

5G's not a competition, but Asia is winning

October 19, 2019 by Andrew Entwistle

We've never bought into the idea that 5G is a magic wand for competitiveness and prosperity, or that being first out of the 5G starting blocks held any particular merit.

However, we are not dismissive of the idea that the early stages of 5G can illuminate important features of the telecoms landscape, or that 5G concerns will continue to energise politicians and regulators. Both of these aspects of 5G should be of concern to investors.

The landscape feature that we want to focus on here is the relative scale of the telecoms sectors in Asia, the USA and Europe – the three poles of the global industry. Our observation is that many investors have a false sense of the relative scale and importance of these three poles – partly because Asian EVs are relatively modest, but mostly the effect of investors' proximity to their local telecoms markets in the US and Europe. This false sense of relative scale is reinforced by the confident projection by western operators of their own importance in the global pecking order^[1].

The early picture of emergent global 5G may help to puncture this misperception –

To date, we have had commercial 5G launches across much of Europe and in the USA, as well as S Korea and a scattering of other markets globally. Real 5G handsets are available, and early customers have posted impressive speedtest results – hundreds of Mbps, or even above the magic 1Gbps.

However, western operators have been very shy, to date, about disclosing their 5G KPIs, so we have to use some guesswork:

- We estimate that, by the end of 2019, there will only be about 5,000 5G cell sites activated in Europe – about 1% of the total European pool. There will be more in the USA – we'd estimate 10,000 to 15,000 by year end – perhaps 3-4% of the total pool, but many of these are mmWave cells covering tiny areas;
- We estimate that there will be perhaps three million 5G subscribers in Europe by the end of 2019 – and maybe significantly less than this. In the USA we estimate perhaps four million by the year end. The lack of disclosure from operators may indicate lower figures;

We can compare these estimates with what we expect for China and S Korea at the end of 2019:

- Pre-registration for 5G services in China indicated that, after just a few days, ten million subscribers had signed up. Services launch at some point in the next few weeks. By the end of the year, based on this early indication, there could be over twenty million 5G subscribers in China. It is expected that the Chinese operators will have about 150,000 5G sites active by the end of 2019 – a mix of large and small cells. See [here](#) for more;
- S Korea is expected to have around seven million 5G subscribers by the end of 2019, with around 130,000 5G sites active. (Our estimate. The operators disclose higher figures which relate to 'sectors' rather than sites. See [here](#) for more on S Korea);

In summary, at the end of the year, we expect tens of millions of 5G subscribers in these two Asian markets, compared to a few million in the western markets. We expect 5G to be deployed and activated at around 200,000 cell sites in these two Asian markets compared to about 20,000 sites in Europe and the USA.

There are two obvious pushbacks to these comparisons. Firstly, this is just 'year one', and might signify nothing for the longer term. Secondly, 'China is enormous – of course it will put western markets in the shade on these metrics' ^[2].

On the first point, we expect the 5G gap to widen in 2020, not narrow. We expect it to continue to widen in the years after that. Expectations are that China will have 600,000 5G cell sites by the end of 2020 – and some expect as many as 800,000. Other Asian markets will join the fray, with hundreds of thousands of 5G sites expected in Japan ([here](#)), and large deployments in Taiwan and elsewhere. Europe and the US will still be counting 5G sites in the tens of thousands over this period – primarily because the conditions for building dense networks in Europe and the US are not favourable.

On the subscriber front, we also expect Asia to continue to dwarf Europe and the US.

Yes, China is huge. And the wider Asian region is also huge. That's our point. 5G is just a reminder that the largest networks on the planet, by a large margin, are in Asia. (See [here](#) for more.) 5G should help to dismiss the argument that, because ARPU's are low in some of these markets, or because networks are deployed differently, using different vendors, this in some way shifts the industrial centre of gravity back to the west.

Why does relative scale matter?

Telecoms is, in large part, a tech sector. Technology developments shape the industry, and to a high degree, will also shape investment performance over the next decade, as they have over the past decades.

If the centre of mass for the telecoms industry is in Asia, then technical developments will focus on Asia in proportion to its scale. Tech investors, entrepreneurs, vendors and others will concentrate on Asian opportunities and solving Asian problems.

This is not new – Time Division, Massive MIMO, C-RAN and v-RAN, even 'cheap smartphones' were all Asia-centric problems solved with heavy lifting by Asia-centric players. This is not even just a 5G issue – earlier this week we wrote about the more positive outlook for IoT in Asia – which is much wider than 5G – [here](#). In a global industry – even with high trade tensions – innovation and technical progress can flow quickly between markets. That flow is asymmetric today, and we think that asymmetry will only increase.

Even investors that want to concentrate on the US and Europe need to stay on top of Asian telecoms and tech. Key industry questions, such as the roadmap for mmWave, the rise and fall of different spectrum bands, the cost of 5G devices, the journey to fully virtualised and containerised networks, the balance of power between wireless and wireline, will all be shaped by developments in Asia. Political and regulatory developments are also shaped by perceptions of the shifting centre of mass for telecoms, as we have seen in recent times with the hot 5G policy agenda, and broader policy themes.

On this basis, we do our best to track and interpret Asian developments for global and regional investors.

The remainder of the Global Weekly Review can be found [HERE](#) along with all past and future reports. Our updated valuation comp sheets can be found [HERE](#).

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1. In the US there is also a persistent 'don't worry, we're doing great!' line from some in government and the FCC (see [here](#) for example). Although this is balanced by 'no we are not' from other quarters (e.g. [here](#)), it succeeds in muddying the waters.
 2. Based on our estimates, China will actually be ahead of the US and Europe even on a penetration basis by the end of 2019. 20 million 5G subscribers equates to 1.4% of the population of China. 4 million US 5G subscribers would be 1.2% of the US population. 3 million in Europe equates to 0.6% of the population. 7 million in S Korea is 14% of the population.