

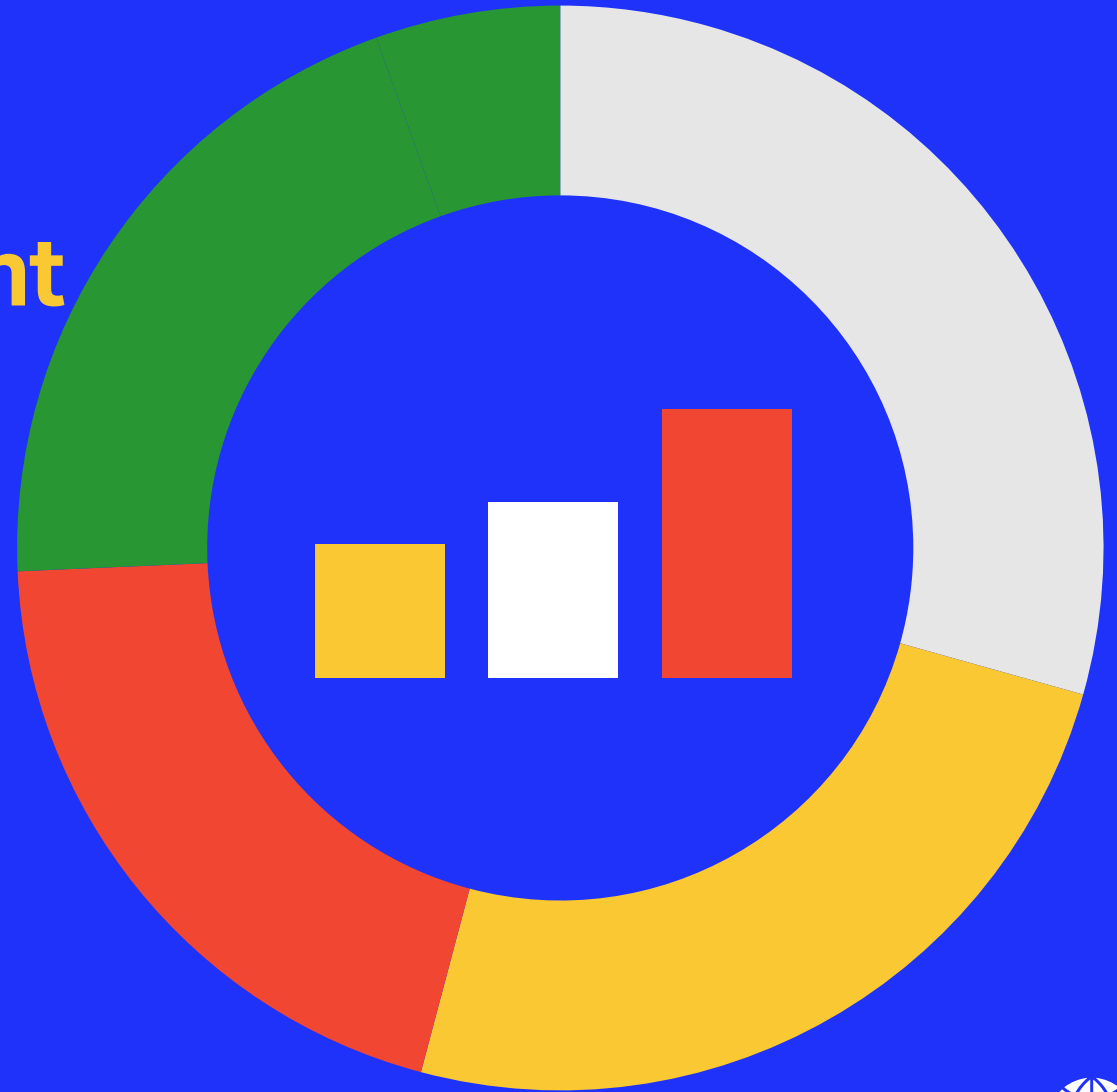
COVID-19

Updated impact* assessment of the novel Coronavirus

Brian Pearce

Chief Economist

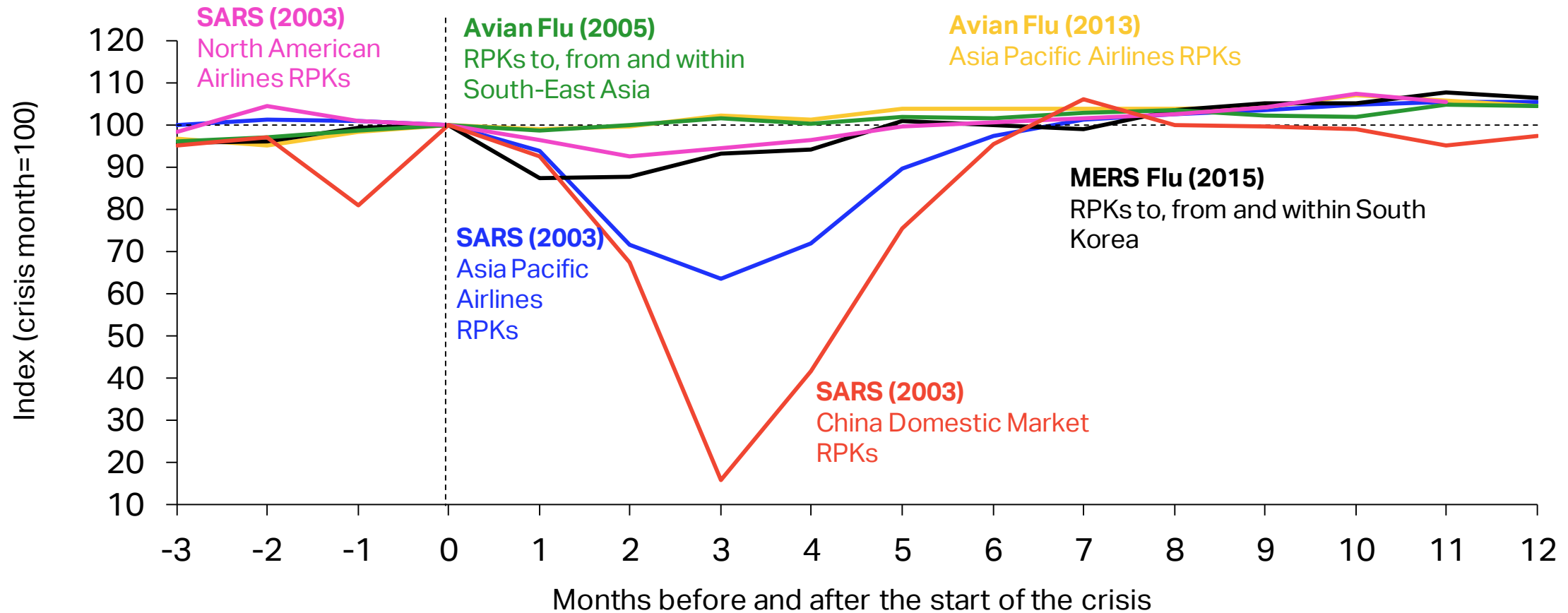
5th March 2020



** These are scenarios not forecasts and will change as the situation evolves and evidence builds.*

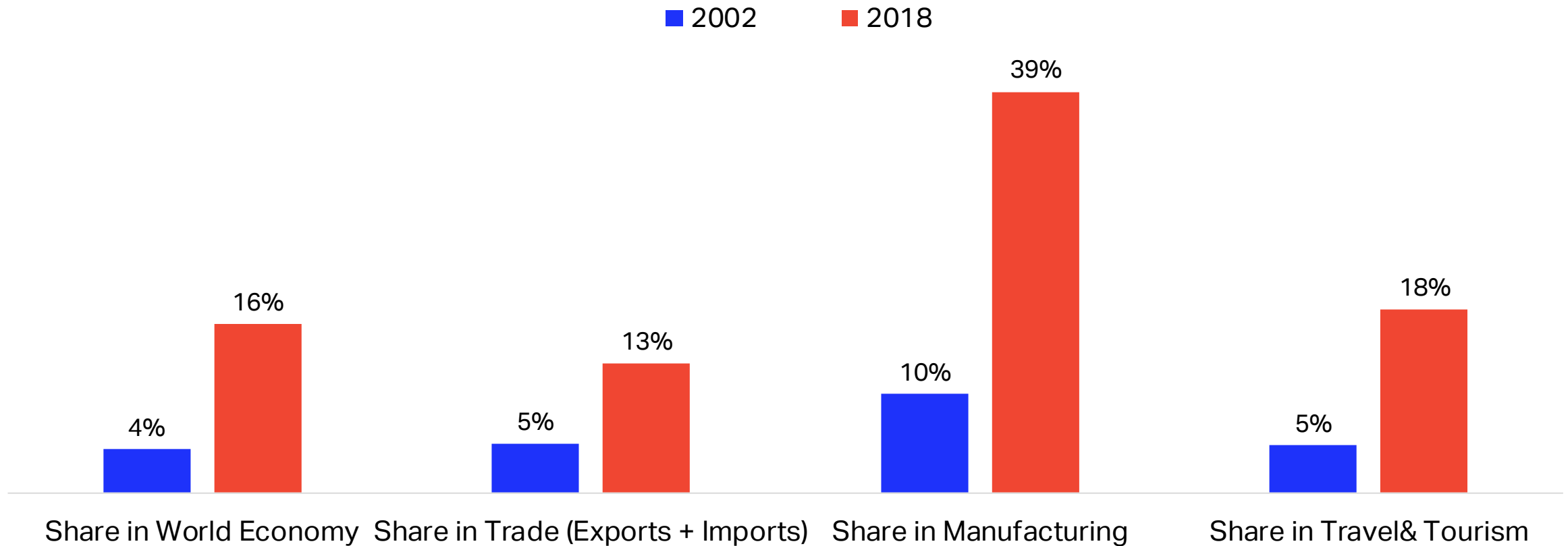
Previous disease outbreaks have peaked after 1-3 months and recovered pre-outbreak levels in 6-7 months

Impact of past disease outbreaks on aviation



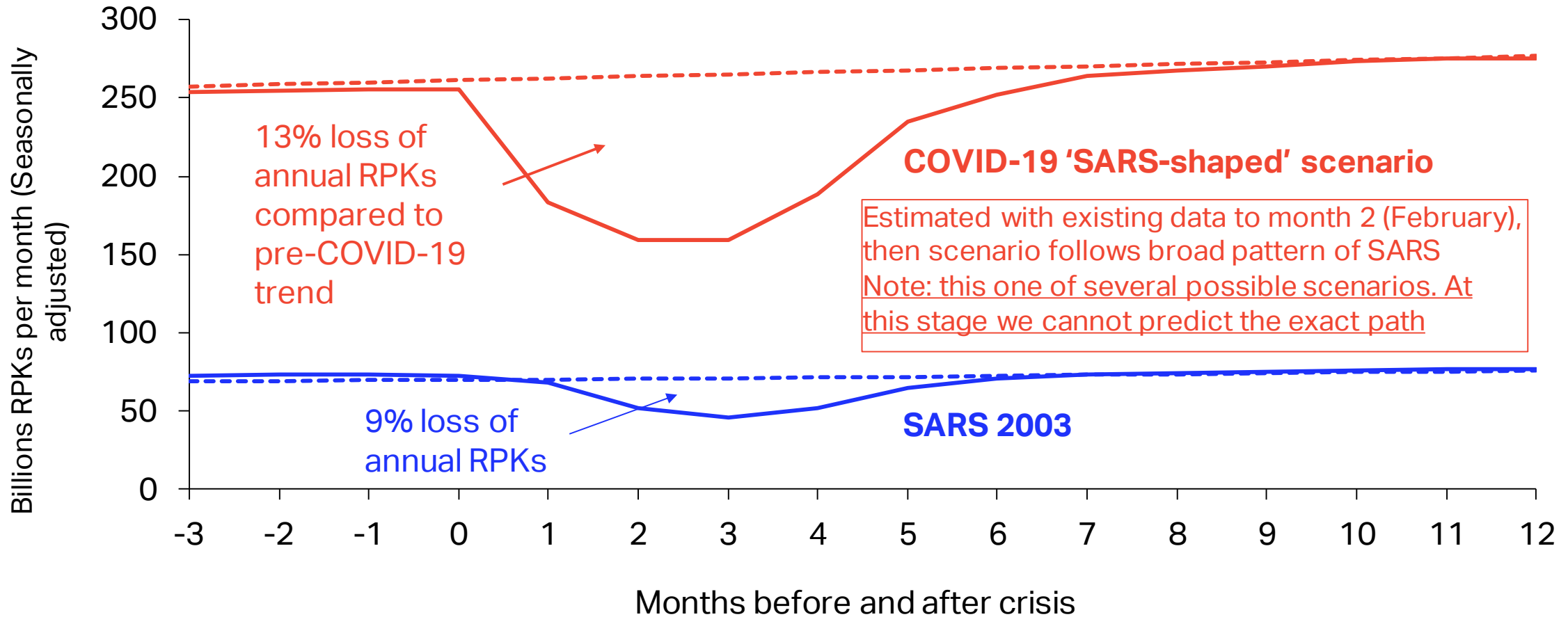
SARS experience **underestimates today's impact** because China's economic size is now much greater

China's Contribution to World Economy



If COVID-19 impact has a SARS-shaped profile this implies a **13% loss of RPKs in 2020** for Asia-Pacific airlines

Asia Pacific Airlines' RPKs



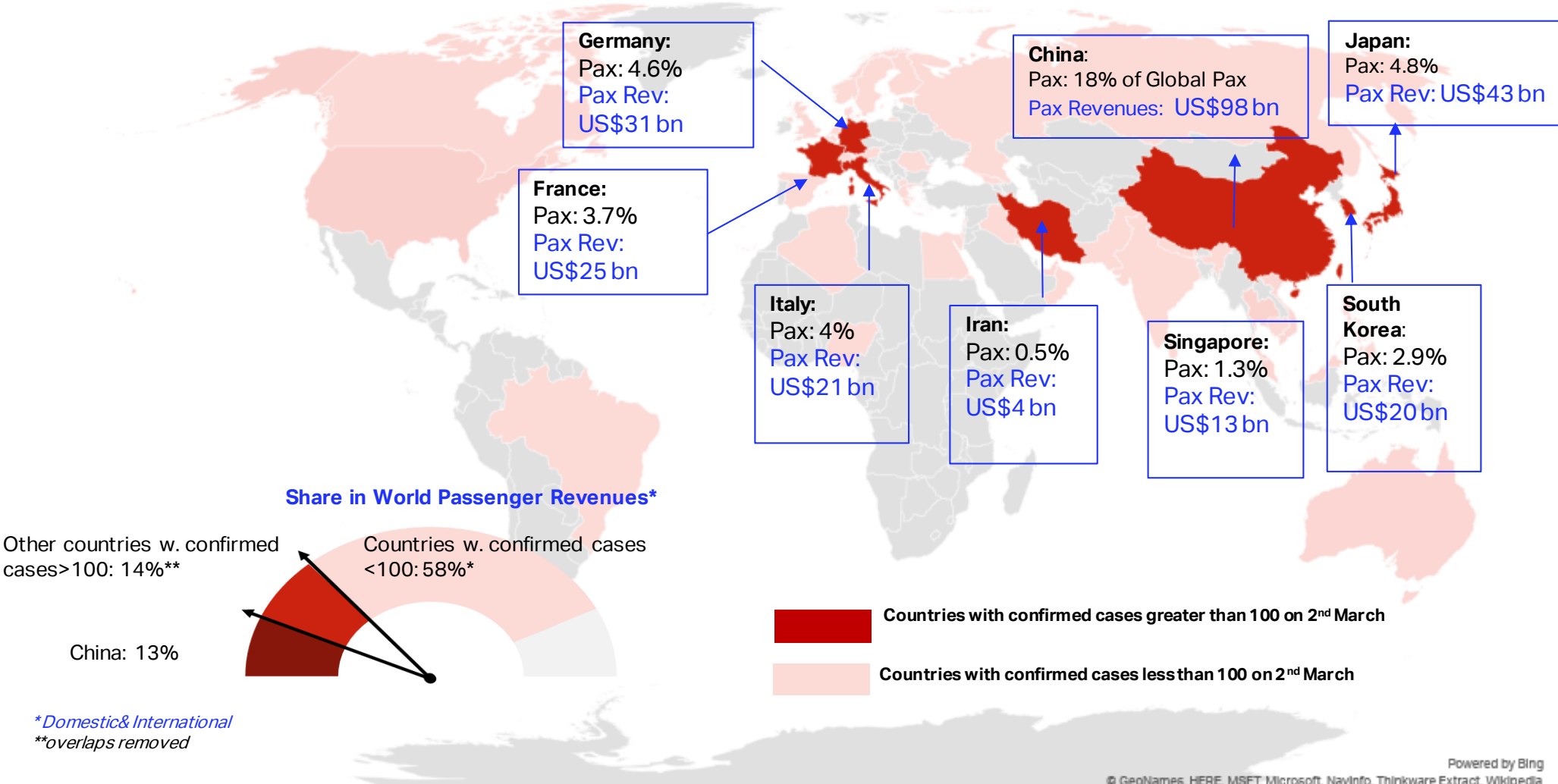
This scenario results in a **\$28bn loss of passenger revenues for Asia-Pacific airlines**. If confined mostly to China markets then impacts elsewhere are minor

Region of airline registration	Impact on 2020 RPKs (% of December forecast for 2020)	Impact on 2020 passenger revenue (billion US\$)
Asia Pacific	-13.0%	-27.8
North America	-0.4%	-0.7
Europe	-0.4%	-0.6
Middle East	-0.2%	-0.1
Africa	-0.4%	-0.04
Latin America	-0.1%	-0.03
Industry	-4.7%	-29.3

Scenario notes: Regional impacts are based only on the direct exposure to Chinese markets, except for Asia-Pacific airlines where a wider Asia impact is assumed, as in SARS. No additional or second-round weakness of other markets beyond China are included for non-Asia Pacific airlines. Revenue impacts are estimated based on the 2020 RPK impact assuming no change in yields.

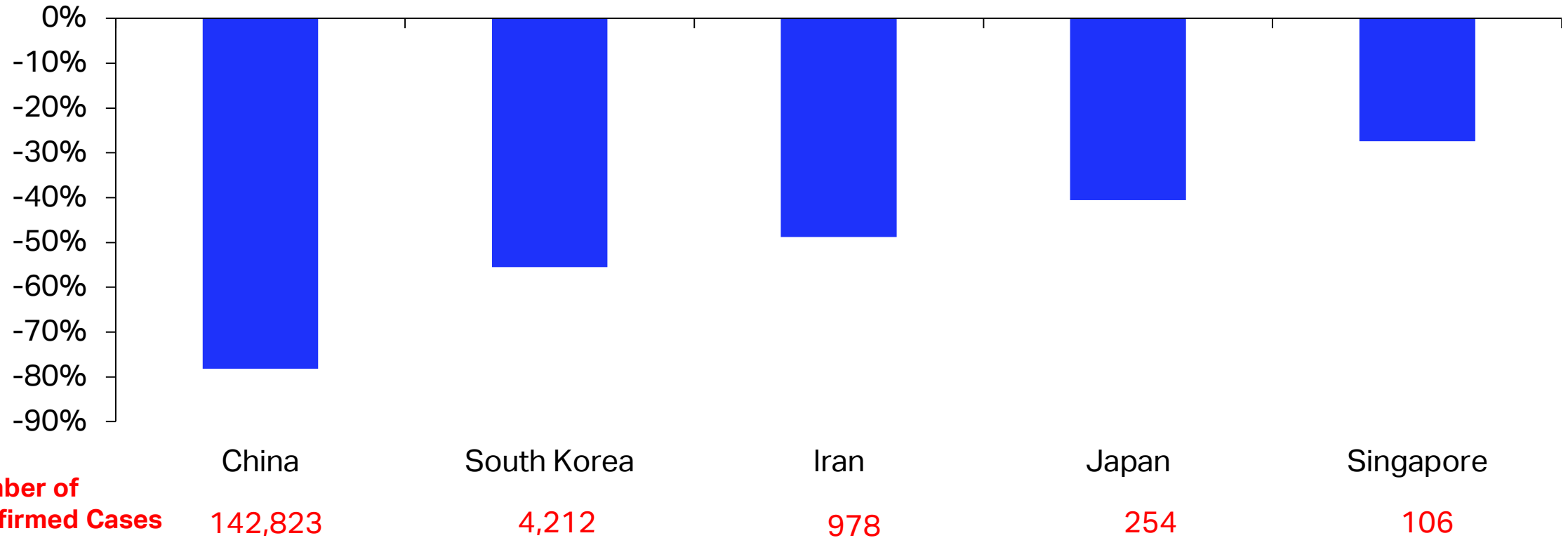
But countries with more than 100 cases now account for more than 27% of global passenger revenues

COVID-19 and Air Passenger Traffic



The scale of the fall in bookings is related to the number of COVID-19 cases in those markets

Year-on Year % Change in Passenger Numbers – Bookings for April



Number of Confirmed Cases
(2 March)

This data shows tickets sold for travel on these dates minus refunds and exchanges. It is for scheduled travel and so will not include charter services.

Scenario 1: 'Limited Spread' Scenario

- **Countries** that have **100 confirmed COVID-19 cases or more** (as of 2 Mar) are included in the analysis.
 - **Asia-Pacific:** China, Japan, Singapore, South Korea, **Europe:** France, Italy, Germany, **Middle East:** Iran
- **We assume a monthly profile for passenger numbers** based first on the pattern in the China market data following the COVID-19 outbreak and then the pattern of the SARS episode.
 - March and April is based on the forward bookings data with the exception of Italy, France and Germany.
 - Italy is assumed to follow the same pattern as China. France and Germany are assumed to follow the same pattern as Singapore (based on the relationship in the previous slide).
 - After two months following the outbreak, the passenger number profile is based on SARS.
- **We also assume an adverse confidence impact in markets close to the centres of community transmission in Asia Pacific, Europe and Middle East.**
 - Asia Pacific markets outside of China, Japan, Singapore and South Korea, are based on forward bookings for first two months and then follow a similar profile to SARS.
 - In Europe and Middle East, year-on-year changes in passenger numbers are assumed to follow the same pattern as the Asia-Pacific region outside of China, Japan, Singapore and South Korea.
- Revenue impacts are estimated assuming **no change in yields.**

The 'Limited Spread' scenario implies a **\$63 bn loss of passenger revenues (11%)** worldwide in 2020

Market	Impact on passenger numbers	Impact on passenger revenue (Billion US\$)*
China	-23%	-22.2
Japan	-12%	-5.3
Singapore	-10%	-1.3
South Korea	-14%	-2.8
Asia Pacific <i>(excluding China, Japan, Singapore, South Korea)</i>	-11%	-15.4
Italy	-24%	-5.0
Germany	-10%	-2.9
France	-10%	-2.5
Europe <i>(excluding Italy, Germany, France)</i>	-7%	-9.2
Iran	-16%	-0.6
Middle East <i>(excluding Iran)</i>	-7%	-3.0

*** Note:**

Revenue numbers do not add up to the \$63 bn global total because of route overlaps e.g. China and Japan include revenues on the China-Japan market. We adjust for overlaps in calculating the worldwide total. Revenues are base fare revenues for all airlines serving routes to, from and within each country

Scenario 2: 'Extensive Spread' Scenario

- **Countries** that have **10 confirmed cases or more** (as of 2 Mar) included in the analysis.
 - **Asia-Pacific:** Australia, PR of China, Japan, Malaysia, Singapore, South Korea, Thailand, Vietnam
 - **Europe:** Austria, France, Italy, Germany, Netherlands, Norway, Spain, Switzerland, Sweden, the United Kingdom
 - **Middle East:** Bahrain, Iraq, Iran, Kuwait, Lebanon, the United Arab Emirates
 - **North America:** Canada, United States
- **We assume a monthly profile for passenger numbers** based first on the pattern in the China market data following the COVID-19 outbreak and then the pattern of the SARS episode.
 - For March and April year-on-year changes is assumed to follow the same pattern as China.
 - After two months, passenger demand profile is based on SARS episode.
- **For Asia Pacific, Europe and Middle East outside the countries with 10 confirmed cases, regional weakness due to confidence loss** is included.
 - Year-on-year change in demand is assumed to follow the same pattern as Asia-Pacific region outside of China, Japan, Singapore, South Korea as in the mild scenario starting from March.
- Revenue impacts are estimated assuming **no change in yields**.

The 'Extensive Spread' scenario implies a \$113 bn loss of passenger revenues (19%) worldwide in 2020

Market	Impact on passenger numbers	Impact on passenger revenue (Billion US\$)*
Australia, China, Japan, Malaysia, Singapore, South Korea, Thailand, Vietnam	-23%	-49.7
<i>APAC excluding the above</i>	-9%	-7.6
Austria, France, Italy, Germany, Netherlands, Norway, Spain, Switzerland, Sweden, the United Kingdom	-24%	-37.3
<i>Europe excluding the above</i>	-9%	-6.6
Bahrain, Iraq, Iran, Kuwait, Lebanon, the United Arab Emirates	-23%	-4.9
<i>Middle East excluding the above</i>	-9%	-2.3
Canada, United States	-10%	-21.1

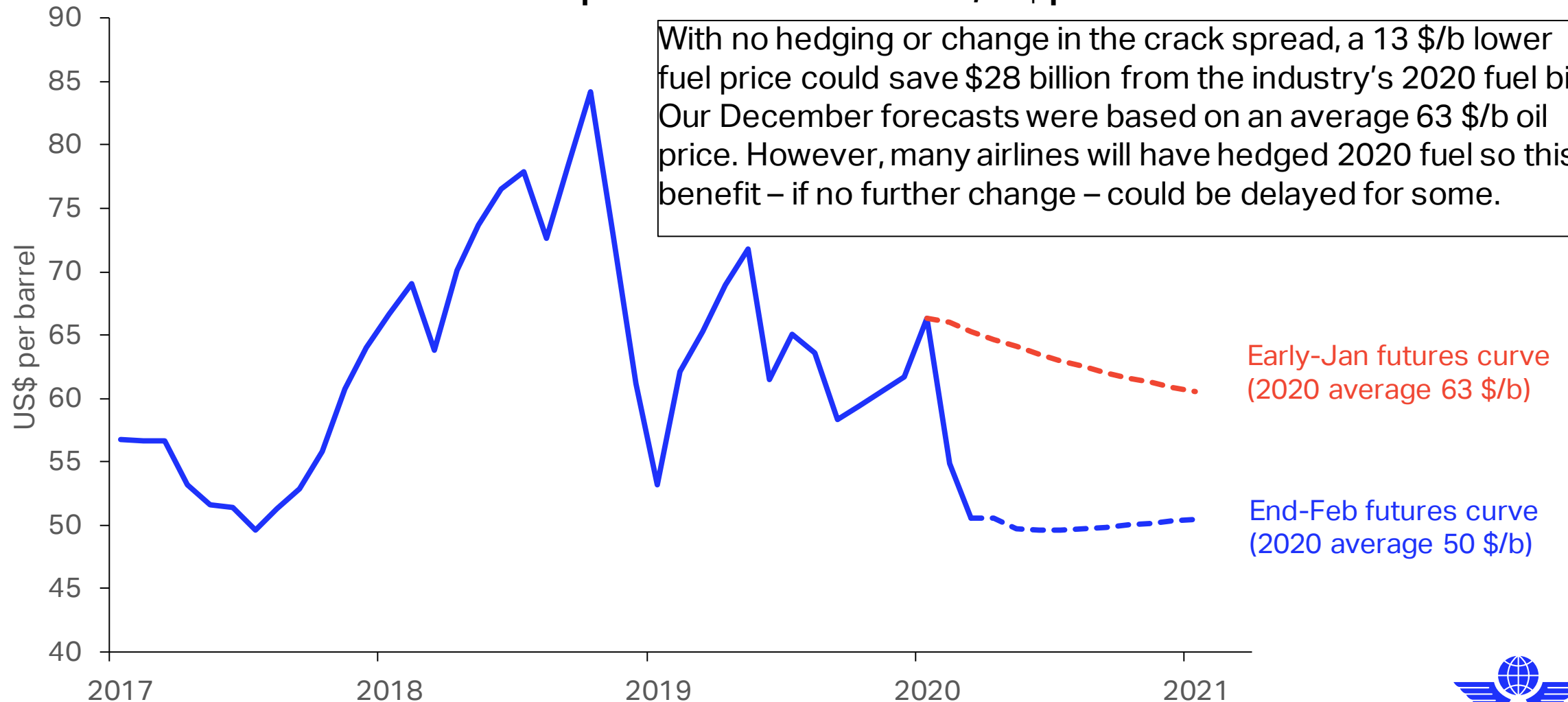
*** Note:**

Revenue numbers do not add up to the \$113 bn global total because of route overlaps e.g. China and Japan include revenues on the China-Japan market. We adjust for overlaps in calculating the worldwide total. Revenues are base fare revenues for all airlines serving routes to, from and within each country



Fall in oil prices will provide some offset with lower costs

Brent crude oil prices and futures curves, US\$ per barrel



With no hedging or change in the crack spread, a 13 \$/b lower fuel price could save \$28 billion from the industry's 2020 fuel bill. Our December forecasts were based on an average 63 \$/b oil price. However, many airlines will have hedged 2020 fuel so this benefit – if no further change – could be delayed for some.

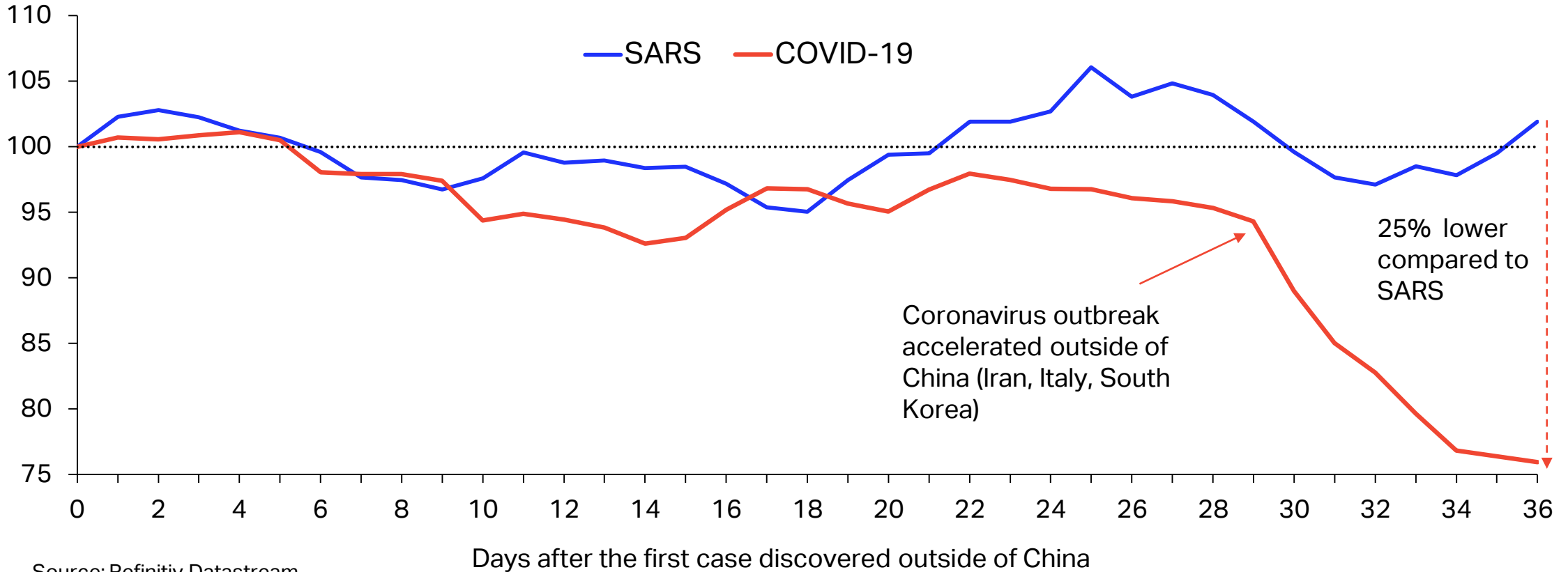
Early-Jan futures curve
(2020 average 63 \$/b)

End-Feb futures curve
(2020 average 50 \$/b)

Financial markets are now **anticipating a large fall in airline profits globally, far beyond SARS impact**

Index=100 at the date of the first case outside of China

Global Airlines Share Performance



Source: Refinitiv Datastream

Source: IATA Economics using data from Refinitiv Datastream



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