



SPECIAL REPORT

GLOBAL SUPPLY CHAINS AND THE 2022 ECONOMY

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The functioning of supply chains this year is very much dependent upon public health conditions globally. The origin of the collapse in supply chains and surge in input costs can be traced to the onset of the COVID-19 pandemic. Improving health conditions should allow for improving mobility, which will enable workers to return to their jobs. An inevitable shift in consumer spending toward services and away from goods will alleviate the pressures on global manufacturing and shipping.

One of the defining features of the 2021 economy was the massive disruption of global supply chains, which resulted in widespread shortages of materials, components, workers, and manufactured products along with a surge in input costs and selling prices worldwide. This phenomenon will prevail throughout this year, although to a diminishing extent as the year unfolds.

- ◆ The functioning of supply chains this year is very much dependent upon public health conditions globally. The origin of the breakdown in supply chains and surge in input costs can be traced to the onset of the COVID-19 pandemic. The abrupt shutdown of the global economy in 2020 — followed by its frenetic reopening only six months later — overwhelmed the supply side of the economy, which had also been in shutdown mode. The result was an uneven reopening whereby limitations in supply were overwhelmed by surging demand, compounded by generous government income transfers.
- ◆ The impact on the economy was vividly manifested in four forms: (1) Massive shortages of vital materials and components needed to transport products from far-flung manufacturing centers to their end markets; (2) A temporary shortfall in aggregate output, as measured by GDP; (3) Steep increases in input costs, including the cost of freight, shipping, and containers, all of which resulted in the fastest rise in consumer prices in decades; and (4) Widespread labor shortages, prompting a sharp acceleration in wage growth.
- ◆ Because of the highly complex nature of the problem, any predictions regarding the restoration of supply conditions to normal are futile. However, two broad conclusions seem reasonable at this time: (1) Most of the current problems stem from one-time events — a sudden shutdown and reopening of the global economy — and will therefore eventually be resolved, although not fully until 2023; and (2) In the interim, global supply chains will remain challenged, implying that the shortfall in deliveries of materials, components, and finished products will persist for the foreseeable future, subtracting from GDP growth and adding to inflation.
- ◆ Nonetheless, there are several positive factors suggesting that supply chains could perform somewhat better in 2022 than last year:

1. Improving health conditions should allow for increased mobility, enabling workers to return to their jobs and for service sector spending to rebound from depressed levels.
2. An inevitable shift in consumer spending toward services and away from goods will alleviate the pressures on global manufacturing and shipping.
3. Large companies will continue to use their resources and creativity to make proactive adjustments to normal transportation, shipping, and warehousing processes. Some large companies are chartering their own container ships to transport goods.
4. Sharply higher wages should provide the necessary incentive to encourage sidelined workers to gradually return to the labor force.
5. Industrial commodity prices have moderated in recent months, while monthly surveys of the domestic manufacturing sector point to some easing in supply pressures. Delivery times have shortened somewhat, while an index of factory material cost pressures has declined from its peak in June.
6. Although newly announced grassroots factories for production of computer chips will not come on stream until 2023 and 2024, producers will make small expansions to existing capacity during the next year, providing some relief for producers of durable goods such as autos and appliances.
7. Government initiatives could reinforce private sector actions. For example, new legislation to recruit and train workers for the trucking industry — contained in the recently passed infrastructure bill — should ease transportation bottlenecks.
 - ◆ One of the major longer-term repercussions of this experience could be strategic reconfigurations of current supply networks enabling firms to exert a tighter control over the flow of inventories globally. The objective would be to achieve a systematic **compression** of the current elongated networks between raw materials and end markets. Companies in many industries are adopting new supply-chain strategies to increase reliability and security of supply while reducing the potential for supply-chain breakdowns and a paralysis within their inventory networks.
 - ◆ These new supply-chain reconfigurations fall into three categories: Regionalization, nearshoring, and reshoring. **Regionalization** refers to the diversification in production from one central facility (say Asia) to three or four regional hubs (say Europe, Latin America, and the US). **Nearshoring** refers to a shift in production from a distant site (Asia) to a foreign site in greater proximity to the end market (Mexico) — or in the case of Europe, from Asia to Eastern Europe. **Reshoring** refers to a consolidation of production in the same national end market for a particular product.

- ◆ Each of these new strategic initiatives by global businesses should result in increased security and reliability, while greatly reducing the odds of disruptions. However, a full reorganization of global supply chains is a highly complex process, which requires years of implementation. In theory, it could require a full decade and trillions of dollars to relocate all US and European facilities out of Asia.
- ◆ These realignments are unlikely to occur in all sectors but rather would be concentrated in those industries that are less labor intensive and amenable to automation. These would include the automotive, semiconductor, electrical equipment, medical equipment, pharmaceutical, and aerospace industries. Labor intensive industries — such as apparel, footwear, furniture, and toys — are unlikely to be affected.
- ◆ There are examples of reshoring back to America, mainly in the automotive and semiconductor industries. Tens of billions of dollars have already been committed for new grassroots facilities for production of computer chips in the US — including Intel, Samsung, Micron Technology, and Taiwan Manufacturing. Most recently, General Motors and Toyota have announced plans to build electric vehicles in the US. I expect additional announcements over the next year. Given the slew of commitments, it is not unrealistic to assume excess capacity in computer chips in 2024.
- ◆ In theory, the domestic economy could benefit significantly from a realignment of supply chains. One major benefit could be a sustained boom in business investment in plant, equipment, and software as supply chains are rebuilt, fortified, and reorganized. The accelerated trend toward digitization of offices, households, and transportation systems is another force adding to the demand for capital goods and software. A sustained capital goods cycle would be the first since the 1990s, and should provide numerous benefits for the domestic economy.
- ◆ Econometric models support the conclusion that capital formation is the crucial fundamental driver of **labor productivity**, with a time lag of two years. In principle, rapid growth in productivity is conducive to faster economic growth, rising real wages, increasing profit margins, and lower inflation.
- ◆ In conclusion, global supply chains are unlikely to be restored to normal until 2023. In the interim, supply conditions are expected to improve gradually but steadily as the year unfolds. I continue to expect 2022 to be a good year for the domestic economy, consisting of solid growth in GDP and company earnings, robust job creation, rising real wages, and some moderation in cost pressures. Because of critical mass and access to resources, large companies should continue to manage more effectively relative to smaller firms.



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Dow Jones Industrial Average: is a stock market index that measures the stock performance of 30 large companies listed on stock exchanges in the United States.

MSCI World Excluding US Equity Index: is a stock market index comprising of non-U.S. stocks from 23 developed markets and 26 emerging markets. The index is calculated with a methodology that focuses on liquidity, investability, and replicability.

NASDAQ: is an American stock exchange at One Liberty Plaza in New York City. It is ranked second on the list of stock exchanges by market capitalization of shares traded, behind the New York Stock.

NYSE FANG+ Index: is an equal-dollar weighted index designed to represent a segment of the technology and consumer discretionary sectors consisting of highly-traded stocks of technology and tech-enabled companies.

Russell 2000 Index: is a small-cap stock market index of the smallest 2,000 stocks in the Russell 3000 Index. It was started by the Frank Russell Company in 1984. The index is maintained by FTSE Russell, a subsidiary of the London Stock Exchange Group.

Russell 3000 Growth Index: is a market capitalization-weighted index based on the Russell 3000 index. The Russell 3000 Growth Index includes companies that display signs of above-average growth. The index is used to provide a gauge of the performance of growth stocks in the United States.

Russell 3000 Value Index: is a market-capitalization weighted equity index maintained by the Russell Investment Group and based on the Russell 3000 Index, which measures how U.S. stocks in the equity value segment perform by including only value stocks.

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