



MORNING BRIEFING

October 27, 2021

Kinks in the Chain

Check out the accompanying [chart collection](#).

(1) From JIT to JIC. (2) Not so easy to go back to JIC. (3) From demand shock to supply shock. (4) Auto industry invented JIT, and is now crippled by it. (5) Lowering and raising our real GDP through the end of next year. (6) Raising our inflation forecast. (7) Supply-chain indicators. (8) Santa will have plenty of good excuses for not delivering all the goods. (9) Is California to blame? (10) Amazing Amazon has hoarded all the truckers, trucks, and cargo planes!

Global Supply Chains I: From JIT to JIC. Melissa and I have been researching the causes of the global supply-chain disruptions. Below, we consider lots of the common explanations. They all make sense and have been contributing to the mess.

When all is said and done, the basic problem is that just-in-time (JIT) inventory management doesn't work in a global pandemic. As a result, businesses are now scrambling to adopt just-in-case (JIC) inventory management. That's easier said than done because everyone is trying to do so at the same time. Undoubtedly, the resultant hoarding has compounded the transition problem.

Also exacerbating the problem is that fiscal and monetary policymakers responded to the pandemic by first slamming on the economic brakes, with lockdowns and social-distancing restrictions, then slamming on the accelerator, reversing course with overly stimulative policies. The resulting demand shock triggered the supply shock. It has all been very shocking, indeed.

JIT was first implemented in the 1970s by the Japanese automaker Toyota Motor Corporation. The company's executives decided that Toyota could adapt more quickly and efficiently to changes in demand if it did not keep any more inventory in stock than was immediately needed.

[Investopedia](#) wisely observes: "A chief benefit of a JIT system is that it minimizes the need for a company to store large quantities of inventory, which improves efficiency and provides substantial cost savings. However, if there is a supply or demand shock, it can bring everything to a halt."

Not surprisingly, the industry for which JIT was invented has been the hardest hit by supply-chain disruptions. Automakers have been crippled by a shortage of computer chips—vital car components produced mostly in Asia. Without enough chips on hand, auto factories from India to the US to Brazil have been forced to halt assembly lines.

The pandemic clearly triggered the supply disruptions, as the transportation of parts and finished goods was impeded by sidelined Covid-stricken port workers and truck drivers. JIT depends on reliable shipping, which has been anything but that lately.

Global Supply Chains II: A Woeful Dashboard. The widespread consensus these days seems to be that the supply disruptions will last through mid-2022. Then all should be well again. That makes sense to us, but it might be wishful thinking. No one really knows how long it will take to remove all the kinks from the supply chains.

In line with the consensus view, Debbie and I are slashing our Q3 real GDP forecast to zero (from 4.0%) and cutting our Q4 estimate to 2.0% (from 3.0% saar). We are leaving the first two quarters of 2022 at 2.5% but raising Q3 and Q4 to 3.0% (from 2.5%) ([Fig. 1](#)).

We are also raising our inflation forecast. We expect the headline PCED to increase 4.5% this year and 3.5% next year. It was 4.3% y/y during August ([Fig. 2](#)). We expect it will range between 4.0% and 5.0% through mid-2022. Then it should moderate to 3.0%-4.0% during the second half of next year. We won't be surprised if the FOMC decides to raise the Fed's inflation target from 2.0% to 3.0% next year.

In addition to watching inflation for signs that the supply disruptions are worsening or improving, here are a few of the other key indicators we will be monitoring:

(1) *Purchasing managers.* September's survey of manufacturing purchasing managers showed that in recent months there has been an unusual widening gap between the M-PMI new orders index, which is rising, and the production index, which is falling ([Fig. 3](#)). The M-PMI supplier deliveries and backlog of orders remain elevated but are down from their record highs during the early summer ([Fig. 4](#)). The M-PMI customer inventories index remains near recent record lows ([Fig. 5](#)).

(2) *Regional business surveys.* Like the M-PMI, indexes of unfilled orders or delivery times in the five regional business surveys conducted by Federal Reserve Banks also remain elevated during October but down from recent highs ([Fig. 6](#)). The same can be said of the

prices-paid and prices-received indexes for the regions ([Fig. 7](#)).

Global Supply Chains III: A Sea of Troubles. It's not even November yet, but already lots of parents are rushing to buy holiday gifts—because how do you explain to a kid that the L.O.L. doll they requested from Santa are [stuck](#) in Chinese warehouses? Under pressure from tight labor markets, lean inventories, and traffic jams from the points of manufacture to delivery, supply chains are clogged as never before.

The problem is touching just about everyone in the market for a new something, big or small. Kitchen cabinet deliveries are delayed. New car purchases seem to take forever. Melissa recently noticed a stark lack of shampoo options at her local Walgreens.

The solutions aren't simple because there is not just one kink in the chain but many. Here's a list:

(1) *Global factories shutdown.* When the virus outbreak occurred, mass quarantines forced factories to shut down around the globe. Since reopening, they've struggled to keep up with new orders. China's manufacturing activity collapsed during February 2020 ([Fig. 8](#)). It quickly recovered since then but is stalling again now. German industrial production is lagging new orders in recent months more than ever before ([Fig. 9](#)).

(2) *Lopsided demand.* Consumers on lockdown in early 2020 quickly shifted their demand from services to goods. Stuck at home, many consumers renovated them or moved to bigger ones in the suburbs. Consumers also upgraded their stay-at-home entertainment and workout routines with the purchase of electronics like computers and flat-screen TVs as well as gym equipment. (See our [Personal Consumption Expenditures](#).)

(3) *Containers stuck.* Finished products are piling up in manufacturing warehouses waiting to be shipped to their destined port. But shipping containers have been hard to come by. Many have been stuck in parts of the world where they are usually not found. Initially in the pandemic, during spring 2020, consumer demand slumped, and shipping lines canceled many of their routes between Asia and North America. As consumer demand returned with a vengeance during summer 2020, thousands of empty containers were stuck in the US, and exporters in China faced long waits for boxes in which to ship their goods, [observed](#) the August 4 *WSJ*.

Shippers “are refusing to send boxes inland to pick up their cargo because they are trying to get empty containers back to factories in Asia as quickly as possible to take advantage of

historically high shipping prices for exports from the continent.” For loaded inland-bound containers, congestion on rail networks and a shortage of truck chassis, drivers and warehouse workers has led to big backups at cargo facilities.”

(4) *Congested docks.* Dozens of loaded container ships are [floating](#) in the waters near Los Angeles and Savannah waiting for up to two weeks to be unloaded. Early in the pandemic, Covid outbreaks among dockworkers forced shutdowns of ports. Events like the container ship [blockage](#) of the Suez Canal in March and China’s [shutdown](#) of the third-busiest container port in August after a dockworker tested positive for Covid further slowed shipping momentum.

(5) *Chain gangs wanted.* Retirees, quitters, and labor unions are tightening the labor market for [essential](#) logistics workers from longshoremen to truckers and rail workers alike. “Once a berth becomes available, longshoremen operating massive blue cranes lift the metal containers and position them to head inland via truck or train. Ideally, a truck driver who has been alerted to the presence of a customer’s goods arrives at a terminal to find a chassis waiting. The container is then hoisted aboard and the driver pulls the chassis to the customer’s warehouse,” explained an October 2 *Washington Post* [article](#).

Some trucks bring the “containers to various hubs where the containers are loaded on trains and taken inland. When the system works properly, containers are lifted from arriving trains and placed directly onto a wheeled chassis, which is then hauled away by a local driver. The chassis is supposed to be quickly unloaded by the final customer and returned by truck to the rail yard,” said a September 3 *Forbes* [article](#). But there are bottlenecks in rail freight too, largely related to a shortage of rail workers.

(6) *Component problem.* The imbalance between booming consumer demand for goods and strained manufacturing capacity inevitably has generated supply shortages for key raw materials and parts. For example, shortages for chemicals like resin and polymers have [reduced](#) production by paint suppliers. (August’s Hurricane Ida in Texas added to paint supplier capacity troubles). Lumber and labor [shortages](#) have slowed housing starts ([Fig. 10](#)).

Semiconductor [shortages](#) have severely impacted inventories from cars and computers to appliances and toothbrushes. German auto production staged a brief recovery earlier this year but has also been slipping again recently ([Fig. 11](#)).

(7) *Hoarding for the holidays.* Manufacturers and retailers are panic-ordering extra inventory

just in time for the Christmas and holiday season—which has worsened the situation, noted an October 20 CNBC [article](#). “Because the problems are well known, orders for raw materials, component parts, and finished goods are now being placed earlier than normal, which is lengthening the queue, creating a vicious cycle,” an RBC analyst quoted in the article observed. Extra inventory also means extra strain on warehouse capacity.

(8) *Factories gone cold*. The latest energy crises in mainland China and Europe are further disrupting global supply chains. China’s power supply shortages have [interrupted](#) the operation of many factories. Europe is in the [same boat](#).

Santa’s sleigh may be short on gas this year.

Global Supply Chains IV: Blaming California Regs. Social media is full of stories and tweets blaming regulations in California for the supply-chain problems in the US. However, *USA Today* [fact checked](#) whether this is true and found the thesis to be wanting. The *USA Today* piece was responding to an October 13 Facebook “news” post that debunked the idea that the California port situation is caused by a driver shortage: “Not so fast: It is in part caused by a California Truck Ban which says all trucks must be 2011 or newer and a law called AB 5 which prohibits Owner Operators.”

While those regulations cited are real, *USA Today* found, they aren’t contributing to the supply-chain delays in California because about 96% of trucks serving California ports already are compliant. A representative for the California Air Resources Board quoted in the article said, “[A]ny truck with a 2007 or newer engine is currently in compliance.”

Another viral post on social media mentions the California Assembly Bill, a January 2020 law that required companies that hired independent contractors to reclassify them as employees. But whether this “gig worker” law applies to independent truck drivers remains in question all the way up to the Supreme Court. It is not in effect now, a CEO of a West Coast port company told *USA Today*.

Likewise not now in effect is a California ban on new gas-powered cars and light trucks by 2035 announced last year. Fourteen years off, that can’t be the cause of California port delays either.

While Melissa and I would have liked to have learned that California regulations were to blame, as rolling them back seems to us an easier fix than coming up with more truck drivers, our digging suggests they’re not.

Global Supply Chains V: Amazon's Fixes. You would think that pivoting the logistics operations for a retail behemoth like Amazon during a pandemic and amid a supply-chain crisis would be as difficult as unlodging the *Ever Given* ship from the Suez Canal. But Amazon promises “to get customers what they want, when they want it, wherever they are this holiday season,” according to the company. Last-minute shoppers will have access to millions of items within as fast as five hours from click to doorstep in 15 metro areas.

How will the company possibly swing that at a time like this? Here's the short list of what Amazon is doing to make good on its motto, “safety, speed, and efficiency”:

(1) *Putting people and safety first.* Initially during the pandemic, the slowdowns in demand for goods and factory production hit Amazon's supply chains hard, resulting in delivery delays and out-of-stock notices, [reported](#) CNBC on September 29. But the ecommerce giant overcame the challenge as a surge in sales led to record profits in July. Turning attention away from exploratory projects and toward the supply-chain challenges at hand, senior leaders met daily “to tackle inventory issues and discuss the latest coronavirus updates,” wrote CNBC.

Amazon also picked up its hiring, bringing on thousands of new warehouse and delivery workers between March and mid-April to keep up with order fulfillment. Through June 30, Amazon's y/y headcount grew 34%, reported CNBC.

Amazon also spent billions on coronavirus-related investments, like safety gear for workers, an internal Covid-19 testing initiative, and new processes to stem virus transmission in its warehouses.

(2) *Focusing on the essentials.* Amazon's ability to flexibly manage inventory utilizing technology was a strength going into the pandemic that has proved invaluable during it. Struggling early in the pandemic to meet its promised two-day delivery window for Prime subscribers, Amazon pivoted to a pandemic-friendly logistics strategy. That included giving precedence in warehouses to high-demand items like hand sanitizer and paper towels and capping how much inventory third-party sellers may store in its warehouses, CNBC observed.

(3) *Expanding internal infrastructure.* Amazon's in-house fulfillment system was robust before the pandemic, but the company has made additional investments to expand its fulfillment capabilities.

To meet new holiday season demand, “Amazon said it has increased ports of entry across its network by 50%, doubled its container processing capacity, and expanded its ocean freight carrier network partnerships to secure committed capacity into critical ports within its network. Later in the holiday season, Amazon expects to have more than 85 aircraft in its fleet to help ensure ample capacity to transport customer packages across longer distances in shorter timeframes,” [according](#) to an October 25 post in a retail supply-chain publication.

Furthermore, “Amazon has opened more than 250 new fulfillment centers, sortation centers, regional air hubs, and delivery stations in the U.S during 2021, including over 100 new buildings in September alone.”

Calendars

US: Wed: Durable Goods Total & Core Capital Goods Orders -1.1%/0.5%, Advanced Goods Trade Balance, Wholesale Inventories, Crude Oil Inventories, MBA Mortgage Applications. **Thurs:** Real GDP & GDP Price Index 2.7%/5.5%, Core PCED 4.5%, Initial Jobless Claims 290k, Kansas City Fed Composite Index, Pending Home Sales 0.5%, Natural Gas Storage. (Bloomberg estimates)

Global: Wed: Germany Gfk Consumer Climate -0.5, BOC, Japan Retail Sales -2.3%, Interest Rate Decision 0.25%, BOJ Interest Rate Decision -0.10%, Beermann, DeBelle. **Thurs:** Eurozone Business & Consumer Survey 116.9, Germany Unemployment Change & Unemployment Rate -20k/5.4%, Germany CPI 0.5%M/M/4.4%y/y, Italy Consumer & Business Confidence 118.4/112.2, Japan Industrial Production -3.2%, Japan Unemployment Rate 2.8%, Japan Core CPI 0.3% y/y, Australia Retail Sales 0.2%, ECB Interest Rate Decision, BOJ Press Conference, Balz. (Bloomberg estimates)

Strategy Indicators

S&P 500 Q3 Earnings Season Monitor ([link](#)): With nearly 30% of S&P 500 companies finished reporting revenues and earnings for Q3-2021, revenues are beating the consensus forecast by a well-above-trend 2.2%, and earnings have exceeded estimates by 12.8%. At the same point during the Q2 season, revenues were a higher 4.1% above forecast and

earnings beat by a greater 17.0%. For the 144 companies that have reported Q3 earnings through mid-day Tuesday, the aggregate y/y revenue and earnings growth rates and the percentage of companies reporting a positive revenue and earnings surprise have slowed considerably from their Q2 measures. The Q3 reporters collectively have a y/y revenue gain of 15.5% and an earnings gain of 44.8%. That compares to y/y growth of 18.9% for revenues and 123.4% for earnings at the same point during Q2. Nearly 82% of the Q3 reporters so far has reported a positive earnings surprise, and 80% has beaten revenues forecasts. Fewer companies have reported positive y/y earnings growth in Q3 (82%) than positive y/y revenue growth (89). These figures will change markedly as more Q3-2021 results are reported in the coming weeks. With the US economy largely re-opened compared to a year earlier, we expect the y/y growth rates to ease in Q3 compared to Q2. The revenue and earnings surprises are expected to moderate as well due to missed deliveries and higher costs.

US Economic Indicators

Consumer Confidence ([link](#)): “Consumer confidence improved in October, reversing a three-month downward trend as concerns about the spread of the Delta variant eased,” noted Lynn Franco, senior director of economic indicators at The Conference Board. The Consumer Confidence Index (CCI) climbed to 113.8 this month, after falling the prior three months from 128.9 in June to a seven-month low of 109.8 by September, with the present situation component rising to 147.4 after falling from 159.6 to 144.3 over the comparable periods. The expectations component improved to 91.3 this month after dropping five of the prior six months—from 111.9 in March to a 10-month low of 86.7 in September. The report notes that while short-term inflation concerns climbed to a 13-year high, the impact on confidence was minimal. The proportion of consumers expecting to purchase homes, autos, and major appliances all increased, while nearly half of respondents (47.6%) expect to take a vacation within the next six months—a 20-month high. This month, consumers’ appraisal of current business conditions was mixed: The percentage saying conditions are good (to 18.6% from 19.1%) and the percentage saying conditions are bad (24.9 from 25.3) both dipped slightly. Consumers’ assessment of the labor market was slightly more favorable this month, with the percentage saying jobs are plentiful (to 55.6 from 56.5) barely budging, while the percentage saying jobs are hard to get (10.6 from 13.0) fell to a four-month low. Looking at the expectations measures: the percentage of consumers expecting business conditions to improve (to 24.3 from 21.7) over the next six months rose, as did the percentage that expects conditions to worsen (21.1 from 17.6). Meanwhile, the short-term

labor market outlook improved, with the percentage expecting jobs to be more available (to 25.4 from 21.3) rising, while the percentage expecting fewer jobs (18.3 from 19.9) dipped a bit.

Regional M-PMIs ([link](#)): Four Fed districts (New York, Philadelphia, Dallas, and Richmond) now have reported on manufacturing activity for October and show the manufacturing sector continued to expand at a steady pace. The composite index climbed to 17.6 this month from 16.7 in September and 13.9 in August—though it's slower than the pace during the five months through July, which averaged 29.3. Both the Dallas (to 14.6 from 4.6) and Richmond (12.0 from -3.0) regions accelerated this month—with the latter moving from contraction to expansion—while growth in the Philadelphia (23.8 from 30.7) and New York (to 19.9 from 34.3) regions was slower, though still elevated. Meanwhile, new orders grew at double the pace of last month, accelerating to 20.0 this month—after slowing steadily from 31.1 in April to 10.0 in September. Billings in the Philadelphia (to 30.8 from 15.9), Dallas (14.9 from 9.5), and Richmond (10.0 from -19.0) regions showed stronger growth—with Richmond's moving back into expansionary territory; New York's (24.3 from 33.7) order growth slowed, though beat both Dallas' and Richmond's. Job gains remained solid, with the employment (to 25.8 from 23.3) measure showing job growth holding around this rate for the seventh month—double last October's rate. Philadelphia (to 30.7 from 26.3), Dallas (28.3 from 26.3), and Richmond (27.0 from 20.0) factories showed an acceleration of growth, with all hiring at a faster pace than New York's (17.1 from 20.5) factories—though the latter is holding around recent highs.

Regional Prices Paid & Received Measures ([link](#)): We currently have prices-paid and -received data from the Philadelphia, New York, Dallas, and Richmond regions for October. The Philadelphia, New York, and Kansas City measures are diffusion indexes, while Richmond's measures are yearly percent changes. (For Richmond, we multiply the percent changes by 10 for easier comparisons to other regional diffusion indexes.) Inflationary pressures remain elevated this month: Richmond's prices-received (94.2) measure hit a new record high, and its prices-paid (130.4) held around September's record reading of 140.1. Dallas' prices-received measure accelerated to a record-high 49.8, and its prices-paid measure (76.3) held near June's record high of 80.8. Meanwhile, Philadelphia's prices-received (51.1) measure has been holding near August's rate of 53.9, which was the highest since 1974, while its prices-paid measure (70.3) has been fluctuating in a flat trend just below June's 80.7, which was the highest since the end of 1979. New York's prices-received measure eased to 43.5 after accelerating to a record high 47.8 in September, while the prices-paid measure rose to 78.7 after slowing steadily from May's record high of 83.5 to 75.7 by September.

New Home Sales ([link](#)): New home sales (counted at the signing of a contract) climbed for the second time in three months by 14.0% in September and 17.1% over the period to 800,000 units (saar) after plunging 31.2% during the five months through June. It's 19.4% below its cyclical high of 993,000 units at the start of this year. Regionally, sales are posting noticeable improvements in the Northeast and South—with the former soaring 64.0% during the two months through September, and the latter up 27.4% during the three months through September. Meanwhile, sales in the Midwest have plunged 41.3% the past six months, while sales in the West are bouncing around recent lows. NAHB's October Housing Market Index (HMI) shows builders' confidence improved for the second month by 5 points (to 80 from 75 in August)—with 4 of the 5 points occurring this month; it's 10 points below November's record high of 90. All three components moved higher this month: The traffic of prospective homebuyers (to 65 from 61), present sales (87 from 82), and future sales (84 from 81). They were at record highs of 77, 96, and 89 last November.

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