

---

# CBRE GROUP, INC.

## THE GLOBAL MARKET LEADER IN COMMERCIAL REAL ESTATE SERVICES

---

December 2017

**CBRE**

A nighttime photograph of a city skyline, likely New York City, featuring the Manhattan Bridge and several illuminated skyscrapers. The scene is reflected in the water in the foreground, creating a symmetrical effect. The sky is a deep blue, and the city lights are warm and vibrant.

## Forward-Looking Statements

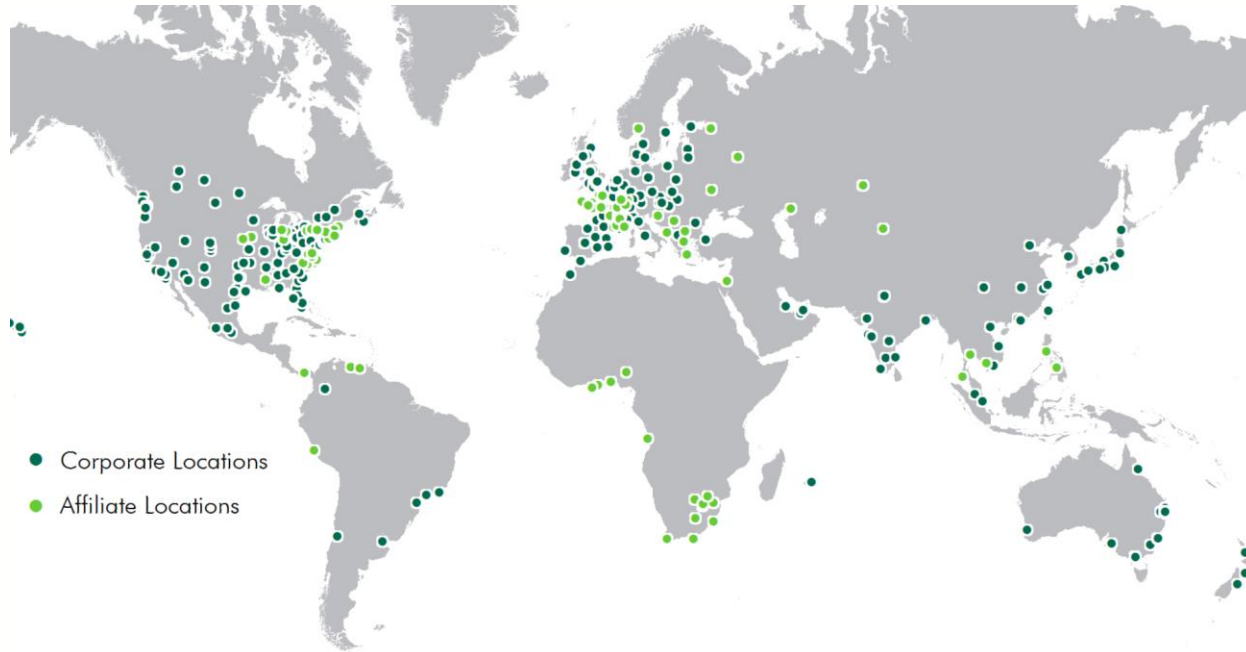
---

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 third quarter earnings release, furnished on Form 8-K, our most recent quarterly report filed on Form 10-Q and our most recent annual report filed on Form 10-K, 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

Integrated services to commercial real estate investors and occupiers



## Scale And Diversity

- 5.3 billion square feet under management<sup>1</sup>
- 450+ offices worldwide<sup>2</sup>
- Serves clients in over 100 countries<sup>2</sup>
- Serves over 90% of the Fortune 100
- Over 85,000 transactions in 2016

## Market Leadership

- **#1** Leasing
- **#1** Property Sales
- **#1** Outsourcing
- **#1** Appraisal & Valuation
- **\$98** billion AUM<sup>3</sup>

## Leading Global Brand

- Lipsey's **#1** CRE brand for 16 consecutive years
- World's most ethical company awarded by Ethisphere Institute for four straight years
- S&P 500 company since 2006
- Named America's 15th Best Employer (out of 500 companies) in 2016 by Forbes

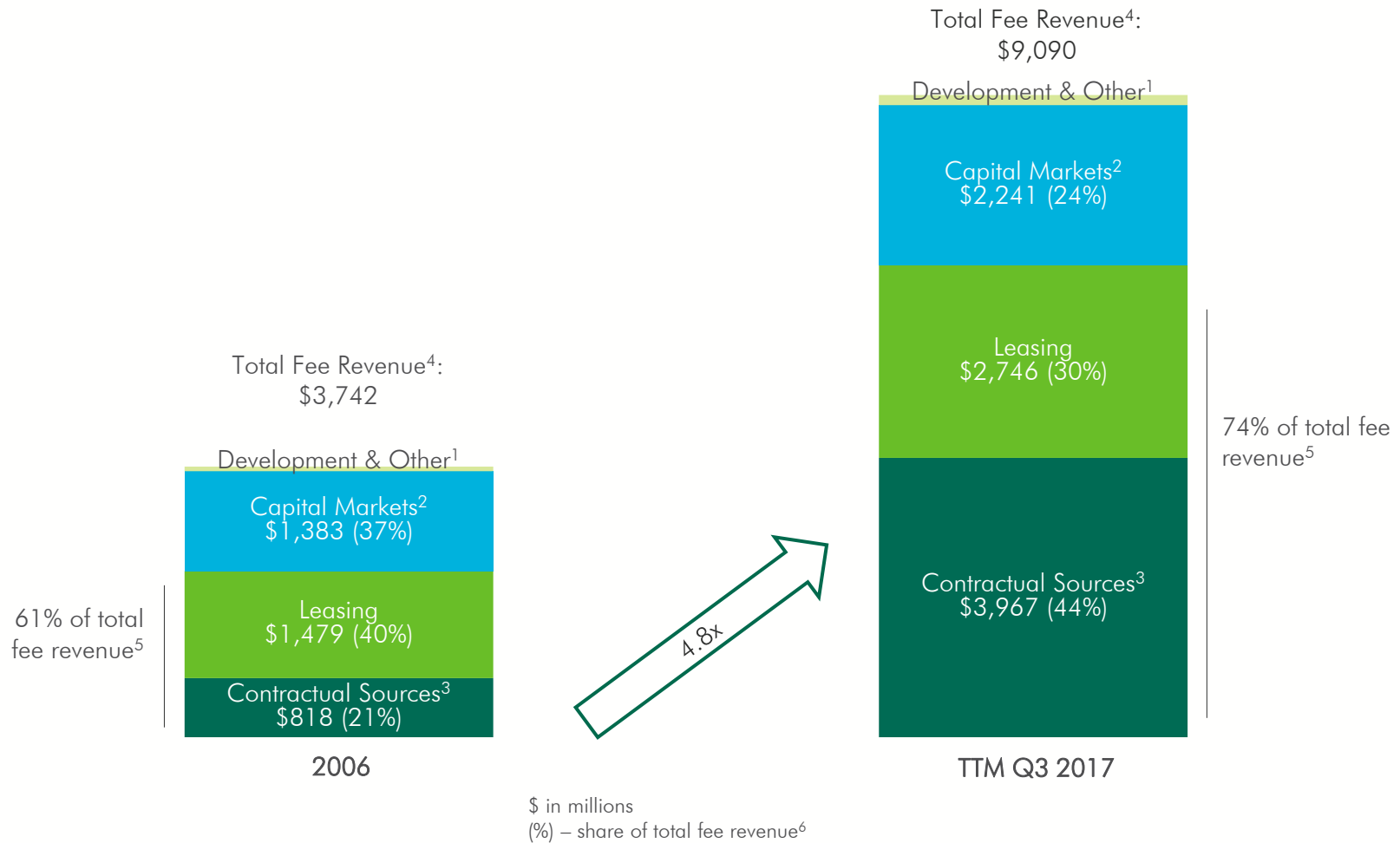
*See slide 39 for footnotes*

# Where Does CBRE Derive Its Revenue?

Global market leader across virtually all CBRE business lines



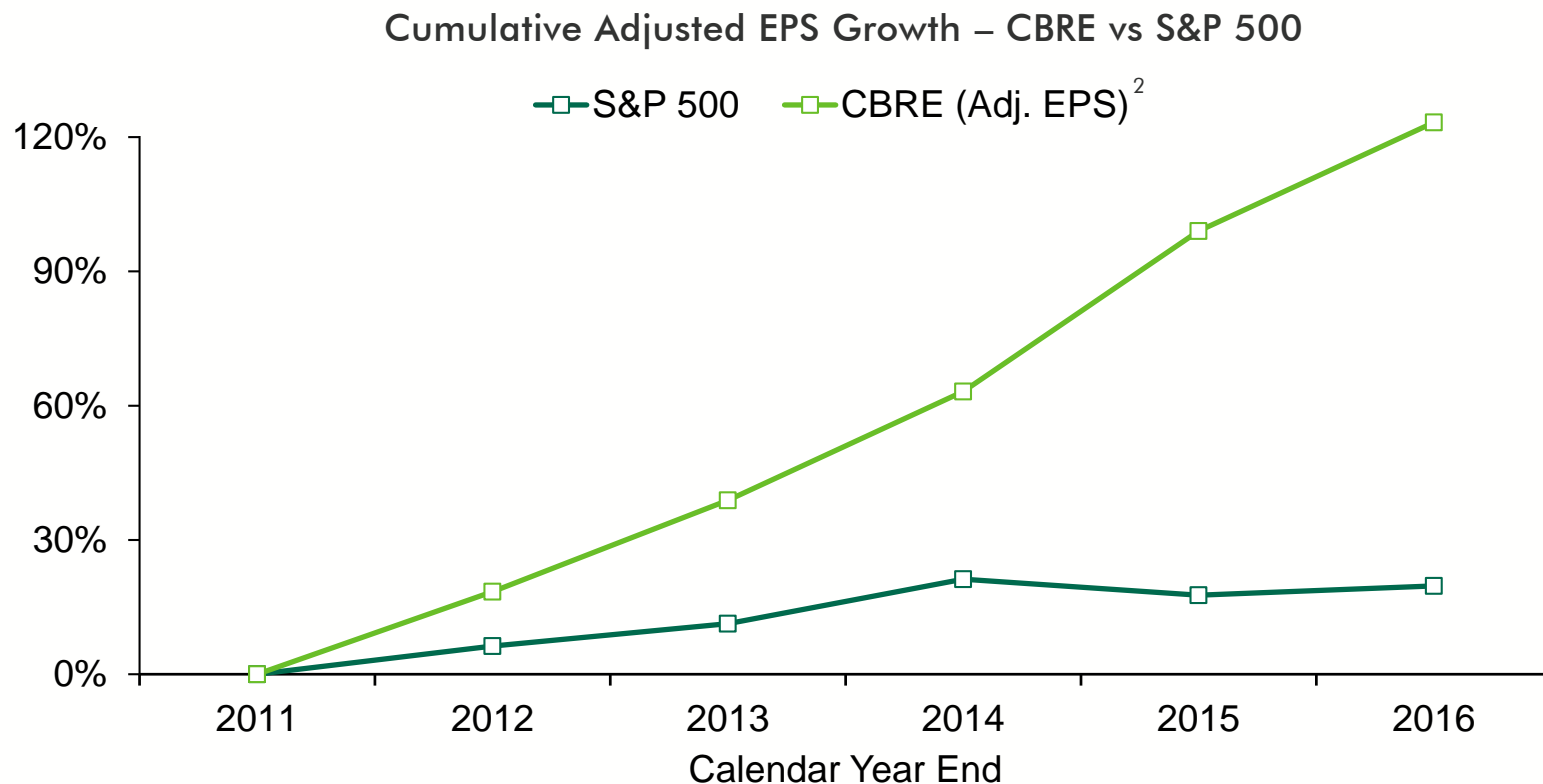
## Growing into a Better Balanced and More Resilient Business



See slide 39 for footnotes

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

While leverage ratio<sup>1</sup> declined to 1.2x in 2016 from 2.1x in 2011



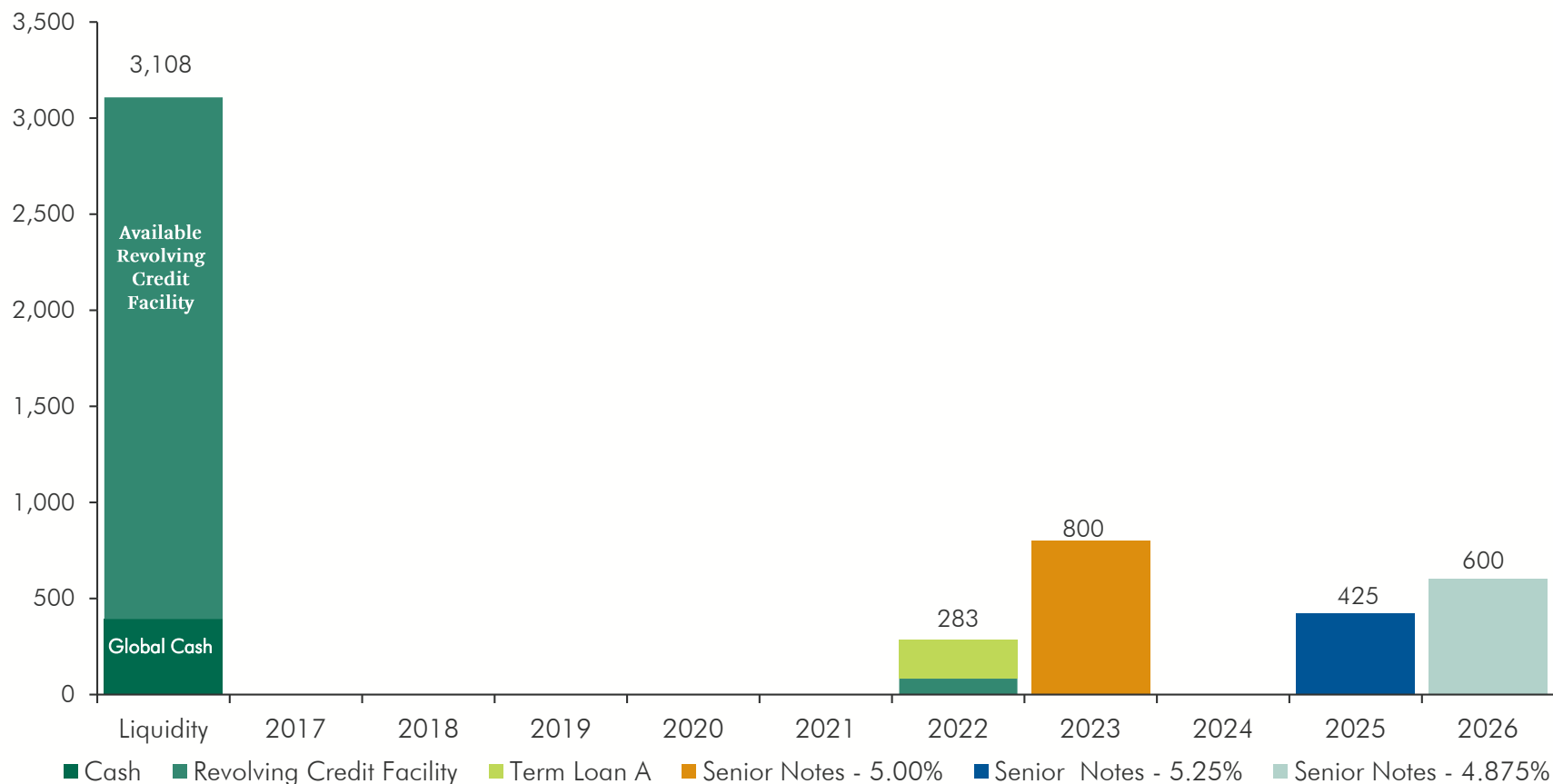
Source: FactSet, Company filings

See slide 40 for footnotes

# Robust Liquidity, Long-Dated Debt & Low Leverage Support Opportunistic Investing

(\$ in millions)

Pro-forma as of September 30, 2017 <sup>1, 2, 3</sup>



1. Proforma cash is calculated with September 30, 2017 available cash plus borrowings from the new revolver and Term Loan A less outstanding term loan balances from the existing credit facilities.

2. \$2,800 million revolving credit facility matures in October 2022. Proforma as of September 30, 2017, the revolving credit facility balance was \$83 million.

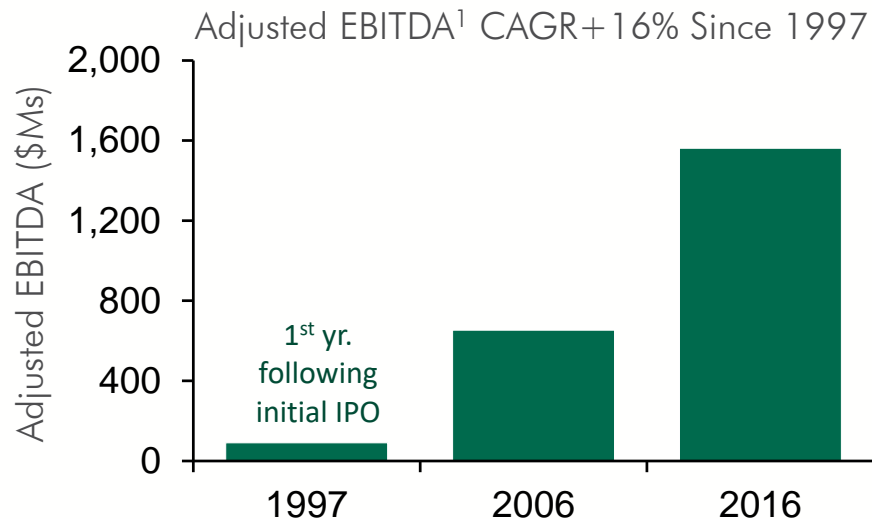
3. One percent annual amortization for the Term Loan A if leverage ratio (as defined in the credit agreement) is higher than 2.5x.

## CBRE is Positioned for Long-Term Growth

1. Services industry with **strong structural tailwinds**

2. CBRE has:

- **a commanding position** with a strong competitive moat
- realized **significant earnings growth** over two decades
- increased the **resiliency of its business mix**



See slide 40 for footnotes



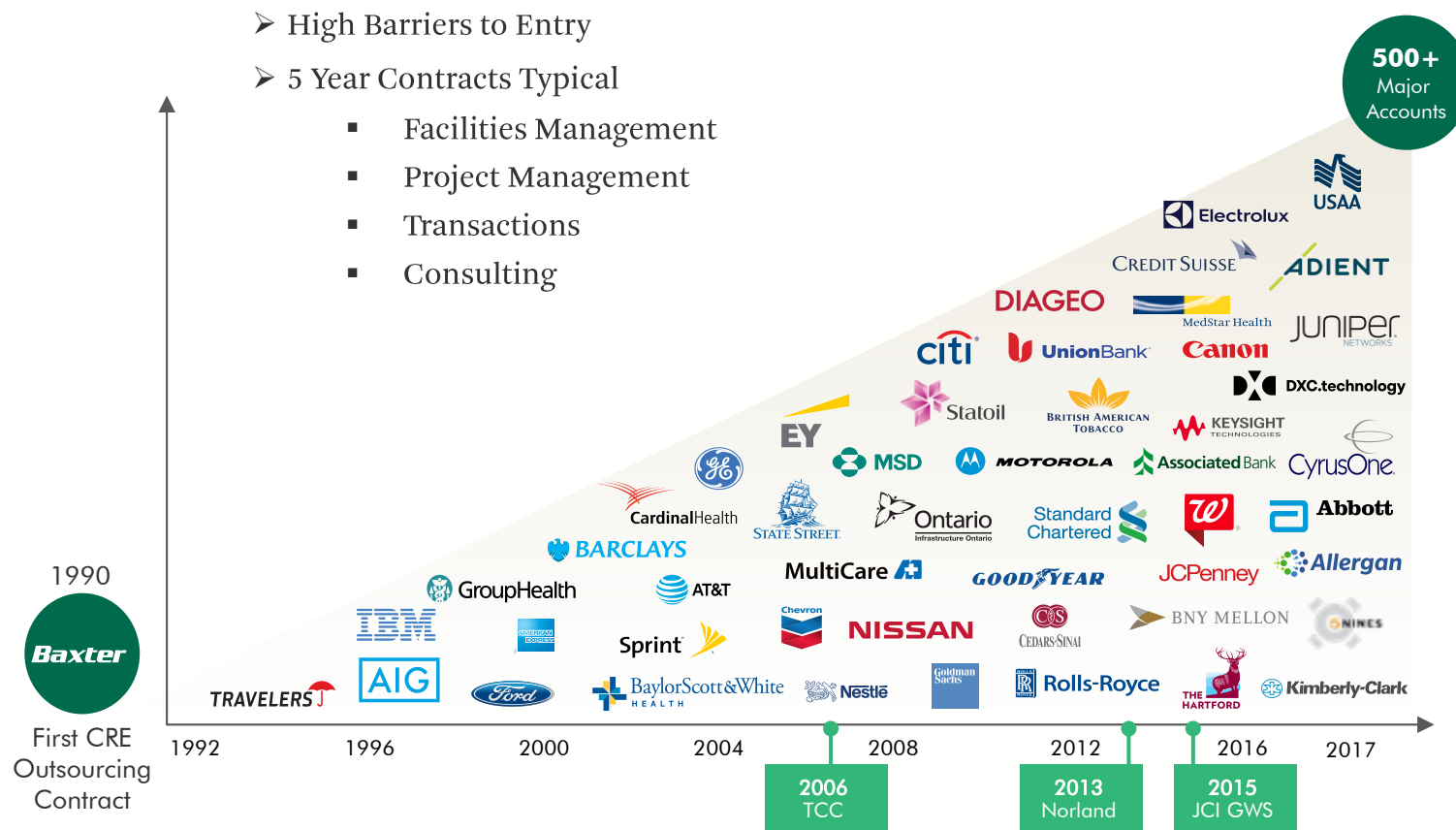
## Three Structural Tailwinds for Commercial Real Estate Services

---

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

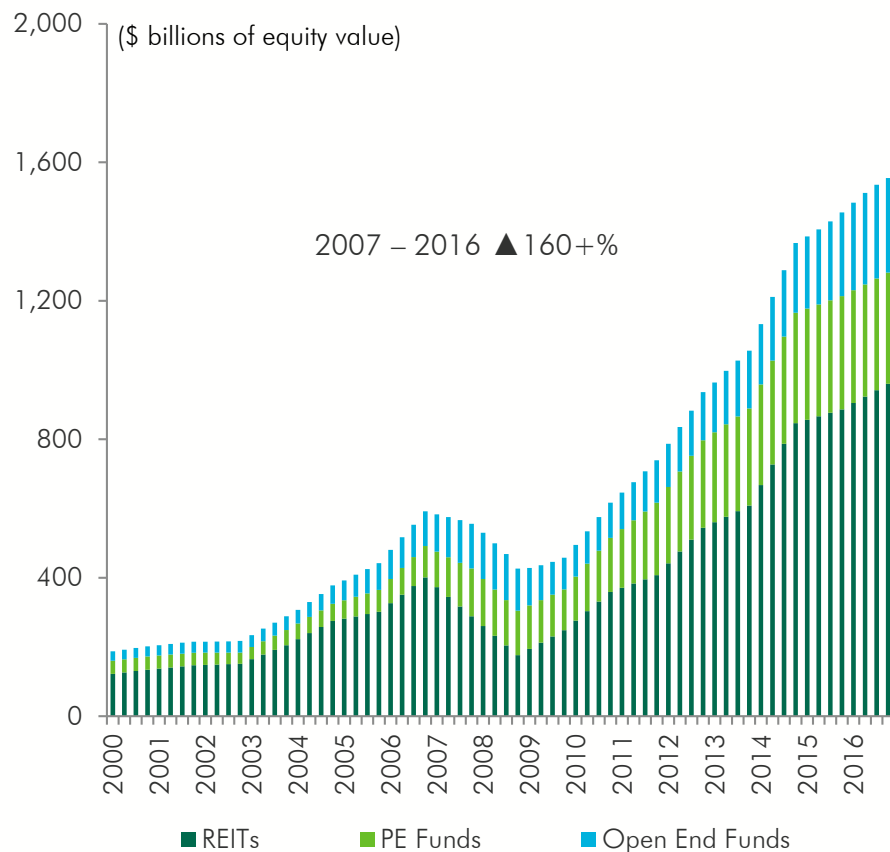
CBRE's market leading position driven by both organic growth and strategic M&A



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

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

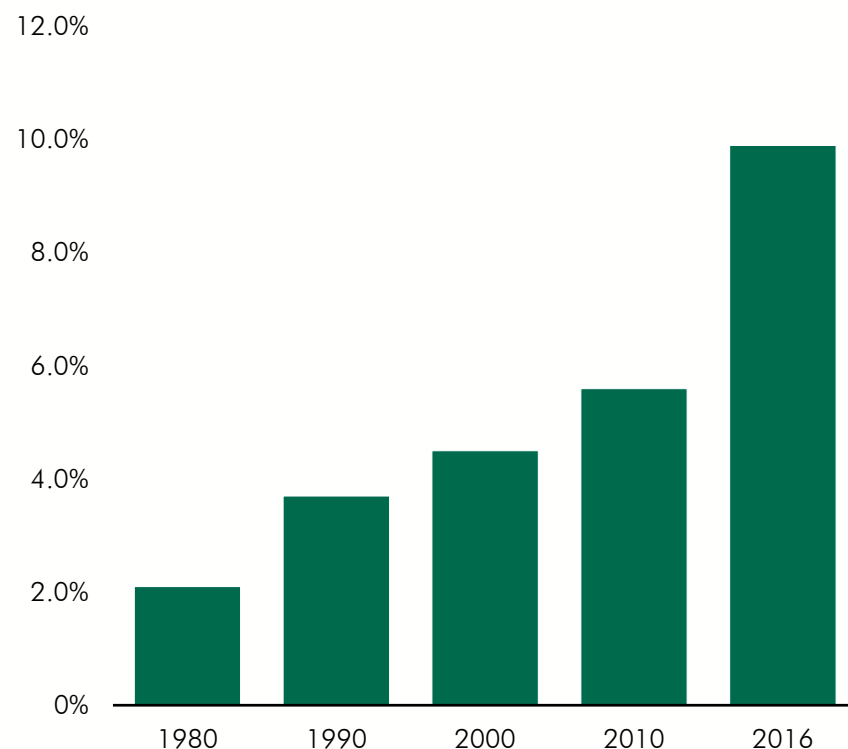
**Our Customers Hold an Increasing Share of the Total Market**



Source: NAREIT, NCREIF, Preqin, and Goldman Sachs Research



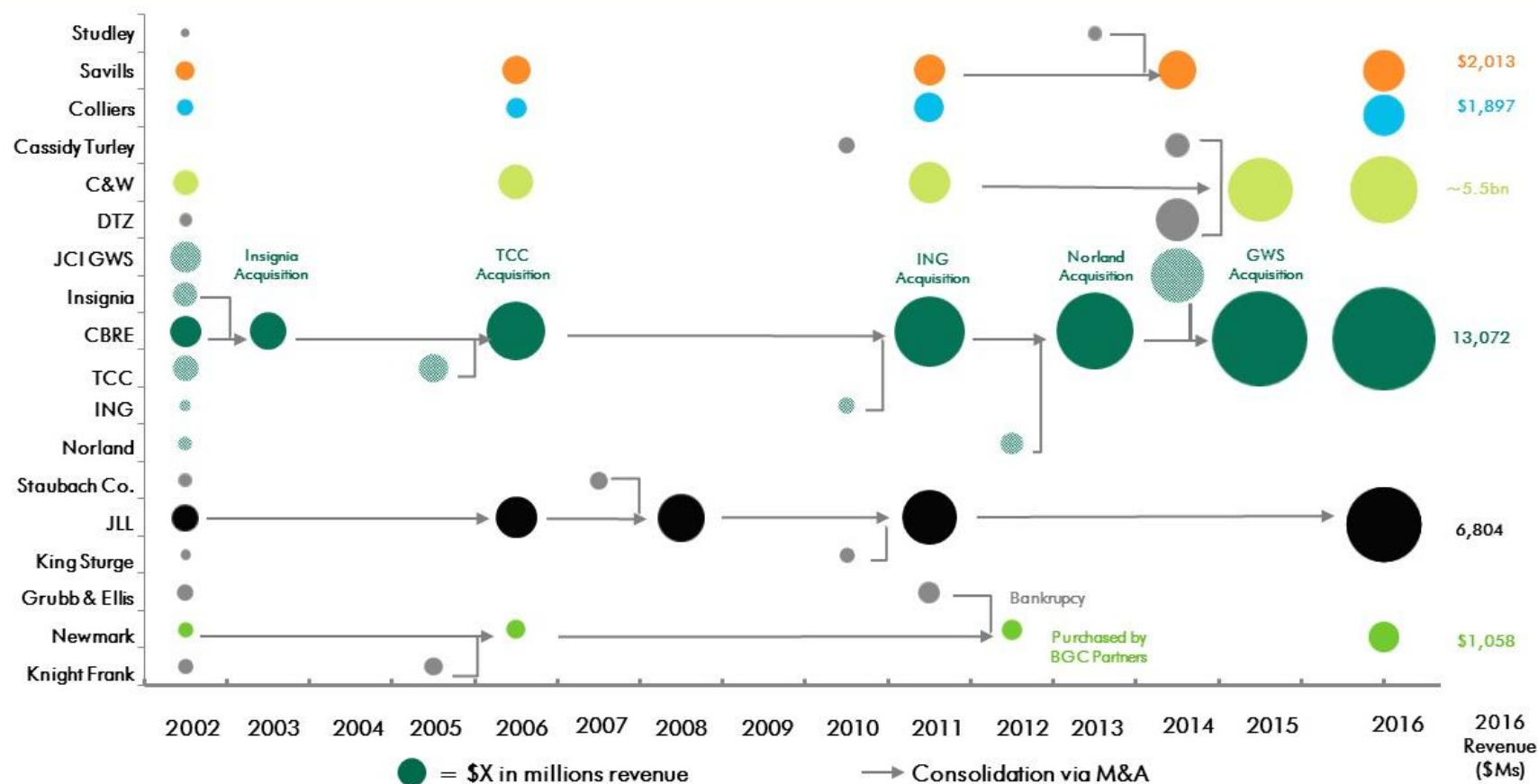
**Institutional Asset Allocation to Real Estate has Increased Strongly Over Time**



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

## Tailwind 3 – 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.

## CBRE Vantage: Industry Leading Suite of Enablement Technology

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

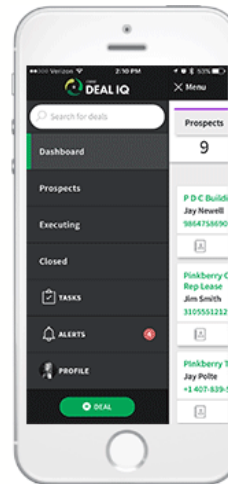
### Sample of CBRE Technology Investments

CBRE Floored



SaaS Interactive Creation of 3D Floor Plans and Virtual Environments

CBRE Deal IQ



SaaS CRM and Deal Management Platform

Forum Analytics

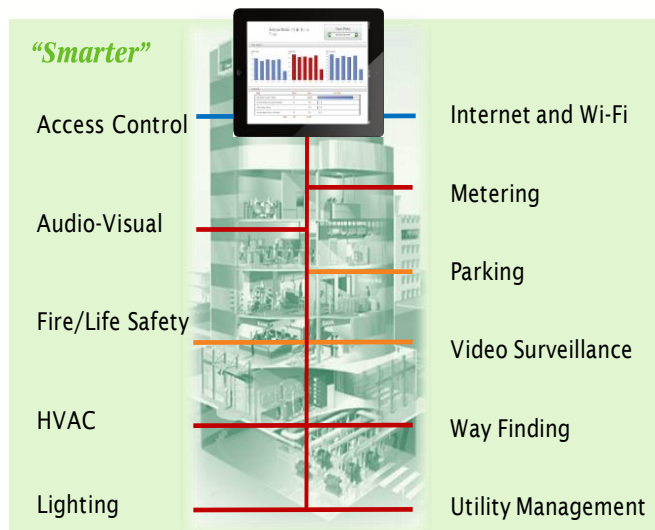


Leading Predictive Analytics Platform

## Technology Case Study: Smart Building Technology (Energy Services Inc.)

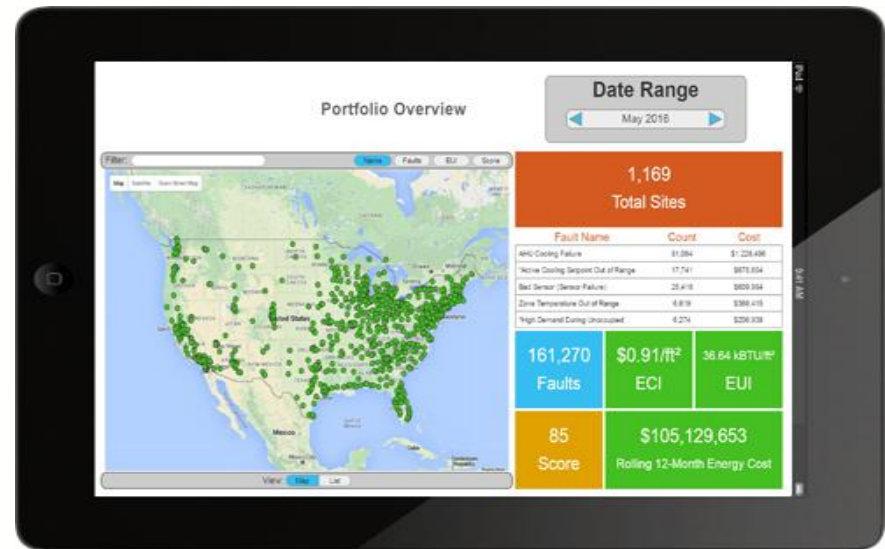
CBRE's over 5 billion square feet of property under management created an advantaged position to acquire and monetize a smart building technology leader

Typical "smart" buildings become much "smarter" in ways that actually allow for greater client satisfaction at a lower cost



### GREAT OUTCOMES

- Lowered operating costs
- Satisfied occupants
- Informed management
- Increased uptime and visibility
- Reduced capital expenditures

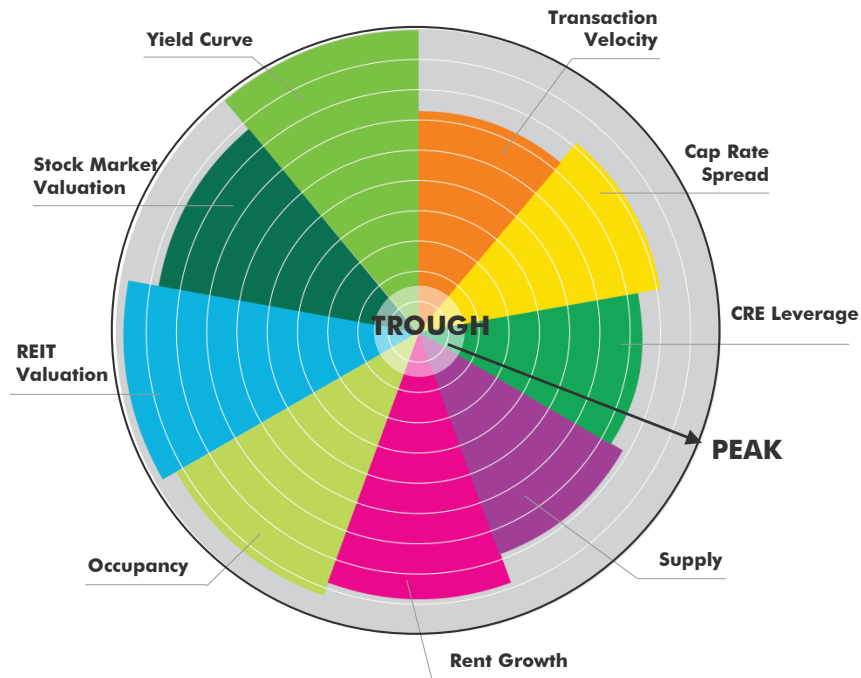


# CBRE Cycle Radar – Markets in Balance

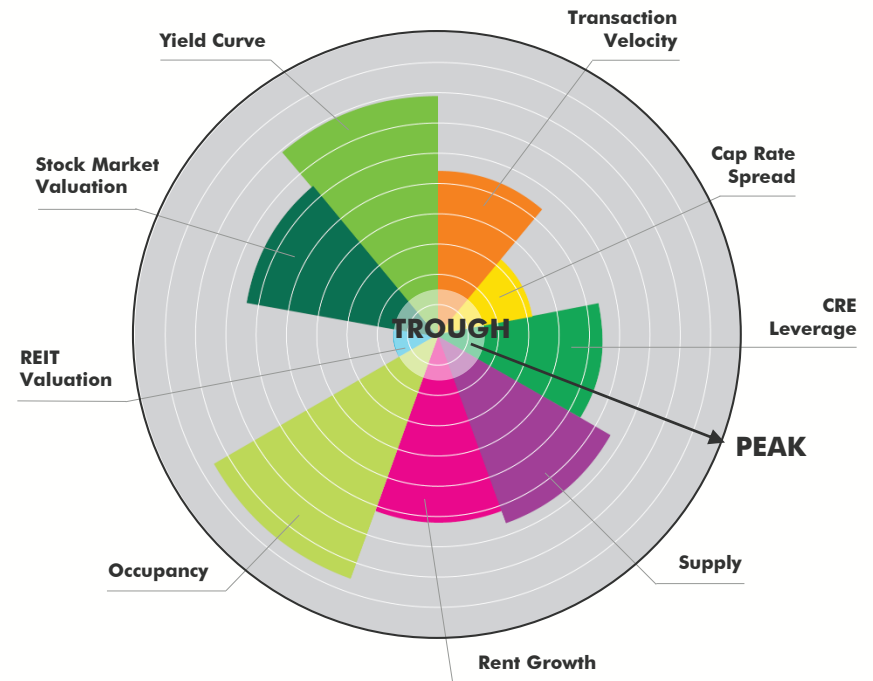
Current measures of economic and CRE cycle suggest an extended cycle from here

Q4 2006

(One Year Prior to Start of Downturn)



Q3 2017



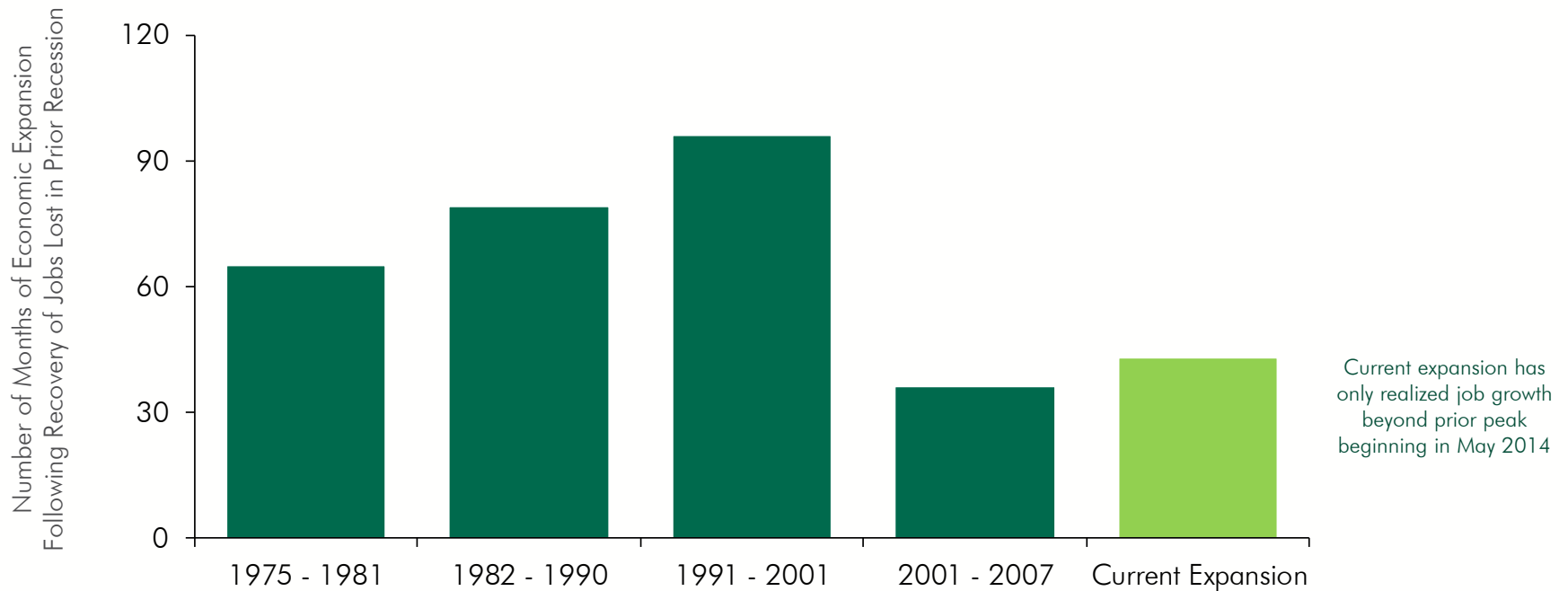
Source: Real Capital Analytics, CBRE-Econometric Advisors, Federal Reserve, BoA Merrill Lynch, FactSet

CBRE proprietary Cycle Radar for Commercial Real Estate charts measure relative percentile for each metric at a point in time against the trailing 15 year history. The outside line represents the highest observed value for each metric over the last 15 years and the middle of the chart represents the lowest observed value.

See slide 42 for footnotes and methodology

## Continued Economic Growth Possible as Current Expansion is Slow

Months of economic expansion following recovery of jobs lost during prior recession



Source: U.S. BLS



## CBRE is Positioned for Long-Term Growth

---

### 1. CBRE:

- **Leads** a services industry with **strong structural tailwinds**,
- has a **durable business model** with **significant free cash flow**, and
- has achieved **long-term growth** through business cycles,
- while continuing to **significantly diversify its business mix**

### 2. Business Cycle:

- **CBRE Cycle Radar** suggests an **extended business cycle**;
- CBRE has a **strong balance sheet** and
- considerable **liquidity to deploy in a downturn** if a recession occurs earlier than expected

# BUSINESS LINE SLIDES

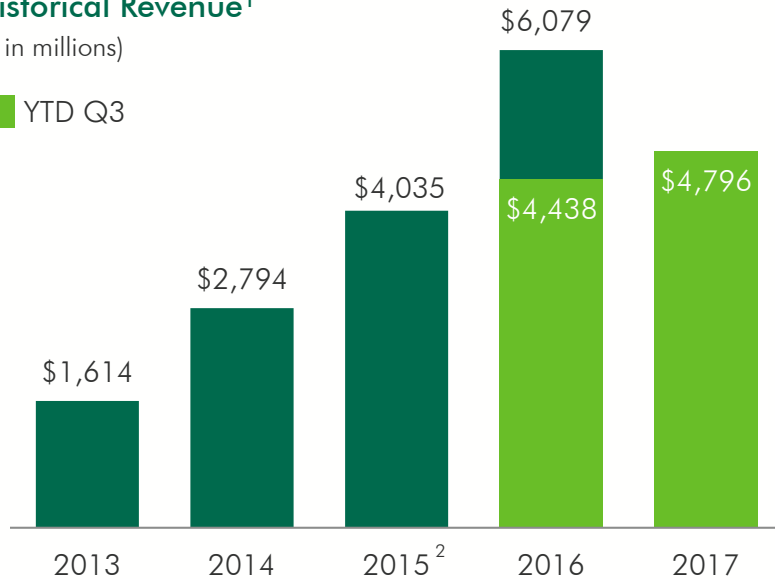
# Occupier Outsourcing

## Integrated Global Solutions for Occupiers

### Historical Revenue<sup>1</sup>

(\$ in millions)

■ YTD Q3



### 2017 Total Contracts

	Q3	YTD Q3
New	41	97
Expansions	44	139
Renewals	27	88

### Overview

- Full service offering
  - Facilities Management – approximately 2.2 billion square feet globally as of 12/31/2016
  - Project Management
  - Transaction Services
  - Strategic Consulting
- Ranked among the top few outsourcing service providers across all industries for six consecutive years<sup>3</sup>

### Representative Clients

Facilities  
Management



MARS

Transaction  
Services



HONDA  
The Power of Dreams

Project  
Management



See slide 40 for footnotes

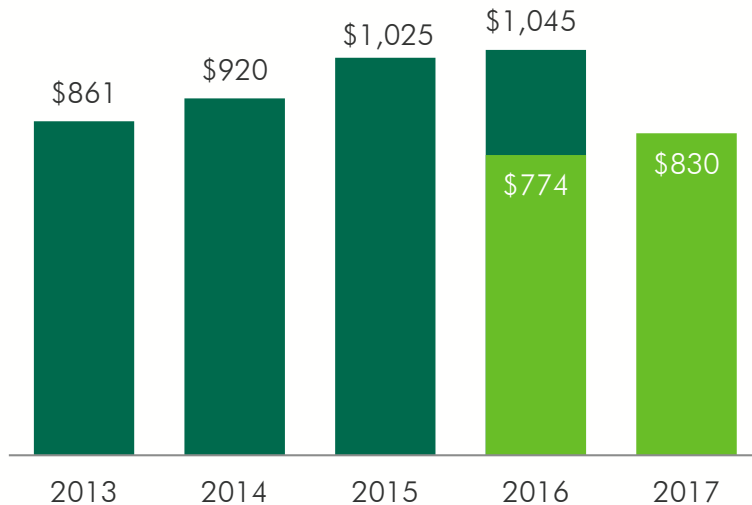
# Property Management

## Optimizing Building Operating Performance for Investors

### Historical Revenue<sup>1</sup>

(\$ in millions)

■ YTD Q3



### Overview

- Manages buildings for investors
  - Highly synergistic with property leasing
- Manages approximately 3.1 billion square feet globally as of 12/31/16<sup>2</sup>
- 300+ premier properties in major Central Business Districts (approximately 450 million square feet)

### Selected Strategic Accounts



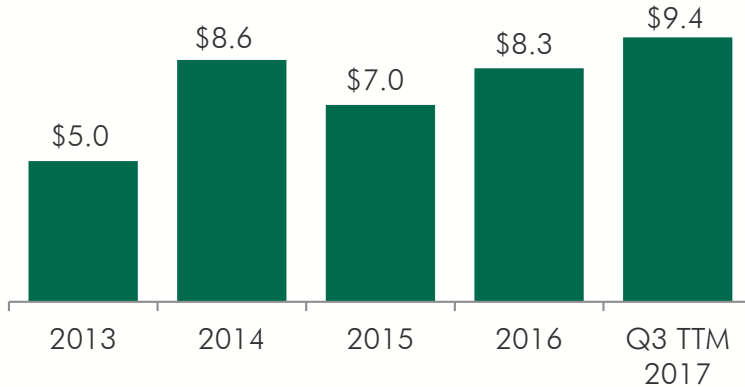
See slide 40 for footnotes

# Investment Management

## Performance Across Risk/Return Spectrum Globally

### Capital Raised<sup>1</sup>

(\$ in billions)



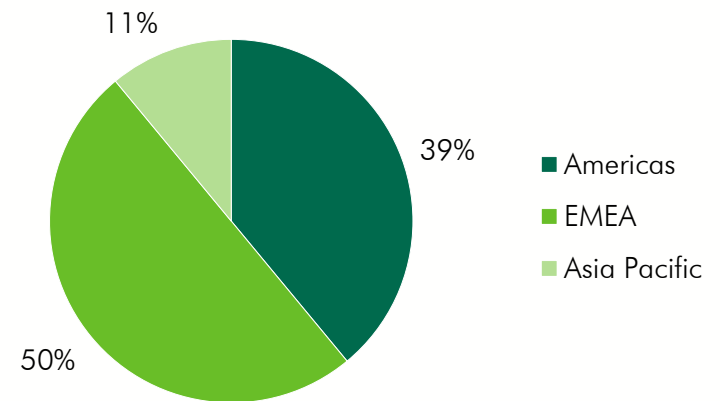
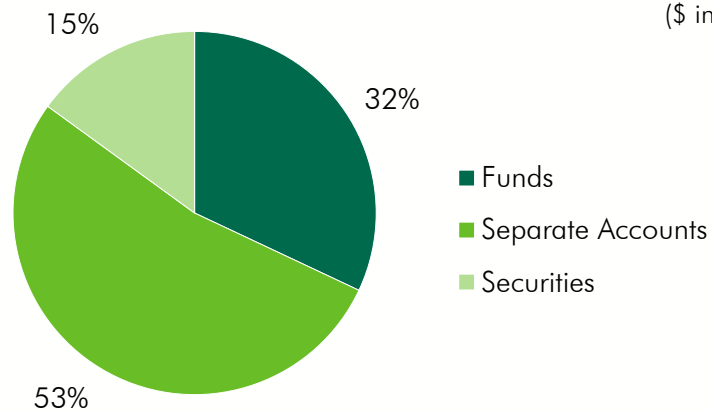
### Overview

- Performance-driven global real estate investment manager
- More than 500 institutional clients
- Equity to deploy: approx. \$5,200 million<sup>1,2</sup>
- Co-Investment: \$155.0 million<sup>2</sup>

### Assets under Management (AUM)\*

\$98.3B as of 9/30/2017

(\$ in billions)



See slide 40 for footnotes

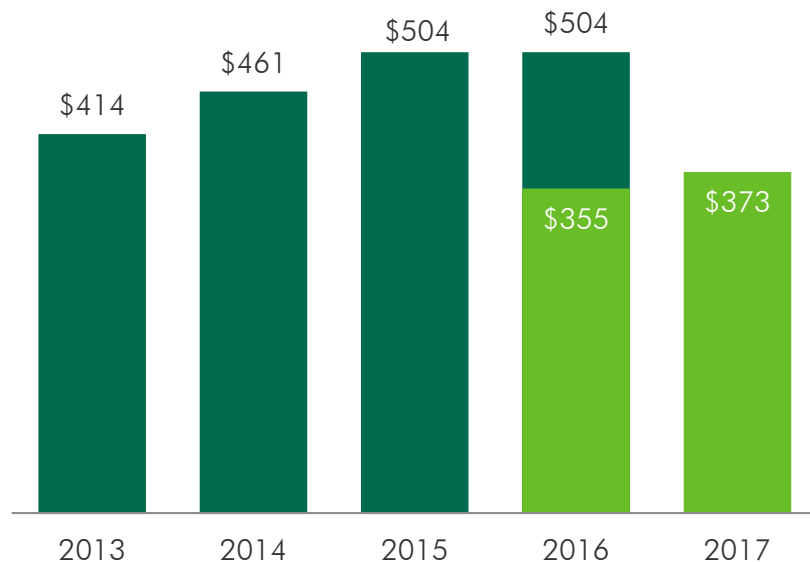
# Appraisal & Valuation

## Serving Clients Globally

### Historical Revenue

(\$ in millions)

■ YTD Q3



### Overview

- Euromoney Global Valuation Advisor of the Year for five consecutive years
- Clients include lenders, life insurance companies, special servicers and REITs

### Premier Clients

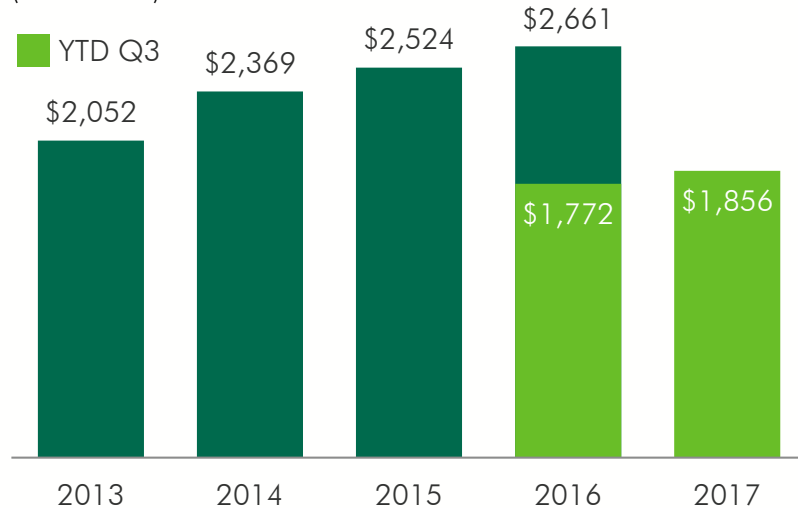


# Leasing

## Strategic Advisory and Execution

### Historical Revenue

(\$ in millions)

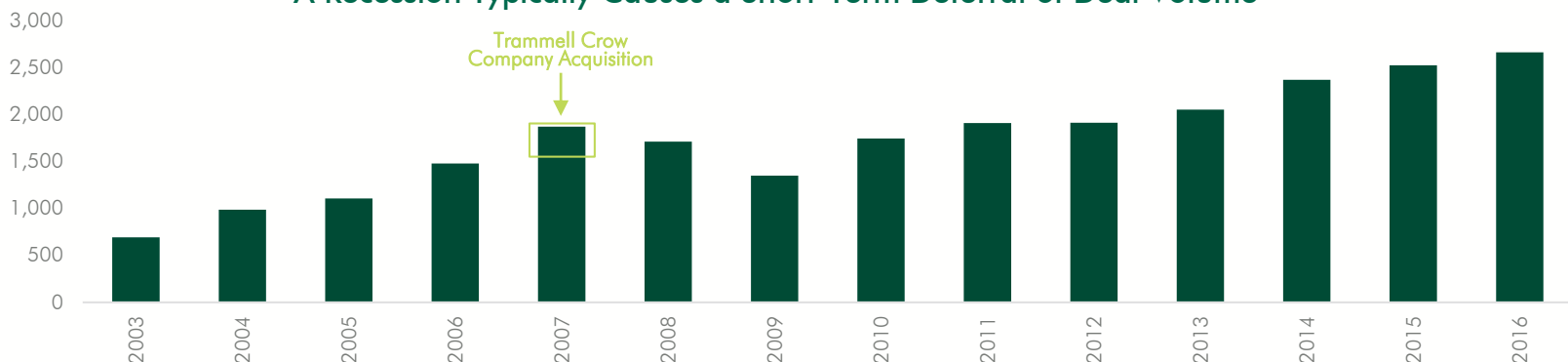


### Overview

- Advise occupiers and investors in formulating and executing leasing strategies
  - Tailored service delivery by property type and industry/market specialization
  - Strategic insight and high-level execution driving significant market share gains
  - #1 global market position – \$110.8 billion lease volume in 2016
- |           |                |               |                |
|-----------|----------------|---------------|----------------|
| — Office: | \$74.1 billion | — Industrial: | \$17.3 billion |
| — Retail: | \$17.4 billion | — Other:      | \$2.0 billion  |

### CBRE Leasing Revenue is Largely Recurring Over Time<sup>1</sup> A Recession Typically Causes a Short-Term Deferral of Deal Volume

\$ in millions

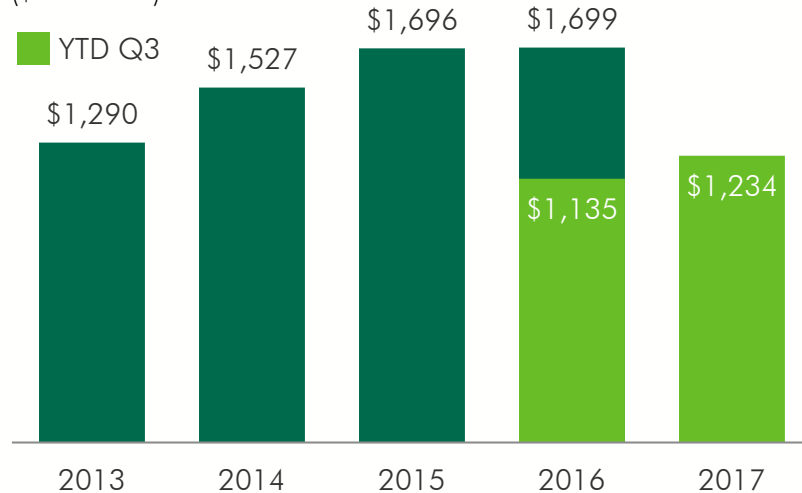


# Property Sales

## Insight and Execution Across Markets & Property Types

### Historical Revenue

(\$ in millions)

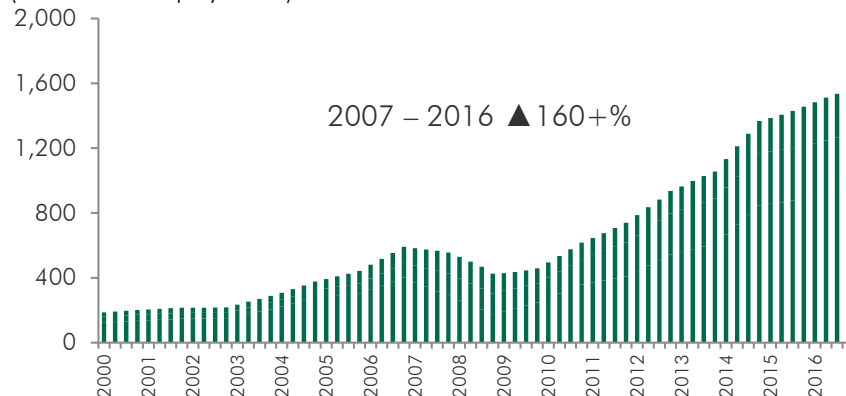


### Overview

- Strategic advisor (sellers and buyers) in commercial real estate
- #1 global market share, based on Real Capital Analytics
  - 800 basis point advantage over #2 firm for full year 2016
- #1 global market position – \$211.4 billion sales volume in 2016
  - Office: \$79.4 billion
  - Industrial: \$31.7 billion
  - Retail: \$33.3 billion
  - Other: \$24.8 billion
  - Multi-family: \$42.2 billion

### Increased Ownership by Active Portfolio Managers Drives Sales Velocity

(\$ billions of equity value)



- Private equity firms, REITs and open-end funds are active traders of real estate and account for an increasingly larger portion of the investment market
- Many large, traditional owners do not actively trade their assets
- As a result, transaction volumes should increase over time



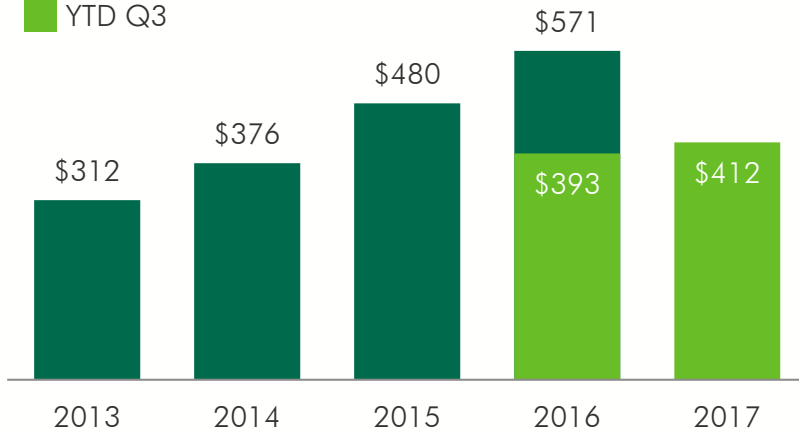
# Commercial Mortgage Origination & Servicing

## Premier Debt and Structured Finance Solutions

### Historical Revenue

(\$ in millions)

■ YTD Q3



### Recent Transactions



National Portfolio

Stonemont Financial  
Group

\$1.1 Billion

Acquisition Financing



Chicago, IL

Morguard Corporation

\$123 Million

Acquisition Financing



Ireland

Kennedy Wilson

\$140 Million

Construction Financing

### Overview

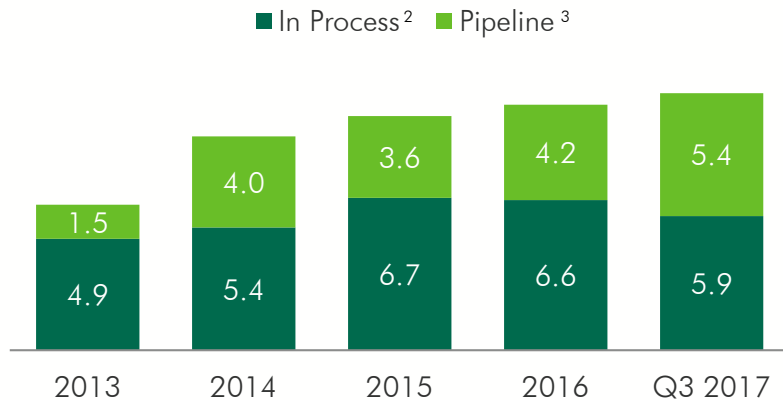
- A leading strategic advisor for debt and structured finance solutions
  - Highly synergistic with property sales
- Key services:
  - Loan origination / debt placement
  - Portfolio loan sales
  - Loan servicing
- \$44.1 billion of global mortgage activity in Q3 TTM 2017<sup>1</sup>
- Commercial loan origination with government agencies \$17.5 billion<sup>2</sup> in Q3 TTM 2017
- \$165 billion loan servicing portfolio as of 9/30/17

# Development Services

Trammell Crow Company – A Premier Brand in U.S. development

## Projects In Process/Pipeline<sup>1</sup>

(\$ in billions)



## Overview

- A premier brand in U.S. development
  - 65+ year record of excellence
- Partner with leading institutional capital sources
- Modest capital required from CBRE
  - \$116.7 million of co-investment at the end of Q3 2017
  - \$15.9 million in repayment guarantees on outstanding debt balances at the end of Q3 2017

## Recent Projects

### Park District



Dallas, TX  
Mixed-Use

### The Boardwalk



Irvine, CA  
Office

### LA Plaza



Los Angeles, CA  
Mixed-use

### Principio Commerce Park



North End, MD  
Industrial

# APPENDIX

## TTM Q3 2017 Revenue

Contractual revenue & leasing, which is largely recurring over time<sup>1</sup>, is 74% of fee revenue

### Revenue (\$ in millions)

	Contractual Revenue Sources					Leasing	Capital Markets		Other		
	Occupier Outsourcing <sup>2</sup>	Property Management <sup>2</sup>	Investment Management	Valuation	Loan Servicing	Leasing	Sales	Commercial Mortgage Origination <sup>3</sup>	Development Services	Other	Total

### Gross Revenue

TTM Q3 2017	\$ 6,437	\$ 1,101	\$ 366	\$ 522	\$ 147	\$ 2,746	\$ 1,798	\$ 443	\$ 50	\$ 87	\$ 13,697
-------------	----------	----------	--------	--------	--------	----------	----------	--------	-------	-------	-----------

### Fee Revenue<sup>4, 5</sup>

TTM Q3 2017	\$ 2,403	\$ 528	\$ 366	\$ 522	\$ 147	\$ 2,746	\$ 1,798	\$ 443	\$ 50	\$ 87	\$ 9,090
-------------	----------	--------	--------	--------	--------	----------	----------	--------	-------	-------	----------

% of Total Fee Revenue	26%	6%	4%	6%	2%	30%	20%	4%	1%	1%	100%
------------------------	-----	----	----	----	----	-----	-----	----	----	----	------

74% of total fee revenue

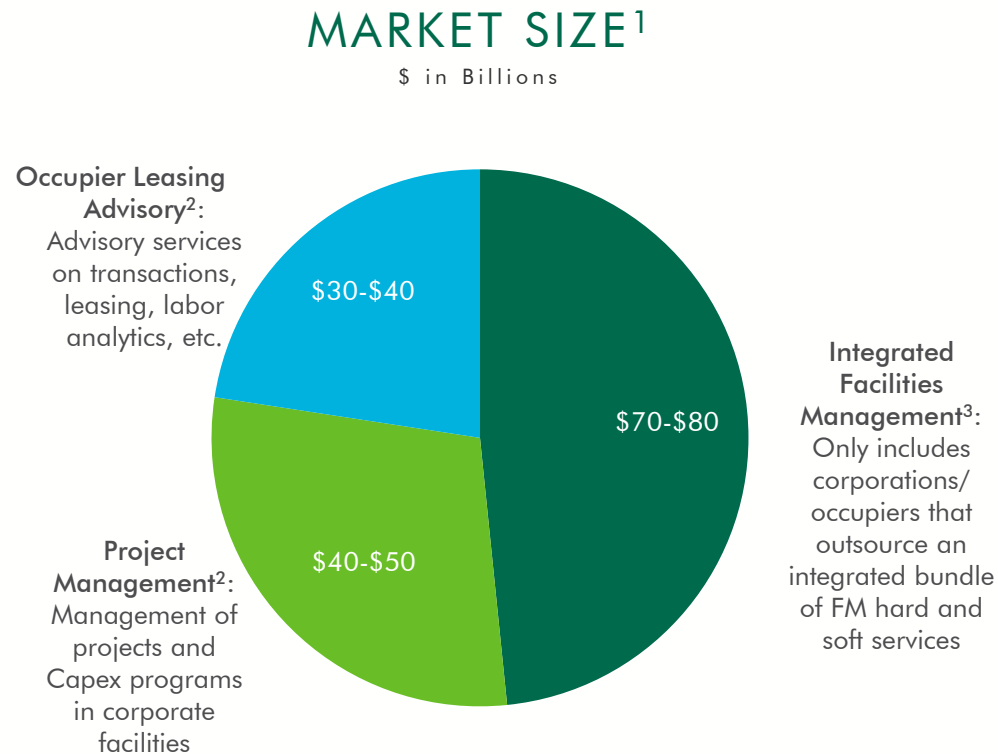
### Fee Revenue Growth Rate (Change TTM Q3 2017-over- TTM Q3 2016)

USD	▲ 7%	▲ 5%	▼ -13%	▲ 5%	▲ 24%	▲ 5%	▲ 8%	▲ 8%	▼ -16%	▲ 4%	▲ 5%
Local Currency	▲ 10%	▲ 6%	▼ -10%	▲ 6%	▲ 25%	▲ 5%	▲ 9%	▲ 8%	▼ -16%	▲ 6%	▲ 7%

See slide 41 for footnotes

# Significant Total Addressable Opportunity for Real Estate Outsourcing Services

\$140B+ Outsourcing Spend Available



1. Market size is as of 2015.

2. CBRE Occupier Leasing Advisory revenue reported in leasing.

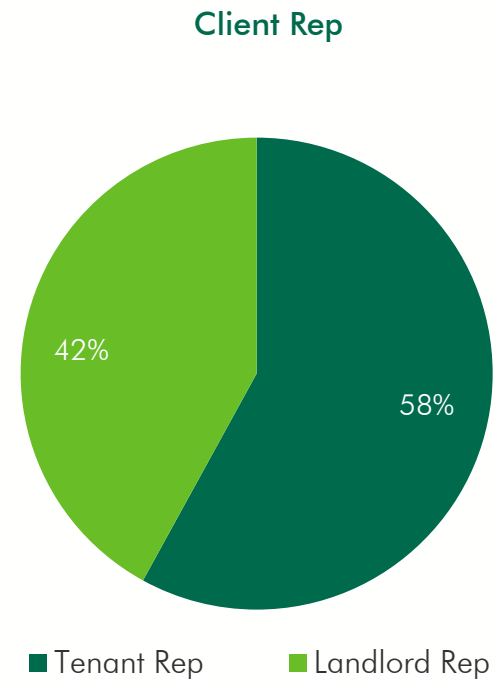
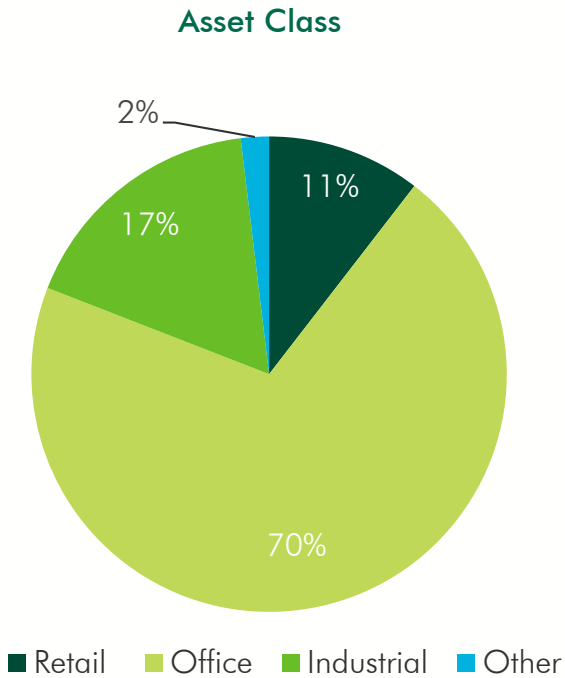
3. CBRE Integrated Facilities Management and Project Management revenue reported in Occupier Outsourcing.

Sources: CBRE and McKinsey analysis; Frost & Sullivan (Global IFM Market, March 2015); KPMG REFM Pulse Report (2015), Engineering News Record's Program Management Report (2015), Morningstar's CRE services report (2014), Emerson Power, the Uptime Institute, CoStar, IBIS World Project Management Report (2015)

## U.S. Leasing

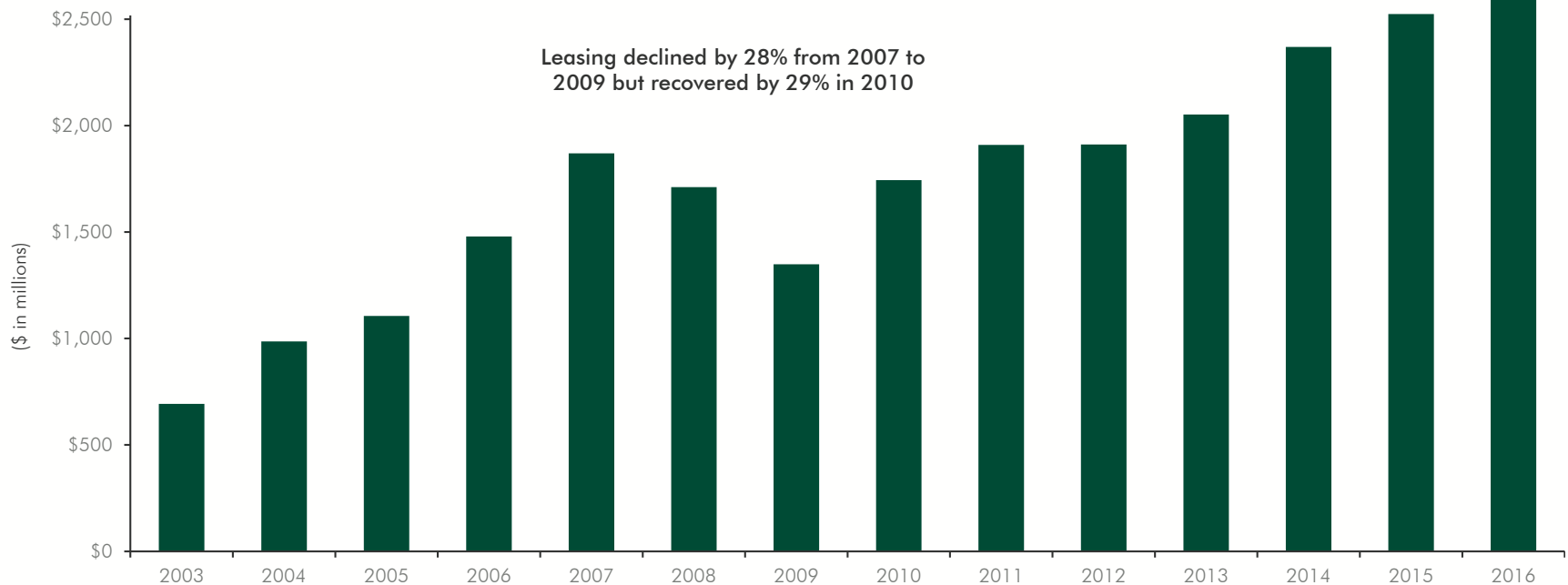
Largely Recurring Business Over Time<sup>1</sup> With Increasing Market Share

2016 CBRE U.S. Leasing Volume - \$82 billion



## Commercial Real Estate Leasing – Largely Recurring Over Time<sup>1</sup>

- Leasing commissions occur when leases expire (tenants renew or move)
- Long-term growth determined by employment growth and market share
- Leasing activity is deferred but not lost during a recession



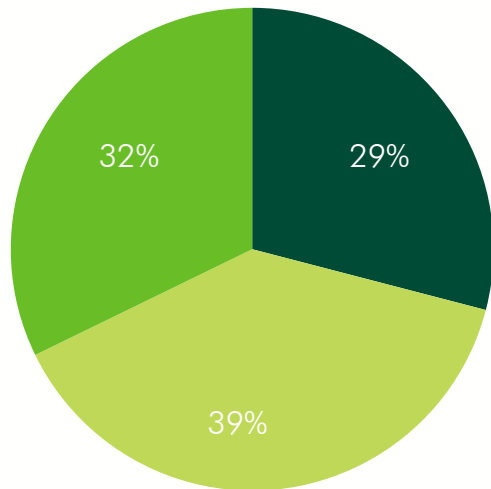
See slide 40 for footnotes

# U.S. Property Sales

Highly Diverse Business Across Transaction Size and Asset Class

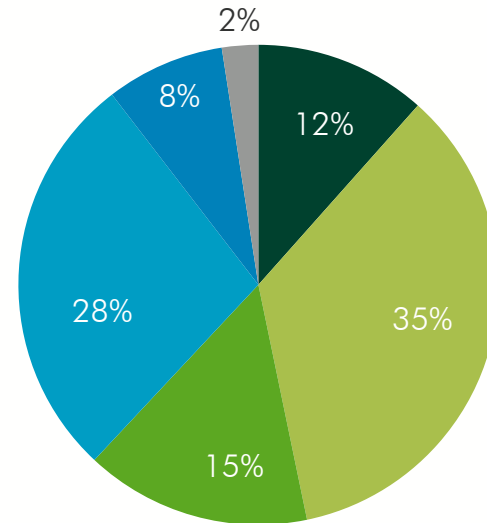
## 2016 CBRE U.S. Sales Transactions

Transaction Value  
\$110B



■ Under \$25M ■ \$25-\$100M ■ \$100M+

Asset Class  
(based on value)



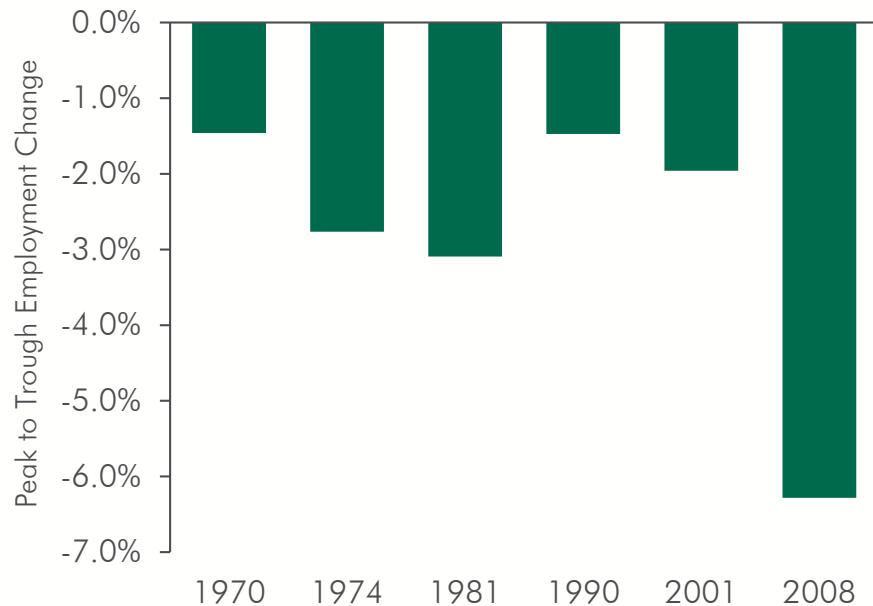
■ Retail ■ Office  
■ Industrial ■ Multi-Housing  
■ Land ■ Other



## Historical Perspective on Economic Cycle

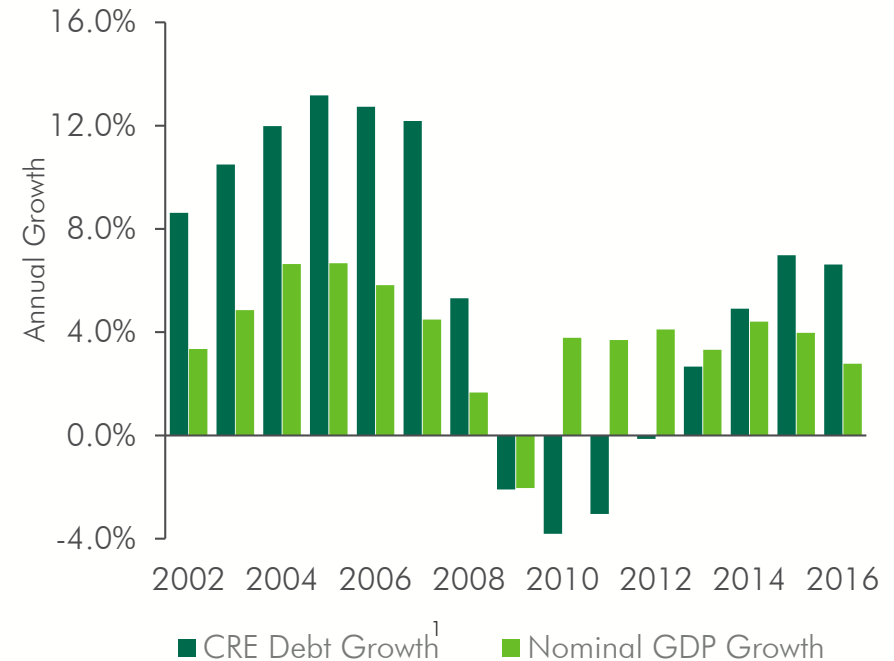
The financial crisis was unusually severe – recovery appears to be unusually slow & long

### The Financial Crisis was Unusually Severe



Source: U.S. BLS

### Commercial Property Had Unusually High Leverage Into the Financial Crisis



Source: Federal Reserve, U.S. BEA

See slide 41 for footnotes

## Non-GAAP financial measures

---

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

- I. fee revenue
- II. contractual fee revenue
- III. net income attributable to CBRE Group, Inc., as adjusted (which we also refer to as “adjusted net income”)
- IV. 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”)
- V. EBITDA and 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 Occupier Outsourcing and Property Management business lines 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 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, EBITDA 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 EBITDA and adjusted EBITDA—the effects of financings and income tax and the accounting effects of capital spending. All of these measures may vary for different companies for reasons unrelated to overall operating performance. In the case of EBITDA and adjusted EBITDA, these measures are not intended to be measures of free cash flow for our management’s discretionary use because they do not consider cash requirements such as tax and debt service payments. The EBITDA and adjusted EBITDA measures 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

	September 30, 2017	December 31, 2016	December 31, 2011
(\$ in millions)			
Cash <sup>1</sup>	\$ 862	\$ 689	\$ 885
Revolving credit facility	-	-	45
Senior term loans <sup>2</sup>	746	744	1,684
Senior notes <sup>2</sup>	1,806	1,803	789
Other debt <sup>3,4</sup>	-	-	13
<b>Total debt</b>	<b>\$ 2,552</b>	<b>\$ 2,547</b>	<b>\$ 2,531</b>
<b>Total net debt<sup>5</sup></b>	<b>\$ 1,690</b>	<b>\$ 1,858</b>	<b>\$ 1,646</b>
TTM Adjusted EBITDA <sup>6</sup>	\$ 1,696	\$ 1,561	\$ 803
<b>Net debt to TTM Adjusted EBITDA</b>	<b>1.0x</b>	<b>1.2x</b>	<b>2.0x</b>

1. Excludes \$93.6 million, \$73.3 million and \$208.1 million of cash in consolidated funds and other entities not available for company use at September 30, 2017, December 31, 2016 and December 31, 2011, respectively.
2. Outstanding amount is reflected net of unamortized debt issuance costs.
3. Excludes \$1,416.3 million, \$1,254.7 million and \$713.4 million of warehouse facilities for loans originated on behalf of the FHA and other government sponsored enterprises outstanding at September 30, 2017, December 31, 2016 and December 31, 2011, 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 \$17.4 million, \$22.7 million and \$359.3 million at September 30, 2017, December 31, 2016 and December 31, 2011, 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) certain carried interest compensation reversal to align with the timing of associated revenue, write-down of impaired assets, cost-elimination expenses as well as integration and other costs associated with acquisitions.

## Reconciliation of Adjusted EBITDA to EBITDA to Net Income

(\$ in millions)	Twelve Months Ended				
	September 30, 2017	December 31, 2016	December 31, 2011 <sup>(1)</sup>	December 31, 2006	December 31, 1997
Adjusted EBITDA	\$ 1,695.9	\$ 1,561.0	\$ 802.6	\$ 661.1	\$ 90.1
Adjustments:					
Integration and other costs related to acquisitions	79.6	125.7	68.8	7.6	-
Cost-elimination expenses	-	78.5	31.1	-	-
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue <sup>2</sup>	(21.9)	(15.6)	-	-	-
Write-down of impaired assets	-	-	9.4	-	-
Merger-related and other non-recurring costs	-	-	-	-	13.8
EBITDA	1,638.2	1,372.4	693.3	653.5	76.3
Add:					
Interest income	9.5	8.1	9.4	9.8	2.6
Less:					
Depreciation and amortization	393.9	366.9	116.9	67.6	18.1
Interest expense	139.8	144.9	153.5	45.0	15.8
Write-off of financing costs on extinguished debt	-	-	-	33.8	-
Provision for income taxes	326.9	296.7	193.1	198.3	20.6
Net income attributable to CBRE Group, Inc.	\$ 787.1	\$ 572.0	\$ 239.2	\$ 318.6	\$ 24.4

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.

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

	Twelve Months Ended December 31,					
	2016	2015	2014	2013	2012	2011
(\$ in millions, except per share amounts)						
Net income attributable to CBRE Group, Inc.	\$ 572.0	\$ 547.1	\$ 484.5	\$ 316.5	\$ 315.6	\$ 239.2
Integration and other costs related to acquisitions	125.7	48.9	-	12.6	39.2	68.8
Amortization expense related to certain intangible assets attributable to acquisitions	111.1	86.6	66.1	29.4	37.2	15.3
Cost-elimination expenses	78.5	40.4	-	17.6	17.6	31.1
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue	(15.6)	26.1	23.8	9.2	-	-
Write-off of financing costs on extinguished debt	-	2.7	23.1	56.3	-	-
Goodwill and other non-amortizable intangible asset impairment	-	-	-	98.1	19.8	-
Write-down of impaired assets	-	-	-	-	-	9.4
Tax impact of adjusted items	(93.2)	(62.6)	(36.4)	(65.4)	(30.0)	(29.3)
Adjusted net income	\$ 778.5	\$ 689.2	561.1	\$ 474.3	\$ 399.4	\$ 334.5
Adjusted diluted earnings per share	\$ 2.30	\$ 2.05	\$ 1.68	\$ 1.43	\$ 1.22	\$ 1.03
Weighted average shares outstanding for diluted income per share	338,424,563	336,414,856	334,171,509	331,762,854	327,044,145	323,723,755

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

	Twelve Months Ended September 30,		
(\$ in millions)	2017 <sup>2</sup>	2016 <sup>2</sup>	
Occupier Outsourcing revenue <sup>1</sup>	\$ 6,436.9	\$ 6,036.1	
Less:			
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	4,034.3	3,784.1	
Occupier Outsourcing fee revenue <sup>1</sup>	\$ 2,402.6	\$ 2,252.0	
Property Management revenue <sup>1</sup>	\$ 1,100.9	\$ 1,039.0	
Less:			
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	572.9	538.1	
Property Management fee revenue <sup>1</sup>	\$ 528.0	\$ 500.9	
	Twelve Months Ended		
	September 30, 2017 <sup>2</sup>	September 30, 2016 <sup>2</sup>	December 31, 2006
Consolidated revenue	\$ 13,697.2	\$ 12,948.0	\$ 4,032.0
Less:			
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	4,607.2	4,322.2	289.7
Consolidated fee revenue	\$ 9,090.0	\$ 8,625.8	\$ 3,742.3
Less:			
Non-contractual fee revenue	5,123.3	4,834.6	2,924.3
Contractual fee revenue	\$ 3,966.7	\$ 3,791.2	\$ 818.0



1. Occupier Outsourcing and Property Management revenue excludes associated leasing and sales revenue, most of which is contractual.

2. Certain adjustments have been made to 2016 fee revenue to conform with current-year presentation.

## Footnotes

---

NOTE: Local currency percent changes versus prior year are non-GAAP financial measures noted on slide 28. These percent changes are calculated by comparing current year results versus prior year results, in each case at prior year exchange rates.

### Slide 3

1. Property and corporate facilities under management as of December 31, 2016; 7% of this square footage is managed by affiliates.
2. As of December 31, 2016, includes affiliates.
3. Assets Under Management (AUM) as of September 30, 2017.

### Slide 4

1. Other includes Development Services revenue (1%) and Other revenue (1%).
2. Capital Markets includes Sales revenue (20%) and Commercial Mortgage Brokerage (excluding Loan Servicing) revenue (4%).
3. Contractual Sources include Occupier Outsourcing and Property Management revenue (32%; excludes associated sales and lease revenues, most of which are contractual), Global Investment Management revenue (4%) Valuation revenue (6%) and Loan Servicing (2%).
4. Fee Revenue is gross revenue less client reimbursed costs largely associated with our employees that are dedicated to client facilities and subcontracted vendor work performed for clients. Certain adjustments have been made to 2016 fee revenue to conform with current-year presentation.
5. Fee revenue includes Loan Servicing within Contractual Sources, consistent with the fee revenue disclosure seen on slide 28.

### Slide 5

1. Other includes Development Services revenue (1% in both 2006 and TTM Q3 2017) and Other revenue (1% in both 2006 and TTM Q3 2017).
2. Capital Markets includes Sales revenue (33% in 2006 and 20% in TTM Q3 2017) and Commercial Mortgage Brokerage (excluding Loan Servicing) revenue (4% in both 2006 and TTM Q3 2017).
3. Contractual Sources include Occupier Outsourcing and Property Management revenue (7% in 2006 and 32% in TTM Q3 2017; excludes associated sales and lease revenues, most of which are contractual), Global Investment Management revenue (6% in 2006 and 4% in TTM Q3 2017) Valuation revenue (8% in 2006 and 6% in TTM Q3 2017) and Loan Servicing (0.5% in 2006 and 2% in TTM Q3 2017).
4. Fee Revenue is gross revenue less client reimbursed costs largely associated with our employees that are dedicated to client facilities and subcontracted vendor work performed for clients. Certain adjustments have been made to 2016 fee revenue to conform with current-year presentation.
5. On a GAAP revenue basis (as opposed to a fee revenue basis) contractual plus leasing revenues are 64% and 83% of GAAP revenues in 2006 and TTM Q3 2017, respectively.
6. Fee revenue includes Loan Servicing within Contractual Sources, consistent with the fee revenue disclosure seen on slide 28.

## Footnotes

---

### Slide 6

1. 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.
2. Adjusted EPS excludes the effect of select charges from GAAP EPS as well as adjusts the provision for income taxes for such charges. Adjustments during the periods presented included amortization expense related to certain intangible assets attributable to acquisitions, cost-elimination expenses, integration and other costs related to acquisitions, and certain carried interest incentive compensation (reversal) expense to align with the timing of associated revenue, write-off of financing costs on extinguished debt, goodwill and other non-amortizable intangible asset impairment, and the write-down of other impaired assets.

### Slide 8

1. Adjusted EBITDA excludes (from EBITDA) certain carried interest incentive compensation (reversal) expense to align with the timing of associated revenue, cost-elimination expenses, integration and other costs related to acquisitions, and merger-related and other non-recurring charges.

### Slide 19

1. Historical revenue for Occupier Outsourcing line of business (formerly Global Corporate Services or GCS, now known as Global Workplace Solutions) excludes associated sales and leasing revenue, most of which is contractual.
2. 2015 revenue includes four months of contribution from the Global Workplace Solutions business acquired on September 1, 2015.
3. Per International Association of Outsourcing Professionals (IAOP).

### Slide 20

1. Property Management (also known as Asset Services) revenue excludes associated sales and leasing revenue, most of which is contractual.
2. 11% of this square footage is managed by affiliates.

### Slide 21

1. Excludes global securities business.
2. As of September 30, 2017.

### Slide 23, 30, and 31

1. 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.

### Slide 25

1. Activity includes loan originations and loan sales, and affiliate loan originations.
2. As measured in dollar value loaned.



## Footnotes

---

### Slide 26

1. As of December 31 for each year presented except Q3 2017.
2. In Process figures include Long-Term Operating Assets (LTOA) of \$0.2 billion for Q3 2017, \$0.2 billion for Q4 2016, \$0.1 billion for Q4 2015, \$0.3 billion for Q4 2014 and \$0.9 billion 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 those 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 twelve months out.

### Slide 28

1. Contractual revenue sources include revenue derived from our Occupier Outsourcing, Property Management, Investment Management, Valuation and Loan Servicing businesses. As noted above, we regard leasing revenue as largely recurring over time.
2. Occupier Outsourcing and Property Management revenue excludes associated leasing and sales revenue, most of which is contractual.
3. Commercial Mortgage Brokerage revenue excludes revenue from Loan Servicing, which is reflected in contractual revenue sources.
4. 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.
5. Certain adjustments have been made to 2016 fee revenue to conform with current-year presentation.

### Slide 33

1. CRE Debt defined as total US outstanding commercial mortgages per the Board of Governors of the Federal Reserve System.

## Footnotes

	Q3 2017	Q4 2006	15-Year	
			Peak	Trough
Transaction Velocity <sup>1</sup> % of Peak	67%	78%	100%	18%
US Office Cap Rates	6.7%	6.9%	7.1%	7.3%
BBB Corp. Bond Yield	3.5%	6.0%	9.4%	3.3%
Cap Rate Spread <sup>2</sup>	3.1%	0.8%	-2.3%	3.9%
Commercial Mortgages Outstanding (\$B)	2,684	2,170	2,548	1,342
US Nominal GDP (\$B)	19,250	14,066	14,384	11,104
CRE Leverage <sup>3</sup> (CRE Mortgages as % of U.S. GDP)	13.9%	15.4%	17.7%	12.1%
Total US Office Completions (sf in M)	47.2	54.6	73.5	6.5
Total US Office Stock (sf in M)	3,787.1	3,395.4	3,226.8	3,621.1
Supply <sup>4</sup> (Completions as % of Total Stock)	1.2%	1.6%	2.3%	0.2%
US REIT Index Dividend Yield	4.2%	3.7%	5.4%	6.6%
BBB Corp. Bond Yield	3.5%	6.0%	7.8%	4.8%
REIT Valuation <sup>5</sup> (Dividend Yield - Bond Yield)	0.7%	-2.3%	-2.4%	1.8%
US Office Occupancy Rate <sup>6</sup>	87.1%	87.4%	87.6%	83.0%
US Office Net Asking Rent Growth <sup>7</sup> TTM	2.9%	6.6%	8.8%	-8.8%
S&P 500 Forward Earnings Yield	5.6%	6.7%	5.5%	9.7%
10 Yr. US Treasury	2.3%	4.7%	4.3%	1.9%
Stock Market Valuation <sup>8</sup> (S&P Yield - 10 Yr.)	3.3%	2.0%	1.3%	7.7%
2 Yr. US Treasury	1.5%	4.8%	4.8%	1.0%
10 Yr. US Treasury	2.3%	4.7%	4.7%	3.8%
Yield Curve <sup>9</sup> (10 Yr. - 2 Yr.)	0.9%	-0.1%	-0.1%	2.8%

Slide 15 – 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.

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