

# Factors Align For Post-Pandemic 5G Growth

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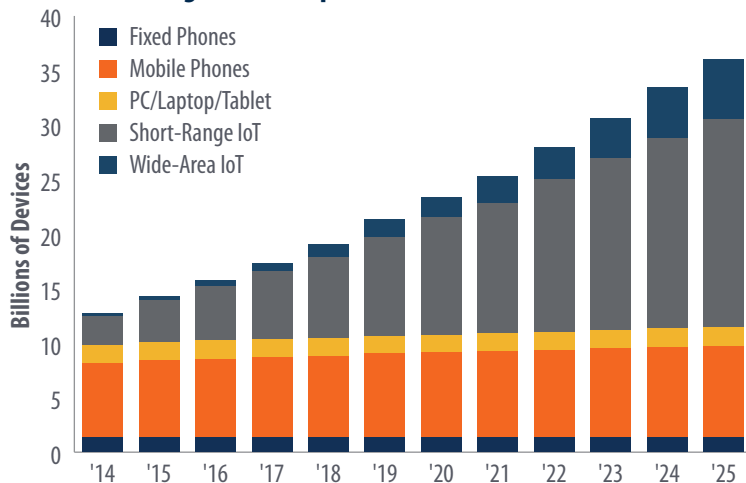
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In 2020, digital networks have been a lifeline, facilitating numerous aspects of daily life. Many of the innovations that we have come to rely upon—including high quality video conferencing, telemedicine, meal delivery apps, and many others—have emerged within just the last few years. As we look forward to the next wave of innovation that may improve our quality of life and enhance productivity, we believe the transition to 5G mobile networks may play a pivotal role. In our view, this transition may also provide an attractive opportunity for investors over the next several years, as new devices utilizing 5G technology are introduced, and the build-out of 5G infrastructure is accelerated by fiscal stimulus spending and geopolitical tensions.

## Rollout of 5G Devices

5G networks are expected to bring faster wireless speeds, reduced latency, and improved capacity for connected devices. This ecosystem of devices, referred to as the Internet of Things or IoT, goes far beyond the next generation of smartphones. Autonomous vehicles, wearable electronics, smart home devices, and remote sensors will communicate in nearly real-time over public and private 5G networks. While current 4G network capacity is limited to approximately 100,000 devices per square kilometer, 5G networks can support over ten times as many devices.<sup>1</sup> According to Ericsson, 5G networks will enable the IoT to grow to as many as 36 billion devices worldwide by 2025, a 54% increase from 2020<sup>2</sup> (see chart below).

## Internet of Things Set for Rapid Growth with 5G



Source: Ericsson: "IoT Devices Mobility Report"

In addition to companies directly involved with installing network infrastructure and maintaining data centers, we believe companies that contribute to the value chain of 5G enabled devices will also be key beneficiaries of the coming wave of 5G network development. Demand for digital components, such as semiconductors, antennas, and sensors, is poised to grow rapidly as more 5G consumer and enterprise use cases emerge. In our opinion, companies involved in the development and production of these advanced electronics may present a high growth opportunity for investors.

## 5G Prominent in Fiscal Stimulus

In response to the economic damage stemming from the coronavirus (COVID-19) pandemic and related shelter-at-home lockdowns, government officials around the world are preparing major infrastructure spending packages, many of which include plans to invest in 5G infrastructure. In June, the Trump administration floated a preliminary \$1 trillion infrastructure proposal, which specifically set aside funds for the transition to 5G<sup>3</sup>, in addition to roads and bridges. While bipartisan support is rare during an election year, key Democrats have also signaled support for stimulus spending that includes 5G infrastructure.<sup>4</sup> Reading the political tea leaves, we believe 5G may be a key beneficiary of a forthcoming US fiscal stimulus package.

<sup>1</sup>Source: Samsung Mobile Press. "The Road to 5G: Understanding What's New With the Next-Gen Network"

<sup>2</sup>Source: Ericsson: "IoT Devices Mobility Report"

<sup>3</sup>Source: Bloomberg: "Trump Team Weighs \$1 Trillion for Infrastructure to Spur Economy"

<sup>4</sup>Source: Newsweek: "Congress Eyes Infrastructure Projects Like 5G in Next Coronavirus Stimulus Phase"

<sup>5</sup>Source: Bloomberg: "China's Got a New Plan to Overtake the U.S. in Tech"

Investments in 5G infrastructure are also central in fiscal stimulus plans outside the US. In China, infrastructure spending in response to the crisis already appears to be ramping up. China's \$1.4 trillion spending plans over the next six years include several significant 5G projects.<sup>5</sup> In Europe, the European Commission has proposed a €750 billion infrastructure spending proposal that would also allocate funds for the next generation of wireless network.<sup>6</sup>

## Geopolitical Tensions May Incentivize Rapid Deployment of 5G

Amid rising geopolitical tensions, 5G has emerged as a key battleground for the future of technological leadership and innovation. Countries around the world appear to recognize that leadership in 5G will boost competitiveness and help mitigate future national security risks. In the US, President Trump has called 5G a "primary driver of our nation's prosperity and security in the 21st century."<sup>7</sup> To win the global 5G race, the White House has reportedly even encouraged US companies to acquire European telecommunication companies to secure domestic 5G equipment manufacturing and expertise.<sup>8</sup> On the regulatory front, the FCC has prioritized overhauling outdated regulations and quickly auctioned new wireless spectrum to US carriers.

After a US ban on its networking equipment in 2019, China continues to rapidly deploy its own domestic 5G networks. According to Bloomberg, China is rolling out tens of thousands of 5G base stations every week, and may have over 500,000 operable by year end, far more than any other country.<sup>9</sup> China's investment in 5G may be in response to mounting geopolitical pressure and the threat of global supply chains leaving the country in the wake of the COVID-19 crisis.

## 5G Exposure for Investors

The First Trust Indxx NextG ETF (NXTG) tracks an index of 100 companies involved in the research, development, and application of 5G. The underlying index methodology captures both domestic and international stocks and focuses on two sub-themes related to the 5G rollout. Infrastructure and hardware stocks comprise 80% of the portfolio and include industries such as data center REITs, IT services companies, and communications equipment stocks. Other hardware related stocks such as semiconductor manufacturers, electronic equipment makers and household durables are also captured by the methodology and give investors exposure to the emerging IoT. The remaining 20% of the portfolio includes diversified and wireless telecommunication services stocks, which provide 5G service to end users.

Throughout the pandemic, the value and necessity of fast, reliable networking has been clearly demonstrated. As the world continues to grapple with its impact, the transition to the next generation 5G network appears set to benefit from the deep integration of new device innovation, targeted fiscal stimulus spending, and heightened geopolitical competitiveness. In our opinion, 5G networking and the industries that support new connected devices remain attractive themes for investors.

<sup>6</sup>Source: European Commission: "Europe's moment: Repair and prepare for the next generation"

<sup>7</sup>Source: The White House: "National Strategy to Secure 5G"

<sup>8</sup>Source: Wall Street Journal: "White House Considers Broad Federal Intervention to Secure 5G Future"

<sup>9</sup>Source: Bloomberg: "China is Winning the Trillion-Dollar 5G War"

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*You should consider the fund's investment objectives, risks, and charges and expenses carefully before investing. Contact First Trust Portfolios L.P. at 1-800-621-1675 or visit [www.ftportfolios.com](http://www.ftportfolios.com) to obtain a prospectus or summary prospectus which contains this and other information about the fund. The prospectus or summary prospectus should be read carefully before investing.*

## ETF Characteristics

The fund lists and principally trades its shares on The Nasdaq Stock Market LLC.

The fund's return may not match the return of the Indxx 5G & NextG Thematic Index. Securities held by the fund will generally not be bought or sold in response to market fluctuations.

Investors buying or selling fund shares on the secondary market may incur customary brokerage commissions. Market prices may differ to some degree from the net asset value of the shares. Investors who sell fund shares may receive less than the share's net asset value. Shares may be sold throughout the day on the exchange through any brokerage account. However, unlike mutual funds, shares may only be redeemed directly from the fund by authorized participants, in very large creation/redemption units. If the fund's authorized participants are unable to proceed with creation/redemption orders and no other authorized participant is able to step forward to create or redeem, fund shares may trade at a discount to the fund's net asset value and possibly face delisting.

## Risk Considerations

The fund's shares will change in value, and you could lose money by investing in the fund. One of the principal risks of investing in the fund is market risk. Market risk is the risk that a particular stock owned by the fund, fund shares or stocks in general may fall in value. There can be no assurance that the fund's investment objective will be achieved. The outbreak of the respiratory disease designated as COVID-19 in December 2019 has caused significant volatility and declines in global financial markets, which have caused losses for investors. The impact of this COVID-19 pandemic may be short term or may last for an extended period of time, and in either case could result in a substantial economic downturn or recession.

The fund is not actively managed and generally will not attempt to take defensive positions in declining markets.

The fund may be a constituent of one or more indices which could greatly affect the fund's trading activity, size and volatility.

There is no assurance that the index provider will compile the index accurately, or that the index will be determined, maintained, constructed, reconstituted, rebalanced, composed, calculated or disseminated accurately.

The fund is subject to the risks associated with investing in real estate and real estate investment trusts (REITs), which include changes in the real estate market, vacancy rates, competition, volatile interest rates and economic recession.

Information technology companies and communication services companies are subject to certain risks, which may include rapidly changing technologies, short product life cycles, fierce competition, aggressive pricing and reduced profit margins, loss of patent, copyright and trademark protections, cyclical market patterns, evolving industry standards and frequent new product introductions. Such companies are particularly vulnerable to domestic and international government regulation, rely heavily on intellectual property rights, and may be adversely affected by the loss or impairment of those rights.

The fund may invest in securities issued by companies concentrated in a particular industry, sector, or geographical location, which involves additional risks, including limited diversification. The fund may invest in small capitalization and mid capitalization companies. Such companies may experience greater price volatility than larger, more established companies.

An investment in a fund containing securities of non-U.S. issuers is subject to additional risks, including currency fluctuations, political risks, withholding, the lack of adequate financial information, and exchange control restrictions impacting non-U.S. issuers. These risks may be heightened for securities of companies located in, or with significant operations in, emerging market countries. The fund may invest in depositary receipts which may be less liquid than the underlying shares in their primary trading market. Changes in currency exchange rates and the relative value of non-US currencies may affect the value of a fund's investments and the value of a fund's shares.

Economic conditions, may, without prior warning, lead to foreign government intervention and the imposition of capital controls or sanctions, which may include retaliatory actions of one government against another government, such as seizure of assets. Capital controls or sanctions may also impact the ability of the fund to buy, sell, or otherwise transfer certain securities or currency, which may cause the fund to decline in value.

As the use of Internet technology has become more prevalent in the course of business, the fund has become more susceptible to potential operational risks through breaches in cyber security.

Companies with exposure to emerging technologies may be exposed to risks that may not fully emerge until the technology is more widely used. Companies that initially develop or adopt a novel technology may not be able to capitalize on it and there is no assurance that a company will derive any significant revenue from it in the future.

The fund currently has fewer assets than larger funds, and like other relatively new funds, large inflows and outflows may impact the fund's market exposure for limited periods of time.

First Trust Advisors L.P. is the adviser to the fund. First Trust Advisors L.P. is an affiliate of First Trust Portfolios L.P., the fund's distributor.

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