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THOUGHT LEADERSHIP: CRUNCH TIME
BIG TECH AND THE THREAT OF REGULATION

WHITEHELM
ADVISERS

INTRODUCTION

There is a growing sense that big technology companies are too big, too profitable and too powerful. Competition regulators around the world, including in the US, Europe and Australia, are now progressing on new frameworks designed to address concerns about competition in digital markets. In determining whether these companies should be reined in, decisionmakers including politicians and regulators will be considering serious questions like: Are some big tech companies stifling competition? Or inhibiting democracy? Have they facilitated racial violence and civil unrest? What are their roles and responsibilities regarding fake news? What about privacy and data ownership?

2020 keeps making history: the rollercoaster of the US election, signs of a tipping point for the response on climate change, the continued rise of China , the dramatic global shift online, a massive liquidity shock and unprecedented monetary and fiscal stimulus injected into global markets, and all this amongst a global pandemic. Big tech companies are intertwined amongst these themes, in good and bad ways, but most definitely as key players. Whether the power and control currently exerted by these companies should be allowed to grow unbridled will be at the centre of future antitrust action.

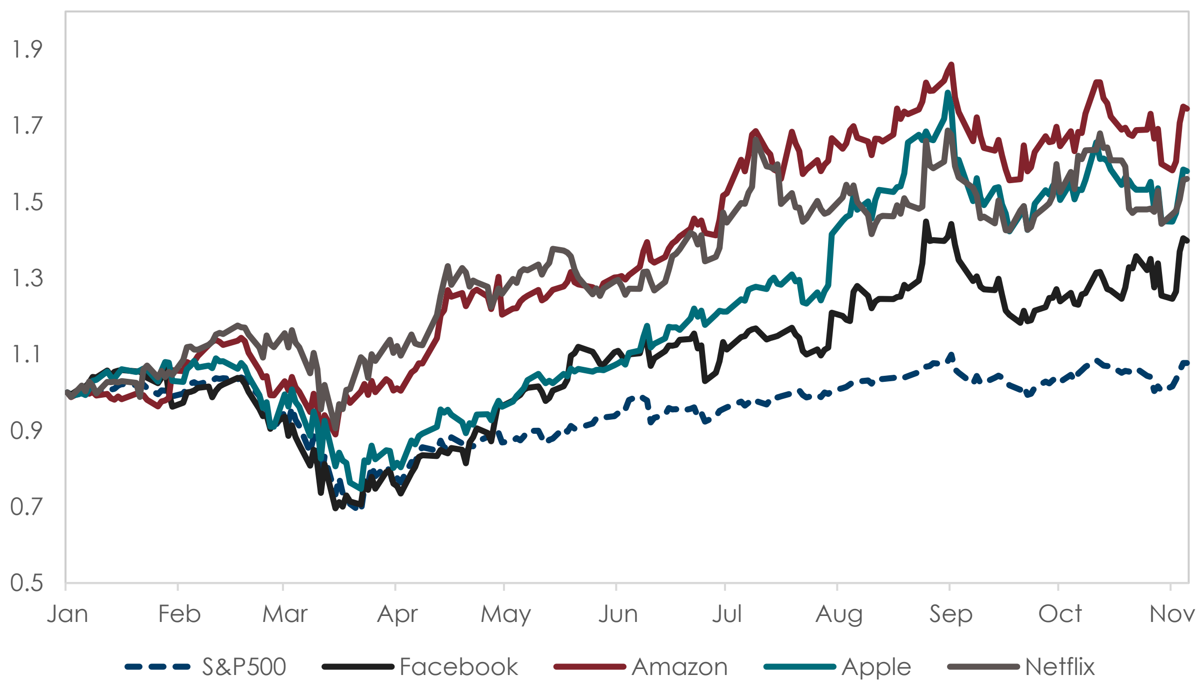
In this feature article, we consider what the implications of regulatory action could be on the value of the technology giants whose rise and rise has driven US stock markets in 2020. We start by tracking the valuations of these companies over 2020, highlighting just how big 'big tech' has become and questioning the basis for their current valuations. We then consider the regulatory changes being considered in the US, where four significant competition investigations are currently underway, and how any findings may be enacted by the incoming Biden Administration. We also look at what is happening in Europe, where more stringent regulatory rules look set to apply. And finally, we consider how any new regulation designed to curb the business models of Amazon, Apple, Facebook and Google could affect the operations of these digital behemoths. Alternatively, have these companies become too essential, too pervasive, too loved by consumers to now reign in?

Covid-19 has accelerated the structural shift towards digitalisation, and this has been reflected in the market pricing of technology companies. Investors must consider whether prices have climbed too high now, or whether they are justified by long-term fundamentals. This is the trillion dollar question, and the dominance of these companies in US stock market indices means the future trajectory of these companies will impact the performance of most diversified investment portfolios. The decisions made by governments and competition regulators around the world over the coming months have the potential to shape these trajectories.

BIG TECH HAVE BECOME EVEN BIGGER IN 2020

Big tech companies have been major beneficiaries of the Covid-19 pandemic and this is reflected by the stratospheric rise in their respective share prices over 2020. Figure 1 shows the trajectory of each of the so-called FAANG stocks since the start of this year, with Amazon up more than 70% from where it started this year and Netflix up almost 60%. These gains are astonishing when you consider the broader market is now only just getting back to January levels, and jaw dropping when considered in the context of a global economy that is predicted by the IMF to contract by 4.4%[1] this year.

Figure 1: FAANG Stocks vs S&P500, Indexed from 1 Jan 2020



Source: Bloomberg, Whitehelm Advisers

[1] https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020

Equity markets have been supported generally this year by an unparalleled level of government stimulus from central banks and fiscal spending the world over. But big tech companies broke away from broad equity markets from the end of April, and have charged ahead, as shown in Figure 2 below.

Figure 2: A Tale of Two Markets – S&P500 vs S&P500 ex-Tech - Change in Value since 1 Jan 20

Source: Bloomberg, Whitehelm Advisers

Tesla is another company whose price has risen stratospherically during 2020, so much so that we think it warrants its own chart (Figure 3 below). Tesla started the year at US$86 and at the time of writing was up 400%.

Whether Tesla should be considered a tech stock is subjective - it is primarily an electric car manufacturer with a classic disruption business model – but its share price trajectory this year certainly makes it look like one.

Figure 3: Tesla Share Price from 1 Jan 2020 (USD)

Source: Bloomberg, Whitehelm Advisers

It makes sense that big tech companies have benefitted from the pandemic-induced economic lockdown. Online shopping soared as people around the world stayed home and waited for Amazon to deliver their packages (and the make-up of these packages changed, containing more of the basics such as groceries and pharmaceuticals as well as office equipment and furniture, clothing and books). Demand for streamed media content surged as consumers substituted theatres and cinemas with Netflix and Amazon Prime from their couches. Businesses shifted to online platforms such as Microsoft Teams and Zoom as offices shutdown and workers logged in from home.

Global shutdowns of businesses and schools also supercharged demand for cloud computing services, cementing the existing growth trend in this sector.

These positive developments are reflected in the 30 September 2020 earnings profiles for the global technology giants and summarised below in Figure 4. Big tech continue to demonstrate why this tech 'bubble' is different to the last one, with surging sales and cash flows and plenty of growth potential still to come as the global economy continues to structurally shift towards digital.

Figure 4: How Covid-19 Impacted Big Tech Companies, as shown by 30 Sept 2020 Quarterly Results*

FACEBOOK

22% increase in revenue

12% increase in daily and monthly active users

amazon

37% increase in sales

56% increase in operating cashflow

6% increase in revenue

46% increase in iPad sales, 29% increase in Mac sales (quarter)

NETFLIX

23% increase in revenue

15.8 million new subscribers (Q1 2020)

14% rise in annual revenue for Alphabet

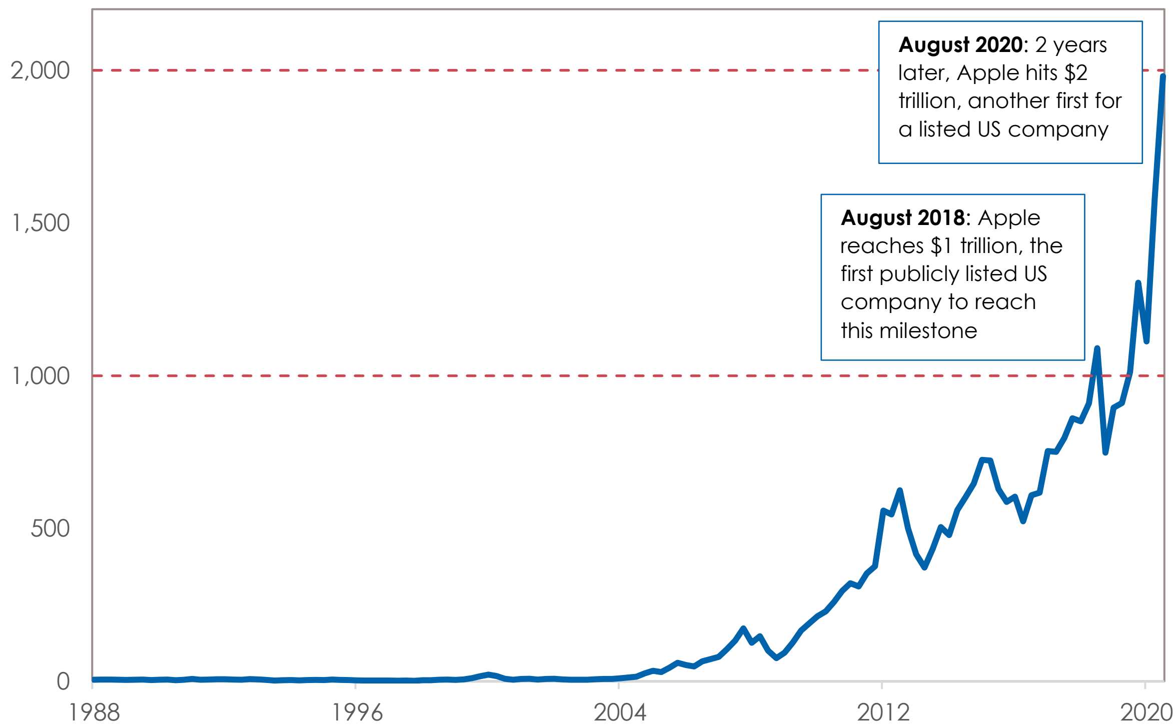
10% rise in advertising income for Google (quarter)

Google

*Source: Facebook, Amazon, Apple, Netflix, Google, Whitehelm Advisers, * Year-on-year unless other specified*

As 2020 rolls on, and with the sharp shift online looking more and more like a structural change, tailwinds continue for the global technology giants. On 19 August 2020, Apple's market capitalisation hit US$2 trillion, just two years since it became the first US publicly listed company to be worth US$1 trillion. We note that, at the end of March 2020, Apple's market cap was $1.1 trillion – meaning that in less than five months, Apple's valuation increased by close to a staggering US$1 trillion.

Figure 5: Apple Market Capitalisation – 1988 – now (USD Billion's, quarterly data)



Source: Bloomberg, Whitehelm Advisers

To give that number some context, we identified a few other things of a similar value including:

Canada's economy

In 2019, Canada had GDP of US1.7 trillion.

US small-caps market

FTSE Russell 2000® measures the US equity small-cap universe, measures the performance of around 2,000 smallest cap American companies and has a market cap of around $1.9 trillion.

Germanys stock exchange

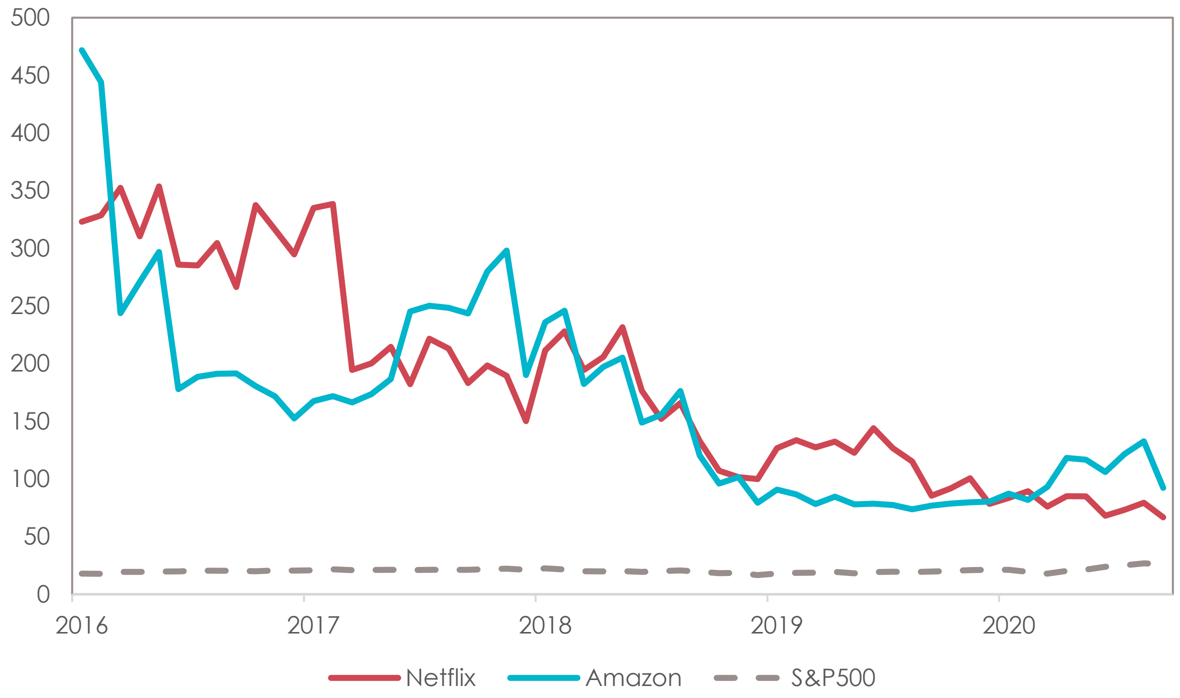
The Deutsche Börse has a market capitalisation of US$1.9 trillion

The Italian economy

Italy's GDP was US$2 trillion in 2019, making it the 8th largest economy in the world and the 3rd largest in the European Union.

Together, the FAANG stocks are worth close to US$6 trillion and price-to-earnings multiples are also sky high. Amazon's P/E multiple (currently 89x but has been historically much higher) is difficult to understand on traditional metrics and indicates the market's optimism for the company's future earnings, an optimism that has been justified to date. However, it also seems slightly less outrageous when considering the growth potential of Amazon Web Services (AWS), the company's cloud computing business. AWS was responsible for 12% of net sales in Q2 this year but grew by 26% year-on-year and is responsible for two-thirds of Amazon's operating profit. The growth potential of cloud computing businesses over the coming years is significant and provides one example as to why investors continue to see value in these businesses.

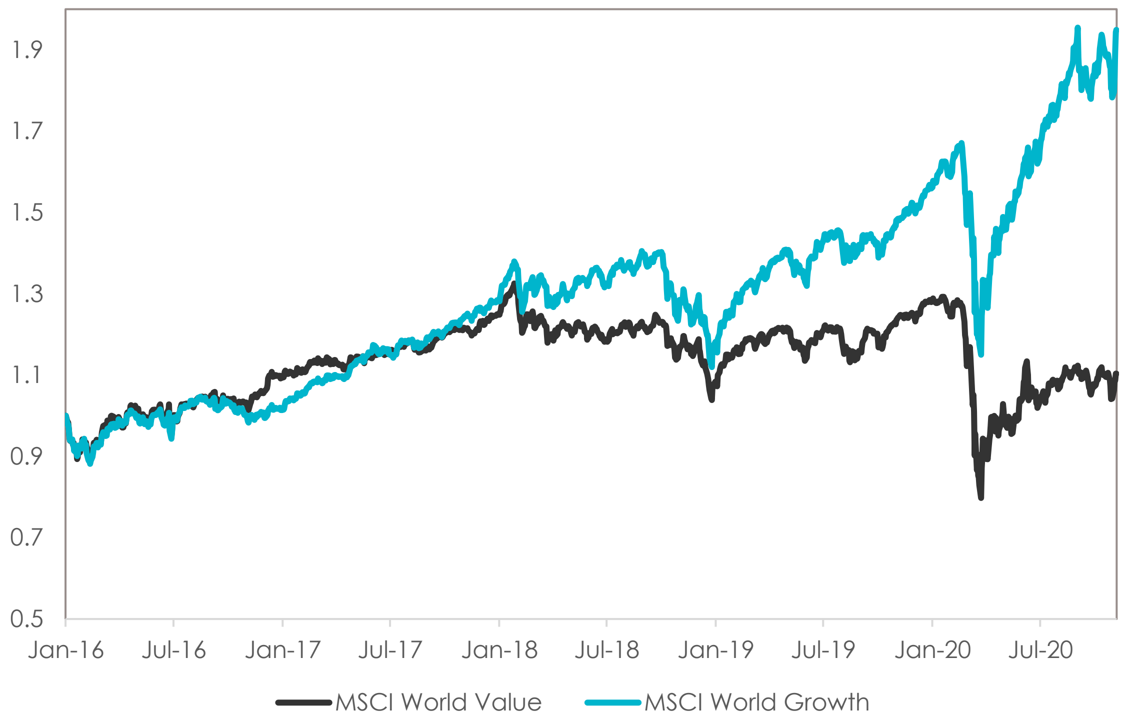
Figure 6: Big Tech Companies Have Traded at P/E Multiples Well Above the Market for Years



Source: Bloomberg, Whitehelm Advisers

There is no question that big tech is dominating US stock markets, currently making up 23% of the S&P500 index.[2] Such a high level of market concentration continues to be a risk for investors. The S&P500 is more top heavy now than in the 2000 dot.com boom, where the top five companies (Microsoft, Cisco, General Electric, Intel and ExxonMobil) made up 18% of the index.[3] And in terms of sector concentration, that the top 5 stocks are all technology also puts us in new territory. The risks associated with a highly concentrated benchmark has been highlighted in Australia, where financials (mostly the major banks) represented 39% of the market 5 years ago and is now more like 25%. Such a high degree of sector concentration made investors vulnerable to a single industry's dynamics. Finally, we note that the growth style has strongly outperformed over the past few years as shown below in Figure 7 and in large part, this is due to the trends we talk about in this paper. This also highlights an investment risk in that if regulation does occur then it could cause a rapid reversal in this style performance. This presents both risk and opportunity for long suffering value investors.

Figure 7: MSCI World Value vs Growth, Indexed from 1 Jan 2016



Source: Bloomberg, Whitehelm Advisers

[2] The FAANG stocks + Microsoft.

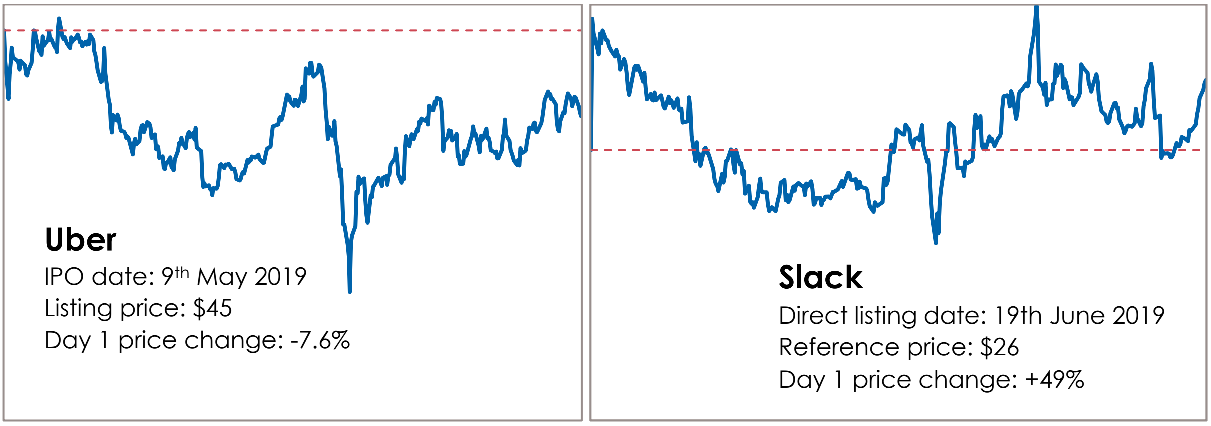
[3] https://www.ft.com/content/95aeb21d-8ade-48f8-82e7-cbf4b85657aa

Box 1: Softbank Vision Fund

Just as these now giant technology companies started in someone's garage, in the same way others will come along…right? Picking the next successful technology company is harder than the now legendary tales of Microsoft and Facebook suggest - just ask Softbank. The Vision Fund is a US$97 billion technology venture capital fund set up by Softbank to invest in 'emerging technology businesses[4]' as well as 'established, multi-billion dollar companies requiring substantial growth funding'.[5]

The Vision Fund's 92 investments include companies like Guardant Health, 10x Genomics and Vir Biotechnology, which have all provided the fund with sound performance since publicly listing. However, it was investments in WeWork, Slack and Uber that made headlines and underlined the risks and challenges associated with investing in disruptive, loss-making technology start-ups with ambitious business models. The share price movements of both Uber and Slack since their respective listing dates are shown below in Figure 8.

Figure 8: Vision Fund – Share Price of Selected Investments since Listing



Source: Bloomberg, FT, Whitehelm Advisers

WeWork, on the other hand, never made it to market. WeWork is a classic disruptor (although we consider it to be more property company than technology company), renting out shared office space by the desk. In the leadup to its planned listing, it burnt through cash to pay for high spec, hip office fit outs and furnishings. From inception, the company had grown at rapid rate in its quest for scale. However, in September 2019, operating losses as well as concerns over the dominant role of co-founder and chief executive Adam Neumann culminated in the initial public offering (IPO) being withdrawn weeks before it was scheduled to list, starving the company of much needed cash. SoftBank stepped in with a US$9.7 billion rescue package that valued WeWork at US$8 billion (compared to US$47 billion 10 months previous) in exchange for, amongst other conditions, the departure of Neumann and resulting in a write-down of US$4.6 billion for the Vision Fund.

Despite this tumultuous investment, the Vision Fund and more generally SoftBank, are continuing to seek the next big thing albeit on a much smaller scale. SoftBank's Vision Fund 2 made first close in November last year and now has assets of US$3 billion across 13 investments.[6]

[4] http://www.softbank.jp/corp/d/group_news/press_20170520_01_en.pdf
5 Ibid
6 https://www.economist.com/leaders/2020/10/17/the-lessons-from-the-vision-fund?itm_source=parsely-api

REGULATORY HEADWINDS

Amidst all this talk of tailwinds for the technology giants, we now turn to an enormous headwind that may be coming towards them – the threat of substantial regulation. As this article has established, big technology companies have become giants, as measured by market capitalisation. In terms of their influence, the impact of these tech behemoths on the way humans socialise, shop, vote, learn and think has been laid bare these past few years.

Up until a few years ago, technology and technology companies were widely viewed as a force for good. However, following scandals including the alleged Russian interference in the 2016 US election and Cambridge Analytica, big tech (and more generally technologies like artificial intelligence and deep learning) were increasingly viewed with suspicion. The term techlash[7] was coined to describe this growing criticism, and the wheels of technology regulation have started to turn in many jurisdictions around the world.

Techlash:

'A strong and widespread negative reaction to the growing power and influence of large technology companies, particularly those based in Silicon Valley[8]'.

'The growing public animosity towards large Silicon Valley platform technology companies and their Chinese equivalents[9]'.

[7] Techlash was runner up in Oxford Dictionaries international word of the year and winner of the FT's Year in a word
[8] https://languages.oup.com/word-of-the-year/2018-shortlist/
[9] https://www.ft.com/content/76578fba-fca1-11e8-ac00-57a2a826423e

United States

Starting in the US, the US Department of Justice (DoJ), the Federal Trade Commission and the states attorneys general have all announced investigations focussed on four big technology companies – Amazon, Apple, Facebook and Google. Broadly, and across these investigations, the accusations focus on restricted competition and the acquisition of small competitors by the big incumbents (purportedly referred to by venture capitalists as a 'kill-zone').[10] At a company level, the accusations are broadly summarised as:

Amazon: Anti-competitive behaviour towards third party sellers, favouring its own retailers.

Apple: Using the power of its app store to block rivals and force them to pay high commissions.

Facebook: Using its monopoly power in social networking to acquire the competition to protect and expand its market power.

Google: Using its dominance in search and digital advertising to restrict competition and protect its monopoly position.

Source: Subcommittee on Antitrust, commercial and administrative law of the committee on the Judiciary, New York Times, Whitehelm Advisers.

In July this year, technology company chief executives Jeff Bezos (Amazon), Tim Cook (Apple), Mark Zuckerberg (Facebook) and Sundar Pichai (Alphabet) testified together (virtually, and somewhat ironically via Cisco's Webex platform) to the House Judiciary antitrust committee. Last month, this committee published its 'Investigation of Competition in Digital Markets' report and recommendations.[11]

Key recommendations included forcing big technology companies to restructure (it prohibits 'dominant platforms from operating in adjacent lines of business') and that any proposed acquisition by a dominant company should be presumed to be uncompetitive unless proven otherwise. Whilst the subcommittee was bipartisan, the report was written by Democrats.[12]

Days later, four Republican members of the same subcommittee[13] released a separate report - '*The Third Way*'[14] - which outlines support for less contentious recommendations and argues against others including the enaction of legislation that allows for 'structural separation and delineating a clear single line of business for any large data company'.

10 https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups
11 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf
12 Chief Authors were Democrats Jerrold Nadler, Chairman, Committee on the Judiciary & David N Cicilline, Chairman, Subcommittee on Antitrust, Commerical and Administrative Law.
13 Republicans Ken Buck, Doug Collins, Matt Gaetz & Andy Biggs.
14 https://buck.house.gov/sites/buck.house.gov/files/wysiwyg_uploaded/Buck%20Report.pdf

Such responses are largely along expected party lines, where Republicans have historically been more supportive while Democrats have tended to take a harder line on antitrust in our view. At the extreme, we note that high profile Senator Elizabeth Warren, a former frontrunner for the 2020 Democrat party nomination, took a hard line against big technology companies pledging to break up companies like Amazon, Apple, Facebook and Google. Such a hard line stance against companies that are hugely popular with the American people (and people all around the world) may have ultimately contributed to her downfall, adding substance to the narrative that she was too far to the left. Biden has not gone this far, instead preferring regulation to curb power.

With the uncertainty surrounding the US election largely behind us, we turn now to what is likely to be in store for big tech under the new Biden Administration. President-elect Joe Biden has signalled that he will focus on privacy rules as well as protecting workers from the impacts of innovations such as self-driving cars. He has also supported the repeal of Section 230 of the Communications Decency Act[15.] We also point to the Investigation of Competition into Digital Markets Report described above as a likely blueprint for antitrust action by the Democrats. It remains to be seen whether the President-elect will support the DoJ's high profile antitrust lawsuit against Google,[16] launched last month accusing it of being 'the gatekeeper of the Internet[17'] and aiming to stop Google from 'unlawfully maintaining monopolies through anticompetitive and exclusionary practices in the search and search advertising markets.[18]

However, we also note that Democratic Vice President-elect Kamala Harris was friendly towards technology companies during her time as California's attorney general (2011-17)[19] and more generally the Democrats have historically maintained strong links to Silicon Valley, potentially making an outright attack seem unlikely.

Saying that, we note the US Senate remains undecided and a Republican controlled Senate will make it difficult for President Biden to pass legislative reform, including on big tech. However, at this early stage, President-elect Biden has reached out to Republicans to restore bipartisanship and certainly Republican Senator Mitch McConnell and the incoming President have a history of working together. Add to this that Republicans under President Trump had a regulatory reform for the technology sector on their agenda, and it seems likely that some changes will come during the next presidential term.

[15] Section 230 of the Communications Decency Act provides immunity to websites from being sued for the content they publish that is written by users and has allowed technology companies to flourish (dubbed the 26 words that created the internet). Technology companies fiercely guard the protections offered to them under Section 230, with Mark Zuckerberg saying that 'without section 230, platforms could potentially be held liable for everything people say'. https://www.theguardian.com/us-news/2020/oct/27/section-230-congress-hearing-facebook-twitter-google

[16] Widely considered the most significant antitrust case since the Microsoft case in the 1990's. This case alleges that Google has used exclusive contracts to become the default search engine.

[17] https://www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws

[18] Ibid

[19] https://www.nytimes.com/2020/08/20/technology/kamala-harris-ties-to-big-tech.html

Europe

Turning now to Europe, where tougher regulatory changes are also afoot. Europe has been a world-leading jurisdiction in tech regulation, as illustrated by the adoption of the General Data Protection Regulation (GDPR) in 2016.[20] However, to date the big Silicon Valley tech companies have avoided significant enforcement actions under European laws,[21] and anecdotal accounts suggest the real impact of new regulation has been that smaller technology start-ups have faced higher red tape and compliance costs – ironically creating a barrier to entry and entrenching the dominance of big tech in Europe.

However, more world leading tech regulation is coming, with the European Union in the process of drafting the Digital Services Act, expected by the end of 2020. The Financial Times[22,] who have been privy to a draft of legislation, have reported that the Digital Services Act may include:

- Power to break up or sell some parts of their operations if considered too uncompetitive
- Power to exclude large tech groups from the European Union
- New rules on disinformation
- Requiring big technology companies to share customer data with smaller rivals.
- Increased power to scrutinise the way user information is gathered.
- Introduction of a rating system allowing the public/stakeholders to assess company behaviour including on tax compliance and actions regarding illegal content
- Liability exemption likely to remain in place
- Gatekeeper platforms only able to use the data they collect for narrow purposes.
- Big Tech banned from preferential treatment of their own services on their sites or platforms

Source: Financial Times, Whitehelm Advisers

[20] GDPR is European Union (EU) regulation that provides consumers with rights and controls over their personal data, including the right to deletion, the right to direct their data be shared and the right to object to profiling. It also governs consent, privacy and liability. GDPR is applicable in the EU but also applies outside this jurisdiction20, meaning it has a global impact. A breach of the GDPR could result in fines of up to €20 million or 4% of the firms worldwide annual revenue, whichever is higher.
[21] There have been two instances of Google was fined €50 million in January 2019 for breaching GDPR in relation to ad targeting and transparency requirements
[22] https://www.ft.com/content/7738fdd8-e0c3-4090-8cc9-7d4b53ff3afb, https://www.ft.com/content/1773edd6-7f1d-4290-93b6-05965a4ff0db

This regulation has the potential to transform the operating landscape for big tech companies in Europe, and other jurisdictions that might adopt the same approach. In doing so, the Digital Services Act could fundamentally revalue global technology companies. However, we see an uncertain path for this legislation, including the time taken to legislate, the impact of lobbying by big tech, the scope of this legislation in different markets and the degree of enforcement. While the full impact of European regulatory reform will only become clear over time, investors may not be pricing in the significant detrimental impacts that would arise from a worst case scenario. Regulatory winds are blowing in the UK and Australia too. The UK government is setting up a digital markets unit to supervise regulation and encourage competition[23]. In addition, the UK Competition and Markets Authority released its study of online platforms and digital advertising market in July, which recommended a new 'pro-competition regulatory regime'. Similarly, in Australia, the Australian Government is pursuing recommendations made by the Australian Competition and Consumer Commission (ACCC) as published its Digital Platforms Inquiry24 in July 2019. Of particular significance is the proposed new rules to make Google and Facebook pay publishers for news.[25]

[23] The economist, 'A world leader after all', 1 August 2020.
[24] https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf
[25] https://www.afr.com/technology/landmark-us-antitrust-case-backs-up-accc-s-google-crusade-20201021-p5679b

CONCLUSION

In considering the long-term value of worlds technology giants, we have found ourselves thinking about what these companies do. Firstly, of course, they are technology companies, selling digital products and services. But they also distribute information, power relationships, inform beliefs, classify people and predict human behaviour, functions that are more intimate and pervasive than the offerings of other historically dominant industries and companies. Never have a group of non-state actors yielded such power across so many people. They are so big, bigger than most other companies, bigger than some economies and stock market indices, but arguably more important than their scale is their ability to influence how humans think and behave.

We have been wondering whether we think these tech behemoths should be regulated and the answer is yes, but to what extent is very much up for debate. As economists, the idea of unregulated monopoly power on a global scale is detrimental to consumers and so regulation should be implemented to restore competition. However, as consumers, we love these devices, apps and websites. If regulation makes them less accessible either through price imposition or increase, or impedes the accuracy of their algorithms, well that will be inconvenient and annoying.

Our point is people tend to love and rely on the products and services of big tech companies. Far reaching regulation that aims to protect things like democracy, freedom of thought, empathy, innovation, privacy and enterprise may struggle to be politically popular if it adversely impacts the quality or accessibility of products or services that are in the pockets, backpacks and handbags of billions of people around the globe.

However, there is no doubt that regulation is coming, and from multiple jurisdictions. Regulatory reform in the US is already underway and likely to be continued by the incoming Biden Administration. Similarly, in Europe, the Digital Services Act is close to being released in draft form. Many other jurisdictions are also moving ahead on competition regulation for technology companies, including the UK, Australia, China, France, Germany Japan, Mexico, Russia, South Africa and the UAE.[26]

But we think it is unlikely that this regulation will materially impact the valuation of big technology stocks over the medium term. The habits of people worldwide during the Covid-19 episode, coupled with the huge fiscal stimulus packages that have put in place, has been a massive tailwind for big tech and this means that the huge uptick in stock prices since May are based on positive fundamentals – increased sales, buckets of cash and robust business models that support the continued digitalisation of the global economy.

[26] https://www.ft.com/content/e7b22230-fa32-11e9-a354-36acbbb0d9b6

The regulation that is coming will impact parts of these companies, for instance relating to those parts of big tech where a platform favours a related party retailer or in allowing new social media platforms to remain independent, and this focussed regulatory change is likely to reduce future sales or operating margins to a degree.

But game changing regulation that would fundamentally revalue big tech stocks strikes us as politically fraught, time consuming to implement, difficult to enforce and sufficiently immune to the lobbying efforts of these powerful companies. In addition, central banks around the world have stepped into markets to provide liquidity and prop up asset prices amidst the uncertainty of the Covid-19 pandemic. It seems unlikely that governments would act to undo a good part of this through heavy handed competition regulation anytime soon.

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