VT Tyndall Global Select Fund Commentary

April 2019

TYNDALL

"China is a sleeping lion. Let her sleep, for when she wakes she will shake the world." – Napoleon Bonaparte

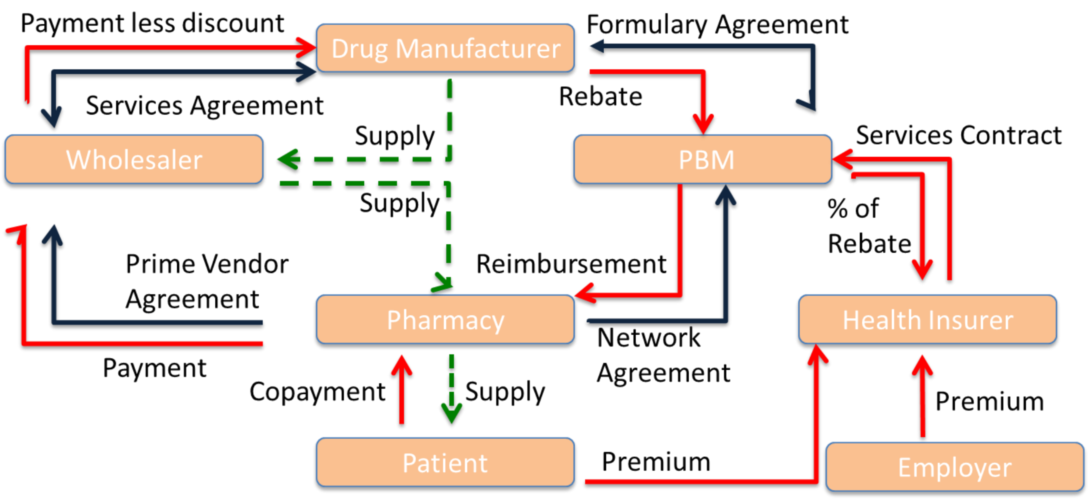
Global markets continued the upward pattern that they have been in since the turn of the year, with the S&P500, the Nasdaq 100, the Swiss Market Index, the Indian Sensex and the MSCI World all making new all-time highs. This month saw the revival of European and Chinese equity markets as the economic data suggests that the worst may be over, and growth might be returning. The wide array of stimulus measures that the Chinese policy makers have been deploying (as indicated in February's commentary) appear to already be taking hold. It is also apparent that the government is not prepared to stop priming the pump quite yet, as government spending was up a further 15% in March compared to this time last year. The Chinese survey of the value added from output of Industry rose to the highest level since 2014 and consumer confidence is at the highest level since the survey started in 1996. One area that is yet to catch up, however, is the Chinese automotive sector; semi-conductor and car component companies have reported weakness in their end markets.

Over the course of the month the VT Tyndall Global Select Fund (B Inc) rose by 3.71%, bring the year-to-date returns to 13.97%.

The Fund's pharmaceutical holdings underperformed this month as Senators Bernie Sanders and Elizabeth Warren, who have both signalled their intention to run for the Democratic nomination in next year's Presidential election, announced that they would seek *'Medicare for all'*. Although we beleive that there is very little likelihood of this coming to fruition, especially as they have not announced how they would go about funding it, the policy of putting pressure on the drug industry has widespread support; even the Republicans, who are in the process of trying to repeal Obamacare, have demanded that drug manufacturers air adverts showing the true cost of their products.

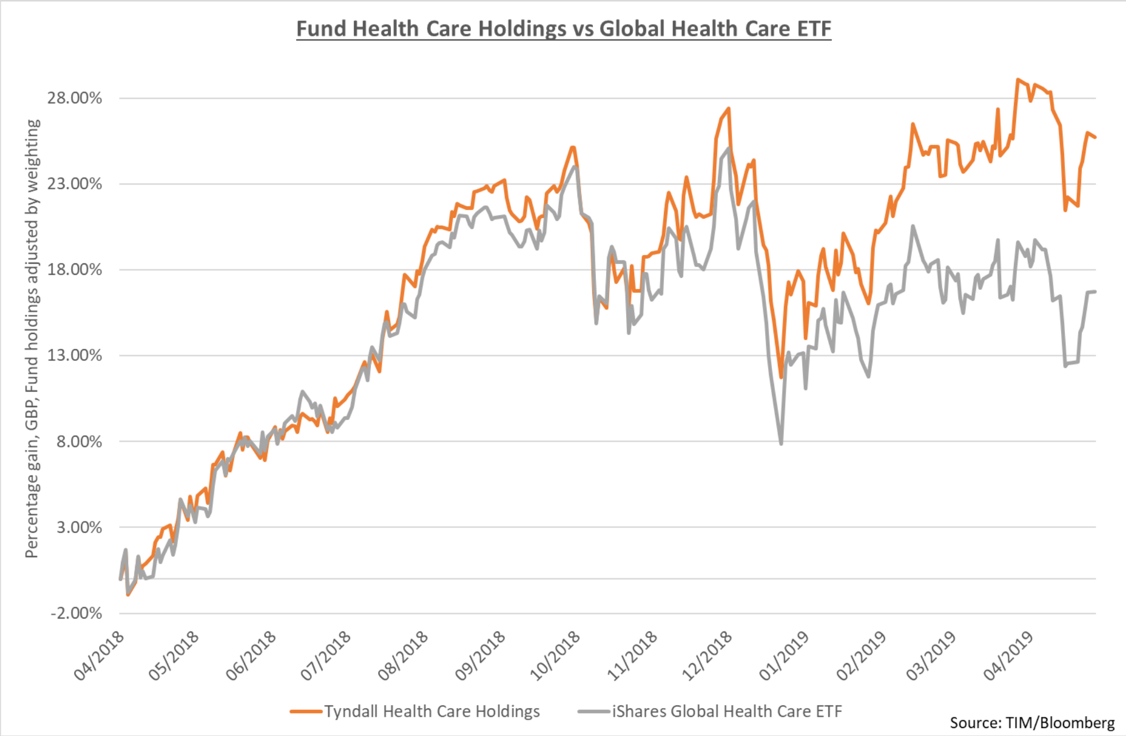
While the average American pays significantly more than their European or Asian counterparts for healthcare, all the blame does not lie at the drug manufacturers' door; in fact, only the uninsured pay the list prices. We accept that the manufacturers are partly responsible owing to above inflation price increases each year, but the real villains in the US are the Pharmacy Benefit Managers (PBMs). PBMs act as middle men between the insurance companies and the pharmaceutical companies, negotiating upfront discounts on the prices of prescription drugs as well as rebates which reward favourable coverage of a particular drug under an insurer's health plan. Although rarely disclosed we believe that the pharmaceutical company only receives about 60% of the list price under these arrangements; this number comes down dramatically once Medicare and Medicaid are added into the mix.

US Pharmaceutical Supply Chain



Source: TIM

Johnson & Johnson have become the first company to actively disclose their drug list prices in TV commercials. By way of example, Xarelto®, their 6th highest selling product, has a list price is $448 per month; however, they claim, using data from the consultants IQVIA™, that 75% of US patients pay between $0 and $47 per month. Within these numbers, those with Medicare pay between $0 and $59 per month and with Medicaid only pay $0 and $3 per month.



Past performance is not necessarily a guide to future performance.

We expect that a cloud may hang over the sector for quite some time as multi-national pharmaceutical companies are easy targets for politicians wanting to score some cheap points in the run up to the 2020 Election. We prefer to remain mindful of the risks whilst looking through the political noise and invest in MedTech and pharmaceutical companies on their cash generation, pipelines and best in class products that often have wide defensive moats surrounding them.

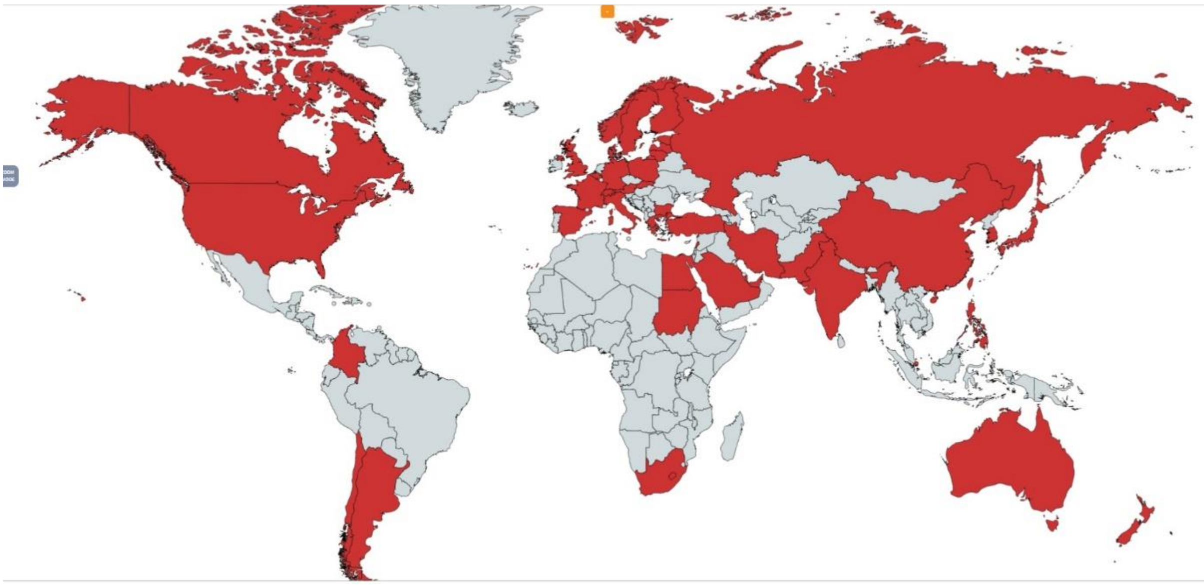
We have been looking at the advent of 5G for some time as the Asian nations have been adopting the technology faster than their Western peers. This month all the major US operators announced that they too would be rolling out their networks. Although there are still only a couple of mobile handsets on the market that are 5G compatible, we expect to see a large number launched in the autumn of this year; Apple's recent deal with Qualcomm enables them to produce a 5G handset, but probably not until 2020.

The EU has legislated that by the end of this year, every member state must have a 5G enabled city, and by 2025, all major trunk roads and cities should have comprehensive coverage. The Scandinavians are early adopters within Europe, and two of the major infrastructure manufacturers, Ericsson and Nokia, come from the region.

Huawei, Ericsson and Nokia account for 70% of the market in 5G infrastructure component manufacturing, and the former is currently banned from the United States and Australia. We are somewhat surprised that the UK government appears to be going against the advice of GCHQ who voiced their concerns about the integrity of Huawei's product.

Nokia has been one of the key beneficiaries of the fallout from Huawei in the Western World, however this has not stopped them signing deals in Asia; China Mobile announced a $1.2 billion deal to help them roll out 5G in the region. Currently they have signed 30 commercial deals and have over 100 pilot schemes worldwide. The partnership with T-Mobile in the US for their implementation of a 5G network is the largest deal that the company has publicly disclosed to date, amounting to $3.5bn.

Countries with disclosed Commercial Deals or Pilot Schemes with Nokia



Source: TIM/Nokia company announcements

The company had guided the market that their first quarter results were going to be below run-rate as the roll out of 5G will not gather pace until the back end of 2019, and then accelerate thereafter. Nonetheless the market took the numbers poorly, as the company also cited some price competition in the market, resulting in the shares falling by 10% (20% from the peak in January) to the lowest level for over 6 months and well below the 5-year average. We decided to look through the short-term issues and decided to innate a position in a company that we have not held since the days when it was the leading mobile telephone handset provider, a business that it wisely disposed of to Microsoft's previous management.

Away from 5G, the company also licenses its technology and intellectual property. Multiple companies that use the android based operating system on their handset pay Nokia an annual royalty fee, providing a steady, recurring revenue stream. Nokia Bell Labs innovations have led to nine Nobel prizes and three Turing awards and the company continually invests heavily in R&D to have patents over key parts of the latest hardware and software. The company has spent €123 billion on R&D in the past two decades and brought 1,300 new patent protected inventions to the market in 2017. Nokia has over 30,000 patents relating to 2G, 3G and 4G, for which smartphone manufacturers pay an annual fee to use. In 2018 Apple shipped 212.1 million handsets and Samsung 293.7 million. Both have recently resigned patent agreements with Nokia which should provide a handsome recurring revenue stream; Apple had to pay Nokia $2 billion after it lost a case for unlawful use of their patents in 2017. The company has already announced that it will charge €3 ($3.6) for each smartphone that uses its 5G portfolio of Standard Essential Patents (SEP), Ericsson by contrast will charge $2.5 to $5 depending on the value of the device.

Our holding in Walt Disney rose significantly over the course of the month after hosting its first investor day since 2014. During the event, management and division heads outlined their strategy, price and quality of content for ESPN+, Hulu, Hotstar, and Disney+ as it shifts to selling its content directly to the consumer (DTC). Although, predictably, Disney+ was the focus of most the attendees' attention, the company also gave greater granularity on their other subsidiaries than ever before. Post the Fox deal, Disney owns 60% of the streaming service Hulu[1] and the leading Indian streaming service, Hotstar.

Disney+		ESPN+		hulu		hotstar	
Ad Free	$6.99	Limited Ads	$4.99	Limited Ads	$5.99	Ad supported / Free Service	
Annual Fee	$69.99	Annual Fee	$49.99	Hulu No Ads	$11.99	Premium Subscription	Rs. 199
				Hulu + Live TV	$44.99	9-month Premium Fee	Rs. 1197

Source: Disney/Hotstar

Although Netflix has a head start with 148m subscribers, Disney believes that consumers will take up more than one streaming service provided the content is significantly differentiated. We believe that once the rights that Disney has leased to Netflix are bought back in house, Hulu will be the only Disney service in direct competition with Netflix and will be profitable within 4 years, unlike Netflix, which is yet to post a profit despite its loftier valuation.

	Current Subscribers	**Target Subscribers**	**Peak Operating Loss**	**Profitability**
Disney+	N/A	60m-90m by FY 2024	FY 2020 – FY 2022	FY 2024
ESPN+	2m	8m-12m by FY 2024	FY 2019- FY 2020	FY 2023
hulu	25m	40m-60m by 2024	FY2019	FY 2023 or FY 2024
hotstar	300m	Not Disclosed	Ad-driven	

Source: Disney

[1] Post the investor day, AT&T announced that it was selling its 10% stake to Hulu, leaving only Comcast as the only other company with ownership interest, although it has subsequently announced that it is interested in selling its 30% stake to Disney to give them full control.

Disney+ will encompass the back-catalogues and new content from Marvel, Star Wars, Pixar, Disney, National Geographic and the Simpsons. The service will be rolled out in the US in the Autumn, followed by Western Europe, Asia Pacific and the rest of North America next year, and finally Latin America and Eastern Europe in 2021. Overall this is a dramatic shift by Disney, but we agree with its CEO, Bob Iger, that the market is changing for good and just relying on licencing their content would leave the company vulnerable and diminish the quality of its cash flow. With the line up of box-office releases that Disney has in store this year, namely *Toy Story 4, Frozen 2, Star Wars: Episode 9, The Lion King* amongst others, we expect that the news flow on the company will remain positive, as all are expected to top the billings; As if the quality of the Disney franchise needed reiterating, the company released *Avengers: End Game* last week and easily surpassed the all-time record for an opening weekend by taking in $1.2bn globally, beating the previous record of $641m, which was set by *Avengers: Infinity War*.

We also believe that, with all the excitement over the DTC strategy, the value of the Parks and Consumer Products division has been overlooked, especially as the first Star Wars theme park is due to open this year. Thus, although the shares have risen on the news, upside still exists.

