Brave new world of 5G investing

Investors should be aware of the technological opportunities and disruptions that 5G can bring. BY JAMES CHEO

5G WILL be a game changer for people, companies and countries in the same way that electricity was for the industrial revolution. Investors who haven't considered what it means for their portfolio, had better do so quick because it's just around the corner.

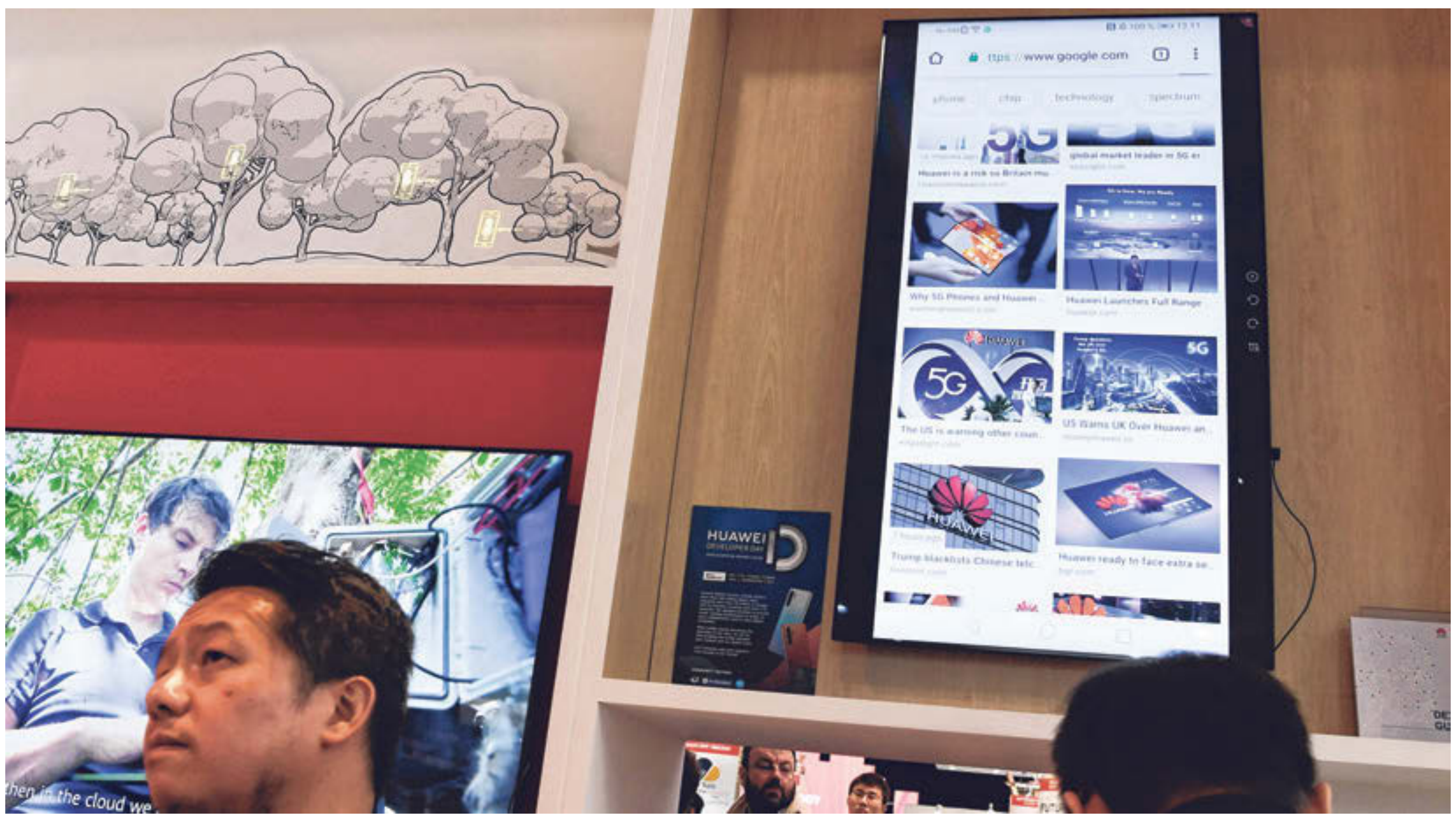
Leapfrogging or simply maintaining market share requires being on the front foot. Already, the world's leading companies have their research and development teams in full swing to understand and harness the opportunities and threats this will bring to their industries and business.

It was just a decade ago we transited from 3G to 4G, which allowed us to access high quality Internet content on our mobile devices.

What makes 5G attractive is simple: it's fast. It will be 10 to 15 times faster than broadband and potentially more than 50 times faster than 4G. Imagine downloading a movie in seconds. It could also mean an end to running out of space on your mobile devices, as more data can be stored in the cloud.

However, 5G goes beyond speed and capacity. The game-changer is 5G's ability to eradicate latency or "lags". Currently, 4G network takes about 40 milliseconds, but 5G can reduce that to just a single millisecond. That's faster than a blink of an eye.

Here are just some of the areas where it will affect our lives, and your investment decisions:



5G is a key enabler of the Fourth Industrial Revolution and this trend is only going to accelerate in the years to come. PHOTO: AFP

5G KEY ENABLER OF FOURTH INDUSTRIAL REVOLUTION

The advent of electricity 200 years ago was the starting gun for the industrial revolution, and expectations are no less for 5G.

The First Industrial Revolution was powered by the steam engine while mass production and machines drove the Second Industrial Revolution. The Third Industrial Revolution was about personal computers and the internet. The Fourth Industrial Revolution builds on the earlier industrial revolutions – combining machines with rising computing power.

5G is not an incremental upgrade, but a platform for innovation creating exponential productivity gains across a wide range of industries. 5G is the catalyst in the fourth industrial revolution that will enable the "Internet of Things" – setting the stage for machines and sensors to communicate over the cloud.

While 4G was about the consumer experience, 5G is really about accelerating commercial productivity gains to the extent that it will enable paradigm shifts for countries' economies. The instant responsiveness of 5G technology will be the key enabler of the Fourth Industrial Revolution.

SELF-DRIVING CARS TO BECOME A REALITY

5G will allow autonomous vehicles to become a reality. With no latency, all autonomous cars and traffic infrastructure can be connected on the cloud and communicate with each other instantaneously.

For example, a self-driving car can see traffic conditions miles away due to the data it gets from other vehicles from the cloud. With instant data, autonomous cars would detect another vehicle's intention to change lanes, adjusting its own speed to compensate. In an ideal world, a fully connected world of autonomous driving would reduce, and possibly eliminate traffic accidents in the future.

Imagine with autonomous driving, there is no longer a need to park a car. A self-driving car will become an asset, as opposed to a liability – picking up passengers and earning income for you while you're not using it.

Ride sharing could become an efficient and cost effective mode of transportation. With predictive and forecasting ability of autonomous driving, traffic jams would be a relic of the past.

Autonomous driving spurs massive data and infrastructure growth. Connected cars need to generate a significant increase usage of data. This presents significant opportunities in areas such as data management, cloud computing, and next-gen 5G low latency-high bandwidth communication.

SPRINGBOARD FOR SMART FACTORIES

For the factories of the future, 5G will connect machines, processes, robots and people to create a more flexible and responsive production capabilities. Currently, more than 90 per cent of factories' connectivity is on wired connections which are reliable, but lack the flexibility to meet the fast-changing consumer needs.

5G will be the springboard that gives the smart factory a leap forward from more traditional automation to a fully connected and flexible system – one that can use a constant stream of data from connected production processes to learn and adapt to new demands from their consumers.

Take, for example, Nokia's factory in Oulu, Finland. A complex set of sensors track items at each stage they are assembled. If something goes wrong, technicians can more quickly identify the issue before it hits the finish line. Supplies can be automatically replenished by fully autonomous and independent robots whizzing around. This in turn reduces factory downtime and speeds up production.

The true power of the smart factory is a flexible system that can self-optimise performance across a broader network, self-adapt to and learn from new conditions in real time, and autonomously run entire production processes.

CONNECTED HEALTHCARE

Globally, the healthcare system is under enormous pressure as the world's population becomes older. The geographical distribution of healthcare services is skewed; and, typically the places that need the most healthcare services are under-served.

5G can address some of these issues, such as enabling skilled surgeons to do complex surgeries in a different location from their patients. Operating such delicate surgical equipment requires precise and real-time response that 5G can offer.

5G can, in part, allow efficient use of limited resources to improve access to healthcare services to people regardless of their geographical location.

AN ACCELERATING TREND

5G is a key enabler of the Fourth Industrial Revolution and this trend is only going to accelerate in the years to come.

Investors have to be aware of the technological opportunities and disruptions that 5G can bring. Businesses that do not adapt their strategies to 5G will be disadvantaged to companies that do.

As early as this year or the next, telcos in many countries will start to offer some 5G services while major brands will announce their new 5G-enabled smart devices which is going to encourage consumers to upgrade their mobile devices.

5G is also about investment in technological hardware and software (cloud computing and storage, data management, telecom infrastructure and towers). Crucially, 5G is about what it can enable with the mega trend of industrial revolution 4.0 – self-driving cars, smart factories and connected healthcare.

We're on the cusp of a technological revolution and investors who are not alert to the groundswell could miss out on a generational opportunity.

The writer is Chief Market Strategist, Southeast Asia, HSBC Private Banking

Growing interest in sustainable investing

Investors are increasingly integrating ESG criteria into their investment processes, as studies show these pillars have a measurable impact on financial performance. BY GARTH BREGMAN

Positive impact

	TRADITIONAL INVESTMENTS	SUSTAINABLE INVESTMENTS			PHILANTHROPY
I wish to...	Integrate sustainable development into my financial choices	Select players with ESG best practices	Focus on themes and sectors whose economic activity is linked to the UN Sustainable Development Goals	Target an intentional and positive impact in specific areas and be able to measure it	Take action on causes that matter to me
The approach	ESG Integration	Responsible multi-sector	Sustainable thematic	Impact investing	Individual Philanthropy Advisory

Source: BNP Paribas Wealth Management

IN OUR recent mid-year outlook event held in Singapore in early July, our clients raised and voted on the questions that interested them most. Two popular questions asked were how they could get started in sustainable and impact investing, and what type of products and services are already available. This reflects a growing interest in sustainable investing in Singapore, and Asia more broadly, albeit from a low base.

Clients' expectations and preferences differ significantly, and this explains the need for a wide variety of investment solutions. As they become more familiar with what is available, we often see their preferences change as they explore sustainable investing more deeply.

When discussing with clients for the first time, it also becomes apparent that the terminology and the many three letter abbreviations can be quite confusing: ESG (Environmental, Social and Governance), SRI (the letters originally stood for "Socially Responsible Investing", yet are now also used for "Sustainable and Responsible Investing"), Negative Screening, Triple Bottom Line, Positive Screening, Best in Class, Impact Investing, PRI (United Nations' Principles for Responsible Investment), SDGs (United Nations' Sustainable Development Goals), etc.

STARTING POINT

Of all the above terms, ESG is most useful as a starting point, as it identifies three key pillars of sustainability. The term was coined in 2005, and captured the changing zeitgeist of the time, even though the history of sustainable investing goes back much further.

Al Gore's 2006 documentary, *An Inconvenient Truth*, reflected the growing awareness of the Environment, the "E" of ESG, and contributed significantly to investors worldwide paying more attention to the environmental impact of their investments, especially those related to pollution and global warming.

The collapse of Enron in 2001 and WorldCom in 2002, as well as the wave of poor corporate governance exposed by the Global Financial Crisis in 2008, highlighted why good Corporate Governance, the "G" of ESG, must be increasingly taken into account, and sharpened investors' focus on this area.

The "S" of ESG is Social, and focuses on topics such as Employee Diversity, Human Rights, Consumer Protection and Animal Welfare, all of which have become increasingly appreciated by investors over the past 20 years.

Study after study has shown that companies' approaches to these ESG pillars has a measurable impact on their financial performance, and this evidence has led to investors increasingly integrating ESG criteria into their investment processes.

It is not just doing the right thing – it is also about generating high returns.

In Asia, it has generally been institutional rather than individual investors who have taken the lead.

For example, Temasek has fully integrated ESG analysis into its investment processes and is a strong advocate of sustainable economic and social development.

But there are also some individual investors and family offices marching side by side with these institutional investors, and we even see some private investors actively engaging their wealth managers to develop services in this direction.

Fortunately, BNP Paribas has a long history in offering such investment solutions to our wealth management clients around the world, and we are part of a global banking group with a strong and fully integrated commitment to sustainability and positive impact.

ANTICIPATING DEMAND

We have anticipated the growing client demand for sustainable investments and have a broad offer already in place, covering the full range of asset classes and services.

The diagram above reflects more broadly how our clients can work with us to generate a positive impact. Sustainable investments form the core part of this spectrum, which also includes our award-winning philanthropy services.

For investments, "ESG integration" is often a client's initial entry point, seen on the left hand side of the diagram.

This is where we take a traditional investment philosophy and process, whether for advising on equities, bonds or funds, or managing discretionary portfolios, and introduce ESG considerations.

We could, for example, exclude companies whose behaviour is harmful to human beings or the environment, or take into account the financial risks associated with companies' poor ESG practices.

Moving to the next category, "Responsible Multi-sector" investing requires having a clearly defined and transparent methodology for performing ESG analysis, which takes dedicated resources and investment to fully develop.

BNP Paribas chose to develop this capability many years ago, and our clients are now able to reap the benefits.

Here we focus only on the companies in each sector with the best ESG practices, which is a form of "Positive Screening", or "Best in Class" when it comes to ESG, and this leads to investments with an even more sustainable footprint than those with ESG integration.

For investors who want to focus on specific themes, the UN Sustainable Development Goals (SDGs) provide a well thought through and easily understandable set of 17 long-term goals.

The SDGs include goals such as "Zero hunger", "Quality education", "Clean water and Sanitation" , "Affordable and Clean Energy", "Sustainable Cities and Communities", and "Responsible Production and Consumption".

Our "Sustainable Thematic" investing approach for clients focuses on individual SDGs or combination of related SDGs.

"Impact investing" offers the highest level of positive impact by introducing the key notions of intention and measurement.

The investment must come with a clearly stated intention for a specific positive impact at the start of the investment, usually linked the UN SDGs, and this must then be clearly measured.

This appeals strongly to investors who want a direct and measurable impact from their investments.

The diagram aims to provide a summary of the different ways to approach sustainable investing. In reality, sustainable investments covers a large and rapidly growing universe with multiple dimensions, some of which are not easily described in a single diagram.

What is clear is that sustainable investing, and more generally using one's wealth to have a positive impact, is of growing importance to an increasing number of wealthy individuals and families.

There are a myriad ways for investments to have a positive impact, and we enjoy working closely with our clients who want their wealth to have an increasingly positive impact.

The writer is Head of Investment Services, Asia, Wealth Management, BNP Paribas

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