

Asia gas hub: To be or not to be?

Dr. Kaho YU



Introducing Verisk Maplecroft

maplecroft.com 

We combine industry-leading data with deep domain expertise to help you manage risk in an increasingly complex world



We are part of Verisk, a leading risk analytics provider operating in 29 countries and employing 7,500 people



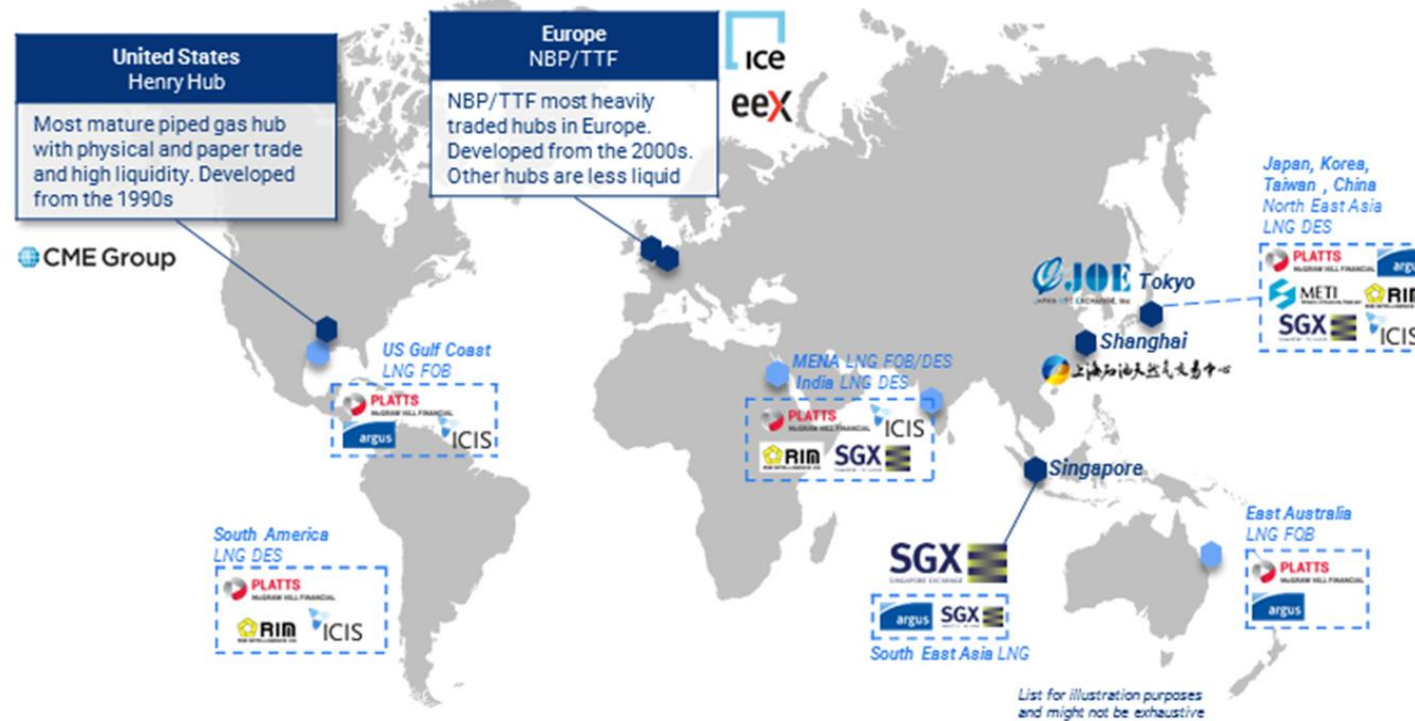
- **Factors driving the creation of an Asian gas hub**
- **Competition among Asian ports: a Chinese gas hub?**
- **Role of Singapore**
- **Q&A**



Factors driving the creation of an Asian gas hub

Factors driving the creation of an Asian gas hub

LNG hubs across the globe



Source: Wood Mackenzie



Factors driving the creation of an Asian gas hub

Why Europe or US hub?

- **Mainly oil-indexed price, but other price indices rising**
 - European spot prices
 - US FOB price
 - Japan Korea Marker (JKM) published by Platts.
- **JKM rising but remains small**
 - Physical market or hub with daily liquidity is absent
- **Europe is still the global benchmark for LNG spot:**
 - Liquidity
 - Financial instrument
 - Trade between Atlantic and Pacific regions



Factors driving the creation of an Asian gas hub

Why create a gas hub?

- Gas hub: a central pricing point for gas trading
- To avoid domination by a few producers
- To secure gas supply (import) and promote continuity of gas supplies (export)
- Boost economic growth and earning potential
- Generate investments, innovation and trading activities



Factors driving the creation of an Asian gas hub

Criteria for a gas hub?

- Diverse sources of gas supply – domestic, LNG and pipeline
- Strong and diverse customer base – power, industry, households
- Liquidity – robust daily trades and market liberalisation
- Regulation – support by the government
- Independent legal system – protects traders and investors
- Robust infrastructure network – storage sites, pipeline network, ports



Factors driving the creation of an Asian gas hub

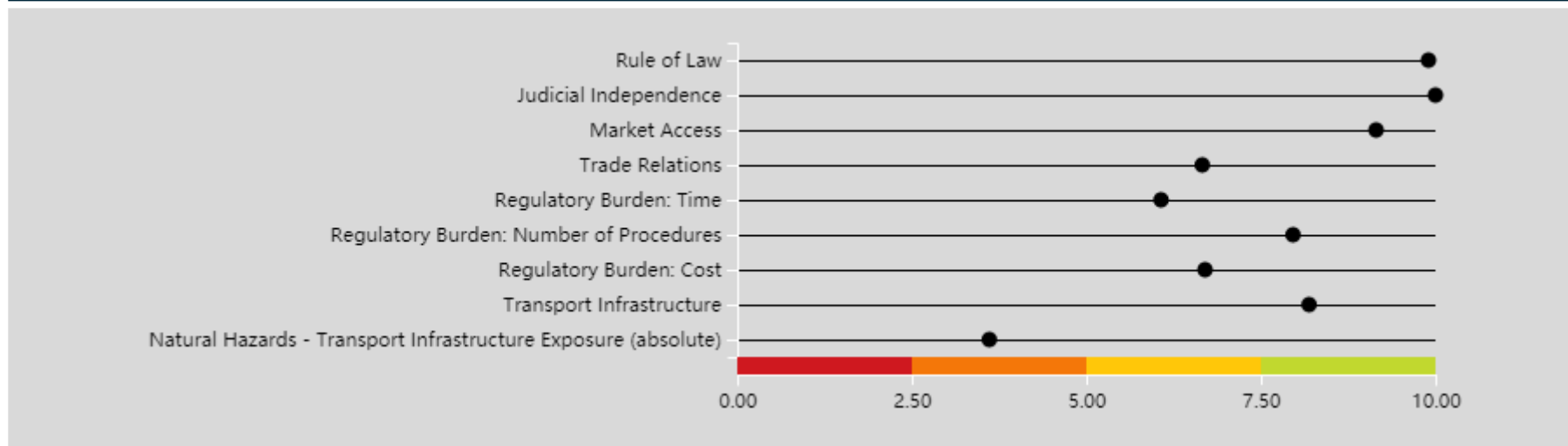
Risks associated with a gas hub?

- Market risks – supply and demand
- Policy and regulatory unpredictability
- Regulatory burden – time, cost and number and complexity of procedures
- Infrastructure risk – natural hazard on transport facilities
- Big power relations – trade disputes, tariffs on LNG

Factors driving the creation of an Asian gas hub

Risks associated with a gas hub?

Risk Scorecard for Germany's Gas Hub





Competition among Asian ports: a Chinese gas hub?

Competition among Asian ports: a Chinese gas hub?

China's advantages

Market

- Largest gas market in Asia
- Likely the largest LNG importer by 2025
- LNG exporter targeting Chinese market

Policy

- Free trade zone, e.g. Zhoushan Connectivity - Belt and Road
- Coal-to-gas policy

Infrastructure

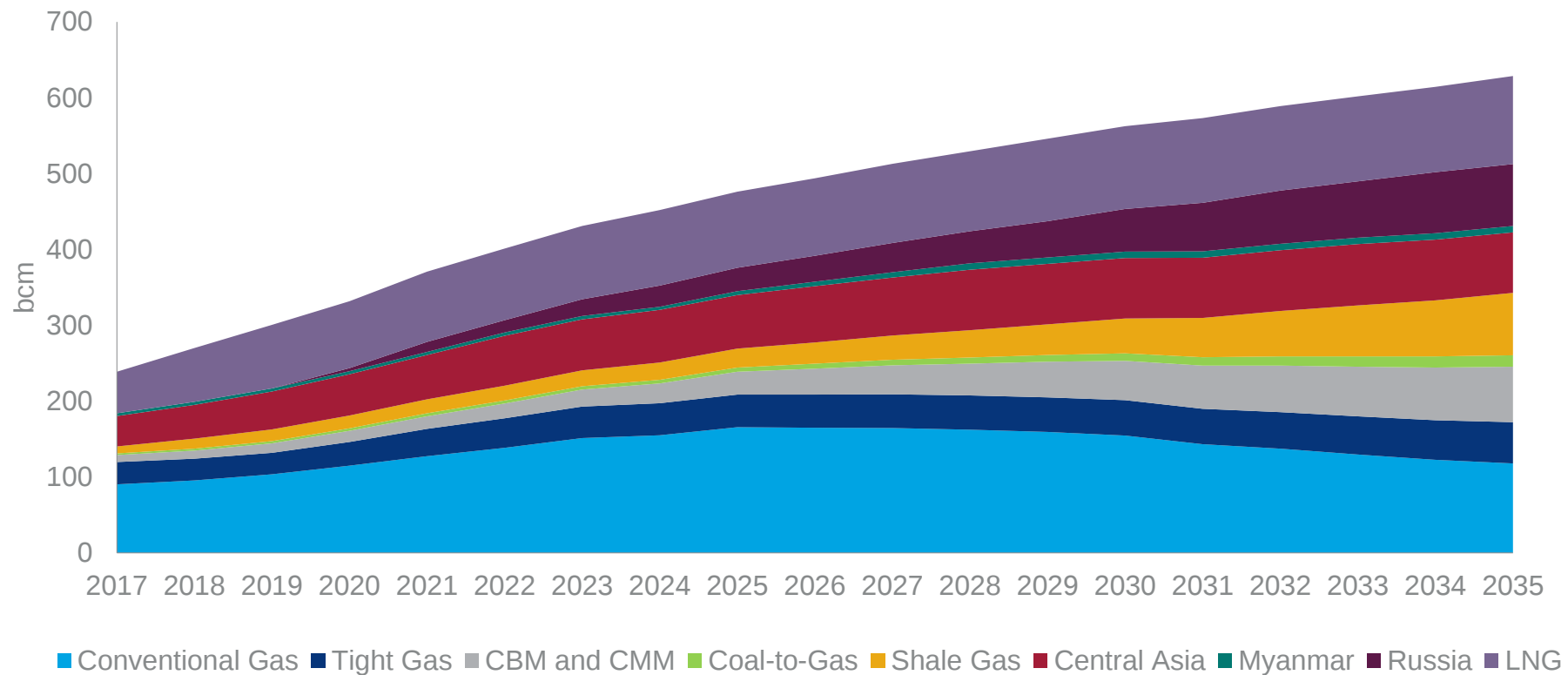
- West-East Gas Pipeline
- Pipeline gas-to-LNG
- New LNG terminals

China to
establish an Asia
gas Hub?

Competition among Asian ports: a Chinese gas hub?

China's gas demand and supply

- Forecast of China's domestic and imported gas supply



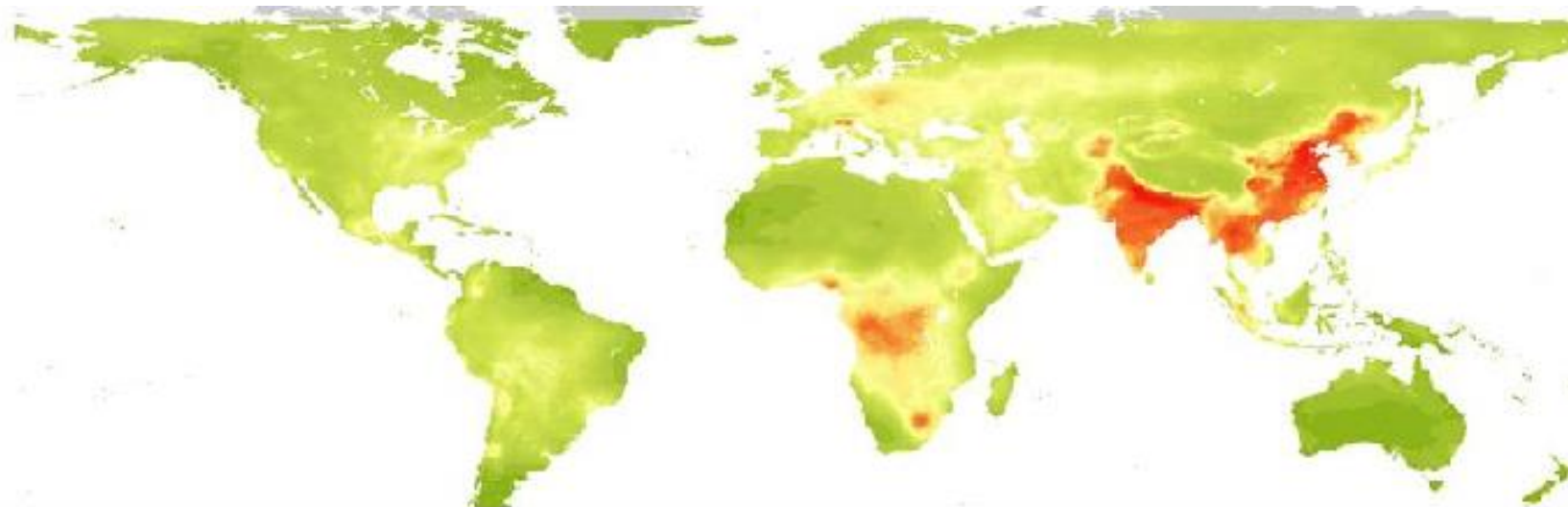
Source: Wood Mackenzie

Competition among Asian ports: a Chinese gas hub?

Coal to gas policy

- In order to improve air quality, China is shifting from coal to gas

Verisk Maplecroft's Air Quality Index Map

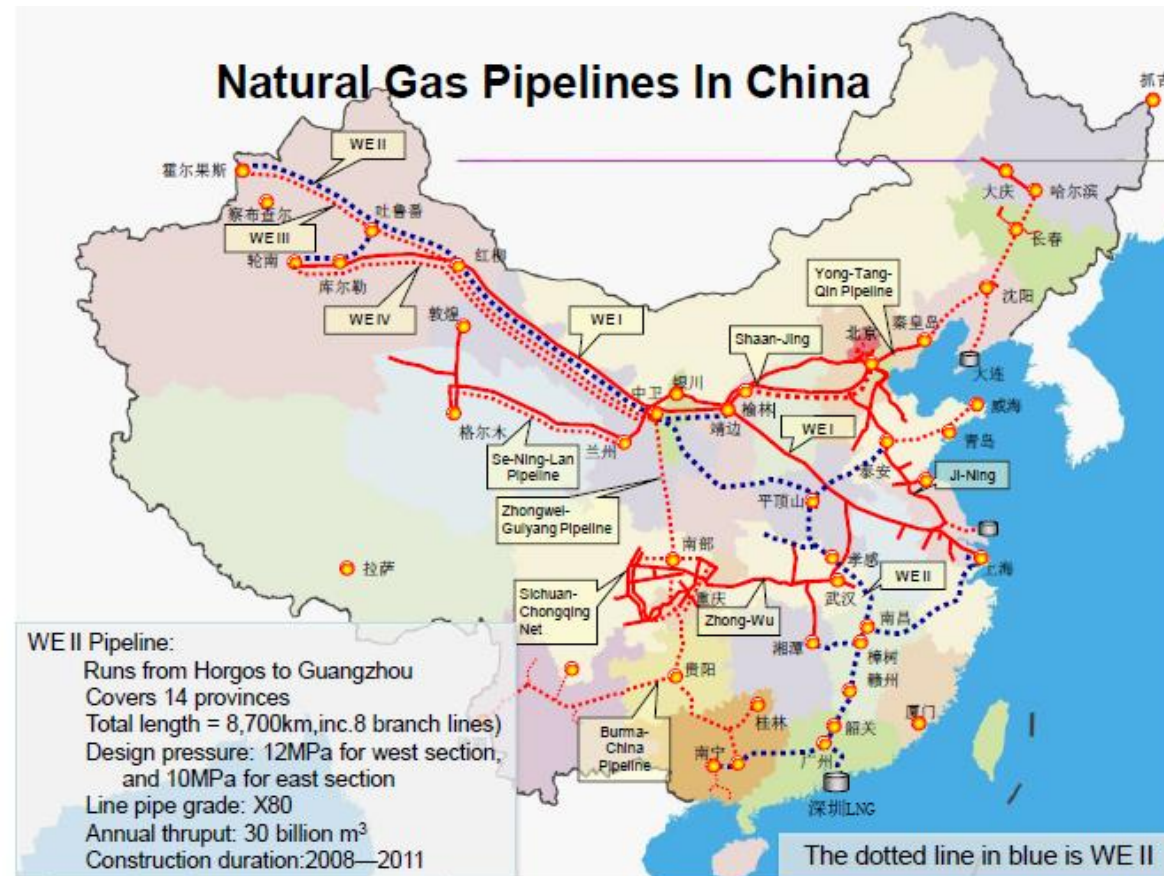


The index score is presented on a scale of 0-10, where 0 represents highest risk and 10 represents lowest risk. The risk category is based on the index score as follows:

● Extreme 0-2.5 ● High 2.5-5 ● Medium 5-7.5 ● Low 7.5-10

Competition among Asian ports: a Chinese gas hub?

Robust infrastructures: Pipeline network and LNG terminals



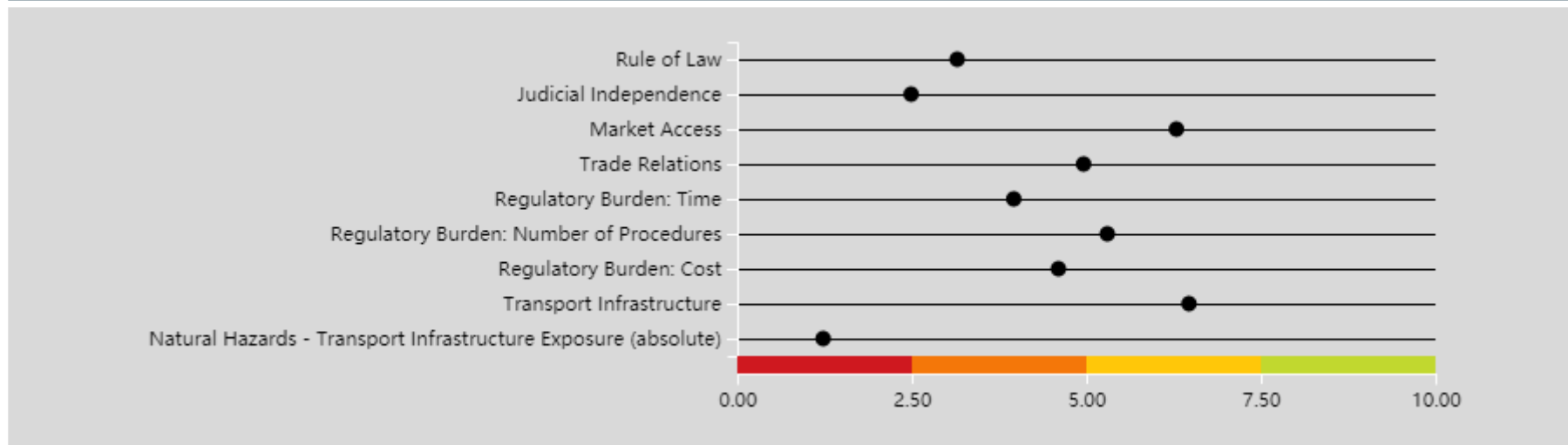
Note: For the actual WEP II and III route, see Keun-Wook Paik, *Sino-Russian Oil and Gas Cooperation*, p. 239 (map).

Source: CNPC (2011). Paik Keun-wook (2015) *Sino-Russian Gas and Oil Cooperation*, OIES

Competition among Asian ports: a Chinese gas hub?

A good distribution center but far from a hub

Risk Scorecard for China's Gas Hub



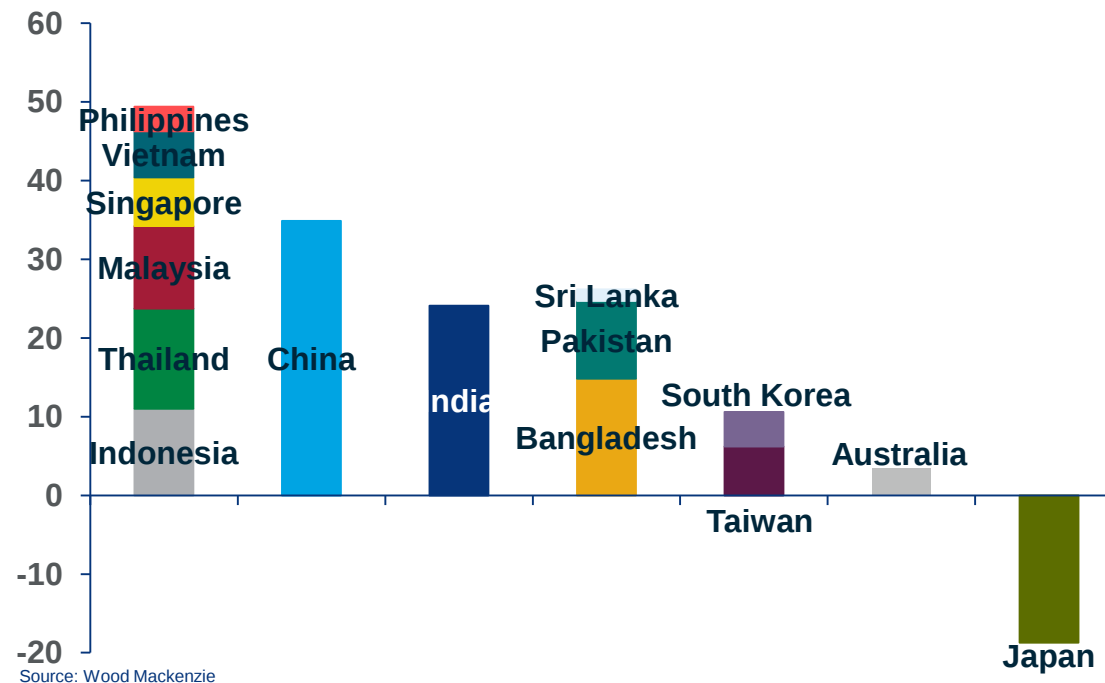


Role of Singapore

Role of Singapore

Southeast Asia gas market

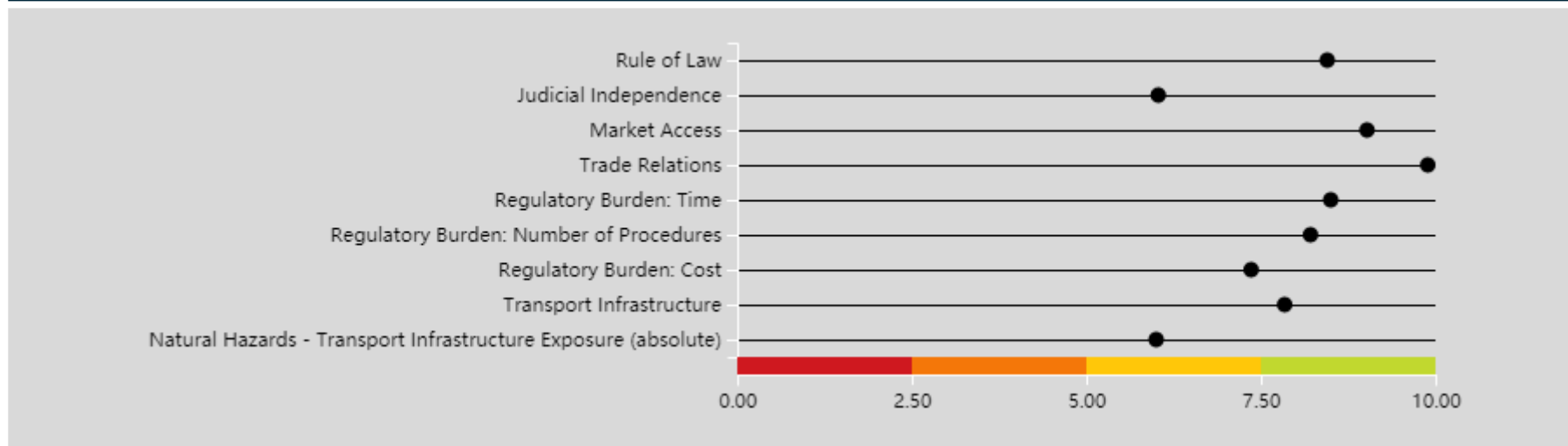
- LNG demand grows across Asia despite China's dominance
- Southeast Asia vs China: LNG demand growth 2017-2030



Role of Singapore

Hub and arbitration center for Southeast Asia LNG market?

Risk Scorecard for Singapore's Gas Hub





Thank you!

Q&A

Dr Kaho YU
Senior Asia Analyst
Verisk Maplecroft
kaho.yu@maplecroft.com



Disclaimer

- This discussion document has been prepared for the attendees of the SIEW 2018 Thinktank Roundtable. It is intended solely for the benefit of the attendees of the SIEW 2018 Thinktank Roundtable and its contents and conclusions are confidential and may not be disclosed to any other persons or companies without Verisk Maplecroft's prior written permission.
- The information upon which this discussion document is based has either been supplied to us by *Wood Mackenzie* or comes from our own experience, knowledge and databases. The opinions expressed in this report are those of Verisk Maplecroft. They have been arrived at following careful consideration and enquiry but we do not guarantee their fairness, completeness or accuracy.
- The opinions, as of this date, are subject to change. We do not accept any liability for your reliance upon them.