

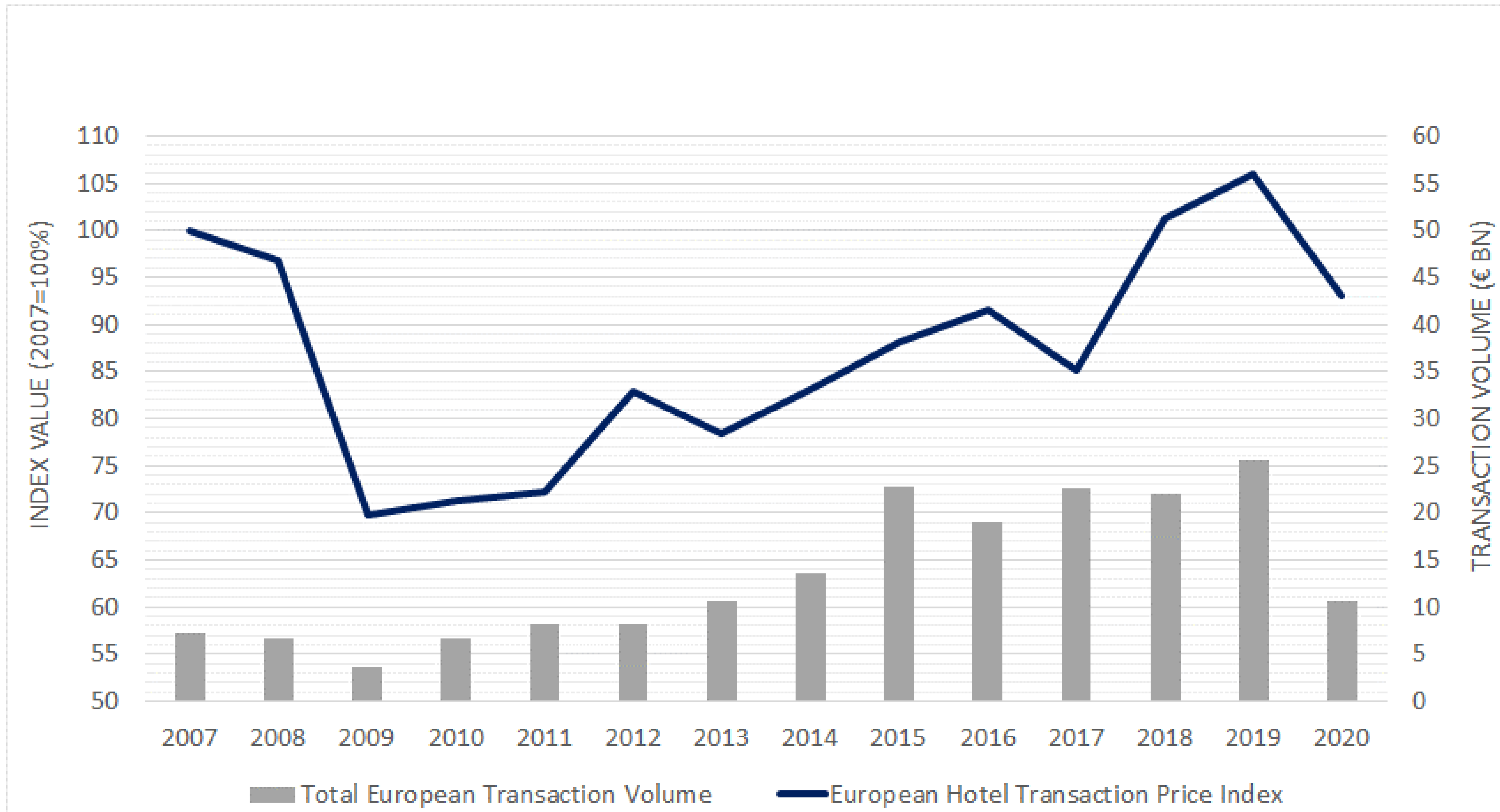
The Impact of COVID-19 on Hotel Transaction Prices – Evidence from Europe

Prof. Dr. René-Ojas Woltering, EHL Hospitality Business School (HES-SO)



Swiss Real Estate Research Congress 2022 – Zürich, May 20

European Hotel Transaction Price Index



Research Questions

- 1) Is a certain **hotel type** more sensitive to the pandemic?
- 2) Which **countries** were impacted the most by the pandemic?
- 3) The success of political measures: **Saving the economy** vs. **saving the health system**?

Hedonic Regression Methodology

$$\ln(P_{i,t}) = \beta_0 + \sum_j \beta_j H_{i,j} + \sum_t \delta_t D_t + \varepsilon_{i,t}$$

Hedonic Characteristics of the Hotel

- Age
- Location (CBD, Rating, City)
- Physical Constitution (Renovation)
- Rating
- Franchise / Independent
- Renovated / In Need of Renovation

Price Index Estimated From **Year Dummies**

- 2007 (base year)
 - 2008
 - 2009
 - ...
 - 2019
- **Estimated coefficients δ_t are the price change relative to the base year 2007**

Impact of the Hedonic Factors

Location

- Located in CBD: +16%
- Location Rating of 9.0 vs. 8.0: +19%

Building

- Age: -0.3% p.a. (quadratic)
- Built before 1930s: +38%
- Recently renovated: +13%

Operations

- Full-service hotel: +24%
- Full-service in CBD: +25%
- Independent Hotel: -19%

Highest Premiums (c.p.):

- Venice
- London
- Florence
- Zürich
- Madrid

Highest Discounts (c.p.):

- Windermere
- Sheffield
- Nottingham
- Belgrade
- Bucharest

Impact by Hotel Type (1/3)

Business Travel Restrictions
Work from home

	(i)	(ii)	(iii)	(iv)
CBD	0.167*** (2.93)	0.165*** (2.85)	0.167*** (2.95)	0.163** (2.75)
CBD*2020	-0.163* (-1.72)	- -	- -	- -
Rooms	0.005*** (11.39)	0.005*** (11.18)	0.005*** (11.44)	0.005*** (11.50)
Rooms*2020	- -	0.001* (1.79)	- -	- -
Full Service	0.241*** (3.45)	0.245*** (3.50)	0.236*** (3.44)	0.245*** (3.50)
Full Service*2020	- -	- -	0.283*** (3.52)	- -
Independent	-0.192*** (-3.59)	-0.191*** (-3.61)	-0.190*** (-3.56)	-0.186*** (-3.41)
Independent*2020	- -	- -	- -	-0.100 (-0.41)
Controls	Yes	Yes	Yes	Yes
City D.	Yes	Yes	Yes	Yes
Year D.	Yes	Yes	Yes	Yes
N	1334	1334	1334	1334
R ²	0.667	0.667	0.667	0.667

Impact by Hotel Type (2/3)

Higher liquidity in the market for large hotels

	(i)	(ii)	(iii)	(iv)
CBD	0.167*** (2.93)	0.165*** (2.85)	0.167*** (2.95)	0.163** (2.75)
CBD*2020	-0.163* (-1.72)	- -	- -	- -
Rooms	0.005*** (11.39)	0.005*** (11.18)	0.005*** (11.44)	0.005*** (11.50)
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Full Service*2020	- -	- -	0.283*** (3.52)	- -
Independent	-0.192*** (-3.59)	-0.191*** (-3.61)	-0.190*** (-3.56)	-0.186*** (-3.41)
Independent*2020	- -	- -	- -	-0.100 (-0.41)
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N	1334	1334	1334	1334
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Impact by Hotel Type (3/3)

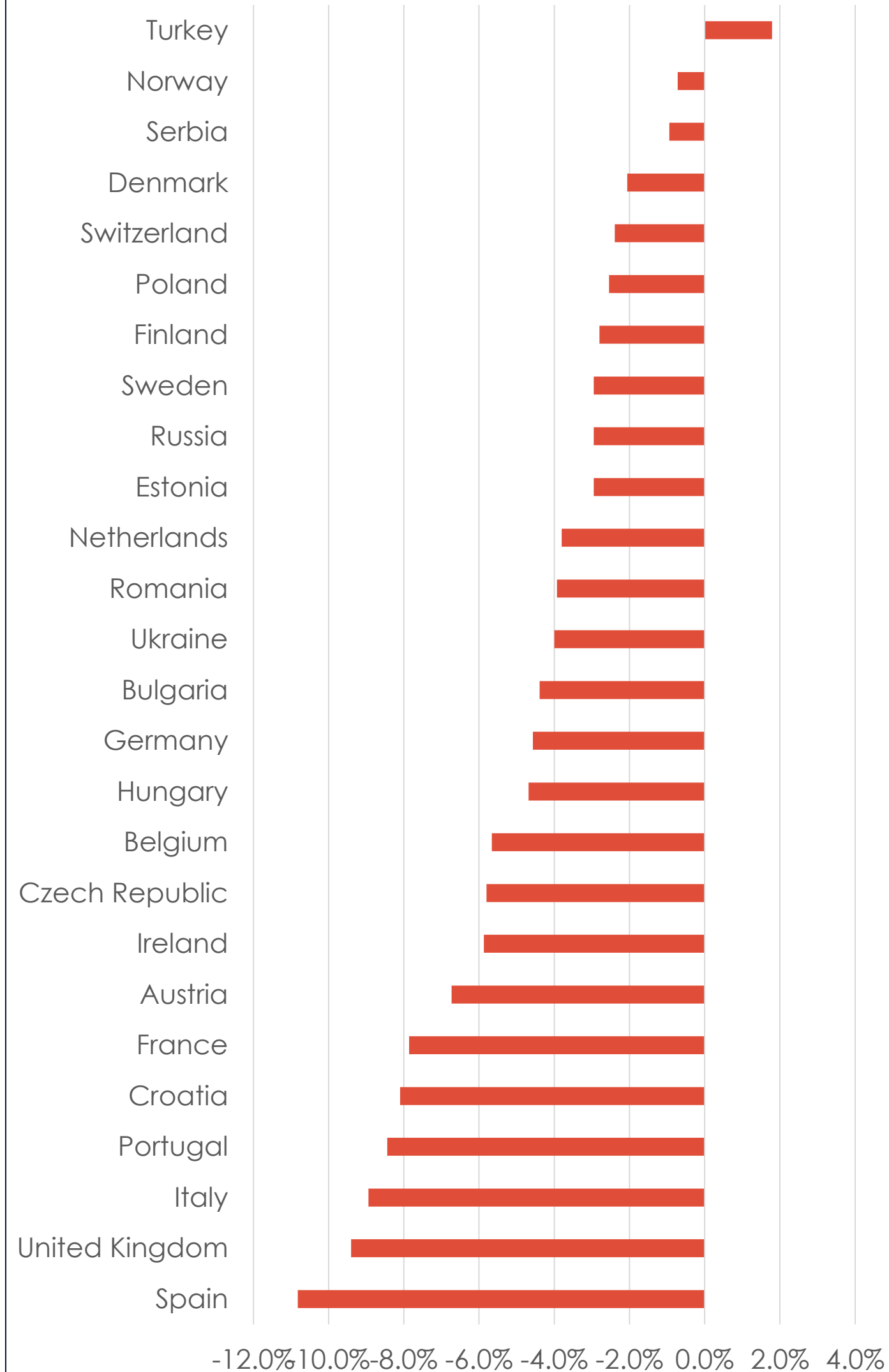
Flight to safety / Higher Quality Hotels

	(i)	(ii)	(iii)	(iv)
CBD	0.167*** (2.93)	0.165*** (2.85)	0.167*** (2.95)	0.163** (2.75)
CBD*2020	-0.163* (-1.72)	- -	- -	- -
Rooms	0.005*** (11.39)	0.005*** (11.18)	0.005*** (11.44)	0.005*** (11.50)
Rooms*2020	- -	0.001* (1.79)	- -	- -
Full Service	0.241*** (3.45)	0.245*** (3.50)	0.236*** (3.44)	0.245*** (3.50)
Full Service*2020	- -	- -	0.283*** (3.52)	- -
Independent	-0.192*** (-3.59)	-0.191*** (-3.61)	-0.190*** (-3.56)	-0.186*** (-3.41)
Independent*2020	- -	- -	- -	-0.100 (-0.41)
Controls	Yes	Yes	Yes	Yes
City D.	Yes	Yes	Yes	Yes
Year D.	Yes	Yes	Yes	Yes
N	1334	1334	1334	1334
R ²	0.667	0.667	0.667	0.667

Impact by Country

	(i)	(ii)	(iii)	(iv)
UK	0.138*** (5.62)	- - -	- - -	- - -
UK*2020	-0.323*** (-6.77)	- -	- -	- -
France	- -	-0.206*** (-3.66)	- -	- -
France*2020	- -	0.264** (2.64)	- -	- -
Germany	- -	- -	-0.074 (-1.46)	- -
Germany*2020	- -	- -	0.310** (2.77)	- -
Netherlands	- -	- -	- -	0.021 (0.92)
Netherlands*2020	- -	- -	- -	0.006 (0.08)
Controls	Yes	Yes	Yes	Yes
City D.	Yes	Yes	Yes	Yes
Year D.	Yes	Yes	Yes	Yes
N	1334	1334	1334	1334
R ²	0.669	0.668	0.668	0.667

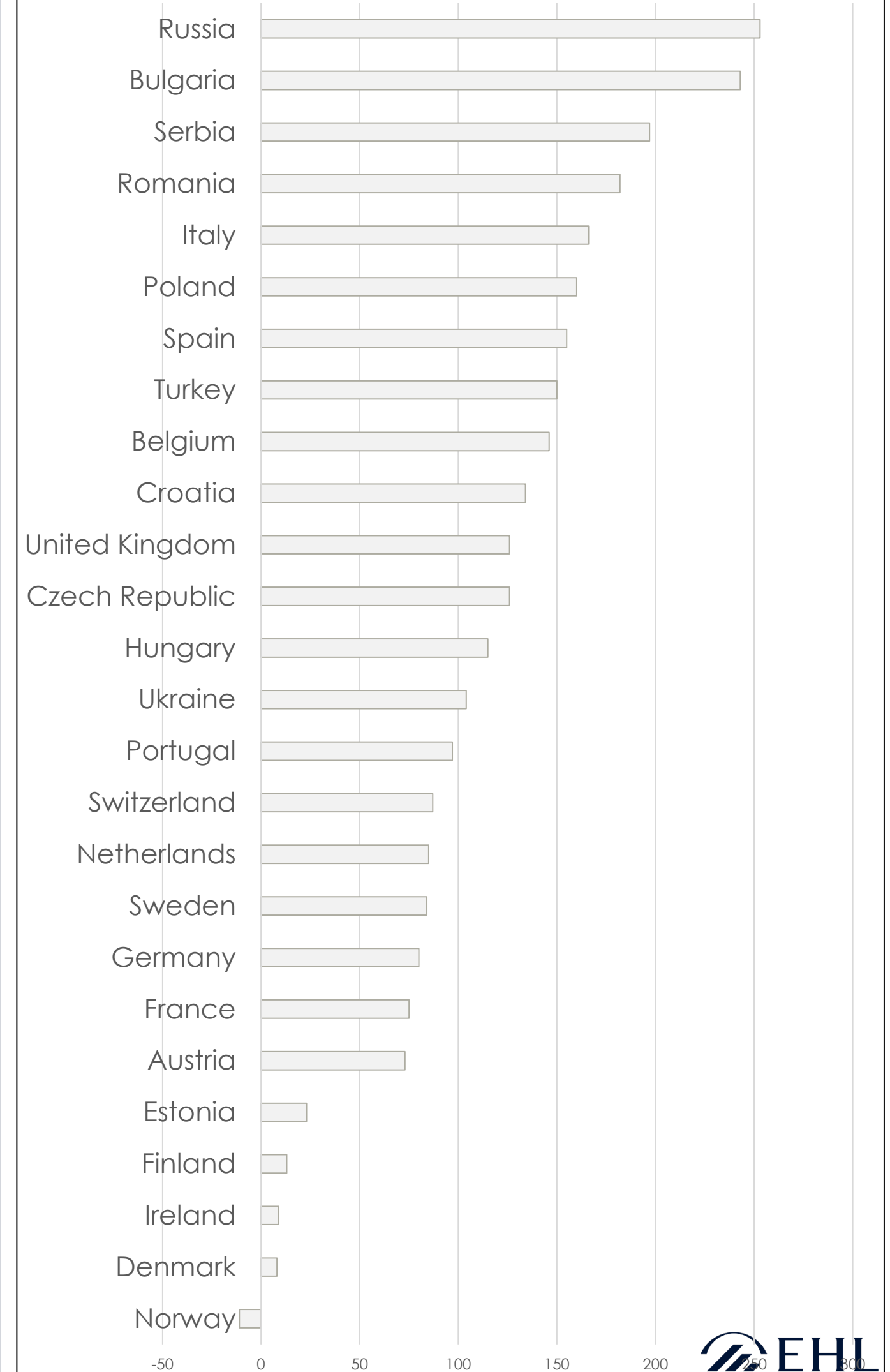
GDP Growth 2020



Change in RevPar 2020



Excess Mortality 2020



Impact of Economic & Health Measures


	(i)	(ii)	(iii)	(iv)
GDP 2020	3.395*	-	-	3.257*
	(1.76)	-	-	(1.83)
D.RevPar 2020	-	0.280	-	0.903
	-	(0.53)	-	(1.53)
Exc.-Mort. 2020	-	-	-0.001*	-0.003**
	-	-	(-1.80)	(-2.17)
Controls	Yes	Yes	Yes	Yes
City D.	Yes	Yes	Yes	Yes
Year D.	Yes	Yes	Yes	Yes
N	1334	1334	1334	1334
R ²	0.667	0.667	0.667	0.668

Summary

- 1) Significant drop in hotel transaction prices in 2020:
 - CBD hotels are more negatively impacted.
 - Larger hotels and full-service hotels are relatively more resilient.
- 2) Regional Differences
 - UK has suffered significantly more severe price declines in 2020.
 - Germany & France have performed significantly better.
- 3) Economy vs. Health System Trade-off
 - Hotels in countries with better GDP growth were less impacted.
 - Hotels in countries with higher excess mortality were more impacted.

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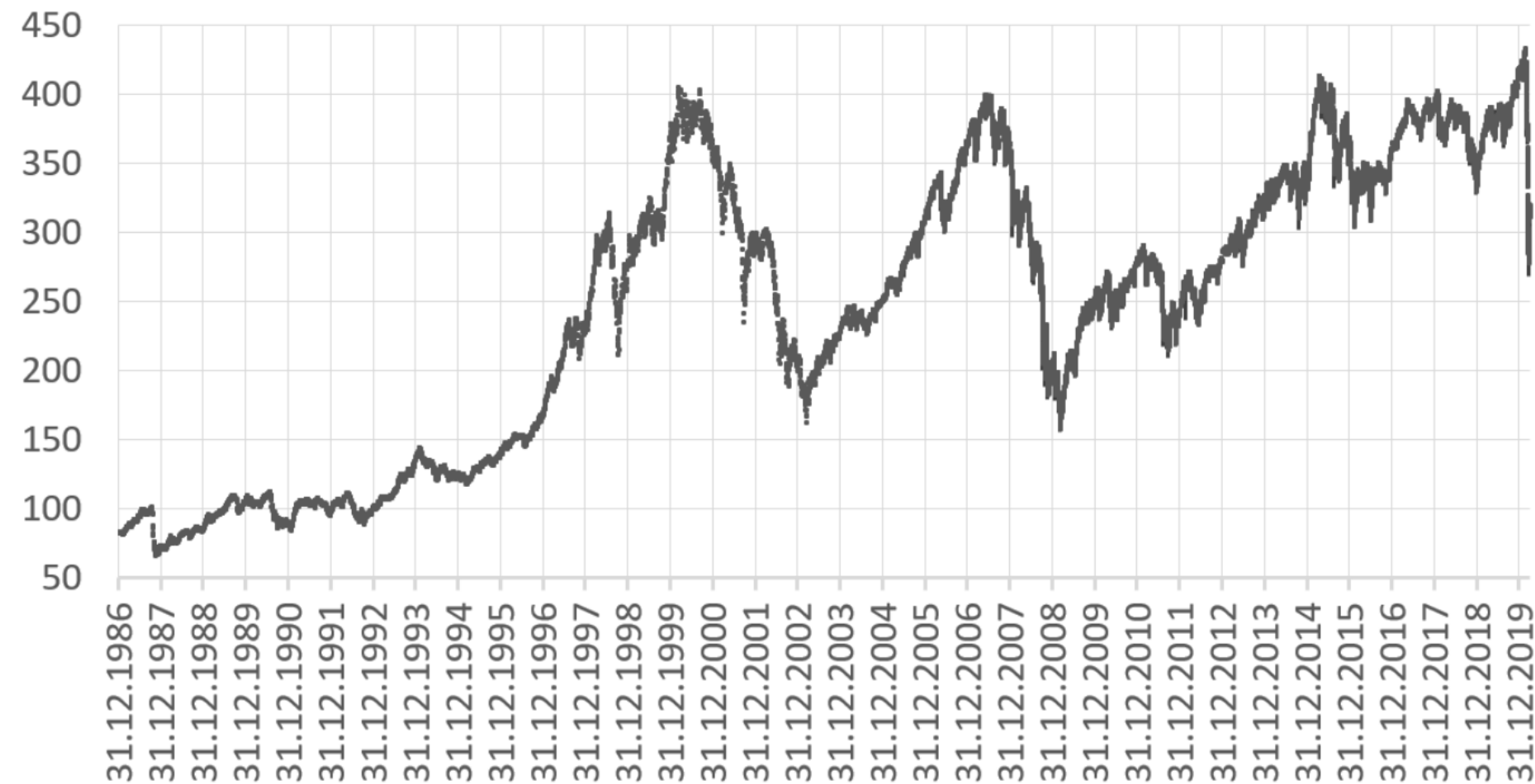
Ling Wei Tan
Senior Vice President, JLL Hotels & Hospitality



Appendix

Price Transparency in the Stock Market

STOXX Europe 600



Characteristics of Stocks:

- Homogenous Assets
- High Trading Frequency
- Public Information

→ High Price Transparency

Price Transparency in the Hotel Market



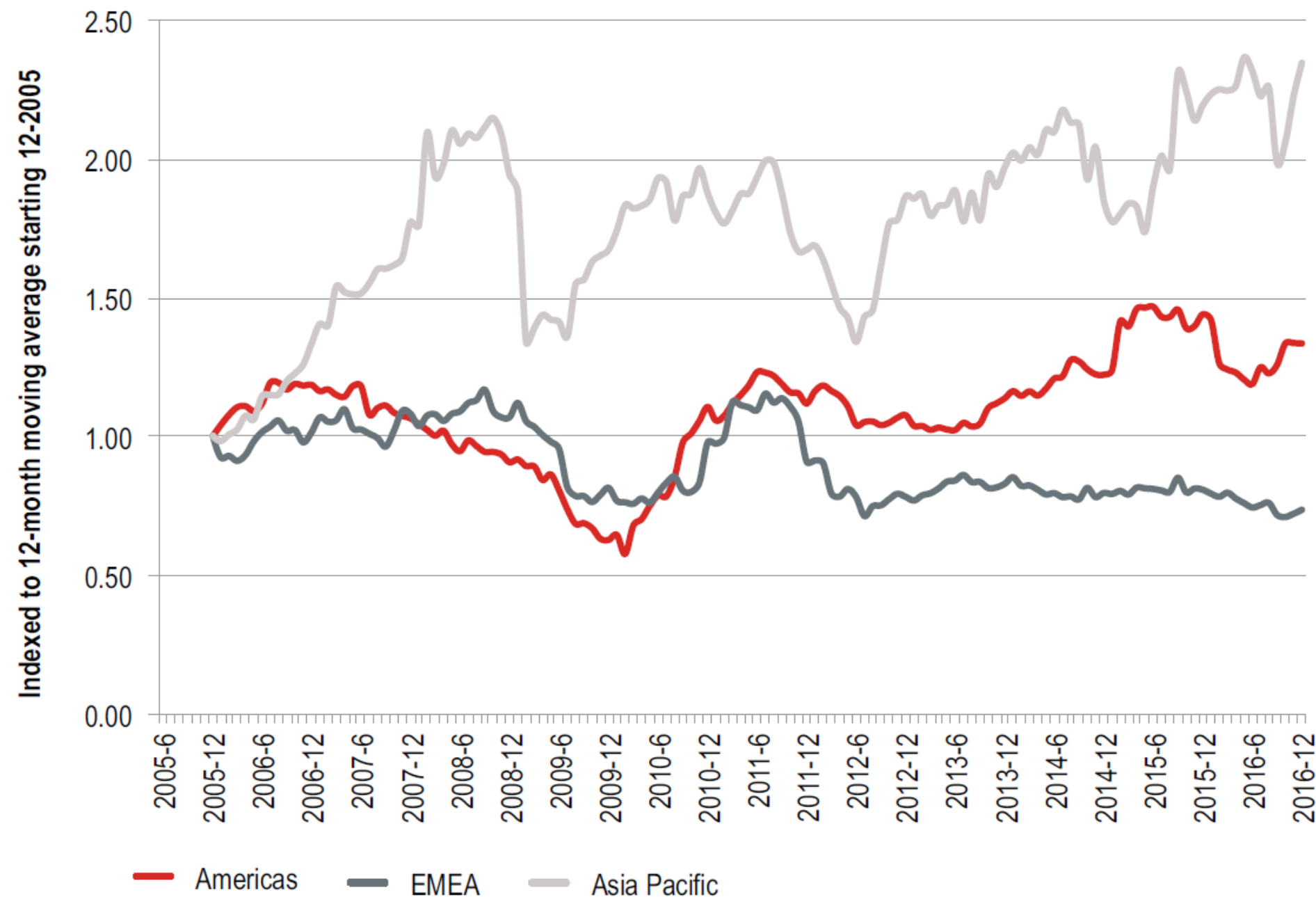
Characteristics of Hotels:

- Every Hotel is Unique!
- Infrequent Trading
- Private Information

→ Very Limited Price Transparency

Current Practice: Average Price per Room

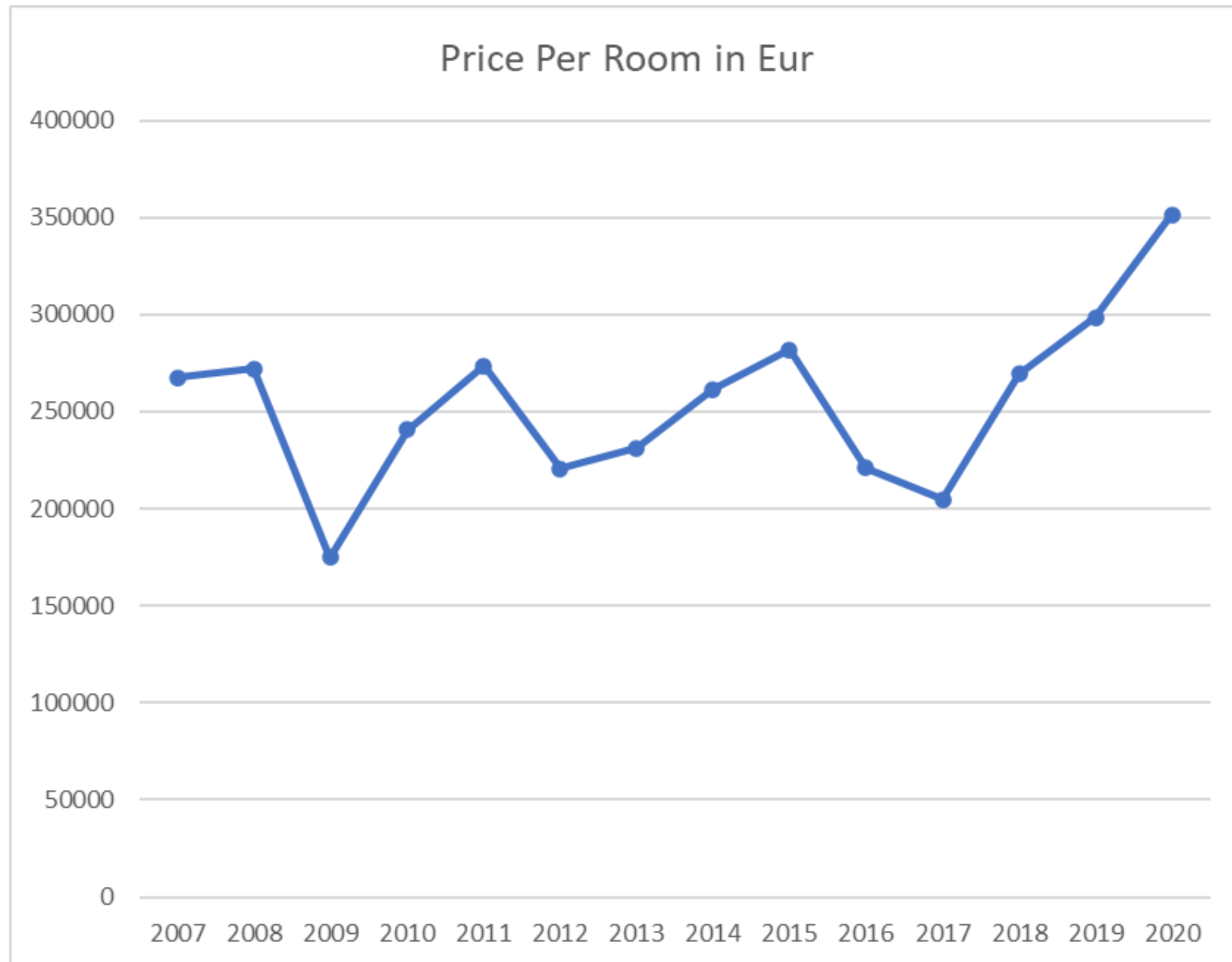
Single-Asset Per-Room Hotel Transaction Value Index



Problem:
Consider a year with many 5*
hotel transactions

→ Index fails to account for
changes in the quality of hotels

Sample Bias



	2015	2017
Metropole	50%	41%
Capital	33%	24%
CBD	41%	35%
Location Rating	8.4	8.3
Renovated	15%	9%

→ Hotels transacted in 2015 were of higher quality than in 2017

→ 2020 Sample:

- Higher % of full-service hotels
- More transactions in CBDs
- Significantly higher ratings