A Global Chill in Commodity Demand Hits America's Heartland In China and other emerging markets, growth is waning and demand for the raw materials that drive the global economy has dried up.

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A thousand miles south of Granite City, Ill., a gritty steel town on the Mississippi River, West Texas oil rigs have shuddered to a halt. Seven hundred miles north, mines in the Iron Range of Minnesota have been stilled.

The drilling rigs, with their deep underground pipes, once consumed much of the steel that Granite City's blast furnaces could produce, while the mines supplied the raw material.

So now, more than 2,000 workers at the mammoth United States Steel plant not far from St. Louis are waiting to see if they will be next. This month, the company warned them it might be forced to idle the plant. Layoffs could begin around Christmas.

Granite City may be waiting, but a chill in economic activity is already evident across a broad swath of the nation's heartland stretching from the Gulf of Mexico to the Canadian border, as prices of commodities sink.

Whether it is roustabouts and other oil field workers in Texas and North Dakota, miners in Minnesota, farmers in Iowa, or heavy equipment makers and sellers in Illinois, the reason for the fear is the same: a sudden plunge in demand for commodities.

"Everybody is scared to death, and we're anticipating the worst," said Mike McCabe, 53, a second-generation steelworker who has spent nearly two decades working in the furnace where molten iron and scrap metal are transformed into steel. "They pay us to make pipe. That's what we do. But the rumor is that the order book is terrible."

The fall in prices for a variety of products, including crude oil, iron ore and agricultural crops like corn and soybeans is reminiscent of the collapse of the technology boom in 2000 or the bursting of the housing bubble nearly a decade ago. And behind the pain and anxiety are headwinds blowing from

China and other emerging markets, where growth is slowing and demand for the raw materials that drive the global economy has dried up.

Even as the American economy continues to plow ahead, nerves are increasingly on edge. Investors and banks that lent eagerly to energy and mining giants when prices were high are worried about whether they will be repaid if prices stay low. Caterpillar, based in Peoria, Ill., said in late September it would cut up to 10,000 jobs, a casualty of falling demand for its trademark yellow bulldozers and excavators.

A few days after Caterpillar's decision, Alcoa announced it would split in two to help cope with the slide in aluminum prices. DuPont, which has been under pressure to perform a similar breakup because of weak chemical prices, said in early October that its chief executive was stepping down and that it would cut costs more aggressively.

In Texas, energy companies and other natural resource businesses have eliminated 25,000 jobs this year. Sparsely populated North Dakota, where fortunes soared with the shale oil fracking boom, has lost more than 10,000 jobs, with some of its hastily built new housing now empty.

For the farm belt, which largely sidestepped the damage wreaked by the financial crisis and the Great Recession, the economic turnabout has been especially sharp. The Agriculture Department forecasts that farm income, adjusted for inflation, will fall 54 percent from where it was two years ago — the third-lowest level since the 1980s. Corn, the most valuable crop in the country, has fallen to $3.78 a bushel from $7.50 three years ago.

"I think a lot of farmers are starting to realize that these price levels may not be temporary," said Nathan Kauffman, the Omaha branch executive with the Federal Reserve Bank of Kansas City, Mo.

Still, for all the rising fears across the nation's midsection, the end of the long boom in commodities cuts both ways. Unlike the housing bust, which benefited no one but a few prescient short-sellers, the price collapse has a countervailing positive impact for consumers and some other businesses.

The 37 percent drop in gasoline prices since the summer of 2014 is the equivalent of a $100 billion tax cut, providing much-needed relief while wages remain stuck. Food prices, too, have declined, with chicken costing 8 percent less than a year ago, according to the Bureau of Labor Statistics. Milk is cheaper, and prices of goods from abroad, like coffee, are down.

Airlines are rejoicing at lower prices for fuel, which makes up 40 percent of their costs. For the first time in years, airlines can buy new planes, invest in new facilities and give bonuses to employees, while paying dividends to shareholders. With gasoline prices low, automakers are raking in healthy profits from selling shiny new pickup trucks and sport utility vehicles.

"There are winners and there are losers," said Nariman Behravesh, chief economist at IHS, a research firm that tracks the economy. "But there is no question that there are pockets of real pain out there."

Years of Plenty

Commodity producers are used to regular booms and busts, but the so-called supercycle driven by China's once insatiable appetite for raw materials has been extraordinary by any standard. Edward L. Morse, Citigroup's global head of commodities research, likens China's boom to the three decades after World War II when Europe was rebuilt, or the Gilded Age industrialization of the United States in the half-century after the Civil War.

"The last 20 years have been mind-boggling," Mr. Morse said. "Between 1993 and 2013, China built 200 cities of a million people or more. This was incredibly intensive in terms of steel and copper and other commodities."

Vast amounts of money were invested globally to increase commodity production, whether it meant digging for iron and aluminum ores in Brazil and Australia or developing once untappable sources of shale oil and natural gas in the United States. In the first decade of the 21st century, Mr. Morse said, spending on energy exploration and drilling rose sevenfold.

"There was a bunching up of capital spending across the planet," he added. "It was an incredible marshaling of resources to find and get new anything. And like those infrastructure booms in the past, it is coming to an end."

And from South America to South Africa and beyond, the cooling in China adds up to an economic freeze. The double whammy of lower exports to China and falling commodity prices has pummeled the Brazilian economy, the world's seventh largest; its currency has fallen by roughly one-third against the dollar this year.

Closer to home, in Assumption, Ill., and in tiny farm towns like it across the Midwest, the lean years have arrived. But as in the biblical Book of Genesis, seven fat years preceded them.

For all the economic suffering elsewhere, the farm sector came through the Great Recession largely unscathed. Harvests were bountiful, prices for corn and soybeans were buoyant, and low interest rates made it easy to borrow and buy land or new equipment.

"My people weren't exposed," said Tom Sloan, chief executive of Sloan Implement, a major dealer of John Deere tractors, combines and other farm equipment with 20 stores in Illinois and Wisconsin. "All my friends were saying how tough things were, but farmers had zero."

Farmers like Terry Albrecht, who grows corn and soybeans on the same 600-acre plot in Staunton, Ill., that his father and grandfather once tilled, used the windfall from high prices to upgrade his grain truck and other equipment. In July, he took a break from the farm and went to Hawaii for two weeks with his wife and daughter.

He admits it may be a while before he can take that kind of trip again. "At these prices, I wouldn't be spending that kind of money," Mr. Albrecht said. "You take the opportunity when it arises."

As was the case with other commodities, overseas demand pushed crop prices steadily higher, especially as consumers in emerging markets began emulating Western eating habits.

Wheat exports from the United States to China in 2014 were four times what they were in 2011, while prices doubled before dropping more recently. Beijing prohibits the import of American beef, but exports to Hong Kong have surged, and the meat is smuggled into mainland China.

As crop prices have dived, so have sales of new John Deere machines in the territory Mr. Sloan serves. New equipment purchases are down about 30 percent from a year ago, he said, with the used tractors and combines he normally takes as trade-ins now filling nearly all of the five-acre lot at his company's headquarters in Assumption.

"Farmers made so much money they all bought new equipment," he said. "Now the supply of used equipment is astronomical."

And just as Mr. Sloan's sales are down, so is overall business at John Deere, which is based in Moline, Ill., a three-hour drive from Assumption. The company has laid off roughly 1,500 workers in the last year, and earnings were down 40 percent last quarter.

Mr. Sloan takes the long view — the company was founded by his grandfather in 1931. "We are in a cyclical business," he said. "The good times lasted longer than we thought, and we probably have a couple of years of lean times ahead."

Now that the boom has ended, bankruptcies in the agricultural sector may tick up, but no one is predicting a replay of the 1980s when many farmers and rural banks went under. The biggest differences this time, they say, are overall low debt levels and historically cheap borrowing costs.

But banking regulators and others are closely watching a steady rise in short-term agricultural operating loans over the last year.

"At $3.50 a bushel, if your land is paid off, you're probably making a little bit of taxable income," said David Miller, the director of research and commodity services for the Iowa Farm Bureau Federation. If you're renting land at $300 an acre, he said, "you're probably losing money."

'It Hurts Big Time'

Northeast of the factories and bleak industrial vistas in Granite City, the landscape in Madison County, Ill., quickly turns to rolling, amber-colored farmland. And for farmers in the area, the Hamel Coop Grain Company in rural Hamel is a place to sell or store their harvest, and a hangout to trade gossip and talk business.

And these days, the conversations inevitably turn to prices, which are displayed on a whiteboard that Amy Rogier, the general manager, updates every afternoon with the latest figures from the Chicago Board of Trade.

Two years ago, soybeans fetched more than $15 a bushel. The co-op is offering $8.90 now. Corn was $6.93 a bushel in 2012. It now trades at $3.78.

“None of them are happy with the prices,” said Ms. Rogier, who grew up on a farm in the area, which her father and brother still run. The co-op offers lower-priced seed, and she says farmers are using less fertilizer, to accommodate tighter budgets.

As he delivered 600 bushels of soybeans for sale this month, John Vieth made no bones about the pain he is feeling. He said he would have preferred to store the beans in the hope of getting a higher price in a few months but needed the money now to pay bills that could not wait.

“It hurts, it hurts big time,” Mr. Vieth said after the crop was unloaded from his Navistar International truck. “Equipment is so dang expensive. Everything is up but our prices.”

As the season wraps up, the speed of the drop in what farmers are now getting for their harvest means big-ticket purchases are being delayed.

“Instead of a new tractor, I can make do with a used one,” said Kenny Grotefendt, as he watched his just-harvested corn being loaded into one of the co-op’s towering silos. “I’ll be 66 on Oct. 24 and my wife wants me to retire. But I was born on a farm, and it gets in your blood. I’ll farm till I’m 70 and then enjoy life.”

Cheap Oil’s Hidden Cost

Like the used farm equipment sitting on the lot at Mr. Sloan’s dealerships, the first thing a visitor sees around the Granite City steelworks is mound after mound of coal. This is what’s known in the steel industry as coke — carbonized coal that is used to melt iron ore and refine it into hardened steel.

With only one of Granite City’s blast furnaces operating, the plant is running at about half of its normal capacity of 2.8 million tons of steel a year. Companywide, United States Steel is using 58 percent of its production capacity, which means lots of coke has no place to go.

Some of the steel produced in Granite City is used in construction and for machinery and other equipment, but the largest single share is earmarked for what is known in the industry as O.C.T.G., or Oil Country Tubular Goods.

From early 2011 to mid-2014, when oil mostly traded from $90 to $110 a barrel, Granite City shipped coil after coil of steel to the United States Steel plant in Lone Star, Tex., where it was turned into the tubes that line new oil wells and other so-called down-hole products.

Crude oil’s abrupt drop to $40 to $50 a barrel for most of 2015 has forced the industry to decommission more than half its rigs. In mid-October, 595 oil rigs were in operation, compared with 1,590 a year ago.

But there is a hidden overhang in the market. To keep their leases, many operators are drilling wells without completing them. That means that as soon as prices revive a bit, production may bubble up again, forcing prices back down.

As a result, the financial consequences for banks and other lenders to the energy industry are growing — and the pressure will only mount if oil remains in the $45 range.

Loans that not so long ago seemed safe now appear riskier: The collateral underpinning many of the loans held by banks is gas and oil reserves. As the price of oil has fallen, so has the value of the commodity guaranteeing the loan.

Banks have started to set aside money to cover bad loans made to energy companies.

For the last four quarters, the Texas bank Comerica has increased the reserves it has set aside for bad loans to energy and energy-related companies, which total around $3.8 billion, roughly 8 percent of total loans held by the bank. In mid-October, Comerica reported that it had nearly doubled to $1.1 billion the pool of energy loans it classifies as “criticized,” meaning the bank has concerns about the borrowers’ financial condition.

Even as they cope with the drop in demand from the oil patch, American steel makers are being pummeled by a flood of imported steel from foreign producers, especially South Korea.

United States Steel has filed a trade case against Korean steel makers, claiming they are dumping steel at less than half of what it costs to make it. By the time the case is resolved, however, the furnaces in Granite City may already be cold.

“There is typically about four months’ inventory of O.C.T.G. out there,” said Douglas R. Matthews, senior vice president for North American flat-rolled operations at United States Steel. “Right now it’s 10 to 12 months, and high levels of Korean steel are still coming in.”

But the flip side of the commodity cycle is that some previous losers are now riding high.

The surge in commodity prices drove a transformation in the airline industry, for example, as high fuel prices prodded carriers to merge, reduce capacity and park planes that were not economical to fly.

Today, with their biggest cost down substantially, the airline industry is reporting historic levels of profitability.

That roller coaster effect will eventually play out within the commodities sector itself. With prices depressed, so is capital spending aimed at finding new deposits of oil or extracting minerals from new mines. Eventually, supply will adjust to better fit demand, setting the stage for prices to stabilize and, over time, recover.

Some signs indicate that the commodity bust is hitting bottom. But many analysts predict that oil prices, in particular, will stay low for an unusually long period, as the industry slowly works off a huge glut of supplies and inventories.

Much as that might cheer many American consumers, in Granite City and towns like it up and down the middle of the country, that prospect brings little joy.

“It’s hard for me to wrap my head around the fact that what’s good at the pump is bad for me,” said Jason Chism, president of Local 50 of the United Steelworkers in Granite City. “But I’m not happy. We’re laying guys off, and the steel industry is in the tank.”

Neither is Mr. McCabe, the second-generation steelworker, who is preparing for the worst. Not long ago, he asked a real estate agent to visit his home in Gillespie, Ill., and give him an estimate on the property. “If the plant is idled, I’d sell everything and start over,” he said. “I have a good credit rating, and I don’t want to lose that. I could get a job for $10 to $15 an hour.”

That is a lot less than the roughly $25 an hour he makes at United States Steel, but Mr. McCabe knows the business has changed since his father and uncle worked in the blast furnace decades ago.

“It’s good money when we’re making steel,” he added, sitting for an interview in the century-old local union hall known as the Labor Temple. “But our pay has already been cut as production has gone down, and we’re constantly dipping into savings. What can we do about it? Nothing.”

Correction: October 23, 2015
An earlier version of this article misstated which book of the Bible speaks of seven fat years preceding seven lean years. It is Genesis, not Exodus.

Clifford Krauss and Jad Mouawad contributed reporting.