Economics

We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before. We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive, involving all stakeholders of the global polity, from the public and private sectors to academia and civil society.

The First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. Now a Fourth Industrial Revolution is building on the Third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.

There are three reasons why today's transformations represent not merely a prolongation of the Third Industrial Revolution but rather the arrival of a Fourth and distinct one: velocity, scope, and systems impact. The speed of current breakthroughs has no historical precedent. When compared with previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. Moreover, it is disrupting almost every industry in every country. And the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance.

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The possibilities of billions of people connected by mobile devices, with unprecedented processing power, storage capacity, and access to knowledge, are unlimited. And these possibilities will be multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing.

Already, artificial intelligence is all around us, from self-driving cars and drones to virtual assistants and software that translate or invest. Impressive progress has been made in AI in recent years, driven by exponential increases in computing power and by the availability of vast amounts of data, from software used to discover new drugs to algorithms used to predict our cultural interests. Digital fabrication technologies, meanwhile, are interacting with the biological world on a daily basis. Engineers, designers, and architects are combining computational design, additive manufacturing, materials engineering, and synthetic biology to pioneer a symbiosis between microorganisms, our bodies, the products we consume, and even the buildings we inhabit.

Challenges and opportunities

Like the revolutions that preceded it, the Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for populations around the world. To date, those who have gained the most from it have been consumers able to afford and access the digital world; technology has made possible new products and services that increase the efficiency and pleasure of our personal lives. Ordering a cab, booking a flight, buying a product, making a payment, listening to music, watching a film, or playing a game—any of these can now be done remotely.

In the future, technological innovation will also lead to a supply-side miracle, with long-term gains in efficiency and productivity. Transportation and communication costs will drop, logistics and global supply chains will become more effective, and the cost of trade will diminish, all of which will open new markets and drive economic growth.

At the same time, as the economists Erik Brynjolfsson and Andrew McAfee have pointed out, the revolution could yield greater inequality, particularly in its potential to

Bad news for the economy is no longer good news for the stock market.

The Federal Reserve is now on hold,  and indicated clearly in minutes from its last meeting released Wednesday  that it will not only stop raising interest rates for now but will stop shrinking its balance sheet in the second half of the year, potentially giving a boost to markets.

So after a stream of negative economic data Thursday, traders saw little reason to bid up stocks on the hopes the Fed would ease up on policy .

“I think we’re at a precipice, where the intentions of the Fed are well known,” said Art Hogan, chief market strategist at National Securities. “So they’re on pause until the data improves. They’re certainly going to use their balance sheet as a stealth stimulus, and the stock market just had a significant run.”

The stock market on Thursday slumped after a string of reports that missed expectations. December’s durable goods data showed a surprise slowdown in business spending. The Philadelphia Fed manufacturing survey fell to minus 4.1, the first negative number since May 2016 and the biggest drop since August 2011. Markit PMI data also showed manufacturing activity at the slowest pace in 17 months.

Previously bad data like that might have sent stocks higher. “It helped drive our perception of monetary policy because it was going to influence the Fed’s pivot,” Hogan said. “Now, the Fed has made their pivot. We know where they stand and incrementally bad news is not going to change their position.”

Some really bad data, however, could have a negative effect. The Dow fell 104 points a week ago Thursday, after December's retail sales report showed a sudden, unexpected drop of 1.2 percent in spending, at a time when consumers should have been shopping for holiday gifts. Some economists wrote off the number as suspect, but it still rattled markets and sent Treasury yields lower. Yields move opposite price.

The declines on negative economic reports have been modest, relative to recent rallies. But if the data continue to be negative and worsens, the reports could stir more fears of recession.

"The loss of economic momentum appears to have carried over into the first quarter. In light of both a quiescent inflation backdrop and a projected downshift in GDP, imply an increased likelihood that the Fed's next move in interest rates is lower," wrote Joseph LaVorgna, chief economist for the Americas at Natixis.

Growth forecasts coming down
Economists definitely see a slowing economy, and on Thursday J.P. Morgan economists cut their forecasts for first quarter growth to 1.5 percent, on top of a lowered 1.4 percent for the fourth quarter. Many economists still see growth holding just above 2 percent.

But one problem is that the government's 35-day shutdown, not only could have been a temporary negative drag on the economy, but also slowed the release of economic reports, creating an even murkier-than-normal look at economic activity.

"The data we've been looking at recently is just like all over the map. There's no really clear pattern to things," said Ward McCarthy, chief financial economist at Jefferies. "Some things look really bad, some things look good, some things look in the middle. The data that was the most trustworthy was the durable goods number which continues to show the drop off in capex spending and according to the survey data, it's due to uncertainty over the trade war."

While durable goods for December rose 1.2 percent, economists were watching the core capital goods orders which fell 0.7 percent, on top of a decline of 1 percent in November. That number reflects capital equipment, or business spending, an area that was expected to have been boosted by tax reform.

Stocks have been boosted by optimism over trade talks with China, but it's clear the Fed has been watching the impact of trade on the economy as one of the risks behind its decision to hold off on rate hikes. When the Fed first began discussing a potential "pause
pause" in rate hikes in December, stocks were selling off and the markets were gripped by fear of a potential recession.

"The Fed put itself on the shelf. …They basically have just said we're going to be patient with everything. If you get bad data, they're going to be patient with that," said McCarthy. "The Fed

just wants to be in the backdrop, and I think that's a good place for them to be, not just because of the way the data looks but because of all the uncertainties which could be disruptive, like trade and politics. As a consequence, they want to make themselves removed from the scapegoat role."

Some of the fogginess around the data is expected to lift as the economy moves away from the government shutdown, which was started in late December but mostly spanned the first weeks of January, in the first quarter.

If the trade discussions between the U.S. and China lead to an eventual deal, economists expect the economy to reflect the end of uncertainty and it could pick up. Even so, J.P. Morgan economists are expecting growth to pick up to 2.25 percent in the second quarter.

The stock market selloff may be overdone if the extent of shares that have fallen below a key technical indicator is anything to go by.
In the past, the market has rebounded whenever 400 stocks or 80 per cent of the BSE-500 index fell below the 200-day moving average (DMA) — a trend indicator.
After the drop in the markets — especially in mid- and small-cap shares — in the past five months, 101of BSE 500 stocks are currently trading above their 200 DMA. When an index or a stock closes below the 200-DMA, it is said to be in a long-term downtrend. But the indicator is also considered to be a reversal sign when too many stocks in an index fall below 200 DMA.

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The findings are based on Edelweiss SAT-DMA Index, which shows the stocks trading above their 200 DMAs.
"The analysis revolves around the hypothesis that the market tends to bottom out when less than 20 per cent of BSE500 stocks are above the 200 DMA," said Yogesh Radke, head of alternative & quantitative research, Edelweiss Securities.
But the rebound may not happen in a hurry. In the past 15 years, the market has remained sluggish for 46 days from the day when the SAT-DMA Index hits the 20 per cent mark.
"Going by history, the extrapolation indicates the likelihood of the market languishing for the next 40 days before resuming its upward trajectory," Radke said.
The trend of SAT-DMA Index hitting the 20 per cent mark and a subsequent bounce-back was seen on six occasions in the past 15 years — June 2006, March-April 2008, February-March 2011, November-January 2012, August-September 2013 and February-March 2016.
The sell-off in the stock market has been on account of liquidity concerns in NBFCs, outflows by foreign portfolio investors, uncertainty ahead of elections and steep share valuations. Since September 1, the Sensex has declined 6 per cent, the mid-cap index has dropped 16 per cent and the small-cap has tumbled 22 per cent. The fall in Sensex and Nifty has been moderated by strength in a few bluechips.

Stocks in the BSE 500 index that are currently trading above 200 DMA include large-caps such as Wipro, Axis Bank, Reliance Industries, Infosys and Bajaj Finance, and mid-cap stocks, such as Bata India, Power Finance Corp, Aditya Birla Fashion, UPL and Divi's Lab.
In the past, the BSE500 Index has dropped by 5 per cent on an average from the day the SAT-DMA Index hit the 20 per cent mark. As the SAT–DMA Index moved above 20 per cent, average returns are 7-8 per cent in the next 2-3 months and 25 per cent in the next year.
"The sharp correction especially in mid- and small-cap stocks is overdone and I believe Indian market will bounce back soon as the valuations of many quality stocks are attractive," said Raamdeo Agrawal, joint MD, Motilal Oswal Financial Services. "The current valuations of several quality stocks have improved the risk reward ratio in favour and offering a buying opportunity in the beaten down mid-cap and small-cap stocks."