IMPACT OF COVID-19

TO GLOBAL BUSINESS VALUATION AND APPRAISAL

























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Panelists













ASA | American Society of Appraisers William (Bill) A. Johnston, ASA Managing Director, Empire Valuation Consultants Group



CBV Institute | Chartered Business Valuation Institute Stephen Cole, FCPA, FCA, FCBV



GACVA | Global Association of Certified Valuators and Analysts Wolfgang Kniest, Dipl.-Kfm., CVA



NACVA | National Association of Certified Valuators and Analysts Lari B. Masten, MSA, CPA/ABV/CFF, CPVA, CVA, MAFF, ABAR Masten Valuation



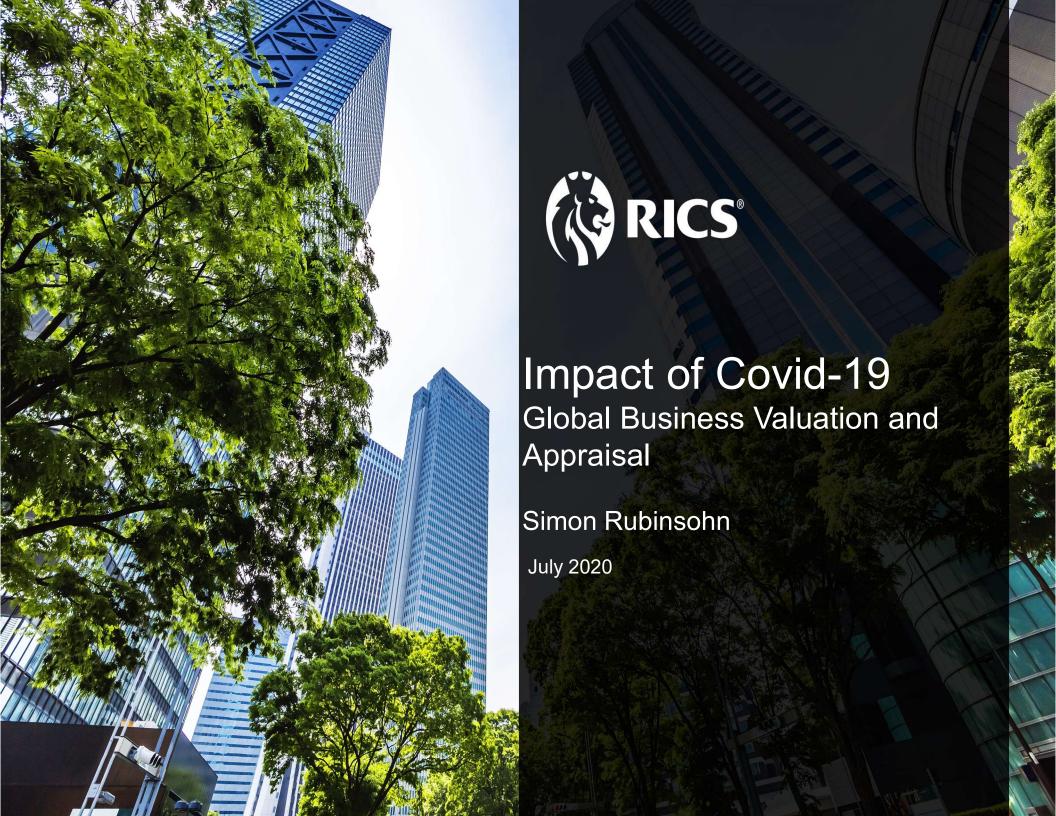
RICS | Royal Institution of Chartered Surveyors Leigh Miller, EY Global Valuation, Modeling & Economics Leader



RICS | Royal Institution of Chartered Surveyors Simon Rubinsohn, Chief Economist

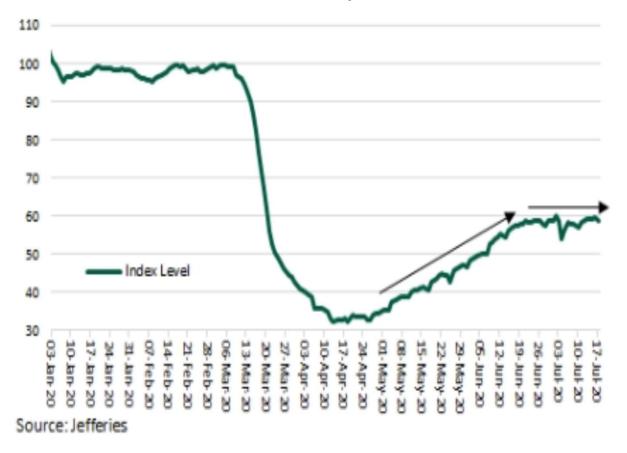


Town Hall Moderator | NACVA Brien K. Jones, Chief Operations Officer/Executive Vice President



This high frequency activity index from Jefferies provides a timely signal that momentum in the economy appears to be waning after a good performance in June

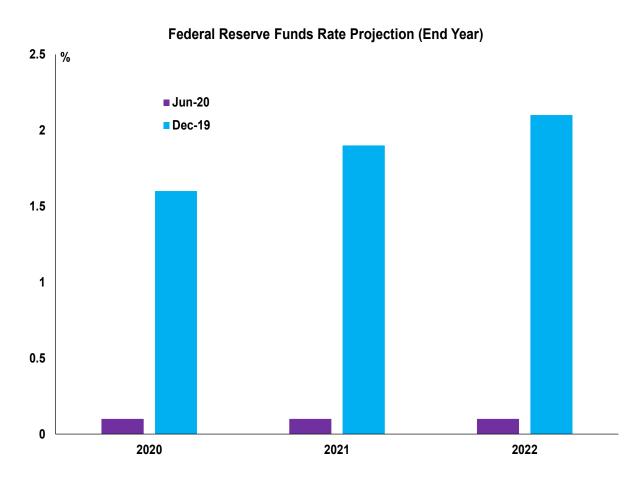
Jefferies US Economic Activity Index



Key drivers of the flatter trend include

- Small business activity 25% of firms are currently closed compared with 19% in late June
- Public transport ridership currently 38% of normal down from 41% at the beginning of the month
- Traffic congestion rebounded after July 4th holiday week but still well below late June reading
- Foot traffic measured around consumer discretionary locations remains well below late June peak
- Restaurant bookings no longer trending higher

The plateauing in the recovery is driving both monetary and fiscal policy developments



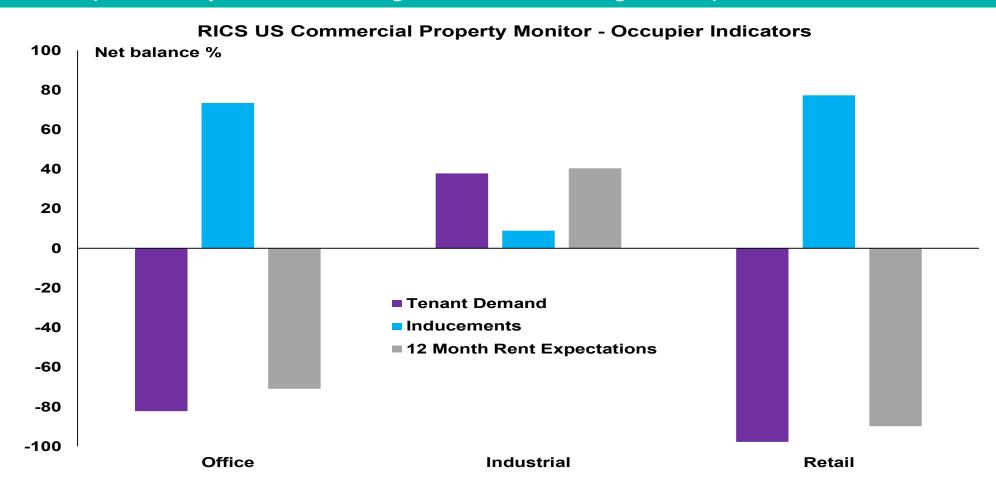
The Fed's guidance from the last meeting was pretty clear

- the policy rate will stay near zero past 2022
- · open-ended QE will continue
- the emergency facilities stand ready to lend

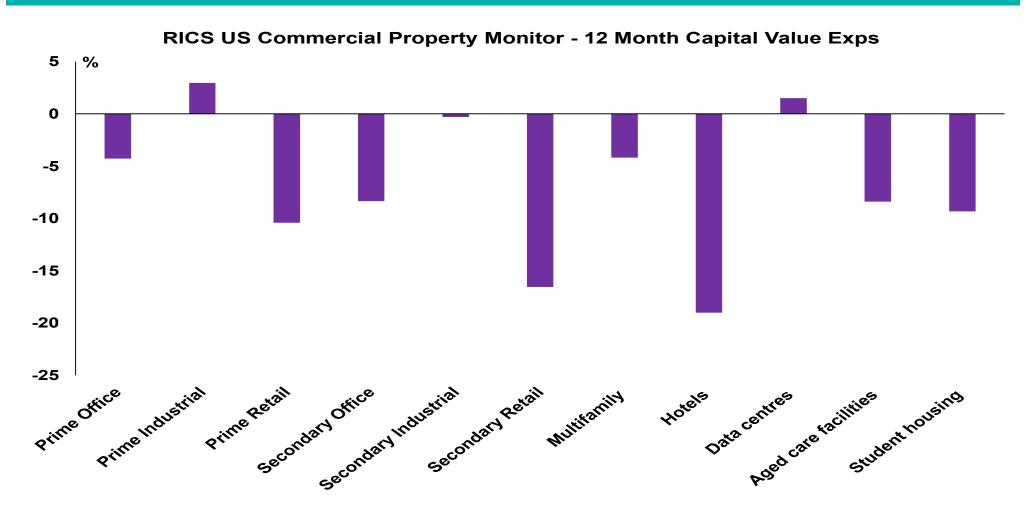
Discussions around another fiscal package are ongoing and critical

- an extension of emergency unemployment benefits is key to supporting consumer confidence
- June surveys showed most furloughed workers expected to be rehired as businesses reopened. According to the latest iteration, more than half do not expect to get their jobs back, either soon or the foreseeable future.

The message coming back to us from respondents to the commercial property monitor predictably shows a strong sector bias amongst occupiers

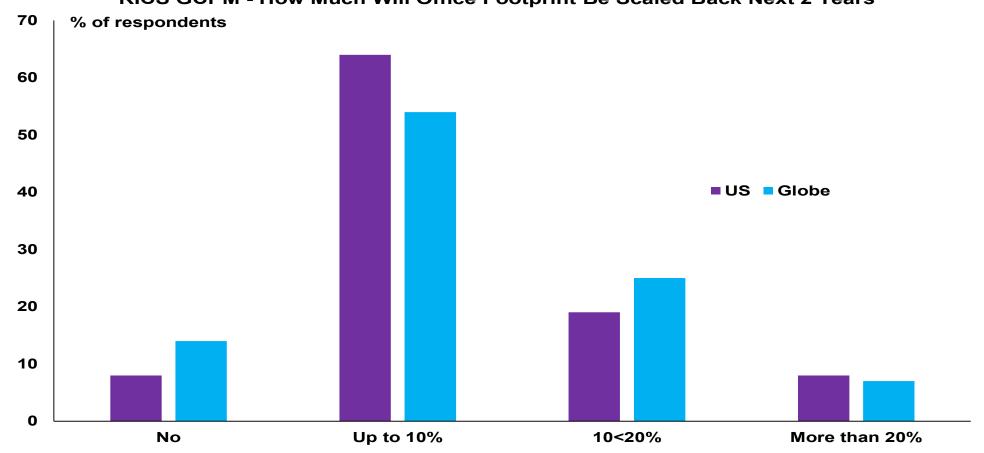


There may be some pandemic related negative bias to these expectations but the broad trends aren't significantly out of line with the feedback from elsewhere

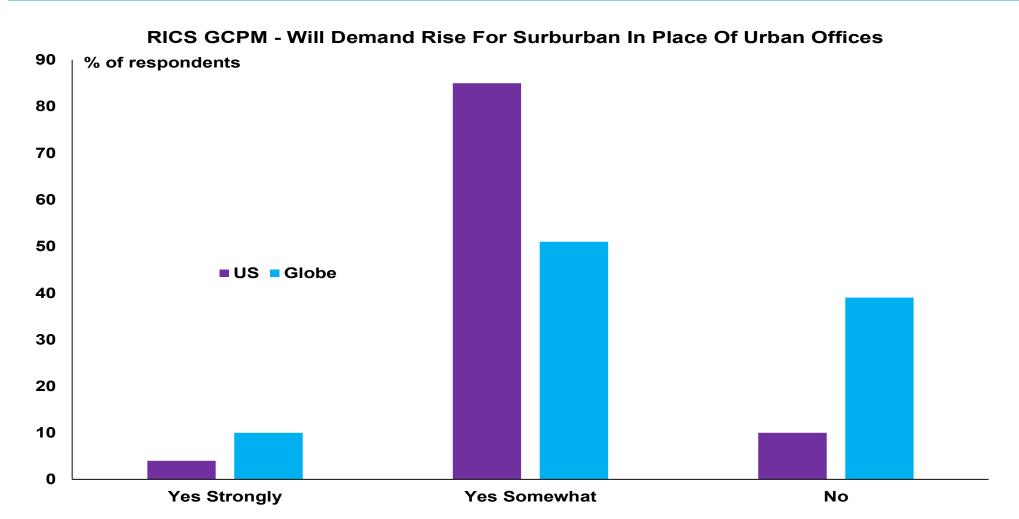


The vast majority of respondents to the RICS survey see the office footprint being reduced over the next 2 years; in the US the proportion is slightly higher

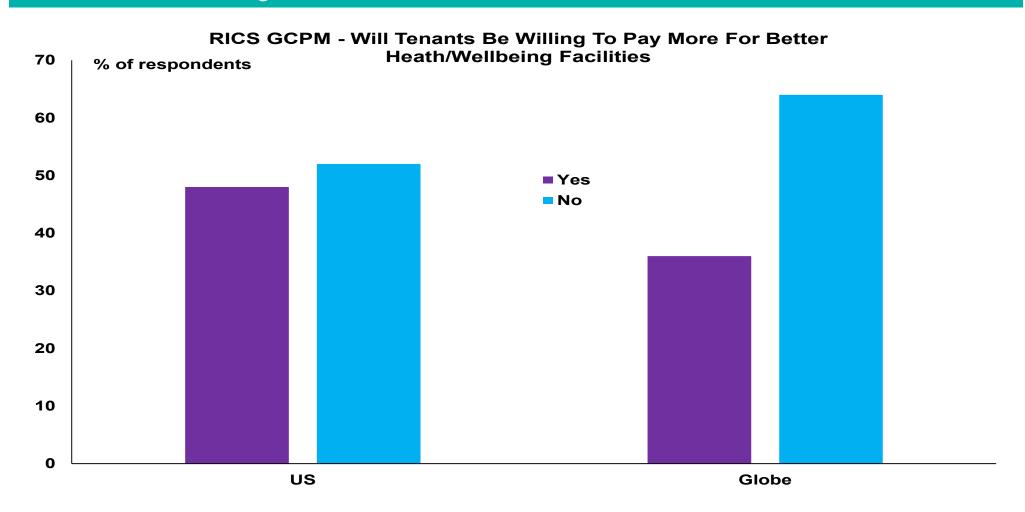




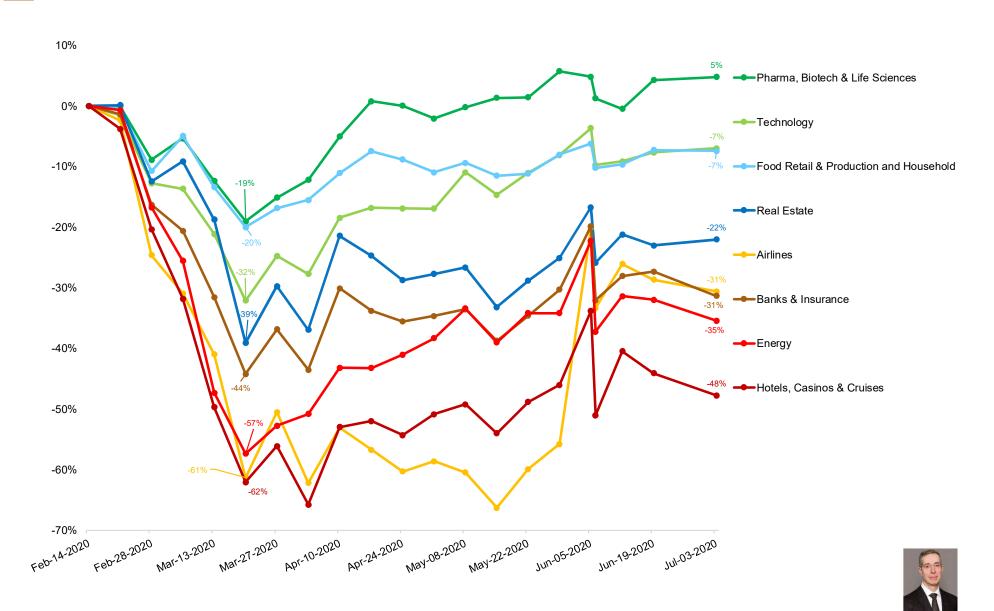
And the trend away from highly urban locations may be more pronounced in the US



Across the globe, an overwhelming majority of respondents believe more will be demanded of buildings but it is unclear who will shoulder the cost



IMPACT ON INDUSTRIES: S&P 500 WEEKLY CUMULATIVE PRICE CHANGE (%) BETWEEN FEB 14 AND JUL 3



Source: Bloomberg.

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IMPACT ON INDUSTRIES: EVOLUTION OF MULTIPLES

Business Valuation Institute
Stephen Cole, FCPA, FCA, FCBV

S&P 500 Multiples (avg.)						% Change					
	29-Feb-20	31-Mar-20	30-Apr-20	31-May-20	30-Jun-20	Mar vs. Feb	Apr vs. Feb	May vs. Feb	Jun vs. Feb		
TEV/LTM EBITDA											
Pharma, Biotech & Life Sciences	17.4x	17.1x	18.8x	19.0x	18.6x	-2%	8%	9%	7%		
Technology	23.3x	20.6x	22.9x	25.1x	25.7x	-11%	-2%	8%	10%		
Food Retail & Prod. and Household	13.9x	13.0x	14.7x	15.4x	15.0x	-7%	6%	11%	8%		
Real Estate	20.8 x	18.1x	19.2x	19.3x	19.6x	-13%	-7%	-7%	-6%		
Airlines	3.6x	2.8x	3.3x	3.4x	3.6x	-23%	-8%	-6%	-1%		
Banks (Market Cap/LTM EBT)	7.8x	5.5x	7.2x	7.2 x	7.3x	-30%	-8%	-7 %	-7%		
Insurance	9.9x	8.4x	12.2x	12.2x	12.5x	-15%	23%	23%	26%		
Energy	8.1x	5.6x	6.1x	6.2x	6.2x	-31%	-24%	-23%	-23%		
Hotels, Casinos & Cruises	11.3x	8.2x	9.8x	11.1x	10.8x	-28%	-14%	-2%	-5%		
TEV/LTM Revenue											
Pharma, Biotech & Life Sciences	5.5x	5.5x	6.0x	6.3x	6.2x	-1%	9%	14%	13%		
Technology	6.3x	5.6x	6.3x	6.9x	7.0x	-11%	0%	9%	11%		
Food Retail & Prod. and Household	3.3x	3.1x	3.2x	3.3x	3.3x	-7%	-2%	2%	1%		
Real Estate	12.5x	11.0x	11.7x	11.7x	11.8x	-12%	-7%	-7%	-6%		
Airlines	0.9x	0.7x	0.7x	0.8x	0.8x	-23%	-16%	-14%	-9%		
Banks (Market Cap/LTM Revenue)	3.0x	2.1x	2.5x	2.5x	2.5x	-29%	-16%	-15%	-15%		
Insurance	1.9x	1.6x	1.7x	1.7x	1.7x	-15%	-11%	-8%	-7%		
Energy	2.4x	1.8x	2.1x	2.1x	2.1x	-26%	-10%	-11%	-11%		
Hotels, Casinos & Cruises	4.4x	3.2x	3.7x	3.9x	3.8x	-28%	-16%	-10%	-13%		

By June 30, 2020, multiples had generally recovered.

Source: S&P Capital IQ.

The change in EV/EBITDA multiples is not as volatile as the change in equity prices on the prior graph:

- For highly levered companies, the impact on market cap is more profound than on enterprise value.
- Multiples increased following the release of COVID-impacted quarterly results, as in general, this marked a drop in LTM revenue and EBITDA relative to enterprise values which had already been depressed.

Trading multiples should be relied upon with skepticism.

ILLUSTRATIVE COSTS OF EQUITY

		Starbucks		Johnson Controls		Microsoft		Walmart		Airbus	
	As at:	02/28/2020	06/30/2020	02/28/2020	06/30/2020	02/28/2020	06/30/2020	02/28/2020	06/30/2020	02/28/2020	06/30/2020
Normalized Risk-free Rate ^[1] Beta ^[2] Normalized Equity Risk Premium ^[1] Cost of Equity ^[3]	а	3.0%	2.5%	3.0%	2.5%	3.0%	2.5%	3.0%	2.5%	3.0%	2.5%
	b	0.55	0.84	1.04	1.03	1.13	1.04	0.53	0.57	1.07	1.07
	С	5.0%	6.0%	5.0%	6.0%	5.0%	6.0%	5.0%	6.0%	5.0%	6.0%
	$d = a + (b \times c)$	5.7%	7.5%	8.2%	8.7%	8.6%	8.7%	5.6%	5.9%	8.4%	8.9%
 ▲ absolute change Cost of Equity from February 28, 2020 ▲ % change in Cost of Equity from February 28, 2020 ▼ % change in Cost of Equity from February 28, 2020 due to risk-free rate change is in range of 6% to 9% - but for the rate drop, the Cost of Equity would have been that much higher. The higher rate is noted here 			1.8%		<u>0.5%</u> <u>5.7%</u>		0.1%		0.3% 5.0%		0.6%
only to highlight the change in risk perception			8.0%		9.2%		9.2%		6.4%		9.4%

Notes:

[2] Based on an average of levered raw betas for comparable companies and with reference to the subject company from Bloomberg. The betas are based on 5-year monthly data regressed against the S&P 500, and have not been unlevered and relevered.

[3] No size, industry or company specific premia added. For the size premia, as most of the subject companies are very large, the inclusion of any size premia would be de minimus. For the industry premia, the beta is assumed to reflect these risks under a CAPM approach. No company specific risk added. However, a size and company-specific risk and perhaps industry risk will be appropriate to add in the majority of small and mid-market cases.

These materials were prepared with grateful assistance from Duff & Phelps Toronto Canada.



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^[1] Source: Duff & Phelps guidance.



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