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# CBRE GROUP, INC.

## THE GLOBAL MARKET LEADER IN COMMERCIAL REAL ESTATE SERVICES

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June 2018

**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

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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 first quarter earnings release, furnished on Form 8-K 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.

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# The Global Leader in an Expanding Industry

Integrated services to commercial real estate investors and occupiers



## Scale And Diversity

- 5.5 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 2017

## Market Leadership

- **#1** Leasing
- **#1** Property Sales
- **#1** Outsourcing
- **#1** Appraisal & Valuation
- **\$103** billion AUM<sup>3</sup>

## Leading Global Brand

- Lipsey's **#1** CRE brand for 17 consecutive years
- One of the World's Most Ethical Companies awarded by Ethisphere Institute for four straight years
- S&P 500 company since 2006
- Named a FORTUNE Most Admired Real Estate Company for six consecutive years

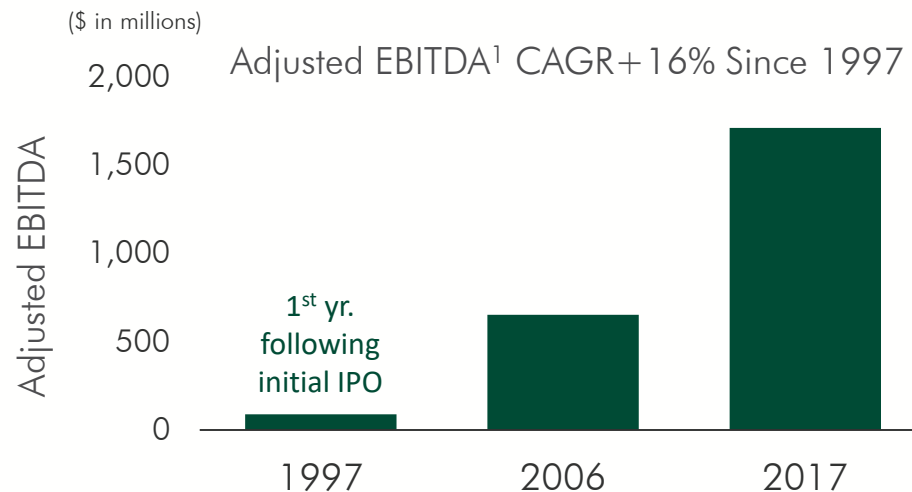
See slide 48 for footnotes

## CBRE is Positioned for Long-Term Growth

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

2. CBRE has:

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



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

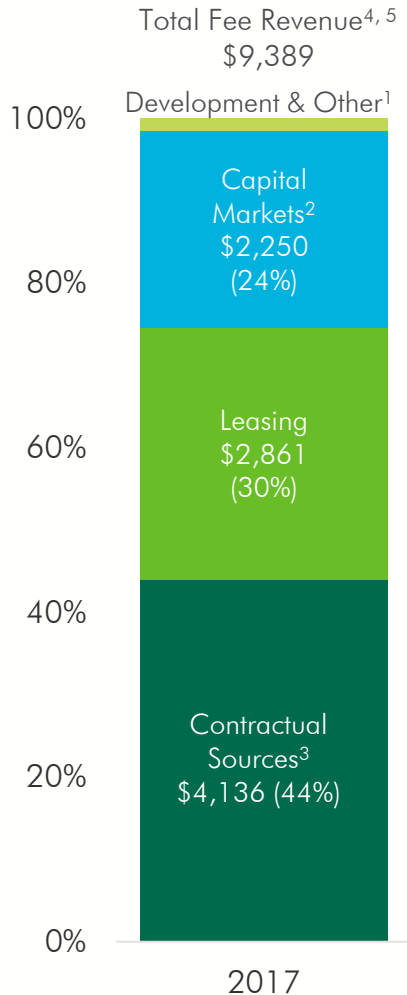
Strategic Investment, Notably M&A and Digital & Tech

Thoughtful, Intensive Cost Management

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# 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 5 billion square feet):**

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

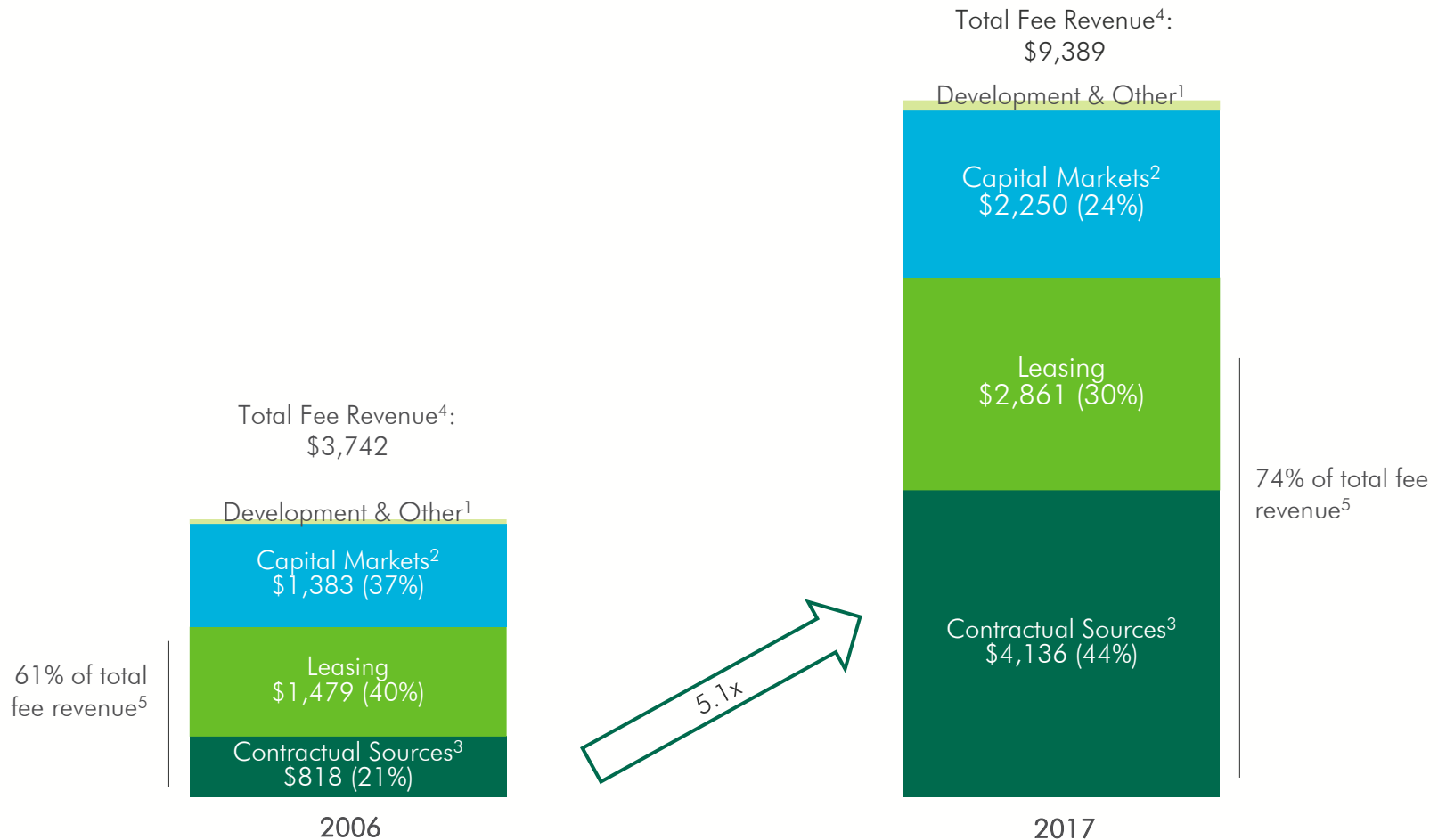
**Investment Management – deploy institutional capital into real estate**

**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

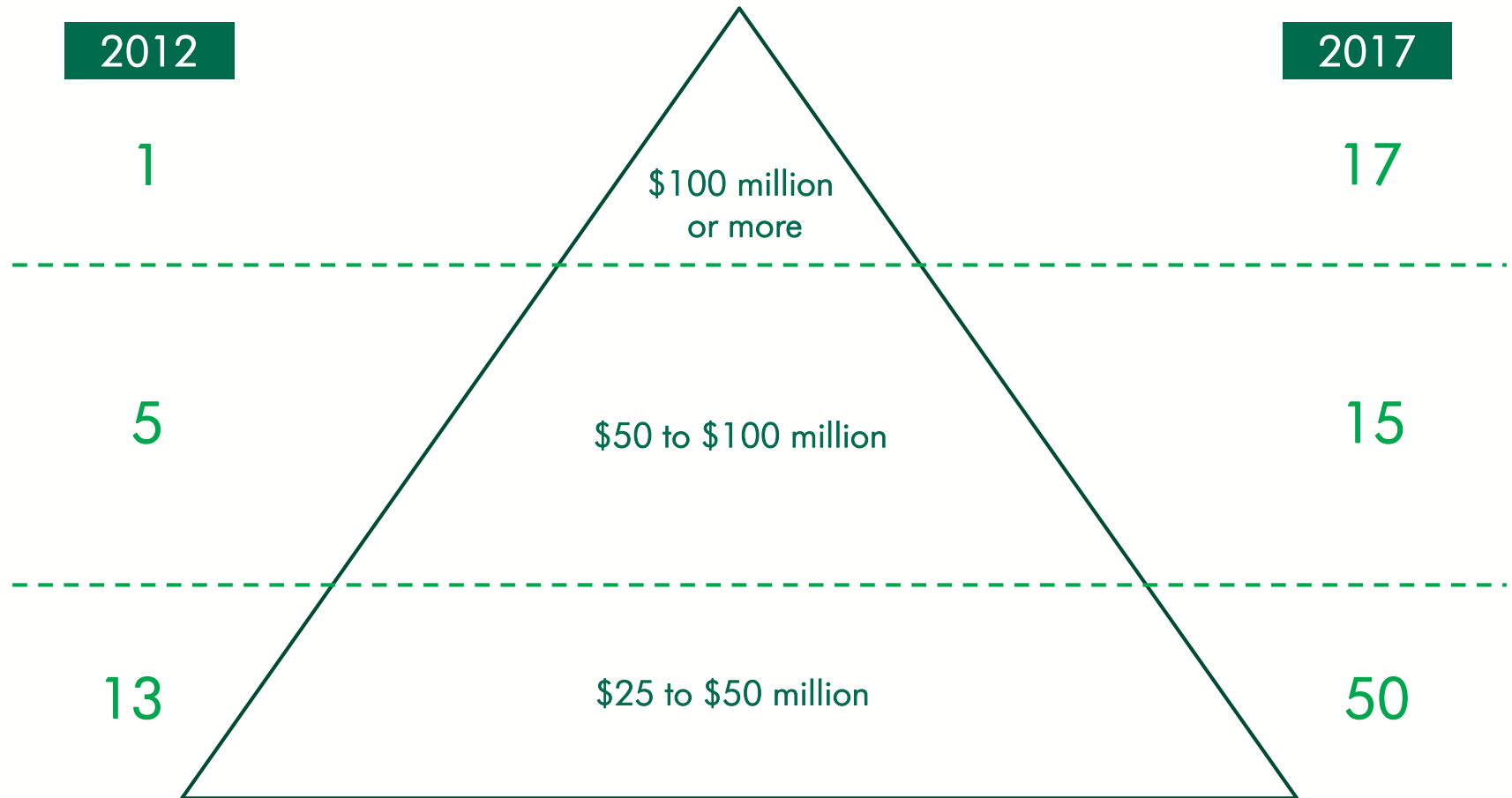


\$ in millions  
(%) – share of total fee revenue<sup>6</sup>

See slide 48 for footnotes

## Client Size Has Grown as CBRE's Capabilities Expanded

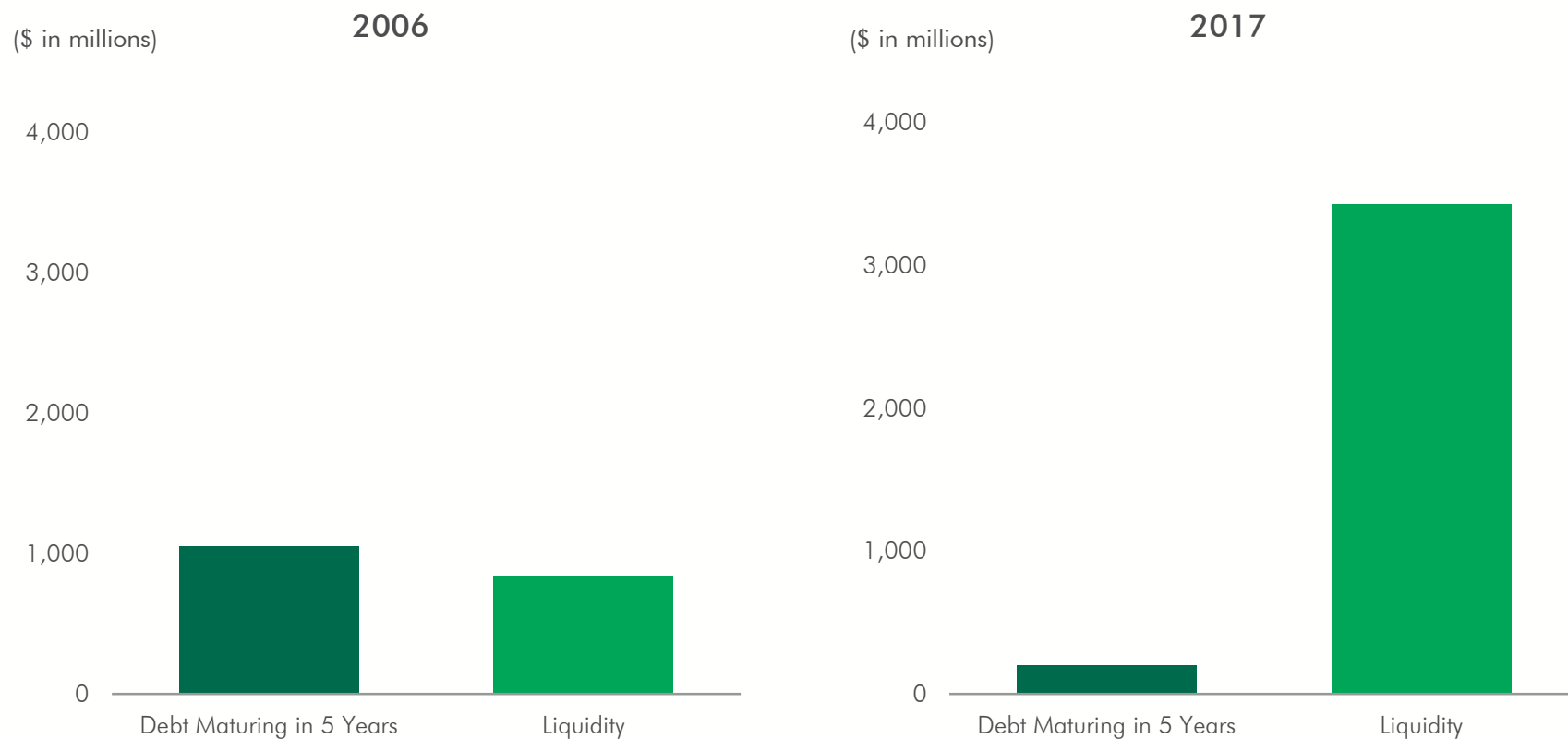
CBRE's Number of Large Clients Has Increased Dramatically as Ability to Service these Clients Has Expanded



*Figures in gross revenue.*



## CBRE's Financial Flexibility Has Improved Dramatically



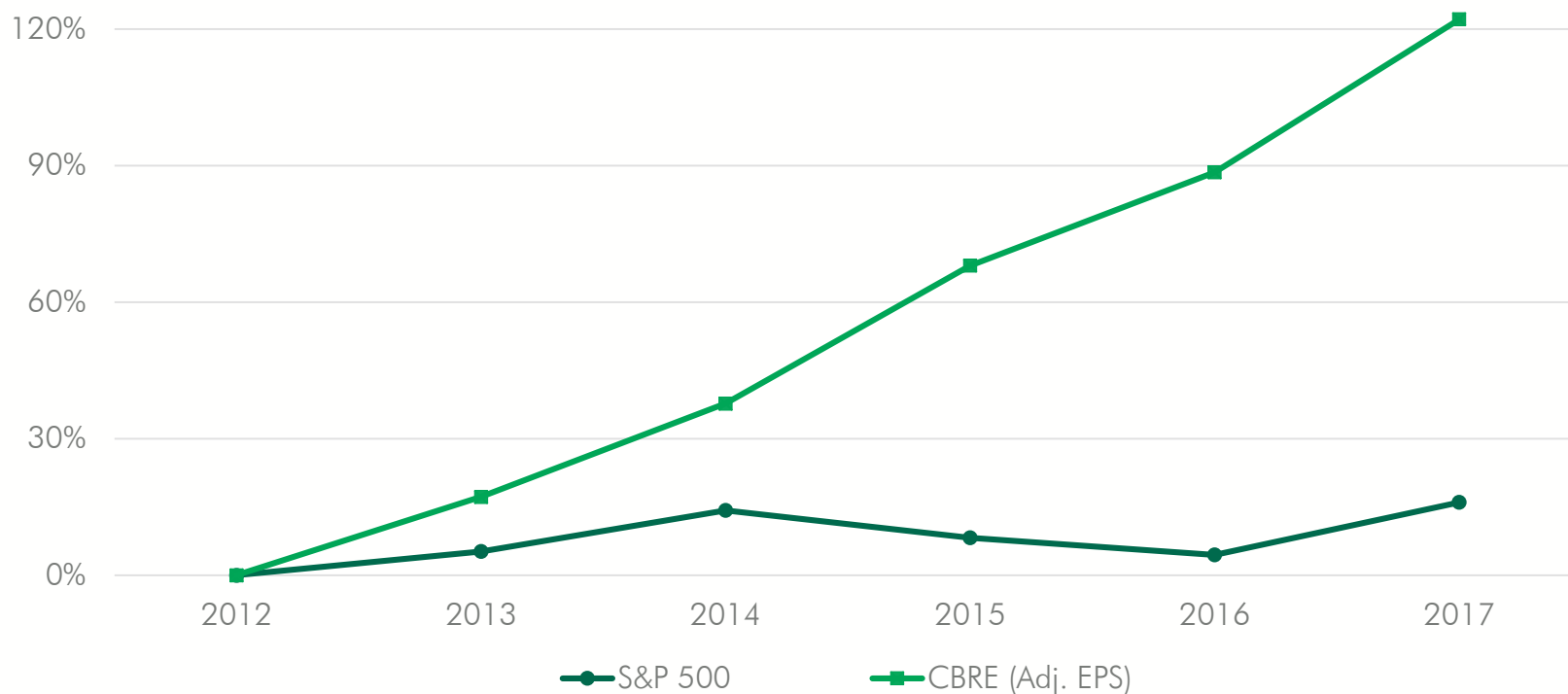
*Note: As of December 31, 2006 and 2017, respectively. Liquidity is defined as cash and cash equivalents plus unused amounts under the revolving credit facility.*

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

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

Leverage ratio<sup>2</sup> declined to 0.8x in 2017 from 1.7x in 2012

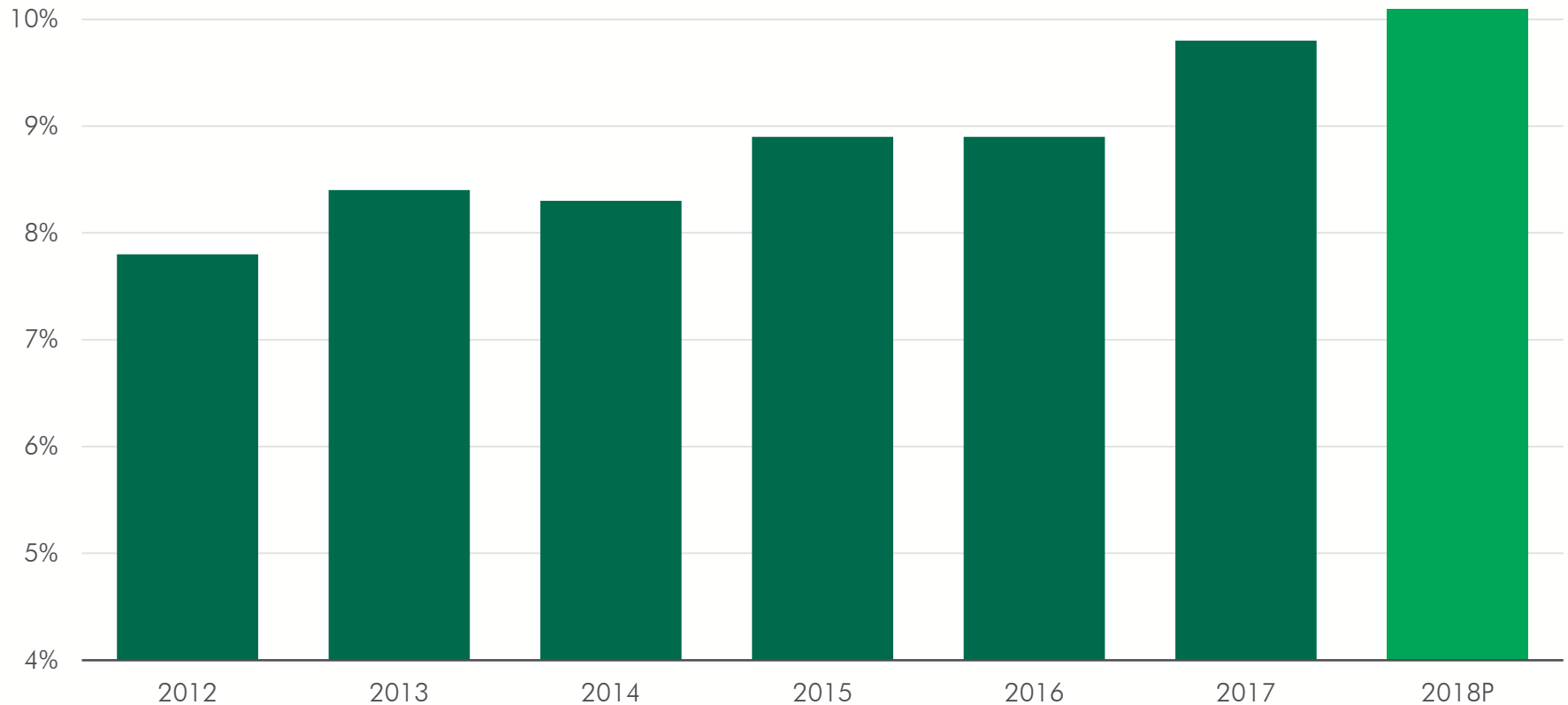
### Cumulative Adjusted EPS Growth – CBRE vs S&P 500



Source: FactSet, Company filings

See slide 49 for footnotes

## CBRE Has Increased Profit Margin While Improving Business Mix



*Note: Profit margin defined as adjusted net income/fee revenue*

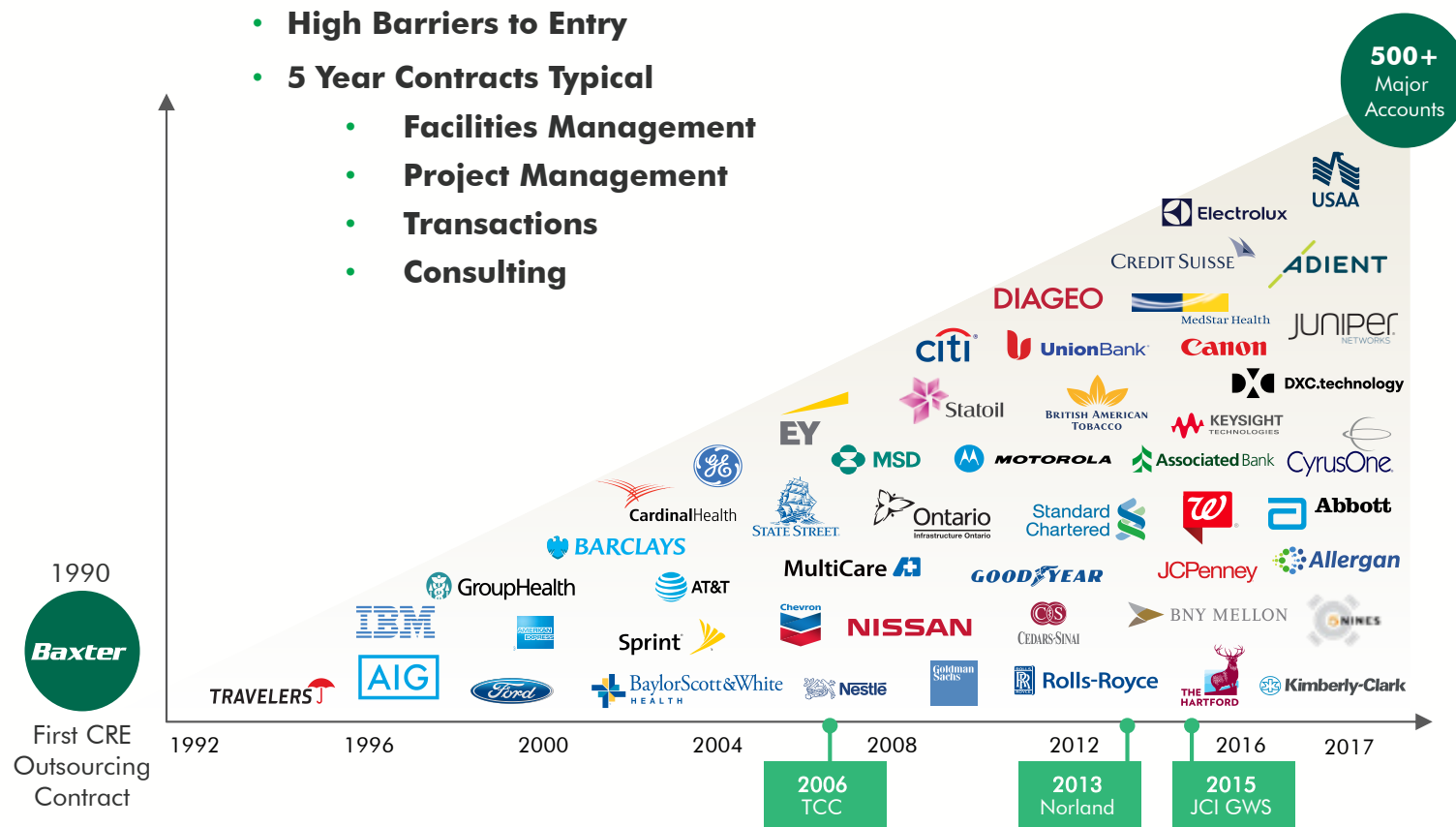
## Three Structural Tailwinds for Commercial Real Estate Services

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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

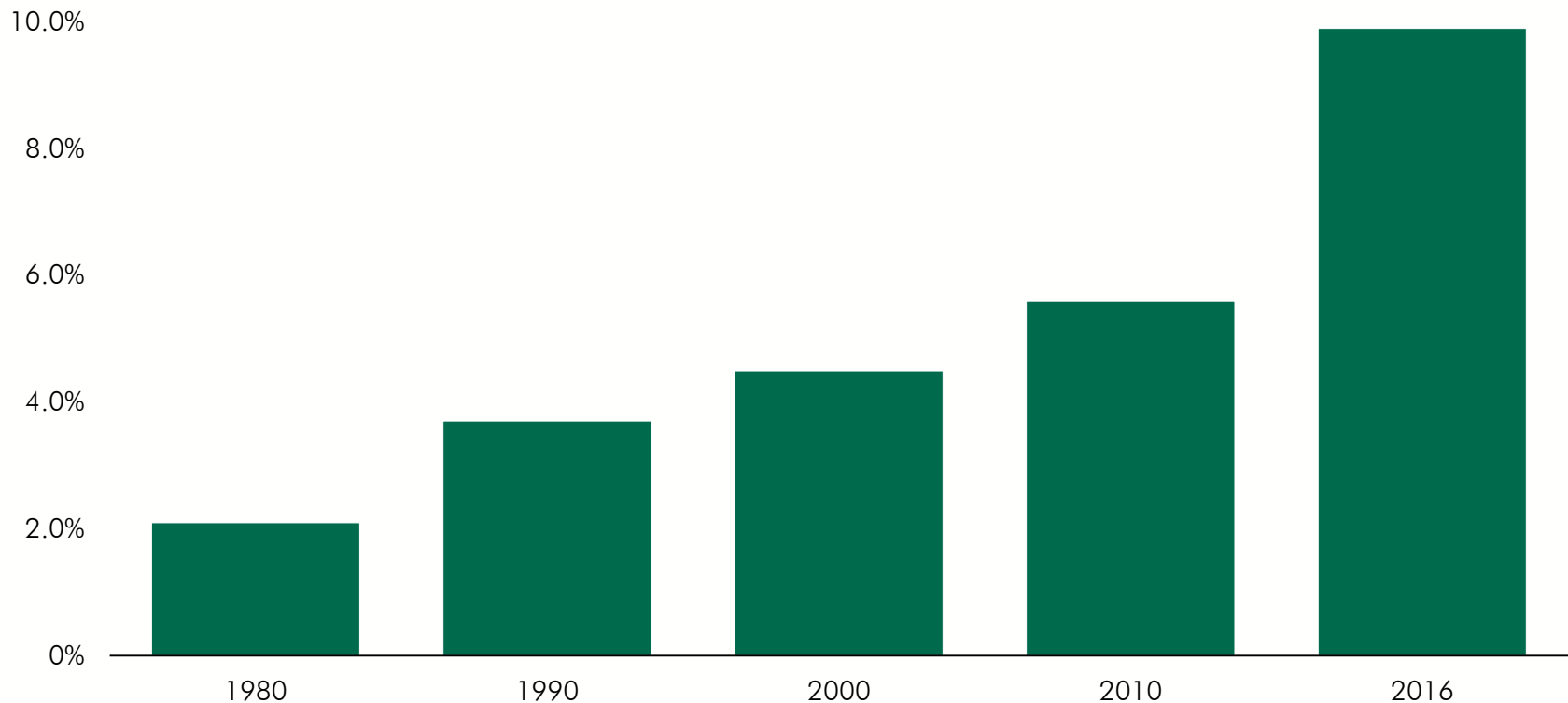
CBRE's market leading position driven by both organic growth and strategic M&A



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

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

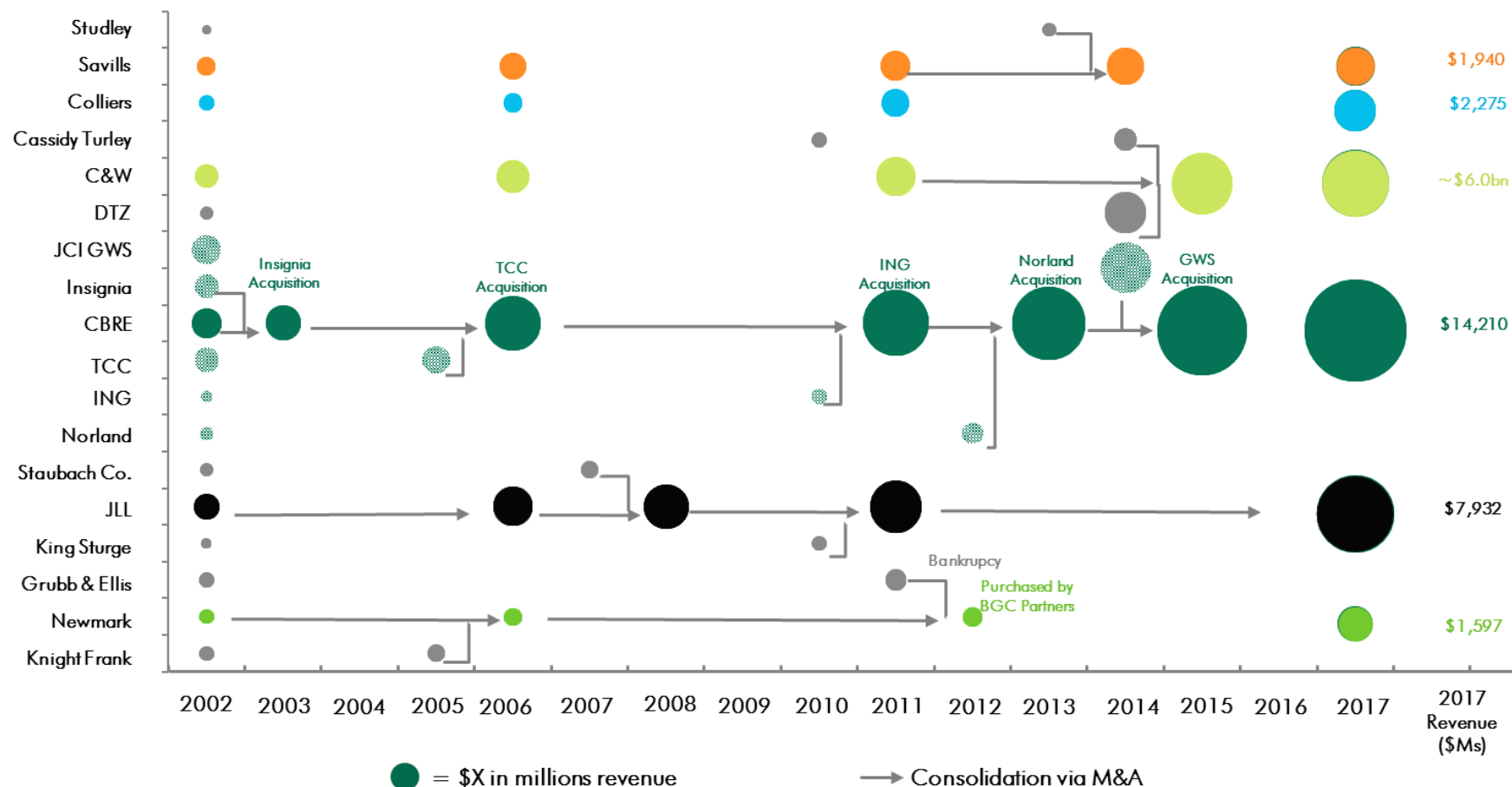
Institutional Asset Allocation to Real Estate has Increased Strongly Over Time



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

## 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.

## We Believe Digital Opportunities Significantly Exceed Disruption Risk

### We Have Conducted a Comprehensive Global Digital & Technology Strategy Review of Opportunities & Risks



Significant research on emerging trends, fact based approach



Breadth and depth of domain expertise, global collaboration



Risk and opportunity assessments for all lines of business and geographies



## 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

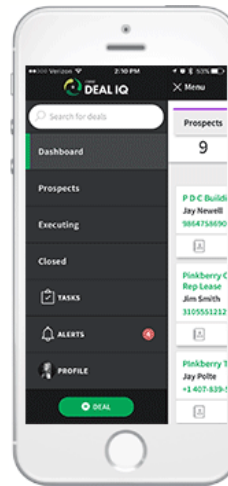
### Sample of CBRE Technology Investments

#### CBRE Floored



SaaS Interactive Creation of 3D Floor Plans and Virtual Environments

#### CBRE Deal IQ



SaaS CRM and Deal Management Platform

#### Forum Analytics



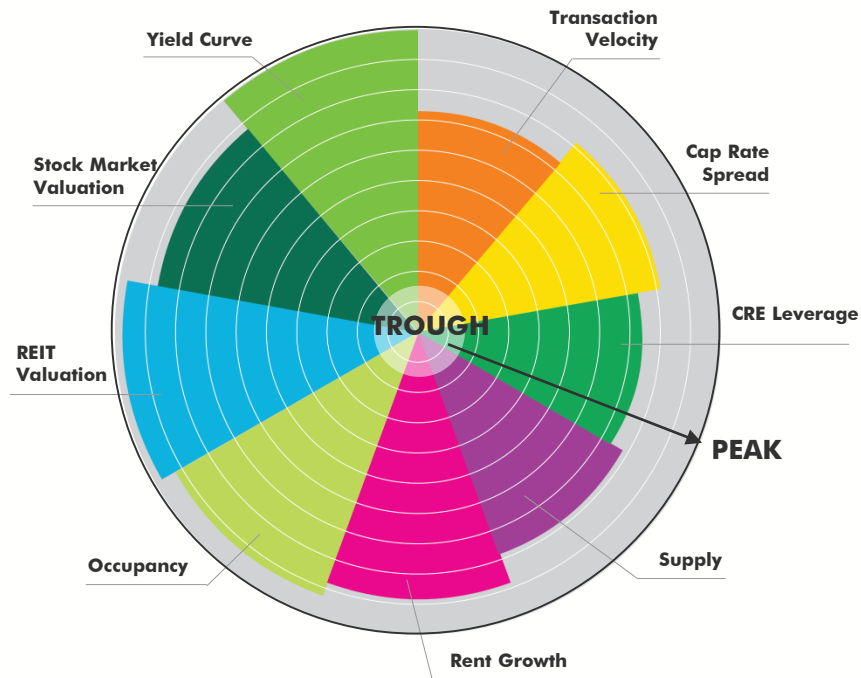
Leading Predictive Analytics Platform

# CBRE Cycle Radar – Markets in Balance

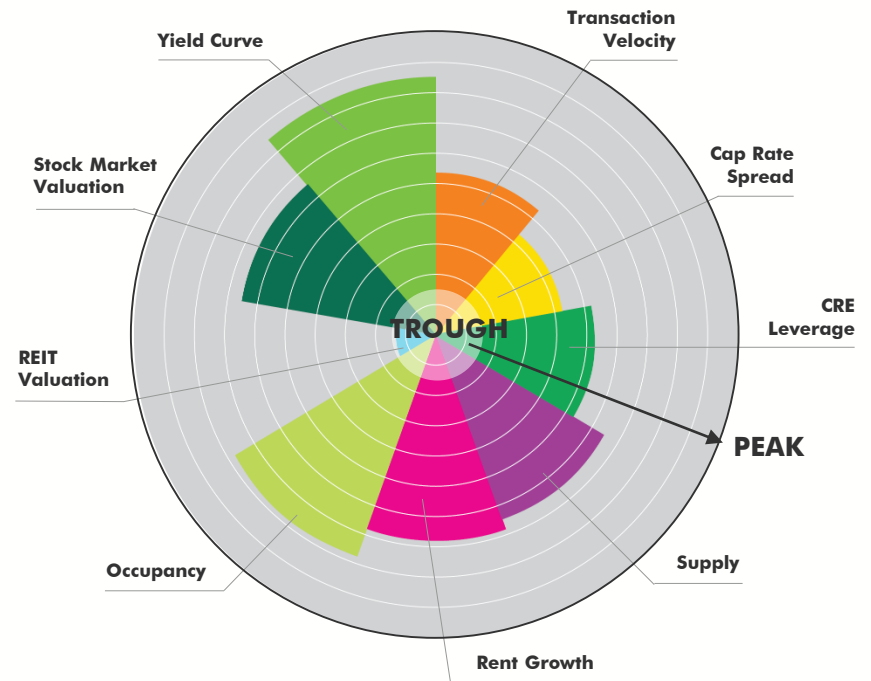
Current measures of economic and CRE cycle suggest an extended cycle from here

Q4 2006

(One Year Prior to Start of Downturn)



Q4 2017



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 51 for footnotes and methodology

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

## CBRE is Positioned for Long-Term Growth

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### 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

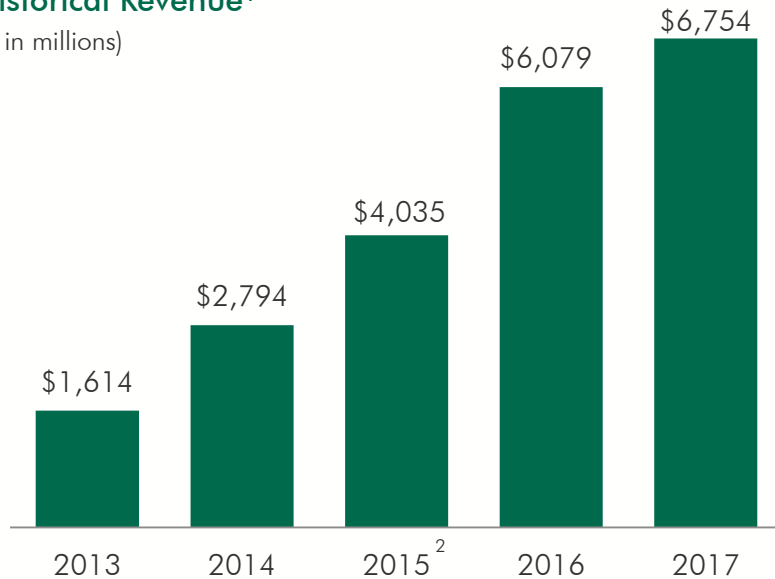
# BUSINESS LINE SLIDES

# Occupier Outsourcing

## Integrated Global Solutions for Occupiers

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

(\$ in millions)



### 2017 Total Contracts

	Q4	FY
New	51	148
Expansions	54	193
Renewals	40	128

See slide 49 for footnotes



### Overview

- Full service offering
  - Facilities Management – approximately 2.4 billion square feet globally as of 12/31/2017
  - 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



Transaction  
Services



Project  
Management

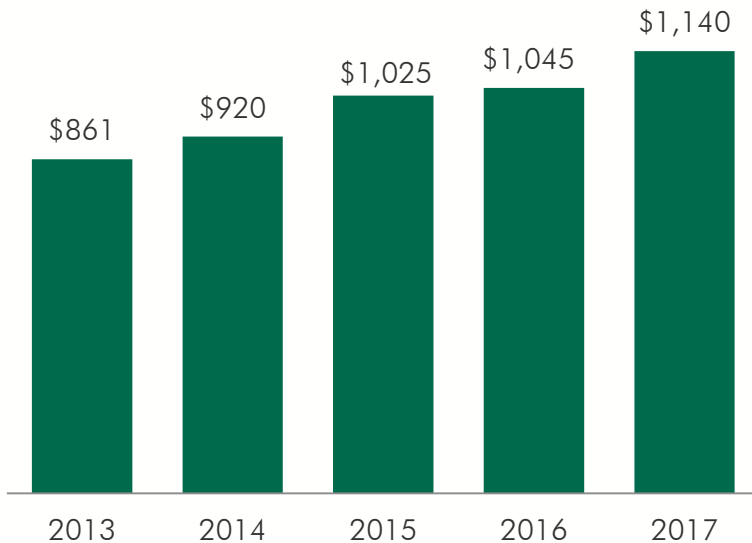


# Property Management

## Optimizing Building Operating Performance for Investors

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

(\$ in millions)



### Overview

- Manages buildings for investors
  - Highly synergistic with property leasing
- Manages approximately 3.1 billion square feet globally as of 12/31/17<sup>2</sup>

### Selected Strategic Accounts



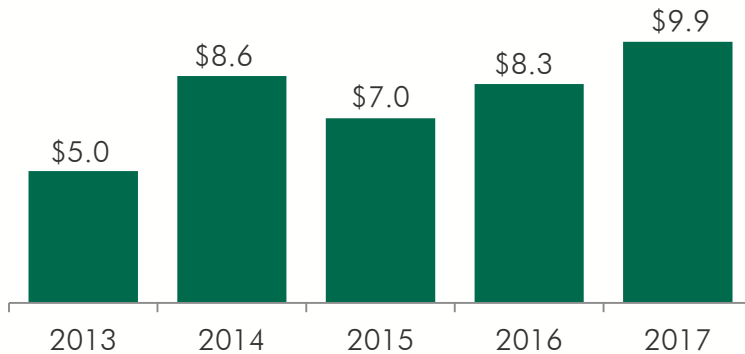
See slide 49 for footnotes

# Investment Management

## Performance Across Risk/Return Spectrum Globally

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

(\$ in billions)

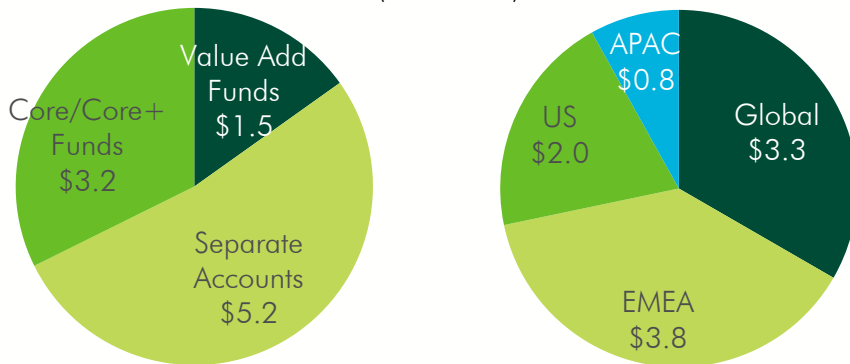


### Overview

- Performance-driven global real estate investment manager
- 45 year track record
- Global platform, 21 countries
- More than 500 institutional clients
- Equity to deploy: approx. \$8,200 million<sup>1,2</sup>
- Co-Investment: \$182.3 million<sup>2</sup>

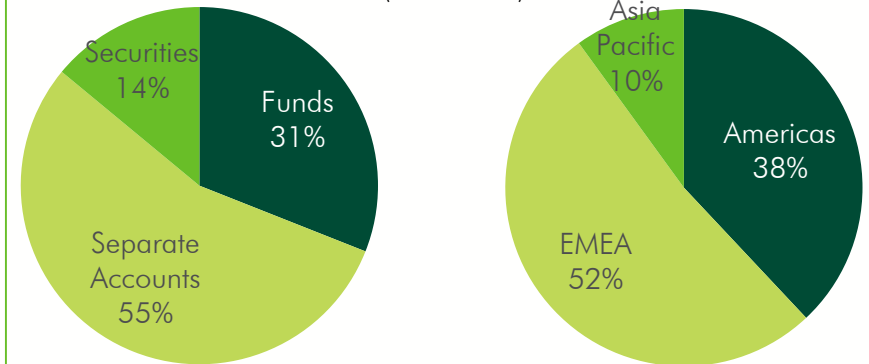
### \$9.9B Capital Raised in 2017<sup>1</sup>

(\$ in billions)



### Assets under Management (AUM)<sup>3</sup> \$103.2B as of 12/31/2017

(\$ in billions)



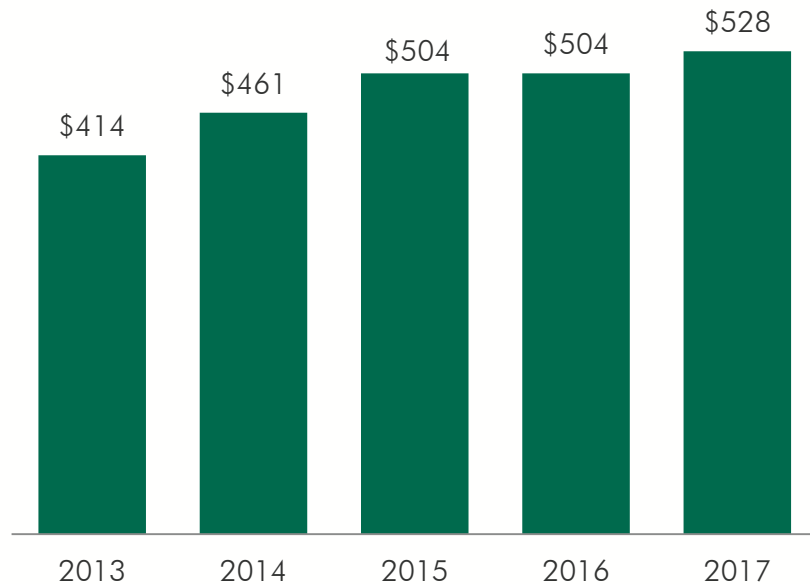
See slide 49 for footnotes

# Appraisal & Valuation

Serving Clients Globally

## Historical Revenue

(\$ in millions)



## Overview

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

## Premier Clients



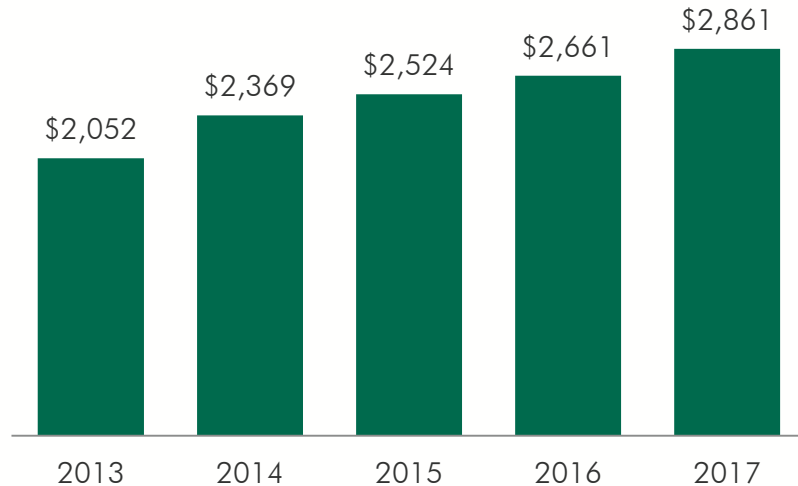


# Leasing

## Strategic Advisory and Execution

### Historical Revenue

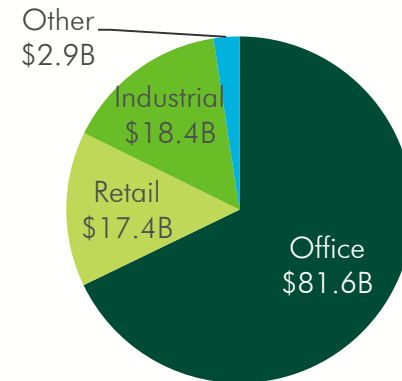
(\$ in millions)



### Overview

- Advise occupiers and investors in executing lease strategies

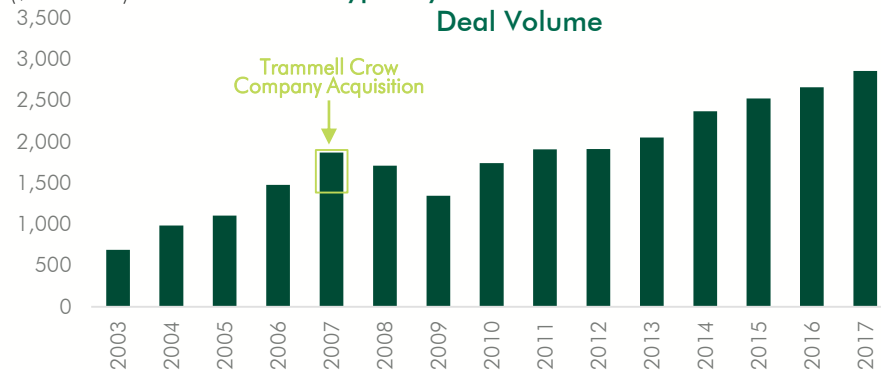
### 2017 CBRE Global Lease Consideration by Property Type



- 2017 US consideration 59% tenant rep/41% landlord rep<sup>1</sup>

### CBRE Leasing Revenue is Largely Recurring Over Time<sup>2</sup> A Recession Typically Causes a Short-Term Deferral of Deal Volume

(\$ in millions)



**CBRE**

See slide 49 for footnotes

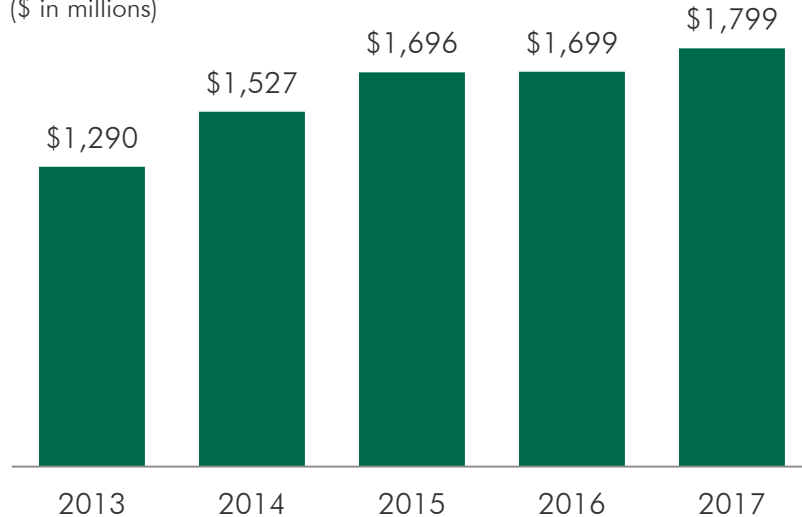
- Leasing commissions occur when leases expire (tenants renew or move)
- Long-term growth determined by employment growth and market share
- Leasing activity is deferred but not lost during a recession
- CBRE leasing revenue declined by 28% from 2007 to 2009 but recovered by 29% in 2010

# Property Sales

## Insight and Execution Across Markets & Property Types

### Historical Revenue

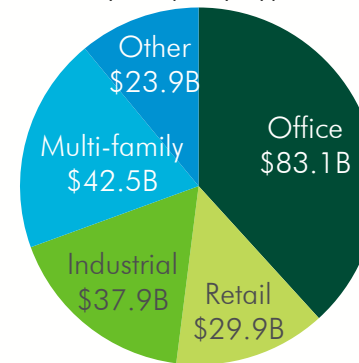
(\$ in millions)



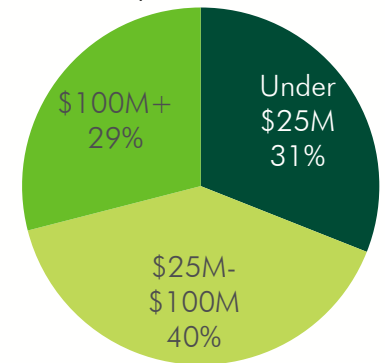
### Overview

- #1 global market share, based on Real Capital Analytics

2017 CBRE Global Consideration by Property Type

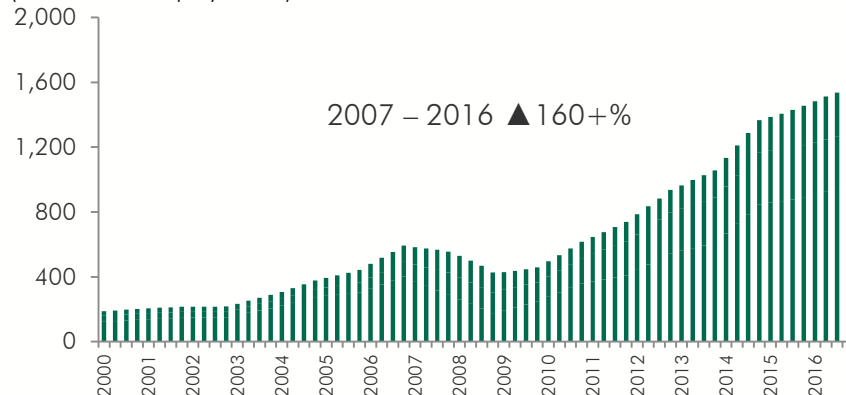


2017 CBRE US Consideration by Deal Size



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

(\$ billions of equity value)



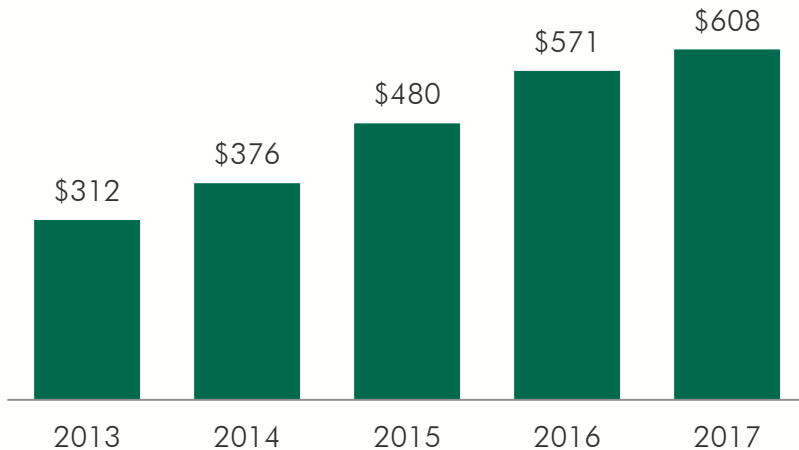
- Private equity firms, REITs and open-end funds are active traders of real estate and account for an increasingly larger portion of the investment market
- Many large, traditional owners do not actively trade
- As a result, transaction volumes should increase over time

# Commercial Mortgage Origination & Servicing

## Premier Debt and Structured Finance Solutions

### Historical Revenue

(\$ in millions)



### Recent Transactions



National Portfolio  
Stonemont Financial  
Group

\$1.1 Billion  
Acquisition Financing



Philadelphia, PA  
Oaktree Capital  
Management

\$157 Million  
Acquisition Financing



Ireland  
Kennedy Wilson

\$140 Million  
Construction Financing

### Overview

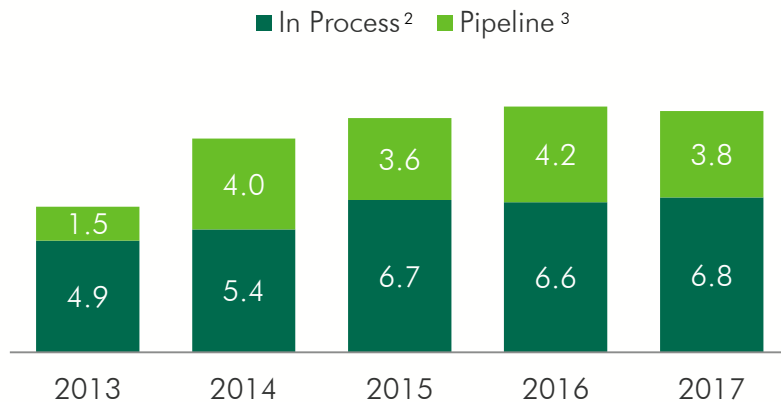
- A leading strategic advisor for debt and structured finance solutions
  - Highly synergistic with property sales
- Key services:
  - Loan origination / debt placement
  - Portfolio loan sales
  - Loan servicing
- \$46.6 billion of global mortgage activity in 2017<sup>1</sup>
- Commercial loan origination with government agencies \$17.9 billion<sup>2</sup> in 2017
- \$174 billion loan servicing portfolio as of 12/31/17

# Development Services

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

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

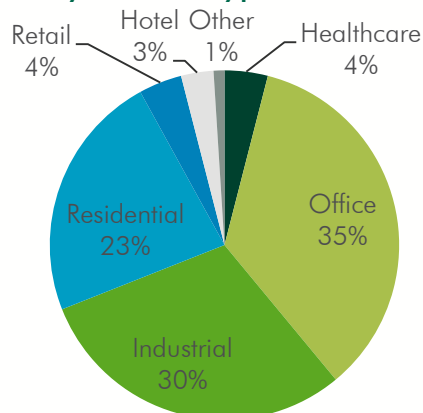
(\$ in billions)



## Overview

- A premier brand in U.S. development
  - 65+ year record of excellence
- Partner with leading institutional capital sources
- Modest capital required from CBRE
  - \$110.7 million of co-investment at the end of 2017
  - \$9.3 million in repayment guarantees on outstanding debt balances at the end of 2017

## 2017 In Process by Product Type



## Recent Projects

### LA Plaza



Los Angeles, CA  
Mixed-use

### Principio Commerce Park



North End, MD  
Industrial

# APPENDIX

## 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

2017	\$ 6,754	\$ 1,140	\$ 378	\$ 528	\$ 157	\$ 2,861	\$ 1,799	\$ 451	\$ 58	\$ 84	\$ 14,210
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#### Fee Revenue<sup>4, 5</sup>

2017	\$ 2,523	\$ 550	\$ 378	\$ 528	\$ 157	\$ 2,861	\$ 1,799	\$ 451	\$ 58	\$ 84	\$ 9,389
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% of Total Fee Revenue	74% of total fee revenue										
	27%	6%	4%	5%	2%	30%	19%	5%	1%	1%	100%

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

USD	▲ 11%	▲ 9%	▲ 2%	▲ 5%	▲ 29%	▲ 8%	▲ 6%	▲ 1%	▲ 2%	▼ -2%	▲ 8%
Local Currency	▲ 12%	▲ 9%	▲ 3%	▲ 4%	▲ 29%	▲ 7%	▲ 5%	▲ 1%	▲ 2%	▼ -2%	▲ 8%

See slide 50 for footnotes

## Q1 2018 Revenue

Contractual revenue & leasing, which is largely recurring over time<sup>1</sup>, is 75% 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	Development Services	Other	Total

#### Gross Revenue

Q1 2018	\$ 2,954	\$ 304	\$ 124	\$ 126	\$ 42	\$ 572	\$ 406	\$ 107	\$ 21	\$ 18	\$ 4,674
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#### Fee Revenue<sup>3</sup>

Q1 2018	\$ 713	\$ 148	\$ 124	\$ 126	\$ 42	\$ 572	\$ 406	\$ 107	\$ 21	\$ 18	\$ 2,277
% of Total Fee Revenue	31%	6%	5%	6%	2%	25%	18%	5%	1%	1%	100%

*75% of total fee revenue* (highlighted in a dashed green oval around the first six categories: Occupier Outsourcing, Property Management, Investment Management, Valuation, Loan Servicing, and Leasing)

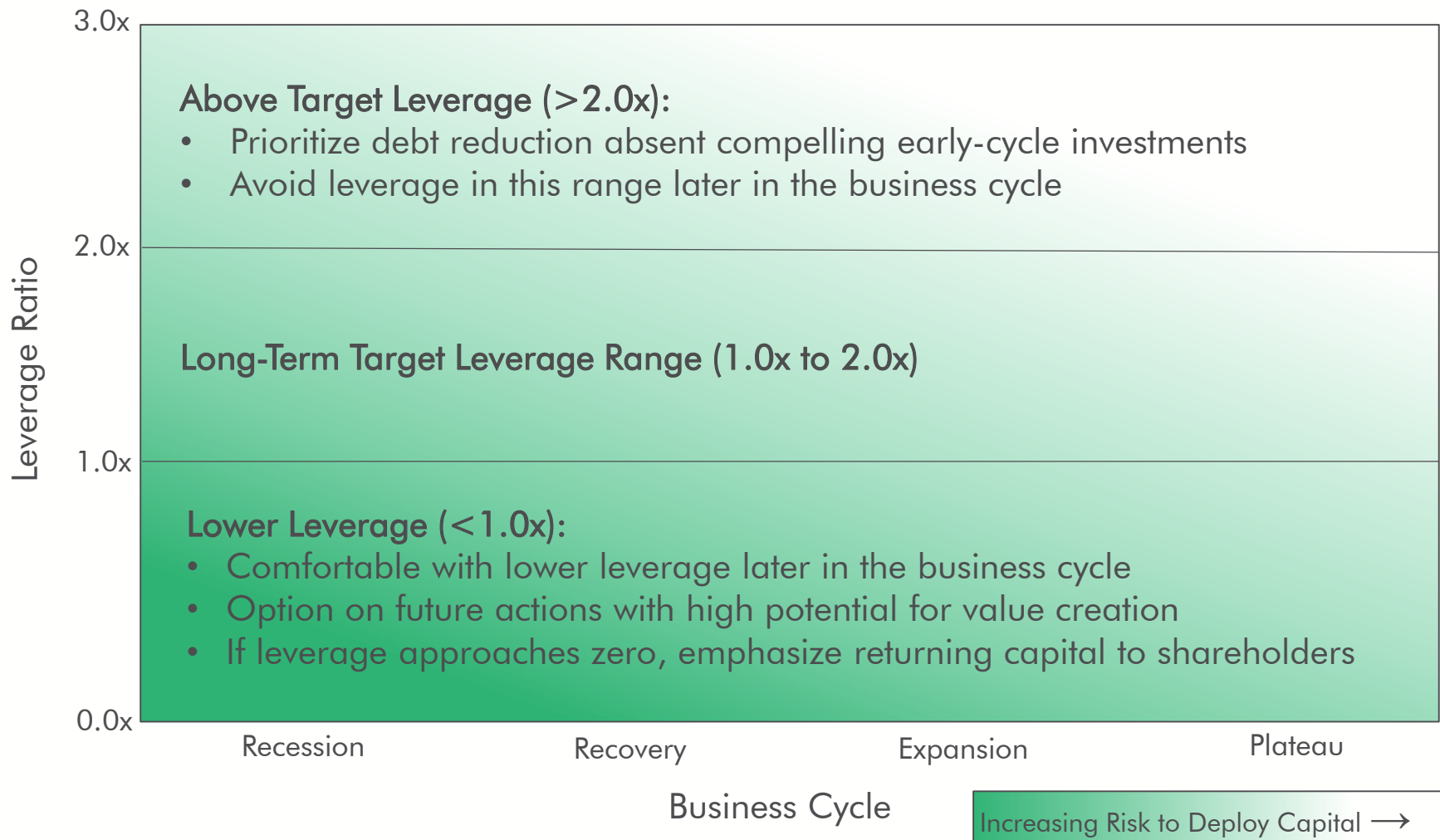
#### Fee Revenue Growth Rate (Change Q1 2018-over- Q1 2017)<sup>4</sup>

USD	▲ 26%	▲ 18%	▲ 38%	▲ 8%	▲ 15%	▲ 8%	▲ 15%	▲ 27%	▲ 83%	▼ -4%	▲ 18%
Local Currency	▲ 18%	▲ 13%	▲ 30%	▲ 3%	▲ 14%	▲ 5%	▲ 11%	▲ 26%	▲ 83%	▼ -8%	▲ 13%

See slide 50 for footnotes

## CBRE Leverage Guideposts

Build Liquidity when Capital is Abundant – Deploy when Scarce

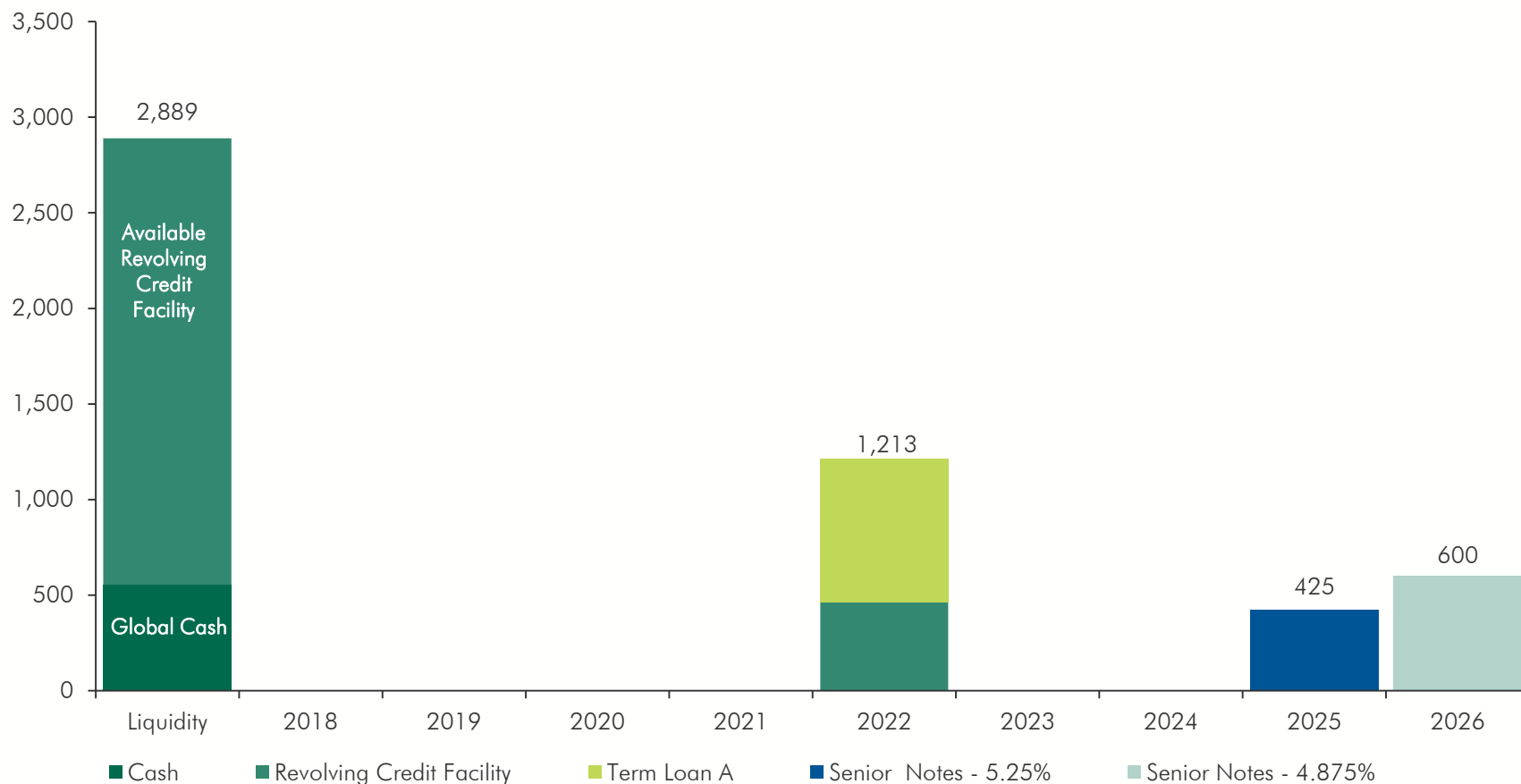




## Mandatory Amortization and Maturity Schedule

(\$ in millions)

As of March 31, 2018<sup>1</sup>



1. \$2,800 million revolving credit facility matures in October 2022. As of March 31, 2018, the revolving credit facility balance was \$463 million.

## Broad Market Leadership Increases Client Value

CBRE's Largest Clients Generate Substantial Revenue from Multiple Lines of Business

- CBRE's position difficult to replicate:
  - Breadth of product offering
  - Leadership within products
  - Deep local expertise
  - Ability to "Sell the entire firm"
- CBRE benefits from efforts to consolidate vendors

● = Revenue between \$1M and \$5M  
 ● ● = Revenue between \$5M and \$10M  
 ● ● ● = Revenue greater than \$10M

Revenue of CBRE Top 20 Clients, Randomly Sorted

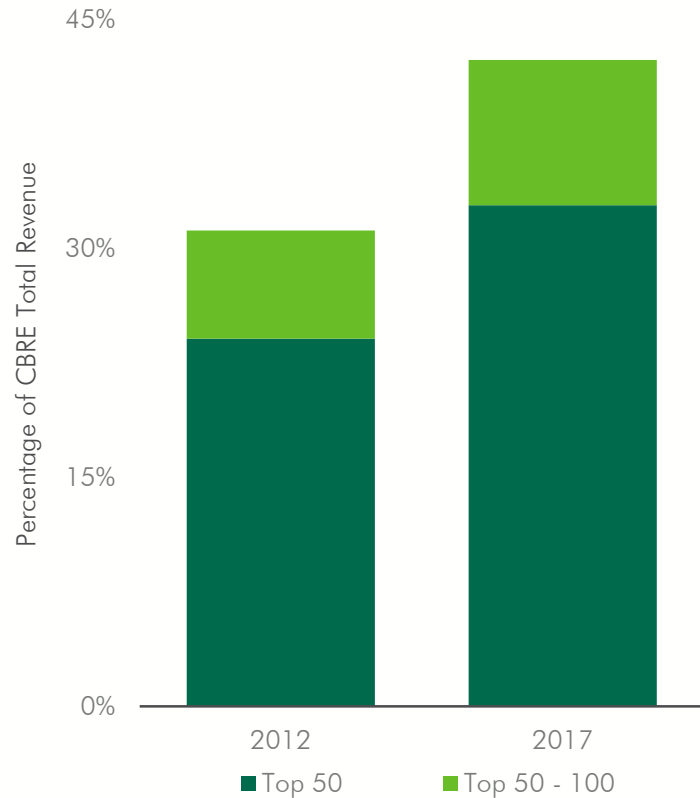
	ADVISORY & TRANSACTION	CAPITAL MARKETS	FACILITIES MANAGEMENT	PROJECT MANAGEMENT	PROPERTY MANAGEMENT	VALUATION
Client 1	● ● ●	●	● ●	● ● ●	●	
Client 2	● ●		● ● ●	● ●		
Client 3	● ● ●	●	● ● ●	● ● ●		●
Client 4	● ● ●	● ● ●		● ●	● ● ●	
Client 5	●		● ● ●	● ●		
Client 6	● ● ●	● ●	● ● ●	● ● ●	● ● ●	●
Client 7	●		● ● ●	● ● ●		
Client 8	● ● ●		● ● ●	● ● ●		
Client 9	●	● ● ●				
Client 10	●		● ● ●	● ● ●		
Client 11	● ● ●		● ● ●	● ● ●		
Client 12	● ● ●		● ● ●	● ● ●		
Client 13	● ● ●	● ●	● ● ●	● ● ●	● ● ●	●
Client 14	● ● ●		● ● ●	● ● ●		
Client 15	●		● ● ●	● ● ●		
Client 16			● ● ●	● ●		
Client 17	● ● ●		● ● ●	● ● ●		
Client 18	● ● ●		● ● ●	● ●		
Client 19			● ● ●	●		
Client 20	● ●	● ●	● ● ●	●		● ●

Figures in gross revenue.

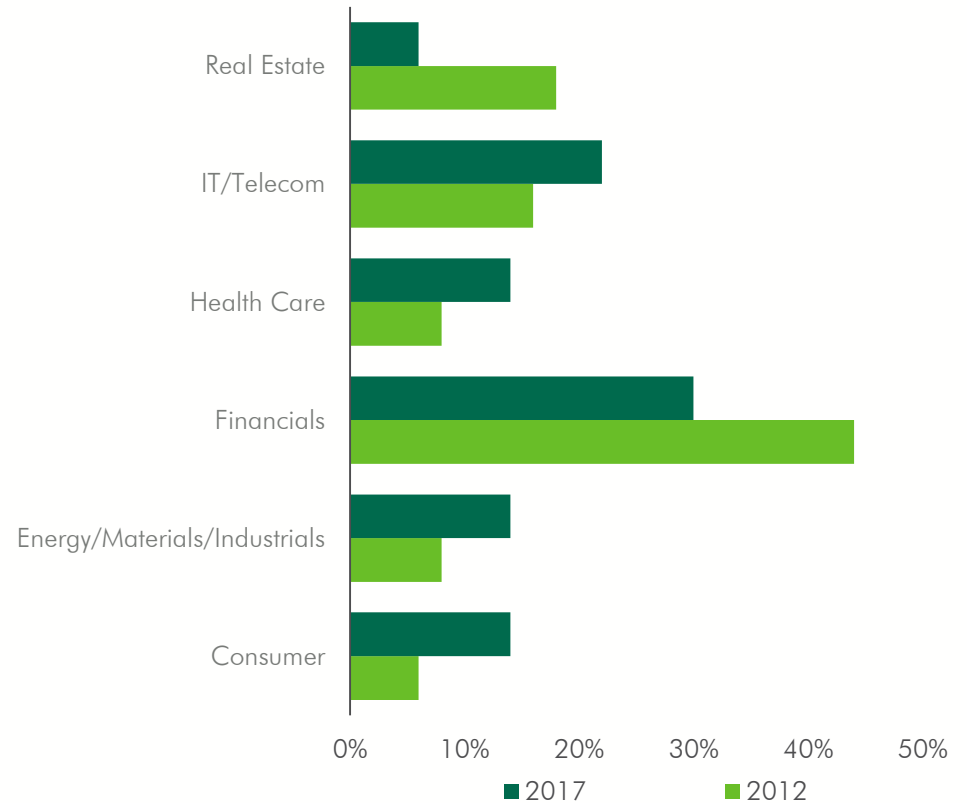
## Largest Clients Growing in Importance and Diversity

Client Diversity Has Increased as CBRE Has Enhanced its Client Service Capabilities

Large Clients Now Represent Larger Share of Total Revenue



Industry Diversity of Top 50 Clients Has Increased Over Time

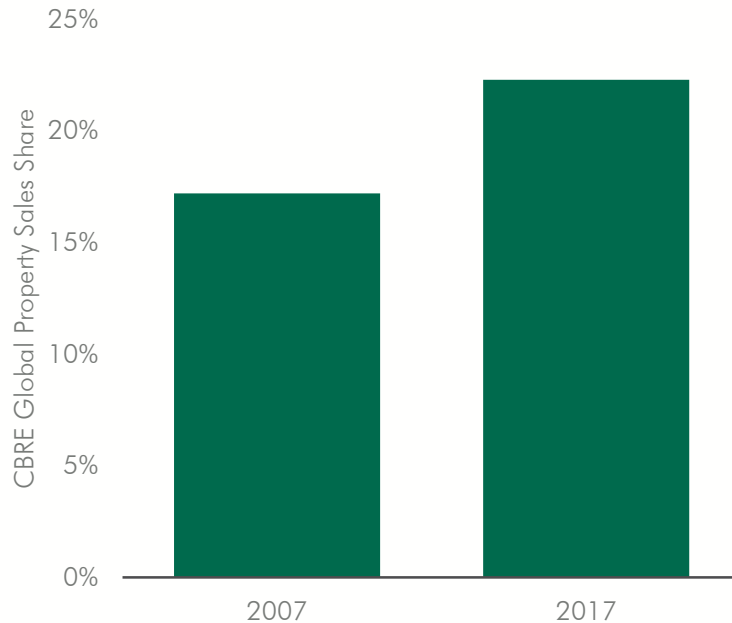


Figures in gross revenue.

## CBRE Has Taken Share in Leasing and Property Sales

CBRE market share gains driven by significant recruiting success

### Global Property Sales Share Increased Without a Major Capital Markets Acquisition



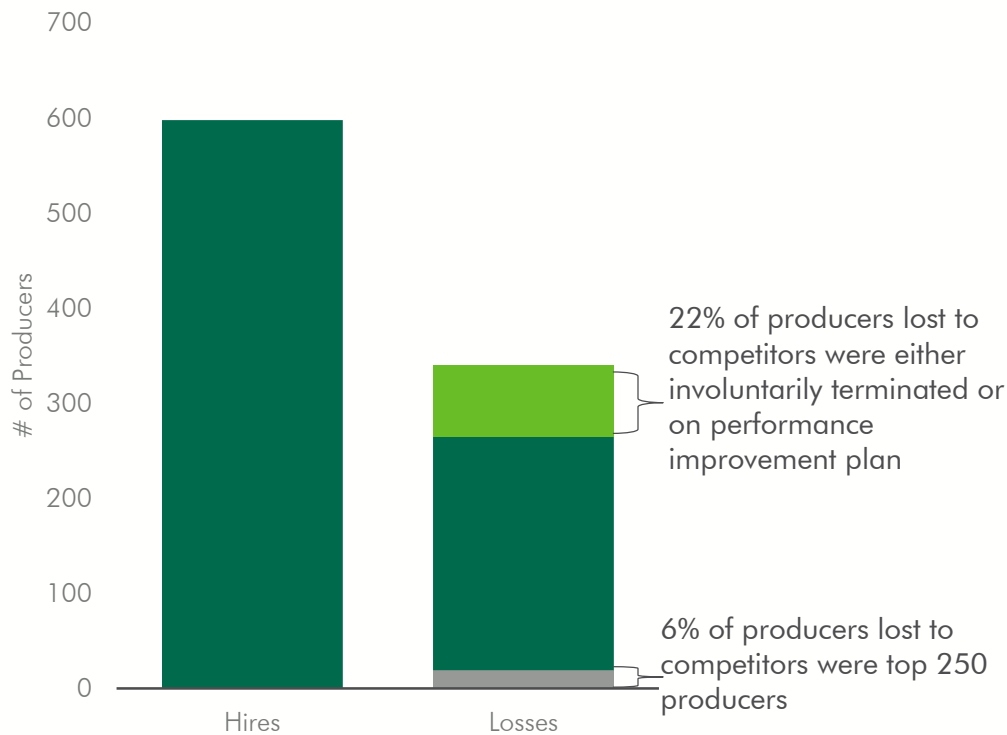
### CBRE Americas Leasing Revenue Up 65% in 10 Years Against US Office Rents Up 7%



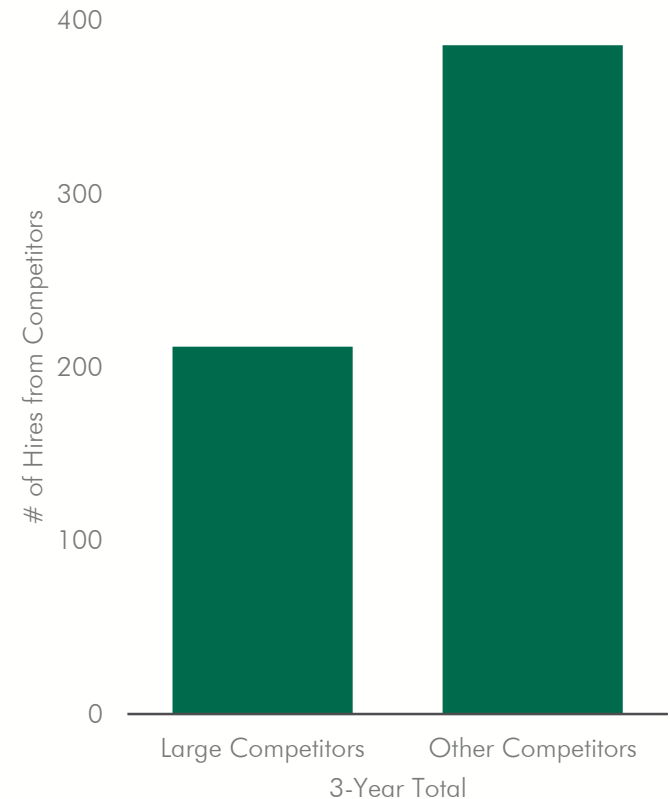
Sources: Global property sales is based on RCA (Real Capital Analytics), US average office rent is based on data from CBRE Econometric Advisors

## CBRE Attracts and Retains Top Talent in the Industry

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



Boutique Competitors are Increasingly Less Competitive

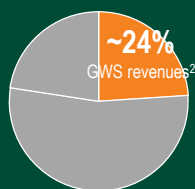


Note: Hires do not include hundreds of internal hires and hires from non-direct competitors

## GWS Revenue is Balanced and Diversified

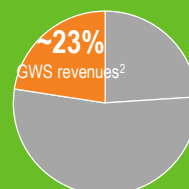
### GWS ACCOUNT MANAGEMENT

#### ADVISORY & TRANSACTIONS | OCCUPIER<sup>1</sup>



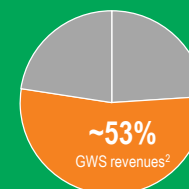
- Commissions split with local market broker
- Portfolio-based contracts
- Business includes new transactions (buying, selling, leasing) and recurring lease renewals

#### PROJECT MANAGEMENT



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

#### 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
- Exploring software as a service

### CONSULTING AND ANALYTICS

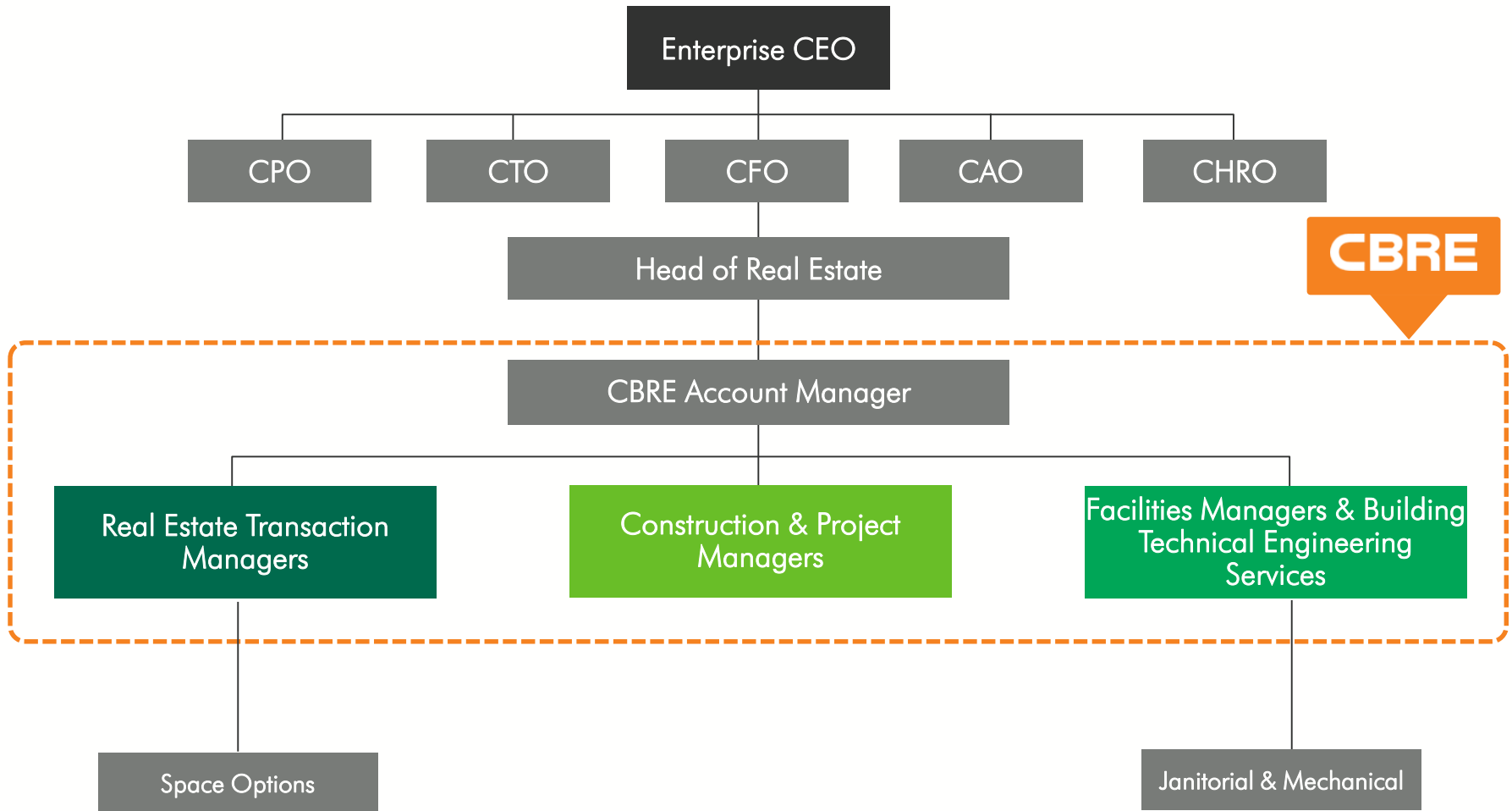
**Variable fee revenue** | Short- and long-term contracts

Recommendations often generate outsourcing decisions, service placement, workplace strategy, technology deployment, process automation, advanced analytics

1. Advisory and Transactions revenue represents all contractual brokerage business, delivered through dedicated, on-account teams as well as through local brokers.

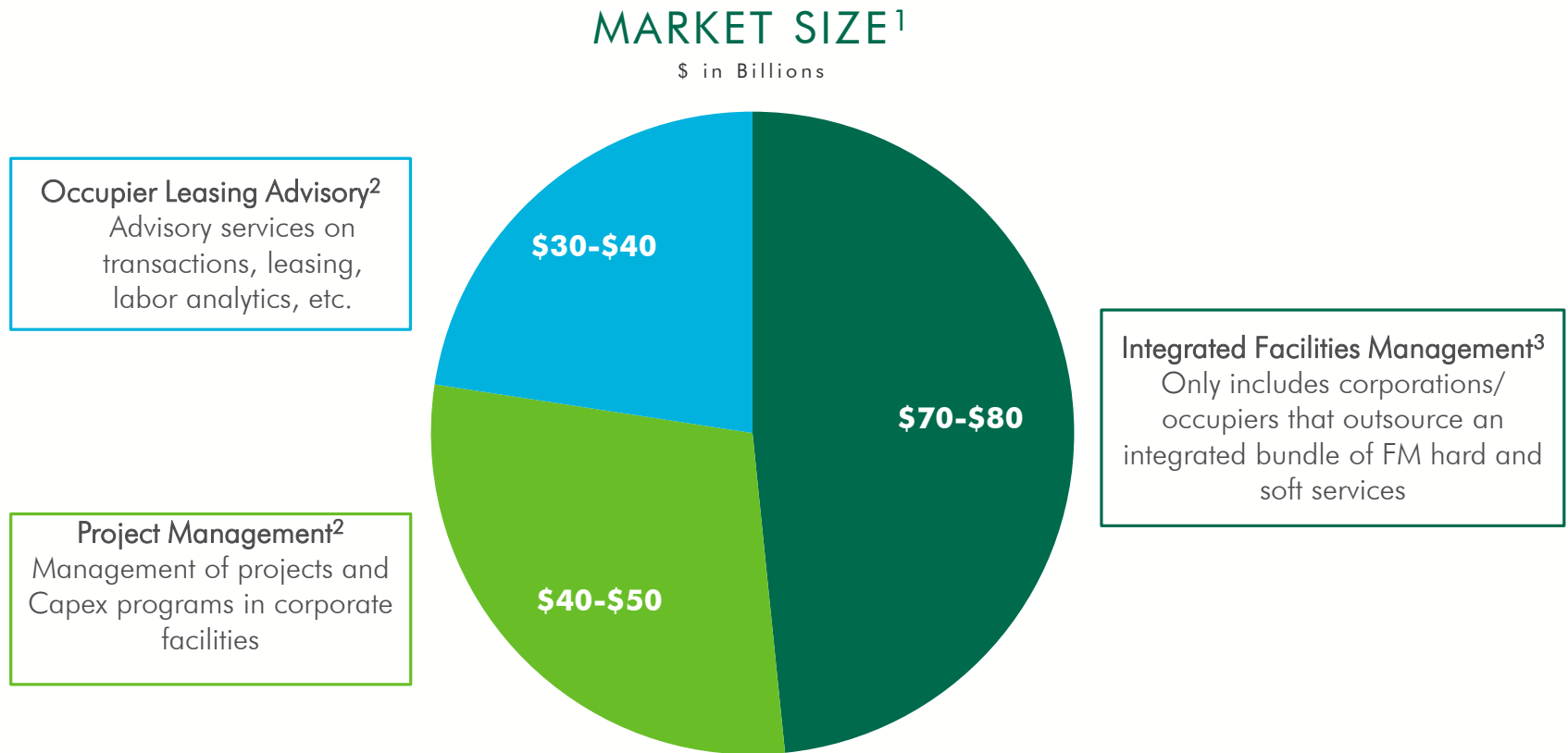
2. Gross revenues

## GWS Service Offering Focus



# 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)



## 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. 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

	December 31, 2017	December 31, 2012
(\$ in millions)		
Cash <sup>1</sup>	\$ 682	\$ 995
Revolving credit facility	-	73
Senior term loans <sup>2</sup>	193	1,628
Senior notes <sup>2</sup>	1,806	791
Other debt <sup>3,4</sup>	-	23
Total debt	\$ 1,999	\$ 2,515
Total net debt <sup>5</sup>	\$ 1,371	\$ 1,520
TTM Adjusted EBITDA <sup>6</sup>	\$ 1,710	\$ 918
Net debt to TTM Adjusted EBITDA	0.8x	1.7x

1. Excludes \$23.8 million and \$94.6 million of cash in consolidated funds and other entities not available for company use at December 31, 2017 and December 31, 2012, respectively.
2. Outstanding amount is reflected net of unamortized debt issuance costs.
3. Excludes \$910.8 million and \$1,026.4 million of warehouse facilities for loans originated on behalf of the FHA and other government sponsored enterprises outstanding at December 31, 2017 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 \$17.9 million and \$312.1 million at December 31, 2017 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) 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 December 31,				
	2017	2016	2012 <sup>1</sup>	2006	1997
Adjusted EBITDA	\$ 1,709.5	\$ 1,561.0	\$ 918.4	\$ 653.5	\$ 90.1
Adjustments:					
Integration and other costs related to acquisitions	27.3	125.7	39.2	7.6	-
Cost-elimination expenses	-	78.5	17.6	-	-
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue <sup>2</sup>	(8.5)	(15.6)	-	-	-
Income related to investment in Savills plc (disposed of in 2007)	-	-	-	(8.6)	-
Merger-related and other non-recurring costs	-	-	-	-	13.8
EBITDA	1,690.7	1,372.4	861.6	652.5	76.3
Add:					
Interest income	9.8	8.1	7.6	9.8	2.6
Less:					
Depreciation and amortization	406.1	366.9	170.9	67.6	18.1
Non-amortizable intangible asset impairment	-	-	19.8	-	-
Interest expense	136.8	144.9	176.6	45.0	15.8
Write-off of financing costs on extinguished debt	-	-	-	33.8	-
Provision for income taxes	466.1	296.7	186.3	198.3	20.6
Net income attributable to CBRE Group, Inc.	\$ 691.5	\$ 572.0	\$ 315.6	\$ 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

(\$ in millions, except per share amounts)	Twelve Months Ended December 31,					
	2017	2016	2015	2014	2013 <sup>2</sup>	2012 <sup>2</sup>
Net income attributable to CBRE Group, Inc.	\$ 691.5	\$ 572.0	\$ 547.1	\$ 484.5	\$ 316.5	\$ 315.6
Amortization expense related to certain intangible assets attributable to acquisitions	112.9	111.1	86.6	66.1	29.4	37.2
Integration and other costs related to acquisitions	27.3	125.7	48.9	-	12.6	39.2
Carried interest incentive compensation (reversal) expense to align with the timing of associated revenue <sup>1</sup>	(8.5)	(15.6)	26.1	23.8	9.2	-
Cost-elimination expenses	-	78.5	40.4	-	17.6	17.6
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
Tax impact of adjusted items	(42.1)	(93.2)	(62.6)	(36.4)	(65.4)	(30.0)
Impact of US tax reform	143.4	-	-	-	-	-
Adjusted net income	\$ 924.5	\$ 778.5	\$ 689.2	\$ 561.1	\$ 474.3	\$ 399.4
Adjusted diluted earnings per share	\$ 2.71	\$ 2.30	\$ 2.05	\$ 1.68	\$ 1.43	\$ 1.22
Weighted average shares outstanding for diluted income per share	340,783,556	338,424,563	336,414,856	334,171,509	331,762,854	327,044,145

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.

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

	Twelve Months Ended December 31,						
(\$ in millions)	2017	2016 <sup>1</sup>	2015 <sup>1</sup>	2014	2013 <sup>2</sup>	2012 <sup>2</sup>	2006
Consolidated revenue	\$ 14,209.6	\$ 13,071.6	\$ 10,855.8	\$ 9,049.9	\$ 7,194.2	\$ 6,519.8	\$ 4,032.0
Less:							
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	4,820.2	4,345.8	3,125.5	2,258.6	1,567.7	1,424.2	289.7
Consolidated fee revenue	\$ 9,389.4	\$ 8,725.8	\$ 7,730.3	\$ 6,791.3	\$ 5,626.5	\$ 5,095.6	\$ 3,742.3
Less:							
Non-contractual fee revenue	5,253.5	4,951.4					2,924.3
Contractual fee revenue	\$ 4,135.9	\$ 3,774.4					\$ 818.0
Adjusted net income	\$ 924.5	\$ 778.5	\$ 689.2	\$ 561.1	\$ 474.3	\$ 399.4	
Profit margin	9.8%	8.9%	8.9%	8.3%	8.4%	7.8%	

1. Certain adjustments have been made to 2016 and 2015 fee revenue to conform with current-year presentation.

2. Includes discontinued operations.

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

(\$ in millions)	Three Months Ended March 31,	
	2018	2017 <sup>1</sup>
Consolidated revenue	\$ 4,674.0	\$ 4,051.0
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	2,397.1	2,117.1
Consolidated fee revenue	\$ 2,276.9	\$ 1,933.9
Less:		
Non-contractual fee revenue	1,124.4	1,000.4
Contractual fee revenue	\$ 1,152.5	\$ 935.5
Occupier Outsourcing revenue <sup>2</sup>	\$ 2,954.1	\$ 2,537.5
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	2,241.6	1,970.2
Occupier Outsourcing fee revenue <sup>2</sup>	\$ 712.5	\$ 567.3
Property Management revenue <sup>2</sup>	\$ 303.6	\$ 272.7
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	155.5	147.0
Property Management fee revenue <sup>2</sup>	\$ 148.1	\$ 125.7

1. In the first quarter of 2018, the company adopted new revenue recognition guidance. Certain restatements have been made to 2017 financial statements (and thus 2017 financial information included in this slide) to conform with the 2018 presentation.
2. Occupier Outsourcing and Property Management revenue excludes associated leasing and sales revenue, most of which is contractual.

## Reconciliation of Revenue to Fee Revenue

(\$ in millions)	Twelve Months Ended December 31,	
	2017	2016 <sup>2</sup>
Occupier Outsourcing revenue <sup>1</sup>	\$ 6,753.4	\$ 6,078.5
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	4,230.1	3,805.3
Occupier Outsourcing fee revenue <sup>1</sup>	\$ 2,523.3	\$ 2,273.2
Property Management revenue <sup>1</sup>	\$ 1,140.0	\$ 1,044.9
Less:		
Client reimbursed costs largely associated with employees dedicated to client facilities and subcontracted vendor work performed for clients	590.1	540.4
Property Management fee revenue <sup>1</sup>	\$ 549.9	\$ 504.5

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

NOTES: In the first quarter of 2018, the company adopted new revenue recognition guidance. Restatements have NOT been made to the 2017 and other prior period financial data included in this presentation to conform with the 2018 presentation (with the exception of Q1 2017 data used/noted on slides 31 and 46, which has been updated for the new revenue recognition guidance). Local currency percent changes versus prior year are non-GAAP financial measures noted on slides 30 and 31. These percent changes are calculated by comparing current year results versus prior year results, in each case at prior year exchange rates. We have not reconciled the (non-GAAP) adjusted net income margin on fee revenue guidance referenced in this presentation to the most directly comparable GAAP measure because this cannot be done without unreasonable effort due to the variability and low visibility with respect to costs related to acquisitions, carried interest incentive compensation and financing costs, which are potential adjustments to future earnings. We expect the variability of these items to have a potentially unpredictable, and a potentially significant, impact on our future GAAP financial results.

### Slide 3

1. Property and corporate facilities under management as of December 31, 2017, includes square footage managed by affiliates.
2. As of December 31, 2017, includes affiliates.
3. Assets Under Management (AUM) as of December 31, 2017. As of December 31, 2017. Assets under management (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.

### Slide 4

1. Adjusted EBITDA excludes (from EBITDA) certain carried interest incentive compensation reversal to align with the timing of associated revenue, integration and other costs related to acquisitions, merger-related and other non-recurring charges and income related to investment in Savills plc (disposed of in January 2007).

### Slide 6

1. Other includes Development Services revenue (1%) and Other revenue (1%).
2. Capital Markets includes Sales revenue (19%) and Commercial Mortgage Origination (excludes Loan Servicing) revenue (5%).
3. Contractual Sources include Occupier Outsourcing and Property Management revenue (33%; excludes associated sales and lease revenues, most of which are contractual), Global Investment Management revenue (4%) Valuation revenue (5%) and Loan Servicing (2%).
4. 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.
5. Fee revenue includes Loan Servicing within Contractual Sources, consistent with the fee revenue disclosure seen on slides 30 and 31.

### Slide 7

1. Other includes Development Services revenue (1% in both 2006 and 2017) and Other revenue (1% in both 2006 and 2017).
2. Capital Markets includes Sales revenue (33% in 2006 and 19% in 2017) and Commercial Mortgage Origination (excludes Loan Servicing) revenue (4% in 2006 and 5% in 2017).
3. Contractual Sources include Occupier Outsourcing and Property Management revenue (7% in 2006 and 33% in 2017; excludes associated sales and lease revenues, most of which are contractual), Global Investment Management revenue (6% in 2006 and 4% in 2017) Valuation revenue (8% in 2006 and 5% in 2017) and Loan Servicing (0.5% in 2006 and 2% in 2017).
4. 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.
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 2017, respectively.
6. Fee revenue includes Loan Servicing within Contractual Sources, consistent with the fee revenue disclosure seen on slides 30 and 31.



## Footnotes

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### Slide 10

1. 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, 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.
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 21

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 22

1. Property Management (also known as Asset Services) revenue excludes associated sales and leasing revenue, most of which is contractual.
2. Approximately 6% of this square footage is managed by affiliates.

### Slide 23

1. Excludes global securities business.
2. As of December 31, 2017.
3. Assets under management (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.

### Slide 25

1. Tenant rep and landlord rep split based on 2017 CBRE US lease consideration value.
2. 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.

## Footnotes

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### Slide 27

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

### Slide 28

1. As of December 31 for each year presented.
2. In Process figures include Long-Term Operating Assets (LTOA) of \$0.2 billion for Q4 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 30

1. Contractual revenue sources include revenue derived from our Occupier Outsourcing, Property Management, Investment Management, Valuation and Loan Servicing businesses. As previously noted, 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 Origination 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 31

1. Contractual revenue sources include revenue derived from our Occupier Outsourcing, Property Management, Investment Management, Valuation and Loan Servicing businesses. As previously noted, 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. 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.
4. In the first quarter of 2018, the company adopted new revenue recognition guidance. Certain restatements have been made to the Q1 2017 financial statements to conform with the 2018 presentation.

## Footnotes

	Q4 2017	Q4 2006	15-Year	
			Peak	Trough
<b>Transaction Velocity<sup>1</sup> % of Peak</b>	<b>66%</b>	<b>78%</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>3.0%</b>	<b>0.8%</b>	<b>-2.3%</b>	<b>3.9%</b>
Commercial Mortgages Outstanding (\$B)	2,685	2,170	2,548	1,342
US Nominal GDP (\$B)	19,250	14,066	14,384	11,104
<b>CRE Leverage<sup>3</sup> (CRE Mortgages as % of U.S. GDP)</b>	<b>13.9%</b>	<b>15.4%</b>	<b>17.7%</b>	<b>12.1%</b>
Total US Office Completions (sf in M)	48.9	54.6	73.5	6.5
Total US Office Stock (sf in M)	3,803.7	3,395.4	3,226.8	3,624.2
<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	4.2%	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>0.6%</b>	<b>-2.3%</b>	<b>-2.4%</b>	<b>1.8%</b>
<b>US Office Occupancy Rate<sup>6</sup></b>	<b>87.0%</b>	<b>87.4%</b>	<b>87.6%</b>	<b>83.0%</b>
<b>US Office Net Asking Rent Growth<sup>7</sup> TTM</b>	<b>3.2%</b>	<b>6.6%</b>	<b>8.8%</b>	<b>-8.8%</b>
S&P 500 Forward Earnings Yield	5.5%	6.7%	5.5%	9.7%
10 Yr. US Treasury	2.4%	4.7%	4.3%	1.9%
<b>Stock Market Valuation<sup>8</sup> (S&amp;P Yield - 10 Yr.)</b>	<b>3.1%</b>	<b>2.0%</b>	<b>1.3%</b>	<b>7.7%</b>
2 Yr. US Treasury	1.9%	4.8%	4.8%	1.0%
10 Yr. US Treasury	2.4%	4.7%	4.7%	3.8%
<b>Yield Curve<sup>9</sup> (10 Yr. - 2 Yr.)</b>	<b>0.5%</b>	<b>-0.1%</b>	<b>-0.1%</b>	<b>2.8%</b>

Slide 18 – 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