



# **Economic Resiliency: Is your component prepared for the next downturn?**

Michele Russo, Managing Director, Research & Practice  
August 8, 2019

# Agenda

- Economic Outlook
- What's on the minds of architecture firm leaders?
- Preparing for the future

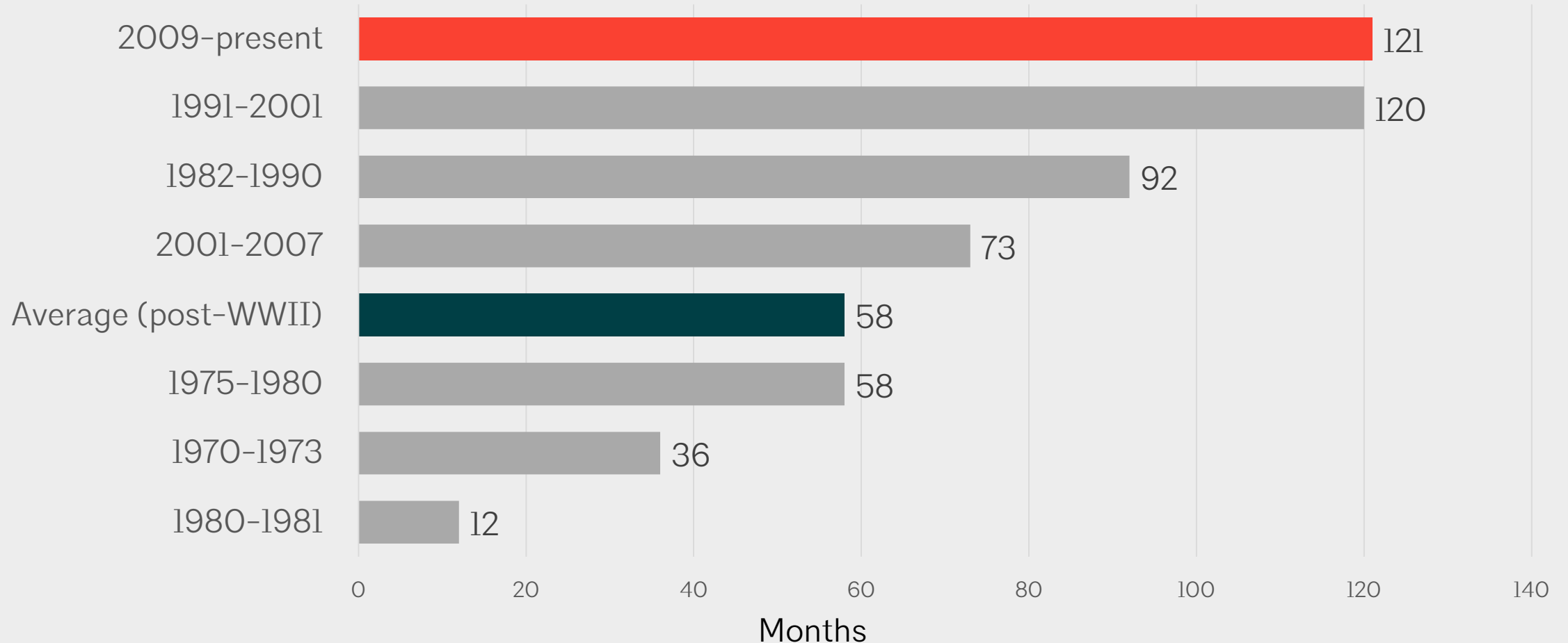
# Economic Outlook

**How are you feeling about the economy?**



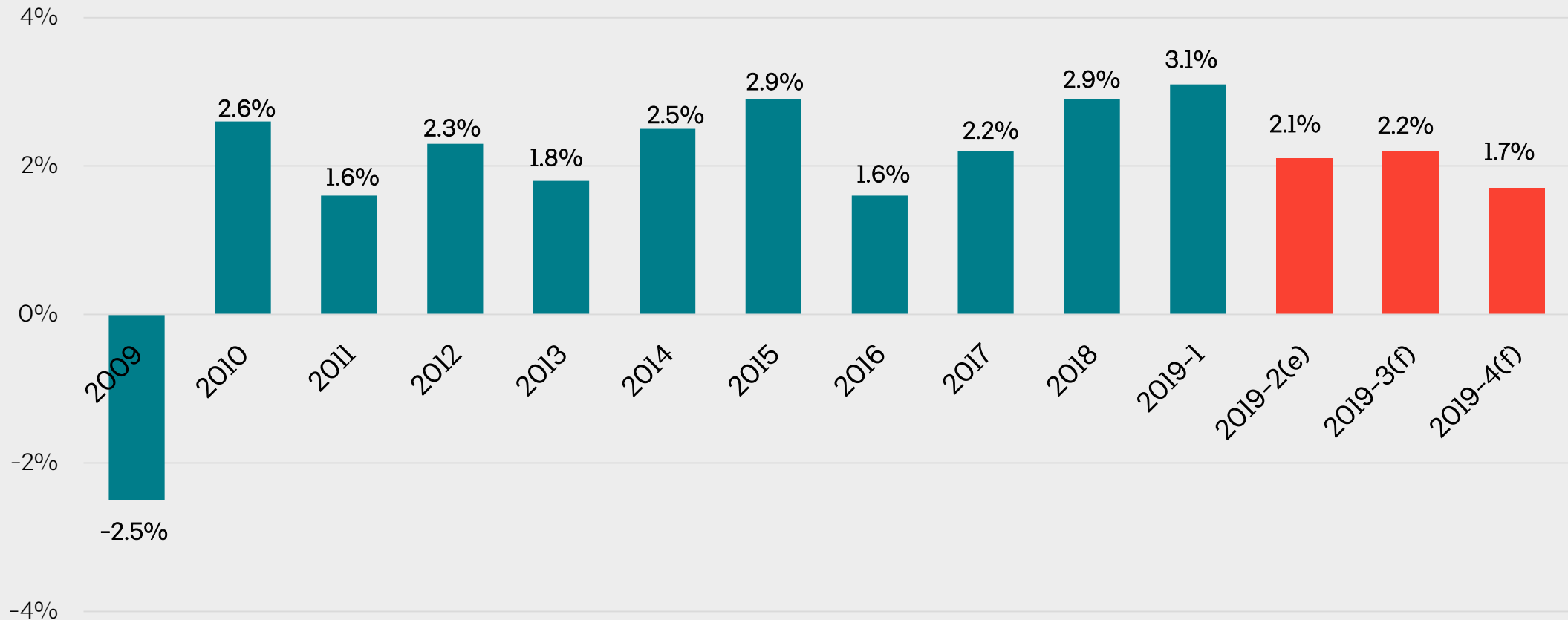
# Current economic cycle is at record length; concerns growing over direction of broader economy

Duration of economic cycle in months



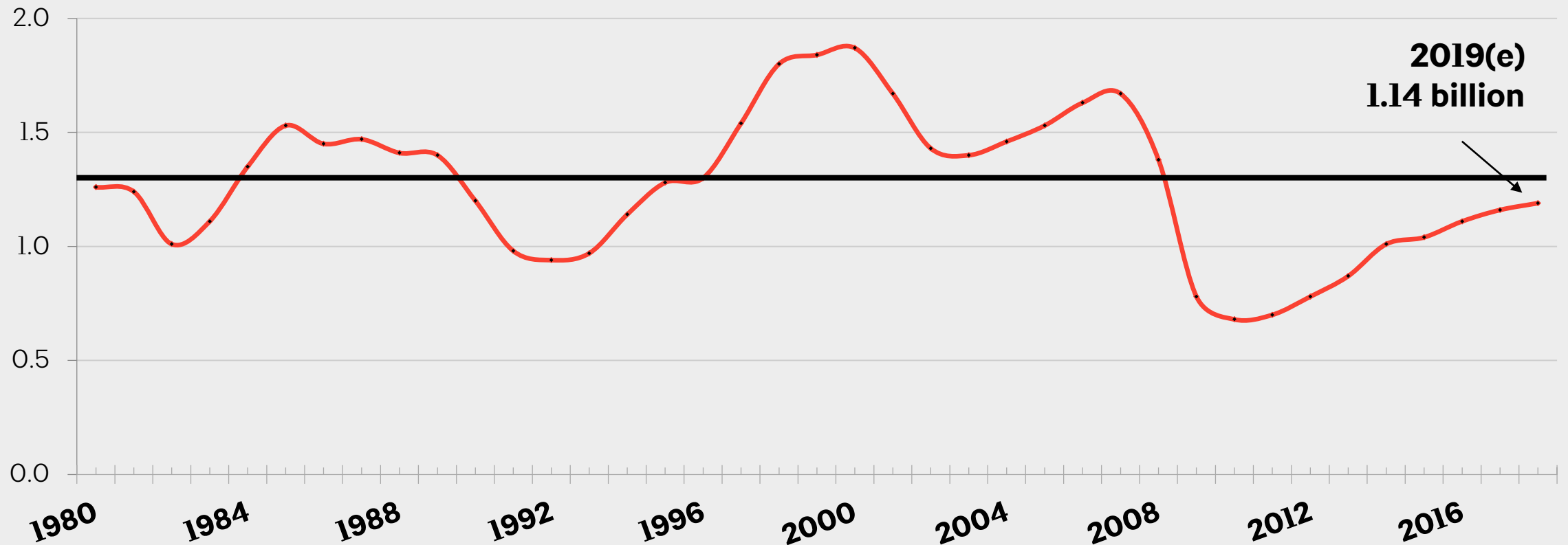
# Pace of economic growth has been moderate since last recession; coming quarters expected to be more of the same

Annual rate of change, real GDP



# Since 1980, nonresidential building construction has averaged 1.3 billion sq.ft. per year

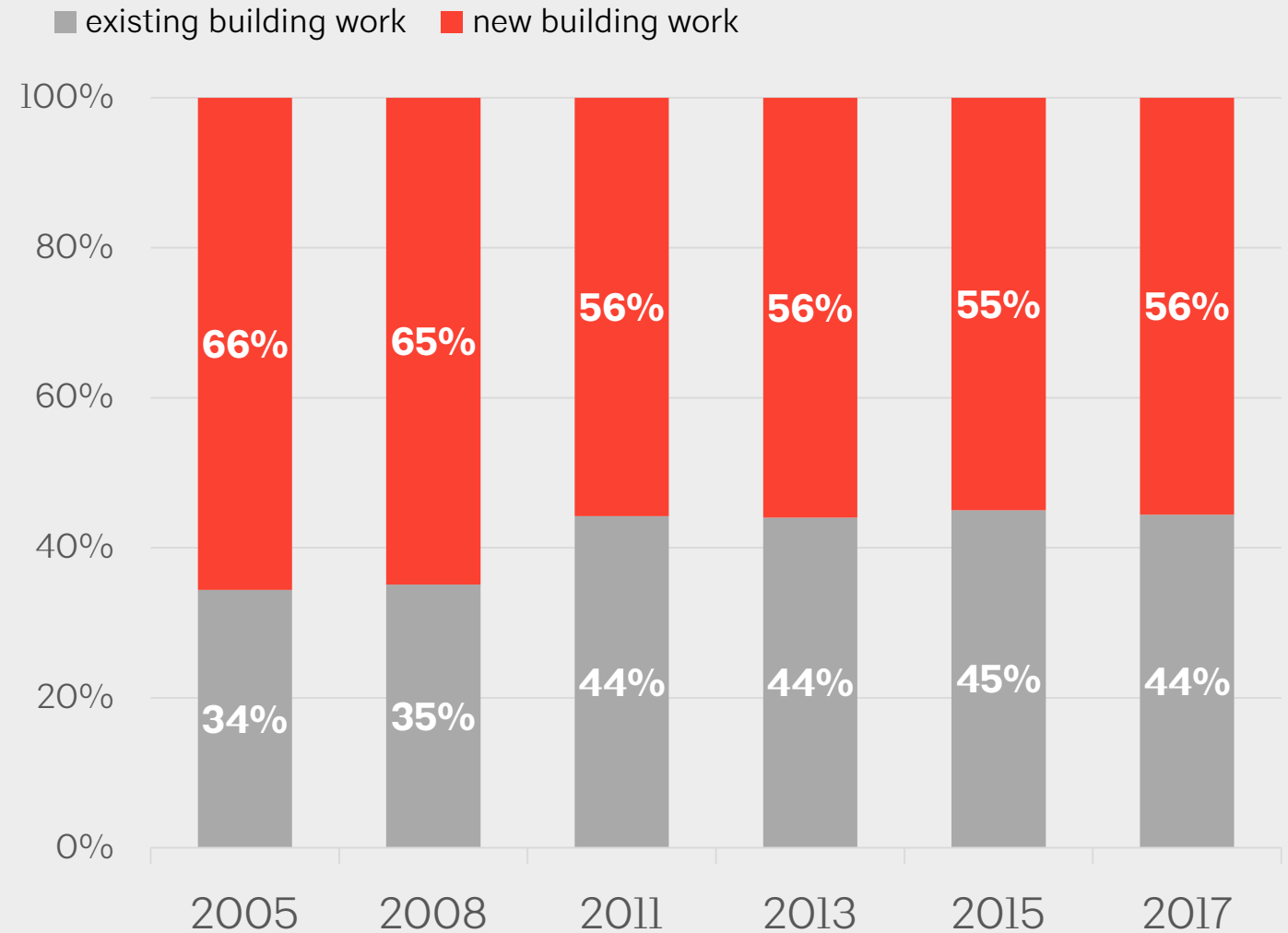
Nonresidential building construction, billions of square feet



Work on existing buildings has remained strong even through the recovery

Pushing out new construction in some sectors

Share of 2017 architecture firm billings





# Topics affecting the construction outlook



Housing sector looks to have peaked for this cycle.



Construction industry faces severe labor shortage, and has made little progress addressing this problem.



ABI trends and the 2019/2020 construction outlook.



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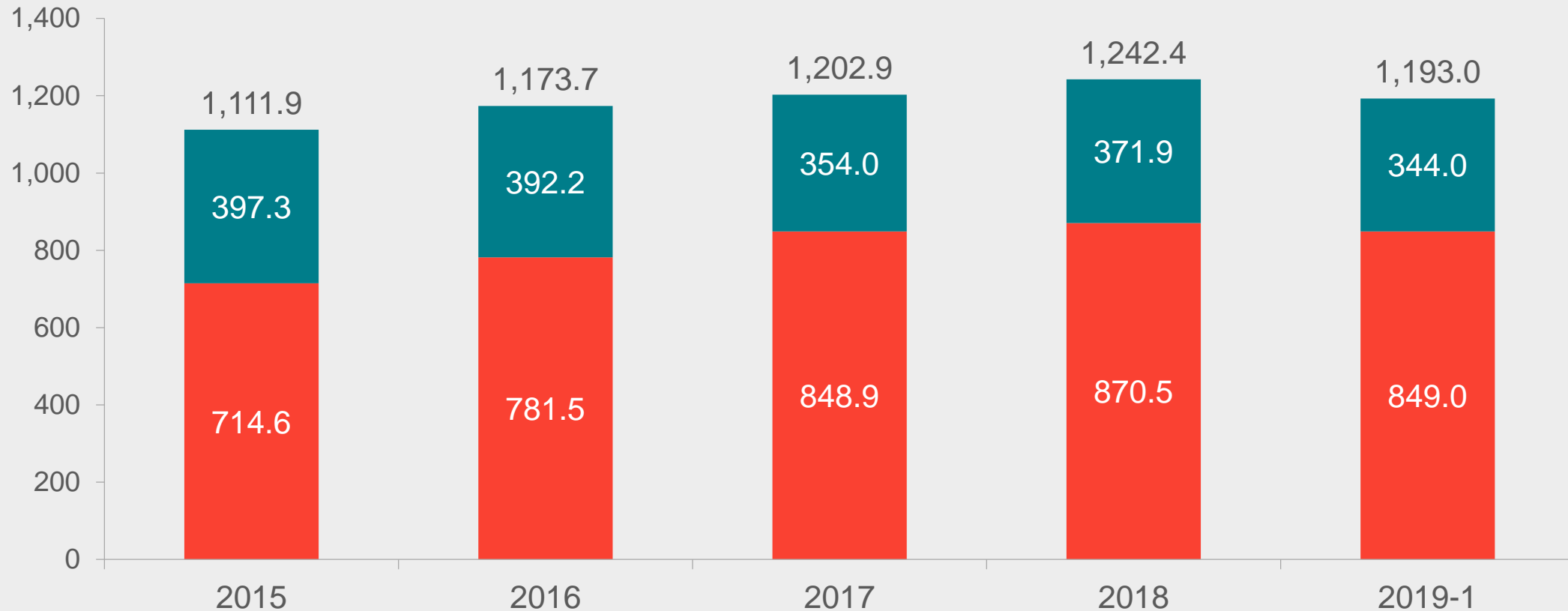


# Housing starts have been increasing at a healthy pace in recent years, but slowed in the first quarter

Annual housing starts (000's)

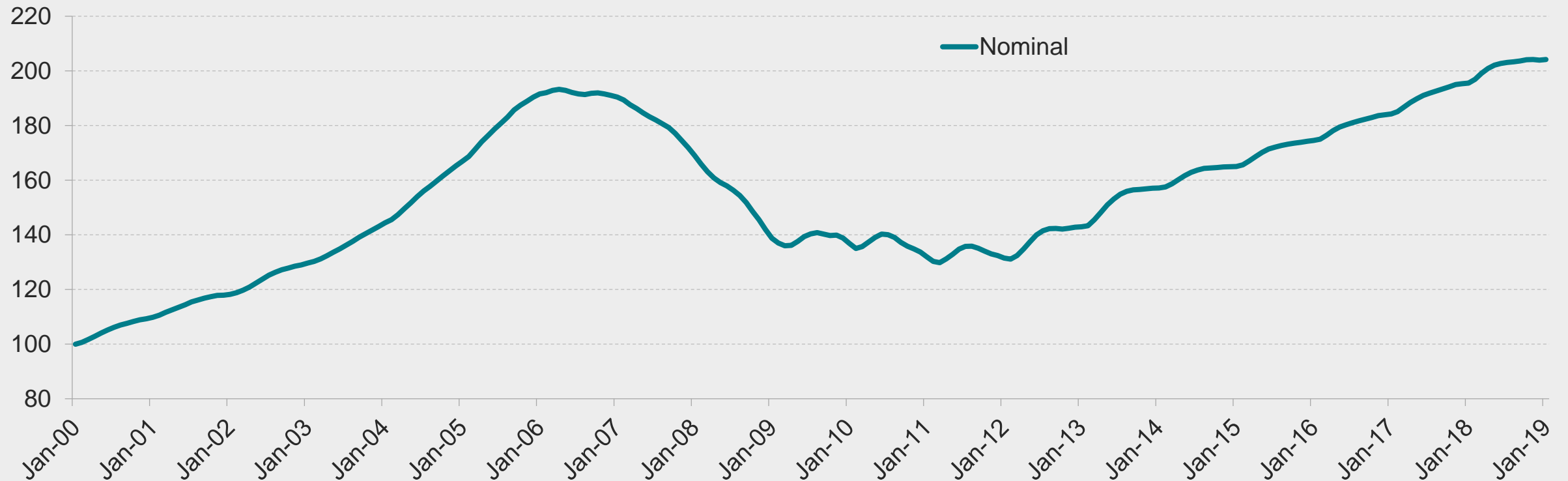
■ single-family

■ multifamily



# Nationally housing prices have recovered

CoreLogic national house price index (NSA, Jan. 2000=100)

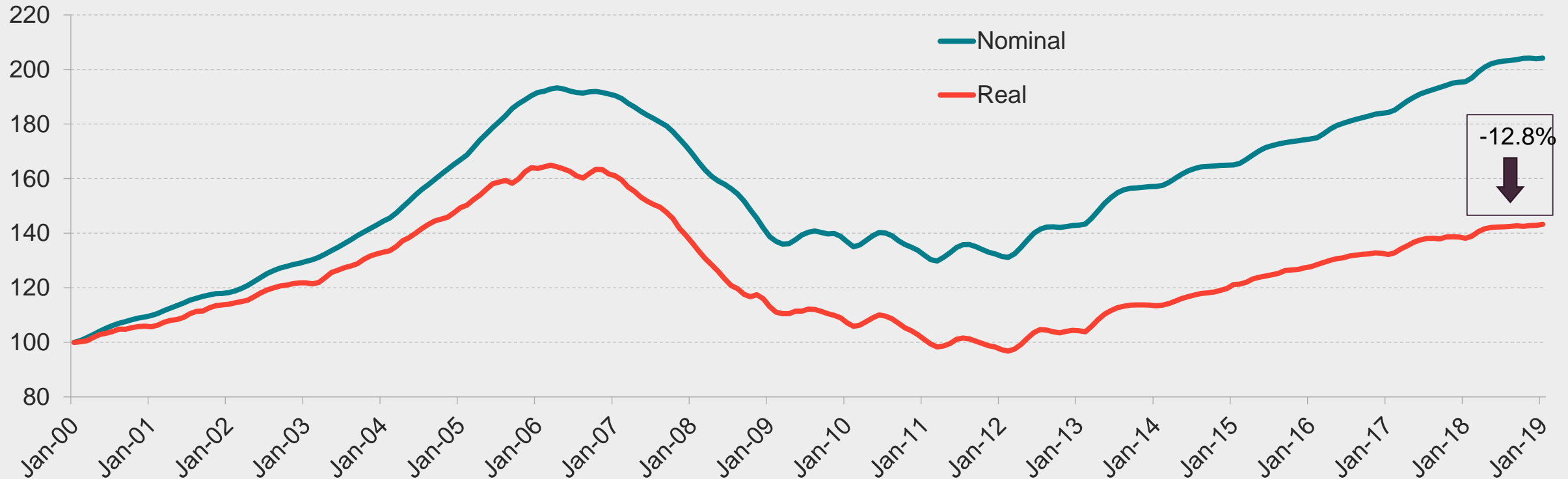


Notes: Index values are adjusted for inflation using the CPI-U for all items less shelter. Index includes single family attached and detached structures. Data accessed on 4/1/19.

Source: CoreLogic, National House Price Index (HPI).

# Nationally housing prices have recovered, but factoring in inflation, prices still below the last peak

CoreLogic national house price index (NSA, Jan. 2000=100)

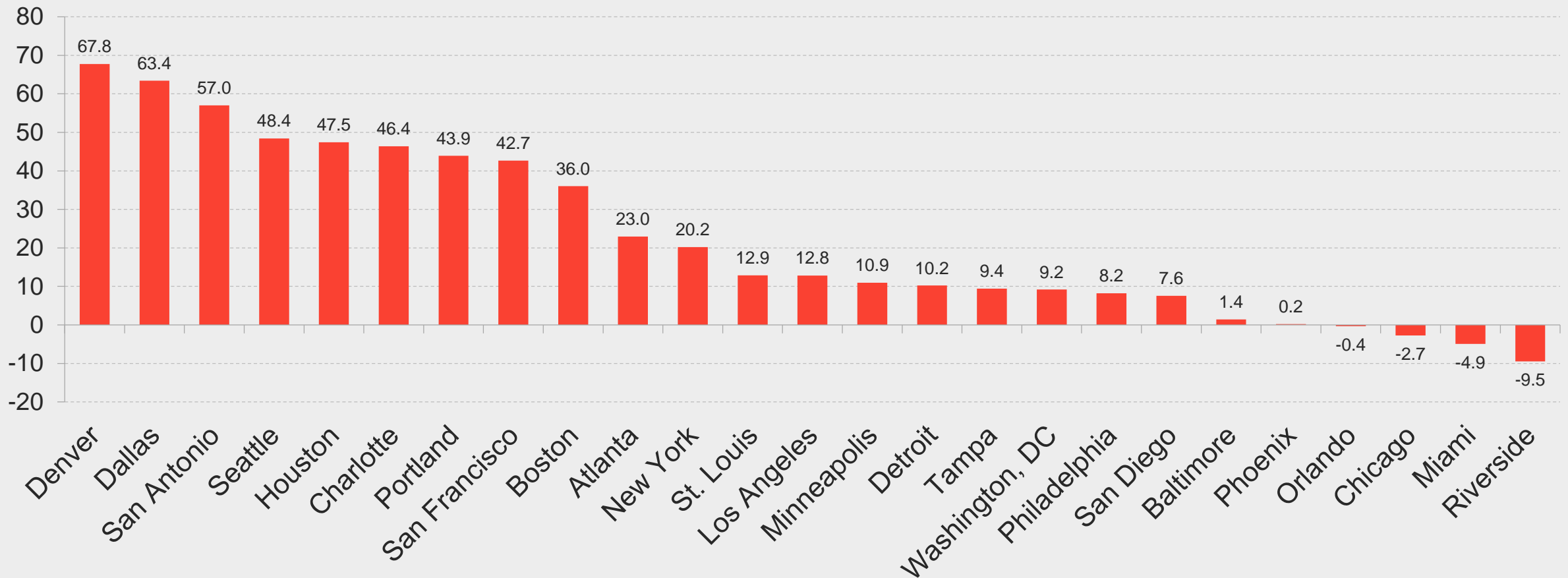


Notes: Index values are adjusted for inflation using the CPI-U for all items less shelter. Index includes single family attached and detached structures. Data accessed on 4/1/19.

Source: CoreLogic, National House Price Index (HPI).

# Though house prices have returned to pre-downturn levels nationally, there is considerable metro variation

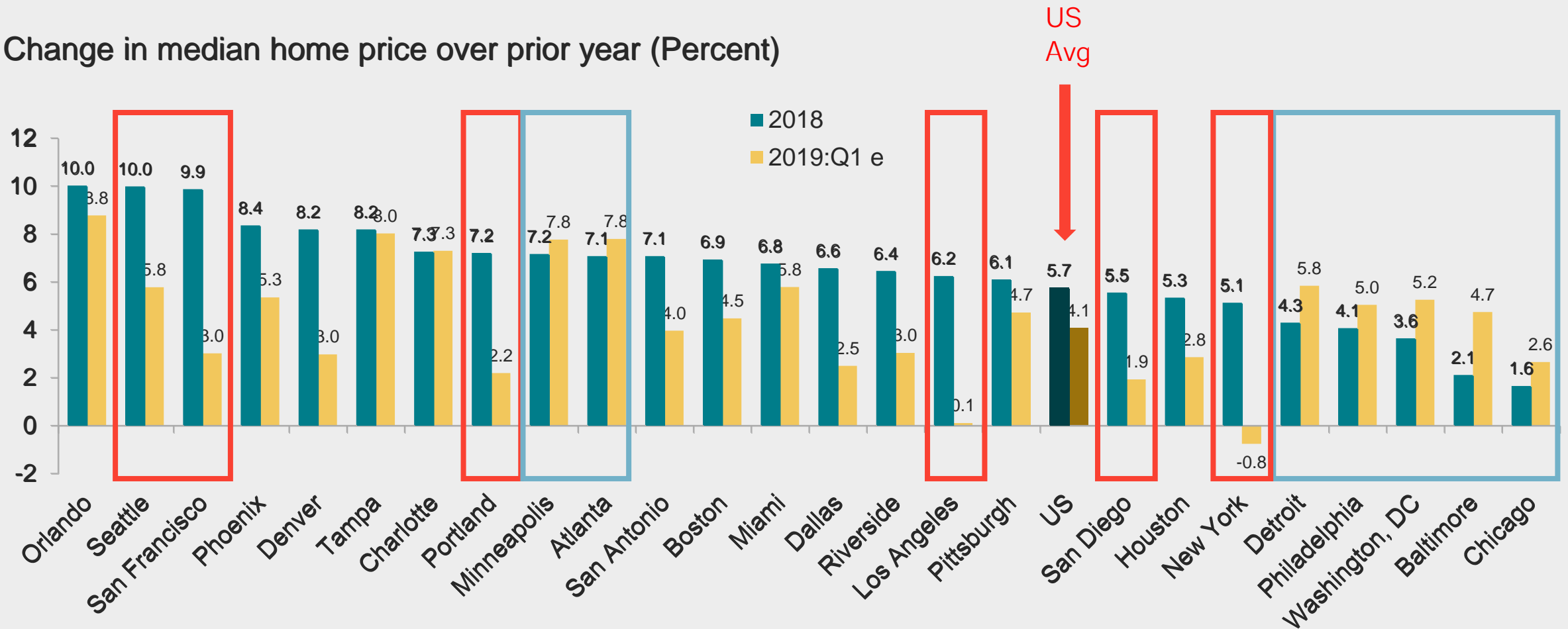
Change in median home price, 2006–2018 (Percent)



Notes: Data are for 25 largest metros by population. Home prices are annual averages of the median sales prices of existing single-family homes.  
Source: CoreLogic.

# By the first quarter of 2019, prices as a percentage of market in many high-price areas

Change in median home price over prior year (Percent)



Notes: Data are for 25 largest metros by population. Home prices are quarterly and annual averages of the median sales prices of existing single-family homes. 2019:Q1 is estimated using January and February data only.  
Source: CoreLogic.

# Topics affecting the construction outlook



Housing sector looks to have peaked for this cycle.



Construction industry faces severe labor shortage, and has made little progress addressing this problem.



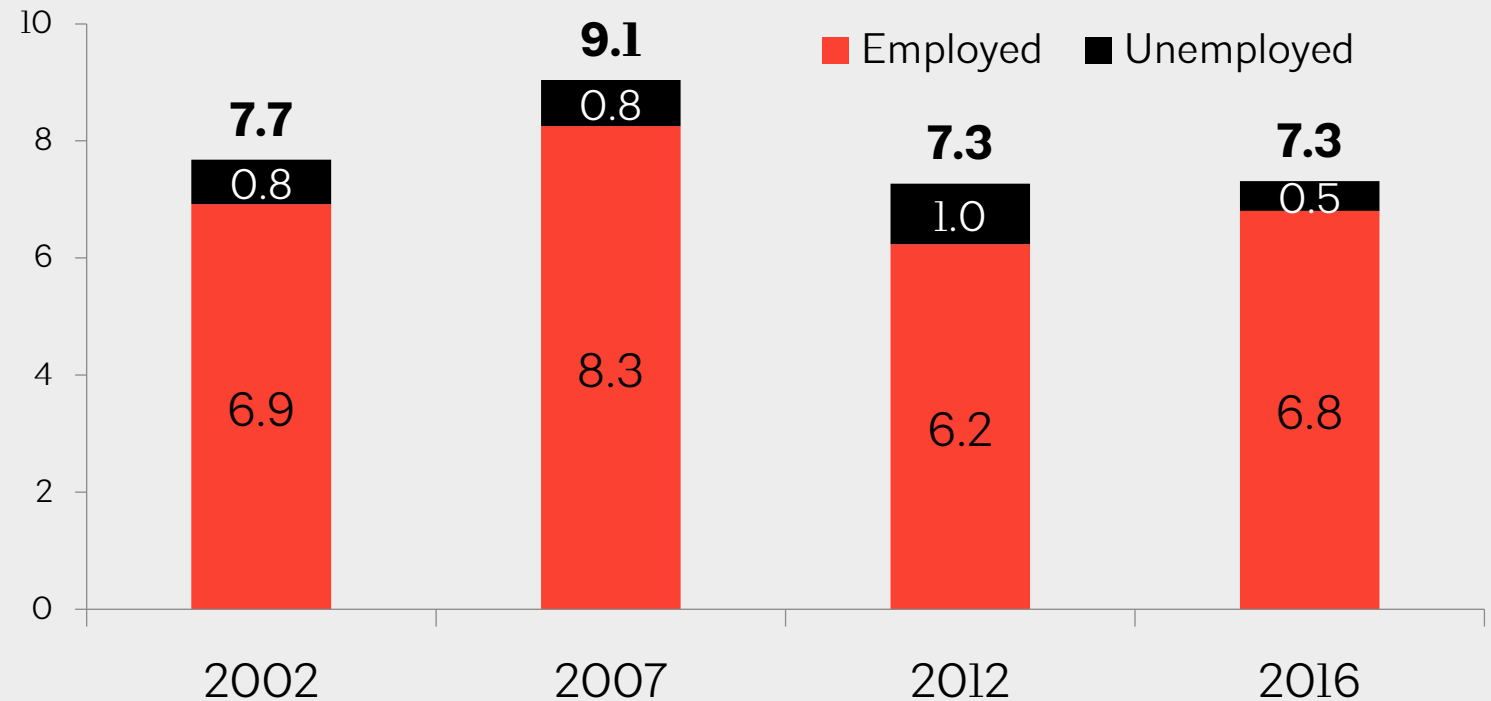
ABI trends and the 2019/2020 construction outlook.





# The construction labor force lost almost two million workers in the recession and has gained back only a fraction

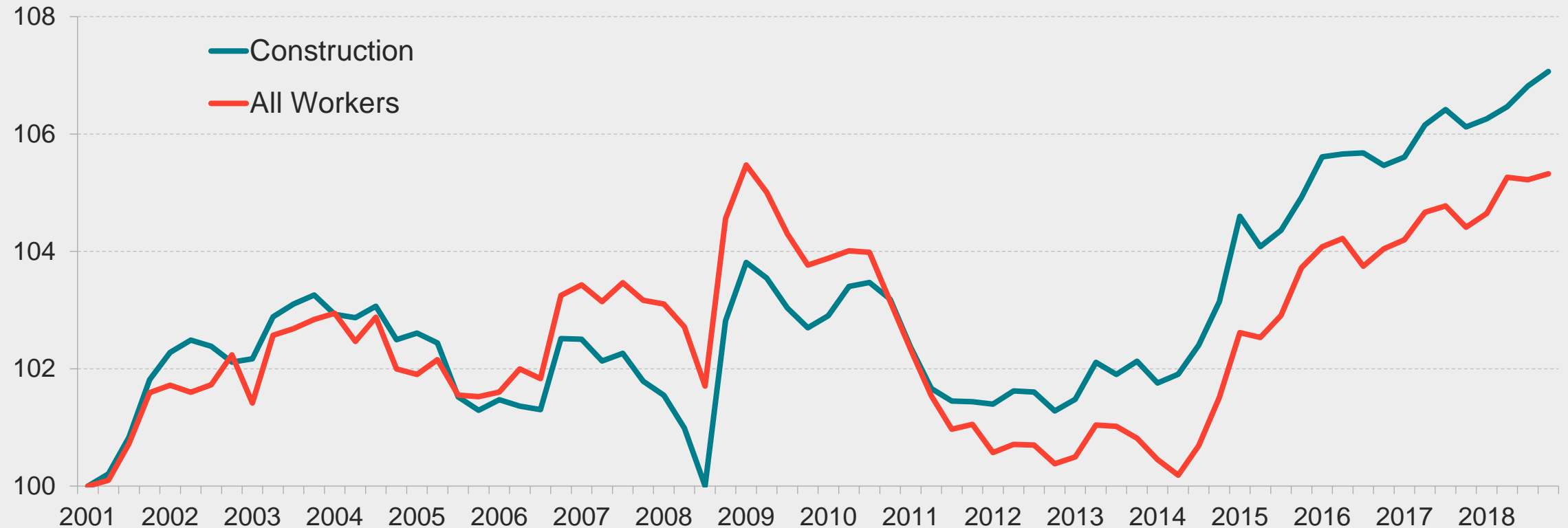
Number of Persons in the Construction Labor Force (Millions)



Notes: Data include workers age 16 and over housed in non-group quarters. The construction labor force includes workers with construction management and trade occupations in the construction industry. Source: JCHS tabulations of US Census Bureau, American Community Survey.

# For most of the past decade, construction wages have been rising faster than those in the rest of the economy

Real change in wages since 2001 (2001=100)

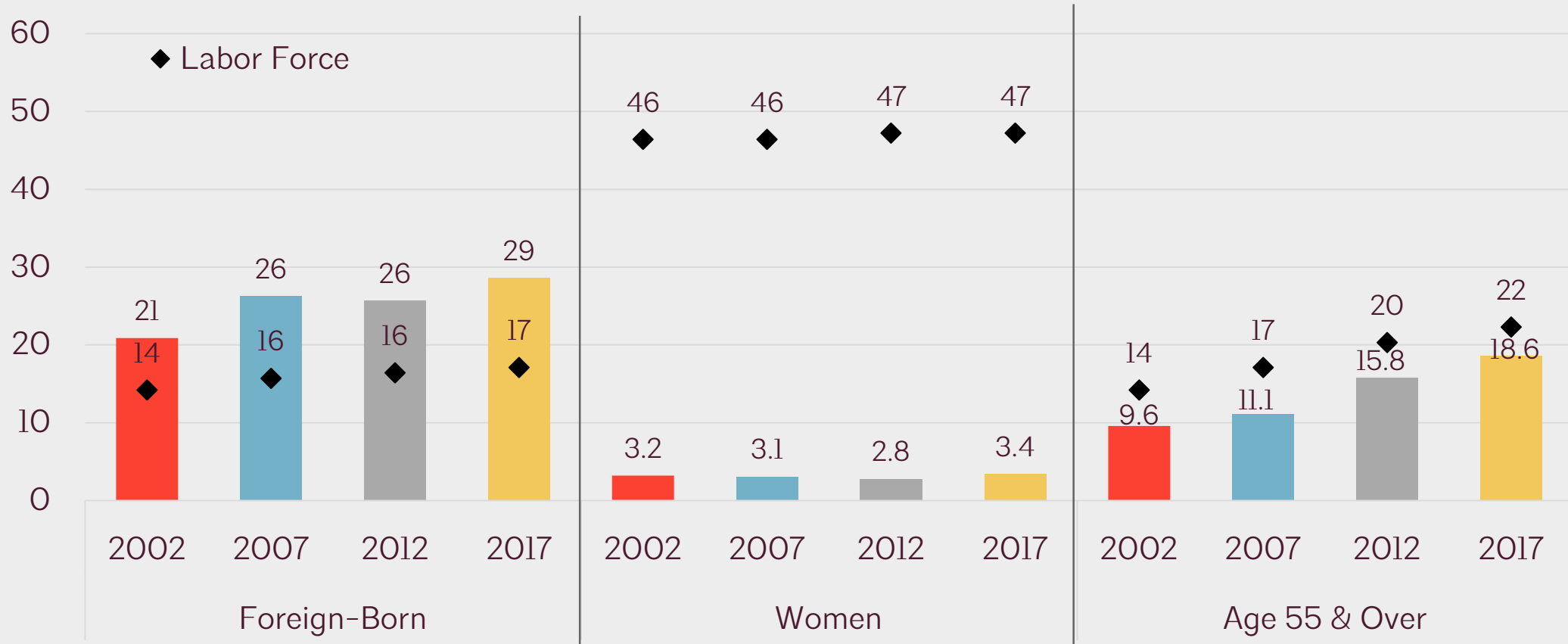


Note: Indexed wage data are for private industry workers adjusted for inflation using the CPI-U for All Items.

Source: JCHS tabulations of U.S. Bureau of Labor Statistics (BLS): Employment Cost Index (ECI) via Moody's economy.com.

# Workers in the construction trades differ from the overall labor force in several key measures

Share of Workers (Percent)



Notes: The construction labor force includes workers with construction management and trades occupations in the construction industry. Data include workers housed in non-group quarters that are either employed or unemployed but available for and seeking work. Source: JCHS tabulations of US Census Bureau, American Community Surveys.

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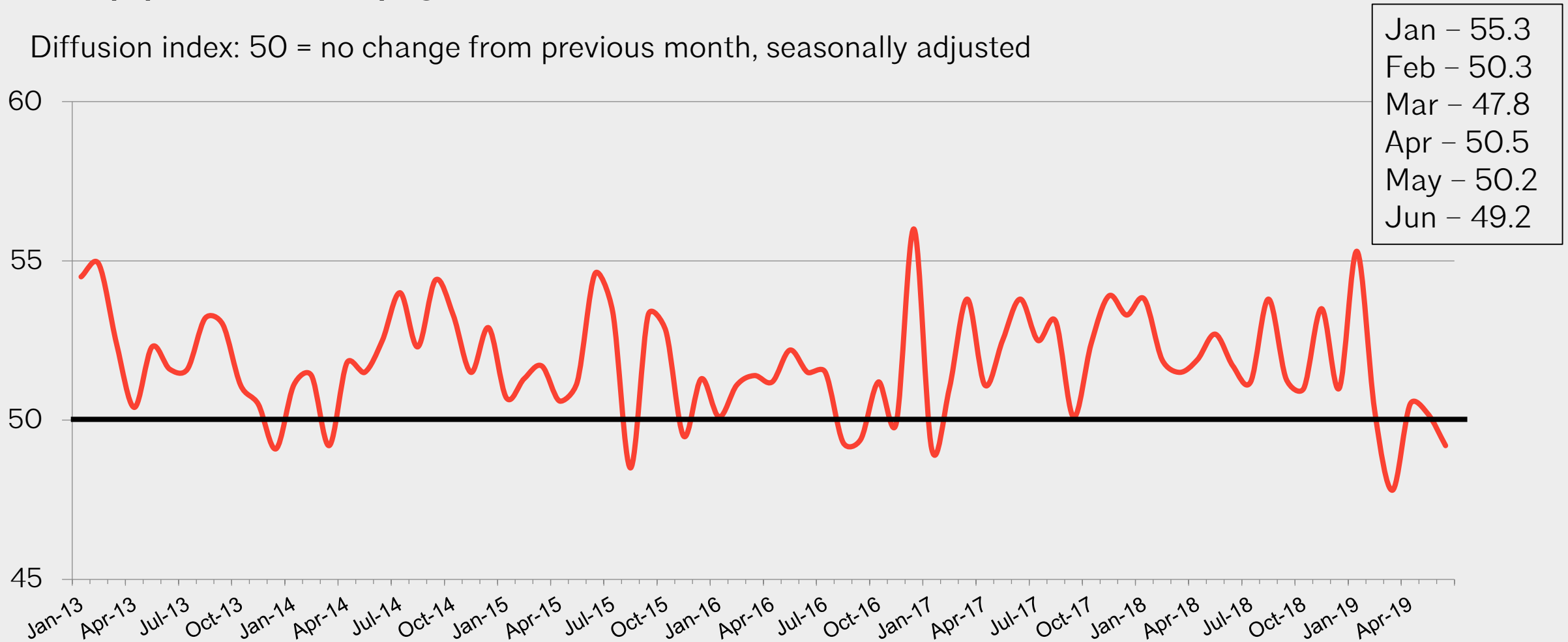


ABI trends and the 2019/2020 construction outlook.



# After a strong January reading, architecture billings dropped sharply in March and have been flat ever since

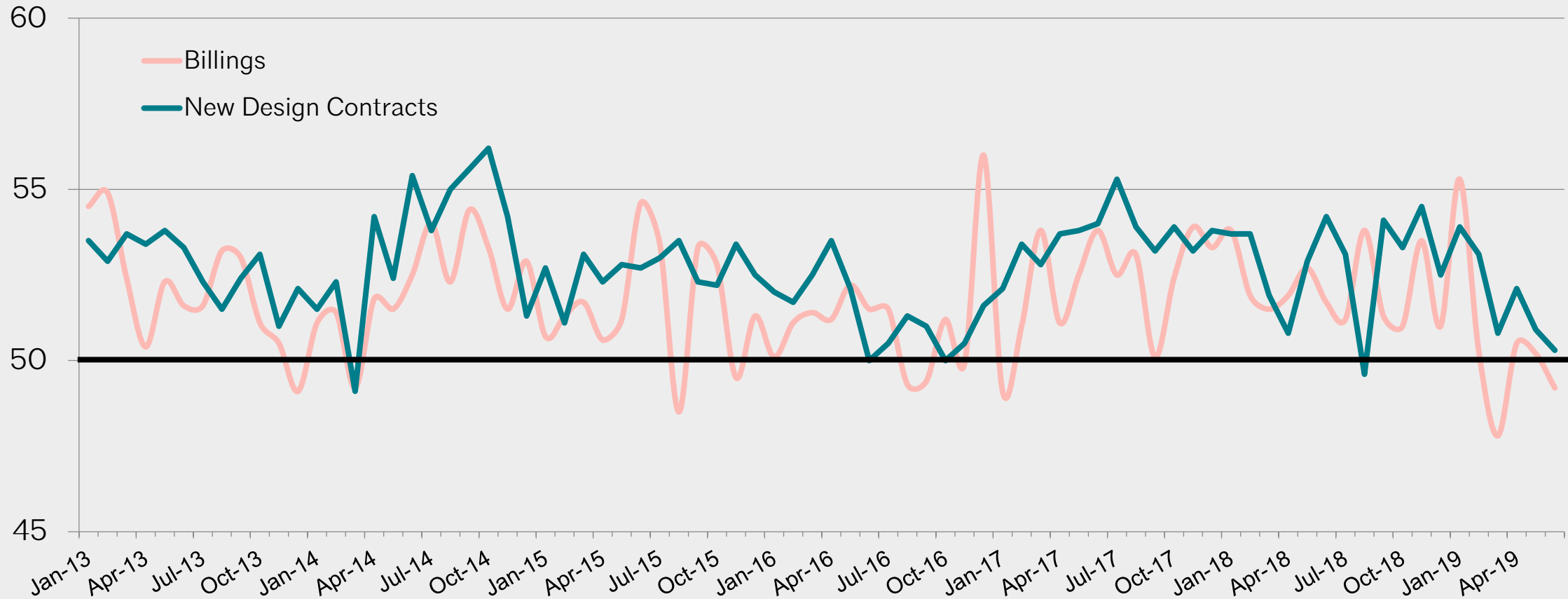
Diffusion index: 50 = no change from previous month, seasonally adjusted



Source: AIA Architecture Billings Index

# However, in spite of weak billings in March, new work coming into architecture firms continues to grow

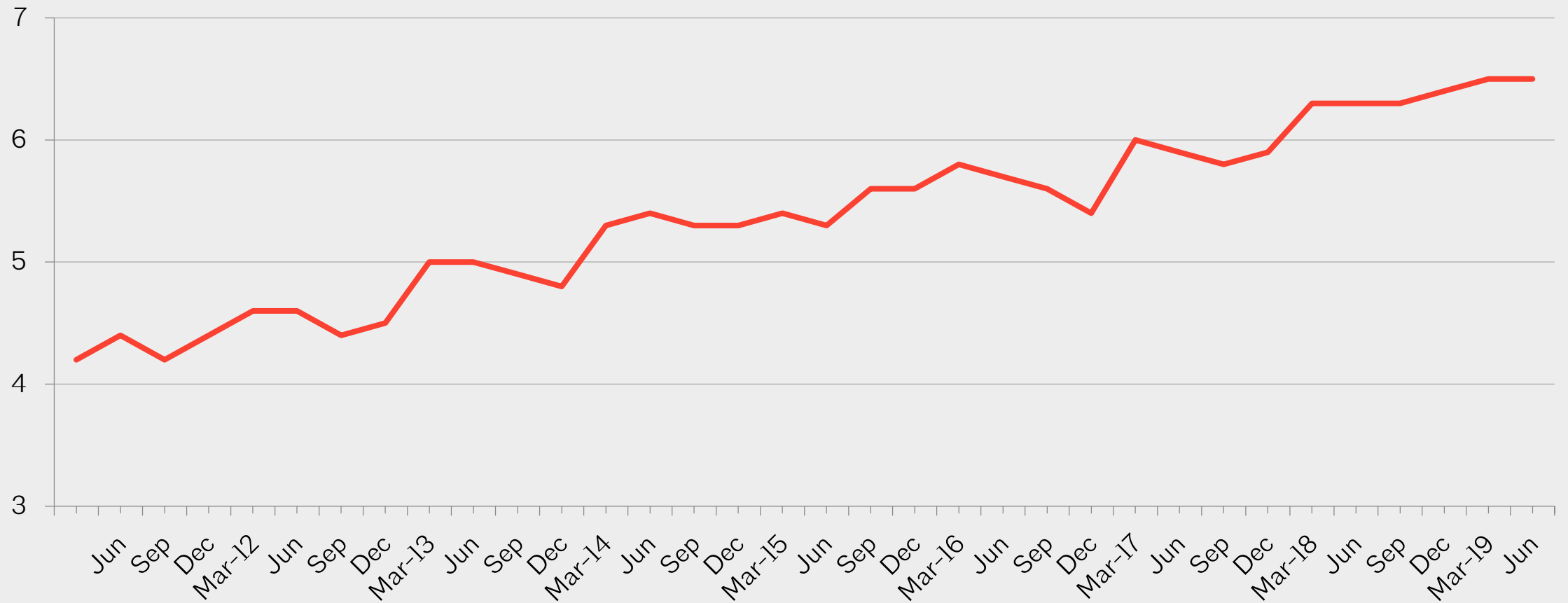
Diffusion index: 50 = no change from previous month, seasonally adjusted



Source: AIA Architecture Billings Index

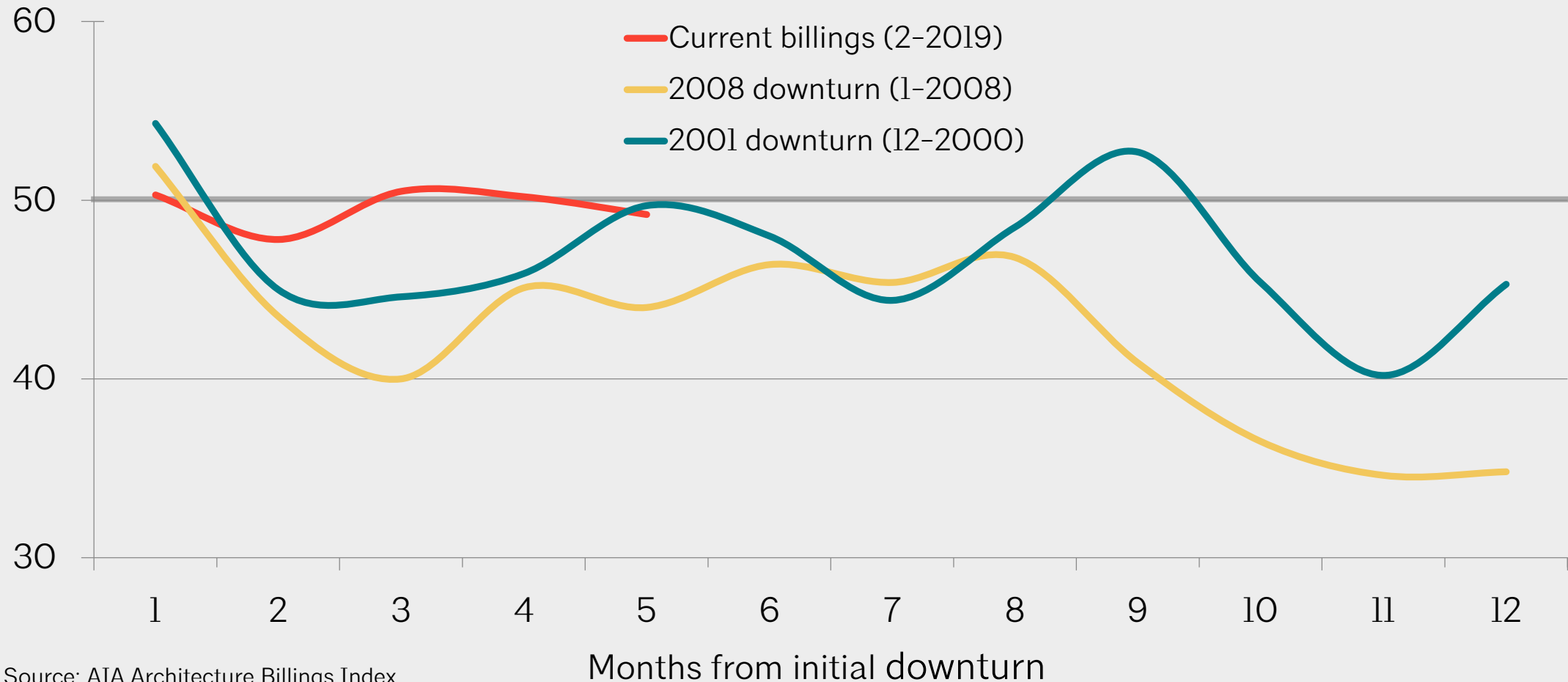
# Currently in excess of 6 months, backlogs at architecture firms are still at post-recession highs

Project backlog, months, averages across all firms



# In previous two recessions, when ABI heads into a downturn, decline was steep and prolonged

Diffusion index: 50 = no change from previous month, seasonally adjusted

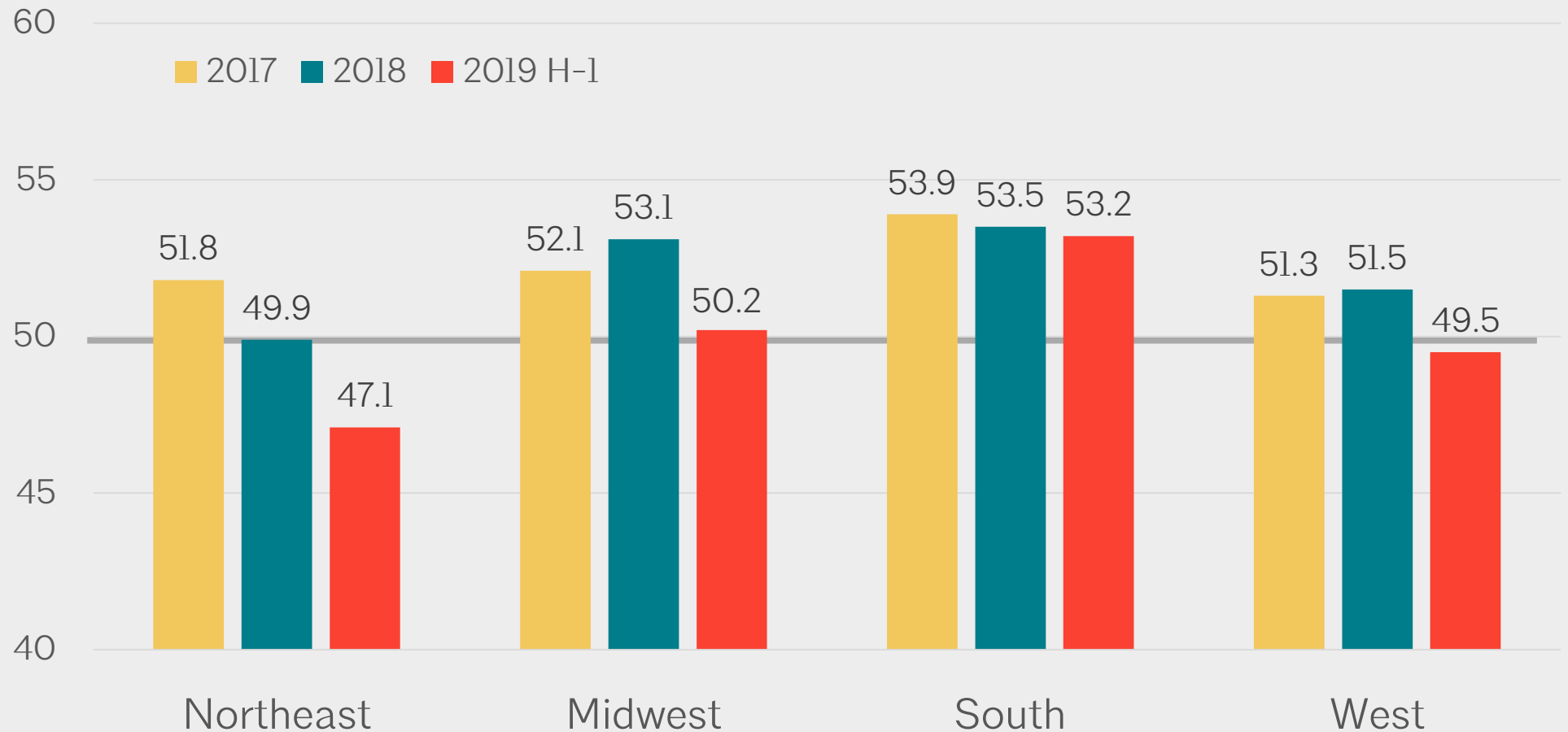


Source: AIA Architecture Billings Index



# So far this year, firms in South reporting healthy conditions, while those in Northeast seeing declines

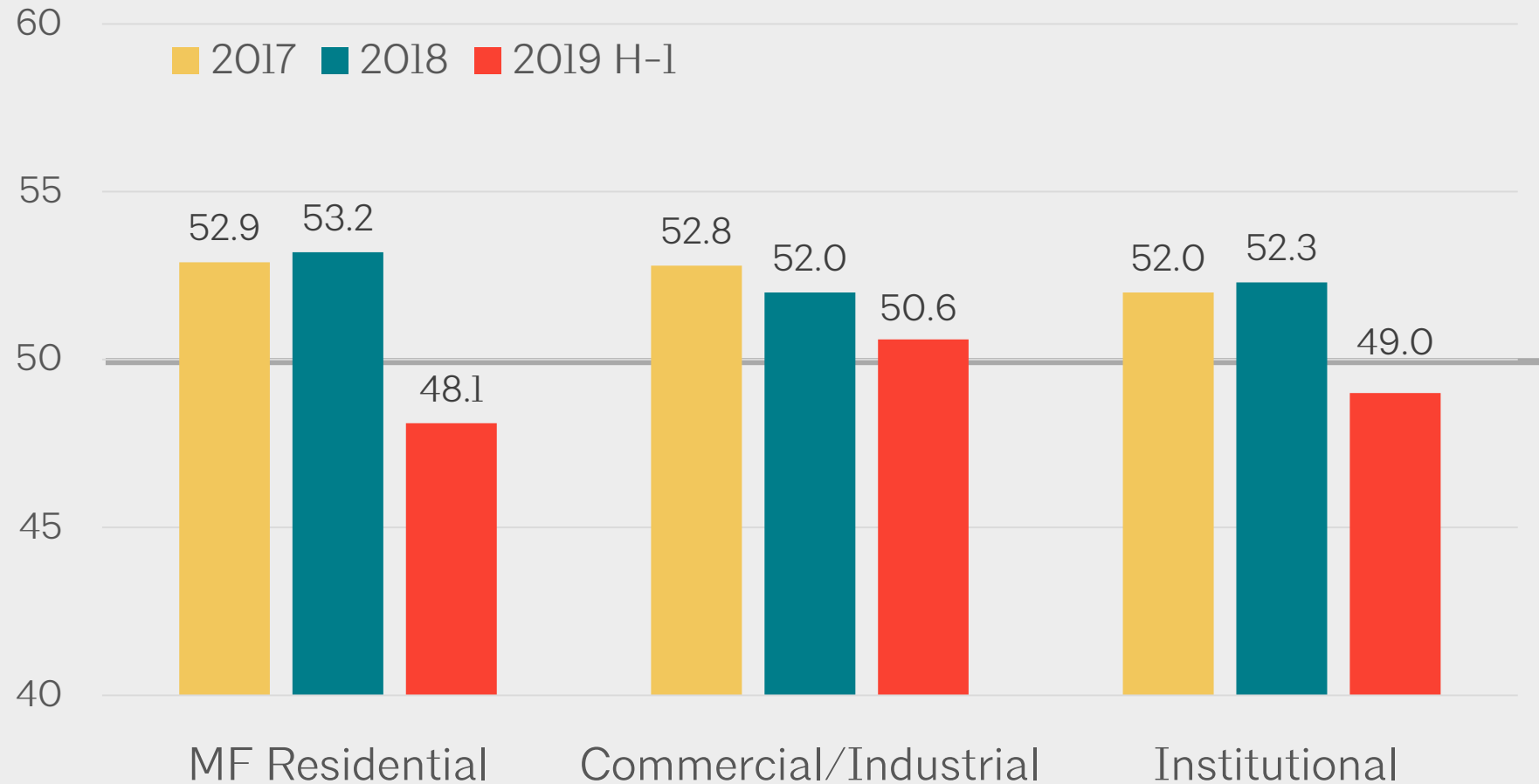
Regional  
ABI  
scores



Source: The American Institute of Architects ABI survey.

# By design specialization, all major sectors are slowing; commercial/industrial only one to see growth this year

Building  
Sector  
ABI scores

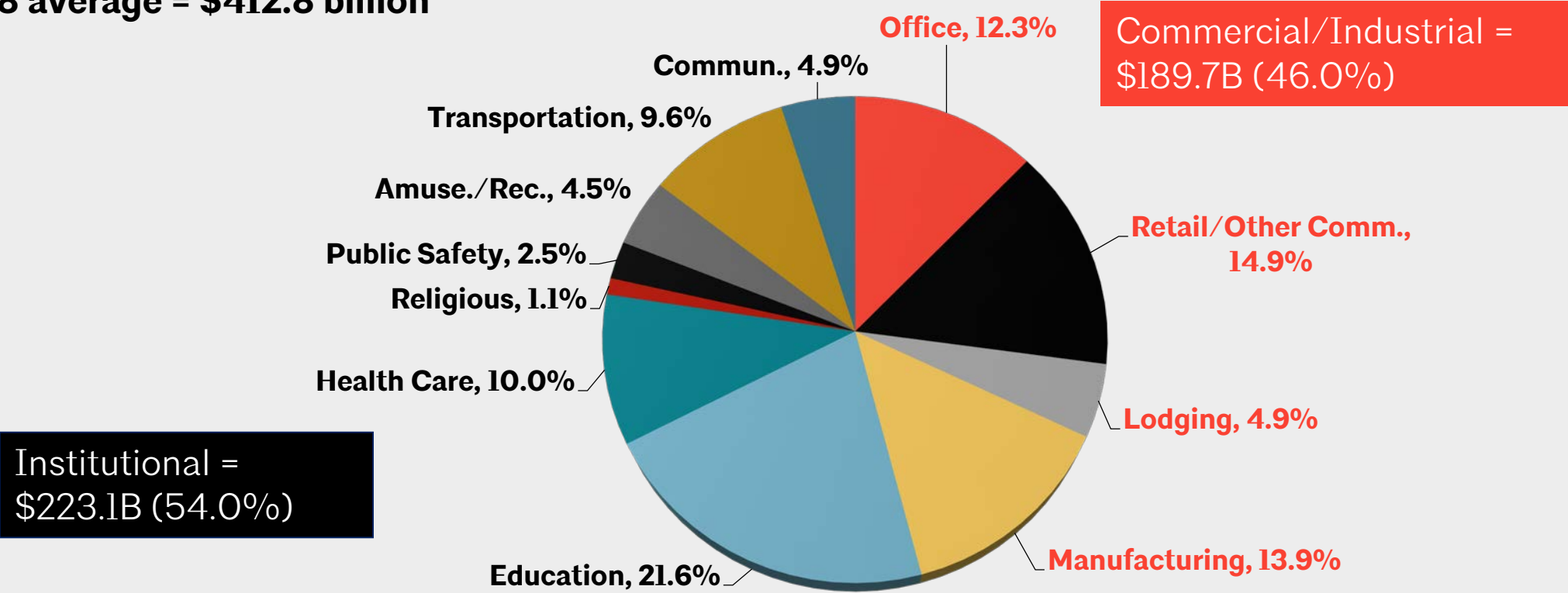


Source: The American Institute of Architects ABI survey.

# Institutional Categories Account for Over Half the Spending on Nonresidential Buildings

Share of U.S. nonresidential building construction spending, 2008-2018

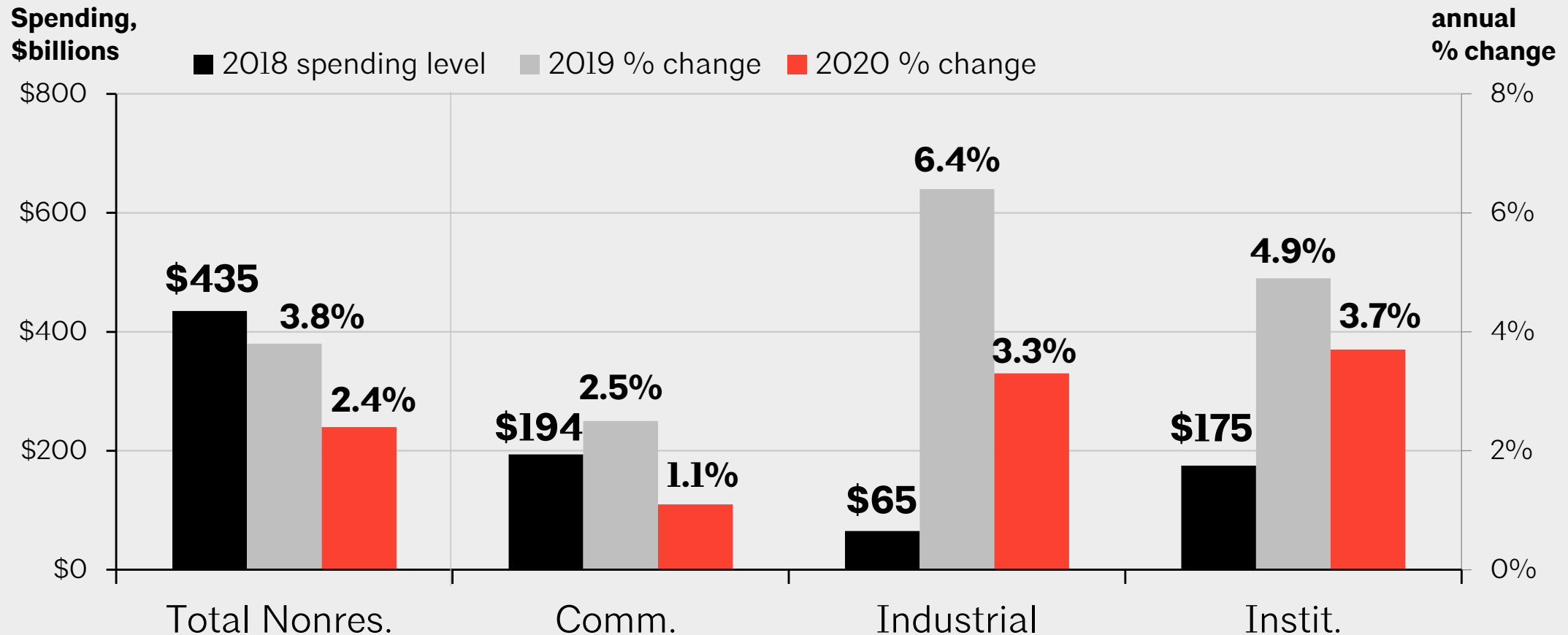
**2008-2018 average = \$412.8 billion**



Source: Construction Spending Put-in-Place, U.S. Department of Commerce

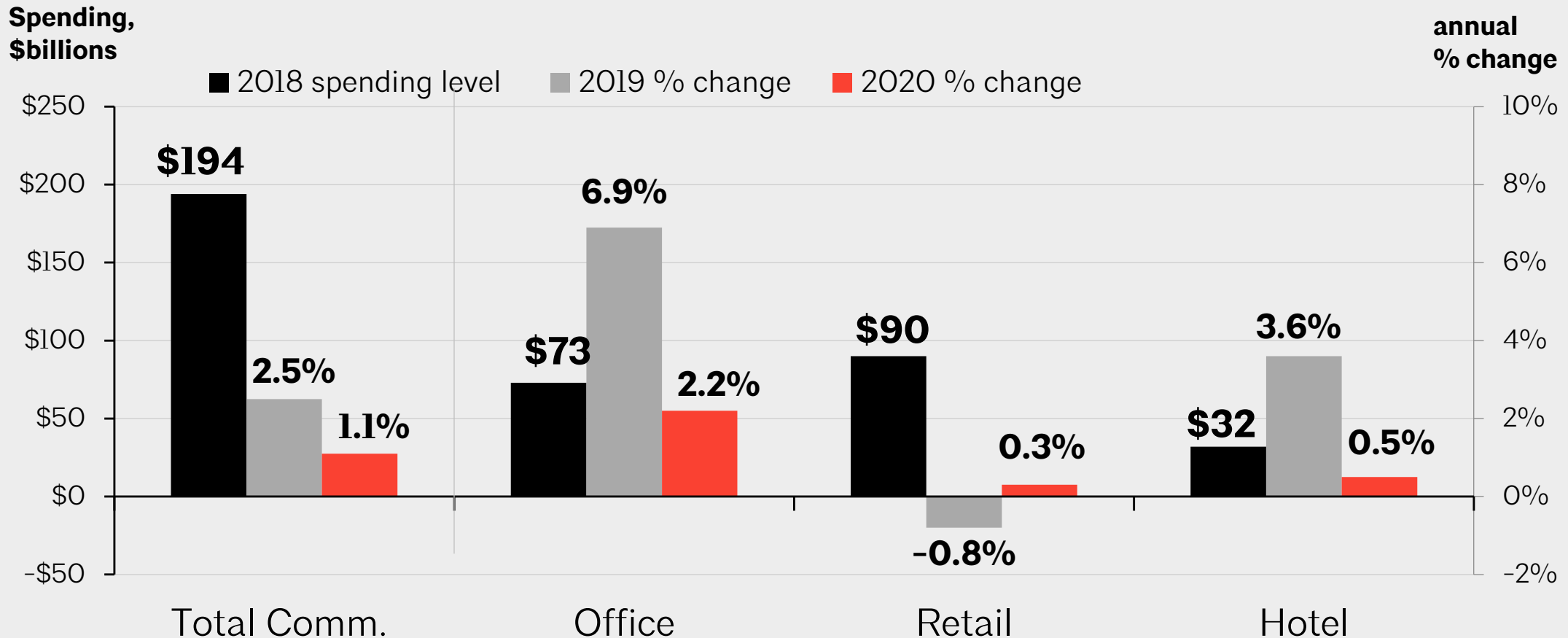
# Overall nonresidential building activity projected to remain healthy this year, and then slower growth in 2020

Billions \$ / % change—construction spending on nonresidential buildings



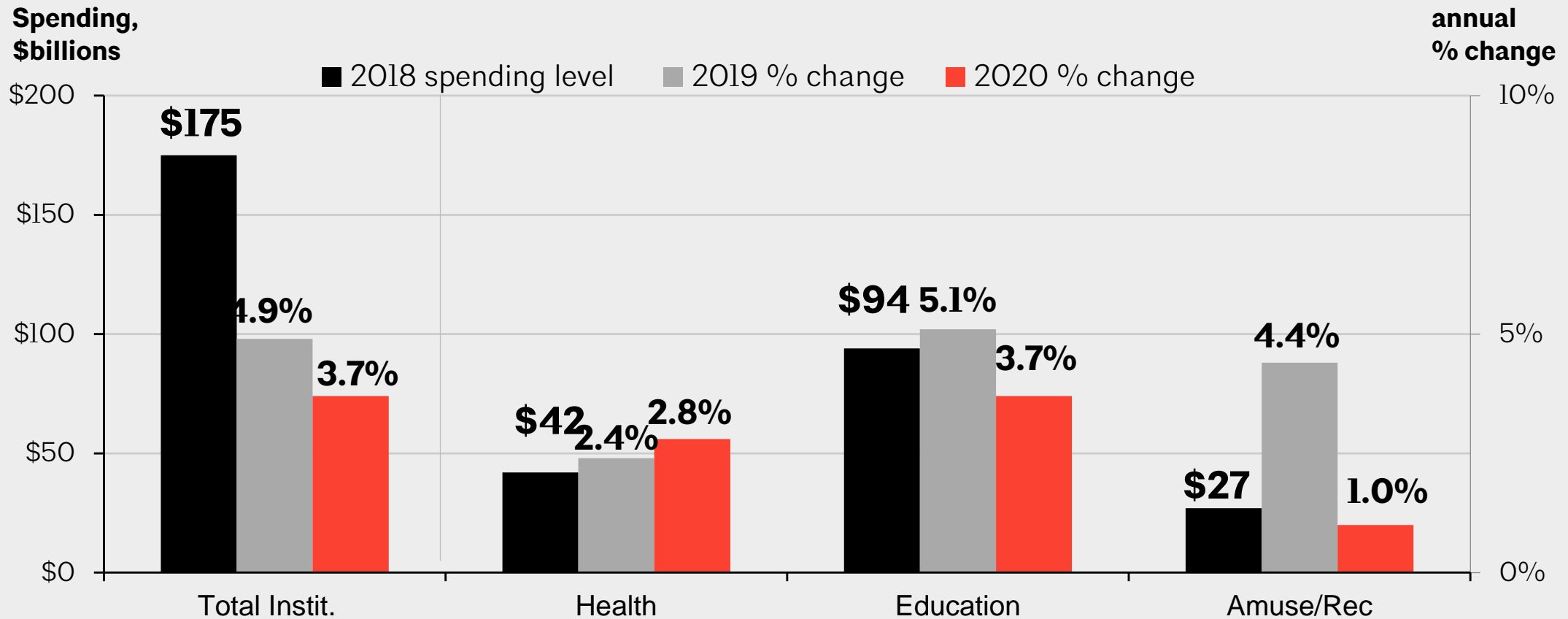
# Commercial: Retail softens this year; all sectors projected to see weakness moving into 2020

Billions \$ / % change—construction spending on nonresidential buildings



# Institutional: Generally, moderate growth this year; slower growth in 2020

Billions \$ / % change—construction spending on nonresidential buildings



**What's on the mind of  
architecture firm leaders?**

**What are your members  
telling you?**

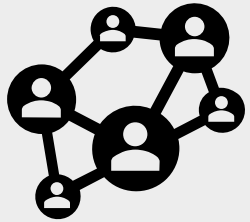




# Issues and opportunities facing architecture firms



- Knowing when to act and how to act

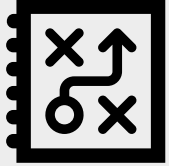


- Managing office morale



- Identifying opportunities in a downturn & preparing for the next growth phase

# Issues and opportunities facing architecture firms



- Knowing when to act and how to act



- Managing office morale



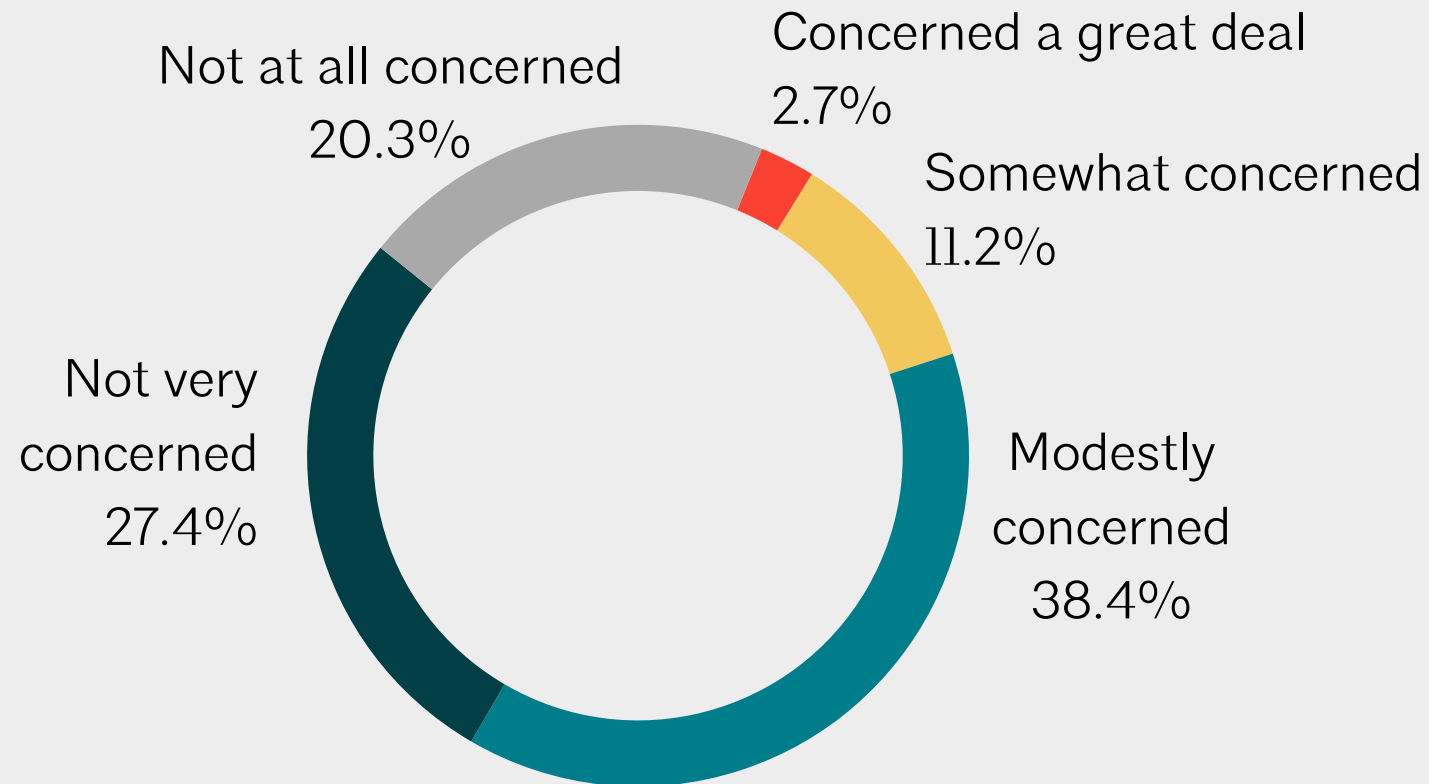
- Identifying opportunities in a downturn & preparing for the next growth phase

# Keep your eye on the most useful indicators

- **General business climate indicators**  
(e.g. stock prices, interest rates, confidence scores)
- **Design/construction industry indicators**  
(e.g. design activity, construction activity, construction costs, building rents and occupancy rates)
- **Business activity at firm**  
(e.g. revenue, profits, staff chargeability)

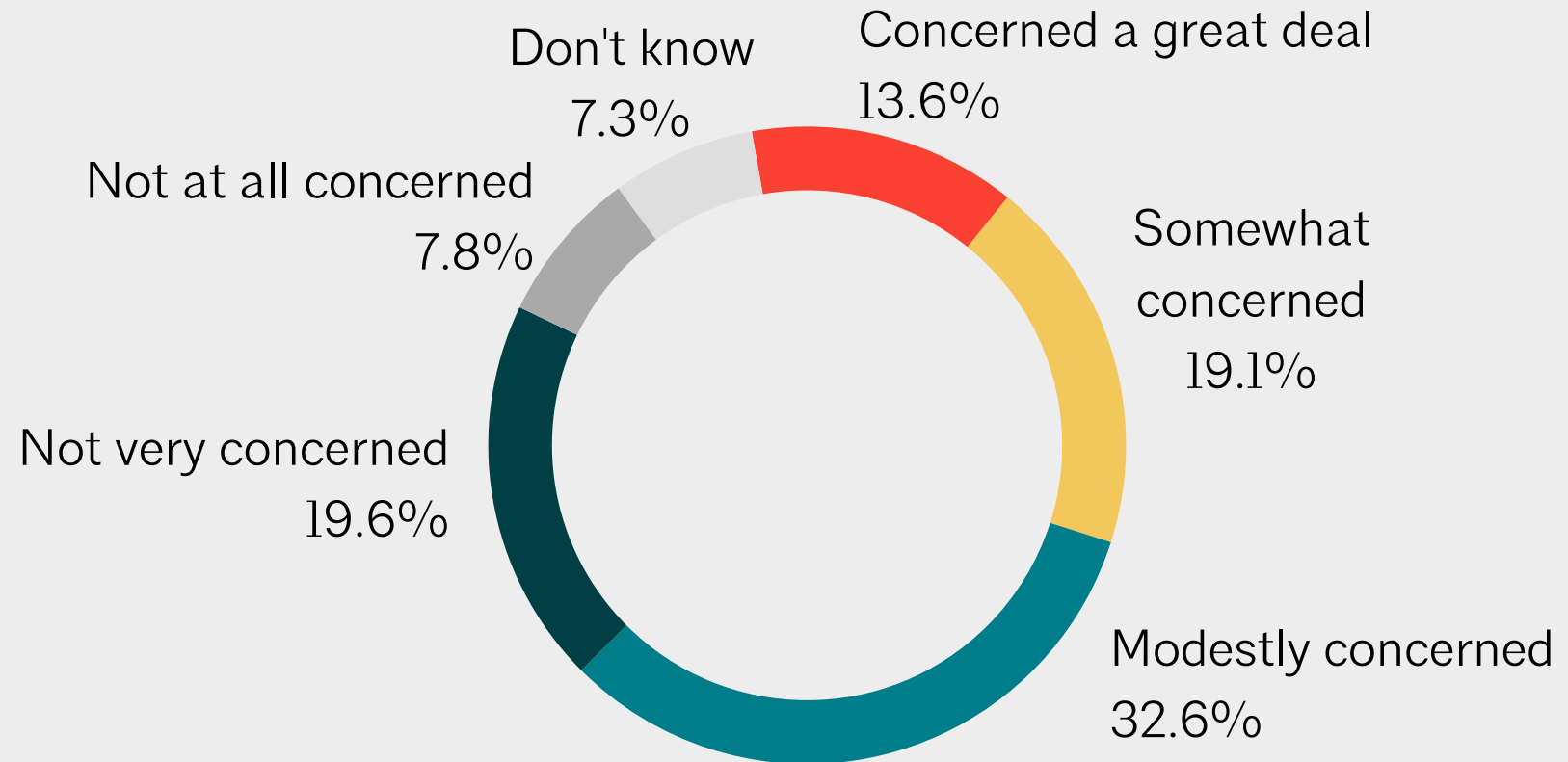
# Architects generally report that their clients are not very nervous at present about the economic outlook

Extent that concern regarding economic outlook is affecting current clients  
(percent of respondents)



# Architects report that their clients are modestly concerned about tariffs and trade retaliation

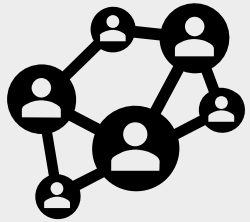
Extent that concern among major clients regarding tariffs and trade  
(percent of respondents)



# Issues and opportunities facing architecture firms



- Knowing when to act and how to act



- Managing office morale



- Identifying opportunities in a downturn & preparing for the next growth phase

# Firms are offering expanded benefits to retain staff

## Offer Health Insurance

**95%**

(up from 93% in 2016)

## Pay a portion of AIA dues

**94%**

(up from 89% in 2016)

\*77% pay them in full

## Support emerging professions

- 81% pay for licensure
- 78% pay membership dues (other than AIA)
- 70% offer paid time off for professional development
- 65% pay for ARE prep materials

# Firms are looking to improve firm culture

## Offer workplace benefits

- 90% have **casual dress**
- 87% have **remote workers**
- 83% offer **flexible work hours**
- 63% offer **parental flexibility**
- 27% **child-friendly offices**
- 27% shorter **summer/seasonal hours**

## Encourage a culture of diversity, equity, and transparency

- 88% have a **formal performance review** process
- 80% have specifically hired, promoted, and/or mentored **employees with diverse backgrounds**
- 36% conducted an **salary equity assessment** based on gender/race
- 27% **transparent promotion and compensation practices**



# Issues and opportunities facing architecture firms



- Knowing when to act and how to act



- Managing office morale

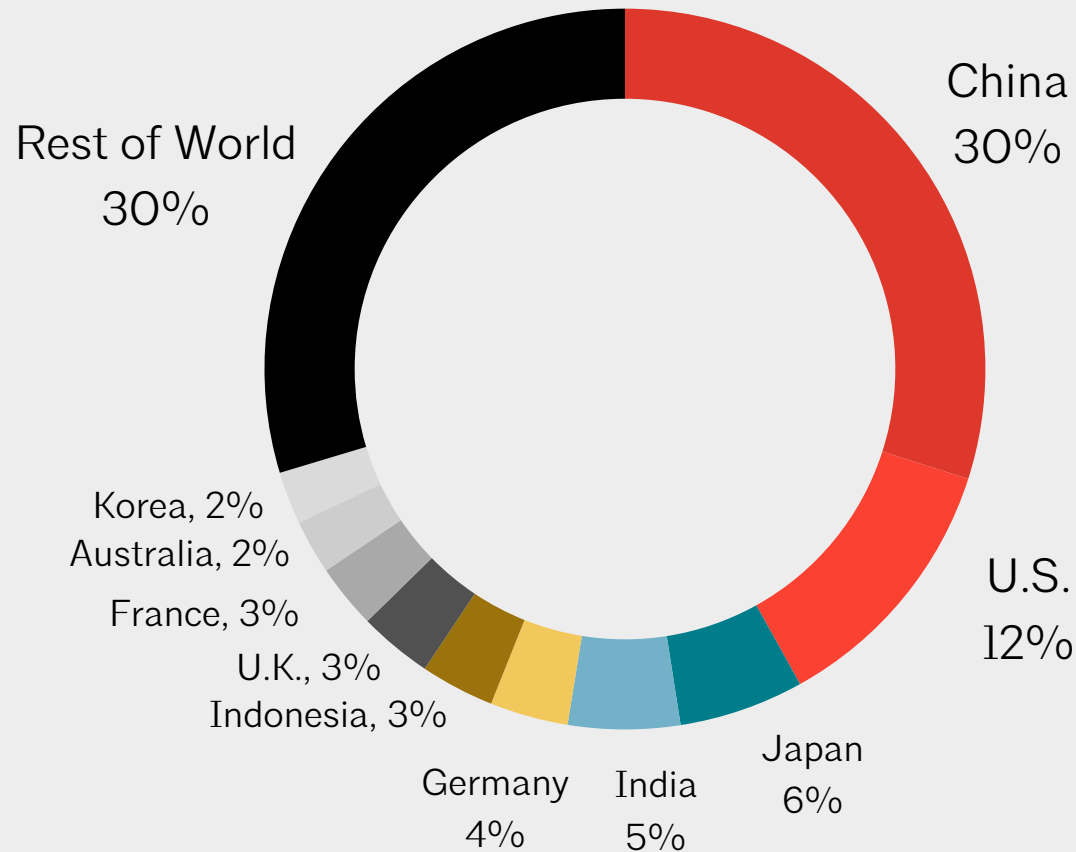


- Identifying opportunities in a downturn & preparing for the next growth phase

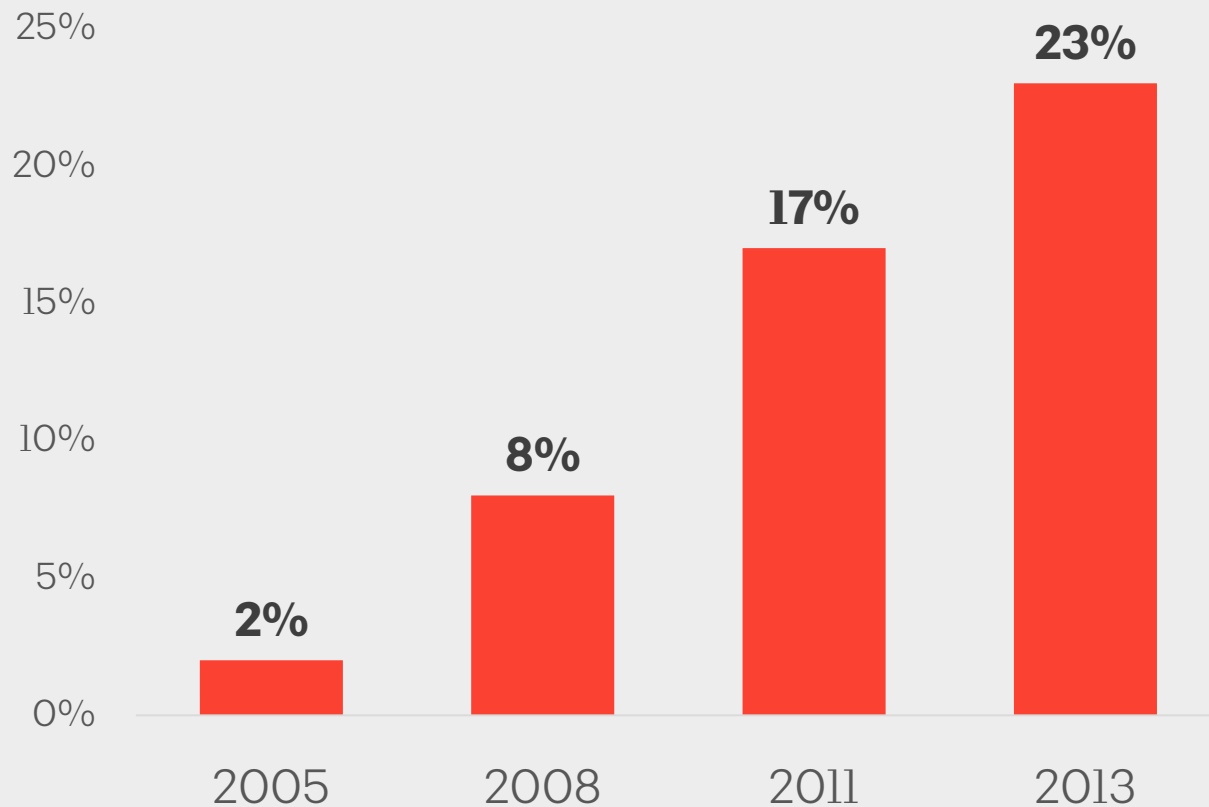
With U.S. accounting for only small share of international construction, global design opportunities are widespread

Top 10 countries account for 70% of \$10+ trillion international construction market.

Share of Global Construction Spending, 2017 (Percent)



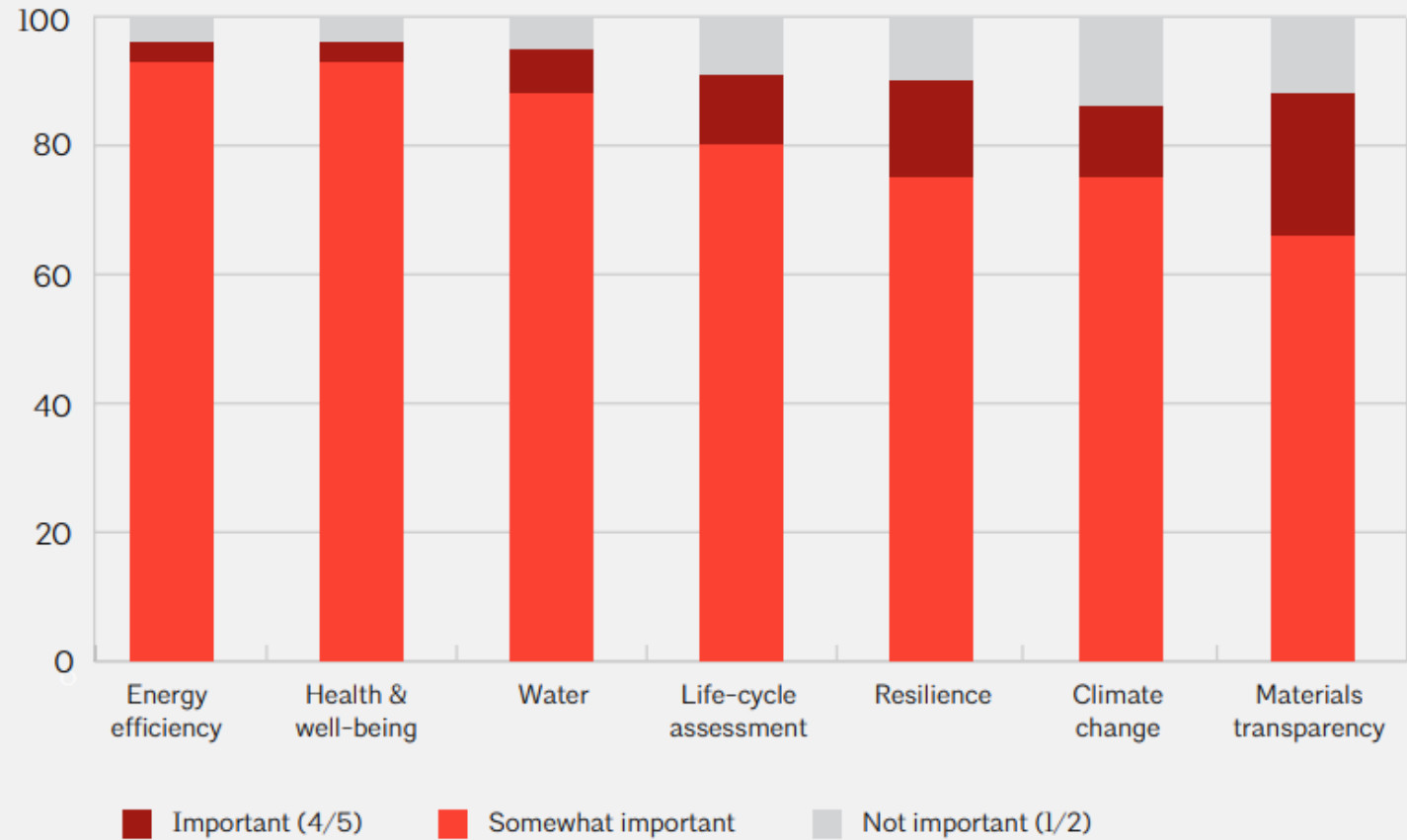
# Green building as a share of market grew in the Great Recession...



...making a downturn a ripe time for deeper sustainable design activity

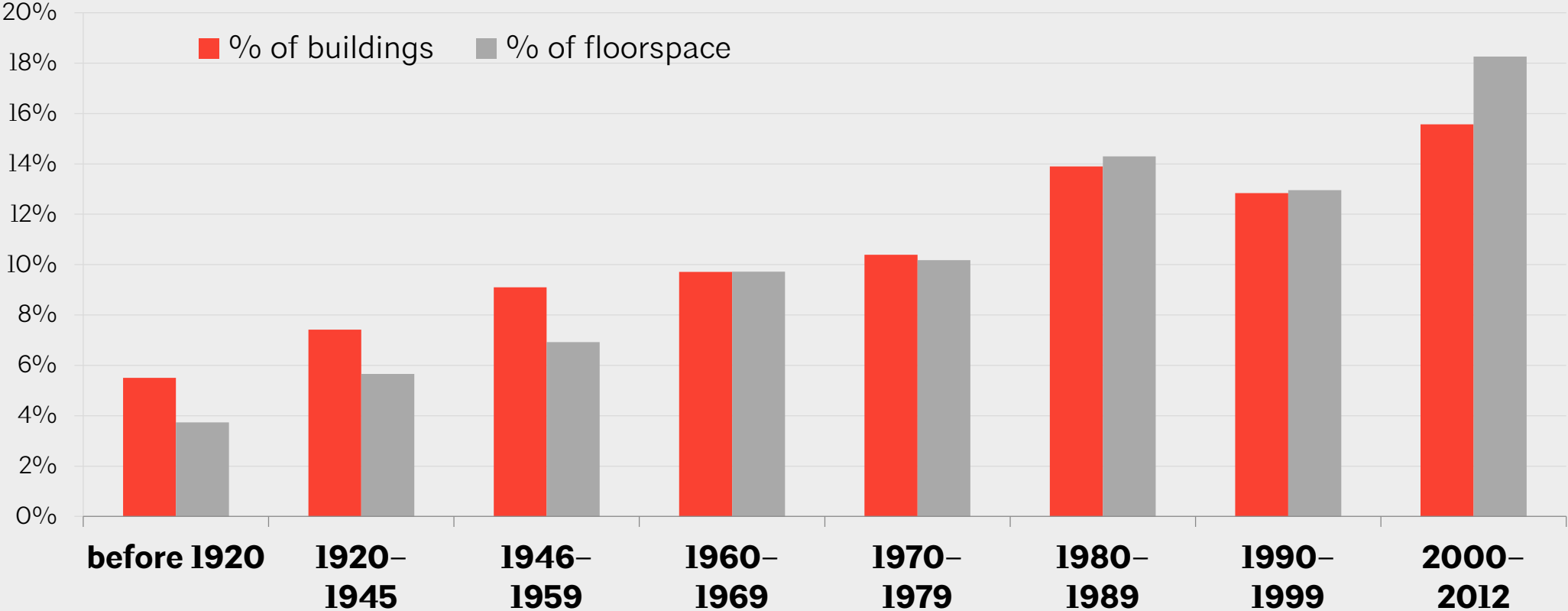
# Members feel that sustainability is important

## Importance of sustainability areas



# U.S. building stock—half built prior to 1980 provide ample opportunity for existing building improvements

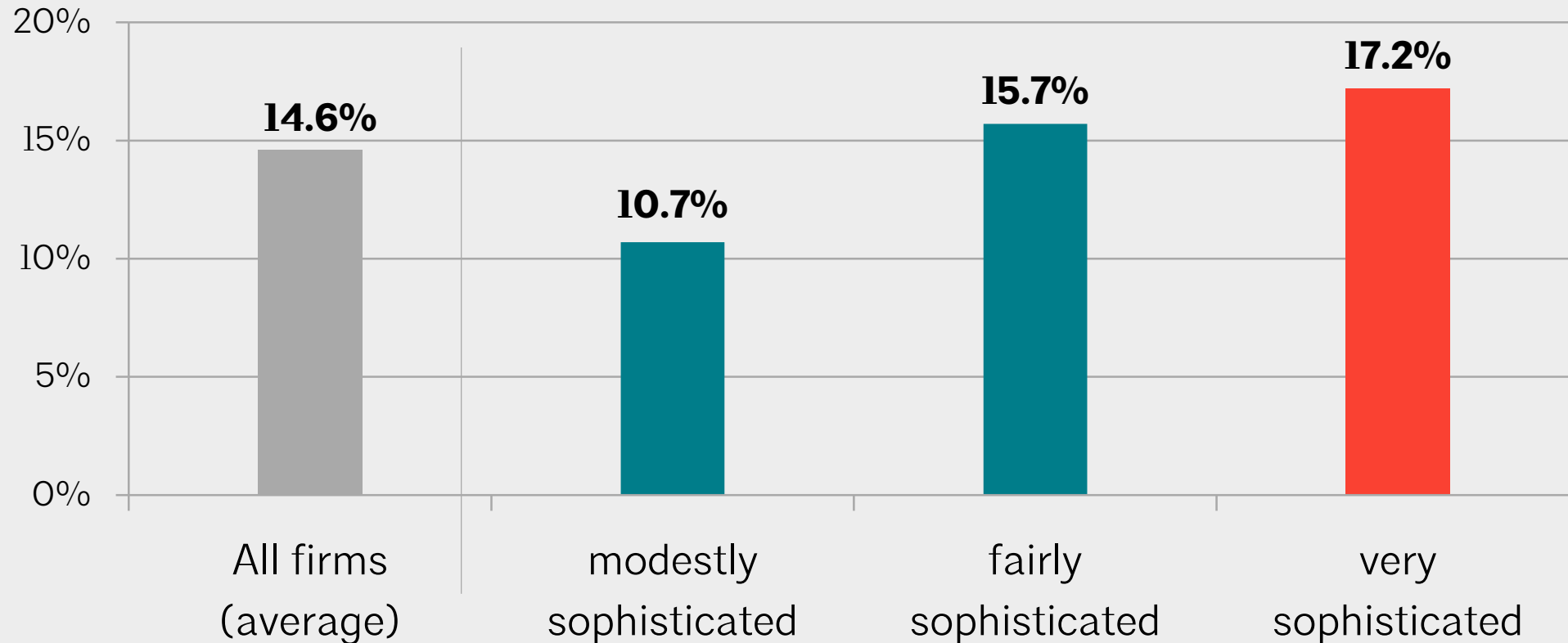
Share of nonresidential buildings by age of building



Source: U.S. Department of Energy, Energy Information Administration, 2012 Commercial Building Energy Consumption Survey (CBECS)

# Technologically advanced architecture firms have been more profitable

2018 profitability by perceived technological sophistication, average % across all firms



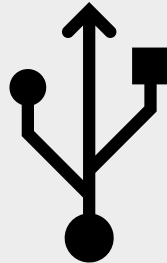
**Preparing for the future**

# Looking forward...

**Pay  
attention to  
fundamentals**



**Prepare for  
technology  
disruptions**



**Eye the  
workforce of  
the future**



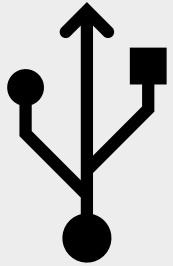


## **Pay attention to fundamentals**




- Get your financials in order
- Right-size staff
- Ensure strong base services
- Stay nimble

# Prepare for technology disruptions




**OFFSITE CONSTRUCTION PROCESSES**  
e.g. prefabrication; modularization; preassembly



**ARTIFICIAL INTELLIGENCE/ MACHINE LEARNING**  
Used to generate best practices; prototypes



**BIG DATA/ PREDICTIVE MODELING**  
Monitor consumer behavior; construction processes; project history




**VIRTUAL/ AUGMENTED REALITY/ REAL-TIME RENDERING**  
Visualize, test, validate designs




**ROBOTICS/ AUTOMATION/ DRONES/ INDUSTRIALIZED DESIGN**  
Improve productivity in construction



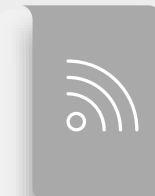
**3D PRINTING**  
Design models, on-site production of construction products



**AUTONOMOUS VEHICLES**  
Affecting building designs, use of space; locational choices



**ENHANCED CONSTRUCTION MATERIALS**  
Specially cured concrete; smart fenestration, microbiology, nanotechnology



**INTERNET OF THINGS**  
Sensors, data to control systems

**Eye the  
workforce of  
the future**



## Time to get ready for Gen Z (born ~1998-2012)

- **Different health crises.** High obesity, depression, sleep deprivation, and technology addiction will disrupt workplaces.
- **Education, idealism and money.** Pragmatism vs. idealism. What does this mean? Are they in conflict or powerful partners?
- **Constant contact—sort of.** This group is more connected than ever—but not in person. What does this mean?
- **It's all about sharing.** Privacy and IP? Not so much.

# Thank you!

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