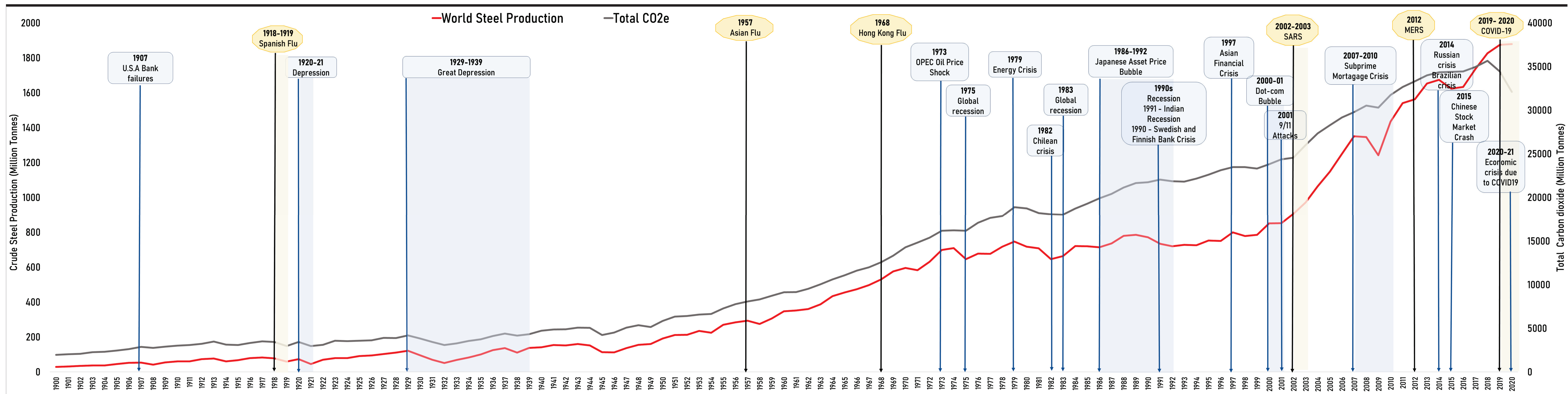


Global Steel Demand, Economic Crises and Pandemics from 1900 to 2020



References: World Steel Annual reports 1970–2021, European Commission, T. A. Boden, G. Marland, and R. J. Andres, "Global, Regional, and National CO2 Emissions," Trends: A Compendium of Data on Global Change (Oak Ridge, TN: Carbon Dioxide Information Analysis Center, 2014), Joint Research Centre (EC-JRC)/Netherlands Environmental Assessment Agency (PBL). Emissions Database for Global Atmospheric Research (EDGAR), release EDGAR v6.0_GHG (1970 - 2018) of May 2021. For the energy related sectors, the activity data are mainly based on IEA data from IEA (2019) World Energy Balances, www.iea.org/statistics, All rights reserved, as modified by Joint Research Centre, European Commission.

CURRENT STATUS

- Globally, it is a **strategic industry for development, economic growth, national security**
 - ❖ 1900s due to modernization and wars
 - ❖ After mid-1900 and now due to emphasis on development
- Production and demand/consumption **shifting from developed (Europe/America/Japan) to Asian countries/developing countries** since late 2000s
 - ❖ 80% of global demand is in Asia
 - ❖ More than 70% production is in Asia

GHG EMISSIONS

- **Energy intensive industries (EIIs)** produce basic materials, such as steel, petrochemicals, aluminum, cement, and fertilizers, that are responsible for around **22 percent of global CO2 emissions** (Bataille 2019).
- In 2020, the total direct emissions from **steel sector** were of the order of 2.6 billion tonnes, representing between **7% and 9% of global anthropogenic emissions** (World Steel 2021).
- **GLOBAL NET-ZERO COMMITMENT:** 75% of 2021 global steelmaking capacity is in countries with net zero targets for 2050 or 2060.

IMPACT OF ECONOMIC CRISES

- Steel demand in developed countries such as US, Europe and Japan have been observed to be impacted by the great depression, oil crisis, energy crisis, global recession, bank crises and global financial crisis.
- Amongst all the crises in the past century, **global financial crisis of 2007** had the deepest impact on global steel demand since 1900.
- The recovery of steel demand after crises varies from six to five years depending **duration** of crisis and **geographic impact** of crisis.

IMPACT OF PANDEMICS

- On **supply side**, containment measures have led to factory shutdowns and shortage of labor supply.
- On **demand side**, change in social patterns have resulted in reduction in consumption activities.
- Steel demand is observed to have impacted after Spanish Flu in 1918 and Asian Avian Flu in 1957 before COVID19.
- The steel demand in **EU28, North America and South America** was impacted more during 2007-08 GFC.
- The steel demand in **China, India and Middle Eastern countries** has been impacted more due to COVID19 and subsequent economic crisis when compared with GFC.