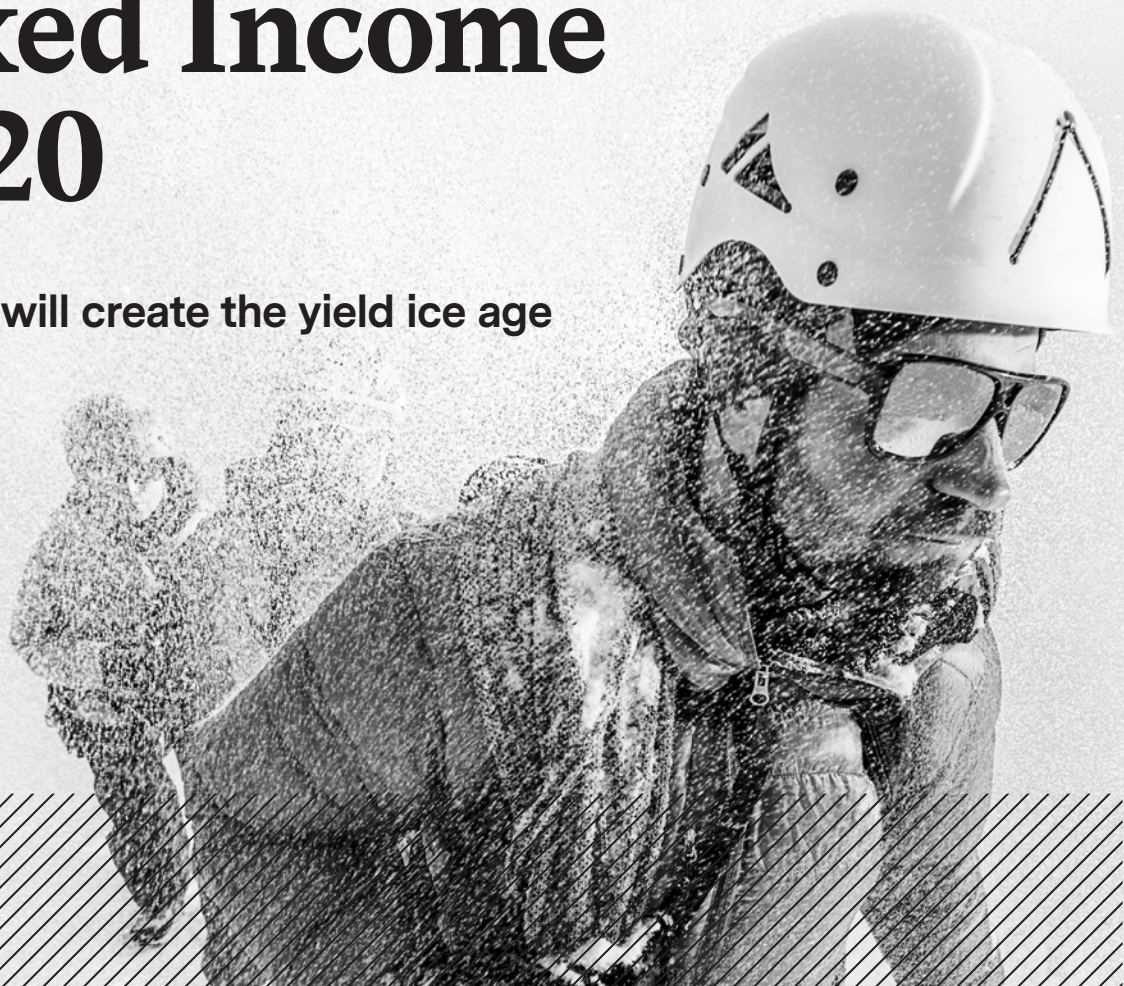


Asset Management

Fixed Income 2020

How 5G will create the yield ice age



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How 5G will create the yield ice age

We all want the best for our children and one major factor in anyone's lives is their career. But what kind of careers await our offspring? Automation is changing the global job market and traditional jobs are disappearing. Now, in 2020, the pace of change is accelerating due to a leap in digitalization thanks to the arrival of 5G. While many jobs will disappear, even the cognitive jobs that remain will be transformed. It's not just industrial jobs that are affected, take the traditional job of a doctor, for example, where 5G connectivity is going to change the healthcare industry.

Right now, ambulances connected to a 5G network are part of a pilot project in Barcelona. Equipped with cameras and sensor monitors that show the patient's vital signs, a live video stream connects to the hospital, where specialist doctors can remotely instruct the paramedics on the best care for the patient, thus substituting their function. This way the patient receives the required and immediate doctor attention within the ambulance, instead of being treated at the hospital upon arrival, as it was the case not so long. The implication of this is that the number of emergency practitioners at the hospital will eventually decrease as this technology is rolled out.

The point here is that 5G connectivity will not only save lives, it will change our lives as a society: how and where we work, study, and play. With such an all-encompassing effect, 5G will have powerful ramifications on the global economy. From an investor's viewpoint, these effects will result in low interest rates for a very long time, if not forever. The 5G world is a low yield world. To understand why this is, we have to understand what brought us here and how we, as bond investors, can continue to generate returns in this sub-zero yield environment.

Mondher Bettaieb Loriot

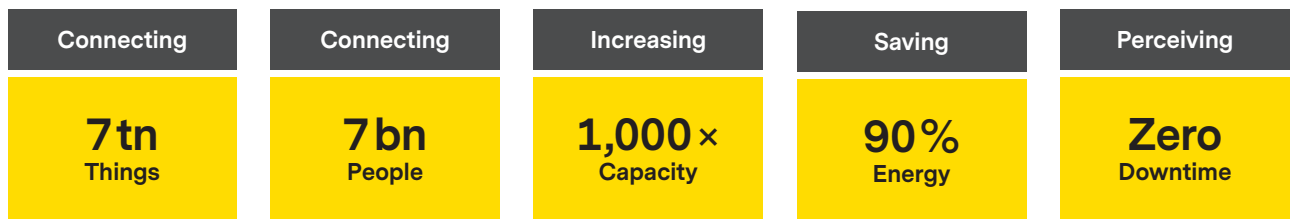
Head of Corporate Bonds

Why 5G will keep inflation on ice

In simple terms, automation causes corporates to lose pricing flexibility, it reduces investments, impacts wages, and diminishes consumer spending. Routine jobs will go the way of the dodo bird and become extinct. This means smart factories and their control centers can be operated from remote locations. As a result, fewer workers will be required to operate machinery and factories. This will be made easier and faster through 5G technology as industrial automation technology, amongst others, is further

facilitated by virtual network functions (VNF) and ultra-reliable, low-latency communication links (see chart 1). Massive machine/device communication and connectivity will bring new benefits to industries and economic sectors, no doubt. The future for us is that 5G will connect everything and mobile robots, sensor processes, and VNFs will replace workers that perform routine functions and even cognitive ones, as described above.

Chart 1: Mobile robots, sensor processes, and network functions will replace workers





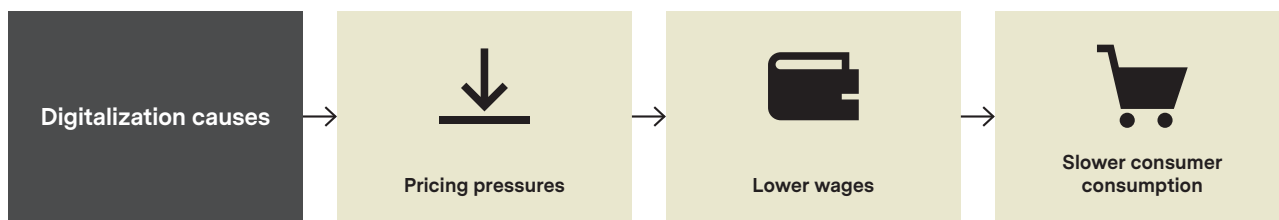
The offshoot of this progress is that 5G will permanently diminish the purchasing power of workers, as their own jobs are diminished and replaced by digital processes, leading to much slower consumer consumption. Industries will hence suffer pricing pressures that will in turn impact investments and wages (see chart 2). This is a disinflationary spiral difficult to get out from and this will probably mean low rates forever as the spiral is also self-reinforcing. As a result, central banks will continue to be required to stimulate consumer purses to sustain the cycle and a minimal level of economic growth.

Central bankers are paying close attention to this trend, as Chair Jay Powell of the US Federal Reserve made clear in his introductory presentation at the Jackson Hole Symposium in 2019. According to Mr. Powell, the changes we face are so great that he defines us as being in a new era. He described the current era as the progression from two previous eras, the first beginning after the Second World War (see chart 3). As central banks now have an even greater role in maintaining economic stability and growth, it's wise for us to take a closer look at what led us to this new era and how Mr. Powell has defined previous eras.

Era 1: The Great Inflation Era, 1950 – 1982

As the world transitioned from war to peace, the global economy, driven by the US, took off. This era was marked by economic volatility, with growth rising well above 10% in the early 1950s and then zigzagging around 6% until the early 1980s, interspersed with periods of recessions. Mr. Powell called this the Great Inflation Era, where each period of economic expansion was halted by tightening monetary policy in an attempt to combat strong demand and inflation. This resulted in sharp economic slowdowns and recessions.

Chart 2: 5G will permanently diminish the purchasing power of workers



Source: Vontobel.

Era II: The Great Moderation Era, 1983–2009

In the second era, periods of economic growth lasted for longer and were not as volatile as in the Great Inflation Era. Central bankers had learned the lessons from the previous era and instead of hitting the breaks full on when trouble hit, they showed more foresight by beginning to cut rates prior to economic slowdowns, softening the severity and length of the ensuing recessions.

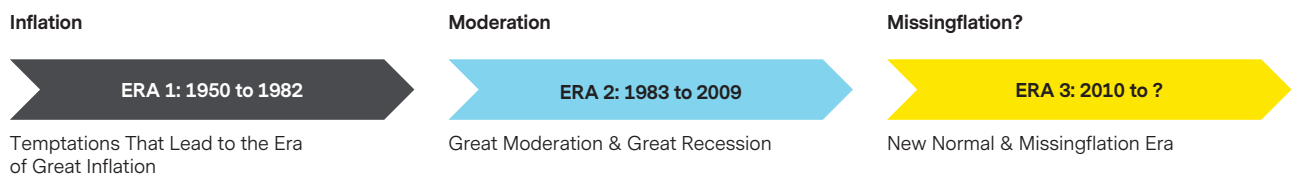
When the second era began, inflation was falling and in 1993 core inflation fell below 2.5% for the first time. Since then, inflation has stabilized within a tight band of 0.9–2.5% as prices steadied and employment figures improved.

According to Mr. Powell: “By the turn of the century, it was beginning to look like financial excesses and global events would pose the main threats to stability in this new era rather than overheating and rising inflation¹.” Evidence of these excesses were the dot com bubble at the turn of the Millennium and the Financial Crisis of 2009.

Era III: The Great “Missingflation” Era, 2010–?

The Financial Crisis transitioned us into the new era. The following years were a period of recovery as banks recapitalized, although the recovery was weak. What was also notable was that declining unemployment did not result in an increase in inflation. This brings us to the core of the current era. Mr. Powell refrained from naming this era, claiming it to be too soon to know what the “great” theme is. We would like to take a stab at it though, as we subscribe to Mr. Powell’s view that inflation will remain low and as a result, so will interest rates.

Our preferred term (and our firm belief) is that we have entered the “Great Missingflation Era” resulting from this major 5G technological shift and the fourth stage of the industrial revolution of digitalization being stepped up. Here, we would also stress that the representation of our present period as an era is not an exaggeration, as eras last a long time and as this new 5G science is unlikely to go away anytime soon.

Chart 3: Powell’s eras point the way for the 2020s: Low rates will keep the world going round!

Source: Introductory Speech by Jerome Powell at Jackson Hole Symposium 2019; the Challenges for Monetary Policy.

¹ Powell, J. (August 23, 2019). Challenges for Monetary Policy, Jackson Hole.

Digitalization and 5G, the employment annihilator and creator

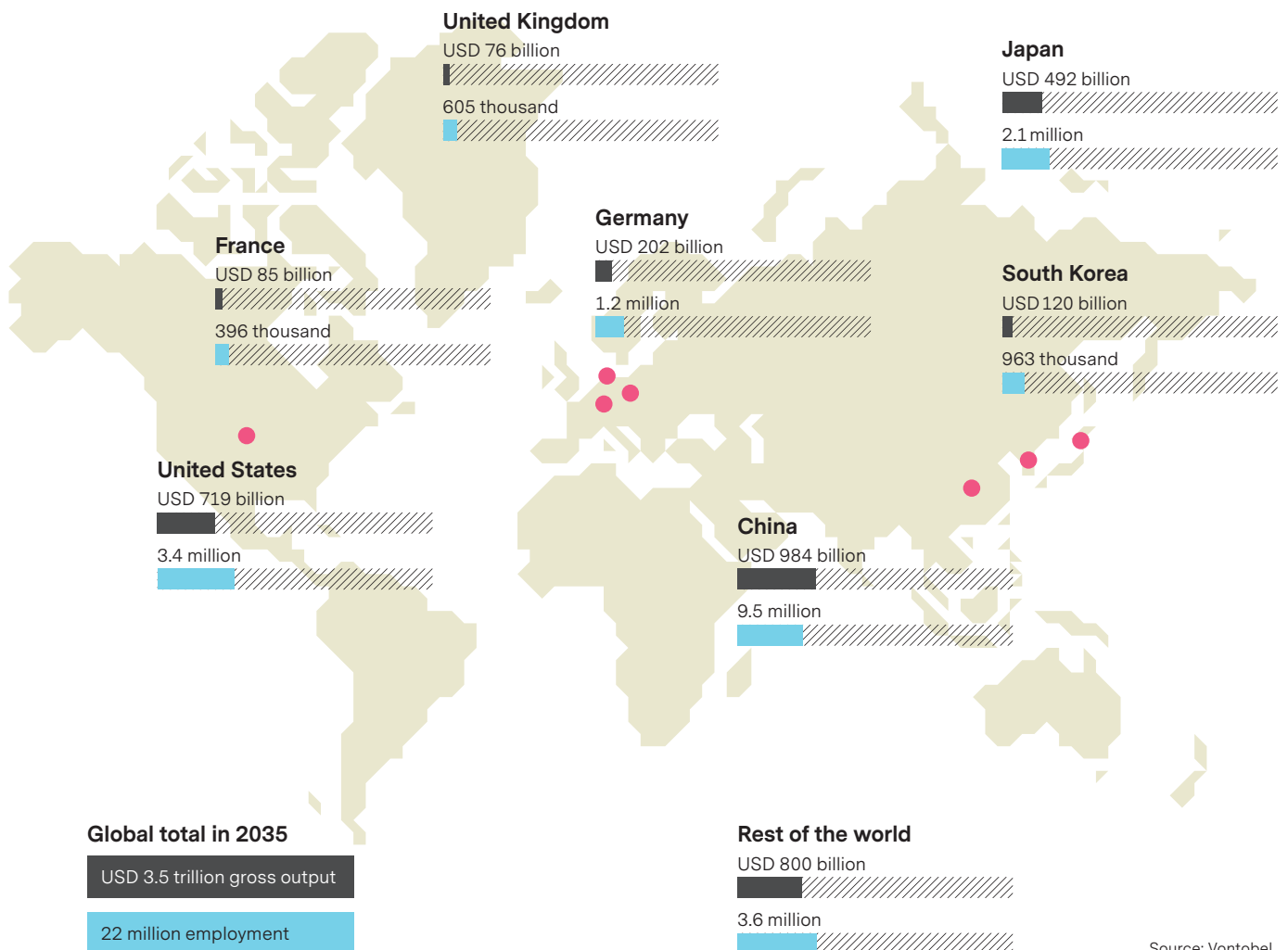
It's clear that the job market is in a paradigm shift with repetitive and services jobs likely to disappear and never to return. The counter argument is that technological progress will, in turn, create new jobs. This is also true, so let's have a look at how this death and birth cycle of job destruction and creation will play out.

In a recent study, Bank of America Merrill Lynch predicted that around 800 million jobs worldwide are at risk of becoming obsolete by 2035 due to digital automation (of which 5G is a significant contributor). Such a large number doesn't just mean industrial jobs, the effects will

be felt across all industries. But what about the promised job creation that this disruption will generate?

A white paper published by IHS Markit found that 5G technology will create 22 million new jobs globally by 2035² (see chart 4). While IHS Markit's findings relate specifically to 5G and not automation in general, it does indicate a gap between job destruction and creation with more jobs lost than created. It should also be noted that these new jobs will not be created equitably across geographies, and it's no surprise that Asia and China, in particular, will benefit from the rise of 5G.

Chart 4: Global 5G value chain output and employment in 2035



Source: Vontobel.

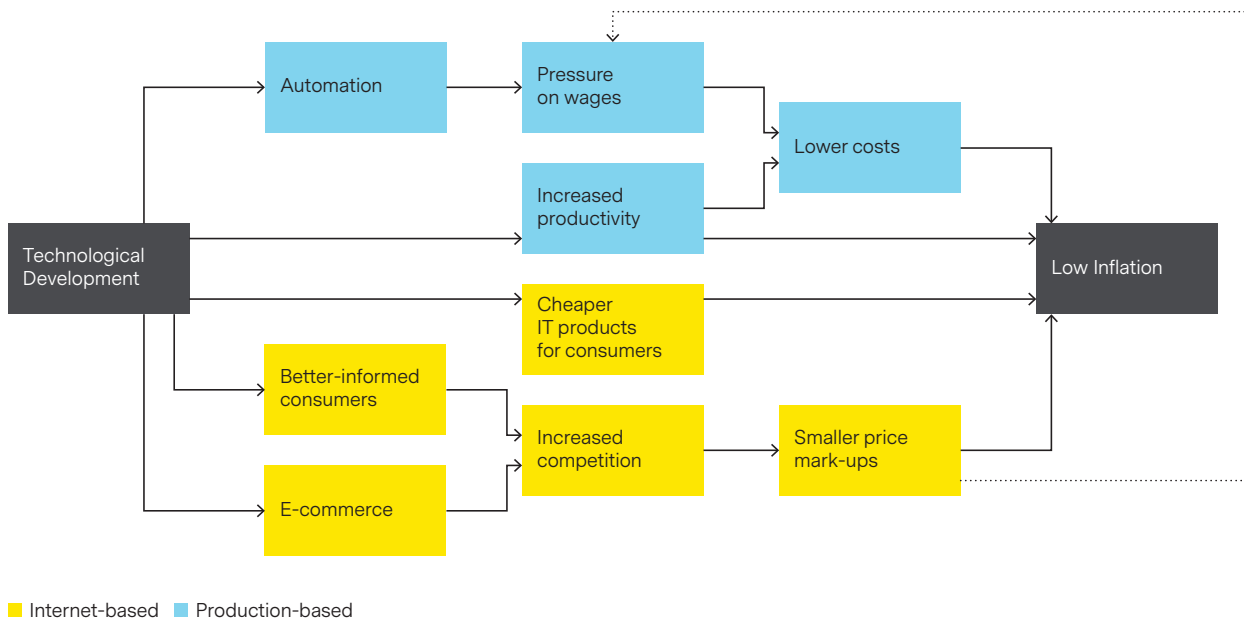
² IHS Markit. (2017). The 5G economy: How 5G technology will contribute to the global economy.

Low rates forever

If we look at the current situation for 5G, the Swedish central bank, the Riksbank, conducted a study into the effects of digitalization and how it will impact the economy for both producers and consumers (see chart 5). The result is a double whammy that will decrease prices for the producers, but also diminish the buying power of consumers. This combination will keep inflation nowhere to be seen and low, as already highlighted. Therefore, investors are faced with a prolonged period of low rates as this era unfolds. Against such a backdrop, central banks will remain vigilant and unlikely to alter their

monetary policies as restarting economic engines could prove extremely difficult in this missing inflation era. In our view, investors would be best advised to remain invested in developed market, mid-yield corporate bonds to still benefit from their positive carry and coupons.












Chart 5: How technological developments keep inflation low



Source: Swedish Central Bank, Riksbank.

5G to overwhelm the economy

The table below shows the impact of 5G and technological changes on various industries.

											
CHALLENGE	AGRI-CULTURE	AUTO-MOTIVE	CON-STRUC-TION	ENERGY	FINANCE	HEALTH	MANU-FACTUR-ING	MEDIA	PUBLIC SAFETY	RETAIL	TRANS-PORT
Autonomous vehicle control		■							■		■
Emergency communication									■		
Factory cell automation		■	■	■			■				
High-speed train		■						■			■
Large outdoor event								■			
Huge amount of geographically spread devices	■						■		■		
Media on demand								■		■	
Remote surgery and examination						■		■	■		
Shopping mall			■		■		■			■	
Smart city		■	■	■	■			■		■	■
Stadium			■					■		■	
Teleprotection in smart grid network				■			■				
Traffic jam		■						■			■
Virtual and augmented reality							■	■		■	

Source: 5G Mobile and Wireless Communications Technology, Cambridge University Press.

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