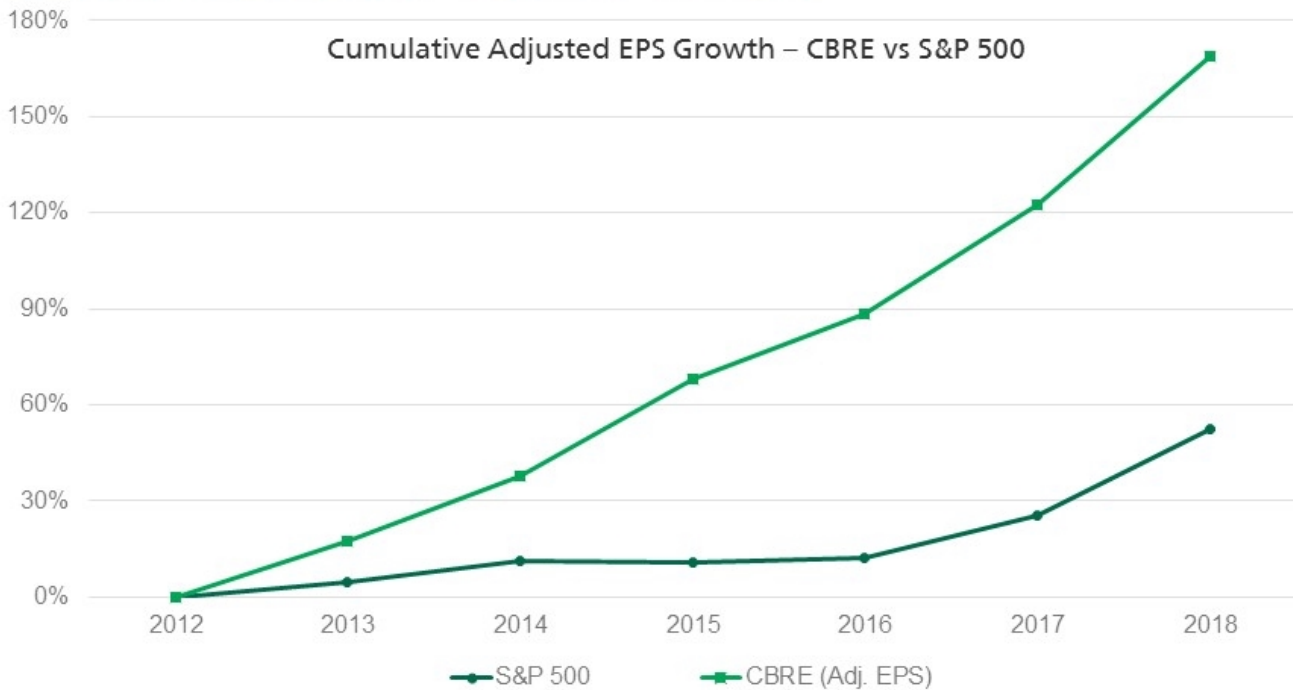
Note: 2016 and 2017 adjusted net income margin figures were restated for ASC 606. We have not made a similar restatement for 2014 and 2015, and adjusted net income margin figures for such periods continue to be reported under the accounting standards in effect during those periods. 2018 adjusted net income margin figures reflect ASC 606.

See slide 48 for footnotes

## Track Record – High-Quality Earnings Growth Materially Outpaced the Market

Nine consecutive years of double-digit adjusted EPS growth<sup>1</sup>

Leverage ratio<sup>2</sup> declined to 0.6x in 2018 from 1.7x in 2012



Source: FactSet, Company filings

Note: 2016 and 2017 adjusted EPS were restated for ASC 606. 2016 adjusted EPS did not change, and 2017 was restated by \$0.02 per share or less than 1% of adjusted EPS. We have not made a similar restatement for 2012-2015, and adjusted EPS for such periods continues to be reported under the accounting standards in effect for those periods. 2018 reflects ASC 606.

See slide 49 for footnotes

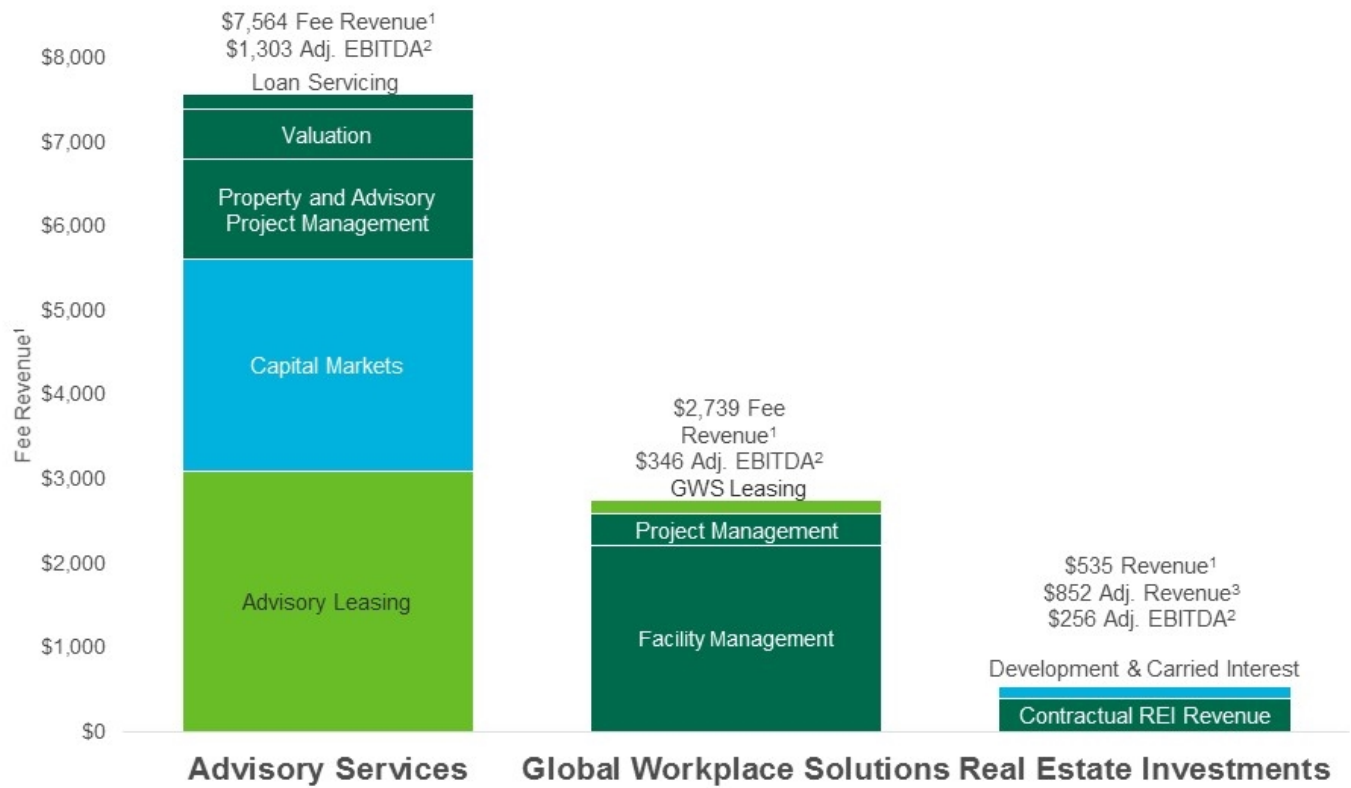


# CBRE'S THREE GLOBAL SEGMENTS

**CBRE**

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## CBRE Reorganization: 2018 Actual Results in Three New Global Segments



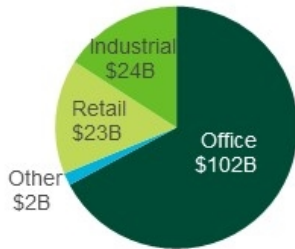
(\$ in millions)  
See slide 49 for footnotes.



■ Contractual Sources    
 ■ Leasing    
 ■ Capital Markets, Development & Carried Interest

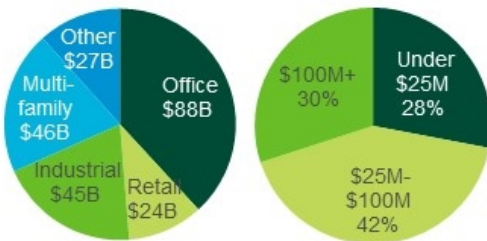
## Advisory Services

### \$151B of Lease Transaction Value in 2018



60% tenant rep/40% landlord rep<sup>1</sup>

### \$230B of Property Sales Transaction Value in 2018<sup>2</sup>



**CBRE**  
See slide 49 for footnotes.

### Property Sales



\$230B  
Transactions

### Commercial Mort. Origination



\$53B  
Transactions

### Loan Servicing



\$193B<sup>3</sup>  
Loan Portfolio

### Advisory Leasing



\$151B\*  
Transactions

### Advisory Property & Project Mgmt.



2.8B\*\*  
Square Feet

### Valuation



513,800  
Annual Appraisals

Note: Charts above reflect fee revenue as a percentage of total fee revenue in the Advisory Services segment.

\*Reflects all leasing including activity for GWS accounts

\*\* Only includes Property Management as Project Management is measured in dollar value

INVESTORDECK | 19

## Advisory Services - Advisory Platform for Occupiers & Investors



### PROPERTY TYPES

- Office
- Industrial & Logistics
- Retail
- Multi-Family
- Hotels
- Specialty



### ADVISORY CAPABILITIES

- Workplace Strategy
- Labor Analytics
- Economic Incentives
- Supply Chain Analytics
- Retail Analytics
- Portfolio Services



### PRACTICE GROUPS

- Law Firms
- Tech & Media
- Mall Specialty
- Life Science
- Data Centers
- Energy & Sustainability
- Healthcare/Seniors

### SALES SUPPORT

Marketing

Research

Sales Management

Digital Sales

### DIGITAL & TECHNOLOGY

### In our local offices around the globe:

- 80 sales management professionals
- 650 research professionals
- 600 marketing and communications professionals
- 70 geographic information systems professionals
- 10 digital sales professionals

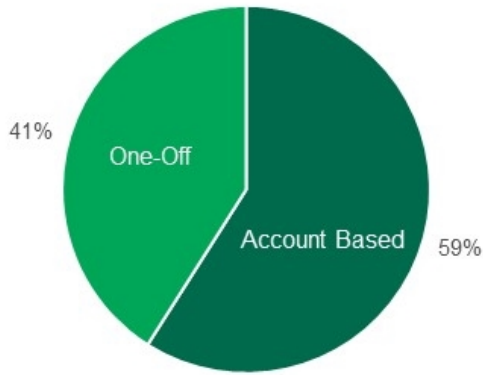
As of December 31, 2018

**CBRE**

INVESTORDECK | 20

## Almost 60% of Large Leasing Transactions Come From Account Based Relationships

Top 25 US Office Occupier Leasing Transaction Mix – Entire Market<sup>1</sup>



## CBRE Account Based Execution is a Relative Strength and Contributed to Share Gains

CBRE Americas Office Occupier Leasing Growth: 2016 to 2018

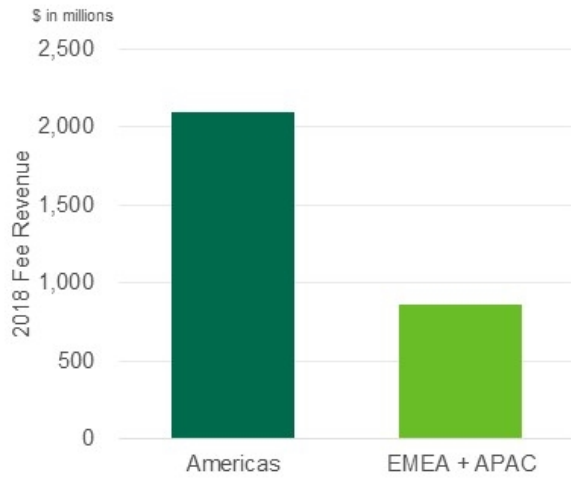


1. Market percentage measured in square feet of leasing transactions. Data represents Top 25 deals data for each market and is collected quarterly in local markets through joint efforts between CBRE market leaders, Sales Management and Research. Percentages above are estimates. Data may be incomplete and is not representative of the entire market. The information is meant to be used for directional purposes only.



## Advisory Services - Driving Client Value with Integrated, Global, Relationships

Fee Revenue<sup>1</sup> from Top 100 Americas Clients  
(Advisory and GWS)



CBRE's global footprint allows us to do more for our largest clients in the Americas

Fee Revenue<sup>1</sup> from Top 100 Facilities Mgmt. Clients



CBRE's best-in-class transaction capabilities enhances relationship with our largest Facilities Management clients

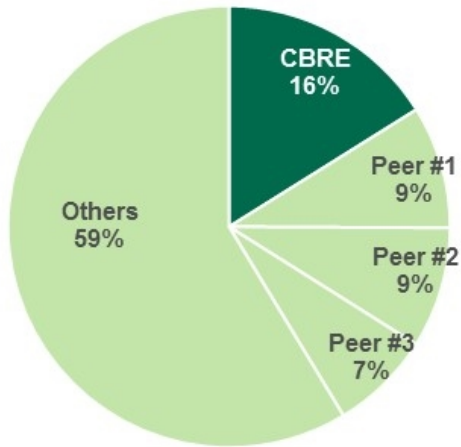
See slide 49 for footnotes.

**CBRE**

# Advisory Services - Top Talent: CBRE Cap. Mkts. is the Leader Across the Largest Markets

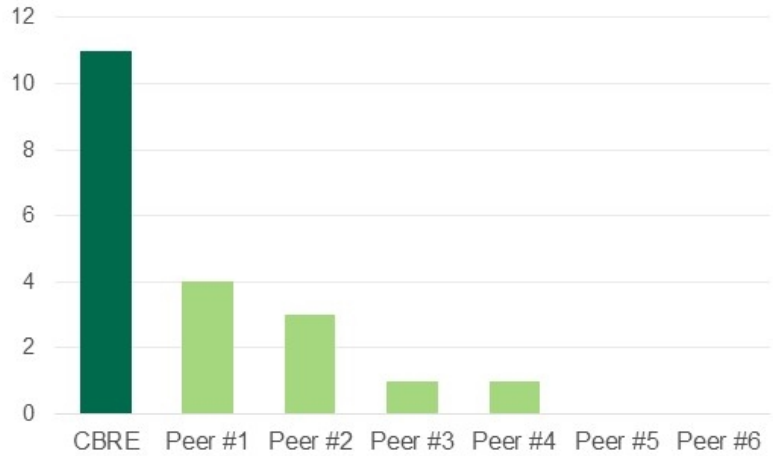
CBRE is the Overall Leader in Capital Markets

Share of US Property Sales per RCA



CBRE Capital Markets has Broad Leadership Across the Largest Local Markets

# of Markets (of the top 20<sup>1</sup>) with #1 Market Position: 2018 US Property Sales



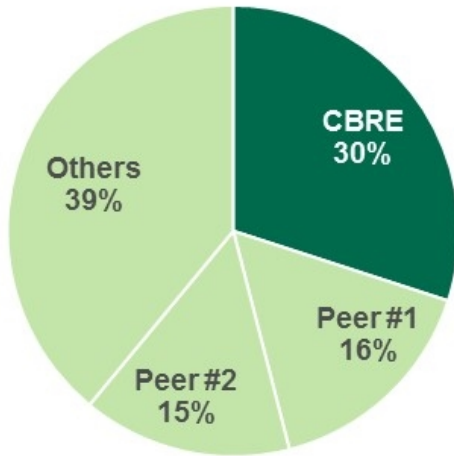
See slide 49 for footnotes.



# Advisory Services - Top Talent: CBRE Leads on the Largest Occupier Leasing Transactions

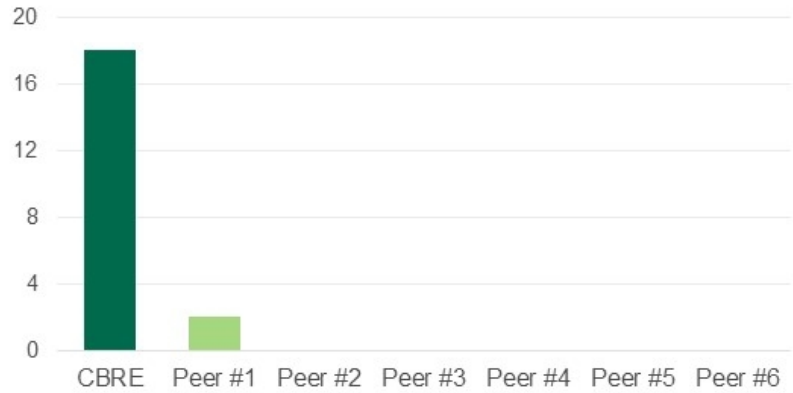
## CBRE Does More of the Largest Leasing Transactions

Share of Top 25 US Office Occupier Leasing Transactions\*



## CBRE Most Often the Local Market Leader in US Occupier Transactions

# of Markets (of the top 20<sup>1</sup>) with #1 Market Position: 2018 US Office Occupier Leasing Transactions



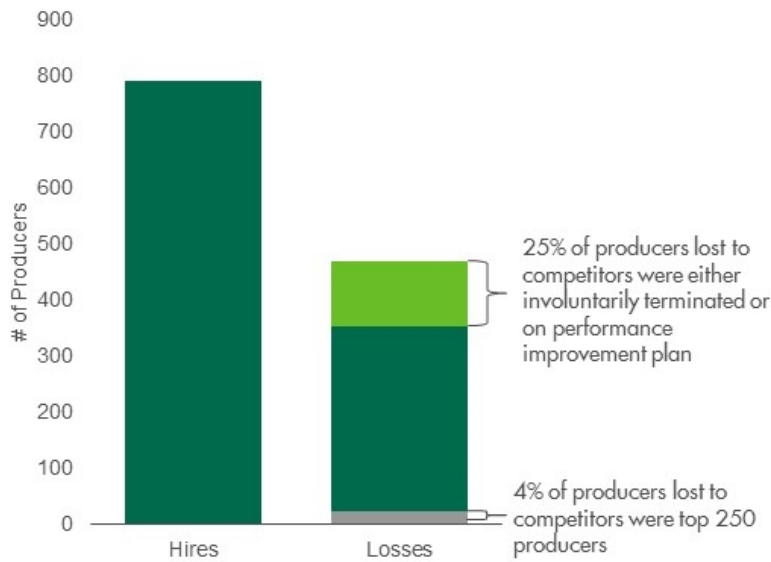
\*Note: Data represent top 25 deals data for each market and is collected quarterly in local markets through joint efforts between CBRE market leaders, Sales Management and Research. Percentages above are estimates. Data may be incomplete and is not representative of the entire market. The information is meant to be used for directional purposes only.

See slide 49 for footnotes.

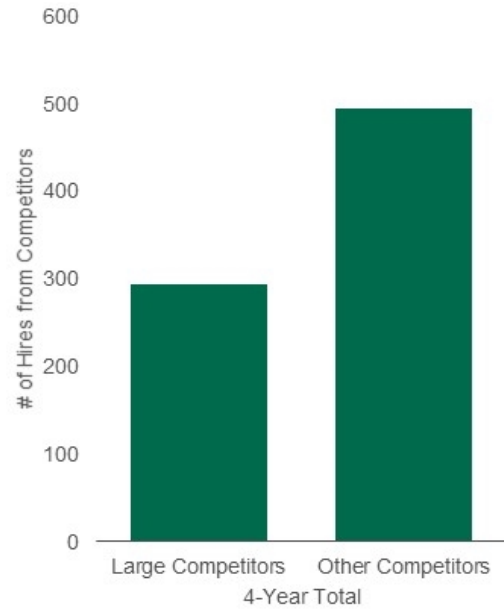


## Advisory Services - CBRE Attracts and Retains Top Talent in the Industry

4-Year Summary: Hires and Losses from and to Competitors (U.S.)



Boutique Competitors are Increasingly Less Competitive



Note: Hires do not include hundreds of internal hires and hires from non-direct competitors



## ACCOUNT-BASED CONTRACTUAL BUSINESS

4 Major Service Offerings  
49,000 Employees  
100+ Countries  
500+ Contractual Client Portfolios  
95% Client Satisfaction

### MISSION

Create measurably superior client outcomes by improving occupant experiences through safe, engaging and high performing workplaces.

## Integrated Account Solutions Comprising Four Major Service Lines

### Facilities Management

- Typical 3-5 year contract terms
- 90%+ renewal rate on expiring contracts
- Many 20+ year clients in portfolio
- Growth in each phase of economic cycle

**3.3B**  
square feet

**17.4M**  
occupants

### Project Management

- Fees generally based on a percentage of capital project costs and/or mark-up on labor
- Short- and long-term contracts

**\$25.4B**  
managed capital projects

**1,901**  
project managers

### Advisory & Transactions

- Commissions split with local market broker
- Portfolio-based contracts
- Business includes new transactions (buying, selling, leasing) and recurring lease renewals

**130**  
client portfolios managed

**160,000**  
leases managed

### Consulting & Analytics

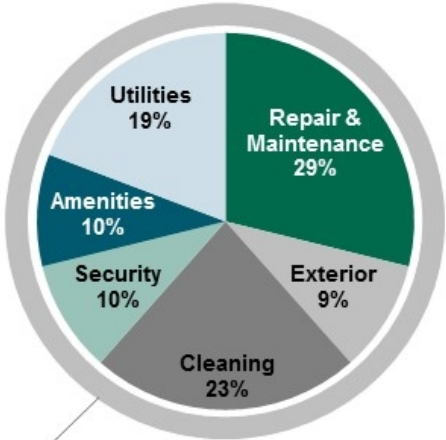
As of December 31, 2018

**CBRE**

# Global Workplace Solutions - Large and Growing Facilities Management Market

- Long-term, performance-based management contracts
- Proven to create value:
  - Simplification
  - Cost Reduction
  - Risk Reduction
  - Consistency/Globalization
  - Speed & Agility
- Increasing differentiation in our fully integrated facilities management model
- **\$100B+** addressable market projected to grow >6% per annum

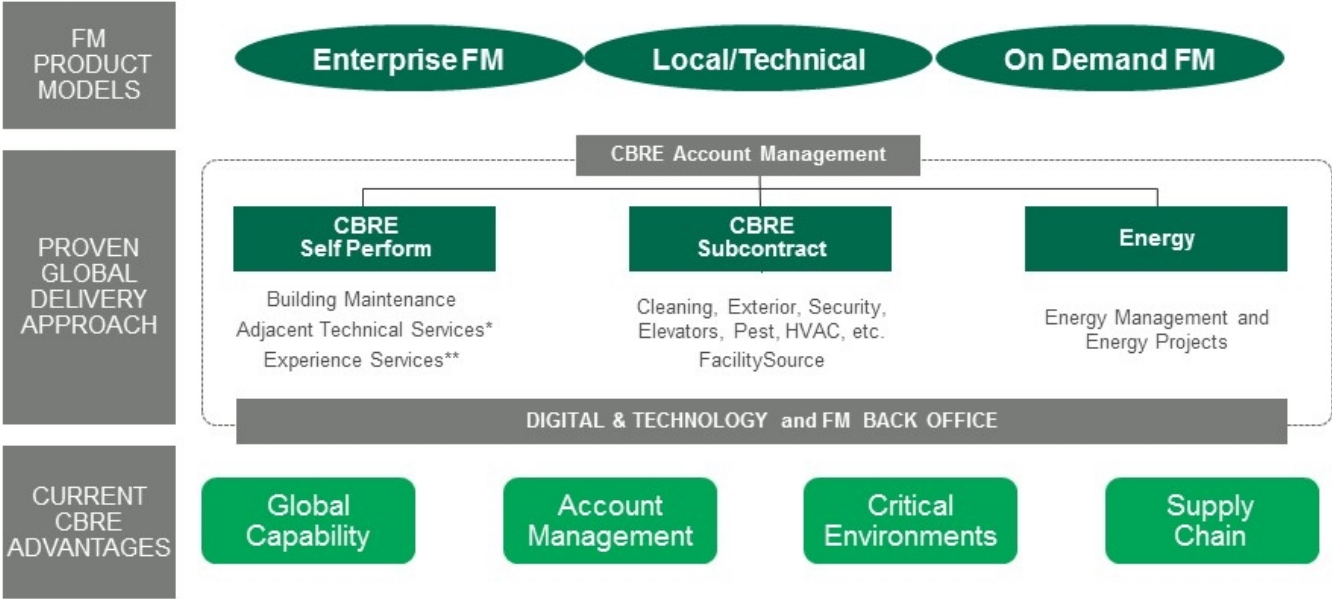
TYPICAL OFFICE PORTFOLIO EXPENSE



FM OPERATIONS & MANAGEMENT

Source: Frost & Sullivan IFM Market Report, McKinsey analysis

# Global Workplace Solutions - CBRE's Facilities Management Differentiation

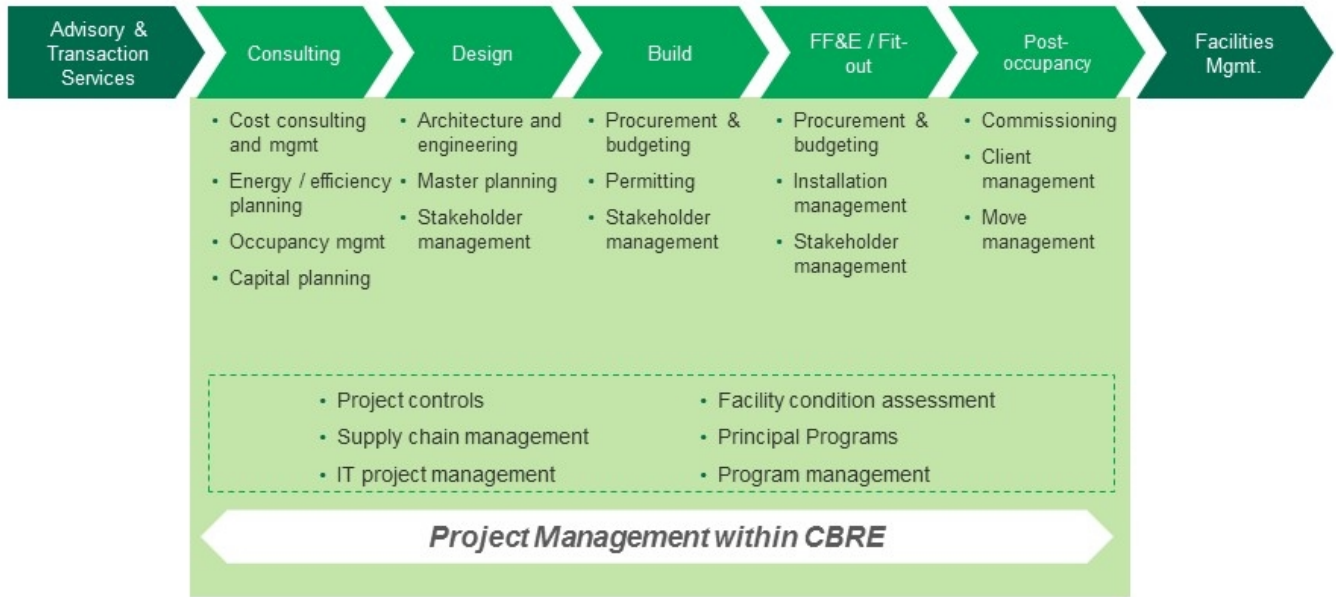


\*Including Data Center Solutions, Materials Handling, Lab Instrumentation, etc.

\*\*Including Reception, Conference Room Services, Mail, Shipping, Concierge, etc.



# Global Workplace Solutions - Project Management: Bridge Between Transactions & Facilities





In a typical year, new clients drive ~40% of growth ...while existing clients drive ~60% of growth



New clients and sectors

Whirlpool



Adjacent Offerings

Uber



Expanded Geographies

ExxonMobil



Expanded Asset Type

Abbott



Expanded Service Lines

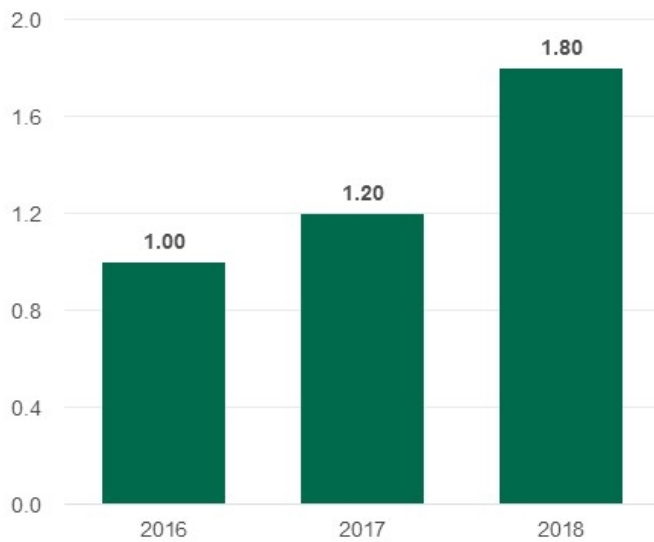
AT&T

- Today, GWS has an estimated 30% share of wallet across all clients

## Global Workplace Solutions - Record Pipeline Growth

Global Workplace Solutions' Pipeline Has Nearly Doubled in Two Years

Pipeline Value<sup>1</sup> Indexed to 2016



- Embedded sales leaders in each of our Divisions
- Continued strong pipeline in vertical markets such as Financial Services and Technology
- Momentum into Life Sciences, Industrial & Manufacturing and Retail
- Focused on engaging with clients as long-term strategic partners
- Large, global deals represent ~70% of pipeline opportunities

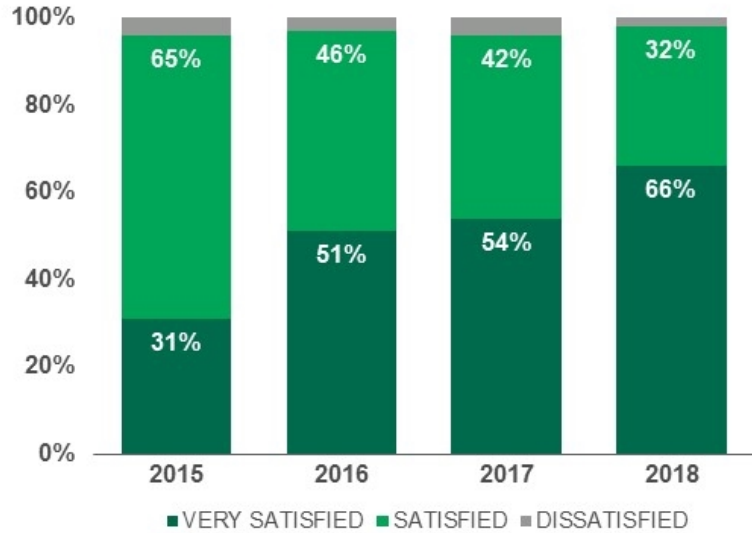
See slide 49 for footnotes.

**CBRE**

## Global Workplace Solutions - Strong Client Satisfaction Drives "Dark Green" Dividend

Global Client Satisfaction Scores Have Continually Risen in the Last 3 Years

- Annual survey administered by an independent third party
- High client satisfaction correlates to strong renewal rates and expansion opportunities
  - 90%+ renewal of expiring fee revenue
  - Off-market expansion opportunities



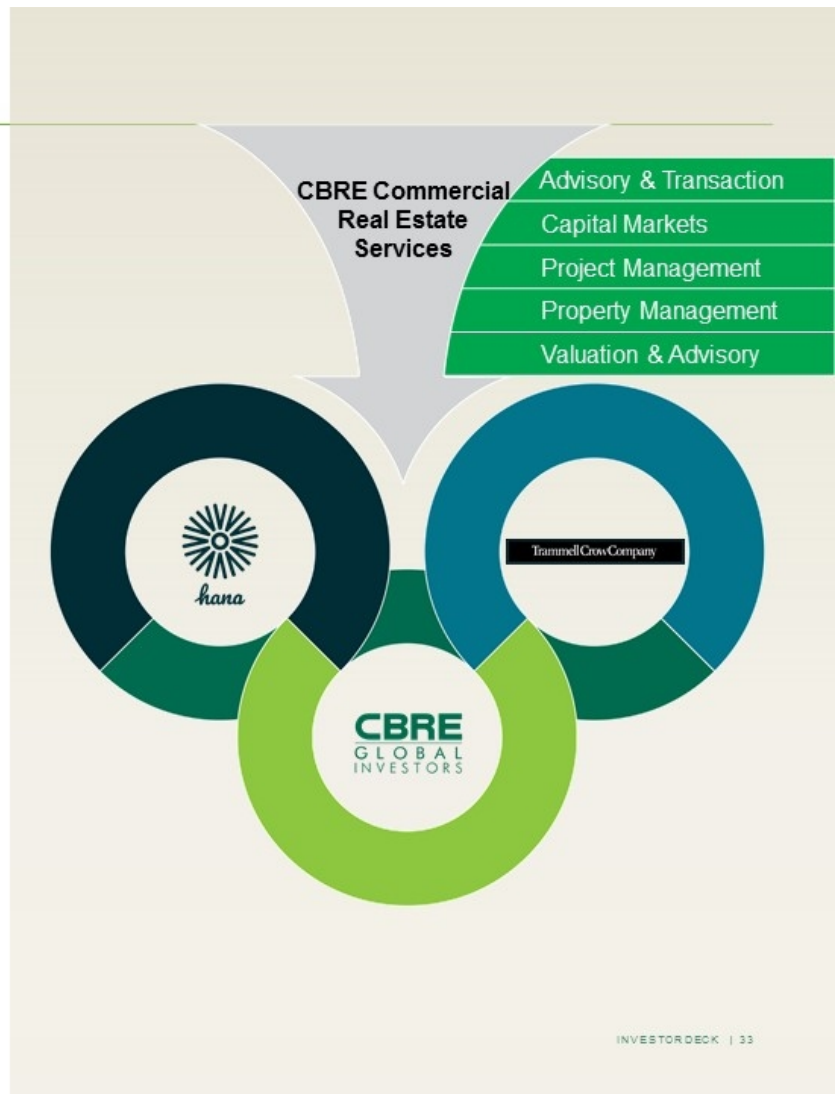
## Real Estate Investments

Three Real Estate Investment Businesses with Over \$100B of Third-Party Capital

- CBRE Global Investors – Global Real Asset Investment Manager with \$106.7B of Assets Under Management<sup>1</sup>
- Trammell Crow Company – U.S.’s leading commercial real estate developer with \$10.6B of projects in process<sup>2</sup>
- Hana – Premium flexible space solution for owners and occupiers with first units to open in 2019

See slide 50 for footnotes.

**CBRE**

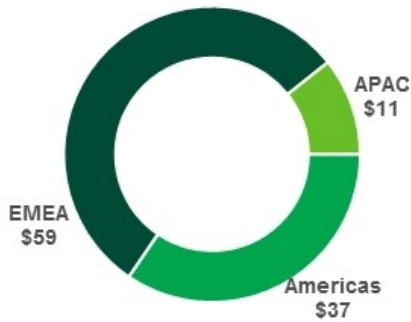


# Real Estate Investments - CBRE Global Investors

## Global Real Asset Investment Manager

- Real asset solutions provided through real estate and infrastructure investment capabilities
- 46-year track record
- \$106.7B assets under management (AUM)<sup>1</sup>
- Global platform – 32 offices, 22 countries
- 87% of AUM is core/core+ strategies, including global and regional open-end funds and separate accounts
- Strong regional enhanced return fund strategies

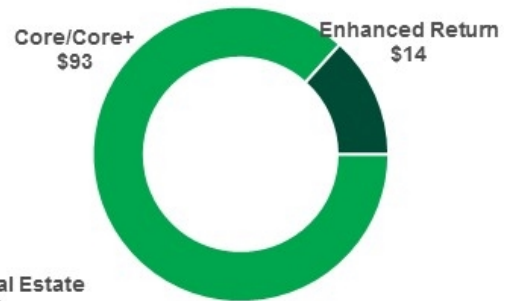
Investment by Region<sup>2</sup>  
(\$B)



AUM by Investment Type<sup>2</sup>  
(\$B)



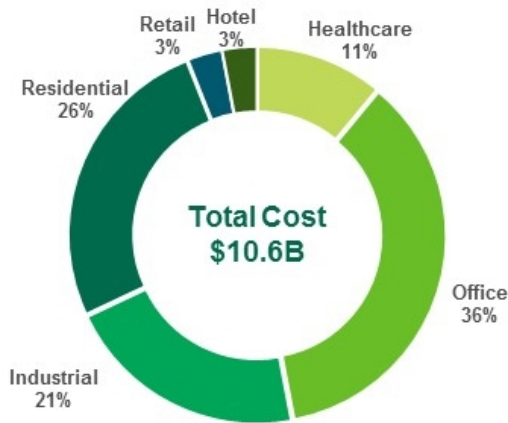
AUM by Strategy<sup>2</sup>  
(\$B)



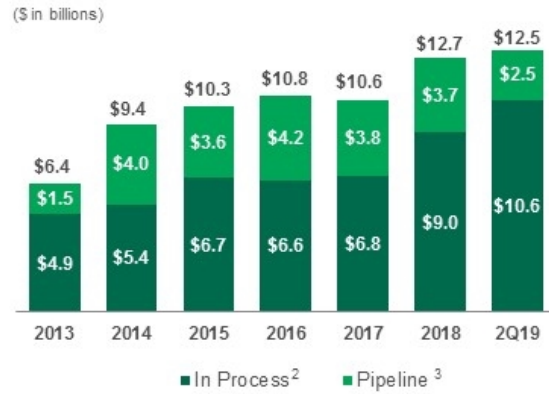
See slide 50 for footnotes.



**In Process by Product Types<sup>1</sup>**



**Projects in Process/Pipeline**



**Representative Equity Partners**



See slide 50 for footnotes.



## Real Estate Investments - Hana

### Targets Enterprise Clients and Structural Alignment with Owners



#### Hana Team

- Branded, semi-custom suites
- Flexible lease terms
- Enterprise teams of 15-300+
- Control over branding/culture

70% OF FLOORPLAN



#### Hana Meet

- Conference, meeting and project team spaces
- Available by day, week, or month
- Light food & beverage offerings
- Integrated, easy to use technology

20% OF FLOORPLAN



#### Hana Share

- Traditional coworking shared desks and areas available by monthly subscription

10% OF FLOORPLAN

### Agile Market Trends

- Substantial shift in occupier needs
  - **Flexible Workforce** – 75% of CRE executives anticipate using agile solutions in their growth plan
  - **The War for Talent** – 88% of employees want more control over their work experience
- Continual **increase in densification**
- Phenomenon is global, led by gateway cities
- Owners want to participate but have limited options beyond leasing to third parties

# APPENDIX

**CBRE**

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## 2018 Revenue

Contractual revenue & leasing, which is largely recurring over time<sup>1</sup>, is 75% of fee revenue

### Revenue (\$ in millions)

	Contractual Revenue & Leasing										
	Global Workplace Solutions	Property & Advisory Project Management	Investment Management (excl. Carried Interest)	Valuation	Loan Servicing	Advisor Leasing	Advisor Sales	Commercial Mortgage Origination	Development Services	Carried Interest	Total

#### Revenue

2018	\$ 12,365	\$ 2,057	\$ 399	\$ 599	\$ 184	\$ 3,080	\$ 1,981	\$ 540	\$ 100	\$ 35	\$ 21,340
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#### Fee Revenue<sup>2</sup>

2018	\$ 2,739	\$ 1,181	\$ 399	\$ 599	\$ 184	\$ 3,080	\$ 1,981	\$ 540	\$ 100	\$ 35	\$ 10,838
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#### % of Total Fee Revenue

25%	11%	4%	5%	2%	28%	18%	5%	1%	<1%	100%
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#### Fee Revenue Growth Rate (Change 2018-over-2017)

USD	▲ 18%	▲ 18%	▲ 10%	▲ 8%	▲ 16%	▲ 19%	▲ 6%	▲ 18%	▲ 26%	▲ 131%	▲ 15%
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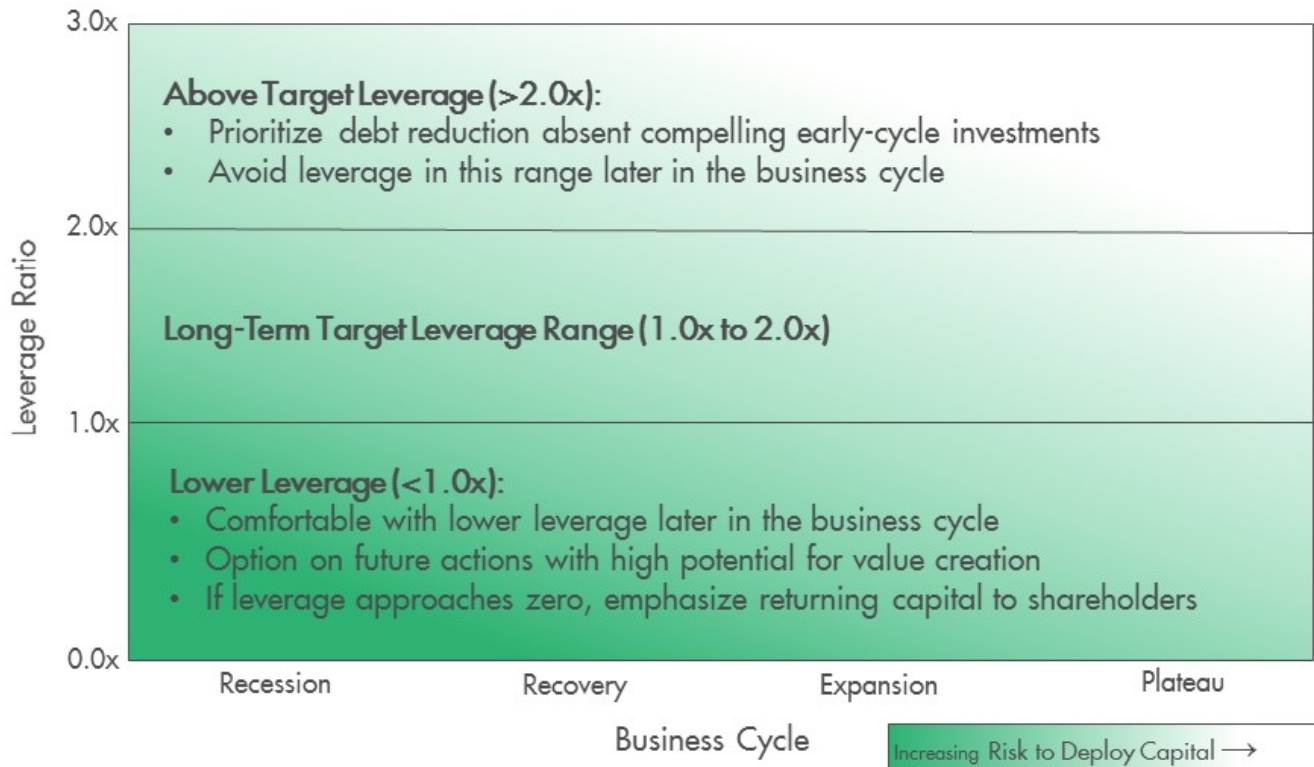
#### Local

Current	▲ 17%	▲ 17%	▲ 8%	▲ 7%	▲ 16%	▲ 19%	▲ 6%	▲ 18%	▲ 26%	▲ 130%	▲ 15%
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## CBRE Leverage Guideposts

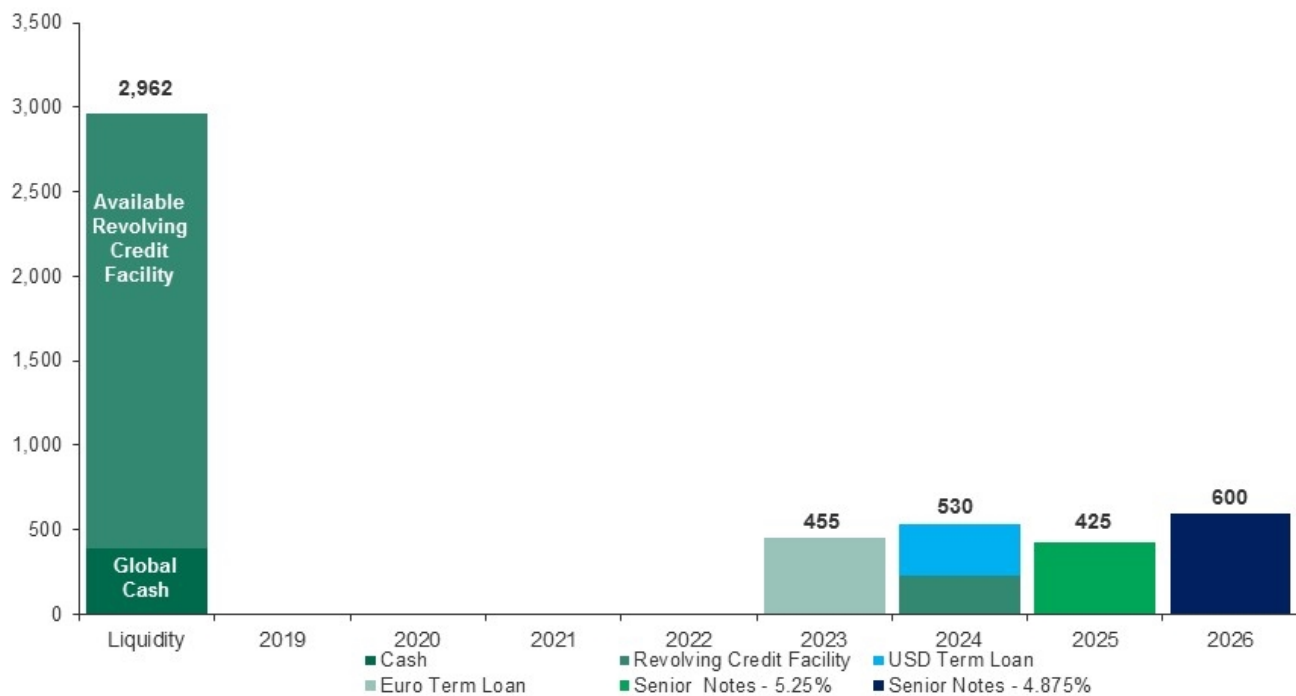
Build Liquidity when Capital is Abundant – Deploy when Scarce



## Mandatory Amortization and Maturity Schedule

(\$ in millions)

As of June 30, 2019<sup>1</sup>



1. \$2,800 million revolving credit facility matures in March 2024. As of June 30, 2019, the revolving credit facility balance was \$230 million.

## Non-GAAP Financial Measures

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The following measures are considered “non-GAAP financial measures” under SEC guidelines:

- I. fee revenue
- II. contractual fee revenue
- III. adjusted revenue for the Real Estate Investments segment
- IV. net income attributable to CBRE Group, Inc., as adjusted (which we also refer to as “adjusted net income”)
- V. diluted income per share attributable to CBRE Group, Inc. shareholders, as adjusted (which we also refer to as “adjusted earnings per share” or “adjusted EPS”)
- VI. Adjusted EBITDA

These measures are not recognized measurements under United States generally accepted accounting principles, or “GAAP.” When analyzing our operating performance, readers should use them in addition to, and not as an alternative for, their most directly comparable financial measure calculated and presented in accordance with GAAP. Because not all companies use identical calculations, our presentation of these measures may not be comparable to similarly titled measures of other companies.

Our management generally uses these non-GAAP financial measures to evaluate operating performance and for other discretionary purposes. The company believes that 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. The company further uses certain of these measures, and believes that they are useful to investors, for purposes described below.

With respect to fee revenue: the company believes that investors may find this measure useful to analyze the financial performance of our Global Workplace Solutions segment and Property & Advisory Project Management business line and our business generally. Fee revenue excludes costs reimbursable by clients, and as such provides greater visibility into the underlying performance of our business.

With respect to adjusted revenue: the company believes that investors may find this measure useful to analyze the financial performance of our Real Estate Investments segment because it is more reflective of this segment’s total operations.

With respect to contractual fee revenue: the company believes that investors may find this measure useful to analyze our overall financial performance because it identifies revenue streams that are typically more stable over time.

With respect to adjusted net income, adjusted EPS and adjusted EBITDA: the company believes that investors may find these measures useful in evaluating our operating performance compared to that of other companies in our industry because these calculations generally eliminate the accounting effects of acquisitions, which would include impairment charges of goodwill and intangibles created from acquisitions—and in the case of adjusted EBITDA—the effects of financings and income tax and the accounting effects of capital spending. All of these measures and adjusted revenue may vary for different companies for reasons unrelated to overall operating performance. In the case of adjusted EBITDA, this measure is not intended to be a measure of free cash flow for our management’s discretionary use because it does not consider cash requirements such as tax and debt service payments. The adjusted EBITDA measure calculated herein may also differ from the amounts calculated under similarly titled definitions in our credit facilities and debt instruments, which amounts 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 and making certain restricted payments. The company also uses adjusted EBITDA and adjusted EPS as significant components when measuring our operating performance under our employee incentive compensation programs.



## Debt & Leverage

	June 30, 2019	December 31, 2018	December 31, 2012
(\$ in millions)			
Cash <sup>1</sup>	\$ 394	\$ 622	\$ 995
Revolving credit facility	230	-	73
Senior term loans <sup>2</sup>	750	751	1,628
Senior notes <sup>2</sup>	1,016	1,015	791
Other debt <sup>3,4</sup>	3	4	23
<b>Total debt</b>	<b>\$ 1,999</b>	<b>\$ 1,770</b>	<b>\$ 2,515</b>
<b>Total net debt<sup>5</sup></b>	<b>\$ 1,605</b>	<b>\$ 1,148</b>	<b>\$ 1,520</b>
TTM Adjusted EBITDA <sup>6</sup>	\$ 2,037	\$ 1,905	\$ 918
<b>Net debt to TTM Adjusted EBITDA</b>	<b>0.8x</b>	<b>0.6x</b>	<b>1.7x</b>

1. Excludes \$141.8 million, \$155.2 million and \$94.6 million of cash in consolidated funds and other entities not available for company use at June 30, 2019, December 31, 2018 and December 31, 2012, respectively.

2. Outstanding amount is reflected net of unamortized debt issuance costs.

3. Excludes \$1,350.0 million, \$1,328.8 million and \$1,026.4 million of warehouse facilities for loans originated on behalf of the FHA and other government sponsored enterprises outstanding at June 30, 2019, December 31, 2018 and December 31, 2012, respectively, which are non-recourse to CBRE Group, Inc.

4. Excludes non-recourse notes payable on real estate, net of unamortized debt issuance costs, of \$10.1 million, \$6.3 million and \$312.1 million at June 30, 2019, December 31, 2018 and December 31, 2012, respectively.

5. Total net debt is calculated as total debt (excluding non-recourse debt) less cash available for company use, as disclosed above.

6. Adjusted EBITDA excludes (from EBITDA) the impact of a one-time non-cash gain associated with remeasuring CBRE's investment in an unconsolidated subsidiary in New England to fair value as of the date it acquired the remaining controlling interest, costs associated with our reorganization, including cost-savings initiatives, costs incurred in connection with a litigation settlement, integration and other costs related to acquisitions, cost-elimination expenses and certain carried interest incentive compensation expense (reversal) to align with the timing of associated revenue.

Note: June 30, 2019 and December 31, 2018 TTM adjusted EBITDA reflect ASC 606. We have not made a similar restatement for 2012, and 2012 TTM adjusted EBITDA continues to be reported under the accounting standards in effect for that period.



## Reconciliation of Net Income to Adjusted EBITDA

(\$ in millions)	Twelve Months Ended		
	June 30, 2019	December 31, 2018	December 31, 2012 <sup>1</sup>
Net income attributable to CBRE Group, Inc.	\$ 1,072.4	\$ 1,063.2	\$ 315.6
Add:			
Depreciation and amortization	442.7	452.0	170.9
Interest expense, net of interest income	93.9	98.7	169.0
Write-off of financing costs on extinguished debt	2.6	28.0	-
Provision for income taxes	303.0	313.0	186.3
Intangible asset impairment	89.0	-	19.8
EBITDA	\$ 2,003.6	\$ 1,954.9	\$ 861.6
Adjustments:			
One-time gain associated with remeasuring an investment in an unconsolidated subsidiary to fair value as of the date the remaining controlling interest was acquired	(100.4)	(100.4)	-
Costs associated with our reorganization, including cost-savings initiatives	87.5	38.0	-
Costs incurred in connection with litigation settlement	8.8	8.8	-
Cost-elimination expenses	-	-	17.6
Carried interest incentive compensation expense (reversal) to align with the timing of associated revenue <sup>2</sup>	18.9	(5.2)	-
Integration and other costs related to acquisitions	18.2	9.1	39.2
Adjusted EBITDA	\$ 2,036.6	\$ 1,905.2	\$ 918.4

1. Includes an immaterial amount of activity from discontinued operations.

2. CBRE began adjusting carried interest compensation expense in Q2 2013 in order to better match the timing of this expense with associated carried interest revenue. This expense has only been adjusted for funds that incurred carried interest expense for the first time in Q2 2013 or in subsequent quarters.



Note: 2018 figures reflect ASC 606. We have not made a similar restatement for 2012 and this period continues to be reported under the accounting standards in effect for this period.

## Reconciliation of Revenue to Fee Revenue and Adjusted Revenue by Segment

(\$ in millions)	Twelve Months Ended December 31, 2018			Twelve Months Ended December 31, 2017
	Advisory Services	Global Workplace Solutions	Real Estate Investments	Global Workplace Solutions
Consolidated revenue	\$ 8,440.0	\$ 12,365.4	\$ 534.7	\$ 10,792.0
Less:				
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	876.3	9,626.3	-	8,474.3
Consolidated fee revenue	\$ 7,563.7	\$ 2,739.1	\$ 534.7	\$ 2,317.7

Consolidated Revenue	\$ 534.7
Add:	
Equity income from unconsolidated subsidiaries	302.4
Gain on disposition of real estate	14.9
Less:	
Non-controlling interest	0.1
Adjusted Revenue	\$ 851.9

**CBRE**

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## Reconciliation of Net Income to Adjusted Net Income and Adjusted Earnings Per Share

(\$ in millions, except per share amounts)	Twelve Months Ended December 31,						
	2018	2017	2016	2015	2014	2013 <sup>2</sup>	2012 <sup>2</sup>
Net income attributable to CBRE Group, Inc.	\$ 1,063.2	\$ 697.1	\$ 573.1	\$ 547.1	\$ 484.5	\$ 316.5	\$ 315.6
One-time gain associated with remeasuring an investment in an unconsolidated subsidiary to fair value as of the date the remaining controlling interest was acquired	(100.4)	-	-	-	-	-	-
Non-cash depreciation and amortization expense related to certain assets attributable to acquisitions	113.1	112.9	111.1	86.6	66.1	29.4	37.2
Write-off of financing costs on extinguished debt	28.0	-	-	2.7	23.1	56.3	-
Costs associated with our reorganization, including cost-savings initiatives	38.0	-	-	-	-	-	-
Costs incurred in connection with litigation settlement	8.8	-	-	-	-	-	-
Carried-interest incentive compensation (reversal) expense to align with the timing of associated revenue <sup>1</sup>	(5.2)	(8.5)	(15.6)	26.1	23.8	9.2	-
Integration and other costs related to acquisitions	9.1	27.3	125.7	48.9	-	12.6	39.2
Cost-elimination expenses	-	-	78.5	40.4	-	17.6	17.6
Goodwill and other non-amortizable intangible asset impairment	-	-	-	-	-	98.1	19.8
Tax impact of adjusted items	(44.2)	(42.1)	(93.2)	(62.6)	(36.4)	(65.4)	(30.0)
Impact of U.S. tax reform	13.3	143.4	-	-	-	-	-
Adjusted net income	\$ 1,123.7	\$ 930.1	\$ 779.6	\$ 689.2	\$ 561.1	\$ 474.3	\$ 399.4
Adjusted diluted earnings per share	\$ 3.28	\$ 2.73	\$ 2.30	\$ 2.05	\$ 1.68	\$ 1.43	\$ 1.22
Weighted average shares outstanding for diluted income per share	343,122,741	340,783,556	338,424,563	336,414,856	334,171,509	331,762,854	327,044,154

1. Carried-interest incentive compensation expense is related to funds that began recording carried interest expense in Q2 2013 and beyond.

2. Includes discontinued operations.



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Note: 2016 and 2017 figures were restated for ASC 606. We have not made a similar restatement for 2012-2015, and such periods continue to be reported under the accounting standards in effect for such periods. 2018 figures reflect ASC 606.



## Reconciliation of Revenue to Fee Revenue and Contractual Fee Revenue

(\$ in millions)	Twelve Months Ended December 31,					
	2018	2017	2016	2015	2014	2006
Consolidated revenue	\$ 21,340.1	\$ 18,628.8	\$ 17,369.1	\$ 10,855.8	\$ 9,049.9	\$ 4,032.0
Less:						
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	10,502.5	9,219.8	8,644.8	3,125.5	2,258.6	289.7
Consolidated fee revenue	\$ 10,837.6	\$ 9,409.0	\$ 8,724.3	\$ 7,730.3	\$ 6,791.3	\$ 3,742.3
Less:						
Non-contractual fee revenue	<u>5,735.9</u>					<u>3,026.0</u>
Contractual fee revenue	\$ 5,101.7					\$ 716.3
Consolidated fee revenue	\$ 10,837.6	\$ 9,409.0	\$ 8,724.3	\$ 7,730.3	\$ 6,791.3	
Adjusted net income	\$ 1,123.7	\$ 930.1	\$ 779.6	\$ 689.2	\$ 561.1	
Adjusted profit margin	<u>10.4%</u>	<u>9.9%</u>	<u>8.9%</u>	<u>8.9%</u>	<u>8.3%</u>	
Net cash flow provided by operating activities	\$ 1,131.2					\$ 430.0
Less: Capital expenditures	<u>(227.8)</u>					<u>(55.3)</u>
Free cash flow	\$ 903.4					\$ 374.7



Note: 2016 and 2017 figures were restated for ASC 606. We have not made a similar restatement for 2006, 2014 and 2015, and such periods continue to be reported under the accounting standards in effect for such periods. 2018 figures reflect ASC 606.

## Reconciliation of Revenue to Fee Revenue

(\$ in millions)	Twelve Months Ended December 31, 2018	
	Americas	EMEA & APAC
Revenue: 100 Largest Americas Clients Advisory & GWS	\$ 6,082.8	\$ 1,957.8
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	3,988.6	1,100.5
Fee Revenue: 100 Largest Americas Clients Advisory & GWS	\$ 2,094.2	\$ 857.3
	Facilities Management	Transactions <sup>1</sup>
Revenue: 100 Largest Facilities Management Clients	\$ 7,588.8	\$ 455.3
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	5,963.7	43.6
Fee Revenue: 100 Largest Facilities Management Clients	\$ 1,625.1	\$ 411.7

(\$ in millions)	Twelve Months Ended December 31,	
	2018	2017
Consolidated Property & Advisory Project Management revenue	\$ 2,057.5	\$ 1,748.6
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	876.3	745.5
Consolidated Property & Advisory Project Management fee revenue	\$ 1,181.2	\$ 1,003.1

1. Transactions fee revenue includes leasing, property sales and commercial mortgage origination.



## Footnotes

NOTES: Local currency percent changes versus prior year are non-GAAP financial measures noted on slide 38. These percent changes are calculated by comparing current year results versus prior year results, in each case at prior year exchange rates.

In the first quarter of 2018, the company adopted new revenue recognition guidance. Restatements have been made to 2017 and 2016 financial data included in this presentation on slides 15, 16, 38, 45 and 46 to conform with the 2018 presentation. Financial data for periods prior to 2016 have not been restated and continue to be reported under the accounting standards in effect for the relevant period. Accordingly, such prior period amounts should not be compared with the restated financial data for 2016, 2017 and 2018. Although we believe that any prior period amounts would not be significantly different if we had restated such periods to conform with the 2018 presentation, there can be no assurance that there would not be a difference, and any such difference may be material.

Slide 3

1. Source: FactSet. Peers include Colliers, Cushman & Wakefield, HFF, JLL, Marcus & Millichap, Newmark, Savills and Walker & Dunlop.

Slide 5

1. Fee Revenue is gross revenue less both client reimbursed costs largely associated with our employees that are dedicated to client facilities and subcontracted vendor work performed for clients.
2. Development and Carried Interest includes Development Services revenue (0.9%) and Carried Interest revenue (0.3%).
3. Capital Markets includes Advisory Sales revenue (18%) and Commercial Mortgage Origination (excludes Loan Servicing) revenue (5%).
4. Contractual Sources includes Global Workplace Solutions (25%), Advisory Property & Project Management (11%), Valuation revenue (5%), contractual REI revenue (4%) and Loan Servicing (2%).

Slide 6

1. Fee Revenue is gross revenue less both client reimbursed costs largely associated with our employees that are dedicated to client facilities and subcontracted vendor work performed for clients.
2. 2006 Contractual Sources include Occupier Outsourcing and Property Management revenue (7%; excludes associated sales and lease revenues, most of which are contractual), Global Investment Management revenue ex. Carried Interest (3%), Valuation revenue (8%) and Loan Servicing (0.5%). 2018 Contractual Sources includes Global Workplace Solutions (25%), Advisory Property & Project Management (11%), Valuation revenue (5%), contractual REI revenue (4%) and Loan Servicing (2%).
3. Capital Markets includes Advisory Sales revenue (33% in 2006 and 18% in 2018) and Commercial Mortgage Origination (excludes Loan Servicing) revenue (4% in 2006 and 5% in 2018).
4. 2006 Development, Carried Interest & Other includes Carried Interest revenue (3%), Development Services revenue (0.2%) and Other revenue (1%). 2018 Development and Carried Interest includes Development Services revenue (0.9%) and Carried Interest revenue (0.3%). Other is no longer a reported category of revenue in 2018.

Slide 7

1. 2018 reflects March 4, 2019 refinancing of \$300 million USD term loan. New maturity date is March 4, 2024.
2. Liquidity is defined as cash and cash equivalents plus unused amounts under the revolving credit facility.
3. Free cash flow is defined as net cash provided by operating activities on the consolidated statement of cash flows minus capital expenditures on the consolidated statement of cash flows.

Slide 15

1. Adjusted net income excludes a one-time non-cash gain associated with remeasuring CBRE's investment in an unconsolidated subsidiary in New England to fair value as of the date it acquired the remaining controlling interest, depreciation and amortization related to certain assets attributable to acquisitions, integration and other costs related to acquisitions, costs associated with our reorganization, including cost-savings initiatives, costs incurred in connection with a litigation settlement, write-off of financing costs on extinguished debt, cost-elimination expenses, and certain carried interest incentive compensation (reversal) expense to align with timing of associated revenue as well as adjusts the provision for income taxes for such items. Adjusted net income also excludes the tax impact of U.S. tax reform initially recorded in the fourth quarter of 2017 and finalized during 2018.
2. Fee Revenue is gross revenue less both client reimbursed costs largely associated with our employees that are dedicated to client facilities and subcontracted vendor work performed for clients.



## Footnotes

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### Slide 16

1. Adjusted EPS excludes a one-time non-cash gain associated with remeasuring CBRE's investment in an unconsolidated subsidiary in New England to fair value as of the date it acquired the remaining controlling interest, depreciation and amortization expense related to certain assets attributable to acquisitions, integration and other costs related to acquisitions, costs associated with our reorganization, including cost-savings initiatives, costs incurred in connection with a litigation settlement, write-off of financing costs on extinguished debt, cost-elimination expenses, goodwill and other non-amortizable intangible asset impairment and certain carried interest incentive compensation (reversal) expense to align with the timing of associated revenue as well as adjusts the provision for income taxes for such items. Adjusted EPS also excludes the tax impact of U.S. tax reform initially recorded in the fourth quarter of 2017 and finalized during 2018. All EPS information is based on diluted shares.
2. Leverage ratio is defined as year-end Net Debt divided by full-year adjusted EBITDA. Net Debt is defined as total debt, net of unamortized debt premiums, discounts and issuance costs, excluding warehouse facilities for loans originated on behalf of FHA and other government sponsored entities which are non-recourse to CBRE Group, Inc., non-recourse notes payable on real estate, and net of cash, excluding cash in consolidated funds and other entities not available for company use at year-end.

### Slide 18

1. 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.
2. EBITDA represents earnings before net interest expense, write-off of financing costs on extinguished debt, income taxes, depreciation and amortization. Amounts shown for adjusted EBITDA further remove (from EBITDA) the impact of certain cash and non-cash items related to acquisitions, costs associated with our reorganization, including cost-savings initiatives, certain carried interest incentive compensation reversal to align with the timing of associated revenue and other non-recurring costs.
3. Revenue and fee revenue are the same amount for REI as this segment does not have client reimbursed costs. Adjusted fee revenue is Real Estate Investments fee revenue plus equity income from unconsolidated subsidiaries and gain on disposition of real estate, net of non-controlling interest. We believe that investors may find this measure useful to analyze the financial performance of our Real Estate Investments segment because it is more reflective of its total operations. See reconciliation on slide 44.

### Slide 19

1. Tenant rep and landlord rep split based on 2018 CBRE US lease consideration value.
2. Property type chart is based on global data. Deal size chart is based on U.S. data.
3. Loan servicing balance as of December 31, 2018 has been restated.

### Slide 22

1. 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.

### Slide 23

1. Top 20 U.S. markets as defined by RCA. Markets include New York City Metro, Los Angeles Metro, San Francisco Metro, Washington D.C. Metro, Dallas, Chicago, Atlanta, Boston Metro, Miami/South Florida, Houston, Seattle, Phoenix, Denver, San Diego, Philadelphia Metro, Orlando, Las Vegas, Austin, Charlotte and Tampa.

### Slide 24

1. Top 20 U.S. markets as defined by RCA. Markets include New York City Metro, Los Angeles Metro, San Francisco Metro, Washington D.C. Metro, Dallas, Chicago, Atlanta, Boston Metro, Miami/South Florida, Houston, Seattle, Phoenix, Denver, San Diego, Philadelphia Metro, Orlando, Las Vegas, Austin, Charlotte and Tampa. Leasing data represents the same top 20 markets as defined by RCA but with market boundaries defined by CBRE research.

### Slide 31

1. GWS pipeline is defined as the GWS pursuits where a prospect has requested a formal pricing proposal from CBRE, either via a formal RFP process or via an off-market proposal. Pipeline includes both new prospect pursuits, as well as expansion opportunities with existing clients. Pipeline excludes early stage client cultivation activities and client contracts up for renewal.

## Footnotes

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### Slide 33

1. As of June 30, 2019, AUM refers to the fair market value of real asset-related investments with respect to which CBRE Global Investors provides, on a global basis, oversight, investment management services and other advice and which generally consist of investments in real assets; equity in funds and joint ventures; securities portfolios; operating companies and real asset-related loans. This AUM is intended principally to reflect the extent of CBRE Global Investors' presence in the global real asset market, and its calculation of AUM may differ from the calculations of other investment or asset managers.
2. As of June 30, 2019, in process figures include Long-Term Operating Assets (LTOA) of \$30M for Q2 2019. LTOA are projects that have achieved a stabilized level of occupancy or have been held 18-24 months following shell completion or acquisition.

### Slide 34

1. As of June 30, 2019, AUM refers to the fair market value of real asset-related investments with respect to which CBRE Global Investors provides, on a global basis, oversight, investment management services and other advice and which generally consist of investments in real assets; equity in funds and joint ventures; securities portfolios; operating companies and real asset-related loans. This AUM is intended principally to reflect the extent of CBRE Global Investors' presence in the global real asset market, and its calculation of AUM may differ from the calculations of other investment or asset managers.
2. As of June 30, 2019, Investment by Region refers to the regional mandate and/or the location of the underlying investment. AUM by investment type refers to the allocation of assets across the four primary segments: Private Real Estate, Securities, Private Infrastructure and Other. AUM by Strategy refers to the allocation of assets among strategies. Core / Core Plus generally refers to investment strategies that include stabilized investments, with a moderate return and leverage profile. Enhanced Return generally refers to value-add and opportunistic investment strategies with a higher return and leverage profile. Allocation figures are subject to change and may not sum due to rounding.

### Slide 35

1. In process as of June 30, 2019.
2. In process figures include Long-Term Operating Assets (LTOA) of \$30M for Q2 2019, \$30M for Q4 2018, \$151M for Q4 2017, \$152M for Q4 2016, \$152M for Q4 2015, \$273M for Q4 2014 and \$851M for Q4 2013. LTOA are projects that have achieved a stabilized level of occupancy or have been held 18-24 months following shell completion or acquisition.
3. Pipeline deals are projects we are pursuing which we believe have a greater than 50% chance of closing or where land has been acquired and the projected construction start is more than 12 months out.

### Slide 38

1. Contractual revenue refers to revenue derived from our Global Workplace Solutions, Advisory Property & Project Management, Valuation, REI (excl. carried interest) and Loan Servicing businesses. We regard leasing revenue as largely recurring over time because unlike most other transaction businesses, leasing activity normally takes place when leases expire. The average lease expires in five to six years. This means that, on average, in a typical year approximately 17% to 20% of leases roll over and a new leasing decision must be made. When a lease expires in the ordinary course, we expect it to be renewed, extended or the tenant to vacate the space to lease another space in the market. In each instance, a transaction is completed. If there is a downturn in economic activity, some tenants may seek a short term lease extension, often a year, before making a longer term commitment. In this scenario, that delayed leasing activity tends to be stacked on top of the normal activity in the following year. Thus, we characterize leasing as largely recurring over time because we expect an expiration of a lease, in the ordinary course, to lead to an opportunity for a leasing commission from such completed transaction even if delayed by a year or two during an economic downturn.
2. 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.

## Footnotes

	Q2 2019	Q4 2006	15-Year	
			Peak	Trough
<b>Transaction Velocity<sup>1</sup> % of Peak</b>	<b>73%</b>	<b>77%</b>	<b>100%</b>	<b>18%</b>
US Office Cap Rates	6.7%	6.9%	7.1%	7.3%
BBB Corp. Bond Yield	3.6%	6.0%	9.4%	3.3%
<b>Cap Rate Spread<sup>2</sup></b>	<b>3.1%</b>	<b>0.9%</b>	<b>-2.3%</b>	<b>4.0%</b>
Commercial Mortgages Outstanding (\$B)	2,936	2,171	2,549	1,073
US Nominal GDP (\$B)	21,099	14,037	14,395	10,003
<b>CRE Leverage<sup>3</sup> (CRE Mortgages as % of U.S. GDP)</b>	<b>13.9%</b>	<b>15.5%</b>	<b>17.7%</b>	<b>10.7%</b>
Total US Office Completions (sf in M)	49.7	54.8	74.8	6.8
Total US Office Stock (sf in M)	3,894.3	3,410.7	3,238.4	3,637.3
<b>Supply<sup>4</sup> (Completions as % of Total Stock)</b>	<b>1.3%</b>	<b>1.6%</b>	<b>2.3%</b>	<b>0.2%</b>
US REIT Index Dividend Yield	3.7%	3.7%	5.4%	6.6%
BBB Corp. Bond Yield	3.6%	6.0%	7.8%	4.8%
<b>REIT Valuation<sup>5</sup> (Dividend Yield - Bond Yield)</b>	<b>0.1%</b>	<b>-2.3%</b>	<b>-2.4%</b>	<b>1.8%</b>
<b>US Office Occupancy Rate<sup>6</sup></b>	<b>87.8%</b>	<b>87.4%</b>	<b>87.8%</b>	<b>83.0%</b>
<b>US Office Net Asking Rent Growth<sup>7</sup> TTM</b>	<b>1.8%</b>	<b>6.6%</b>	<b>8.8%</b>	<b>-8.8%</b>
S&P 500 Forward Earnings Yield	6.0%	6.7%	4.8%	9.7%
10 Yr. US Treasury	2.0%	4.7%	5.4%	1.9%
<b>Stock Market Valuation<sup>8</sup> (S&amp;P Yield - 10 Yr.)</b>	<b>4.0%</b>	<b>2.0%</b>	<b>-0.6%</b>	<b>7.8%</b>
2 Yr. US Treasury	1.7%	4.8%	4.8%	1.0%
10 Yr. US Treasury	2.0%	4.7%	4.7%	3.8%
<b>Yield Curve<sup>9</sup> (10 Yr. - 2 Yr.)</b>	<b>0.3%</b>	<b>-0.1%</b>	<b>-0.1%</b>	<b>2.8%</b>

Source: Real Capital Analytics, CBRE-Econometric Advisors, Federal Reserve, BoA Merrill Lynch, FactSet

Slide 8 – The metrics included in the CBRE Cycle Radar are derived as follows:

1. Transaction Velocity – Total dollar value of US commercial real estate transactions per Real Capital Analytics divided by the Moody's/RCA US National All-Property Composite Price Index per Real Capital Analytics.
2. Cap Rate Spread – The capitalization rate on completed US office transactions per Real Capital Analytics less the Effective Yield on BBB Corporate Bonds per FactSet.
3. CRE Leverage – Total US outstanding commercial mortgages per the Board of Governors of the Federal Reserve System divided by nominal Gross Domestic Product for the US per the Bureau of Economic Analysis.
4. Supply – Trailing 12-month US office real estate completions (in square feet) divided by the total stock of US office real estate square footage; per CBRE – Econometric Advisors.
5. REIT Valuation – Dividend yield on MSCI US REIT Index per FactSet less BofA Merrill Lynch US Corporate Bond BBB Effective Yield per FactSet.
6. Occupancy – Total US office occupancy per CBRE – Econometric Advisors.
7. Rent Growth – Trailing 12-month US office rent growth per CBRE – Econometric Advisors.
8. Stock Market Valuation – Earnings Yield on S&P 500 per FactSet less the yield on 10-year US Treasury Notes per FactSet.
9. Yield Curve – Yield on 10-year US Treasury Notes per FactSet less the yield on 2-year US Treasury Notes per FactSet.

